

- C₁₁H₁₄N₄** C 73,0 — H 8,1 — N 18,9 — M. G. 296.
 1) 1,4-Di[Phenylhydrazido]hexahydrobenzol. Sm. 147—148° (B. 22, 2175). — IV, 783.
 2) isom. 1,4-Di[Phenylhydrazido]hexahydrobenzol. Fl. Oxalat + H₂O (B. 22, 2174). — IV, 783.
 3) 1,4-Di[5-Amido-3-Methylphenyl]hexahydro-1,4-Diazin. Sm. 195 bis 196° (B. 25, 2943). — IV, 625.
 4) 1,4-Di[3-Amido-4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 193° (B. 25, 2943). — IV, 612.
 5) Diisopropyldiphenyltetrazon. Sm. 79° (A. 252, 281). — IV, 1308.
 6) Verbindung (aus Anilin u. Glyoxal). (2HCl, PtCl₄) (A. 140, 124; B. 11, 831).
- C₁₀H₁₀N₂** C 76,3 — H 8,8 — N 14,8 — M. G. 283.
 1) Isobutyldi[2-Amidobenzyl]amin. Sm. 132° (B. 26, 2586). — IV, 628.
- C₁₀H₁₀O** C 83,7 — H 10,1 — O 6,2 — M. G. 258.
 1) Verbindung (aus Methylacetyladipinsäureäthylester). Sd. 230—240°₃₀ (Soc. 61, 78). — I, 1014.
- C₁₀H₁₀O₂** C 78,8 — H 9,5 — O 11,7 — M. G. 274.
 1) Mentylester d. Phenyllessigsäure. Sd. 180°₁₅ (B. 31, 1778).
 2) Mentylester d. 1-Methylbenzol-2-Carbonsäure. Sd. 191°₁₅ (B. 31, 1778).
 3) Mentylester d. 1-Methylbenzol-3-Carbonsäure. Sd. 197°₁₅ (B. 31, 1778).
 4) Mentylester d. 1-Methylbenzol-4-Carbonsäure. Sd. 200°₁₅ (B. 31, 1778).
 5) Acetat d. 5-Oxy-1-Methyl-3-[4-Isopropylphenyl]hexahydrobenzol Sd. 206°₁₄ (A. 303, 269).
- C₁₀H₁₀O₃** C 74,5 — H 8,9 — O 16,6 — M. G. 290.
 1) Anhydrid d. Isolauronolsäure. Sd. 210—215°₁₅ (C. 1897 [1] 763).
- C₁₀H₁₀O₄** C 70,6 — H 8,5 — O 20,9 — M. G. 306.
 1) Diäthylester d. 1-Phenylhexahydrobenzol-2,2-Dicarbonsäure. Fl. (Soc. 57, 315). — II, 1860.
 2) norm. Propylester d. Santonsäure. Sd. 220° (i. V.) (B. 13, 2209; G. 13, 165). — II, 1788.
 3) norm. Propylester d. Parasantonsäure. Sm. 113° (B. 13, 2209; G. 13, 159). — II, 1790.
 4) Diisoamylester d. Benzol-1,4-Dicarbonsäure (A. 121, 89). — II, 1832.
- C₁₀H₁₀O₅** C 67,1 — H 8,1 — O 24,8 — M. G. 322.
 1) Diäthylester d. Hydroxydibenzoesäure. Sd. 205—207° (A. 134, 331). — II, 1959.
 2) Diäthylester d. ζ-Oxyhexanphenyläther-γγ-Dicarbonsäure. Sd. 228°₂₂ (B. 31, 2136).
- C₁₀H₁₀O₇** C 61,0 — H 7,3 — O 31,6 — M. G. 354.
 1) norm. Oxyhexinsäure. Sm. 173° (A. ch. [5] 20, 489).
 2) Isooxyhexinsäure. Sm. 186—187° (A. ch. [5] 20, 491).
- C₁₀H₁₀O₁₁** C 51,7 — H 6,2 — O 42,1 — M. G. 418.
 1) Lignose (A. Spl. 5, 225; B. 8, 476). — I, 1080.
- C₁₀H₁₀O₁₂** C 49,8 — H 6,0 — O 44,2 — M. G. 434.
 1) Dulcithexacetat. Sm. 171° (A. ch. [4] 27, 150). — I, 418.
 2) Mannithexacetat. Sm. 119° (A. 160, 94; A. ch. [5] 8, 107; B. 12, 2059). — I, 417.
 3) Sorbithexacetat (B. 23 [2] 24). — I, 418.
 4) Aethylester d. Pentaacetylgalaktonsäure. Sm. 101—102° (M. 16, 336).
 5) Aethylester d. Pentaacetyl-d-Glykonsäure. Sm. 103,5° (B. 19, 2622). — I, 826.
 6) Diäthylester d. Tetraacetylzuckersäure. Sm. 61° (A. 149, 242). — I, 853.
 7) Diäthylester d. Tetraacetylnorisoazuckersäure. Sm. 47° (B. 19, 1270; 27, 128). — I, 853.
 8) Diäthylester d. Tetraacetylchleimsäure. Sm. 189° (A. 129, 195; B. 20, 3367; M. 14, 474; 19, 459). — I, 856.
- C₁₀H₁₀O₁₃** C 48,0 — H 5,8 — O 46,2 — M. G. 450.
 1) Triacetylinulin (A. 160, 83). — I, 1096.

- $C_{15}H_{26}O_{15}$ C 43,4 — H 5,2 — O 51,4 — M. G. 498.
 1) **Oxycellulose** (Soc. 43, 22; A. 272, 288; siehe auch A. 267, 368). — I, 1077.
- $C_{15}H_{26}N_2$ C 80,0 — H 9,6 — N 10,4 — M. G. 270.
 1) **Verbindung** (aus Diäthylketon u. Pyrrol). Sm. 208—210° u. Zers. wasserfrei. 2 + AgNO₃ (B. 20, 2455). — IV, 944.
- $C_{15}H_{26}O$ C 83,1 — H 10,8 — O 6,1 — M. G. 260.
 1) **Desoxyphoron**. Sm. 108—109° (A. 180, 10; 296, 321). — I, 1013.
 2) **Undekylphenylketon**. Sm. 47°; Sd. 132°_{0,3} (Soc. 67, 508; B. 29, 1318).
 3) **Verbindung** (aus d. Wurzel von Polygonum cuspidatum) (Soc. 67, 1089). C 78,2 — H 10,1 — O 11,6 — M. G. 276.
- $C_{15}H_{26}O_2$
 1) **Axinsäure** (J. 1860, 324). — II, 1401.
 2) **Phenylester d. Laurinsäure**. Sm. 24,5°; Sd. 210°₁₆ (B. 17, 1378). — II, 662.
 3) **Verbindung** (aus Calcain) (Z. 1867, 539). — III, 573.
 4) **Verbindung** (aus Diacetylcapronsäureäthylester). Sd. 265—275°₃₃ (Soc. 57, 26). — I, 694.
- $C_{15}H_{26}O_3$ C 63,5 — H 8,2 — O 28,2 — M. G. 340.
 1) **Diäthylester d. cis-2,5-Diketo-1,4-Dipropylhexahydrobenzol-1,4-Dicarbonensäure** (D. d. Dipropylsuccinylbernsteinsäure). Sd. 217—218°₁₅ (B. 26, 232).
 2) **Diäthylester d. trans-2,5-Diketo-1,4-Dipropylhexahydrobenzol-1,4-Dicarbonensäure** (D. d. Dipropylsuccinylbernsteinsäure). Sm. 86—87°; Sd. 217—218°₁₅ (B. 26, 232).
 3) **Diäthylester d. cis-2,5-Diketo-1,4-Diisopropylhexahydrobenzol-1,4-Dicarbonensäure** (D. d. Diisopropylsuccinylbernsteinsäure). Sd. 215 bis 220°₁₆ (B. 26, 232).
 4) **Diäthylester d. trans-2,5-Diketo-1,4-Diisopropylhexahydrobenzol-1,4-Dicarbonensäure** (D. d. Diisopropylsuccinylbernsteinsäure). Sm. 116 bis 117°; Sd. 215—220°₁₅ (B. 26, 232).
- $C_{15}H_{26}O_4$ C 60,7 — H 7,8 — O 31,4 — M. G. 356.
 1) **l-Condurangin**. Sm. 134° (G. 22 [1] 239). — III, 577.
- $C_{15}H_{26}O_5$ C 58,0 — H 7,5 — O 35,4 — M. G. 372.
 1) **Tetraäthylester d. Hexahydrobenzol-1,1,3,3-Tetracarbonsäure**. Sd. 243—245°₃₀ (Soc. 59, 803, 994). — I, 866.
- $C_{15}H_{26}O_6$ C 55,7 — H 7,2 — O 37,1 — M. G. 388.
 1) **Tetraäthylester d. β-Ketohexan-γδε-γ-Tetracarbonsäure**. Sd. 222 bis 223°₁₆ (Soc. 73, 729).
- $C_{15}H_{26}O_{10}$ C 53,5 — H 6,9 — O 39,6 — M. G. 404.
 1) **Pentaäthylester d. Propan-ααββγ-Pentacarbonsäure**. Sd. 234°₁₃ (B. 15, 1108; 21, 2113; 29, 1745; A. 297, 104). — I, 870.
 2) **Pentaäthylester d. Propan-ααβγγ-Pentacarbonsäure**. Sd. 265°₃₀ (B. 25 [2] 746; Soc. 73, 1013). — I, 870.
- $C_{15}H_{26}O_{11}$ C 46,1 — H 6,0 — O 47,9 — M. G. 468.
 1) **Quittenschleim** (A. 175, 208; 249, 247; 271, 60; H. 14, 158). — I, 1103.
 2) **Verbindung** (aus Glykose). + C₁₂H₂O (H. 5, 125).
- $C_{15}H_{26}N_2$ C 79,4 — H 10,3 — N 10,3 — M. G. 272.
 1) **1,2-Di[1-Piperidylmethyl]benzol**. Sd. 190—195°₃₀. (2HCl, PtCl₄), (2HCl, 2AuCl₃), Pikrat (B. 31, 427, 592).
- $C_{15}H_{27}N$ C 83,4 — H 11,2 — N 5,4 — M. G. 259.
 1) **β-Benzylidenamidoundekan**. Sd. 197—198°₁₇ (G. 24 [2] 280). — III, 28.
- $C_{15}H_{30}O$ C 82,4 — H 11,4 — O 6,2 — M. G. 262.
 1) **Laktucerylalkohol**. Sm. 162° (Hesse, N. Handw. d. Ch. 4, 8).
 2) **Syccocerylalkohol**. Sm. 90° (J. 1861, 640). — II, 1067.
 3) **norm. Oktyläther d. 3-Oxy-4-Isopropyl-1-Methylbenzol**. Sd. 319°₈ (A. 243, 49). — II, 770.
 4) **Hydrocarotin?** Sm. 137,4° (A. 117, 206; 180, 274, 277; B. 48, 488; M. 7, 598). — III, 626.
 5) **Verbindung** (aus Jalapin) (C. 1895 [2] 495).
- $C_{15}H_{30}O_2$ C 77,7 — H 10,8 — O 11,5 — M. G. 278.
 1) **Äthyläther d. Bensoresinol**. Sm. 157—158° (B. 26 [2] 679). — III, 554.
 2) **Linolensäure**. Fl. (M. 8, 158, 267; 9, 204). — I, 537.

- $C_{10}H_{30}O_2$ 3) Verbindung (aus Campherphoron). Sm. 160–162° (A. 290, 144).
 4) Verbindung (Pinakon). Sd. 230–240°₉₀ (Soc. 61, 81). — I, 272.
 C 73,5 — H 10,2 — O 16,3 — M. G. 294.
- $C_{10}H_{26}O_3$ 1) Ammosesitannol (B. 29 [2] 37). — III, 553.
 2) 2,4,6-Triketo-1,1,3,3,5,5-Hexaäthylhexahydrobenzol. Sm. 65–68°; Sd. 200–205°₂₁ (M. 9, 896). — II, 1026.
 3) Äthyläther d. 2,4-Diketo-6-Oxy-1,1,3,3,5-Pentaäthyl-1,2,3,4-Tetrahydrobenzol. Fl. (M. 9, 224). — II, 1026.
- $C_{10}H_{26}O_5$ 4) Säure (aus Lithofellinsäure). Sm. 152° (B. 28, 3046).
 C 66,3 — H 9,2 — O 24,5 — M. G. 326.
- $C_{10}H_{26}O_6$ 1) Säure (aus Isobutyläthylweinsäureäthylester). Ag (Soc. 73, 60).
 C 63,2 — H 8,8 — O 28,0 — M. G. 342.
- $C_{10}H_{26}O_7$ 1) Di[$\beta\beta$ -Diäthoxyläthyläther] d. 1,2-Dioxybenzol. Sd. 195–197° (Bl. [3] 19, 764).
 2) Smilacin (Pariglin) (A. 5, 204; 11, 305; 13, 84; 14, 76; 15, 74; 17, 166). — III, 649.
 C 60,3 — H 8,4 — O 31,3 — M. G. 358.
- $C_{10}H_{26}O_8$ 1) Telaescin (J. 1862, 492; 1867, 751). — III, 613.
 C 57,8 — H 8,0 — O 34,2 — M. G. 374.
- $C_{10}H_{26}O_9$ 1) Dimethylester d. Dicaproylweinsäure. Fl. (Bl. [3] 11, 313).
 2) Diäthylester d. Divalerylweinsäure. Sd. 214–215°₁₁ (Bl. [3] 11, 313).
 3) Diäthylester d. Diisovalerylweinsäure. Fl. (Bl. [3] 11, 369).
 4) Tetraäthylester d. β -Isopropylpropan- $\alpha\gamma\gamma$ -Tetracarbonsäure. Sd. 198° (B. 31, 2589).
 5) Dipropylester d. Dibutylweinsäure. Sd. 226–227°₆₀ (B. 25 [2] 859; 26 [2] 923; Bl. [3] 9, 683; [3] 11, 312).
 6) Dipropylester d. Diisobutylweinsäure. Fl. (Bl. [3] 11, 368).
 7) Dibutylester d. Dipropionylweinsäure. Sd. 230–231°₃₆ (B. 25 [2] 859; Bl. [3] 11, 311).
 8) Diisobutylester d. Dipropionylweinsäure. Sd. 207–208°₁₃ (Bl. [3] 11, 367; B. 25 [2] 859).
 9) Tetraäthylester d. Hexan- $\beta\beta\delta\delta$ -Tetracarbonsäure. Sd. 293–295°₇₆ (B. 24, 1055). — I, 861.
 10) Tetraäthylester d. Hexan- $\beta\beta\epsilon\epsilon$ -Tetracarbonsäure. Sm. 53–53,5° (54°) (B. 27, 1579; Soc. 65, 1004; A. 294, 103).
 11) Tetraäthylester d. Hexan- $\beta\gamma\gamma\delta$ -Tetracarbonsäure. Sd. bei 300° (B. 23, 668). — I, 861.
 12) Tetraäthylester d. Hexan- $\gamma\gamma\delta\delta$ -Tetracarbonsäure. Sd. 198–200°₁₁₂ (B. 21, 2085; Am. 16, 581). — I, 861.
 13) Tetraäthylester d. β -Methylpentan- $\gamma\gamma\delta\epsilon$ -Tetracarbonsäure. Sd. 204 bis 205°₁₇ (Soc. 73, 1010).
 14) Quercitributyrat (A. ch. [5] 15, 50). — I, 424.
 C 55,4 — H 7,7 — O 36,9 — M. G. 390.
- $C_{10}H_{26}O_{10}$ 1) Verbindung (aus Oxyazelaensäure) (B. 22, 71). — I, 758.
 C 44,4 — H 6,2 — O 49,4 — M. G. 486.
- $C_{10}H_{26}N_4$ 1) Dextrin (aus Stärke) (Bl. [3] 17, 959).
 2) Verbindung (aus Glykose) (H. 5, 126).
 C 71,5 — H 10,9 — N 10,2 — M. G. 274.
- $C_{10}H_{26}N_6$ 1) Hydroxanzoniin. (2HCl, ZnCl₂) + 2Zn(OH)₂ (J. pr. [2] 26, 341). — IV, 830.
 C 65,5 — H 9,1 — N 25,4 — M. G. 330.
- $C_{10}H_{27}O_2$ 1) Tripiperidinmelamin. Sm. 213°. (2HCl, PtCl₄) (B. 18, 2779). — IV, 14.
 C 77,1 — H 11,4 — O 11,4 — M. G. 280.
- $C_{10}H_{27}O_2$ 1) Hanfölsäure (Linolsäure). Fl. (M. 7, 217; 8, 149, 263; 9, 946). — I, 535.
 2) Hirseölsäure (B. 21 [2] 142). — I, 596.
 3) Leinölsäure (Linolsäure). Fl. Ba, Zn. Lit. bedeutend. — I, 535.
 4) Stearölsäure (β -Heptadekin- α -Carbonsäure). Sm. 48°. Ca + H₂O, Ba, Ag (A. 140, 50; 190, 294; B. 2, 359; 27, 172, 3397; 28, 2249, 2250; M. 9, 953; C. 1896 [1] 1262). — I, 535.
 5) Taririnsäure. Sm. 50,5°. K, Ag (Bl. [3] 7, 233; B. 26 [2] 767; 27 [2] 20; C. 1896 [1] 1262). — I, 536.
 6) Säure (aus Ricinelaëdinsäure). Sm. 53–54°. Ba (M. 15, 310; B. 27, 3474).

- $C_{18}H_{32}O_2$ 7) Säure (aus Ricinolsäure). Sm. 44—45°; Sd. 230°₁₅ (B. 21, 2732; 27, 3473; M. 15, 308). — I, 536.
- 8) Verbindung (aus 6-Acetyl-5-Methyl-1,2,3,4-Tetrahydrobenzol). Sd. 255 bis 265°₅₀ (Soc. 57, 21). — I, 1011.
- $C_{18}H_{32}O_3$ C 73,0 — H 10,8 — O 16,2 — M. G. 296.
- 1) α -Keto- η -Heptadekan- ρ -Carbonsäure (Ketoölsäure). Sm. 58° (B. 28, 2248).
- 2) Ricinostearolsäure. Sm. 51° (53°). Ba, Ag (Z. 1867, 547; M. 15, 314; B. 27, 3123, 3475; 28, 1448 Anm.). — I, 625.
- 3) Anhydrid d. Hexadekan- $\alpha\beta$ -Dicarbonsäure. Sm. 89°; Sd. 245—248°₁₅ (B. 23, 2355). — I, 690.
- $C_{18}H_{32}O_4$ C 69,2 — H 10,2 — O 20,5 — M. G. 312.
- 1) β -Diketostearinsäure (Stearoxylsäure). Sm. 86°. Ba, Ag (A. 140, 63; 190, 297; M. 9, 953; B. 28, 276; 29, 813). — I, 695.
- 2) Ricinostearoxylsäure. Sm. 78° (78—80°). Ba, Ag (Z. 1867, 550; M. 15, 315). — I, 695.
- $C_{18}H_{32}O_5$ C 62,8 — H 9,3 — O 27,9 — M. G. 344.
- 1) Triäsovalerat d. $\alpha\beta\gamma$ -Trioxypropan (Glycerintriaisovalerin) (A. ch. [3] 41, 257). — I, 429.
- 2) Triäthylester d. β -Methyloktan- $\varepsilon\zeta$ -Tricarbonsäure. Sd. 300—305° (B. 29, 976).
- 3) Triäthylester d. $\beta\zeta$ -Dimethylheptan- $\beta\gamma\gamma$ -Tricarbonsäure. Sd. 305 bis 310° (B. 29, 977).
- 4) Triäthylester d. $\beta\zeta$ -Dimethylheptan- $\gamma\delta\delta$ -Tricarbonsäure. Sd. 285 bis 290° (B. 29, 976).
- $C_{18}H_{32}O_{10}$ C 52,9 — H 7,8 — O 39,2 — M. G. 408.
- 1) Säure (aus Terpentin) (J. 1869, 786). — III, 562.
- $C_{18}H_{32}O_{16}$ C 42,8 — H 6,3 — O 50,8 — M. G. 504.
- 1) β -Cellulose (B. 26, 2524).
- 2) Glykogen? Ba (B. 14, 1215).
- 3) Melazitose + 2H₂O. Sm. 147—148° (wasserfrei) (A. ch. [3] 55, 282; B. 27, 98; J. pr. [2] 45, 321; J. r. 21, 420; B. 26 [2] 694; C. 1897 [1] 30). — I, 1071.
- 4) Raffinose (Gossypose; Melitose; Melitriose). Sm. 118—119° (wasserfrei). Lit. bedeutend. — I, 1071.
- 5) Stachyose + 3H₂O (B. 23, 1692, 1696; 24, 2705; 25 [2] 386). — I, 1104.
- 6) lösliche Stärke. + BaO (B. 30, 2416; 31, 1791).
- $C_{18}H_{32}O_2$ 1) Säure (aus Dammarharz) = (C₁₈H₃₂O₂)_n (B. 22 [2] 345). — III, 555.
- $C_{18}H_{32}N_3$ C 74,2 — H 11,3 — N 14,4 — M. G. 291.
- 1) 6-Amino-5-Isobutyl-2,4-Diisocamyl-1,3-Diazin (Kyanamylin). Sm. 53°. HCl, (2HCl, PtCl₄) (J. pr. [2] 37, 409). — IV, 1135.
- $C_{18}H_{32}N_3$ C 67,7 — H 10,3 — N 21,9 — M. G. 319.
- 1) Base (aus Isovaleraldehydammoniak). Sm. 61—62°. HCl (A. 130, 220; J. r. 13, 507). — I, 952.
- $C_{18}H_{34}O$ C 81,2 — H 12,8 — O 6,0 — M. G. 266.
- 1) Mononaphtenyläther. Sd. 300,5° (J. r. 22, 130). — I, 303.
- $C_{18}H_{34}O_2$ C 76,6 — H 12,1 — O 11,3 — M. G. 282.
- 1) Pinakolin (aus Phoron). Sm. 155°; Sd. 200—240° (A. 290, 139).
- 2) Elaidinsäure. Sm. 44—45° (51—52°); Sd. 287—288°₁₀ (154°). Na, K, Ba, Pb, Ag (A. 4, 11; 28, 253; 35, 174; B. 22, 819; 29, 1325; J. r. 24, 515; J. pr. [2] 50, 75, 81; [2] 57, 29; Soc. 73, 629). — I, 526.
- 3) Oelsäure (Elaidsäure, Oleinsäure). Sm. 14°; Sd. 285,5—286°₁₀₀ (153°). Salze siehe (A. 35, 196; 57, 38; 244, 263). Lit. bedeutend. — I, 525.
- 4) Isoölsäure. Sm. 44—45°. Na, Ca + H₂O, Ba, Zn, Ag (J. pr. [2] 35, 386; [2] 37, 269; [2] 45, 301; [2] 50, 61, 81; C. 1897 [2] 184). — I, 527.
- 5) Rapinsäure. Fl. Na, Zn, Ag (B. 20, 2387; M. 17, 309). — I, 614.
- 6) Säure (aus Stearinsäure). Sm. 35° (J. 1863, 335). — I, 527.
- 7) Lakton d. β -Oxyheptadekan- α -Carbonsäure. Fl. (J. pr. [2] 35, 378). — I, 579.
- 8) Lakton d. γ -Oxyheptadekan- α -Carbonsäure. Sm. 47—48° (J. pr. [2] 37, 84; C. 1897 [1] 742; 1897 [2] 184). — I, 580.
- 9) Aethylester d. Gaidinsäure (A. 99, 310). — I, 524.
- 10) Aethylester d. Hypogänsäure (A. 94, 234). — I, 524.

$C_{18}H_{34}O_2$

C 72,5 — H 11,4 — O 16,1 — M. G. 298.

- 1) Lichesterylsäure. Sm. 83,5—84°. NH_4 , Ag (C. 1898 [2] 964).
- 2) Ricinolsäure. Sm. 16—17°; Sd. 250°₁₅. Mg, Ca, Sr, Ba, Zn, Pb, Ag (A. 64, 114; B. 9, 1916; 21, 2731; 27, 3121, 3471; J. 1857, 359; M. 9, 476; 15, 307; C. 1897 [1] 662). — I, 613.
- 3) Isoricinolsäure. Fl. (Bl. [3] 11, 283).
- 4) Pseudoricinolsäure. Ba (C. 1897 [1] 662).
- 5) Ricinelaïdinsäure. Sm. 50° (53%). Ca, Ba, Ag (A. 60, 332; 119, 174; Z. 1867, 548; A. ch. [3] 44, 82; M. 15, 308; B. 27, 3472). — I, 613.
- 6) Ricinsäure. Sm. 81°; Sd. 250—252°₁₅ u. ger. Zers. Ba, Ag (B. 21, 2736; 27, 3472). — I, 614.
- 7) Oxyölsäure. Fl. (A. 140, 70). — I, 614.
- 8) β -Ketoheptadekan- α -Carbonsäure (Ketostearinsäure). Sm. 83° (B. 29, 807).
- 9) ϵ -Ketoheptadekan- α -Carbonsäure (Ketostearinsäure). Sm. 76° (B. 27, 174; 23, 2249).
- 10) Säure (aus Dioxystearinsäure). Na, Ag (J. pr. [2] 33, 313).
- 11) Anhydrid d. Pelargonsäure. Sm. 5° (A. 85, 231). — I, 464.
- 12) Verbindung (aus Diacetylpentan). Sd. 305—310°₂₂₀ (Soc. 59, 229). — I, 1020.

 $C_{18}H_{34}O_2$

C 68,8 — H 10,8 — O 20,4 — M. G. 314.

- 1) β -Keto- λ -Oxyheptadekan- α -Carbonsäure (Ketoxyystearinsäure). Sm. 84—85°. Ba, Ag (B. 27, 3123; 29, 806).
- 2) α -Acetoxyheptadekan- α -Carbonsäure (α -Acetoxyalmitinsäure). Sm. 62,5° (B. 24, 941). — I, 579.
- 3) Hexadekan- $\alpha\beta$ -Dicarbonsäure (Tetradekylbernstainsäure). Sm. 121°. Ag₂ (B. 23, 2355). — I, 690.
- 4) Hexadekan- $\alpha\pi$ -Dicarbonsäure. Sm. 118°. K₁, Mg, Ba, Cu (A. 261, 125). — I, 690.
- 5) isom. Hexadekandicarbonsäure (B. 26 [2] 95—96).
- 6) Diäthylester d. Dodekan- $\alpha\mu$ -Dicarbonsäure. Sm. 27° (A. 261, 123). — I, 689.
- 7) norm. Dibutylester d. Oktan- $\alpha\beta$ -Dicarbonsäure (D. d. Sebacinsäure). Sd. 344—345° (Soc. 52, 801). — I, 686.
- 8) sec. Dibutylcarbinolester d. β -Methylpentan- $\alpha\alpha$ -Dicarbonsäure (C. 1896 [1] 186).
- 9) norm. Diheptylester d. Bernsteinsäure. Sd. 350,1° (A. 253, 302). — I, 656.

 $C_{18}H_{34}O_2$

C 65,4 — H 10,3 — O 24,2 — M. G. 330.

- 1) Dioxyricinolsäure (Trioxyölsäure). Sm. 64° (B. 16, 2455). — I, 761.

 $C_{18}H_{33}N$

C 81,5 — H 13,2 — O 5,3 — M. G. 265.

- 1) Curarin. (2HCl, PtCl₄), Pikrat (A. 191, 254; Z. 1865, 382). — III, 877.
- 2) Nitril d. Stearinsäure. Sm. 41°; Sd. 274,5°₁₀₀ (128°). 2 + HBr (B. 15, 1730; 26, 2847; 29, 1325). — I, 1468.

 $C_{18}H_{36}O$

C 80,6 — H 13,4 — O 6,0 — M. G. 268.

- 1) β -Ketoooktadekan (Methylhexadekylketon). Sm. 51—52°; Sd. 251—252°₁₀₀ (B. 15, 1707). — I, 1005.
- 2) γ -Ketoooktadekan. Sm. 53°; Sd. 197,5°₁₁ (Bl. [3] 15, 765).
- 3) Aldehyd d. Stearinsäure. Sm. 63,5°; Sd. 259—261°₁₀₀ (B. 13, 1417). — I, 957.

 $C_{18}H_{36}O_2$

C 76,0 — H 12,7 — O 11,3 — M. G. 284.

- 1) Stearinsäure. Sm. 69,2° (71—71,5°); Sd. 359—383° (154,5—155,5°). Salze meist bekannt, Lit. bedeutend. — I, 444.
- 2) Neurostearinsäure. Sm. 84°. Ba (J. pr. [2] 25, 25; [2] 53, 87). — I, 447.
- 3) Heptadekan- ϵ -Carbonsäure (Dioktylessigsäure). Sm. 38,5°; Sd. 270 bis 275°. Ba, Ag (A. 204, 11, 165). — I, 447.
- 4) Cetylessigsäure. Sm. 63,5—64°. Ag (A. 206, 355, 360).
- 5) Methyl ester d. Daturinsäure. Sm. 30° (B. 26 [2] 288).
- 6) Äthylester d. Palmitinsäure. Sm. 24,2°; Sd. 184,5—185,5°₁₀ (J. 1853, 502; A. 88, 299; C. 1898 [2] 757). — I, 443.
- 7) Äthylester d. norm. Diheptylessigsäure. Sd. 308,5—311° (A. 200, 114). — I, 444.

- C₁₈H₃₀O₂** 8) **Cetylolester d. Essigsäure.** Sm. 22—23° (18,5°); Sd. 190,5—200,5°₁₅ (A. 102, 220; B. 16, 284; E. 16, 1721). — I, 411.
- C₁₈H₃₄O₂** C 72,0 — H 12,0 — O 16,0 — M. G. 300.
- 1) **α-Oxyheptadekan-α-Carbonsäure (α-Oxystearinsäure).** Sm. 77—79° (84—85°). Ba, Cd, Pb, Cu, Ag (J. pr. [2] 37, 277, 284; B. 24, 2392; C. 1897 [1] 742; 1897 [2] 184). — I, 579.
 - 2) **β-Oxyheptadekan-α-Carbonsäure (β-Oxystearinsäure).** Sm. 81—81,5° (83—85°). Na, Ca + H₂O, Ba, Zn, Cu, Ag (J. pr. [2] 35, 369, 384; [2] 37, 81; [2] 57, 31; J. r. 17, 426; 18, 41; A. ch. [2] 65, 113; D. 261, 499; C. 1897 [1] 742; 1897 [2] 184; B. 16, 2458). — I, 579.
 - 3) **γ-Oxyheptadekan-α-Carbonsäure (γ-Oxystearinsäure).** Cu, Pb (J. pr. [2] 37, 85; C. 1897 [1] 742; 1897 [2] 184). — I, 580.
 - 4) **Aethylester d. Jalapinolsäure.** Sm. 32,5° (47—48°) (A. 116, 314; J. pr. [2] 57, 449). — III, 595.
 - 5) **Aethylester d. Tampikolsäure (Z. 1870, 668).** — III, 613.
- C₁₈H₃₆O₂** C 68,3 — H 11,4 — O 20,3 — M. G. 316.
- 1) **d-β-Dioxyheptadekan-α-Carbonsäure.** Strychninsalz (Bl. [3] 13, 1053).
 - 2) **l-β-Dioxyheptadekan-α-Carbonsäure.** Strychninsalz + 2¹/₂ H₂O (Bl. [3] 13, 1053).
 - 3) **l-β-Dioxyheptadekan-α-Carbonsäure (Dioxystearinsäure aus Oelsäure).** Sm. 136,5° (126°). Na, K, Ca + 3 H₂O, Ba, Zn, Ag (A. 140, 72; B. 18, 1268; J. pr. [2] 33, 304; [2] 40, 244; [2] 50, 62; Bl. [3] 13, 1052; Soc. 73, 630). — I, 635.
 - 4) **isom. β-Dioxyheptadekan-α-Carbonsäure (Dioxystearinsäure aus Elaidinsäure).** Sm. 99—100°. Na, Ag (J. pr. [2] 33, 315; [2] 50, 76; Soc. 73, 630). — I, 636.
 - 5) **isom. Dioxystearinsäure.** Sm. 66—68° (Bl. [3] 11, 283).
 - 6) **isom. Dioxystearinsäure.** Sm. 141—143°. Na (Bl. [3] 13, 238).
 - 7) **Paradioxystearinsäure.** Sm. 77—78°. Na, Ca, Ag (J. pr. [2] 37, 276; [2] 50, 63). — I, 636.
 - 8) **Aethylester d. Turpetholsäure.** Sm. 72° (A. 139, 59). — III, 614.
- C₁₈H₃₈O₂** C 65,1 — H 10,8 — O 24,1 — M. G. 332.
- 1) **Trioxystearinsäure.** Sm. 140—142°. Na + ¹/₂ H₂O, K, Ca, Ba, Ag (M. 9, 476; J. pr. [2] 39, 341). — I, 738.
 - 2) **α-Isotrioxystearinsäure.** Sm. 110—111°. Na, Ba, Ag (M. 9, 477; J. pr. [2] 39, 345; B. 27, 3475). — I, 738.
 - 3) **β-Isotrioxystearinsäure.** Sm. 114—115° (M. 10, 199). — I, 738.
 - 4) **Isobutylester d. Trioxysigtriisobutyläthersäure.** Sd. 146°₁₀ (A. 254, 33). — I, 737.
- C₁₈H₃₆O₄** C 62,1 — H 10,3 — O 27,6 — M. G. 348.
- 1) **Sativinsäure (Tetraoxystearinsäure).** Sm. 173°. Na + H₂O, K + ¹/₂ H₂O, Ba, Ag (M. 7, 224; 8, 159, 261; 9, 187; J. pr. [2] 41, 543; C. 1865 [1] 22). — I, 787.
- C₁₈H₃₆O₆** C 56,8 — H 9,5 — O 33,7 — M. G. 380.
- 1) **Linusinsäure.** Sm. 203° (M. 8, 159, 267; 9, 181). — I, 851.
 - 2) **Isolinusinsäure.** Sm. 173—175° (M. 9, 181). — I, 851.
- C₁₈H₃₆N₆** C 64,3 — H 10,7 — N 25,0 — M. G. 336.
- 1) **Isotriisocamylmelamin. (2 HCl, PtCl₄) (B. 3, 264).** — I, 1445.
- C₁₈H₃₆Br₂** 1) **Dibromoktadekan.** Sm. 24° (B. 17, 1373). — I, 180.
- C₁₈H₃₄J** 1) **Jodoktadekan.** Sm. 42—43° (33,5°) (J. 1884, 1193; B. 19, 2984). — I, 196.
- C₁₈H₃₆O** C 80,0 — H 14,1 — O 5,9 — M. G. 270.
- 1) **Oxyoktadekan (Oktadekylalkohol).** Sm. 59°; Sd. 210,5°₁₅ (A. 92, 299; B. 16, 1722; 17, 1628). — I, 240.
 - 2) **Aethylcetyläther.** Sm. 20° (A. 102, 220). — I, 300.
- C₁₈H₃₄N₂** C 76,6 — H 13,5 — N 9,9 — M. G. 282.
- 1) **Stearinamidin.** Sm. 85°. HCl, (2HCl, PtCl₄), HNO₃ (PINNER, Imidoäther 130; B. 20, 2843).
- C₁₈H₃₈N** C 80,3 — H 14,5 — N 5,2 — M. G. 269.
- 1) **α-Aethylamidoheptadekan (Cetyläthylamin).** Sm. 27—28°; Sd. 342° u. Zers. HJ (B. 22, 814). — I, 1138.
 - 2) **α-Dihexylamidoheptadekan (Trihexylamin).** Sd. 260°. HCl, (2HCl, PtCl₄) (A. 101, 310; 102, 312; J. 1863, 527). — I, 1136.

- $C_7H_{10}N_2$ 1) C 87,9 — H 14,5 — N 17,6 — $M. G.$ 318.
 1) Pentaäthylentetraäthyltetramin. (4HCl, 2PrCl₃) (*J.* 1861, 521c).
- $C_7O_2Cl_2$ 1) Perchlordinorm. Butylester d. Hexadekachloroktan- α , β -Dicarbon-säure (P. d. Perchlorsäure). (*B.* 127; *N.* 209 (Se. 52, 842). — I, 587.
- C_7NCl_3 1) Perchlortriphenylamin (*B.* 9, 1494). — II, 342.

C_{13} -Gruppe mit drei Elementen.

- $C_{13}H_9O_2Br_{11}$ 1) Xanthogallol. *Sm.* 1229 (*A.* 177, 193; 245, 350) — II, 1013.
- $C_{13}H_9O_2N_7$ 1) C 51,2 — H 1,4 — O 34,1 — N 13,3 — $M. G.$ 422.
 1) Tetranitrochrysochinon (*A.* 158, 314). — III, 463.
- $C_{13}H_9O_{12}N_4$ 1) C 43,4 — H 1,2 — O 38,6 — N 16,8 — $M. G.$ 488.
 1) Chrysoeyaminsäure + 3H₂O. (NH₃)₂ + 3H₂O. K₂ + 3H₂O. Ca + 3H₂O. Ba, Ag₂ (*A.* 134, 229). — III, 428.
- $C_{13}H_9O_{11}N_3$ 1) Salpetersaures Tetrazoresorcin (*A.* 162, 282, siehe auch *B.* 17, 1855). — II, 933.
- $C_{13}H_8N_2Br_2$ 1) β -Hexabrom-2,3-BichinolyI. *Sm.* 239 (*J. pr.* [2] 51, 488). — IV, 1967.
- $C_{13}H_8O_2Br_7$ 1) Heptabromtriresorcin + 2H₂O (*A.* 289, 659).
- $C_{13}H_8O_2Br_{11}$ 1) Xanthogallolsäure. *Sm.* 139 (*u.* 72). *Ba* (*A.* 177, 195; 245, 345; *B.* 20, 2035). — II, 1015.
- $C_{13}H_8O_2Cl_{11}$ 1) Mairogallol. *Sm.* 159^a u. *Zers.* (*A.* 179, 237). — II, 1013.
- $C_{13}H_8O_2Br_{11}$ 1) Bromdichroinsäure. *Zers.* bei 100°. Ca₂, Ba₂, Ag₂ (*B.* 10, 1142). — II, 726.
- $C_{13}H_8O_2N_7$ 1) C 37,4 — H 1,2 — O 44,4 — N 17,0 — $M. G.$ 577.
 1) Heptanitrodiphenyläther d. 1,4-Dioxybenzol. *Sm.* 190^a (*B.* 24, 3588). — II, 940.
- $C_{13}H_8O_2N_2$ 1) C 76,1 — H 2,8 — O 11,3 — N 9,8 — $M. G.$ 284.
 1) α , β -Diketonaphthenzin (Naphthenzinchinon). *Sm.* 265^a u. *Zers.* (*A.* 286, 79).
- $C_{13}H_8O_2Cl_2$ 1) Dichlorchrysochinon (*A.* 158, 312). — III, 462.
 2) 6,11-Dichlor-5,12-Diketo-5,12-Dihydronaphtacen. *Sm.* 252—254^a (*B.* 31, 1282).
- $C_{13}H_8O_2Br_2$ 1) Dibromchrysochinon. *Sm.* 160—165^a (*B.* 12, 1892). — III, 462.
- $C_{13}H_8O_2Br_7$ 1) Dibromanhydrobisdiketodihydroinden. *Sm.* 241—242^a u. *Zers.* (*A.* 252, 78). — III, 276.
- $C_{13}H_8O_2Cl_2$ 1) 2,2-Bi-2-Chlor-1,3-Diketo-2,3-Dihydroinden. *Sm.* 288^a (*B.* 31, 1167).
- $C_{13}H_8O_2Br_2$ 1) 2,2'-Bi-2-Brom-1,3-Diketo-2,3-Dihydroinden. *Sm.* bei 280^a (*B.* 31, 1169).
- $C_{13}H_8O_2N_2$ 1) C 62,1 — H 2,3 — O 27,6 — N 8,0 — $M. G.$ 348.
 1) Dinitrochrysochinon. *Sm.* 230^a (*B.* 12, 1893). — III, 463.
- $C_{13}H_8O_2N_4$ 1) C 57,4 — H 2,1 — O 25,5 — N 14,9 — $M. G.$ 376.
 1) Dinitrotriphendioxazin (*B.* 30, 996). — IV, 1977.
- $C_{13}H_8O_2N_4$ 1) C 52,9 — H 2,0 — O 31,4 — N 13,7 — $M. G.$ 468.
 1) Tetranitrochrysen (*A.* 158, 307; *J. pr.* [2] 9, 283). — II, 292.
- $C_{13}H_8O_2Cl_2$ 1) Leukogallol + 2H₂O. *Sm.* 104^a u. *Zers.* (*B.* 20, 2035). — II, 1013.
- $C_{13}H_8O_2N_4$ 1) C 40,6 — H 1,5 — O 42,1 — N 15,8 — $M. G.$ 532.
 1) Hexanitrodiphenyläther d. 1,3-Dioxybenzol. *Sm.* 220^a (*B.* 24, 3587). — II, 917.
 2) Hexanitrodiphenyläther d. 1,4-Dioxybenzol. *Sm.* 190^a (*B.* 24, 3588). — II, 940.
- $C_{13}H_8O_2N_3$ 1) Salpetersaures Dihydrotriazoresorcin (*A.* 162, 285). — II, 934.
- $C_{13}H_8N_2Br_2$ 1) Hexabromdiphenylazophenylen. *Sm.* 243^a (*M.* 8, 481). — II, 338.
- $C_{13}H_8O_2Br_7$ 1) Bromanhydrobisdiketodihydroinden. *Sm.* 195—196^a u. *Zers.* (*A.* 252, 78). — III, 276.
- $C_{13}H_8O_2N$ 1) C 71,3 — H 3,0 — O 21,1 — N 4,6 — $M. G.$ 303.
 1) Nitrochrysochinon. *Sm.* 252^a (*B.* 24, 953). — III, 462.
 2) β -Nitro-5,12-Diketo-5,12-Dihydronaphtacen. *Sm.* 315^a (*B.* 31, 1278).
 3) isom. β -Nitro-5,12-Diketo-5,12-Dihydronaphtacen. *Sm.* bei 240^a (*B.* 31, 1279).
- $C_{13}H_8O_2Cl$ 1) 2-Chlor-2,2'-Bi-1,3-Diketo-2,3-Dihydroinden. *Sm.* 242—244^a (*B.* 31, 1170).

- $C_{18}H_{10}O_6N$ C 64,5 — H 2,7 — O 28,6 — N 4,2 — M. G. 335.
- $C_{18}H_9O_11N_5$ 1) Nitroäthindiphtalid. Sm. bei 240° (B. 19, 838). — II, 2034.
C 44,3 — H 1,8 — O 39,4 — N 14,4 — M. G. 487.
- $C_{18}H_{10}O_2N_2$ 1) Pentanitrodiphenyläther d. 1,3-Dioxybenzol. Sm. 68° (B. 24, 3587). — II, 917.
- $C_{18}H_7NBr_6$ 1) *p*-Tetrabrom-2-[1-Naphtyl]indol-2,3-Dibromid. Sm. oberh. 300° (A. 272, 208). — IV, 465.
- $C_{18}H_{10}O_2N_2$ C 75,5 — H 3,5 — O 11,2 — N 9,8 — M. G. 286.
- $C_{18}H_{10}O_2N_2$ 1) Triphenioxazin. subl. bei 250°. 2HCl (B. 23, 183; 28, 293; 32, 126). — IV, 1077.
2) Anhydroindol-2-Carbonsäure. Sm. 312—315° (B. 21, 1932). — IV, 235.
- $C_{18}H_{10}O_2N_4$ C 68,8 — H 3,2 — O 10,2 — N 17,8 — M. G. 314.
- $C_{18}H_{10}O_2N_4$ 1) 1,4-Benzochinonhomofluorindin (Istarin) (B. 23, 2794; C. 1897 [1] 62). — III, 340.
C 67,9 — H 3,1 — O 20,1 — N 8,8 — M. G. 318.
- $C_{18}H_{10}O_2N_2$ 1) Dinitrochrysen. Sm. oberh. 300° (J. pr. [2] 9, 282). — II, 292.
2) Oxyphenylposafanonchinon. Zers. bei 275° (B. 31, 2438).
3) Hippuroflavin. Sm. noch nicht bei 300°. subl. + Phenol, + Anilin, + *o*-Toluidin (B. 21, 3321; 26, 2320; A. 287, 68). — II, 1185.
- $C_{18}H_{10}O_4Cl_2$ 1) Diphenyläther d. 3,6-Dichlor-2,5-Dioxy-1,4-Benzochinon. Sm. 243° (Am. 17, 595). — III, 352.
- $C_{18}H_{10}O_4Br_2$ 1) Diphenyläther d. 3,6-Dibrom-2,5-Dioxy-1,4-Benzochinon. Sm. 266 bis 267° (Am. 17, 652). — III, 352.
- $C_{18}H_{10}O_4Br_4$ 1) Tetrabromtriresorcin. 2 + 5HBr (A. 289, 67).
- $C_{18}H_{10}O_5N_2$ C 51,7 — H 2,4 — O 19,1 — N 26,8 — M. G. 418.
- $C_{18}H_{10}O_5N_2$ 1) 2-Nitroso-1-Phenylazo-4-[2,4,6-Dinitrosomitrophenylazo]benzol? Sm. 175—176° u. Zers. (J. pr. [2] 44, 461). — IV, 1370.
- $C_{18}H_{10}O_5Br_2$ 1) Anhydrid d. *p*-Dibrom- α - β -Diketo- α - β -Diphenylbutan- β - γ -Dicarbonsäure. Sm. 285—287° (B. 10, 1561). — II, 2034.
- $C_{18}H_{10}O_6N_2$ C 61,7 — H 2,9 — O 27,4 — N 8,0 — M. G. 350.
- $C_{18}H_{10}O_6N_2$ 1) Bidioxymethylenindigo (B. 23, 1566). — II, 1946.
2) Indigodicarbonsäure. Ba, Ag₂ (B. 18, 950). — II, 1624.
- $C_{18}H_{10}O_6N_6$ C 53,2 — H 2,5 — O 23,6 — N 20,7 — M. G. 406.
- $C_{18}H_{10}O_6N_2$ 1) N-2,4,6-Trinitroposafranin. HCl (B. 31, 1188). — IV, 1176.
- $C_{18}H_{10}O_6N_2$ 1) Verbindung (aus 4-Amidochoinolin). Sm. 285° (J. pr. [2] 56, 201).
C 56,6 — H 2,6 — O 33,5 — N 7,3 — M. G. 382.
- $C_{18}H_{10}O_6N_2$ 1) Dinitrür d. Äthindiphtalid. Zers. bei 160° (B. 19, 837). — II, 2034.
- $C_{18}H_{10}O_6S_2$ 1) Chrysochinondisulfonsäure. Ba (B. 12, 1894). — III, 463.
- $C_{18}H_{10}O_{10}N_4$ C 48,8 — H 2,3 — O 36,2 — N 12,7 — M. G. 442.
- $C_{18}H_{10}O_{10}N_4$ 1) Di[2,4-Dinitrophenyläther] d. 1,3-Dioxybenzol. Sm. 184° (B. 24, 3586). — II, 917.
2) Di[2,4-Dinitrophenyläther] d. 1,4-Dioxybenzol. Sm. 240° (B. 24, 3588). — II, 940.
- $C_{18}H_{11}N_2Br_2$ 1) *p*-Dibrom-6,7-Bichinoly (M. 6, 553). — IV, 1070.
- $C_{18}H_{10}N_2Br_2$ 1) Oktobrom-*p*-Tetroliditoly (B. 14, 935). — IV, 1035.
- $C_{18}H_{10}N_2S_2$ 1) Thiochinanthren. Sm. 306°; subl. bei 170°₉₈. 11,8SO₄ + 2H₂O, Pikrat (J. pr. [2] 54, 342, 353; [2] 56, 273; B. 29, 2456; 30, 2418). — IV, 291.
2) isom. Thiochinanthren. Sm. oberh. 360° (J. pr. [2] 56, 277).
- $C_{18}H_{11}ON$ C 84,1 — H 4,3 — O 6,2 — N 5,4 — M. G. 257.
- $C_{18}H_{11}ON$ 1) α -Phenylpyridinphenylenketon. Sm. 68°. 2 + CrO₃ (A. 249, 124). — IV, 459.
- $C_{18}H_{11}ON_3$ C 75,8 — H 3,8 — O 5,6 — N 14,7 — M. G. 285.
- $C_{18}H_{11}ON_3$ 1) Triphenazinnoxazin (B. 28, 299). — IV, 1212.
2) Naphtostyryltolazin. Sm. oberh. 290° (J. pr. [2] 38, 184). — IV, 621.
- $C_{18}H_{11}O_2N$ C 79,1 — H 4,0 — O 11,7 — N 5,1 — M. G. 273.
- $C_{18}H_{11}O_2N$ 1) Nitrochrysen. Sm. 209° (A. 158, 306; J. pr. [2] 9, 281; B. 23, 792, 2444). — II, 292.
2) Amidochrysochinon. (2HCl, PtCl₄), HJ (B. 24, 954). — III, 163.
3) Chinophthalin (Chinolingelb). Sm. 234—235° (B. 16, 1083). — IV, 308.
4) 1,8-Anhydrid d. 8-Benzoylamidonaphtalin-1-Carbonsäure. Sm. 170° (J. pr. [2] 38, 168). — II, 1450.
5) Oximanhydrid d. α -Oximidophenyl- α -[1-Naphtyl]methan-2-Carbonsäure. Sm. 175—176° (B. 29, 827).

- $C_{18}H_{11}O_2N$ 6) Phenylimid d. Naphtalin-1,8-Dicarbonensäure. Sm. 202° (*G.* 25 [1] 250; *B.* 28, 362). — II, 1880.
- 7) 1-Naphtylimid d. Benzol-1,2-Dicarbonensäure. Sm. 180—181° (*G.* 15, 346, 480; *B.* 29, 827). — II, 1806.
- 8) 2-Naphtylimid d. Benzol-1,2-Dicarbonensäure. Sm. 216° (*G.* 15, 480). — II, 1806.
- $C_{18}H_{11}O_2Br$ 1) 2-Brom-1,1'-Diketo-2,3-Dihydro-2,2'-Biinden + C_6H_6 . Sm. 150° u. Zers. (*Soc.* 71, 245).
- 2) Lakton d. α -Brom- α -Phenyl- α -[2-Oxy-1-Naphtyl]essigsäure. Sm. 121° (*B.* 31, 2823).
- $C_{18}H_{11}O_3N$ 1) Oxim d. Anhydrobisdiketodihydroinden. Zers. oberh. 210° (*A.* 277, 370). — III, 276.
- 2) 3-Furfuryl- β -Naphtochinolin-1-Carbonensäure. Sm. 275°. HCl (*B.* 27, 2028). — IV, 466.
- 3) Lakton d. Diphenylketipinsäuremononitril. Sm. 193—194° (*A.* 282, 61). — II, 2032.
- $C_{18}H_{11}O_3N_3$ 1) C 68,1 — H 3,5 — O 15,1 — N 13,2 — M. G. 317.
- 2) 5-Phenyl-3-[6-Chinoly]-1,2,4-Oxdiazol-5'-Carbonsäure (Chinolin-6-Methenylazoximbenzenyl-4-Carbonensäure). Sm. 203° (*B.* 22, 2766). — IV, 350.
- $C_{18}H_{11}O_3Cl$ 1) Säure (aus Dehydrobenzoylessigsäure). Sm. 150—151° (*Soc.* 47, 262). — II, 1721.
- $C_{18}H_{11}O_4N_3$ 1) 5-Oximido-2,4,6-Triketo-1,3-Diäthylhexahydro-1,3-Diazin + H_2O (Diäthylviolursäure). Sm. bei 90° (107° wasserfrei). NH_3 , NH_4H + 2 H_2O , NaH + 3 H_2O , KH + 2 H_2O (*B.* 30, 1816).
- 2) Dinitroamidochrysen. HCl (*B.* 24, 952). — II, 643.
- $C_{18}H_{11}O_4Cl$ 1) Diphenyläther d. 6-Chlor-2,5-Dioxy-1,4-Benzochinon. Sm. 169 bis 170° (*Ann.* 17, 655). — III, 349.
- $C_{18}H_{11}O_4Br$ 1) Bromhydrocumarin (*Soc.* 51, 67). — II, 2026.
- $C_{18}H_{11}O_5N$ 1) Aethenylacetylamidoalizarin (Acetat d. Oxy-1-Methylanthrachinonoxazol). Sm. 238—240° (*B.* 18, 1666). — III, 424.
- $C_{18}H_{11}O_5Br$ 1) Brompulsivsäure. Sm. 208—209° u. Zers. Ba + 2 H_2O (*A.* 282, 19). — II, 2032.
- $C_{18}H_{11}O_6N_3$ 1) C 59,2 — H 3,0 — O 26,3 — N 11,5 — M. G. 365.
- 2) Trinitro-1,3-Diphenylbenzol. Sm. 200° (*A.* 203, 130). — II, 286.
- 3) Trinitro-1,4-Diphenylbenzol. Sm. 195° (*A.* 203, 207; *J.* 1881, 400). — II, 286.
- $C_{18}H_{11}O_6Br$ 1) Diacetat d. β -Brom-1,2-Dioxy-9,10-Anthrachinon (*J.* 1874, 486). — III, 422.
- $C_{18}H_{11}O_7N$ 1) C 61,2 — H 3,1 — O 31,7 — N 4,0 — M. G. 353.
- 2) Phloreïn (*A.* 178, 93). — II, 1022.
- $C_{18}H_{11}O_7N_3$ 1) C 52,8 — H 2,7 — O 27,4 — N 17,1 — M. G. 409.
- 2) 3-Nitroso-2,5-Di[β -Nitrophenylamido]-1,4-Benzochinon (*B.* 16, 1557). — III, 340.
- $C_{18}H_{11}O_8N$ 1) C 58,5 — H 3,0 — O 34,7 — N 3,8 — M. G. 369.
- 2) Diacetat d. 3-Nitro-1,2-Dioxy-9,10-Anthrachinon. Sm. 218° (*B.* 12, 587). — III, 423.
- 3) Diacetat d. 4-Nitro-1,2-Dioxy-9,10-Anthrachinon. Sm. 194—195,5° (*B.* 24, 1611). — III, 423.
- $C_{18}H_{11}N_2Cl_2$ 1) 10-Chlorphenylat d. 2,8-Dichlor-5,10-Naphtdiazin (Dichlorphenylphenazoniumchlorid). + $AuCl_3$ (*B.* 31, 301). — IV, 1001.
- $C_{18}H_{11}N_2Br$ 1) β -Brom-6,6'-Bichinoly. Sm. 150—155° (*B.* 17, 2449). — IV, 1069.
- $C_{18}H_{13}ON_3$ 1) C 79,4 — H 4,4 — O 5,9 — N 10,3 — M. G. 272.
- 2) 7-Phenylhydrazon-8-Ketoacenaphten. Sm. 179° (*A.* 276, 10). — III, 404.
- 3) 5-Phenyl-3-[2-Naphtyl]-1,2,4-Oxdiazol. Sm. 116° (*B.* 22, 2452). — II, 1155.
- 4) 1-Nitroso-2-[1-Naphtyl]indol. Sm. 248° u. Zers. (*A.* 272, 205). — IV, 465.
- 5) 6-Chinolyäther d. 2-Oxychinolin. Sm. 120°. (2HCl, PtCl₄) (*M.* 17, 670). — IV, 271.

- C₁₈H₁₁ON₂** 5) **8-Chinolyläther d. 2-Oxychinolin.** Sm. 175°. HCl, (2HCl, PtCl₄), (2HCl, PdCl₂ + H₂O) (*M.* 17, 668). — **IV**, 274.
 6) **2-Oxy-2,3'-Bichinoly.** Sm. 208°. K + H₂O, Pb (*M.* 7, 314). — **IV**, 1067.
 7) **2-Oxy-2,5'-Bichinoly.** Sm. 186—187° (*M.* 8, 144). — **IV**, 1068.
 8) **1-Keto-4-[2-Naphtyl]-1,2-Dihydro-2,3-Benzdiazin.** Sm. oberh. 250° (*J. pr.* [2] 51, 155). — **IV**, 1071.
 9) **Aposafranon (Safranon; Benzolindon).** Sm. 248—249° (242°) (*B.* 28, 275, 1716; 29, 1819; 30, 2623; *J. pr.* [2] 46, 572; *A.* 266, 252; 287, 193). — **IV**, 1002.
 10) **Verbindung (aus d. Nitril d. β-Imido-β-Phenylpropionsäure).** Sm. 144° (*J. pr.* [2] 52, 107).
- C₁₈H₁₁O₂N₂** C 75,0 — H 4,2 — O 11,1 — N 9,7 — M. G. 288.
 1) **2-Keto-5-Phenyl-3-[1-Naphtyl]-2,3-Dihydro-1,3,4-Ox Diazol.** Sm. 136° (*B.* 24, 4185). — **IV**, 927.
 2) **α-Dioxy-2,3'-Bichinoly.** Sm. 239°. HCl, 2HCl, (2HCl, PtCl₄) (*M.* 7, 319). — **IV**, 1068.
 3) **β-Dioxy-2,3'-Bichinoly.** Sm. oberh. 305° (*M.* 7, 324). — **IV**, 1068.
 4) **4,5-Diketo-2-Methyl-1-Phenyl-4,5-Dihydro-β-Naphtimidazol.** Sm. 305—306° (*B.* 31, 2410).
 5) **Safranol (Oxybenzolindon).** Sm. oberh. 330°. Na, HCl (*B.* 21, 1593; 28, 273; 29, 369; 30, 401; *A.* 286, 199, 210). — **IV**, 1003.
 6) **Oxyaposafranon (Oxyphenylphenazon).** Sm. 280° u. Zers. (*A.* 262, 252; 290, 301; *B.* 26, 383; 28, 1712, 2287; 29, 1605). — **IV**, 1003.
 7) **Oxybenzolindon** (*A.* 286, 200). — **IV**, 1002.
 8) **Base (aus Triphenyldioazin)** (*B.* 23, 186). — **IV**, 1078.
 9) **Acetat d. 5-Oxy-α-β-Naphtophenazin.** Sm. 217° (*B.* 26, 622). — **IV**, 1057.
 10) **Acetat d. 6-Oxy-α-β-Naphtophenazin.** Sm. 188—189° (*B.* 26, 619). — **IV**, 1054.
 11) **2-Phenyl-α oder β-Naphtimidazol-2'-Carbonsäure.** Zers. bei 280° (*B.* 23, 1044). — **IV**, 1065.
 12) **Nitril d. α-Diphenylketipinsäure.** Sm. 270° u. Zers. K₂ + 2C₂H₆O (*A.* 282, 9, 45). — **II**, 2031.
 13) **Nitril d. β-Acetoxy-β-Phenyl-α-[2-Cyanphenyl]äthen-α-Carbonsäure.** Sm. 211—213° (*B.* 27, 833). — **II**, 1977.
 14) **Phenylamidoimid d. Naphtalin-1,8-Dicarbonensäure.** Sm. 218,5° (*B.* 28, 363). — **IV**, 712.
- C₁₈H₁₁O₂N₄** C 68,4 — H 3,8 — O 10,1 — N 17,7 — M. G. 316.
 1) **5,5'-Diketo-3,3'-Diphenyl-4,5,4',5'-Tetrahydro-4,4'-Bipyrazol (Phenylpyrazolonblau)** (*J. pr.* [2] 52, 37). — **IV**, 906.
- C₁₈H₁₁O₂Cl** 1) **Tetrachlorstyracin** (*A.* 70, 6). — **II**, 1407.
- C₁₈H₁₁O₂N₂** C 71,1 — H 3,9 — O 15,8 — N 9,2 — M. G. 304.
 1) **Dioxyaposafranon.** Sm. oberh. 280° (*B.* 29, 369). — **IV**, 1004.
- C₁₈H₁₁O₂N₄** C 65,1 — H 3,6 — O 14,5 — N 16,8 — M. G. 332.
 1) **9-Nitro-5-Acetylamido-α-β-Naphtophenazin.** Zers. bei 295—300° (*B.* 31, 3092).
 2) **10-Nitro-5-Acetylamido-α-β-Naphtophenazin** (*B.* 31, 3094).
- C₁₈H₁₁O₂Br** 1) **Anhydrid d. Allo-α-Brom-β-Phenylakrylsäure.** Sm. 72—74° (*Ann.* 20, 91).
- C₁₈H₁₁O₄N₂** C 67,5 — H 3,7 — O 20,0 — N 8,7 — M. G. 320.
 1) **2-Dinitro-1,4-Diphenylbenzol.** Sm. 277° (*A.* 203, 125; *J.* 1881, 400). — **II**, 286.
 2) **Indoxin.** Sm. 223° (*B.* 29, 660). — **IV**, 238.
 3) **α-β-Di[1,2-Phthalylamido]äthan (Äthylketimid).** Sm. 232° (*B.* 20, 2225). — **II**, 1807.
 4) **3-Phthalylamido-1-Phenyl-2,5-Diketotetrahydropyrrol (Phthalylasparaginphthalimid).** Sm. 263—264° (*G.* 16, 7). — **II**, 1811.
 5) **Trioxyphenylaposafranon** (*B.* 31, 2437).
 6) **2,5-Diphenyl-1,4-Diazin-3,6-Dicarbonensäure.** Sm. 190°. Ag₂ (*A.* 291, 278). — **IV**, 1050.
 7) **Äthylonimid d. Benzol-1,2-Dicarbonensäure (Diphtaläthylendimid).** Sm. 243—244° (*G.* 24 [1] 405; *B.* 27 [2] 404). — **II**, 1808.

- $C_{15}H_{17}O_4N_2$ 8) Verbindung (aus Äthylendibenzoyldicarbonsäure). Sm. 270° u. Zers. (B. 20, 1492). — II, 2034.
- $C_{15}H_{17}O_4N_2$ 1) C 62,1 — H 3,4 — O 18,4 — N 16,1 — M. G. 348.
- $C_{15}H_{17}O_4N_2$ 1) Phenylyrazolonphenylpyridazoncarbonsäure. Sm. 245° u. Zers. (B. 27, 3454). — IV, 1265.
- $C_{15}H_{17}O_4N_6$ 1) C 57,4 — H 3,2 — O 17,0 — N 22,3 — M. G. 376.
- $C_{15}H_{17}O_4N_6$ 1) Dinitrophenosafranin. HCl (B. 28, 513). — IV, 1278.
- $C_{15}H_{17}O_4Cl_2$ 1) 1,4-Diphenyläther d. 3,6-Dichlor-1,2,4,5-Tetraoxybenzol. Sm. 197 bis 198° (Am. 17, 596).
- $C_{15}H_{17}O_5N_2$ 1) C 64,3 — H 3,6 — O 23,8 — N 8,3 — M. G. 336.
- $C_{15}H_{17}O_5N_2$ 1) Di[Phthalylamidomethyl]äther. Sm. 207° (B. 31, 1232).
- $C_{15}H_{17}O_5N_2$ 2) 1-Nitroso-2,5-Diphenylpyrrol-2',5'-Dicarbonsäure. Sm. 210° (B. 19, 842). — IV, 452.
- $C_{15}H_{17}O_5N_4$ 1) C 56,8 — H 3,2 — O 25,3 — N 14,7 — M. G. 380.
- $C_{15}H_{17}O_5N_4$ 1) 2,4,6-Trinitrotriphenylamin. Sm. 62° (Soc. 59, 717). — II, 342.
- $C_{15}H_{17}O_5N_4$ 2) P-Trinitrotriphenylamin. Sm. 280° (B. 18, 2157; 23, 2539). — II, 342.
- $C_{15}H_{17}O_5N_4$ 3) 2,5-Di[2-Nitrophenylamido]-1,4-Benzochinon. Sm. 305° u. Zers. (B. 23, 2794; C. 1897 [1] 62). — III, 340.
- $C_{15}H_{17}O_6Br_2$ 1) Monacetat d. Dibrombrasilein + $\frac{1}{2}H_2O$ (B. 23, 1428). — III, 655.
- $C_{15}H_{17}O_6Br_2$ 2) P-Dibrom- α,δ -Diketo- α,δ -Diphenylbutan- β,γ -Dicarbonsäure? Sm. 270 bis 272° u. Zers. (B. 10, 2209). — II, 2034.
- $C_{15}H_{17}O_6P_2$ 1) 1,2-Dioxybenzolphosphin. Sd. 202–203° (B. 27, 2569, 2752). — II, 910.
- $C_{15}H_{17}O_7N_2$ 1) C 58,7 — H 3,3 — O 30,4 — N 7,6 — M. G. 368.
- $C_{15}H_{17}O_7N_2$ 1) Oxysesozin (M. 8, 426). — II, 932.
- $C_{15}H_{17}O_7N_2$ 2) Anhydrid d. β -[4-Nitrophenyl]akrylsäure (A. 86, 260). — II, 1415.
- $C_{15}H_{17}O_7N_4$ 1) C 47,8 — H 2,6 — O 24,8 — N 24,8 — M. G. 452.
- $C_{15}H_{17}O_7N_4$ 1) 4-Phenylhydrazido-2,2',4',6'-Nitrosotrinitroazobenzol. Sm. 115 bis 116° (J. pr. [2] 43, 492). — IV, 1359.
- $C_{15}H_{17}O_7N_4$ 2) 3'-Phenylhydrazido-2,4,6,5'-Nitrosotrinitroazobenzol. Zers. bei 130° (J. pr. [2] 44, 460). — IV, 1499.
- $C_{15}H_{17}O_8N_2$ 1) C 56,2 — H 3,1 — O 33,3 — N 7,3 — M. G. 384.
- $C_{15}H_{17}O_8N_2$ 1) Dinitropolyporsäure. Sm. 230° (A. 195, 369). — II, 1907.
- $C_{15}H_{17}O_8N_4$ 1) C 46,2 — H 2,6 — O 27,3 — N 23,9 — M. G. 468.
- $C_{15}H_{17}O_8N_4$ 1) 3'-Phenylhydrazido-2,4,6,5'-Tetrantiroazobenzol. Zers. bei 193° (J. pr. [2] 44, 462). — IV, 1499.
- $C_{15}H_{17}O_8Cl_4$ 1) Tetracetat d. 2,4,6,7-Tetrachlor-1,3,5,8-Tetraoxynaphtalin. Sm. noch nicht bei 250° (A. 286, 49).
- $C_{15}H_{17}O_8P_2$ 1) 1,2-Dioxybenzolphosphinoxid. Sd. oberh. 360° (i. V.) (B. 27, 2571). — II, 910.
- $C_{15}H_{17}O_{11}N_4$ 1) C 45,4 — H 2,5 — O 40,3 — N 11,8 — M. G. 476.
- $C_{15}H_{17}O_{11}N_4$ 1) Diäthyläther d. 1,6-Dioxy-9,10-Anthrachinon (A. 143, 367). — III, 428.
- $C_{15}H_{17}O_{11}N_6$ 1) C 39,1 — H 2,2 — O 43,5 — N 15,2 — M. G. 552.
- $C_{15}H_{17}O_{11}N_6$ 1) Äthylester d. α -Acetyl- $\alpha\alpha$ -Di[2,4,6-Trinitrophenyl]essigsäure. Sm. 205° u. Zers. (B. 23, 2720). — II, 1715.
- $C_{15}H_{17}N_7Cl_2$ 1) 10-Chlorphenylat d. 2-Chlor-5,10-Naphtdiazin (Chlorphenylphenazoniumchlorid) (B. 30, 1830). — IV, 1001.
- $C_{15}H_{17}N_7Br_2$ 1) 6,6'-Bichinolyldibromid (B. 17, 2448). — IV, 1069.
- $C_{15}H_{17}N_7Br_2$ 1) 2,7'-Bichinolyltetrabromid (B. 19, 2473). — IV, 1069.
- $C_{15}H_{17}N_7Br_2$ 2) 6,6'-Bichinolyltetrabromid (B. 17, 1818, 2448). — IV, 1070.
- $C_{15}H_{17}N_7Br_2$ 3) 6,7'-Bichinolyltetrabromid (M. 8, 553). — IV, 1070.
- $C_{15}H_{17}N_7S_2$ 1) 2,2'-Dichinolyldisulfid. Sm. 137° (B. 21, 622). — IV, 291.
- $C_{15}H_{17}N_7Br_2$ 1) 4-Brom-1-Di[4-Bromphenylazo]amidobenzol (Bis-p-Bromdiazobenzol-p-Bromanilid) (B. 28, 831). — IV, 1521.
- $C_{15}H_{13}ON$ 1) C 83,4 — H 5,0 — O 6,2 — N 5,4 — M. G. 259.
- $C_{15}H_{13}ON$ 1) Acetylphenyl- β -Naphthylcarbazol. Sm. 121° (A. 202, 7). — IV, 453.
- $C_{15}H_{13}ON$ 2) Acetylphenylnaphtylcarbazol. Sm. 142° (B. 20, 270). — IV, 453.
- $C_{15}H_{13}ON_3$ 1) C 75,2 — H 4,5 — O 5,6 — N 14,6 — M. G. 287.
- $C_{15}H_{13}ON_3$ 1) 3-Oxy-5-Phenyl-1-[2-Naphtyl]-1,2,4-Triazol. Sm. 274–275°. Ag (Soc. 73, 371). — IV, 1158.
- $C_{15}H_{13}ON_3$ 2) 3-[2-Naphtyl]hydrazon-2-Oxypseudoindol (β -N. d. Isatin). Sm. 234° (B. 28, 2527). — IV, 930.

- $C_{11}H_{11}ON_3$ 3) Safraninon (*s*-Amidobenzolindon). HCl (*B.* 28, 275; 30, 399; *A.* 286, 211). — *IV*, 1173.
 4) 3-Phenylhydrazo- α -Naphtoxindol. Sm. 268—270° (*B.* 21, 118). — *II*, 623.
 5) 3-Acetyl-amido- α - β -Naphtophenazin. Sm. 274° (*B.* 31, 2415).
 6) 5-Acetyl-amido- α - β -Naphtophenazin. Sm. oberh. 370° (*B.* 23, 846; 27, 3342; 29, 2951). — *IV*, 1204.
 7) 6-Acetyl-amido- α - β -Naphtophenazin. Sm. 240° (*B.* 31, 2411).
 8) Nitril d. 2-Oxy-1-[3-Methylphenyl]azonaphtalin-1'-Carbonsäure. Sm. 227° (*B.* 26, 52). — *IV*, 1466.
- $C_{11}H_{11}OBr$
 $C_{11}H_{11}O_2N$ 1) Bromanhydrobishydrindon. Zers. bei 180° (*Soe.* 65, 497). — *III*, 257. C 78,5 — H 4,7 — O 11,6 — N 5,1 — M. G. 275.
 1) *p*-Amido-*p*-Dioxychrysen. *IJ* (*B.* 24, 953). — *II*, 1004.
 2) 3,4-Methylenäther d. α -[3,4-Dioxyphenyl]- β -[2-Chinoly]äthen (Piperonäthylenchinolin). Sm. 155° (*B.* 27, 1977). — *IV*, 455.
 3) 1-[1-Naphtyl]imidomethylbenzol-2-Carbonsäure (*B.* 29, 2035).
 4) 1-[2-Naphtyl]imidomethylbenzol-2-Carbonsäure (*B.* 29, 2038).
 5) 2,6-Diphenylpyridin-4-Carbonsäure. Sm. 275°. Ag (*B.* 20, 2761; 29, 798). — *IV*, 458.
 6) 2-[β -Phenyläthenyl]chinolin-4-Carbonsäure. Sm. 295° u. Zers. Mg, Ag (*B.* 22, 3007). — *IV*, 458.
 7) 2-[β -Phenyläthenyl]chinolin-6-Carbonsäure. Sm. 264° (*B.* 23, 2260). — *IV*, 459.
 8) Lakton d. 1-[1-Naphtyl]amidooxymethylbenzol-2-Carbonsäure. Sm. 155—159° (*B.* 29, 2035).
 9) Lakton d. 1-[2-Naphtyl]amidooxymethylbenzol-2-Carbonsäure (*B.* 29, 2038).
 10) Lakton d. 1-[α -Oxy- β -2-Chinoly]äthyl]benzol-2-Carbonsäure (Monophtalidylchinaldin). Sm. 104°. (2HCl, PtCl₄), (HCl, AuCl₃) (*B.* 29, 188). — *IV*, 369.
- $C_{11}H_{11}O_2N_3$ C 71,3 — H 4,3 — O 10,6 — N 13,8 — M. G. 303.
 1) Acetat d. 4-Oxyphenylazimido- β -Naphtalin. Sm. 164—165° (*B.* 18, 3138). — *IV*, 1576.
 2) *p*-Nitro-2-Methyl-1-[2-Naphtyl]benzimidazol. Sm. 162° (*B.* 21, 592). — *IV*, 877.
 3) Amidoxyposafranon. Sm. 270—280° u. Zers. (*A.* 266, 256). — *IV*, 1179.
 C 65,2 — H 3,9 — O 9,7 — N 21,1 — M. G. 331.
 1) Phenylpyrazolonrubazonsäure. Sm. 124° (127°) u. Zers. (*B.* 27, 784; *J. pr.* [2] 51, 62; [2] 52, 30). — *IV*, 1162, 1490.
- $C_{11}H_{11}O_2Br$ 1) 2-Brom-1,1'-Diketo-2,3,2',3'-Tetrahydro-2,2'-Biinden. Sm. 170 bis 178° u. Zers. (*Soe.* 71, 243; *B.* 29 [2] 870).
 $C_{11}H_{11}O_3N$ C 74,2 — H 4,5 — O 16,5 — N 4,8 — M. G. 291.
 1) 1-Naphtylmonamid d. Benzol-1,2-Dicarbonsäure (1-Naphtylphtalamid-säure). Sm. 183—185° (*G.* 15, 480). — *II*, 1797.
 2) 2-Naphtylmonamid d. Benzol-1,2-Dicarbonsäure (*G.* 15, 480). — *II*, 1797.
 3) Verbindung (aus d. Anhydro-1-[β -Oxyäthenyl]benzol-2-Carbonsäure). Sm. 285°. Ag (*B.* 27, 210). — *II*, 1641.
- $C_{11}H_{11}O_3N_3$ C 62,2 — H 3,7 — O 13,8 — N 20,2 — M. G. 347.
 1) Phenylpyrazolondiketo-hydroxypyridinphenylhydraon. Zers. bei 245°. Phenylhydrazinsalz (*B.* 27, 3453). — *IV*, 727.
- $C_{11}H_{11}O_3Br$ 1) Acetat d. 6-Brom-1-Keto-2-[2-Oxybenzyliden]-2,3-Dihydroinden. Sm. 142° (*B.* 31, 722).
 2) Acetat d. 6-Brom-1-Keto-2-[3-Oxybenzyliden]-2,3-Dihydroinden. Sm. 173—174° (*B.* 31, 722).
 3) Acetat d. 6-Brom-1-Keto-2-[4-Oxybenzyliden]-2,3-Dihydroinden. Sm. 226—227° (*B.* 31, 723).
- $C_{11}H_{11}O_4N$ C 70,4 — H 4,2 — O 20,8 — N 4,6 — M. G. 307.
 1) Berberolin. H₂SO₄ + 2H₂O (*Soe.* 55, 87). — *III*, 503.
 2) 2,5-Diphenylpyrrol-2',5'-Dicarbonsäure. Sm. 230—232° (*B.* 19, 840). — *IV*, 451.
 3) Pulvinaminsäure (Monamid d. Pulvinsäure). Sm. 226° (220°). NH₄, K + 5H₂O, Zn, Ag + H₂O (*B.* 13, 1633; *A.* 219, 14; 282, 23, 49). — *II*, 2031.

- $C_{15}H_{13}O_2N$ 4) **Methylester d. 4-Phenylamido-1,2-Naphtochinon-4²-Carbonsäure.** Sm. 188° (*B.* 27, 3073). — III, 395.
5) **Verbindung** (aus Isomethylenphtalid). Sm. 179—180° (*B.* 17, 2666). — II, 1647.
- $C_{16}H_{15}O_4N_2$ 6) **Verbindung** (aus d. Chinon $C_{14}H_{10}O_2$). Sm. 202—203° u. Zers. (*A.* 293, 112).
C 64,5 — H 3,9 — O 19,1 — N 12,5 — M. G. 335.
1) **p-Dinitrotriphenylamin.** Sm. 206—207° (*B.* 23, 2538). — II, 342.
2) **3-Nitro-2,5-Di[Phenylamido]-1,4-Benzochinon.** Sm. 260° u. Zers. (*B.* 28, 1387). — III, 343.
3) **Acetat d. 2-[4-Nitrophenyl]azo-1-Oxynaphtalin.** Sm. 179,5° (*B.* 28, 851, 1125). — IV, 1430.
4) **Acetat d. 4-[4-Nitrophenyl]azo-1-Oxynaphtalin.** Sm. 165—166° (*B.* 28, 851, 1125). — IV, 1430.
5) **Acetat d. 1-[3-Nitrophenyl]azo-2-Oxynaphtalin.** Sm. 161—162° (*Soc.* 53, 465). — IV, 1430.
6) **Acetat d. 1-[4-Nitrophenyl]azo-2-Oxynaphtalin.** Sm. 192—193° (*Soc.* 53, 466). — IV, 1431.
- $C_{15}H_{13}O_2Br$ 1) **Bromtriresorcin.** $HBr + H_2O$ (*A.* 289, 67).
 $C_{15}H_{13}O_2N$ C 66,9 — H 4,0 — O 24,8 — N 4,3 — M. G. 323.
1) **Pulvinhydroxamsäure.** Sm. 194° u. Zers. Anilinsalz (*A.* 282, 34). — II, 2031.
2) **Verbindung** (aus Diphtalylsäure). Sm. 150—152° (*A.* 242, 231). — II, 2029.
- $C_{15}H_{13}O_2N_3$ C 61,6 — H 3,7 — O 22,8 — N 11,9 — M. G. 351.
1) **Tartrandibenzamid** (*A.* 232, 165). — II, 1267.
- $C_{16}H_{15}O_6N$ C 63,7 — H 3,8 — O 28,3 — N 4,1 — M. G. 339.
1) **Säure** (aus Corydinsäure) + 2 H_2O . Pb (*C.* 1897 [2] 133).
2) **Monacetat d. 3-Acetylamido-9,10-Anthrachinon.** Sm. 268—271° u. Zers. (*B.* 18, 1668). — III, 424.
- $C_{17}H_{19}O_6Cl$ 1) **Triphloroglucinchlorid** + 2 H_2O (*A.* 276, 333). — II, 1020.
 $C_{16}H_{13}O_6Br$ 2) **Acetat d. Bromthebaolchinon.** Sm. 310° (*B.* 30, 1391).
 $C_{16}H_{13}O_6N$ C 60,8 — H 3,7 — O 31,6 — N 3,9 — M. G. 355.
1) **Aristinsäure.** Sm. 275°. K + 2 H_2O , Ca + 4 H_2O , Ba + 2 H_2O , Pb + 2 H_2O , Cu + 3 H_2O , Ag (*B.* 29 [2] 38). — III, 780.
2) **Aristidinsäure.** Zers. bei 260° (*B.* 29 [2] 38). — III, 780.
- $C_{15}H_{13}O_7N_3$ C 56,4 — H 3,4 — O 29,2 — N 11,0 — M. G. 383.
1) **2,4,6-Trinitrophenyläther d. 2-Oxy-1,4-Dimethylnaphtalin.** Sm. 189—190° (*B.* 31, 1679).
- $C_{15}H_{13}N_2Cl$ 1) **Chlorphenylat d. 5,10-Naphtdiazin** (Phenylphenazoniumchlorid) + $FeCl_3$, 2 + $PtCl_4$, + $AuCl_3$ (*B.* 29, 2316, 2968; 30, 2622). — IV, 1001.
- $C_{15}H_{11}N_3S_2$ 5) **5-Phenylamido-2-Thiocarbonyl-3-[1-Naphtyl]-2,3-Dihydro-1,3,4-Thiodiazol.** Sm. 255° u. Zers. (*B.* 24, 4192). — IV, 927.
- $C_{18}H_{13}N_3Cl_2$ 1) **Diazophenosafraninchlorid.** + 2 $AuCl_3$ (*B.* 16, 469). — IV, 1284.
 $C_{15}H_{14}ON_3$ C 78,8 — H 5,1 — O 5,8 — N 10,2 — M. G. 274.
1) **2-Phenylamido-4-Phenylimido-1-Keto-1,4-Dihydrobenzol** (Anilidochinonphenylimid). Sm. 125° (*B.* 26, 385). — IV, 838.
2) **4'-Oxy-4-Phenylazobenzol.** Sm. 240° (*B.* 31, 482; *A.* 300, 254). — IV, 1415.
3) **3-[2-Naphtyl]amido-1,4-Benzoxazin.** Sm. 154—155° (*Am.* 20, 567).
4) **Phenyloxyhydrat d. 5,10-Naphtdiazin** (Phenylphenazoniumhydrat). Salze, siehe diese. Chlorid, Nitrat, Bichromat (*B.* 29, 2316, 2968; 30, 2622). — IV, 1001.
5) **Aethyläther d. 9 oder 10-Oxy- α - β -Naphtophenazin.** Sm. 186—187° (*B.* 25, 496). — IV, 1055.
6) **Aethylphenonaphtazon.** Sm. 192—193° (*A.* 290, 300). — IV, 1055.
7) **Aethylrosindon.** Sm. 180° (*C.* 1898 [2] 920).
8) **ms-Aethylisosindon.** Sm. 178° (*B.* 29, 2759; 31, 2478). — IV, 1055.
9) **N-Acetyldihydro- α -Naphtinolin.** Sm. 174° (*B.* 27, 2258). — IV, 1039.
- 10) **Nitril d. β -Aethoxyl- β -Phenyl- α -[2-Cyanphenyl]äthen- α -Carbonsäure.** Sm. 115—116° (*B.* 27, 834). — II, 1977.
 $C_{15}H_{11}ON_3$ C 71,5 — H 4,6 — O 5,3 — N 18,6 — M. G. 302.
1) **4-Phenylnitrosamidoazobenzol.** Sm. 119,5° (*B.* 12, 261). — IV, 1356.
2) **4-Oxy-1,3-Di[Phenylazo]benzol.** Sm. 131° (*A.* 137, 87; 263, 237; 288, 242; *B.* 9, 628; *Soc.* 37, 572). — IV, 1415.

- $C_{15}H_{11}ON_4$ 3) 5-Oxy-1,3-Di[Phenylazo]benzol. Sm. 176—177° (B. 22, 2193). — IV, 1416.
 4) Acetylderivat d. Verb. $C_{16}H_{13}N_4$. Sm. 137—139° (B. 20, 2900). — IV, 1542.
 5) Monoacetylderivat d. Base $C_{16}H_{12}N_4$ (aus d. Verb. $C_{16}H_9O_2N_4$). Sm. 260—261° (A. 255, 353). — IV, 1171.
- $C_{15}H_{11}ON_6$ C 65,5 — H 4,2 — O 4,8 — N 25,4 — M. G. 330.
 1) 4-[2-Amido-1-Naphtyl]azo-3-Oxy-1-Phenyl-1,2,5-Triazol (A. 295, 160). — IV, 1235.
- $C_{18}H_{14}O_2N_2$ C 74,5 — H 4,8 — O 11,0 — N 9,7 — M. G. 290.
 1) *p*-Nitrotriphenylamin. Sm. 139—140° (B. 23, 2537; 31, 2988). — II, 342.
 2) 4-Nitroso-1-Phenylacetylamidonaphtalin. Sm. 81° (A. 286, 182).
 3) *s*-Benzoyl-1-Naphtylharnstoff. Sm. 243—243,5° (Soc. 71, 1202).
 4) *s*-Benzoyl-2-Naphtylharnstoff. Sm. 219—220° (Soc. 71, 1202).
 5) Benzoyl-2-Naphtenylamidoxim. Sm. 179° (B. 22, 2451). — II, 1455.
 6) 2,5-Di[Phenylamido]-1,4-Benzochinon (J. 1863, 415; B. 5, 851; 16, 1556; 21, 2618; 22, 1655; A. 210, 178; 228, 331). — III, 340.
 7) 5-Phenylamido-2-Oxy-1,4-Benzochinonphenylimid (B. 18, 788). — III, 347.
 8) Acetat d. 2-Oxy-1-Phenylazonaphtalin. Sm. 117° (G. 15, 407; Soc. 53, 466; 55, 117; 63, 930; B. 24, 2306). — IV, 1428.
 9) Acetat d. 4-Oxy-1-Phenylazonaphtalin. Sm. 128° (B. 17, 3030). — IV, 1427.
 10) Acetat d. 1-Oxy-2-Phenylazonaphtalin. Sm. 120—121° (Soc. 65, 810). — IV, 1429.
 11) 2-Oxy-1-[4-Acetylphenyl]azonaphtalin (B. 18, 2695). — IV, 1478.
 12) 3,5-Diketo-4- γ -Phenylallyliden]-1-Phenyltetrahydropyrazol. Sm. 252° (B. 30, 1018). — IV, 992.
 13) Benzoesäure d. 6-Oxy-4-Methyl-2-Phenyl-1,3-Diazin. Sm. 150° (PINNER, Inaidoäther 243). — IV, 957.
 14) Acetylpseudoisatin- β -Indogenid. Sm. 197—198° (B. 16, 2200). — II, 1615.
 15) Dimethylindirubin (B. 28, 2526).
 16) Oxyyaposafanon. Sm. 280° u. Zers. (A. 266, 252; B. 28, 2287).
 17) Dimethylamidophenonaphtoxazon. Sm. 244°. HCl (A. 289, 123). — IV, 1061.
 18) Muscarin (B. 25, 3003). — IV, 1060.
 19) Methyläster d. 2,3-Diphenyl-1,4-Diazin-5-Carbonsäure. Sm. 115 bis 116° (Soc. 63, 1306). — IV, 1049.
 20) Nitril d. β -Benzoylimido- α -Benzoylbuttersäure. Sm. 158° (J. pr. [2] 47, 112). — II, 1195.
 21) Verbindung (aus Indirubin). Sm. 204° (B. 28, 2525).
 22) Verbindung (aus Diacetonitril u. Salicylaldehyd). Sm. 179—180° (J. pr. [2] 56, 139).
- $C_{18}H_{11}O_2N_4$ C 67,9 — H 4,4 — O 10,1 — N 17,6 — M. G. 318.
 1) 1,3-Di[Phenylnitrosamido]benzol. Sm. 102° (B. 16, 2798). — IV, 572.
 2) 1,4-Di[Phenylnitrosamido]benzol. Sm. 120° u. Zers. (M. 8, 479). — IV, 585.
 3) 3-Nitro-4'-Phenylamidoazobenzol. Sm. 136—137° (Soc. 45, 118). — IV, 1359.
 4) 4-Nitro-4'-Phenylamidoazobenzol. Sm. 151° (Soc. 43, 440; 45, 119). — IV, 1359.
 5) 1,4-Di[4-Oxyphenylazo]benzol. Sm. 205—207° (Soc. 47, 659). — IV, 1416.
 6) *p*-Di 4-Oxyphenylazo]benzol (B. 15, 3021). — IV, 1416.
 7) 1-Phenylazo-4-[*m*-Dioxyphenylazo]benzol. Sm. 183—184° (B. 15, 2818). — IV, 1444.
 8) isom. 1-Phenylazo-4-[*m*-Dioxyphenylazo]benzol. Sm. 215° (B. 15, 2818). — IV, 1444.
 9) 2,4-Di[Phenylazo]-1,3-Dioxybenzol. Sm. 220—222° (B. 17, 880; 21, 3118). — IV, 1443.
 10) 4,6-Di[Phenylazo]-1,3-Dioxybenzol. Sm. 213—215° (217°) (B. 15, 24, 2516; 21, 3117). — IV, 1443.

- $C_{15}H_{11}O_2N_4$ 1) **?-Di[Phenylazo]-1,3-Dioxybenzol**. Sm. 220° (*B.* 15, 24, 2817; 21, 3117). — **IV**, 1443.
- 2) **3,3'-Bi-5-Keto-1-Phenyl-4,5-Dihydropyrazol**. Sm. 275° u. Zers. (*B.* 28, 68). — **IV**, 722.
- 3) **3,5'-Diphenyl-3',5'-Aethylenbi[1,2,4-Oxiazol]**. Sm. 158—159° (*B.* 22, 2960). — **II**, 1210.
- 4) **3-Methyl-2-[4-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin**. Sm. 107°. + C_2H_2O (*Soc.* 59, 697). — **IV**, 1396.
- 5) **α -Imidobenzylamid d. 6-Oxy-2-Phenyl-1,3-Diazin-4-Carbonsäure**. Sm. 263° u. Zers. (*B.* 22, 2615). — **IV**, 988.
- 6) **Benzylidenhydrazid d. 5-Keto-4-Benzyliden-4,5-Dihydropyrazol-3-Carbonsäure**. Sm. noch nicht bei 250° (*J. pr.* [2] 51, 57). — **IV**, 987.
C 62,4 — H 4,0 — O 9,2 — N 24,3 — M. G. 346.
- $C_{18}H_{14}O_2N_6$ 1) **Benzylidenhydrazid d. 4-Benzylidenhydrazon-5-Keto-4,5-Dihydropyrazol-3-Carbonsäure**. Sm. 217,5° (*J. pr.* [2] 51, 58). — **IV**, 535.
- $C_{18}H_{14}O_2Cl_2$ 1) **Chlorid d. α -Truxillsäure**. Sm. 125° (*B.* 22, 681). — **II**, 1901.
- 2) **Chlorid d. β -Truxillsäure**. Sm. 96° (*B.* 22, 2260). — **II**, 1902.
- 3) **Chlorid d. γ -Truxillsäure**. Sm. 140° (*B.* 22, 682). — **II**, 1893.
- $C_{18}H_{14}O_2Br_2$ 1) **Dibromretenchinon**. Sm. 250—252° (*A.* 229, 120). — **III**, 458.
- $C_{18}H_{14}O_2N_2$ 1) **2-Naphtylamidomethyl-3-Nitrophenylketon**. Sm. 179° (*B.* 30, 575).
2) **3-Acetylamido-4-Phenylamido-1,2-Naphtochinon**. Sm. 308° (*B.* 31, 2410).
3) **6-Acetylamido-4-Phenylamido-1,2-Naphtochinon**. Sm. 282° u. Zers. (*B.* 31, 2416).
4) **p-Acetylamido-4-Phenylimido-2-Oxy-1-Keto-1,4-Dihydronaphtalin**. Sm. 215° (*B.* 15, 286). — **III**, 393.
5) **Monacetat d. 1-Phenylazo-2,4-Dioxynaphtalin**. Sm. 173° (*A.* 286, 87; *B.* 17, 1812). — **IV**, 1449.
6) **Monacetat d. 1-Phenylazo-2,7-Dioxynaphtalin**. Sm. 181° (*B.* 23, 524). — **IV**, 1450.
7) **Monacetat d. 1-Phenylazo-3,4-Dioxynaphtalin**. Sm. 133° (*A.* 286, 83). — **IV**, 1449.
8) **Monamid d. s-Diphenylketipinsäuremononitril**. Sm. 199—200° u. Zers. (*A.* 282, 45). — **II**, 2032.
9) **$\alpha\beta$ -Phenylimid- γ -Phenylamid d. Propen- $\alpha\beta\gamma$ -Tricarbonsäure**. Sm. 250—252° (*A.* 98, 80; *Soc.* 55, 238; *Am.* 9, 192). — **II**, 423.
C 64,7 — H 4,2 — O 14,4 — N 16,7 — M. G. 334.
- $C_{18}H_{14}O_2N_4$ 1) **3,5-Di[Phenylnitrosamido]-1-Oxybenzol** (*G.* 20, 343). — **II**, 724.
- 2) **2,4-Di[Phenylazo]-1,3,5-Trioxybenzol**. Sm. 228—230° (*B.* 12, 226; *Soc.* 71, 190). — **IV**, 1450.
- 3) **2-Acetylamido-1-[2-Nitrophenyl]azonaphtalin**. Sm. 154° (*Soc.* 59, 373). — **IV**, 1394.
- 4) **2-Acetylamido-1-[3-Nitrophenyl]azonaphtalin**. Sm. 192° (*Soc.* 59, 377). — **IV**, 1395.
- 5) **2-Acetylamido-1-[4-Nitrophenyl]azonaphtalin**. Sm. 227—228° (*Soc.* 59, 376). — **IV**, 1395.
- 6) **2-Oxy-1-[3-Methylphenyl]azonaphtalin-1^c-Carbonsäure**. Sm. 283° u. Zers. (*B.* 26, 52). — **IV**, 1466.
- 7) **4-Oxy-1-[3-Methylphenyl]azonaphtalin-1^c-Carbonsäure**. Sm. 270° u. Zers. (*B.* 26, 54). — **IV**, 1466.
- 8) **Verbindung (aus Anilin u. Trichlorcitrazinamid)** (*B.* 21, 1248; 27, 579). — **II**, 423.
- $C_{18}H_{14}O_2N_2$ C 67,1 — H 4,3 — O 19,9 — N 8,7 — M. G. 322.
- 1) **2,4-Di[Benzoylamido]-1,3-Dioxy-R-Buten + $\frac{1}{2}H_2O$ (Dibenzamidodioxytetrol)**. Sm. 137—138° (wasserfrei). Ca, Pb (*B.* 21, 3325; 22, 115). — **II**, 1185.
- 2) **Dimethyläther d. Dioxyindigo**. subl. (*B.* 22, 2351). — **II**, 1621.
- 3) **1,5-Di[Acetylamido]-9,10-Anthrachinon** (*B.* 16, 368). — **III**, 414.
- 4) **2,3,5,6-Tetraketo-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin**. Sm. 274°. + 2 Aceton (*J. pr.* [2] 47, 188). — **II**, 467.
- 5) **β -Naphtolazoanissäure + $\frac{1}{2}H_2O$. Ba + $4\frac{1}{2}H_2O$ (*B.* 14, 2039). — **IV**, 1471.**

- $C_{15}H_{14}O_4N_2$ 6) Diacetat d. 9,10-Dioximido-9,10-Dihydrophenanthren. Sm. 184° (B. 22, 1993). — III, 446.
7) Verbindung (aus 5-Keto-1-Aethyl-2-Benzyliden-3,4-Diphenyl-2,5-Dihydro-pyrrrol). Sm. 151° (B. 24, 3874). — II, 1728.
8) Verbindung (aus Cymol). Sm. 125° (A. 172, 314; B. 6, 937; 20, 3361; R. 6, 63). — III, 300.
9) Verbindung (aus 1,4-Benzochinon u. 4-Amido-1-Oxybenzol). Sm. noch nicht bei 290° (A. 226, 70). — III, 346.
- $C_{15}H_{14}O_4N_4$ 1) 1-Phenylamido-2-[β -Dinitrophenyl]amidobenzol. Sm. 170–171° (J. pr. [2] 46, 572). — IV, 556.
2) 4,6-Dinitro-1,3-Di[Phenylamido]benzol. Sm. 186° (B. 30, 1668). — IV, 572.
3) 4-Amido-4'-[2,4-Dinitrophenyl]amidobiphenyl. Sm. 245° (B. 9, 981). — IV, 963.
4) 1,4-Dibenzoyl-3,6-Diamido-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin (Hippuroflavindiamid). Sm. 237–238° (A. 287, 94).
5) 4-[2-Nitrophenyl]azo-1-Naphtylamidoessigsäure. Sm. 94–96° u. Zers. K. HCl (B. 25, 1607). — IV, 1398.
6) 4-[3-Nitrophenyl]azo-1-Naphtylamidoessigsäure. Sm. 139° u. Zers. K. HCl (B. 25, 1609). — IV, 1398.
7) 4-[4-Nitrophenyl]azo-1-Naphtylamidoessigsäure. Sm. 125° u. Zers. K. HCl (B. 25, 1606). — IV, 1398.
- $C_{15}H_{14}O_4N_6$ C 57,1 — H 3,7 — O 16,9 — N 22,2 — M. G. 378.
1) Dinitrophenylphenylenblau (B. 28, 512). — IV, 1278.
- $C_{15}H_{14}O_4Cl$ 1) Tetrachlorhydroxyporsäure. Sm. 108° (A. 195, 372). — II, 1907.
- $C_{15}H_{14}O_4Br$ 1) Acetat d. Dibromthebaol. Sm. 179° (B. 30, 1389).
- $C_{15}H_{14}O_4S$ 1) Säure (aus Thiodiglykolsäure u. Benzaldehyd). $N_2 + 2\frac{1}{2}H_2O$ (B. 18, 3242). — II, 1638.
- $C_{15}H_{14}O_4S_2$ 1) 1,3-Di[Phenylsulfon]benzol. Sm. 190–191° (B. 19, 2421). — II, 814.
2) Phenyläthendisulfiddicarbonsäure (Disulfidzimmtesäure). Sm. 179°. Na_2 (M. 8, 351). — II, 1638.
- $C_{15}H_{14}O_4N_2$ C 63,9 — H 4,1 — O 23,7 — N 8,3 — M. G. 338.
1) Rhodizocanlid (B. 21, 1855). — III, 355.
- $C_{15}H_{14}O_4N_4$ C 59,0 — H 3,8 — O 21,9 — N 15,3 — M. G. 366.
1) Aethylester d. α -[N-Benzoyl-3-Nitrophenylhydrazon]- α -Cyanessigsäure. Sm. 174–175° (J. pr. [2] 51, 223). — IV, 1456.
2) Verbindung (aus Äpfelsäurebiphenylhydrazid). Sm. 199° (B. 24, 4193). — IV, 712.
- $C_{15}H_{14}O_4Br_2$ 1) 2-Acetat-3,4-Methylenäther d. α,β -Dibrom- γ -Keto- γ -[2-Oxyphenyl]- α -[3,4-Dioxyphenyl]propan. Sm. 113–114° (B. 32, 316).
- $C_{15}H_{14}O_4S_2$ 1) Phenylester d. Diphenylsulfon-3-Sulfonsäure. Sm. 106° (B. 19, 2421). — II, 814.
2) Verbindung (aus Benzolsulfonsäurechlorid u. Oxybenzol). Sm. 123° (G. II, 66). — II, 668.
- $C_{15}H_{14}O_4N_2$ C 61,0 — H 3,9 — O 27,1 — N 7,9 — M. G. 354.
1) Dimethyläther d. 4,5-Di[4-Oxybenzoyl]-1,2,3,6-Dioxidiazol (Dianisylidimitrosacyl). Sm. 139° (B. 23, 1202; R. 10, 215). — III, 134.
- $C_{15}H_{14}O_4N_4$ C 56,6 — H 3,7 — O 25,1 — N 14,6 — M. G. 382.
1) Verbindung (aus Weinsäurediphenylhydrazid). Sm. 182° (B. 24, 4193). — IV, 721.
- $C_{15}H_{14}O_4Br_2$ 1) Monacetat d. Dibrombrasilin. Sm. 170° (B. 27, 528). — III, 653.
- $C_{15}H_{14}O_4S_2$ 1) 1,3-Phenylenester d. Benzolsulfonsäure. Sm. 69–70° (B. 24, 417). — II, 918.
2) 1,4-Phenylenester d. Benzolsulfonsäure. Sm. 120–121° (B. 24, 418). — II, 941.
- $C_{15}H_{14}O_4N_2$ C 58,4 — H 3,8 — O 30,3 — N 7,5 — M. G. 370.
1) Tartrandibenzamsäure. Cu_3 (A. 232, 160). — II, 1267.
2) Dimethylester d. Azoxybenzol-4,4'-Diketocarbonsäure. Sm. 173 bis 175° (B. 22, 206). — IV, 1345.
- $C_{15}H_{14}O_4N_2$ C 56,0 — H 3,6 — O 33,2 — N 7,2 — M. G. 386.
1) Dinitro- β -Cocensäure. Sm. 252° (A. 271, 205). — II, 1404.
2) α -Dinitro- α -Truxillsäure. Sm. 228–229° (B. 24, 2589). — II, 1901.

- $C_{12}H_{13}O_2N$ C 78,0 — H 5,4 — O 11,5 — N 5,1 — M. G. 277.
- 1) **Methyläther d. 4-[4-Methylphenyl]imido-2-Oxy-1-Keto-1,4-Dihydro-naphthalin.** Sm. 150° (B. 15, 1970). — III, 394.
 - 2) **Aethyläther d. 4-Phenylimido-2-Oxy-1-Keto-1,4-Dihydro-naphthalin.** Sm. 104° (B. 14, 1496; 15, 282). — III, 393.
 - 3) β -[2-Naphtyl]äther d. α -Oximido- β -Oxy- α -Phenyläthan. Sm. 144 bis 145° (B. 28, 3032). — III, 133.
 - 4) **Acetat d. 7-Phenylamido-2-Oxynaphtalin.** Sm. 162° (B. 26, 3088). — II, 886.
 - 5) **9-Diacetylamidoanthracen.** Sm. 159° (B. 23, 2525). — II, 640.
 - 6) **P-Aethylphenylamido-1,2-Naphtochinon?** Sm. 165° (B. 15, 691). — III, 393.
 - 7) **2-Aethylphenylamido-1,4-Naphtochinon.** Sm. 155°. HCl (B. 15, 1810). — III, 376.
 - 8) **β -Oxy- β -Phenyl-1,4-Naphtochinonäthylimid.** Sm. 129—130° (A. 226, 40). — III, 460.
 - 9) **Methyläther d. 2-[β -Phenyläthenyl]-5-[4-Oxyphenyl]oxazol.** Sm. 99 bis 100°. HCl (B. 29, 2102). — IV, 456.
 - 10) **2,6-Dioxy-4-Phenyl-3-Benzylpyridin.** Sm. 175° (See. 75, 251).
 - 11) **α -[3-Methoxy-4-Oxyphenyl]- β -2-Chinoly]äthen (Vanillothylen-chinolin).** Sm. 182°. HCl, + 2 $\frac{1}{2}$ H₂O, (2HCl, PtCl₄) (B. 27, 1975). — IV, 454.
 - 12) **Acetat d. 4-Methyl-2-[4-Oxyphenyl]chinolin (A. d. Flavenol).** Sm. 128° (B. 16, 60). — IV, 436.
 - 13) **Acetat d. 2-[4-Oxy-3-Methylphenyl]chinolin.** Sm. 106° (M. 9, 106). — IV, 434.
 - 14) **Aethylester d. 2-Phenylchinolin-4-Carbonsäure.** Sm. 50—51°. (2HCl, PtCl₄), Plkrat (J. pr. [2] 58, 297).
 - 15) **Oxim d. Verbindung C₁₂H₁₁O₂.** Sm. 192° u. Zers. (B. 28, 1210). — III, 325.
 - 16) **2-Methyl-1,5-Diphenylpyrrol-3-Carbonsäure.** Sm. 226° (B. 18, 2595). — IV, 357.
 - 17) **2,6-Diphenyl-1,4-Dihydropyridin-4-Carbonsäure.** NH₃ (B. 20, 2760). — II, 1901.
 - 18) **3-Crotonyl- β -Naphtochinolin-1-Carbonsäure + H₂O.** Sm. 226° (wasserfrei), Ag (B. 27, 2024). — IV, 450.
 - 19) **Phenylester d. Diphenylamidoameisensäure.** Sm. 103—104° (B. 20, 2122). — II, 663.
 - 20) **Benzylester d. 2-Methylchinolin-3-Carbonsäure.** Sm. 82° (A. 282, 124). — IV, 353.
 - 21) **2-Naphtylester d. 2-Methylphenylamidoameisensäure.** Sm. 149° (B. 25, 1087). — II, 878.
 - 22) **Aethylimid d. $\alpha\beta$ -Diphenyläthen- $\alpha\beta$ -Dicarbonsäure (A. d. Diphenylmaleinsäure).** Sm. 108° (B. 26, 2478). — II, 1897.
 - 23) **Aethylimid d. $\alpha\beta$ -Diphenyläthen- α, α -2-Dicarbonsäure (Benzalhomophtaläthylimid).** Sm. 97° (B. 20, 2498). — III, 36.
 - 24) **Phenylamid d. 2-Oxynaphtalinmethyläther-1-Carbonsäure.** Sm. 169° (J. pr [2] 41, 317). — II, 1690.
 - 25) **Phenylamid d. 4-Oxynaphtalinmethyläther-1-Carbonsäure.** Sm. 218° (J. pr. [2] 41, 316). — II, 1689.
 - 26) **Methylphenylamid d. 3-Oxynaphtalin-2-Carbonsäure.** Sm. 150° (B. 25, 3635). — II, 1691.
 - 27) **1-Naphtylamid d. α -Oxyphenyleisigsäure.** Sm. 140° (A. 279, 129). — II, 1552.
 - 28) **2-Naphtylamid d. α -Oxyphenyleisigsäure.** Sm. 189° (A. 279, 129). — II, 1552.
 - 29) **Verbindung (aus Benzoylessigsäurealdehyd).** Sm. 219—220° (B. 21, 1138). — III, 95.
- $C_{12}H_{11}O_2N_3$ C 70,8 — H 4,9 — O 10,5 — N 13,8 — M. G. 305.
- 1) **4-Acetylamido-1-[3-Oxyphenyl]azonaphtalin.** Sm. 232—235° (B. 27 [2] 596). — IV, 1415.
 - 2) **2-Phenylazo-4-Acetylamido-1-Oxynaphtalin.** Sm. 267—268° (B. 29, 2949). — IV, 1431.

- $C_8H_7O_2N$ 3 2-Oxyphenylacetylhydrazimido- β -Naphthalin. Sm. 196° (B. 18, 3197). — IV, 1576.
- 4 4-Oxyphenylacetylhydrazimido- β -Naphthalin. Sm. 218° (B. 18, 3199). — IV, 1576.
- 5 α -2-Naphtyl- β -Phenylguanidin-3-Carbonsäure. HCl B. 16, 389. — II, 1269.
- 6 4-Phenylazo-1-Naphthylamidoessigsäure. Sm. 133° u. Zers. HCl K (B. 24, 242). — IV, 139.
- 7 Methyl ester d. 5- β -Phenyläthanyl-1-Phenyl-1,2,4-Triazol-3-Carbonsäure. Sm. 159°. — IV, 1176.
C 64,9 — H 4,5 — O 9,6 — N 21,0 — M. G. 353.
- $C_8H_7O_2Br$ 1) Diamid d. 2-Methyl-4,6-Diphenyl-1,3,5-Triazin-4',6'-Dicarbonsäure? (B. 17, 1434; FISHER, Imidogatter 1954 — IV, 1262)
- $C_8H_7O_2P$ 1) Phenylester d. Diphenylphosphinsäure. Sm. 135—137°; Sd. oberh. 500° u. Zers. (B. 19, 2113). — IV, 1657.
C 73,7 — H 5,1 — O 16,4 — N 4,8 — M. G. 293.
- $C_8H_7O_2N$ 1) α -Phenoldichroin (B. 7, 247, *Soe.*, 1066; 17, 1877. — III, 678).
- 2) Disimamthydroxamsäure. Sm. 152°. Na, K, Pb, Ag (L. 178, 219). — II, 1498.
- 3) 4-Oxy-5-Keto-3-Acetyl-1,2-Diphenyl-2,5-Dihydropyrrol. Zers. bei 239—240° (B. 31, 1397).
- 4) Benzoat d. α -Oxy- α -2-Furanyl- β -2-Pyridyläthan-Benzoylalkylfurylalken). Sm. 47—49°. (HCl, HgCl₂, (2HCl, PCl₅) (B. 23, 2935). — IV, 333.
- 5) γ -Cyan- α -Keto- α - δ -Diphenylbutan- γ -Carbonsäure. Sm. 178°. Ba + H₂O (B. 31, 15, 777).
- 6) Benzylbetailin d. Chininsäure. Sm. 156° (A. 276, 270). — IV, 362.
- 7) 1,4-Anhydrid d. 6-Methoxyl-1-Methyl-2-Phenylchinolinammonium-4-Carbonsäure + H₂O. Sm. 218° u. Zers. (A. 282, 57). — IV, 447.
- 8) Methyl ester d. 6-Methoxyl-2-Phenylchinolin-4-Carbonsäure. Sm. 111° (A. 282, 106). — IV, 447.
- 9) Aethylester d. 4-Oxy-2-Phenylchinolin-3-Carbonsäure. Sm. 262° (B. 18, 2633; 19, 1462). — IV, 446.
- 10) 3-Oxy-1,2,3,4-Tetrahydro-2-Naphtylimid d. Benzol-1,2-Dicarbonsäure. Sm. 217—218,5° (A. 288, 132).
- 11) Oxim d. Verbindung C₁₁H₁₁O₂ (aus d. Verbind. C₁₁H₁₁O₂), α -Modif. Sm. 185° u. Zers.; β -Modif. Sm. 179—180° u. Zers. (B. 28, 1206, 1210). — III, 325.
- 12) Verbindung (aus Diphenacylcyanessigsäure) = (C₁₁H₁₁O₂N)₂. Sm. 170° u. Zers. (B. 31, 15, 1013).
C 67,3 — H 4,7 — O 14,9 — N 13,1 — M. G. 321.
- $C_{11}H_{11}O_2N_3$ 1) 4-Nitro-2-Acetylamido-1-[2-Naphtyl]amidobenzol. Sm. 206° u. Zers. (B. 21, 591). — IV, 558.
- 2) Aethyläther d. 1-Oxy-2-Phenylazonaphtalin. Sm. 151—152° (*Soe.* 65, 841). — IV, 1429.
- 3) Aethylester d. Phenylbenzoylhydrazoncyanessigsäure. Sm. 158° (*J. pr.* [2] 49, 331). — IV, 1455.
- $C_{11}H_{11}O_2Br$ 1) Acetat d. γ -Keto- γ -(4-Methylphenyl)- α -(5-Brom-2-Oxyphenyl)-propen. Sm. 153° (B. 31, 714 Anm.).
- $C_{11}H_{11}O_2Br_2$ 1) Tribrompyroguaajacin. Sm. 172° (M. 1, 601). — III, 645.
- $C_{11}H_{11}O_2P$ 1) Triphenylphosphit. Sd. 220°₁₁ (A. 218, 96; 239, 311). — II, 659.
- 2) Diphenylester d. Phenylphosphinsäure. Sm. 63,5° (A. 181, 338). — IV, 1651.
- 3) Triphenylester d. Phosphorigen Säure (B. 27, 493).
- $C_{11}H_{11}O_2As$ 1) Triphenylester d. Arsenignsäure. Sd. 275°₁₁ (B. 28, 621).
C 69,9 — H 4,8 — O 20,7 — N 4,5 — M. G. 309.
- $C_{11}H_{11}O_2N$ 1) Phenoloxychroin + H₂O (B. 17, 1878). — III, 679.
- 2) 5-Dimethyl-1-(1-Naphtyl)pyrrol-3,4-Dicarbonsäure. Zers. bei 244°. K₂, Ba, Ag (A. 236, 307). — IV, 92.
- 3) 2,5-Dimethyl-1-[2-Naphtyl]pyrrol-3,4-Dicarbonsäure. Zers. oberh. 299°. Ba (B. 18, 304; A. 236, 306). — IV, 92.
- 4) β ,2'-Imid d. α , β -Diphenylpropan- β ,2,2'-Tricarbonsäure. Sm. 233 bis 236° (B. 27, 2499) — II, 2927.

- C₁₅H₁₅O₂N** 5) Benzylimid d. Benzoyläpfelsäure. Sm. 100° (*G.* 23 [1] 174). — II, 530.
6) isom. Benzylimid d. Benzoyläpfelsäure. Sm. 122° (*G.* 23 [1] 175). — II, 530.
- C₁₈H₁₅O₂N₃** 7) 4-Butyroxylphenylimid d. Benzol-1,2-Dicarbonssäure. Sm. 156° (*C.* 1897 [1] 49).
C 64,1 — H 4,4 — O 19,0 — N 12,5 — M. G. 337.
- C₁₈H₁₅O₂Cl₃** 1) Dibenzolat d. 2,5-Di[Oximido]tetrahydropyrrol. Sm. 187–189° (*B.* 22, 2965). — II, 1210.
- C₁₈H₁₅O₂Br** 1) Diacetat d. $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -[4,4'-Dioxydiphenyl]äthan. Sm. 138° (*B.* 7, 1202). — II, 995.
- C₁₈H₁₅O₂Br** 1) Aethyläther d. α -Brom- α -Oxy- $\beta\gamma\delta$ -Triketo- $\alpha\delta$ -Diphenylbutan. Sm. 101–102° (*B.* 27, 718). — III, 318.
2) Aethylester d. β -Brom- $\alpha\gamma$ -Diketo- $\alpha\gamma$ -Diphenylpropan- β -Carbonssäure (Ae. d. Dibenzoylbromessigsäure). Sm. 109–110° (*A.* 282, 160). — II, 1896.
- C₁₈H₁₅O₂P** 1) Triphenylester d. Phosphorsäure. Sm. 48–50° (45°); Sd. 245°₁₁ (*A.* 92, 317; 224, 159; *B.* 8, 1523; 15, 640; 16, 1765; 18, 1718; 30, 2372; *G.* 11, 69; *H.* 25, 442). — II, 660.
- C₁₈H₁₅O₂N** C 63,3 — H 4,4 — O 28,2 — N 4,1 — M. G. 341.
1) 1,4-Benzochinonamid? (*Berz. J.* 26, 801; *A.* 210, 178). — III, 330.
2) Triacetat d. Hydroresorufin. Sm. 216° (*B.* 22, 3031). — II, 933.
3) Verbindung (aus 1,3-Dioxybenzol) (*B.* 18, 374). — II, 923.
- C₁₈H₁₅O₂Br** 1) Monacetat d. p -Brom-3,4,2',4',6'-Pentaoxydiphenylketon-3,4-Methylenäther- p -Dimethyläther (Acetylbromprotocetin). Sm. 175° (*B.* 24, 2986). — III, 209.
- C₁₈H₁₅O₂P** 1) Tri[3-Oxyphenylester] d. Phosphorsäure + H₂O. Sm. 75° (*Bf.* [3] 15, 363).
2) Tri[4-Oxyphenylester] d. Phosphorsäure. Sm. 149° (*Lf.* [3] 15, 361).
- C₁₈H₁₅N₂Cl** 1) 7-Chloräthylat d. $\alpha\beta$ -Naphthophenin. + FeCl₃, 2 + PtCl₄ (*C.* 1898 [2] 920).
- C₁₈H₁₅N₂J** 1) Jodäthylat d. $\alpha\beta$ -Naphthophenin. Sm. bei 150° u. Zers. (*B.* 26, 180). — IV, 1051.
- C₁₈H₁₅N₂Cl** 1) 6-Chlorphenylat d. 2,8-Diamido-5,10-Naphtdiazin. 2 + PtCl₄ (*Bf.* 48, 772; *B.* 19, 3123; 28, 1581, 1697). — IV, 1282.
- C₁₈H₁₅ClSi** 1) Siliciumtriphenylechlorid. Sm. 88–89° (*B.* 19, 1018). — IV, 1701.
- C₁₈H₁₅ClSn** 1) Zinntriphenylchlorid. Sm. 106° (*A.* 194, 172; *B.* 12, 509). — IV, 1714.
- C₁₈H₁₅Cl₂As** 1) Triphenylarsendichlorid. Sm. 171°. + HgCl₂ (*A.* 201, 242). — IV, 1689.
- C₁₈H₁₅Cl₂Bi** 1) Wismuthtriphenyldichlorid. Sm. 141,5° (140°) (*B.* 20, 56; *A.* 251, 329). — IV, 1698.
- C₁₈H₁₅Cl₂Sb** 1) Antimontriphenyldichlorid. Sm. 143° (*A.* 233, 50; *B.* 31, 2911; *G.* 24 [1] 318). — IV, 1695.
- C₁₈H₁₅Br₂Bi** 1) Wismuthtriphenyldibromid. Sm. 122° (119°) (*B.* 20, 56; *A.* 251, 329). — IV, 1698.
- C₁₈H₁₅Br₂Sb** 1) Antimontriphenyldibromid. Sm. 216° (*A.* 233, 50). — IV, 1695.
- C₁₈H₁₅J₂Sb** 1) Antimontriphenyldijodid. Sm. 153° (*A.* 233, 51). — IV, 1695.
- C₁₈H₁₅SP** 1) Triphenylphosphinsulfid. Sm. 157,5°; Sd. oberh. 360° u. ger. Zers. (*A.* 229, 307). — IV, 1660.
- C₁₈H₁₅SP** 1) Sulfid (aus Phenylphosphin). Sm. 138° (*B.* 10, 811). — IV, 1648.
- C₁₈H₁₅SA₃** 1) Triphenylarsinsulfid. Sm. 162° (*A.* 201, 244; *B.* 19, 1032). — IV, 1659.
- C₁₈H₁₅S₂P** 1) Triphenylperthiophosphorsäure. Sm. 86° (*J. pr.* [2] 10, 234). — II, 661.
- C₁₈H₁₅PSe** 1) Triphenylphosphinselenid. Sm. 184–186° (*A.* 229, 308). — IV, 1660.
- C₁₈H₁₆ON₂** C 78,3 — H 5,8 — O 5,8 — N 10,1 — M. G. 276.
1) 3,5-Di[Phenylamido]-1-Oxybenzol. Sm. 94–95°. 2HCl, (2HCl, PtCl₄) (*A.* 256, 260; *G.* 20, 343). — II, 724.
2) 3-Acetylamido-1-[2-Naphtyl]amidobenzol. Sm. 135° (*Bf.* 26, 979). — IV, 573.
3) 4-Acetylamido-1-Phenylamidonaphtalin? Sm. 192° (*A.* 286, 184). — IV, 922.
4) α -Benzyl-1-Naphtylharnstoff. Sm. 203° (*B.* 24, 3818). — II, 608.
5) 1,4-Naphtochinondimethylamidophenylimid (α -Naphtolblau) (*B.* 16, 2851; 18, 2917; *A.* 289, 129). — III, 371.
6) 1-Naphtyläther d. β -Phenylhydrazon- α -Oxyäthan (*B.* 30, 1703).

- C₁₅H₁₆ON₂**
- 7) 2-Naphtyläther d. β -Phenylhydrazon- α -Oxyäthan. Sm. 145° (B. 30, 1702). — IV, 755.
 - 8) α -Phenyl- α -Benzyl- β -[2-Fural]hydrazin. Sm. 138° (G. 27 [2] 239). — IV, 812.
 - 9) Methyläther d. 4-Oxy-1-[2-Methylphenylazo]naphtalin. Sm. 93° (B. 19, 2489). — IV, 1435.
 - 10) Methyläther d. 4-Oxy-1-[4-Methylphenylazo]naphtalin. Sm. 103 bis 104° (B. 19, 2488). — IV, 1435.
 - 11) Aethyläther d. 2-Oxy-1-Phenylazonaphtalin (B. 20, 3177; Soc. 55, 608). — IV, 1428.
 - 12) Aethyläther d. 4-Oxy-1-Phenylazonaphtalin. Sm. 98—100° (B. 17, 3028; 25, 1013; 27, 2351; Soc. 55, 609). — IV, 1427.
 - 13) 6-Oxy-4-Methyl-2-Phenyl-5-Benzyl-1,3-Diazin. Sm. 243° (B. 22, 1626). — IV, 1041.
 - 14) Methyläther d. 6-Oxy-5-Methyl-2,4-Diphenyl-1,3-Diazin. Sm. 121° (J. pr. [2] 39, 197). — IV, 1192.
 - 15) 2-[3-Acetylamido-4-Methylphenyl]chinolin. Sm. 176—177° (M. 9, 104). — IV, 1030.
 - 16) 4-Methyl-2-[4-Acetylamidophenyl]chinolin. Sm. 162—163°. — IV, 1030.
 - 17) Aethyloxyhydrat d. $\alpha\beta$ -Naphtophenazin. Sm. bei 185°. Jodid (B. 26, 181). — IV, 1051.
 - 18) N-Acetyltetrahydro- α -Naphtinolin. Sm. 240° (B. 27, 2255). — IV, 1032.
 - 19) β -Naphtholviolett. HCl, (2HCl, PtCl₄) (B. 12, 2066; Soc. 39, 39). — II, 886.
- C₁₅H₁₆ON**
- 1) Diazobenzolnitrosodiphenylamin. Sm. 112° u. Zers. (B. 21, 2614). — IV, 797.
 - 2) 5-Phenyloxyhydrat d. 2,8-Diamido-5,10-Naphtdiazin (Phenosafranin). 2Chlorid + PtCl₄, Nitrat (B. 16, 466, 871; 19, 3123; 21, 1593; 28, 1581, 1697; 30, 1565; Bl. 48, 339, 772). — IV, 1282.
- C₁₅H₁₆ON₃**
- 1) Verbindung (aus 5-Keto-3-Methyl-1-Phenyl-4,5-Dihydro-1,2,4-Triazol). Sm. 140—141°. — IV, 1105.
- C₁₅H₁₆OSi**
- 1) Siliciumtriphenyloxyhydrat. Sm. 139—141° (B. 19, 1019). — IV, 1702.
- C₁₅H₁₆OSN**
- 1) Zinntriphenyloxyhydrat + 1½H₂O. Sm. 117—118° (A. 194, 174). — IV, 1715.
- C₁₅H₁₆O₂N₂**
- C 74,0 — H 5,5 — O 10,9 — N 9,6 — M. G. 292.
 - 1) Methylenäther d. δ -Phenylhydrazon- α -[3,4-Dioxyphenyl]- $\alpha\gamma$ -Butadien. Sm. 190—192° (B. 28, 1369). — IV, 764.
 - 2) 4-Phenylhydrazon-3,5-Diketo-1-Phenylhexahydrobenzol. Sm. 172° (A. 294, 308). — IV, 1480.
 - 3) Methyläther d. 4-Oxy-1-[2-Naphtyl]nitrosamidomethylbenzol. Sm. 133° (A. 241, 342). — II, 754.
 - 4) 4-Aethyläther d. 4-Oxy-1-[4-Oxyphenyl]azonaphtalin. Sm. 171° (B. 27, 2359). — IV, 1440.
 - 5) 1'-Aethyläther d. 4-Oxy-1-[4-Oxyphenyl]azonaphtalin. Sm. 168° (B. 27, 2360). — IV, 1440.
 - 6) Monoäthyläther d. 1-Phenylazo-2,4-Dioxyaphtalin. Sm. 172 bis 173° (B. 17, 1812). — IV, 1449.
 - 7) Monoäthyläther d. 1-Phenylazo-2,7-Dioxyaphtalin. Sm. 137° (B. 23, 524). — IV, 1450.
 - 8) 1-Benzoyl-3-Keto-4,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazol. Sm. 99° (A. 266, 129). — IV, 522.
 - 9) Acetat d. α -Phenyl- β -[4-Oxy-1-Naphtyl]hydrazin. Sm. 157° (B. 24, 2313). — IV, 1506.
 - 10) Acetat d. 5-Methyl-3-Phenyl-1-[4-Oxyphenyl]pyrazol. Sm. 133° (A. 278, 301). — IV, 937.
 - 11) 3-[β -Phenyläthenyl]-4-[α -Oxy- α -Phenyläthyl]-1,2,5-Oxdiazol. Sm. 132° (B. 28, 1211). — III, 325.
 - 12) 2,5-Diketo-1,4-Di[2-Methylphenyl]-1,2,4,5-Tetrahydro-1,4-Diazin. Sm. 231—232° (J. pr. [2] 47, 185). — II, 471.
 - 13) Dimethyläther d. 2,3-Di[4-Oxymethyl]-1,4-Diazin. Sm. 134° (Soc. 63, 1303). — IV, 1038.

- $C_{18}H_{16}O_2N_2$ 14) 2'-Aethyläther d. 6-Oxy-2-[4-Oxyphenyl]-4-Phenyl-1,3-Diazin. Sm. 274° (B. 23, 2955). — IV, 1040.
- 15) 1-Acetyl-3-[4-Methylphenyl]imido-2-Keto-5-Methyl-2,3-Dihydroindol. Sm. 121—122° (B. 18, 196). — II, 1652.
- 16) Aethyläther d. 5-Benzoylamido-6-Oxychinolin. Sm. 144° (J. pr. [2] 48, 30). — IV, 911.
- 17) Aethyläther d. 5-Benzoylamido-8-Oxychinolin (Analgen) (J. pr. [2] 48, 25). — IV, 913.
- 18) 7-Dimethylamido-2-Phenylchinolin-4-Carbonsäure. Sm. 275° u. Zers. $Zn + 2\frac{1}{2}H_2O$, $Pb + H_2O$, $Cu + H_2O$, Ag (A. 281, 20). — IV, 1036.
- 19) Aethylester d. 1,5-Diphenylpyrazol-3-Carbonsäure. Sm. 90°; Sd. 400° (B. 20, 2185; 25, 3144). — IV, 946.
- 20) Aethylester d. 6-Methyl-2-Phenyl-1,3-Benzdiazin-4-Carbonsäure. Sm. 121° (B. 28, 737). — IV, 1036.
- 21) 4-Methylphenylimid d. 4-Methylphenylimidobernsteinsäure. Sm. 228° (B. 26, 1766). — II, 509.
- $C_{18}H_{16}O_2N_4$ C 67,5 — H 5,0 — O 10,0 — N 17,5 — M. G. 320.
- 1) 1,2-Diacetyl-3,6-Diphenyl-1,2-Dihydro-1,2,4,5-Tetrazin. Sm. 225 bis 229° (B. 26, 2133; 27, 1005; A. 297, 259). — II, 1214.
- 2) 1,4-Diacetyl-3,6-Diphenyl-1,4-Dihydro-1,2,4,5-Tetrazin. Sm. 215° (B. 27, 1005; A. 297, 262). — II, 1215.
- 3) 5-Methyl-1-Phenylpyrazol-4-Phenylhydrasonmethylcarbonsäure. Sm. 207—208° (A. 295, 322). — IV, 547.
- $C_{18}H_{16}O_2Br_2$ 1) β -Dibrom- γ -Phenylpropylester d. β -Phenylakrylsäure. Sm. 151° (A. 189, 344). — II, 1407.
- $C_{18}H_{16}O_2Br_4$ 1) $\alpha\beta$ -Di[3,6-Dibrom-4-Oxy-2,5-Dimethylphenyl]äthen. Sm. 234° (B. 28, 2909, 2914, 2921; 29, 1112, 2338; A. 301, 275).
- 2) isom. $\alpha\beta$ -Di[3,6-Dibrom-4-Oxy-2,5-Dimethylphenyl]äthen? Sm. 217—220° (A. 301, 273).
- 3) $\alpha\beta$ -Di[2,6-Dibrom-4-Oxy-3,5-Dimethylphenyl]äthen. Sm. 232° (A. 302, 85).
- 4) $\beta\gamma$ -Dibrom- γ -Phenylpropylester d. $\alpha\beta$ -Dibrom- β -Phenylpropionensäure? (A. 189, 348). — II, 1407.
- 5) Verbindung (aus 1,3,6-Tribrom-4-Keto-1,2,5-Trimethyl-1,4-Dihydrobenzol). Sm. bei 230° (B. 28, 2914; 29, 1115, 1116).
- 6) Verbindung (aus d. Acetat d. 4,6-Dibrom-2-Oxy-5-Brommethyl-1,3-Dimethylbenzol). Sm. 254° (A. 302, 93).
- $C_{18}H_{16}O_2Br_1$ 1) $\alpha\beta$ -Dibrom- $\alpha\beta$ -Di[3,6-Dibrom-4-Oxy-2,5-Dimethylphenyl]äthan. Sm. 179° (B. 29, 1117).
- $C_{18}H_{16}O_2S_2$ 1) Verbindung (aus 1,4-Benzochinon u. 2 Mol. Mercaptobenzol) (J. pr. [2] 53, 482). — III, 344.
- $C_{18}H_{16}O_2N_2$ C 70,1 — H 5,2 — O 15,6 — N 9,1 — M. G. 308.
- 1) 2-Alloxanylamidodi[4-Methylphenyl]amin. α -Modif. Sm. 252° u. Zers.; β -Modif. Sm. 242—247° u. Zers. (B. 28, 542). — IV, 616.
- 2) γ -Benzoylphenylhydrason- $\beta\delta$ -Diketopentan. Sm. 160—161° (B. 25, 3194). — IV, 787.
- 3) Monocxim d. 4-Oxy-5-Keto-3-Acetyl-1,2-Diphenyl-2,5-Dihydro-pyrrrol. Sm. 213—215° (B. 31, 1307).
- 4) Benzoat d. 4-Oxy-3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydro-pyrazol. Sm. 139° (A. 293, 53). — IV, 513.
- 5) Anhydro- α -[3-Methylphenyl]amido- α -[3-Methylphenyl]imidoäthan-6',6''-Dicarbonsäure. Sm. 293° (B. 30, 1189).
- 6) Aethylester d. 6-Oxy-2-[2-Naphtyl]-1,3-Diazin-4-Methylcarbonsäure. Sm. 193° (B. 28, 481). — IV, 1036.
- 7) Imid d. β -Phenylbenzoylamidopropan- $\alpha\beta$ -Dicarbonsäure. Sm. 190° (B. 18, 1042). — II, 440.
- 8) Dioxim (aus d. Verb. $C_{18}H_{16}O_4$). Sm. 157—158° (B. 28, 1208). — III, 324.
- 9) Verbindung (aus Diacetylweinsäureanhydrid u. p-Toluidin) (Soc. 71, 1062).
- 10) Verbindung (aus Oxybenzol u. Harnstoff). Sm. 61° (J. 1886, 548). — II, 651.
- 11) Verbindung (aus d. γ -Phenylhydrason- α -Phenylbutan- α^2, β -Dicarbonsäure- β -Aethylester). Sm. 228—229° (A. 236, 194). — IV, 719.

- C₁₅H₁₆O₂N₄** C 64,3 — H 4,7 — O 14,3 — N 16,7 — M. G. 336.
 1) 4-[3-Nitrobenzyliden]amido-3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazol. Sm. 213° (A. 293, 62). — IV, 1109.
 2) Acetat d. 3-Oxy-5-3-Acetylamidophenyl-1-Phenyl-1,2,4-Triazol. Sm. 117° (Soc. 71, 212). — IV, 1271.
 3) Acetat d. 3-Oxy-5-[4-Acetylamidophenyl]-1-Phenyl-1,2,4-Triazol. Sm. 215° (Soc. 71, 208). — IV, 1271.
 4) Aethylester d. 4-Phenylhydrazon-5-Keto-1-Phenyl-4,5-Dihydropyrazol-3-Carbonsäure. Sm. 152—154° (B. 24, 4212; 25, 1979). — IV, 729.
- C₁₅H₁₆O₄Br₂** 1) $\alpha\beta$ -Dibrom- γ -Oxy- $\gamma\delta$ -Diketo- $\alpha\gamma$ -Diphenylhexan. Sm. 127° u. Zers. (B. 29, 1211). — III, 325.
 2) Acetat d. $\beta\gamma$ -Dibrom- α -Keto- α -[4-Methylphenyl]- γ -[2-Oxyphenyl]-propan. Sm. 136—137° (B. 29, 239). — III, 234.
- C₁₅H₁₆O₄N₂** C 66,7 — H 4,9 — O 19,7 — N 8,6 — M. G. 324.
 1) $\alpha\delta$ -Dioximido- $\beta\gamma$ -Diketo- $\alpha\delta$ -Di[4-Methylphenyl]butan. Sm. 181° u. Zers. + C₈H₈O (B. 25, 3474). — III, 324.
 2) Diacetat d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. α -Benzildioxim). Sm. 147—148° (B. 21, 798). — III, 294.
 3) Diacetat d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. β -Benzildioxim). Sm. 124—125° (A. 252, 46; B. 21, 799). — III, 294.
 4) Diacetat d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. γ -Benzildioxim). Sm. 114—115° (B. 22, 714). — III, 294.
 5) Di[4-Methylbenzyliden]hydrazin- $\alpha\alpha'$ -Dicarbonsäure. Sm. 280° (C. 1896 [2] 380; B. [3] 17, 368).
 6) α ,2-Lakton d. β -Phenylhydrazon- α -Oxy- α -Phenyläthan- β ,2-Dicarbonsäure- β -Aethylester. Sm. 157—159° (A. 246, 344). — IV, 724.
 7) Aethylester d. Phenylazobenzoylbrenstraubensäure. Sm. 116 bis 117° (B. 21, 1705). — IV, 1475.
 8) Phenylmonamid d. Citronensäurephenylimid (Citrodianil) (A. 82, 87; 98, 88). — II, 423.
 9) Diphenylamid d. Akonitsäure. Sm. 188—189° (Am. 9, 193). — II, 423.
 10) p-Nitro-2-Isopropyl-4-Methylphenylimid d. Benzol-1,2-Dicarbonsäure. Sm. 167° (A. 221, 169). — II, 1806.
- C₁₅H₁₆O₄N₄** C 61,3 — H 4,5 — O 18,2 — N 15,9 — M. G. 352.
 1) 1,4-Dibenzoyl-3,6-Diamido-2,5-Dioxy-1,4-Dihydro-1,4-Diazin (Dihydrohippuroflavindiamid). Sm. 240° u. Zers. (A. 287, 96).
 2) 3,6-Diketo-2,5-Diacetyl-1,4-Diphenylhexahydro-1,2,4,5-Tetrazin. Sm. 153° (B. 21, 2330). — IV, 676.
 3) Diazotruixilsäure (B. 24, 2591). — IV, 1557.
 4) Verbindung (aus Diäthylendi[2-Methylphenyl]diamin). Sm. 282° (B. 23, 1982). — II, 459.
 5) Verbindung (aus Diäthylendi[4-Methylphenyl]diamin). Sm. 166—167° (B. 23, 1984). — II, 457.
- C₁₅H₁₆O₄N₆** C 56,8 — H 4,2 — O 16,8 — N 22,1 — M. G. 380.
 1) Dinitrodiäthyltetraamidodimethylbiphenyl. Sm. 242°. 2HCl, 2HNO₃ (B. 21, 2407). — IV, 1295.
- C₁₅H₁₆O₄Cl₂** 1) Di[4-Chloracetylphenyläther] d. $\alpha\beta$ -Dioxyäthan. Sm. 160—165° (B. 31, 171).
- C₁₅H₁₆O₄Br₂** 1) 2-Acetat-4-Methyläther d. $\alpha\beta$ -Dibrom- γ -Keto- γ -[2,4-Dioxyphenyl]- α -Phenylpropan. Sm. 130,5—131,5° (B. 32, 312).
 2) 2-Acetat-4-Methyläther d. $\alpha\beta$ -Dibrom- γ -Keto- γ -[2-Oxyphenyl]- α -[4-Oxyphenyl]propan. Sm. 104—105° (B. 32, 319).
 3) Diäthylester d. p-Dibrombiphenyl-2,2'-Dicarbonsäure. Sm. 105 bis 106° (B. 19, 3154). — II, 1885.
- C₁₅H₁₆O₄N₂** C 63,5 — H 4,7 — O 23,5 — N 8,2 — M. G. 340.
 1) 1-Benzoyl-4-Benzoylamido-3,5,5-Trioxo-4,5-Dihydropyrrrol. Sm. 153,5—158,5°. Ba, Pb, Cu (B. 21, 3325; 22, 1957). — II, 1186.
 2) Aethylester d. Furfurincarbonsäure. Sm. 124° (J. pr. [2] 27, 319). — III, 722.
 3) Diacetat d. Anhydro- α -Phenylendiimidoglykopyrogallol. Sm. 143° (B. 27, 1985). — IV, 565.
 4) 4,4'-Biphenylendiamid d. Citronensäure (Citrobenzidylsäure). Zers. oberh. 300°. Ag (B. 21, 663). — IV, 966.

- $C_{18}H_{16}O_8N_2$ C 60,7 — H 4,5 — O 26,9 — N 7,9 — M. G. 356.
- 1) **Bis-2-Aldehydophenoxyessigsäurehydraton**. Sm. 222° u. Zers. (B. 31, 2810).
 - 2) **Meso- $\alpha\beta$ -Di[Benzoylamido]bernsteinsäure**. Sm. 213° u. Zers. (B. 26, 1986). — II, 1192.
 - 3) **isom. $\alpha\beta$ -Di[Benzoylamido]bernsteinsäure + H₂O**. Sm. 182° u. Zers. (B. 26, 1996). — II, 1192.
 - 4) **4,4'-Di[Acetylamido]biphenyl-3,3'-Dicarbonsäure**. Sm. bei 300° (B. 31, 2582).
 - 5) **Bernsteinsäurediphenylamid-3,3'-Dicarbonsäure (Succindi-3-Amido-benzol-1-Carbonsäure)**. Sm. bei 300° u. Zers. Ca + 7H₂O, Ba + 5H₂O (J. r. 4, 295, 300; G. 15, 547). — II, 1266.
 - 6) **Dinitrodiäthylcarbobenzonsäure**. Sm. 155–156° (A. 184, 170). — II, 1476.
 - 7) **$\alpha\beta$ -Di[Benzoylamido]äthan-2,2'-Dicarbonsäure (Aethylendiphtalamid-säure)** (B. 21, 2670). — II, 1798.
 - 8) **Diäthylester d. 1,2-Phtalyldi[cyanessigsäure]**. Sm. 158–160° (A. ch. [7] 1, 499). — II, 2018.
 - 9) **Diäthylester d. 1,3-Phtalyldi[cyanessigsäure]**. Sm. 191–192° (NH₄), Fe₃, Cu + 2H₂O, Ag₂ (Bl. [3] 11, 1097). — II, 2019.
 - 10) **Diäthylester d. 1,4-Phtalyldi[cyanessigsäure]**. Sm. 179° (Bl. [3] 11, 927). — II, 2019.
 - 11) **Di[2-Acetoxyphenylamid] d. Oxalsäure**. Sm. 201° (B. 20, 2644).
 - 12) **Di[4-Acetoxyphenylamid] d. Oxalsäure**. subl. bei 260° (G. 25 [2] 533).
 - 13) **Phenylhydrazonderivat (aus d. α,α' -Lakton d. α -Oxy- α' -[2,4,6-Trioxvphenyl]äthen- α,β -Dicarbonsäure- β -Aethylester)**. Sm. 243° (Soc. 71, 1112).
- $C_{18}H_{16}O_6N_4$ C 56,3 — H 4,1 — O 25,0 — N 14,6 — M. G. 384.
- 1) **2,5-Diketo-1,4-Di[β -Nitro-2-Methylphenyl]hexahydro-1,4-Diazin**. Sm. 253–254° (B. 23, 1992). — II, 471.
- $C_{18}H_{16}O_6Cl_2$ 1) **Diäthylester d. 3,6-Dichlor-1,4-Dimethyl-p- β -Benzdifuran-2,5-Dicarbonsäure**. Sm. 175° (J. pr. [2] 45, 72). — III, 735.
- $C_{18}H_{16}O_6Br_2$ 1) **Di[β -Brom-4-Acetoxyphenyläther] d. $\alpha\beta$ -Dioxyäthan**. Sm. 156° (A. 280, 203). — II, 941.
- $C_{18}H_{16}O_7N_2$ C 58,1 — H 4,3 — O 30,1 — N 7,5 — M. G. 372.
- 1) **Triacetat d. Tetraoxyazobenzol**. Sm. 240–242° (C. 1897 [2] 588). — IV, 1363.
 - 2) **Oxybernsteinsäurediphenylamid-3,3'-Dicarbonsäure**. Cu (A. 232, 166). — II, 1266.
 - 3) **Verbindung (aus Oxyresazoin)** (M. 8, 428). — II, 932.
- $C_{18}H_{16}O_6Si_4$ 1) **Trisilicobenzoylkieselsäure?** (B. 19, 1016). — IV, 1702.
- $C_{18}H_{16}O_8N_2$ C 55,7 — H 4,1 — O 33,0 — N 7,2 — M. G. 388.
- 1) **$\alpha\beta$ -Dioxybernsteinsäurediphenylamid-3,3'-Dicarbonsäure**. (CuOH)₂ (A. 232, 159). — II, 1267.
 - 2) **Diäthylester d. $\alpha\beta$ -Di[β -Nitrophenyl]äthan-2,2'-Dicarbonsäure**. Sm. 60° (A. 239, 70). — II, 1889.
 - 3) **Diacetat d. $\alpha\beta$ -Dioxy- $\alpha\beta$ -Di[4-Nitrophenyl]äthan**. Sm. bei 340° (J. pr. [2] 34, 345). — II, 1101.
 - 4) **Schwarzer Farbstoff (aus Haaren)** (J. 1876, 936; J. Th. 1886, 333). — III, 669.
- $C_{18}H_{16}O_8N_4$ C 51,9 — H 3,8 — O 30,8 — N 13,5 — M. G. 416.
- 1) **Diäthylester d. β -Dinitroazobenzol-3,3'-Dicarbonsäure**. Sm. 104° (J. r. 6, 197). — IV, 1459.
- $C_{18}H_{16}O_{10}N_6$ C 45,4 — H 3,3 — O 33,6 — N 17,6 — M. G. 476.
- 1) **Di[β -Dinitro-4-Methylphenylamid] d. Bernsteinsäure** (A. 209, 380). — II, 502.
- $C_{18}H_{16}O_{10}S_2$ 1) **α -Truxillsäure- α -Disulfonsäure (γ -Isotropasulfonsäure)**. Ba₂ + 4H₂O (B. 22, 128). — II, 1902.
- 2) **α -Truxillsäure- β -Disulfonsäure**. Ba + 4H₂O (B. 22, 128). — II, 1902.
 - 3) **β -Truxillsäure- β -Disulfonsäure**. Ba₂ + 4H₂O (B. 22, 129). — II, 1903.
- $C_{18}H_{16}NB$ 1) **2-Brommethyl-1-[1-Naphtylamido]methylbenzol**. Sm. 240–242° (B. 31, 423).
- $C_{18}H_{16}NJ$ 1) **Jodmethylat d. 2,6-Diphenylpyridin**. Sm. 203° (B. 20, 2765; 28, 1732). — IV, 455.

- $C_{15}H_{14}N_2Cl_2$ 1) 2,4-Dichlor-1,3-Di[4-Methylphenylimido]tetrahydrotetren. Sm. 133° (A. 279, 64).
- $C_{15}H_{14}N_2S$ 1) α -Methyl- α -Phenyl- β -[2-Naphtyl]thioharnstoff. Sm. 127° (B. 17, 2091). — II, 619.
- 2) s -[2-Methylphenyl]-1-Naphtylthioharnstoff. Sm. 165—168° (B. 15, 1416). — II, 609.
- 3) s -[4-Methylphenyl]-1-Naphtylthioharnstoff. Sm. 168° (B. 15, 1416). — II, 610.
- 4) s -[2-Methylphenyl]-2-Naphtylthioharnstoff. Sm. 193—194° (B. 15, 1418). — II, 619.
- 5) s -[4-Methylphenyl]-2-Naphtylthioharnstoff. Sm. 163—164° (B. 15, 1419). — II, 619.
- 6) s -Benzyl-1-Naphtylthioharnstoff. Sm. 172—173° (Soc. 59, 558). — II, 610.
- 7) s -Benzyl-2-Naphtylthioharnstoff. Sm. 165—166° (Soc. 59, 559). — II, 619.
- 8) 2-Merkapto-1-Allyl-4,5-Diphenylimidazol. Sm. noch nicht bei 240°. K (A. 284, 28). — III, 224.
- 9) Methyläther d. α -Phenylamido-[1-Naphtyl]imidomerkaptomethan. Sm. 96° (B. 21, 1870). — II, 609.
- $C_{15}H_{14}N_2S_2$ 1) 4-Amido-4'-Phenylamidodiphenyldisulfid. Sm. bei 120°. 2HCl (B. 27, 3322).
- $C_{15}H_{14}N_3Cl$ 1) 7-Chloräthylat d. 5-Amido- $\alpha\beta$ -Naphtophenazin. 2 + PtCl₄ (J. r. 30, 549). — IV, 1204.
- 2) 7-Chloräthylat d. 9-Amido- $\alpha\beta$ -Naphtophenazin. 2 + PtCl₄ (C. 1898 [2] 919; B. 29, 2759). — IV, 1201.
- 3) 3-Chloräthylat d. 3-Phenyl- β -Naphtisotriazol. Sm. 212° u. Zers. 2 + PtCl₄ (A. 255, 347). — IV, 1171.
- $C_{15}H_{14}N_3J$ 1) 3-Jodäthylat d. 3-Phenyl- β -Naphtisotriazol. Sm. 192° u. Zers. (A. 255, 346). — IV, 1171.
- $C_{15}H_{14}N_3S$ 1) Sulfid d. 3-Merkapto-1-[4-Methylphenyl]-1,2,4-Triazol. Sm. 188° (G. 28 [2] 561).
- 2) Verbindung (aus 2,5-Di-[2-Methylphenylamido]-1,3,4-Thiadiazol). Sm. 89° (B. 23, 368). — IV, 1236.
- 3) Verbindung (aus 2,5-Di-[4-Methylphenylamido]-1,3,4-Thiadiazol). Sm. 190° (B. 23, 365). — IV, 1236.
- $C_{15}H_{17}ON$ C 82,1 — H 6,5 — O 6,1 — N 5,3 — M. G. 263.
- 1) 6-Phenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol. Sm. 240° (A. 294, 305).
- 2) Methyläther d. 2-Oxy-1-[2-Naphtylamido]methylbenzol. Sm. 92°; Sd. 220—225° u. Zers. (A. 247, 352). — II, 742.
- 3) Methyläther d. 4-Oxy-1-[2-Naphtylamido]methylbenzol (A. 241, 341). — II, 754.
- 4) β -Phenylamidoäthyläther d. 2-Oxynaphtalin. Sm. 75° (B. 13, 1955 bis 1956). — II, 877.
- 5) 6-Benzoylamido-2,3-Dimethylinden. Sm. 198° u. Zers. (B. 23, 1885). — II, 1167.
- 6) Retenchinonimid. Sm. 109—111° (A. 229, 121). — III, 458.
- 7) 5-Phenyl-2-[4-Isopropylphenyl]oxazol. Sm. 50°; Sd. oberh. 360°. HCl (B. 29, 2101). — IV, 445.
- 8) Phenyläther d. 1-Oxy-3-Propylisochinolin. Fl. Pikrat (B. 29, 2397). — IV, 338.
- 9) Phenyläther d. 1-Oxy-3-Isopropylisochinolin. Fl. (B. 30, 894). — IV, 339.
- $C_{15}H_{17}ON_3$ C 74,2 — H 5,8 — O 5,5 — N 14,4 — M. G. 291.
- 1) p -Nitro-1-Aethylamido-2-Phenylamidonaphtalin. Sm. 145—146° (B. 26, 190). — IV, 918.
- 2) β -2-Naphtylamido- α -[2-Methylphenyl]harnstoff. Sm. 215°. — IV, 928.
- 3) β -2-Naphtylamido- α -[4-Methylphenyl]harnstoff. Sm. 187°. — IV, 928.
- 4) 1-[4-Dimethylamido-2-Oxyphenyl]azonaphtalin. Sm. 176° (B. 31, 2777). — IV, 1414.

- $C_{15}H_{17}ON_3$ 5) 2-[4-Dimethylamido-2-Oxyphenyl]azonaphtalin. Sm. 196° (B. 31, 2778). — IV, 1414.
- 6) 4-Benzylidenamido-3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazol. Sm. 173° (A. 293, 61). — IV, 1169.
- 7) 1-Acetyl-2,5-Di[4-Methylphenyl]-1,3,4-Triazol. Sm. 129—130° (B. 27, 3285; A. 298, 13). — IV, 1188.
- 8) Aethyläther d. 3-Oxy-1-Phenyl-5- β -Phenyläthenyl]-1,2,4-Triazol. Sm. 89—90° (Soc. 71, 216). — IV, 1167.
- 9) Dimethyldiamidonaphtophenoxazin (A. 289, 115).
- $C_{15}H_{17}ON_3$ 1) C 67,7 — H 5,3 — O 5,0 — N 21,9 — M. G. 319.
- 2) 2-(2-Amido-1-Naphtyl)azo-4-Methylnitrosamido-1-Methylbenzol. Sm. 179° (B. 31, 2629). — IV, 1400.
- $C_{15}H_{17}OCl$ 1) Isobutyloxanthranolchlorid. Sm. 78° (A. 212, 87; B. 14, 463). — III, 244.
- $C_{15}H_{17}O_2N$ C 77,4 — H 6,1 — O 11,5 — N 5,0 — M. G. 279.
- 1) β -Oximido- α -Oxy- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 153,5° (Bl. [3] 13, 859).
- 2) β -Phenylamido- δ -Keto- γ -Benzoyl- β -Penten. Sm. 87—88° (A. 291, 98). — III, 316.
- 3) 2-Diäthylamido-9,10-Anthrachinon. Sm. 162° (Bl. [3] 19, 831).
- 4) Retenehinnoxim. Sm. 128,5° (A. 229, 122). — III, 458.
- 5) Dimethyläther d. 2,5-Di[4-Oxyphenyl]pyrrol. Sm. 223° (R. 10, 217). — IV, 438.
- 6) 3-Isobutyl- β -Naphtochinolin-1-Carbonsäure. Sm. 251° (B. 27, 2022). — IV, 423.
- 7) Aethyl ester d. 3-Benzylindol-2-Carbonsäure. Sm. 144—146° (B. 31, 555).
- 8) 2-Isopropyl-4-Methylphenylimid d. Benzol-1,2-Dicarbonsäure. Sm. 145° (A. 221, 169). — II, 1806.
- $C_{15}H_{17}O_3N_3$ C 70,4 — H 5,5 — O 10,4 — N 13,7 — M. G. 307.
- 1) ϵ -Phenylhydrazon- α -[4-Nitrophenyl]- $\alpha\gamma$ -Hexadiën. Sm. 209—210° (A. 253, 355). — IV, 775.
- 2) 4-[2-Oxybenzyliden]amido-3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazol. Sm. 194° (A. 293, 62). — IV, 1169.
- 3) 1,4-Diacetyl-3,5-Diphenyl-4,5-Dihydro-1,2,4-Triazol. Sm. 93° (95°) (B. 30, 1877; A. 297, 268). — II, 1245; IV, 1184.
- 4) 5-[4-Methylbenzoyl]-2-[2,4-Dimethylphenyl]-1,2,3,6-Oxtriazin (R. 16, 325).
- 5) Anhydro- α -[3-Methylphenyl]amido- α -[3-Methylphenyl]imidoäthan-6',6'-Dicarbonsäure-6'-Amid. Sm. 278° (B. 30, 1190).
- 6) Nitril d. Imidodi[2-Methoxyphenylessigsäure] (o-Methoxyphenylimidoacetnitril). Sm. 123° (B. 15, 2025). — II, 1750.
- 7) γ -Phenylallylidenhydrazid d. Benzoylamidoessigsäure (Hippurylcinnamylhydrazin). Sm. 201,5° (J. pr. [2] 52, 247). — III, 62.
- 8) Verbindung (aus 2-Acetylbenzol-1-Carbonsäure). Sm. 204—210° (B. 18, 1258 Anm.). — II, 1646.
- $C_{15}H_{17}O_2P$ 1) Triphenyloxyphosphoniumhydroxyd. Sm. 153,5°. Nitrat (B. 15, 803; 18, 2120; 27, 274; A. 229, 306). — IV, 1659.
- $C_{15}H_{17}O_2As$ 1) Triphenyloxyarsoniumoxyhydrat. Sm. 108°. Nitrat (B. 19, 1032; A. 201, 243). — IV, 1659.
- $C_{15}H_{17}O_2Bi$ 1) Wismuthtriphenyldioxyhydrat. Chlorid, Bromid, Nitrat (B. 20, 56; A. 251, 329). — IV, 1658.
- $C_{15}H_{17}O_2Sb$ 1) Antimontriphenyldioxyhydrat. Sm. 212°. Chlorid, Bromid, Jodid, Nitrat (A. 233, 51; B. 31, 2911; G. 24 [1] 318). — IV, 1695.
- $C_{15}H_{17}O_3N$ C 73,2 — H 5,8 — O 16,3 — N 4,7 — M. G. 295.
- 1) Difuraltropinon. Sm. 138°. HCl (B. 30, 2715).
- 2) Aethyl ester d. α -Benzoylamido- β -Phenylakrylsäure. Sm. 149° (A. 275, 11). — II, 1420.
- 3) β -[2,4-Dimethylphenoxy]äthylimid d. Benzol-1,2-Dicarbonsäure. Sm. 113—114° (B. 29, 2400).
- $C_{15}H_{17}O_3N_2$ C 69,9 — H 5,3 — O 14,8 — N 13,0 — M. G. 323.
- 1) Verbindung (aus Natriumbenzoylessigsäurealdehyd). Sm. 197—198° (B. 24, 137). — III, 95.
- $C_{15}H_{17}O_3N_2$ C 61,6 — H 4,8 — O 13,7 — N 19,9 — M. G. 351.
- 1) 2-Tri[Acetylamido]-5,10-Naphtdiazin (B. 22, 858). — IV, 1326.

- C₁₈H₁₇O₄N** C 69,4 — H 5,5 — O 20,6 — N 4,5 — M. G. 311.
 1) Benzoylhydrastinin. Sm. 98–99° (A. 271, 387). — III, 106.
 2) *α*-Benzylidenamido-*β*-Acetoxy-*β*-Phenylpropionsäure. Sm. 160 bis 170° u. Zers. Na (A. 284, 43). — II, 1576.
 3) 1,2-Lakton d. 3,4-Dioxy-1-[1,2,3,4-Tetrahydro-1-Chinoly]oxy-methylbenzol-3 oder 4-Methyläther-2-Carbonsäure (Methylnoropiainsäure-tetrahydrochinolid). Sm. 231°. Na (B. 29, 2035; 30, 693). — IV, 195.
 4) Aethyl ester d. *β*-Phenylamidoformoxyl-*α*-Phenylakrylsäure. Sm. 116° (A. 291, 200).
- C₁₈H₁₇O₄Br** 1) Diäthylester d. *p*-Brombiphenyl-2,2'-Dicarbonsäure. Sm. 65° (B. 19, 3151). — II, 1885.
- C₁₈H₁₇O₄N** C 66,0 — H 5,2 — O 24,5 — N 4,3 — M. G. 327.
 1) Indiretin (J. 1858, 469). — III, 596.
 2) Mekoninmethylphenylketonoxim. *α*-Derivat Sm. 146°; *β*-Derivat Sm. 198° (M. 13, 670, 672). — II, 2022.
 3) Benzoxylhydrastininhydrat. Sm. 169–170° (A. 271, 387). — III, 106.
 4) Diacetat d. Acetylidi-4-Oxyphenyl]amin. Sm. 128,5° (B. 32, 690).
 5) Diacetat d. 3,4-Dioxy-6-Aethylphenoxazin. Sm. 110° (B. 31, 497).
 6) Benzylmonamid d. Benzoyläpfelsäure. Sm. 117° (G. 22 [1] 176). — II, 530.
- C₁₈H₁₇O₄N** C 62,9 — H 5,0 — O 23,0 — N 4,1 — M. G. 343.
 1) Corydinsäure + 1/2 H₂O. Sm. 218°. Ag₂ (Soc. 71, 661).
 2) *α*,2'-Lakton d. *α*-Oxy-4'-Methoxyl-3'-Dimethylamido-1'-Oxydi-phenylmethan-2',*α*-Dicarbonsäure. Sm. 180° (A. 296, 360).
 3) Diacetat d. 1-Diacetylamido-2,7-Dioxy-naphthalin. Sm. 135° (B. 30, 1123).
- C₁₈H₁₇O₄N** C 60,2 — H 4,7 — O 31,2 — N 3,9 — M. G. 359.
 1) Triacetat d. 3-Acetylamido-1,2,4-Trioxynaphthalin. Sm. 145° (J. pr. [2] 40, 182). — II, 1027.
 2) Dimethylester d. 2-[3,4-Dimethoxylbenzoyl]pyridin-3,4-Dicarbonsäure (D. d. Papaverinsäure). Sm. 122–124° (M. 14, 521; 17, 492). — IV, 176.
 3) 3-Aethylester d. 2-[3,4-Dimethoxylbenzoyl]pyridin-3,4-Dicarbonsäure (*β*-Ac. d. Papaverinsäure). Sm. 187–188° (M. 10, 160; 13, 699). — IV, 177.
 4) 4-Aethylester d. 2-[3,4-Dimethoxylbenzoyl]pyridin-3,4-Dicarbonsäure (*γ*-Ac. d. Papaverinsäure). Sm. 184° (M. 18, 464).
- C₁₈H₁₇O₄N₃** C 55,8 — H 4,4 — O 28,9 — N 10,8 — M. G. 387.
- C₁₈H₁₇O₁₀N₃** C 49,7 — H 3,9 — O 36,8 — N 9,6 — M. G. 435.
 1) Trinitrotruxen. Zers. bei 235° (Soc. 65, 288).
- C₁₈H₁₇O₁₀N₃** C 46,6 — H 3,7 — O 34,6 — N 15,1 — M. G. 463.
 1) 2,4-Dinitrophenylamid d. Oxyessig-*p*-Dinitro-4-Isobutylphenyläthersäure. Sm. 176,5° (Am. 19, 74).
- C₁₈H₁₇N₂Cl₃** 1) *αβδ*-Trichlor-*αγ*-Di[4-Methylphenylimido]butan. Sm. 263–265° (A. 279, 63).
- C₁₈H₁₇N₂S** 1) *α*-Phenyl-*β*-[2,4-Dimethyl-5 oder 7-Chinoly]thioharnstoff. Sm. 173 bis 174° (A. 274, 372). — IV, 938.
 2) *α*-Phenyl-*β*-[5,8-Dimethyl-6-Chinoly]thioharnstoff. Sm. 157–159°. (2HCl, PtCl₄) (B. 23, 1025). — IV, 939.
- C₁₈H₁₇N₄Cl** 1) 7-Chloräthylat d. 5,10-Diamido-*αβ*-Naphthophasin. 2 + PtCl₄ (C. 1898 [2] 920). — IV, 1296.
- C₁₈H₁₈ON₂** C 77,7 — H 6,5 — O 5,7 — N 10,1 — M. G. 278.
 1) Aethyläther d. 3-Phenylamido-4-Amido-1-Oxynaphthalin. Sm. 167° HCl (B. 25, 1013). — II, 866.
 2) Aethyläther d. 4-Amido-3-Oxy-1-[*p*-Amidophenyl]naphthalin. Sm. 72°. 2HCl (B. 20, 3178). — II, 903.
 3) 2-Phenylhydrazon-3-Oxy-1,4-Dimethyl-2,3-Dihydronaphthalin. Sm. 83–84° (G. 26 [1] 26).
 4) 2-Phenylhydrazon-3-Isopropyl-1,2-Benzopyron. Sm. 112° (B. 24, 3464). — IV, 698.
 5) 3-[4-Aethylphenyl]imido-2-Keto-5-Aethyl-2,3-Dihydroindol (p-Phenäthyl-p-Aethylimesatin) (B. 17, 2805). — II, 1660.

- C₁₆H₁₅ON₂**
- 6) 3-[4-Methylphenyl]imido-2-Keto-5-Methyl-1-Aethyl-2,3-Dihydroindol. Sm. 151—152° (B. 18, 198). — II, 1652.
 - 7) m-Tolylmethyloxychinisin. Sm. 143° (B. 19, 2141). — IV, 1503.
 - 8) Base (aus α-Oximidoäthylphenylketon). Fl. (B. 22, 563). — III, 140.
 - 9) Verbindung (aus α-Amidoäthylphenylketonchlorhydrat). Sm. 125—126° (B. 30, 1524).
- C₁₅H₁₅ON₄**
- 10) Verbindung (aus d. Verb. C₁₅H₁₅ON₃). Sm. 117°. (2HCl, PtCl₄) (B. 21, 1596). — IV, 1284.
- C₁₅H₁₅ON₄**
- C 70,6 — H 5,9 — O 5,2 — N 18,3 — M. G. 306.
 - 1) 3,5-Di[Phenylhydrazido]-1-Oxybenzol. Sm. 143—144° (B. 22, 2191). — IV, 1506.
 - 2) 4-[4-Methylphenyl]hydrazon-5-Keto-2-Methyl-1-[4-Methylphenyl]-4,5-Dihydropyrazol. Sm. 216—217° (Soc. 59, 340). — IV, 807.
 - 3) Verbindung (aus s-Diacetylphenylhydrazin). Sm. 192° (Bl. [3] 11, 115; J. pr. [2] 55, 165). — IV, 666.
 - 4) Verbindung (aus Glyoxal u. 2,4-Diamido-1-Methylbenzol) (B. 11, 831). — IV, 607.
- C₁₅H₁₅O₇N₂**
- C 73,5 — H 6,1 — O 10,9 — N 9,5 — M. G. 294.
 - 1) αβ-Di[4-Acetylamidophenyl]äthen. Sm. 312° u. Zers. (B. 16, 945; 19, 3237). — IV, 994.
 - 2) α-Acetyl-imido-α-Acetylphenylamido-α-[4-Methylphenyl]methan. Sm. 121—122° (J. pr. [2] 54, 129). — IV, 851.
 - 3) Dehydroacetylisomethylpaeonolphenylhydrazon. Sm. 150° (B. 25, 1299). — IV, 772.
 - 4) 2,5-Diketo-1,4-Dibenzylhexahydro-1,4-Diazin. Sm. 170° (Soc. 65, 190). — II, 525.
 - 5) 2,3-Diketo-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin. Sm. 183,5 bis 184° (B. 22, 1805). — II, 467.
 - 6) 2,5-Diketo-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin. Sm. 159 bis 160°. (2HCl, PtCl₄ + 4H₂O) (J. pr. [2] 38, 299; B. 22, 1787; 23, 1992). — II, 470.
 - 7) 2,3-Diketo-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 263° (B. 23, 2036). — II, 501.
 - 8) 2,5-Diketo-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 252 bis 253° (B. 21, 1260; 22, 1806; 25, 2287; J. pr. [2] 40, 433). — II, 506.
 - 9) 2,6-Diketo-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 185° (B. 25, 2287). — II, 506.
 - 10) 2,5-Diketo-1-[2-Methylphenyl]-4-[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 179—180° (J. pr. [2] 40, 443). — II, 506.
 - 11) 3,6-Diketo-2,5-Dimethyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 183,5° (B. 22, 1793; 23, 2012, 2016; 25, 2300). — II, 432.
 - 12) isom. 3,6-Diketo-2,5-Dimethyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 144—146° (B. 22, 1794; 23, 2013, 2017; 25, 2299). — II, 432.
 - 13) isom. 3,6-Diketo-2,5-Dimethyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 172—173° (B. 23, 2019; 25, 2301). — II, 433.
 - 14) 1-4-Dibenzylhexahydro-1,4-Diazin. Sm. 191° (B. 23, 3301; 26, 725). — II, 1169.
 - 15) Dimethyläther d. 5,6-Di[4-Oxyphenyl]-2,3-Dihydro-1,4-Diazin. Sm. 126—127° (Soc. 63, 1301). — III, 295.
 - 16) 5-Methyl-1-4-Methylphenyl]benzimidazol-2-[Aethyl-β-Carbon-säure]. Sm. 228° (B. 27, 2781). — IV, 616.
 - 17) Amid d. α-Truxillsäure. Sm. 265° (B. 22, 2261). — II, 1901.
 - 18) Phenylamid d. β-Methylbenzoylamidocrotonsäure. Sm. 175° u. Zers. (B. 25, 1874). — II, 1192.
 - 19) 4-Methylphenylamid d. Fumarsäure. Sm. oberh. 330° (B. 23, 2045; 24, 2004; A. 279, 134). — II, 502.
 - 20) 4-Methylphenylamid d. Maleinsäure. Sm. 142° (G. 23 [1] 170; A. 279, 134).
 - 21) Methylphenylaminofumarid? Sm. 187,5° (G. 16, 14). — II, 416.
 - 22) β-m-Dimethylphenyl]amidoäthylamid d. Benzol-1,2-Dicarbon-säure. Sm. 123° (B. 24, 2197). — II, 1800.
 - 23) γ-[4-Methylphenyl]amidopropylimid d. Benzol-1,2-Dicarbon-säure. Sm. 134—136°. HCl (B. 30, 2498).

- $C_{15}H_{15}O_2N_4$ C 67,1 — H 5,6 — O 9,9 — N 17,4 — M. G. 322.
- 1) **3,5-Dioximido-4-Phenylhydrazon-1-Phenylhexahydrobenzol.** Sm. 228° u. Zers. (A. 294, 309). — IV, 1480.
 - 2) **Diacetyldibenzennyldiazidin.** Sm. 98° (B. 27, 997). — II, 1214.
 - 3) **p-Xylylendimethoxyypyrimidin.** Sm. oberh. 250° (B. 21, 2661). — IV, 1295.
 - 4) **Di[Benzylidenhydrasid] d. Aethan- $\alpha\beta$ -Dicarbonsäure** (J. pr. [2] 51, 191). — III, 40.
- $C_{15}H_{15}O_2Br_2$ 1) **Diäthyläther d. $\alpha\beta$ -Dibrom- $\alpha\beta$ -Di[4-Oxyphenyl]äthen.** Sm. 210° (A. 279, 342). — II, 998.
- $C_{15}H_{15}O_2Cl_4$ 1) **Diäthyläther d. $\alpha\alpha\beta\beta$ -Tetrachlor- $\alpha\beta$ -Di[4-Oxyphenyl]äthan.** Sm. 172° (A. 279, 342). — II, 993.
- $C_{15}H_{15}O_2Br_4$ 1) **Dimethyläther d. $\alpha\beta\gamma\delta$ -Tetrabrom- $\alpha\delta$ -Di[4-Oxyphenyl]butan** (A. 255, 309). — II, 1001.
- $C_{15}H_{15}O_2N_2$ C 69,7 — H 5,8 — O 15,5 — N 9,0 — M. G. 310.
- 1) **4-Acetylamido-4'-[Diacetylamido]biphenyl.** Sm. 215–216° (B. 31, 663). — IV, 964.
 - 2) **α -Benzoylamido- β -Acetylbenzoylamidoäthan.** Sm. 113–114° (B. 28, 3068).
 - 3) **Dihydroindendioxynitrosamin** (B. 26, 1542). — II, 170.
 - 4) **Methylfurfurin.** (2HCl, PtCl₄), Dioxalat (A. 258, 123). — III, 726.
 - 5) **Hydromethylfurfuramid.** Sm. 86–87° (A. 258, 123; Am. 15, 163). — III, 726.
 - 6) **5-Benzooat d. 5-Oxy-3-Methyl-1-Phenylpyrazol-2-Methoxyhydrat.** Chlorid, Jodid, Pikrat (A. 293, 42). — IV, 513.
 - 7) **1-Nitroso-2,6-Diphenylhexahydropyridin-4-Carbonsäure.** Sm. 159° (B. 20, 2763). — IV, 403.
 - 8) **Aethylester d. 2-Phenylureidozimmtsäure.** Sm. 112° (B. 28, 3228).
 - 9) **Aethylester d. 3-Phenylureidozimmtsäure.** Sm. 198° (B. 28, 3230).
 - 10) **Aethylester d. 4-Phenylureidozimmtsäure.** Sm. 204° (B. 28, 3231).
 - 11) **Aethylester d. α -[4-Benzoylphenyl]hydrazonpropionsäure.** Sm. 145° u. Zers. (Soc. 55, 616). — III, 187.
 - 12) **Phenylmonamid d. β -Phenylamidoäthen- $\alpha\alpha$ -Dicarbonsäuremonäthylester.** Sm. 118° (B. 27, 2745; A. 285, 123, 127, 128, 145, 147).
- $C_{15}H_{15}O_3Br_2$ 1) **5-Benzooat-2-Aethyläther d. 3,6-Dibrom-5-Oxy-2-Oxymethyl-1,4-Dimethylbenzol.** Sm. 109–110° (B. 28, 2905).
- $C_{15}H_{15}O_3Br_4$ 1) **Di[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyläther.** Sm. 252° (B. 28, 2917).
- $C_{15}H_{15}O_4N_2$ C 66,3 — H 5,5 — O 19,6 — N 8,6 — M. G. 326.
- 1) **Anilinfurobenzamat** (A. 239, 361). — III, 724.
 - 2) **Tetramethylacetylpyrokoll.** Sm. 206–208° (G. 24 [1] 551). — IV, 102.
 - 3) **Oxim d. Benzoylhydrastinin.** Sm. 146° (A. 271, 387). — III, 106.
 - 4) **α -Diamido- α -Truxillsäure.** 2HCl (B. 24, 2591). — II, 1902.
 - 5) **β -Diamido- α -Truxillsäure.** 2HCl (B. 24, 2591). — II, 1902.
 - 6) **Säure (aus Azobenzol-3,3'-Dicarbonsäure).** Ba, Ag₂ (J. r. 6, 251; 16, 412). — IV, 1459.
 - 7) **Aethylester d. $\beta\beta$ -Dibenzoylhydrasidoessigsäure.** Sm. 113° (B. 31, 166).
 - 8) **Diäthylester d. Azobenzol-2,2'-Dicarbonsäure.** Sm. 138–139° (J. pr. [2] 17, 216). — IV, 1458.
 - 9) **Diäthylester d. Azobenzol-3,3'-Dicarbonsäure.** Sm. 97° (90–92°) (B. 8, 252; J. r. 6, 251). — IV, 1458.
 - 10) **Diäthylester d. Azobenzol-4,4'-Dicarbonsäure.** Sm. 88° (114,5°) (A. 132, 148; B. 8, 252; J. r. 23, 93). — IV, 1459.
 - 11) **Diphenylester d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure** (Phenolpiperazindurethan). Sm. 177–178° (B. [3] 19, 186).
 - 12) **Dibenzozol d. 2,5-Dioxyhexahydro-1,4-Diazin.** Sm. 230–250° u. Zers. (B. 27, 171).
 - 13) **polym. Phenylamid d. Brenztraubensäure.** Sm. 209° (A. 279, 78).
 - 14) **Verbindung (aus Azobenzol-3,3'-Dicarbonsäure).** Sm. 74–76° (J. r. 6, 251; 16, 412). — IV, 1459.
- $C_{15}H_{15}O_4N_4$ C 61,0 — H 5,1 — O 18,1 — N 15,8 — M. G. 354.
- 1) **s-Di[Benzoylamidoacetyl]hydrazin.** Sm. 268–269° (J. pr. [2] 52, 251).

- C₁₀H₁₀O₄N₂** 2) 4,4'-Biphenylen- $\alpha\alpha$ -Dihydrasonpropionsäure. Sm. 197—198° u. Zers. (A. 239, 211). — IV, 1276.
- 3) 2,4-Lakton d. 2-Oxy-1,2-Di[4-Aethoxyphenyl]-2,2-Dihydro-1,2,3,5-Tetrazol-4-Carbonsäure + 2H₂O. Sm. 113° (B. 28, 1694). — IV, 1241.
- 4) Diacetat d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Di[Phenylamido]äthan. Sm. oberh. 200° u. Zers. (B. 26, 1406). — II, 410.
- 5) Dibenzooat d. $\alpha\delta$ -Diamido- $\alpha\delta$ -Dioximidobutan. Sm. 192° (B. 22, 2960). — II, 1210.
- 6) Di[β -Formyl- α -Phenylhydrazid] d. Bernsteinsäure. Sm. 246—247° (B. 26, 2496). — IV, 704.
- 7) Di[4-Oxybenzylidenhydrazid] d. Aethan- $\alpha\beta$ -Dicarbonsäure. Sm. 216° (J. pr. [2] 51, 192). — III, 86.
- 8) Di[Benzylidenhydrazid] d. $\alpha\beta$ -Dioxyäthan- $\alpha\beta$ -Dicarbonsäure. Sm. 225° (B. 26, 2058). — III, 41.
- C₁₀H₁₀O₄N₆** C 56,6 — H 4,7 — O 16,7 — N 22,0 — M. G. 382.
1) Verbindung (aus Eulyt). Sm. 110—111° (B. 24, 1304). — I, 710.
- C₁₀H₁₀O₄Br** 1) Tetrabromgeraniolmonoester d. Benzol-1,2-Dicarbonsäure. Sm. 114—115° (B. [3] 19, 638).
- C₁₀H₁₀O₄S** 1) Diacetat d. Di[p -Oxy- p -Methylphenyl]sulfid. Sm. 83—84° (G. 19, 347). — II, 967.
- C₁₀H₁₀O₄S₂** 1) Diäthylester d. Diphenyldisulfid-2,2'-Dicarbonsäure. Sm. 119 bis 120° (B. 31, 1670).
C 63,1 — H 5,3 — O 23,4 — N 8,2 — M. G. 342.
- C₁₀H₁₀O₄N₂** 1) Diäthylester d. Azoxybenzol-3,3'-Dicarbonsäure. Sm. 76—78° (J. r. 23, 93). — IV, 1344.
2) Di[Phenylamid] d. Monacetylweinsäure. Sm. 148° (Soc. 71, 1060).
3) Phenylamid d. Isosuckersäure. Sm. 231° (B. 19, 1265; 27, 124). — II, 424.
4) Diphenyldiamid d. Citronensäure (α -Citrodianilsäure). Sm. 183° (153°). Ba, Ag, Anilinsalz (A. 82, 89; 98, 89; Soc. 61, 1006). — II, 423.
5) isom. Diphenyldiamid d. Citronensäure (β -Citrodianilsäure). Sm. 184° (B. 22, 985, 986; Soc. 61, 1006; 63, 699). — II, 423.
- C₁₀H₁₀O₄S₂** 1) Diphenyldimerkaptodilaktysäure. Fl. Ag (B. 18, 266). — II, 788.
C₁₀H₁₀O₄N₂ C 60,3 — H 5,0 — O 26,8 — N 7,8 — M. G. 358.
1) $\alpha\beta$ -Di[4-Nitro-2-Aethylbenzoyl]hydrazin. Sm. 245—245,5° u. Zers. (B. 29, 2540).
2) Dibenzooat d. γ -Methylnitramido- $\alpha\beta$ -Dioxybutan. Sm. 102° (B. 15, 204).
3) Aethylester d. $\beta\beta'$ -Di[2-Nitrophenyl]isobuttersäure. Sm. 62° (B. 27, 2250). — II, 1471.
4) Diäthylester d. 1,4-Naphtylendioxaminsäure. Sm. 203° (B. 30, 773). — IV, 922.
5) Diäthylester d. 1,5-Naphtylendioxaminsäure. Sm. 206—208° (B. 30, 774). — IV, 924.
- C₁₀H₁₀O₄N₄** C 55,9 — H 4,7 — O 24,9 — N 14,5 — M. G. 386.
1) $\alpha\beta$ -Di[Acetylamido]- $\alpha\beta$ -Di[2-Nitrophenyl]äthan. Sm. 215—216° (J. pr. [2] 48, 197). — II, 368.
2) 5,5'-Dinitro-4,4'-Di[Acetylamido]-3,3'-Dimethylbiphenyl. Zers. bei 320° (B. 21, 748). — IV, 981.
3) $\alpha\beta$ -Di[4-Methylphenylnitrosamido]bernsteinsäure. Sm. 125° (B. 26, 1767). — II, 509.
4) Methylester d. α -Phenylhydrazon-3,5-Dinitro-2,4,6-Trimethylphenylessigsäure. Sm. 197—198° (A. 264, 144). — IV, 698.
5) Di[p -Nitro-4-Methylphenylamid] d. Bernsteinsäure. Sm. 217° (A. 209, 381). — II, 502.
- C₁₀H₁₀O₆S** 1) Diacetat d. s -Di[p -Oxy- p -Methylphenyl]sulfon. Sm. 132—133° (G. 19, 346). — II, 967.
2) Diacetat d. s -Di[p -Oxy- p -Methylphenyl]sulfon. Sm. 206—208° (G. 19, 348). — II, 967.
- C₁₀H₁₀O₆S₂** 1) Retendisulfonsäure + 10H₂O. Salze meist bekannt (J. 1860, 476; A. 185, 86). — II, 277.
- C₁₀H₁₀O₆N₄** C 51,7 — H 4,3 — O 30,6 — N 13,4 — M. G. 418.
1) Dimethyläther d. 6,6'-Dinitro-4,4'-Di[Acetylamido]-3,3'-Dioxybiphenyl. Zers. oberh. 220° (J. pr. [2] 58, 218).

- C₁₈H₁₈O₈N₄** 2) Tetranitrodimesityl. Sm. 206° (B. 27, 2524).
 3) isom. Tetranitrodimesityl. Sm. 233° (B. 27, 2525).
 4) isom. Tetranitrodimesityl. Sm. 160° (B. 27, 2524).
- C₁₈H₁₈O₈Cl₂** 1) Diäthylester d. 2,5-Dichlor-1,4-Benzochinon-3,6-Di[Acetylessigsäure]. Sm. 127–128° (J. pr. [2] 45, 71). — II, 2077.
 2) Diäthylester d. 3,6-Dichlor-1,4-Benzochinondi[Methylfurancarbonsäure]. Sm. 171° (J. pr. [2] 45, 75). — II, 2078.
- C₁₈H₁₈O₈S** 1) Verbindung (aus 1,4-Dioxybenzol u. SO₂) (A. 110, 358). — II, 939.
- C₁₈H₁₈O₇S₂** 1) Retentrisulfonsäure. Ba₃ + 18H₂O, Pb₃ + 18H₂O (A. 185, 93). — II, 277.
- C₁₈H₁₈N₂Cl₂** 1) 1,2-Xylylendipyridoniumchlorid. 2 + PtCl₄, 2 + 2AuCl₃ (B. 31, 430).
- C₁₈H₁₈N₂Br₂** 1) 1,2-Xylylendipyridoniumbromid. Sm. 134° (B. 31, 430).
- C₁₈H₁₈N₂Br₄** 1) Tetrabromid d. 1,2-Xylylendipyridoniumbromid. Sm. 141° (B. 31, 430).
- C₁₈H₁₈N₂S** 1) 2-Dibenzylamido-4-Methylthiazol. Sm. 50° (G. 24 [1] 65). — IV, 520.
 2) 2-Benzylimido-4-Methyl-3-Benzyl-2,3-Dihydrothiazol. HCl, HBr (G. 24 [1] 67). — IV, 520.
 3) 2-Methyläther d. 3-Merkapto-1-Aethyl-4,5-Diphenylimidazol. Sm. 106° (A. 284, 27). — III, 224.
- C₁₈H₁₈N₂S₂** 1) γ-Phenylhydrazon-ββ-Dithiénylbutan. Fl. (B. 30, 2040).
- C₁₈H₁₈N₂J** 1) Jodmethylat d. 6-Phenylamido-4-Methyl-2-Phenyl-1,3-Diazin + 2H₂O. Sm. 210–213° u. Zers. (Am. 20, 486). — IV, 1167.
- C₁₈H₁₈N₂P** 1) Triphenylamid d. Phosphorigensäure. 3HCl, (6HCl, 3ZnCl₂), (6HCl, 3PtCl₄) (Z. 1865, 648). — II, 356.
- C₁₈H₁₈N₂As** 1) Tri[β-Amidophenyl]arsin. Sm. 176°. 3HCl, (6HCl, 3PtCl₄) (B. 19, 1034). — IV, 1689.
- C₁₈H₁₈N₂S₄** 1) Sulhd d. 5-Merkapto-2-Methyl-3-Phenyl-2,3-Dihydro-1,3,4-Thio-diazol. Sm. 140° (B. 28, 2641). — IV, 746.
 C 81,5 — H 7,2 — O 6,0 — N 5,3 — M. G. 265.
- C₁₈H₁₈ON** 1) β-Benzoyl-α-Methylphenylamido-α-Buten. Sm. 72–73° (A. 281, 398). — III, 166.
 2) Verbindung (aus p-Tetroliditoly) (B. 14, 2063). — IV, 1035.
 C 73,7 — H 6,5 — O 5,5 — N 14,3 — M. G. 293.
- C₁₈H₁₈ON₃** 1) Aethyläther d. 5-Oxy-3-Phenyl-6,7,8,9-Tetrahydro-β-Naphtisotriazol. Sm. 125–126° (B. 31, 901). — IV, 1576.
 2) Verbindung (aus Phenosafranin). Sm. 130° (B. 21, 1595). — IV, 1284.
 C 76,8 — H 6,8 — O 11,4 — N 5,0 — M. G. 281.
- C₁₈H₁₈O₂N** 1) Dihydroindendioxyamin. Sm. 188,5° (B. 26, 1542). — II, 170.
 2) α-Phenylamido-γ-Oxy-β-Acetyl-α-Phenyl-β-Buten. Sm. 109° (B. 31, 1393).
 3) Aethyläther d. α-Keto-γ-Phenylimido-α-[2-Oxyphenyl]butan (Anilid d. o-Aethoxybenzoylacetone). Sm. 110–111° (B. 27, 3037). — III, 271.
 4) α-Phenylamido-β-Acetyl-γ-Keto-α-Phenylbutan. Sm. 83–84° (B. 31, 1392).
 5) β-Acetylamido-2,4,5-Trimethyldiphenylketon. Sm. 170° (B. 17, 2674). — III, 236.
 6) N-Benzoylbensimidoisobutyläther. Sm. 54,5°; Sd. 228–235₁₀ (Am. 20, 75).
 7) Acetat d. anti-α-Oximido-4-Propyldiphenylmethan. Sm. 66° (B. 24, 4034). — III, 236.
 8) Acetat d. syn-α-Oximido-4-Propyldiphenylmethan. Sm. 116° (B. 24, 4034). — III, 236.
 9) Acetat d. anti-α-Oximido-4-Isopropyldiphenylmethan. Sm. 90° (B. 24, 4036). — III, 236.
 10) Acetat d. syn-α-Oximido-4-Isopropyldiphenylmethan. Fl. (B. 24, 4036). — III, 236.
 11) Apocodein. HCl, (2HCl, PtCl₄ + 4H₂O) (A. 158, 131). — III, 907.
 12) Pinenphtalimid. Sm. 90–100° (G. 21, 1). — IV, 77.
 13) 2,6-Diphenylhexahydropyridin-4-Carbonsäure (B. 20, 2762; 29, 798). — IV, 403.
 14) Aethyl ester d. β-Benzylamido-β-Phenylakrylsäure. Sm. 68° (B. 30, 3005).
 15) Phenylamid d. δ-Keto-β-Phenylpentan-α-Carbonsäure. Sm. 135° (A. 294, 329).

- $C_{18}H_{19}O_2N$ 16) 2-Naphtylimid d. $\beta\gamma$ -Dimethylbutan- $\beta\gamma$ -Dicarbonsäure. Sm. 152° (A. 292, 177).
- 17) Piperidid d. β -Furanyl- α -Phenylakrylsäure (P. d. Furalphenylessigsäure). Sm. 105° (B. 31, 282).
- $C_{18}H_{19}O_2N_3$ 1) Aethyläther d. γ -Phenylallylphenyluramidoxim. Sm. 155–156° (B. 22, 2398). — II, 1409.
- 2) 2,7-Di[Acetylamido]-3,6-Dimethylcarbazol. Sm. oberh. 300° (B. 24, 1035). — IV, 1175.
- 3) Verbindung (aus Phenylcarbonimid u. β -Methylamidocrotonsäureanilid). Sm. 173° (B. 25, 1873). — II, 383.
- $C_{18}H_{19}O_2Cl$ 1) Diäthyläther d. β -Chlor- $\alpha\alpha$ -Di[4-Oxyphenyl]äthen. Sm. 67° (A. 279, 342). — II, 998.
- $C_{18}H_{19}O_2N$ 1) Berbamin + 2H₂O. Sm. 197–210° (156°) wasserfrei. HCl, (2HCl, PtCl₄ + 5H₂O), (HCl, AuCl₃ + 5H₂O), H₂SO₄ + 4H₂O (B. 19, 3193; 28 [2] 614). — III, 803.
- 2) Curin. Sm. 212°. + C₆H₆O (Sm. 159–163°); + C₆H₆ (sm. 161°); (2HCl, PtCl₄), (HCl, AuCl₃) (C. 1895 [2] 1085).
- 3) Pellutein (Flavobuxin; Siperin). (2HCl, PtCl₄) (A. 48, 109; 69, 59; J. 1859, 565; 1869, 740). — III, 798.
- 4) Thebenin. HCl + 3H₂O, (2HCl, HgCl₂ + 2H₂O), H₂SO₄ + H₂O, Dioxalat + H₂O (A. 153, 69; B. 27, 2961; 30, 1375; 32, 180). — III, 910.
- 5) 3-Methyläther-4-[β -Oximido- β -Phenyläthyläther] d. 3,4-Dioxy-1-Allylbenzol (Eugenolacetophenonoxim). Sm. 81–82° (B. 27, 2462). — III, 133.
- 6) 3-Methyläther-4-[β -Oximido- β -Phenyläthyläther] d. 3,4-Dioxy-1-Propenylbenzol (Isoeugenolacetophenonoxim). Sm. 141–142° (B. 27, 2462). — III, 133.
- 7) Aethyläther d. 4-Methylbenzoyl-4-Methylbenzhydroxamsäure. Sm. 70,5° (A. 281, 267). — II, 1345.
- 8) Anthracenisobutylnitrat. Sm. 121° u. Zers. (Soc. 61, 867). — II, 260.
- 9) Acetat d. β -Acetylamido- α -Oxy- $\alpha\beta$ -Diphenyläthan. Sm. 212–213° (159°) (B. 20, 494; 29, 1214). — II, 1080.
- 10) 3-Methylbenzoat d. Aethyl-3-Methylbenzhydroxamsäure. Fl. (A. 281, 244). — II, 1336.
- 11) 4-Methylbenzoat d. α -Aethyl-4-Methylbenzhydroxamsäure. Sm. 78° (A. 281, 244). — II, 1345.
- 12) 4-Methylbenzoat d. β -Aethyl-4-Methylbenzhydroxamsäure. Sm. 54° (A. 281, 246). — II, 1345.
- 13) Morphothebain (oder C₁₇H₁₇O₂N). Sm. 192–193°. HCl, HBr, HJ (B. 32, 188).
- 14) 2-[4-Diäthylamidobenzoyl]benzol-1-Carbonsäure. Sm. 180° (B. 27 [2] 665; B. [3] 19, 830).
- 15) Aethylester d. β -Oximido- $\alpha\gamma$ -Diphenylpropan- α -Carbonsäure. Sm. 112–113° (A. 296, 5).
- 16) Aethylester d. 3-Benzoyl-2,4,6-Trimethylpyridin-5-Carbonsäure. Fl. HCl, (2HCl, PtCl₄), HNO₃ (B. 24, 1668). — IV, 157.
- 17) Aethylester d. 5-Acetyl-2,6-Dimethyl-4-Phenylpyridin-3-Carbonsäure. Sm. 85–86° (B. 31, 1028).
- 18) Monamid d. $\alpha\beta$ -Diphenyläthan-2,2'-Dicarbonsäuremonäthylester. Sm. 65–68° (A. 239, 68). — II, 1889.
- 19) Phenylamid d. Oxyessig-2-Methoxyl-4-Allylphenyläthersäure. Sm. 54° (B. [3] 17, 361).
- 20) 4-Methylphenylmonamid d. β -Phenylpropan- $\alpha\gamma$ -Dicarbonsäure. Sm. 154–155°. Ag (Am. 20, 513).
- $C_{18}H_{19}O_2N_3$ C 61,2 — H 5,4 — O 13,6 — N 19,8 — M. G. 353.
- 2) 2,4,3'-Tri[Acetylamido]azobenzol. Sm. 264° (B. 30, 2205). — IV, 1363.
- $C_{18}H_{19}O_2Br_3$ 1) Tribromostruthin. Sm. 133° (A. 183, 341). — III, 639.
- $C_{18}H_{19}O_2N$ C 69,0 — H 6,1 — O 20,4 — N 4,5 — M. G. 313.
- 1) 1-Aethyläther d. 4-Acetylamygdalylamid-1-Oxybenzol. Sm. 154° (B. 28 [2] 991).
- 2) 4,4'-Diäthyläther d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Di[4-Oxyphenyl]äthan. Sm. 136° (A. 279, 343). — III, 296.

- C₁₈H₁₉O₄N** 3) α -Dimethylamido- α - β -Diphenyläthan-4,4'-Dicarbonsäure. Sm. 268 bis 270°. HCl. (2HCl, PtCl₄), Pikrat (B. 28, 1143). — II, 1889.
- 4) 2-[4-Diäthylamido-3-Oxybenzoyl]benzol-1-Carbonsäure. Sm. 203° u. Zers. (Bl. [3] 19, 830; C. 1898 [1] 1296).
- 5) 1,2-Lakton d. 3,4-Dioxy-1-Aethylphenylamidooxymethylbenzol-3,4-Dimethyläther-2-Carbonsäure (Opiansäureäthylanilid). Sm. 116 bis 117° (B. 29, 182).
- 6) Dimethylester d. α -Phenylamido- α -Phenyläthan- $\beta\beta$ -Dicarbonsäure. Sm. 117—118°. HCl (B. 28, 146). — II, 1850.
- 7) β -[2,4-Dimethylphenoxy]äthylmonamid d. Benzol-1,2-Dicarbonsäure. Sm. 130—131° (B. 29, 2400).
- 8) 2-Naphtylmonamid d. Säure C₉H₇O₂ (aus Camphersäure). Sm. 178° (B. 30, 1902).
- C₁₈H₁₉O₄N₃** 9) Verbindung (aus Bebeerin). Zers. oberh. 260° (B. 29, 2058). — III, 798. C 63.3 — H 5.6 — O 18.8 — N 12.3 — M. G. 341.
- 1) 5-Nitro-4,4'-Di[Acetylamido]-3,3'-Dimethylbiphenyl. Sm. 200° (B. 25, 1033). — IV, 981.
- 2) Diäthylester d. Diazoamidobenzol-3,3'-Dicarbonsäure. Sm. 144° (A. 117, 11). — IV, 1577.
- 3) α -Phenylamidofornyl- β -Phenylhydrazid d. Malonsäuremonoäthylester. Sm. 158° (B. 24, 1800). — IV, 702.
- C₁₈H₁₉O₅N** C 63.7 — H 5.8 — O 24.3 — N 4.2 — M. G. 329.
- 1) 2-Acetat-5,5'-Dimethyläther d. 2'-Nitroso-2,5,5'-Trioxy-3,3'-Dimethylbiphenyl (B. 31, 1335).
- 2) Morphinearbonsäure (B. 25 [2] 202). — III, 900.
- 3) Dimethylcolchicinsäure + 4 $\frac{1}{2}$ H₂O. Sm. 141—142°. HCl + H₂O (M. 9, 17). — III, 875.
- 4) 3,4-Dimethoxy-1-[4-Aethoxyphenyl]imidomethylbenzol-2-Carbonsäure (Opiansäure-p-Phenetidin). Sm. 175° (C. 1897 [1] 1121).
- 5) 1-Methylester-2-Benzylamid d. 3,4-Dioxybenzoldimethyläther-1,2-Dicarbonsäure. Sm. 96—97° (R. 15, 340).
- 6) 2-Methylester-1-Benzylamid d. 3,4-Dioxybenzoldimethyläther-1,2-Dicarbonsäure. Sm. 113° (R. 15, 341).
- 7) 4-Methoxybenzoat d. α -Aethyl-4-Methoxybenzhydroxamsäure. Sm. 94° (A. 281, 255). — II, 1535.
- 8) 4-Methoxybenzoat d. β -Aethyl-4-Methoxybenzhydroxamsäure. Sm. 77° (A. 281, 257). — II, 1535.
- C₁₈H₁₉O₆N** C 62.6 — H 5.5 — O 27.8 — N 4.1 — M. G. 345.
- 1) Verbindung (aus Ketacetsäurediäthylester u. Anilin). Sm. 137—138° (A. 269, 43). — I, 848.
- C₁₈H₁₉O₆Cl** 1) Verbindung (aus Chlorhexaoxybiphenyltetraäthyläther). Sm. 159° (B. 31, 618).
- C₁₈H₁₉O₆Br** 1) Pentamethyläther d. p-Brom-3,4,2',4',6'-Pentaoxydiphenylketon. Sm. 144° (B. 25, 1132). — III, 208.
- C₁₈H₁₉O₆P** 1) Di[2,4-Dimethylphenyl]phosphinsäure-5,5'-Dicarbonsäure. Sm. 185°. Ag₂ (A. 294, 32). — IV, 1679.
- C₁₈H₁₉O₆N₂** 1) Verbindung (aus Gelsemin). Sm. 238° (C. 1896 [1] 111).
- C₁₈H₁₉N₈** 1) Äthyläther d. Benzylechinolinammoniumsulfhydrat. 2 + PtCl₄ (J. pr. [2] 51, 96). — IV, 252.
- C₁₈H₁₉N₂Cl** 1) Base (aus Essigsäure-4-Methylphenylamid). Sm. 71—72°. (2HCl, PtCl₄) (A. 214, 205, siehe auch B. 9, 1214). — II, 491.
- C₁₈H₁₉N₂J** 1) Jodäthylat d. 4-Methyl-2-[4-Amidophenyl]chinolin (B. 15, 1502). — IV, 1030.
- C₁₈H₁₉N₂Si** 1) Verbindung (aus Anilin u. Siliciumchloroform) (C. 1896 [1] 803). C 77.1 — H 7.1 — O 5.7 — N 10.0 — M. G. 280.
- C₁₈H₂₁ON₂** 1) 4- β -Benzoylpropylidenlamido-1-Dimethylamidobenzol? Sm. 135 bis 136° (B. 25, 636). — IV, 598.
- 2) α -Phenyl- β -[1,2,3,4-Tetrahydro-1-Naphtylmethyl]harnstoff. Sm. 120,5° (B. 22, 1917). — II, 589.
- 3) α -Phenyl- β -[1,2,3,4-Tetrahydro-2-Naphtylmethyl]harnstoff. Sm. 141° (B. 22, 1913). — II, 590.
- 4) γ -Phenylhydrazon- α -[2-Oxyphenyl]- α -Hexen. Sm. 119° (B. 29, 376). — IV, 274.

- $C_{18}H_{20}ON$, 5) Aethyläther d. 8-Phenylazo-5-Oxy-1,2,3,4-Tetrahydronaphtalin. Sm. 91,5° (B. 31, 899). — IV, 1426.
- 6) 2-Keto-4-Methyl-1,3-Di[2-Methylphenyl]tetrahydroimidazol. Sm. 93° (B. 25, 3276). — II, 464.
- 7) 2-Keto-4-Methyl-1,3-Di[4-Methylphenyl]tetrahydroimidazol. Sm. 129,9° (B. 25, 3278). — II, 495.
- 8) 2-Keto-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin. Sm. 79° (B. 25, 2933). — II, 470.
- 9) 2-Keto-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 168,5° (B. 22, 1785). — II, 506.
- 10) 3-Keto-2-Aethyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 93—94° (B. 25, 2938). — II, 434.
- 11) 3-Keto-2,2-Dimethyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 116° (B. 25, 2939). — II, 435.
- 12) Phenyläther d. α -Phenylimido- α -Oxy- α -[1-Piperidyl]methan (Diphenylpiperidylisoharnstoff). Sm. 86° (B. 23, 983). — IV, 13.
- 13) Acetylderivat (d. Base $C_{16}H_{18}N_2$, vom Sm. 126°). Sm. 188° (B. 25, 2031; 27, 1303). — II, 443.
- 14) Acetylderivat (d. isom. Base $C_{16}H_{18}N_2$, vom Sm. 85,5°). Amorph (B. 27, 1303).
- $C_{18}H_{20}OCl_4$
 $C_{18}H_{20}O_2N_2$, 1) Tetrachlorearotin. Sm. 120° (A. 117, 228). — III, 626.
 C 73,0 — H 6,7 — O 10,8 — N 9,5 — M. G. 296.
- 1) Dimethyläther d. $\alpha\beta$ -Di[2-Oxybenzylidenamido]äthan. Sm. bei 113° (B. 20, 272). — III, 72.
- 2) Dimethyläther d. $\alpha\beta$ -Di[4-Oxybenzylidenamido]äthan. Sm. 110 bis 111° (B. 20, 272). — III, 85.
- 3) β -Di[Acetylamido]-2-Benzyl-1-Methylbenzol. Sm. 220° (B. 26, 1855). — IV, 983.
- 4) $\alpha\beta$ -Di[Acetylamido]- $\alpha\beta$ -Diphenyläthan. Sm. oberh. 350° (B. 22, 2300; 28, 3176). — IV, 978.
- 5) $\alpha\beta$ -Di[Phenylacetylamido]äthan. Sm. 158° (B. 22, 1785). — II, 368.
- 6) $\alpha\beta$ -Di[2-Acetylamidophenyl]äthan. Sm. 249—250° (A. 305, 99).
- 7) 2-Acetylamido-1-[Acetyl-4-Methylphenyl]amidomethylbenzol. Sm. 185—186° (B. 23, 2190). — IV, 631.
- 8) 4,4'-Di[Acetylamido]-2,2'-Dimethylbiphenyl. Sm. 281° (274—275°) (B. 22, 839; 28, 2554). — IV, 980.
- 9) 4,4'-Di[Acetylamido]-3,3'-Dimethylbiphenyl. Sm. 314° (306°) (A. 278, 377; B. 17, 468; 21, 746, 1065). — IV, 981.
- 10) $\alpha\delta$ -Di[Benzoylamido]butan. Sm. 176—177° (H. 13, 574; B. 31, 3184). — II, 1170.
- 11) 4-Methylacetylamido-4'-Dimethylamidodiphenylketon. Sm. 145° (B. 24, 3199). — III, 185.
- 12) $\alpha\zeta$ -Dioximido- $\alpha\zeta$ -Diphenylhexan. Sm. 216—218° (C. 1896 [2] 1091).
- 13) β -Acetyl- α -[4-Isopropylbenzoyl]- α -Phenylhydrazin. Sm. 40—42°. — IV, 670.
- 14) Glyoxim-N-2,4-Dimethylphenyläther. Sm. 198° (B. 31, 560).
- 15) Glyoxim-N-2,6-Dimethylphenyläther. Sm. 203,5° u. Zers. (B. 31, 560).
- 16) Hydrokurin (M. 2, 83). — IV, 270.
- 17) o-Kresolantipyrin. Sm. 60—62° (Bl. [3] 15, 609). — IV, 510.
- 18) m-Kresolantipyrin. Fl. (Bl. [3] 15, 610). — IV, 510.
- 19) p-Kresolantipyrin. Fl. (Bl. [3] 15, 610). — IV, 510.
- 20) 1-Phenyl-4,5-Camphylpyrazol-3-Carbonsäure. Sm. 197° (193 bis 194°), + $\frac{1}{2}C_6H_6$ (Am. 19, 405; 20, 336). — IV, 864.
- 21) Aethylester d. β -Diphenylhydrazonbuttersäure. Sm. 120—135° (B. 30, 3008). — IV, 690.
- 22) Aethylester d. isom. β -Diphenylhydrazonbuttersäure. Fl. (B. 30, 3008). — IV, 690.
- 23) Aethylester d. β -Phenylhydrazon- α -Phenylpropan- α -Carbonsäure. Sm. 104° (B. 31, 3164).
- 24) Aethylidenamid d. Phenylsigssäure. Sm. 227—228° (A. 184, 318). — II, 1312.
- 25) Di[Phenylamid] d. Piperazin-1,4-Dicarbonensäure (J. pr. [2] 53, 21).
- 26) Diphenylamid d. s-Paradimethylbernsteinsäure. Sm. 235° (B. 23, 644). — II, 415.

- C₁₈H₂₀O₂N₂** 27) Diphenylamid d. *s*-Antidimethylbernsteinsäure. Sm. 222° (*B.* 23, 644). — II, 415.
- 28) Di[Methylphenylamid] d. Bernsteinsäure. Sm. 154,5 — 155° (*A.* 292, 192).
- 29) Di[2-Methylphenylamid] d. Bernsteinsäure. Sm. 100° (*B.* 12, 323). — II, 468.
- 30) Di[4-Methylphenylamid] d. Bernsteinsäure. Sm. 256° (*B.* 12, 323; *A.* 126, 165; 209, 380). — II, 502.
- 31) Dibenzylamid d. Bernsteinsäure. Sm. 205—206° (*Soc.* 55, 631). — II, 530.
- 32) Di[*o*-Phenyläthylamid] d. Oxalsäure. Sm. 185° (*B.* 27, 2308).
- 33) Di[*β*-Phenyläthylamid] d. Oxalsäure. Sm. 186° (180°) (*B.* 19, 1826; *J. pr.* [2] 50, 558). — II, 540.
- 34) Di[2,4-Dimethylphenylamid] d. Oxalsäure. Sm. 210° (204°) (*B.* 3, 227; *M.* 9, 746). — II, 544.
- 35) Di[2,5-Dimethylphenylamid] d. Oxalsäure. subl. bei 125° (*B.* 11, 1538). — II, 547.
- 36) 1-Methylamid d. 2-[2,4,5-Trimethylphenyl]amid d. Benzol-1,2-Dicarbonensäure. Sm. 215° u. *Zers.* (*B.* 17, 1808). — II, 1808.
- 37) Verbindung (aus Furfurol, Anilin u. Methylanilin). HCl (*A.* 239, 356). — III, 723.
- 38) Verbindung (aus 1,4-Dioxybenzol u. Amidobenzol). Sm. 89—90° (*B.* 15, 1973). — II, 939.
- 39) Verbindung (aus 2-Methylphenylcarbonimid u. anti-4-Isopropylbenzaldoxim). Sm. 70° (*B.* 26, 2095). — III, 57.
- 40) Verbindung (aus 4-Methylphenylcarbonimid u. anti-4-Isopropylbenzaldoxim). Sm. 115° (*B.* 26, 2095). — III, 57.
- 41) Verbindung (aus 4-Methylphenylcarbonimid u. syn-4-Isopropylbenzaldoxim). 2 isom. Formen. Sm. 113° u. 120° (*B.* 26, 2095). — III, 57.
- C₁₈H₂₀O₂N₄** C 66,7 — H 6,1 — O 9,9 — N 17,3 — M. G. 324.
- 1) Butenyldiphenylureid. Sm. 169—170°. — II, 378.
- 2) *αβ*-Succinyldiphenylhydrazidoäthan. Sm. bei 126° (*A.* 254, 123). — IV, 704.
- 3) 3,3'-Di[Acetylamido]-2,2'-Dimethylazobenzol. Sm. oberh. 340° (*Soc.* 59, 1016). — IV, 1377.
- 4) 4,4'-Di[Acetylamido]-3,3'-Dimethylazobenzol. Sm. noch nicht bei 30° (*Am.* 17, 450). — IV, 1377.
- 5) 6,6'-Di[Acetylamido]-3,3'-Dimethylazobenzol (*B.* 22, 1397). — IV, 1377.
- 6) 3,3'-Di[Acetylamido]-4,4'-Dimethylazobenzol. Sm. bei 300° (*Soc.* 59, 1016). — IV, 1379.
- 7) *γδ*-Di[Phenylhydrizon]-*ββ*-Methylbutan-*ββ*-Carbonsäure. Sm. 190° (*B.* 30, 859). — IV, 707.
- 8) Aethylester d. *αα*-Phenylazo-*ββ*-Phenylhydrizonbuttersäure. Sm. 108—109° (*B.* 32, 208).
- C₁₈H₂₀O₂Cl₂** 1) Diäthyläther d. *ββ*-Dichlor-*αα*-Di[4-Oxyphenyl]äthan. Sm. 72° (*A.* 279, 341). — II, 995.
- C₁₈H₂₀O₂Br₂** 1) *p*-Dibrom-5,5'-Dioxy-1,2,4,1',2',4'-Hexamethyl-*p*-Biphenyl. Sm. 186—187° (*B.* 18, 2690). — II, 996.
- 2) Diäthyläther d. *αβ*-Dibrom-*αβ*-Di[4-Oxyphenyl]äthan. Sm. 192° (*A.* 279, 344). — II, 993.
- C₁₈H₂₀O₂S₂** 1) Aethylester d. *ββ*-Merkaptobutterdiphenyläthersäure. Sm. 57—58° (*B.* 19, 1790). — II, 788.
- C₁₈H₂₀O₂N₂** C 69,2 — H 6,4 — O 15,4 — N 9,0 — M. G. 312.
- 1) Aethyläther d. 5-[4-Formylamido-3-Methylphenyl]formylamido-2-Oxy-1-Methylbenzol. Sm. 146—147° (*A.* 287, 194).
- 2) Aethyläther d. 6,4'-Di[Acetylamido]-3-Oxybiphenyl. Sm. 190—191° (*A.* 303, 350).
- 3) Aethyläther d. 4-Diacetylamido-4'-Oxydiphenylamin. Sm. 175 bis 176° (*B.* 26, 693). — IV, 584.
- 4) Guajakolantipyrrin (*Bil.* [3] 15, 172). — IV, 510.
- 5) Orcinantipyrrin. Fl. (*Bil.* [3] 15, 612). — IV, 510.
- 6) Saligeninantipyrrin. Fl. (*Bil.* [3] 15, 849). — IV, 510.

- $C_{15}H_{20}O_2N_2$ 7) Cyan-2-Nitrobenzylcampher. Sm. 104—105° (B. 24 [2] 733). — III, 514.
- 8) Cinchotenin + 3H₂O. Sm. 197—198°. (2HCl, PtCl₄), (2HCl, AuCl₃) (A. Spl. 7, 249; A. 176, 232; 197, 376; B. 11, 1984; 28, 12, 1072, 1988; M. 15, 787; 16, 62, 159). — III, 840.
- 9) Cinchotenicin. Sm. 153° (B. 11, 1983). — III, 844.
- 10) Cinchoteninid + 3H₂O. Sm. 256° u. Zers. (2HCl, PtCl₄), H₂SO₄ + 2 $\frac{1}{2}$ H₂O (A. 197, 237; B. 14, 1892; M. 10, 54). — III, 854.
- 11) α -[α -Phenylamidopropionylphenyl]amidopropionsäure. Sm. 79—80° u. Zers. (B. 23, 2016). — II, 433.
- 12) 2-Methylphenylamidoacetyl-2-Methylphenylamidoessigsäure. Sm. 123° (J. pr. [2] 38, 306). — II, 470.
- 13) 2-Methylphenylamidoäthyl-2-Methylphenylamidoformylameisensäure + xH₂O. Sm. 100° u. Zers. Ba + H₂O (B. 23, 2035). — II, 467.
- 14) Phenylmonamid d. Phenylamidobernsteinsäuremonoäthylester. Sm. 144° (B. 25, 650). — II, 437.
- 15) Phenylmonamid d. Phenylmidodiessigsäuremonoäthylester. Sm. 121—122° (B. 22, 1801). — II, 431.
- 16) Benzylmonamid d. Benzylamidobernsteinsäure. Sm. 204—205°. Ba (C. 1896 [1] 244).
- 17) 2-Methylphenylmonamid d. 2-Methylphenylimidodiessigsäure. Sm. 146—148° (B. 23, 1994). — II, 470.
- 18) 4-Methylphenylmonamid d. 4-Methylphenylimidodiessigsäure. Sm. 222° u. Zers. (B. 23, 2001; 25, 2288). — II, 507.
- 19) Di[2-Methylphenylamid] d. Aepfelsäure. Sm. 180,5—181,5° (179°) (B. 23, 2044; G. 23, 183; C. 1899 [1] 467). — II, 468.
- 20) Di[3-Methylphenylamid] d. Aepfelsäure. Sm. 153° (C. 1899 [1] 467).
- 21) Di[4-Methylphenylamid] d. Aepfelsäure. Sm. 195° (206°) (G. 23, 180; C. 1899 [1] 467). — II, 503.
- 22) Verbindung (aus d. Diäthyläther d. 2-Amido-1,3-Dioxybenzol). Sm. 207° (B. 20, 1149). — II, 928.
- $C_{18}H_{20}O_2N_4$
- 1) 3,3'-Di[Acetylamido]-2,2'-Dimethylazoxybenzol. Sm. 307° (Soc. 59, 1016). — IV, 1339.
- 2) 6,6'-Di[Acetylamido]-3,3'-Dimethylazoxybenzol. Sm. 196° (B. 22, 1397). — IV, 1341.
- 3) 3,3'-Di[Acetylamido]-4,4'-Dimethylazoxybenzol. Sm. 290° (Soc. 59, 1016). — IV, 1341.
- 4) Di[Phenylhydrason] d. Keton C₈H₈O₂ (aus Quercit). Sm. 180° u. Zers. (B. 29, 1766). — IV, 788.
- 5) α -Phenyl- β -Acetylhydrazid d. β -Acetyl- α -Phenylhydrazidoessigsäure. Sm. 198° (A. 301, 87).
- 6) Verbindung (aus Akonsäuremethylester u. Phenylhydrazin). Sm. 167° (B. 27, 3441). — IV, 708.
- $C_{18}H_{20}O_2Br_2$
- $C_{18}H_{20}O_4N_2$
- 1) Di[3-Brom-4-Oxy-2,5-Dimethylbenzyläther]. Sm. 162° (A. 302, 122). C 65,9 — H 6,1 — O 19,5 — N 8,5 — M. G. 328.
- 1) $\alpha\beta$ -Di[Acetylamido]- $\alpha\beta$ -Di-2-Oxyphenyläthan. Sm. oberh. 300° (Soc. 45, 680; B. 17, 2409). — II, 994; III, 286.
- 2) Dimethyläther d. 4,4'-Di[Acetylamido]-3,3'-Dioxybiphenyl. Sm. 231° (J. pr. [2] 58, 214).
- 3) Di-2-Acetylamidophenyläther] d. $\alpha\beta$ -Dioxyäthan. Sm. 226° (J. pr. [2] 27, 204). — II, 705.
- 4) Di[4-Acetylamidophenyläther] d. $\alpha\beta$ -Dioxyäthan. Sm. 257° (C. 1898 [2] 423).
- 5) Tetramethyläther d. Di[3,4-Dioxybenzyliden]hydrazin. Sm. 190° (Bl. [3] 17, 946).
- 6) Chitenol + H₂O. Zers. oberh. 270°. 2HCl + H₂O, (2HCl, PtCl₄), H₂SO₄ + H₂O (M. 14, 603). — III, 820.
- 7) $\alpha\beta$ -Di[4-Methylphenylamido]bernsteinsäure. Sm. 200°. Na₂, Ca, Cu (B. 26, 1767). — II, 509.
- 8) Dimethylester d. α -Phenylhydrazido- α -Phenyläthan- $\beta\beta$ -Dicarbonensäure. Sm. 94,5° u. Zers. (B. 28, 147). — IV, 741.
- 9) Dimethylester d. Phenylhydrazonanemonsäure. Sm. 170° (M. 17, 294). — IV, 797.

- C₁₂H₁₀O₂N₂ 10) Diäthylester d. Biphenylen-4,4'-Diamidoameisensäure (Biphenylen-diacethan). Sm. 230° (A. 258, 368; Soc. 49, 256). — IV, 964.
- 11) 3-Nitrophenylamid d. Oxyessig-4-Isobutylphenyläthersäure. Sm. 136—139° (Am. 19, 74).
- 12) Di[2-Methylphenylamid] d. Weinsäure. Sm. 182—183° (200° u. Zers.) (B. 23, 2049; C. 1899 [1] 467). — II, 468.
- 13) Di[3-Methylphenylamid] d. Weinsäure. Sm. 182° u. Zers. (C. 1899 [1] 467).
- 14) Di[4-Methylphenylamid] d. Weinsäure. Sm. 264° u. Zers. (230° u. Zers.) (B. 23, 2050; A. 279, 145; C. 1899 [1] 467). — II, 503.
- 15) 4-Aethoxyphenylamid d. 4-Acetylamidophenoxylessigsäure. Sm. 198° (B. 30, 2107).
- 16) Di[4-Aethoxyphenylamid] d. Oxalsäure. Sm. 265° (256—258°) (B. 28 [2] 991; G. 26 [2] 536).
- C₁₅H₂₀O₄N₄ C 60,7 — H 5,6 — O 18,0 — N 15,7 — M. G. 356.
- 1) 4-Aethoxyphenylazo-4-Aethoxyphenylhydrazonessigsäure. Sm. 147—148° (B. 28, 1693). — IV, 1240.
- C₁₈H₂₀O₄S₂ 1) Hexamethyldiphenylendisulfon. Zers. oberh. 300° (Bl. [3] 15, 1040).
- C₁₈H₂₀O₄Pb 1) Diacetat d. Bleidi[4-Methylphenyl]dioxyhydrat + 2H₂O. Sm. 183,5° (wasserfrei) (B. 21, 3427). — IV, 1716.
- C₁₅H₂₀O₄S₄ 1) Verbindung (aus βγ-Dibrompropylphenylsulfon). Sm. 157—158° (J. pr. [2] 56, 448).
- C₁₅H₂₀O₆N₂ C 60,0 — H 5,6 — O 26,6 — N 7,8 — M. G. 360.
- 1) Diphenylamid d. Schleimsäure (Mucanilid) (J. pr. [2] 6, 138). — II, 424.
- 2) Di[4-Methoxyphenylamid] d. αβ-Dioxyäthan-αβ-Dicarbonensäure. Sm. 259° (C. 1897 [1] 49).
- C₁₅H₂₀O₆Cl₂ 1) Hexamethyläther d. Dichlorhexaoxybiphenyl (B. 11, 1624). — II, 1042.
- C₁₅H₂₀O₆Br₂ 1) Hexamethyläther d. Dibromhexaoxybiphenyl. Sm. 138—140° (B. 11, 1623). — II, 1042.
- C₁₈H₂₀O₆S 1) Verbindung (aus 1,4-Dioxybenzol u. H₂S) (A. 69, 297). — II, 939.
- C₁₈H₂₀O₆S₂ 1) Aethylester d. ββ-Diphenylsulfonbuttersäure. Sm. 97° (A. 259, 367). — II, 789.
- C₁₈H₂₀O₇N₂ C 57,4 — H 5,3 — O 29,8 — N 7,4 — M. G. 376.
- 1) 4-Benzoat d. 4-Oxy-2-Aethyl-1,2,6-Oxidiazin-3,5-Dicarbonensäurediäthylester. Sm. 69° (B. 26, 1005). — IV, 545.
- C₁₈H₂₀O₇N₄ C 53,5 — H 4,9 — O 27,7 — N 13,9 — M. G. 404.
- 1) Diäthyläther d. 4'-Acetylamido-2,4-Dinitro-3,6-Dioxydiphenylamin. Sm. 199° (B. 24, 3828). — II, 949.
- C₁₈H₂₀O₇N₆ C 50,0 — H 4,6 — O 25,9 — N 19,5 — M. G. 432.
- 1) 2-Nitro-1,4-Di[Acetylamido]benzol + 2-Nitro-4-Acetylamido-1-Amidobenzol. Sm. 161° (B. 30, 585). — IV, 589.
- C₁₈H₂₀O₈N₂ C 55,1 — H 5,1 — O 32,7 — N 7,1 — M. G. 392.
- 1) Verbindung (aus ?-Dichlor-?-Diamido-1,4-Dioxybenzol). Sm. 225° (A. 210, 185).
- C₁₈H₂₀O₈Cl₂ 1) Diäthylester d. 3,6-Dichlor-2,5-Dioxybenzoldi-1,4-[Acetylmethylcarbonensäure] (D. d. p-Dichlorhydrochinondiacetessigsäure). Sm. 154° (J. pr. [2] 45, 72). — II, 2076.
- 2) Verbindung (aus Hanf) (Soc. 43, 19; 55, 204). — I, 1080.
- C₁₈H₂₀O₁₀N₂ C 50,9 — H 4,7 — O 37,8 — N 6,6 — M. G. 424.
- 1) Tetracetat d. 3,6-Diacetylamido-1,2,4,5-Tetraoxybenzol. Sm. 240° u. Zers. (B. 18, 503). — II, 1033.
- C₁₈H₂₀O₁₁N₆ C 45,0 — H 4,2 — O 33,3 — N 17,5 — M. G. 480.
- 1) Pyrogallein (J. 1858, 259). — II, 1011.
- C₁₈H₂₀O₁₂N₂ C 47,4 — H 4,4 — O 42,1 — N 6,1 — M. G. 456.
- 1) Tetraäthylester d. 3,6-Dinitrobenzol-1,2,4,5-Tetracarbonensäure. Sm. 130° (A. 237, 23). — II, 2074.
- C₁₈H₂₀O₁₆S₂ 1) Celluloseschwefelsäure. Ca (Berz. J. 25, 582; 26, 615; Z. 1869, 703; A. 53, 134; H. 7, 528; M. 6, 711; 7, 458). — I, 1077.
- C₁₅H₂₀N₂S 1) s-Phenyl-1,2,3,4-Tetrahydro-2-Naphtylmethylthioharnstoff. Sm. 139,5—140° (B. 22, 1913). — II, 590.
- 2) 2 isom. Verbindungen (aus 6-Amido-1,3,4-Trimethylbenzol). Sm. 183° u. 125° (B. 22, 585). — II, 827.

- C₁₈H₂₁N₃S** 1) **s-1,2-Naphtylendi[allylthioharnstoff]**. Zers. bei 200° (*B.* 19, 808). — *IV*, 919.
2) **2,5-Di[2,4-Dimethylphenylamido]-1,3,4-Thiadiazol**. Sm. 79°. (2HCl, PtCl₄), *PKrat.*, + AgNO₃ (*B.* 23, 368). — *IV*, 1236.
C 80,9 — H 7,9 — O 6,0 — N 5,2 — M. G. 267.
- C₁₈H₂₁ON** 1) **Methyläther d. 5-Oxy-4-Isopropyl-2-Phenylimidomethyl-1-Methylbenzol**. Sm. 80° (*B.* 16, 2099). — *III*, 90.
2) **α-[2,4-Dimethylphenyl]amidopropylphenylketon**. Sm. 106—107° (*Bl.* [3] 17, 78).
3) **ε-Oximido-δ-ε-Diphenyl-β-Methylpentan**. Sm. 118° (*B.* 21, 1299). — *III*, 239.
4) **Cyanbenzylcampher**. Sm. 58—59° (*B.* 24 [2] 733). — *III*, 514.
5) **p-Isoamphenylamid d. Benzolcarbonsäure**. Sm. 148,5° (*B.* 14, 2346; 15, 1644; 20, 1259). — *II*, 1167.
6) **l-Methyl-3-Isobutyl-2-Phenylamid d. Benzolcarbonsäure**. Sm. 141 bis 142° (*B.* 17, 2340). — *II*, 1167.
7) **l-Methyl-5-Pseudobutyl-2-Phenylamid d. Benzolcarbonsäure**. Sm. 168° (*B.* 17, 2322). — *II*, 1167.
C 73,2 — H 7,1 — O 5,4 — N 14,2 — M. G. 295.
- C₁₈H₂₁ON₂** 1) **2-Methylphenylazocycancampher**. Sm. 140° u. Zers. — *IV*, 1482.
2) **4-Methylphenylazocycancampher**. Sm. 137°. — *IV*, 1482.
- C₁₈H₂₁OCl** 1) **α-Chlor-β-Oxy-α-α-Di[β-Methylphenyl]-β-Methylpropan**. Sd. 265° (*J. pr.* [2] 37, 369). — *II*, 1081.
C 76,3 — H 7,4 — O 11,3 — N 4,9 — M. G. 283.
- C₁₈H₂₁O₂N** 1) **Desoxycodein**. HBr (*J.* 1871, 778). — *III*, 907.
2) **α-[3-Methoxy-4-Oxyphenyl]-β-[1,2,3,4-Tetrahydrochinolyl(2)]-äthan**. Sm. 88°. HCl (*B.* 27, 1976). — *IV*, 402.
3) **4-Diäthylamidodiphenylmethan-2'-Carbonsäure**. Sm. 108° (*C.* 1898 [1] 1296).
4) **Aethylester d. α-Phenylbenzylamidopropionsäure**. HCl (*B.* 31, 2673).
5) **Aethylester d. α-Aethylphenylamidophenyllessigsäure**. Sm. 38,5 bis 39,5° (*B.* 30, 3179).
6) **Aethylester d. Phenyl-2,4-Dimethylphenylamidoessigsäure**. Sm. 90,5° (*B.* 30, 2477).
7) **2-Methylbenzoat d. r-Carvoxim** (*Ph. Ch.* 14, 404). — *III*, 114.
8) **3-Methylbenzoat d. r-Carvoxim** (*Ph. Ch.* 14, 404). — *III*, 114.
9) **4-Methylbenzoat d. r-Carvoxim** (*Ph. Ch.* 14, 404). — *III*, 114.
10) **Phenylacetat d. r-Carvoxim** (*Ph. Ch.* 14, 404). — *III*, 114.
11) **Phenylamidoformiat d. 5-[α-Oxyäthyl]-1,2,4-Trimethylbenzol**. Sm. 108° (*B.* 31, 1006).
12) **Phenylamidoformiat d. 2-[α-Oxyäthyl]-1,3,5-Trimethylbenzol**. Sm. 124° (*B.* 31, 1009).
13) **Phenylamid d. 5-Oxy-4-Isopropyl-1-Methylbenzolzomethyläther-2-Carbonsäure**. Sm. 166° (*J. pr.* [2] 41, 315). — *II*, 1589.
14) **Phenylamid d. Oxyessig-4-Isobutylphenyläthersäure**. Sm. 97° (*Ann.* 19, 73).
15) **Phenylamid d. Oxyessig-3-Methyl-6-Isopropylphenyläthersäure**. Sm. 81° (*Bl.* [3] 17, 360).
C 69,4 — H 6,8 — O 10,3 — N 13,5 — M. G. 311.
- C₁₈H₂₁O₂N₂** 1) **5-Dimethylamido-2,4-Di[Acetylamido]biphenyl**. Sm. 233° (*A.* 303, 3561).
2) **Mono[4-Methylphenyl]diamid d. 4-Methylphenylimidodiessigsäure**. Sm. 209° (*B.* 25, 2288). — *II*, 507.
3) **Di[4-Methylphenylamid] d. Diglykolamidsäure**. Sm. 149,5° (*B.* 8, 1155). — *II*, 493.
C 72,2 — H 7,0 — O 16,0 — N 4,7 — M. G. 299.
- C₁₈H₂₁O₃N** 1) **Bebeerin** (Behirin; Buxin; Pelosin). amorph. Sm. 180°; kryst. Sm. 214°. HCl, (2HCl, PtCl₄), H₂SO₄, H₂CrO₄ + H₂O (*A.* 33, 81; 48, 111; 55, 105; 69, 53; 77, 333; *B.* 29, 2054; *J.* 1858, 375; 1860, 548; 1869, 738, 739; 1871, 771, 777; *G.* 12, 97; *M.* 18, 385). — *III*, 797.
2) **Codein** (Methyläther d. Morphin) + H₂O. Sm. 153° (155° wasserfrei); Sd. 179°. Salze meist bek. Lit. bedeutend. — *III*, 901.
3) **Isocodein**. Sm. 70—80° (*B.* 32, 196).

- $C_{18}H_{21}O_3N$ 4) Pseudocodēin + H_2O . Sm. 178—180°. HCl, (2HCl + 3HgCl₂ + 1 $\frac{1}{2}$ H₂O), (2HCl, PtCl₄), (HCl, AuCl₃ + 3H₂O), HBr + H₂O, H₂SO₄ + 2H₂O, Pikrat (B. 24 [2] 643). — III, 906.
- 5) Methylpiperin (3,4-Methylenäther d. ϵ -Keto- σ -Piperidyl- α -[3,4-Dioxyphenyl]- δ -Methyl- $\alpha\gamma$ -Pentadien). Sm. 125—126° (B. 28, 1195). — IV, 77.
- 6) 4,4'-Diäthyläther d. α -Oximido- $\alpha\beta$ -Di[4-Oxyphenyl]äthan. Sm. 119° (A. 279, 343). — III, 227.
- 7) 4-Diäthylamido-3-Oxydiphenylmethan-2'-Carbonsäure. Sm. 188° (Bl. [3] 19, 830; C. 1898 [1] 1296).
- 8) 4-Keto-2,6-Dimethyl-1-[2,3,4,6-Tetramethylphenyl]-1,4-Dihydropyridin-3-Carbonsäure. Sm. 145° (B. 21, 1656). — II, 562.
- 9) Phenylamidocamphoformencarbonsäure. Sm. 174°. Anilinsalz (Am. 21, 249).
- 10) Pinenphthalamidsäure. Sm. 109—111° (G. 21, 2). — IV, 77.
- 11) Aethylester d. 3-Benzoyl-2,4,6-Trimethyl-1,4-Dihydropyridin-5-Carbonsäure. Sm. 186—187° (B. 24, 1667). — IV, 90.
- $C_{18}H_{21}O_4N$ 12) Aethylester d. 5-Acetyl-2,6-Dimethyl-4-Phenyl-1,4-Dihydropyridin-3-Carbonsäure. Sm. 167°; Sd. 210—230°₁₅₋₂₀ (B. 31, 1027). C 68,6 — H 6,7 — O 20,3 — N 4,4 — M. G. 315.
- 1) d-Cinnamylegonin. Fl. HCl, (2HCl, PtCl₄), HNO₃ (B. 24, 8). — III, 869.
- 2) l-Cinnamylegonin. Sm. 216° u. Zers. (HCl, AuCl₃) (B. 21, 3373). — III, 868.
- 3) δ -Isatropylegonin (β -Truxillegonin). Sm. 202° u. Zers. (HCl, AuCl₃) (B. 22, 680). — III, 869.
- 4) Base (aus Protopin). Sm. 148° (M. 19, 198).
- 5) Diäthylester d. l-Naphtylamidobernsteinsäure. Sm. 150° (B. 25, 965). — II, 614.
- 6) Diäthylester d. 2-Naphtylamidobernsteinsäure. Sd. 108°₁₅₋₂₀ u. Zers. (B. 25, 970). — II, 622.
- 7) Diäthylester d. 2,5-Dimethyl-1-Phenylpyrrol-3,4-Dicarbonssäure. Sm. 37—38°; Sd. 280°₃₀ (B. 18, 303; A. 236, 305). — IV, 92.
- $C_{18}H_{21}O_4N_2$ C 63,0 — H 6,1 — O 18,6 — N 12,2 — M. G. 343.
- 1) Isobutyldi[2-Nitrobenzyl]amin. Sm. 62°. (HCl, AuCl₃) (B. 26, 2586). — II, 621.
- $C_{18}H_{21}O_5N$ C 65,3 — H 6,3 — O 24,2 — N 4,2 — M. G. 331.
- 1) Diäthylester d. α -Phenylamido- α -[2-Furanyl]äthan- $\beta\beta$ -Dicarbonssäure (D. d. Anilidofurylmalonsäure). Sm. 72—73° (B. 28, 1455). — III, 718.
- 2) Diäthylester d. 2-Keto-6-Methyl-4-Phenyl-1,2,3,4-Tetrahydropyridin-3,6-Dicarbonssäure. Sm. 149,5—150° (B. 31, 763).
- 3) Verbindung (aus d. Diäthyläther d. 4-Amido-1,3-Dioxybenzol). Sm. 170° (B. 20, 1129). — II, 929.
- $C_{18}H_{21}O_6N$ C 62,3 — H 6,0 — O 27,7 — N 4,0 — M. G. 347.
- 1) Diäthylester d. δ -Phthylamidobutan- α -Dicarbonssäure. Sm. 46 bis 48° (B. 23, 1768). — II, 1812.
- $C_{18}H_{21}O_6Cl_2$ 1) Verbindung (aus α -Benzolhexachlorid) (J. 1862, 452).
- $C_{18}H_{21}O_7N_2$ C 55,2 — H 5,4 — O 28,6 — N 10,7 — M. G. 391.
- 1) Hexacetylderivat d. 2,4,6-Triamido-1-Oxybenzol. Sm. 184° (M. 16, 261).
- $C_{18}H_{21}O_8N_{11}$ C 21,6 — H 2,1 — O 60,9 — N 15,4 — M. G. 999.
- 1) Undekanitrat d. Raffinose. Sm. 55—65° (B. 31, 85).
- $C_{18}H_{21}N_3Cl$ 1) l-Chloräthylat d. 5-Methyl-1-Aethyl-2-Phenylbenzimidazol. HCl, 2 + PtCl₄ (A. 210, 374). — IV, 1014.
- $C_{18}H_{21}N_3Cl_2$ 1) Verbindung (aus Chloral u. γ -Dimethyl?-Amidobenzol). Sm. 95—99° (A. 173, 283). — II, 548.
- $C_{18}H_{21}N_3J$ 1) l-Jodäthylat d. 5-Methyl-1-Aethyl-2-Phenylbenzimidazol. + J₂ (Sm. 128—129°) (A. 210, 373). — IV, 1014.
- $C_{18}H_{21}N_3S$ 1) 2-[1-Piperidyl]diphenylthioharnstoff. Sm. 174° (B. 24, 2103). — IV, 560.
- $C_{18}H_{21}N_3S_2$ 1) Dimethyläthylidiphenylthiobiuret. Sm. 98,8° (B. 26, 1686). — II, 400.
- 2) α -Dimethyläthylidiphenylpseudodithiobiuret. Sm. 89,8° (B. 26, 1688). — II, 400.

- $C_{15}H_{21}N_2S$, 3) β -Dimethyläthylidiphenylpseudodithiobiuret. Sm. 91,2° (B. 26, 1688). — II, 400.
- $C_{15}H_{21}N_2Br$, 1) 2,4,5,2',4',5'-Hexamethyl-6-Diazoazobenzoltribromid. Sm. 122 bis 124° (B. 21, 546). — IV, 1534.
- $C_{15}H_{21}ON_2$, C 76,6 — H 7,8 — O 5,7 — N 9,9 — M. G. 282.
- 1) 4-[4-Dimethylamidophenyl]imido-1-Keto-2-Methyl-5-Isopropyl-1,4-Dihydrobenzol. Sm. 69,5° (Bl. [3] 7, 97; [3] 11, 1135). — III, 365.
 - 2) 4-[4-Dimethylamidophenyl]imido-1-Keto-3-Methyl-6-Propyl-1,4-Dihydrobenzol (Bl. [3] 13, 896).
 - 3) 4-[4-Dimethylamidophenyl]imido-1-Keto-3-Methyl-6-Isopropyl-1,4-Dihydrobenzol. Sm. 87–88° (Bl. [3] 11, 1135). — III, 365.
 - 4) s-[4-Methylphenyl]-4-Isopropylbenzyl]harnstoff. Sm. 150° (B. 22, 932). — II, 561.
 - 5) Äthyläther d. 8-[4-Amidophenyl]amido-5-Oxy-1,2,3,4-Tetrahydro-naphtalin. Sm. 87–88° (B. 31, 904).
 - 6) Äthylester d. 8-Amido-7-Phenylamido-5-Oxy-1,2,3,4-Tetrahydro-naphtalin. Sm. 168–169° (B. 31, 901).
 - 7) γ -Phenylhydrazon- α -[2-Oxyphenyl]hexan. Sm. 149–150° (B. 29, 377). — IV, 773.
 - 8) Oxyhexamethylazobenzol. Sm. 147–148° (B. 17, 885). — IV, 1425.
 - 9) 1-Aethyloxyhydrat d. 5-Methyl-1-Aethyl-2-Phenylbenzimidazol. Sm. 152–153°. Chlorid + HCl, 2 Chlorid + PtCl₄, Jodid, Jodid + J₂, H₂SO₄ + H₂O (A. 210, 375). — IV, 1014.
- 10) 2,4-Dimethylphenylamid d. 2,4-Dimethylphenylamidoessigsäure. Sm. 128° (B. 16, 206). — II, 544.
- $C_{15}H_{21}ON_4$, C 69,7 — H 7,1 — O 5,1 — N 18,1 — M. G. 310.
- 1) 2,4,5,2',4',5'-Hexamethyl-6-Diazoazobenzol. Tribromid, Nitrat (B. 21, 546). — IV, 1533.
- $C_{15}H_{21}O_2N_2$, C 72,5 — H 7,4 — O 10,7 — N 9,4 — M. G. 298.
- 1) Acetaldehydetetramethylamidofluorimium. (2HCl, PtCl₄) (B. 27, 2895).
 - 2) Dimethyläther d. 1,4-Di[4-Oxyphenyl]hexahydro-1,4-Diazin. Sm. 233° (B. 22, 1782). — II, 716.
 - 3) Äthyläther d. 5-[4-Acetylamido-3-Methylphenyl]amido-2-Oxy-1-Methylbenzol. Sm. 143° (A. 287, 194).
 - 4) Äthyläther d. 6-[4-Acetylamido-2-Methylphenyl]amido-3-Oxy-1-Methylbenzol. Sm. 116° (A. 287, 208).
 - 5) Äthyläther d. 6-[4-Acetylamido-3-Methylphenyl]amido-3-Oxy-1-Methylbenzol. Sm. 144° (A. 287, 206).
 - 6) Äthyläther d. 5-Acetylamido-2-[4-Methylphenyl]amido-4-Oxy-1-Methylbenzol. Sm. 125° (B. 27, 2708).
 - 7) Diäthyläther d. α -[4-Oxyphenyl]amido- α' -[4-Oxyphenyl]imidoäthan + H₂O (Holocain). Sm. 121°. HCl (C. 1897 [1] 875).
 - 8) o-Carbtoluido-r-Carvoxim (Ph. Ch. 14, 399). — III, 113.
 - 9) m-Carbtoluido-r-Carvoxim (Ph. Ch. 14, 399). — III, 113.
 - 10) p-Carbtoluido-r-Carvoxim (Ph. Ch. 14, 399). — III, 113.
 - 11) Di[4-Dimethylamidophenyl]essigsäure. Sm. 171° (B. 27, 1407; C. 1895 [1] 201). — II, 1465.
 - 12) Base (aus Nicotin). 311J (M. 14, 441). — III, 821.
 - 13) Phenylhydrazid d. Oxyessig-4-Isobutylphenyläthersäure. Sm. 171,5° (Ann. 19, 76). — IV, 687.
 - 14) Verbindung (aus 4-Amido-1-Aethoxybenzol). Sm. 140°. HCl, 2HCl (C. 1897 [2] 38).
 - 15) Verbindung (aus schleims. p-Toluidin) (B. 14, 2094). — IV, 1035.
- $C_{15}H_{21}O_2N_4$, C 66,3 — H 6,7 — O 9,8 — N 17,2 — M. G. 326.
- 1) α - β -Di[β -Acetyl- α -Phenylhydrazido]äthan. Sm. 222° (A. 254, 121). — IV, 665.
 - 2) N-Di-4-Dimethylamidophenyl]glyoxim. Sm. 224–225° (B. 31, 293).
 - 3) Resorcin + 2 Molec. Phenylhydrazin. Sm. 76° (B. 22, 2198). — IV, 654.
 - 4) Hydrochinon + 2 Molec. Phenylhydrazin. Sm. 70–71° (B. 24 [2] 904). — IV, 654.
 - 5) Diäthyläther d. 3-Amido-6-Dimethylamido-1,4-Dioxyphenazin. Pikrat (B. 24, 3827). — II, 949.

- C₁₈H₂₁O₂N**, 6) Di[4-Dimethylamidophenylamid] d. Oxalsäure. Sm. noch nicht bei 270° (*B.* 12, 533). — **IV**, 592.
- 7) 4-Dimethylamidophenylhydrazid d. β -Acetyl- α -Phenylhydrazidoessigsäure. Sm. 158° (*B.* 30, 1101; *A.* 301, 77).
- C₁₈H₂₂O₂S** 1) Di[4-Isopropylphenylsulfon]. Sm. 109—110° (96°) (*B.* 26, 2945; *Bl.* [3] 11, 513). — **II**, 827.
- C₁₈H₂₁O₂N₂**
- 1) C 68,8 — H 7,0 — O 15,3 — N 8,9 — M. G. 314.
- 1) Diphenyläther d. Di[γ -Oxypropyl]nitrosamin. Sm. 60—61° (*B.* 24, 2638). — **II**, 653.
- 2) α -Oxy- α -Di[4-Dimethylamidophenyl]essigsäure. K (*B.* 27, 3296). — **II**, 1637.
- 3) β -[4-Methylphenyl]amidoäthyl-[4-Methylphenyl]amidoessigsäure. Ba + 4H₂O (*B.* 23, 2035). — **II**, 506.
- 4) Phenylhydrazoncampheroxalsäure. Sm. 214—215° (*Am.* 20, 328).
- 5) Methylester d. α -Di[4-Methylphenylamido]- α -Oxyessigmethyläthersäure. Sm. 105° (*B.* 28, 62).
- 6) Methylester d. Phenylazocamphocarbonsäure. Sm. 78° (*B.* 25 [2] 729). — **IV**, 1468.
- 7) 4-Aethoxylphenylamid d. [4-Aethoxylphenyl]amidoessigsäure. Sm. 139—140° (*B.* 22, 1789). — **II**, 721.
- 8) Acetylphenylamidoimid d. Camphersäure. Sm. 107° (*B.* 25, 2567). — **IV**, 708.
- C₁₈H₂₁O₂N₄**
- C 63,2 — H 6,4 — O 14,0 — N 16,4 — M. G. 342.
- 1) Di[Phenylhydrazon] d. Chinovose. Sm. 193—194° (*B.* 26, 2419). — **IV**, 794.
- 2) Di[Phenylhydrazon] d. Isodulcit. Sm. 180° (*B.* 20, 1091, 1189; *Bl.* 47, 761). — **IV**, 789.
- C₁₈H₂₁O₂N₂**
- C 65,5 — H 6,6 — O 19,4 — N 8,5 — M. G. 330.
- 1) Diphenylhydrazon d. Isodulcit. Sm. 134° (*A.* 258, 247). — **IV**, 789.
- 2) Diäthylester d. 1-Phenylamido-2,5-Dimethylpyrrol-3,4-Dicarbon-säure. Sm. 127° (*B.* 18, 304, 1568). — **IV**, 549.
- C₁₈H₂₁O₂N₄**
- C 60,3 — H 6,1 — O 17,9 — N 15,6 — M. G. 358.
- 1) Di[Phenylhydrazon] d. Akrose. Sm. bei 217° u. Zers. (*B.* 20, 1093, 2571, 3386, 3388; **22**, 360; **23**, 383). — **IV**, 790.
- 2) isom. Di[Phenylhydrazon] d. Akrose. Sm. 148° (156—159°) (*B.* 20, 2573, 3387). — **IV**, 790.
- 3) Di[Phenylhydrazon] d. Carubinose. Sm. 198° (*Bl.* [3] 17, 958). — **IV**, 792.
- 4) Di[Phenylhydrazon] d. Dulcit. Sm. 205—206° u. Zers. (*B.* 20, 3390; *Soc.* 75, 10). — **IV**, 791.
- 5) Di[Phenylhydrazon] d. Formose. Sm. bei 144° (*B.* 21, 274, 989; *J. pr.* [2] 33, 339). — **IV**, 791.
- 6) Di[Phenylhydrazon] d. Galaktose. Sm. 188—191° u. Zers. (*B.* 17, 581; **20**, 826). — **IV**, 791.
- 7) Di[Phenylhydrazon] d. Galtose. Sm. 182° (*R.* 16, 270).
- 8) Di[Phenylhydrazon] d. d-Glykose. Sm. 205° (*B.* 17, 579; **19**, 50, 1921; **20**, 821; **21**, 2632; **22**, 374; **23**, 385; **27**, 2488). — **IV**, 791.
- 9) Di[Phenylhydrazon] d. l-Glykose. Sm. 205° u. Zers. (*B.* 23, 374). — **IV**, 792.
- 10) Di[Phenylhydrazon] d. Glutose. Sm. 165° (*R.* 16, 277).
- 11) Di[Phenylhydrazon] d. Sorbin. Sm. 164° (*B.* 20, 827). — **IV**, 793.
- 12) Phenylsazon d. Zucker C₆H₁₂O₆. Sm. 144° (*B.* 21, 990).
- 13) Phenylsazon d. Zucker C₆H₁₂O₆. Sm. 200° (*B.* 21, 990).
- 14) Phenylsazon d. Zucker C₆H₁₂O₆ (aus Weinsäure). Sm. 168—170° (*Soc.* 71, 377).
- C₁₈H₂₁O₄Br** 1) Tetrabromid d. Phtalsäuremonogermaniolester. Fl. Ba + 4H₂O (*Bl.* [3] 19, 87).
- C₁₈H₂₁O₂N₂**
- C 62,4 — H 6,4 — O 23,1 — N 8,1 — M. G. 346.
- 1) Diphenylhydrazon d. Galaktose. Sm. 157° (*A.* 258, 246). — **IV**, 791.
- 2) Diphenylhydrazon d. d-Glykose. Sm. 161—162° (*A.* 258, 245). — **IV**, 791.
- 3) Diphenylhydrazon d. l-Glykose. Sm. 162—163° (*B.* 23, 2619). — **IV**, 791.

- $C_{18}H_{22}O_5N_2$ 4) Diphenylhydrazon d. i-Glykose. Sm. 132—133° (B. 23, 2620). — IV, 791.
- 5) Diphenylhydrazon d. Mannose. Sm. 155° (A. 258, 246). — IV, 793.
- 6) 4-Biphenylhydrazon d. Galaktose. Sm. 157—158° u. Zers. (B. 27, 3108). — IV, 970.
- 7) 4-Biphenylhydrazon d. Glykose. Sm. 143—144° u. Zers. (B. 27, 3108). — IV, 970.
- 8) Diäthylester d. 5-Keto-3-Methyl-1-Phenyl-4,5-Dihydropyrazol-4-Aethyl- α,β -Dicarbonsäure. Fl. (B. 23, 3758). — IV, 727.
- 9) Diäthylester d. Phenylizinsuccinylbernsteinsäure. Sm. 159—160° (B. 17, 2054). — IV, 723.
- $C_{18}H_{22}O_5N_4$ 1) Phenylsazon d. Methose. Sm. 205—206° (B. 22, 476). — I, 1040.
- $C_{18}H_{22}O_5S_2$ 1) Di[γ -Phenylsulfonpropyl]äther. Sm. 85° (J. pr. [2] 61, 293; B. 24, 1834). — II, 784.
- 2) Di[4-Methylphenylsulfonäthyl]äther (B. 26, 944). — II, 823.
- 3) polym. Di[4-Methylphenylsulfonäthyl]äther. Sm. 83—84° (J. pr. [2] 30, 358). — II, 823.
- $C_{18}H_{22}O_6N_4$ C 57,7 — H 5,9 — O 21,4 — N 15,0 — M. G. 374.
- 1) Dioxim d. Dicumpherilsäure. Sm. bei etwa 250°. Acetat (Soc. 75, 183).
- 2) Dioxim d. Säure $C_{18}H_{20}O_6$ (B. 27 [2] 594).
- $C_{18}H_{21}O_6N_4$ C 55,4 — H 5,6 — O 24,6 — N 14,4 — M. G. 390.
- 1) Diäthyläther d. 3'-Dimethylamido-2,4-Dinitro-3,6-Dioxydiphenylamin. Sm. 106° (B. 24, 3830). — II, 949.
- 2) Diäthyläther d. 4'-Dimethylamido-2,4-Dinitro-3,6-Dioxydiphenylamin. Sm. 148° (B. 24, 3826). — II, 949.
- 3) Di[Phenylhydrazid] d. Alloschleimsäure. Sm. 213° u. Zers. (B. 24, 2139). — IV, 731.
- 4) Di[Phenylhydrazid] d. Schleimsäure. Sm. 238—240° u. Zers. (A. 236, 196; B. 48, 722). — IV, 731.
- 5) Di[Phenylhydrazid] d. d-Mannozuckersäure. Sm. 212° u. Zers. (B. 24, 544). — IV, 730.
- 6) Di[Phenylhydrazid] d. l-Mannozuckersäure. Sm. 212—214° u. Zers. (B. 20, 2714; B. 48, 721). — IV, 731.
- 7) Di[Phenylhydrazid] d. i-Mannozuckersäure. Sm. 220—225° (B. 24, 545). — IV, 731.
- 8) Verbindung (aus d. 2-Amidobenzol-1-Carbonsäureamid u. Oxalsäuredimethylester). Sm. 80—90° (J. pr. [2] 43, 231). — II, 1246.
- $C_{18}H_{21}O_8N_2$ C 54,8 — H 5,6 — O 32,5 — N 7,1 — M. G. 394.
- 1) Tetraäthylester d. 1,4-Diimido-1,4-Dihydrobenzol-2,3,5,6-Tetra-carbonsäure. Sm. 161° (Ann. 11, 5). — II, 2074.
- $C_{18}H_{21}N_2Br_2$ 1) p-Dibrom-4,4'-Di[Dimethylamido]-3,3'-Dimethylbiphenyl. Sm. 117° (B. 14, 2174). — IV, 981.
- $C_{18}H_{21}N_2S_2$ 1) α -Aethyl- β -Propyl- α,β -Diphenylthioharnstoff. Sm. 66,3° (B. 21, 103). — II, 397.
- 2) α -[4-Methylphenyl]- β -[4-Isobutylphenyl]thioharnstoff. Sm. 137° (B. 16, 2023). — II, 558.
- 3) Benzylimidobenzylamidomethylpropylsulfid (B. 19, 2349). — II, 529.
- $C_{18}H_{21}ON$ C 80,3 — H 8,6 — O 5,9 — N 5,2 — M. G. 269.
- 1) Methylphenylamidomethylenecampher. Sm. 124° (A. 281, 360). — III, 116.
- 2) 4-Methylphenylamidomethylenecampher. Sm. 188—189° (A. 281, 359). — III, 116.
- $C_{18}H_{21}ON_3$ C 72,7 — H 7,7 — O 5,4 — N 14,1 — M. G. 297.
- 1) 4-4-Isopropylbenzyl nitrosamido-1-Dimethylamidobenzol. Sm. 87° (A. 245, 302). — IV, 587.
- 2) β -Isocamylphenylamido- α -Phenylharnstoff. Sm. 220°. — IV, 674.
- $C_{18}H_{20}O_2N$ C 75,8 — H 8,1 — O 11,2 — N 4,9 — M. G. 285.
- 1) Diphenyläther d. Di[γ -Oxypropyl]amin. Sd. oberh. 300°. HCl (B. 24, 2637). — II, 653.
- 2) Di[4-Methylphenyläther] d. Di[β -Oxyäthyl]amin. Sm. 49—50°. HCl (B. 24, 195). — II, 748.
- 3) Benzoesat d. 1-Oximido-3-Isobutyl-5-Methyl-1,2,3,4-Tetrahydrobenzol. Sm. 138—140° (A. 288, 338).

- C₁₁H₂₃O₂N** 4) Benzylester d. Cyancampholsäure. Sm. 70–71° (A. ch. [6] 30, 515; [7] 2, 386). — II, 1052.
- C₁₁H₂₃O₂N₂** C 69,0 — H 7,3 — O 10,2 — N 13,4 — M. G. 313.
- 1) α -Amido- α -Di[4-Dimethylamidophenyl]essigsäure. Sm. 171° u. Zers. (B. 27, 3296). — II, 1465.
- 2) Amid d. α -Oxy- α -Di[4-Dimethylamidophenyl]essigsäure. Sm. 140 bis 142° (B. 27, 3297). — II, 1697.
- C₁₁H₂₃O₂P** 1) Di[4-Isopropylphenyl]phosphinsäure. Cu (A. 294, 52). — IV, 1677.
- 2) Di[2,4,5-Trimethylphenyl]phosphinsäure. Sm. 202–203°. NH₄ + 2H₂O, K + H₂O, Ba + 6H₂O, Pb, Co, Ni + 10H₂O, Cu + 10H₂O, Ag (A. 294, 25). — IV, 1679.
- C₁₁H₂₃O₂N** C 71,8 — H 7,6 — O 16,0 — N 4,6 — M. G. 301.
- 1) Propylphenyltetrahydroazindoncarbonsäure. Sm. 85°. Pb + H₂O (B. 29, 818). — IV, 367.
- C₁₁H₂₃O₂N₂** C 60,5 — H 6,4 — O 13,4 — N 19,6 — M. G. 357.
- 1) Verbindung (aus Acetylcyanessigsäuremethylester u. Phenylhydrazin). Sm. 87° (C. 1896 [2] 83).
- C₁₁H₂₃O₄N** C 68,2 — H 7,2 — O 20,2 — N 4,4 — M. G. 317.
- 1) Morphinmethoxyhydrat + 5H₂O. Salze siehe (A. 88, 338; 222, 208; B. 13, 96; 30, 354). — III, 898.
- 2) α -Cocäthylin. Fl. (2HCl, PtCl₄), (HCl, AuCl₃) (B. 29, 2227). — III, 873.
- 3) Methylester d. Phenylacetylcegonin. Fl. (2HCl, PtCl₄) (B. 21, 3337). — III, 869.
- 4) Äthylester d. Benzoylcegonin. Sm. 108–109°. (2HCl, PtCl₄) (B. 18, 2954; 21, 48). — III, 867.
- 5) Äthylester d. d-Benzoylcegonin. Sm. 57°. HCl + H₂O (B. 23, 986). — III, 867.
- 6) Propylester d. Cocaylbenzoxylessigsäure. Sm. 56–58°. HCl, HBr (B. 21, 3443). — III, 863.
- C₁₁H₂₃O₂N₂** C 62,6 — H 6,6 — O 18,6 — N 12,2 — M. G. 345.
- 1) Diphenylhydrazon d. Glykosamin. Sm. 162° u. Zers. (B. 31, 2199).
- C₁₁H₂₃O₂P** 1) Di[2-Isopropylphenyl]phosphorsäure. Ba + 6H₂O (G. 16, 130). — II, 761.
- C₁₁H₂₁O₂N** C 64,9 — H 6,9 — O 24,0 — N 4,2 — M. G. 333.
- 1) Anisylcocain. Fl. (HCl, AuCl₃) (B. 22, 132). — III, 870.
- C₁₁H₂₁O₂N₂** C 59,8 — H 6,4 — O 22,2 — N 11,6 — M. G. 361.
- 1) d-Cocainharnstoff. Sm. 72°. HCl (B. 27, 1884). — III, 868.
- C₁₁H₂₁O₂N** C 61,9 — H 6,6 — O 27,5 — N 4,0 — M. G. 349.
- 1) Äthylester d. Acetylhydrocotarninessigsäure. Sm. 113° (B. 20, 2432). — III, 917.
- C₁₁H₂₁O₂N** C 59,2 — H 6,3 — O 30,7 — N 3,8 — M. G. 365.
- 1) Verbindung (aus d. Trimethyläther d. 5-Amido-1,2,3-Trioxybenzol) (G. 27 [2] 356).
- C₁₁H₂₁N₂J** 1) p-Jod- α - β -Di[4-Dimethylamidophenyl]äthan. (2HCl, PtCl₄), (HJ, J₂) (B. 13, 2198). — IV, 978.
- 2) Jodäthylat d. 1,4-Diphenylhexahydro-1,4-Diazin. Sm. 100° (J. 1858, 353). — II, 344.
- C₁₁H₂₁N₂S** 1) β -Isocamylphenylamido- α -Phenylthioharnstoff. Sm. 160° (A. 252, 285). — IV, 680.
- 2) Dimethyldiäthylindaminsulfid. (2HCl, ZnCl₂ + 3H₂O) (A. 251, 84). — II, 801.
- C₁₁H₂₁ON₄** C 69,2 — H 7,7 — O 5,1 — N 18,0 — M. G. 312.
- 1) Amid d. α -Amido- α -Di[4-Dimethylamidophenyl]essigsäure. Sm. 170° (B. 27, 3295). — II, 1465.
- C₁₁H₂₁O₂N₂** C 72,0 — H 8,0 — O 10,7 — N 9,3 — M. G. 300.
- 1) Napharin. Erweicht bei 65° (J. 1882, 1156; B. 16, 969). — III, 894.
- 2) Menisperm. Sm. 120°. H₂SO₄ (A. 10, 198). — III, 893.
- 3) Paramonisperm. Sm. 250° (A. 10, 200). — III, 894.
- 4) α -Di[4-Dimethylamido-2-Oxyphenyl]äthan. Sm. 167° (140°) (B. 27, 2895, 3304; J. pr. [2] 54, 228).
- 5) Diäthyläther d. α - β -Di[4-Oxyphenylamido]äthan. Sm. 98° (B. 23, 1979). — II, 717.
- 6) δ -Dioxy- δ - ϵ -Di[2-Pyridyl]oktan. Sm. 146° (B. 24, 2538). — IV, 985.

- $C_{18}H_{21}O_2N_2$ 7) 1- α -Phenylhydrazonamyl]-1,2,3,4-Tetrahydrobenzol-6-Carbonsäure (Phenylhydrazon d. Sedanonsäure). Sm. 130—131° (B. 30, 500, 1423).
 8) Dipiperidid d. Benzol-1,2-Dicarbonensäure (Phthalypiperidin). Fl. (A. 227, 197). — IV, 16.
 9) Verbindung (aus Aceton u. 3,3'-Dihydrazido-4,4'-Dioxybiphenyl). Sm. 200° (B. 21, 3333). — II, 989.
- $C_{18}H_{21}O_2N_6$ 1) Diacetylhexaamidobitolyl. Sm. 196°. 2HCl + 2H₂O, Pikrat (B. 21, 2409). — IV, 1332.
 C 68,4 — H 7,6 — O 15,2 — N 8,8 — M. G. 316.
- $C_{18}H_{21}O_3N_2$ 1) Verbindung (aus Blut) (B. 25 [2] 476).
 C 65,0 — H 7,2 — O 19,3 — N 8,4 — M. G. 332.
- $C_{18}H_{21}O_4N_2$ 1) Dipiperidid d. Resorcindikohlensäure. Sm. 122° (A. 300, 153).
 C 60,0 — H 6,7 — O 17,8 — N 15,5 — M. G. 360.
- $C_{18}H_{21}O_4N_4$ 1) Verbindung (aus Hexamethylenamin u. 1,2-Dioxybenzol). Zers. bei 140° (A. 272, 281). — II, 909.
- $C_{18}H_{21}O_4Br_2$ 1) Dibromid d. Phthalsäuremonocitronellolester. Al (Bl. [3] 19, 87).
 C 82,1 — H 6,9 — O 23,0 — N 8,0 — M. G. 348.
- $C_{18}H_{21}O_4N_2$ 1) 2,6-Tetraacetyldiamido-3-Oxy-4-Isopropyl-1-Methylbenzol. Sm. 216 bis 220° (G. 20, 425). — II, 773.
 C 59,3 — H 6,6 — O 26,4 — N 7,7 — M. G. 364.
- $C_{18}H_{21}O_5N_2$ 1) Hydrobensursäure (A. 134, 303, 310). — II, 1189.
 C 54,5 — H 6,1 — O 32,3 — N 7,1 — M. G. 396.
- $C_{18}H_{21}O_5N_2$ 1) Tetraäthylester d. 3,6-Diamidobenzol-1,2,4,5-Tetracarbonensäure. Sm. 134° (A. 237, 25; Soc. 53, 444). — II, 2074.
- $C_{18}H_{21}N_2$ 1) Diäthylidibenzylammoniumjodid (B. 10, 314). — II, 520.
- $C_{18}H_{21}N_2Hg$ 1) Quecksilberdi[6-Dimethylamido-3-Methylphenyl]. Sm. 60° (G. 28 [2] 105). — IV, 1711.
- $C_{18}H_{21}ClP$ 1) Diäthylidibenzylphosphoniumchlorid. 2 + PtCl₄ (Soc. 53, 724). — IV, 1664.
 C 79,7 — H 9,2 — O 5,9 — N 5,2 — M. G. 271.
- $C_{18}H_{21}ON$ 1) Methyläther d. 1-2-Oxybenzylidenfenchylamin. Sm. 56° (A. 276, 321). — IV, 59.
 2) Methyläther d. 1-4-Oxybenzylidenfenchylamin. Sm. 54—55° (A. 276, 321). — IV, 59.
 3) Acetylphenylfenchylamin. Sd. 190—193°,₄ (Soc. 73, 277).
 C 72,2 — H 8,4 — O 5,3 — N 14,0 — M. G. 299.
- $C_{18}H_{21}ON_3$ 1) 2-Keto-3,3-Di-[1-Piperidyl]-2,3-Dihydroindol (Dipiperidylisatin) (B. 24, 1367). — IV, 16.
 C 65,3 — H 7,5 — O 14,5 — N 12,7 — M. G. 331.
- $C_{18}H_{21}O_3N_3$ 1) o-Toluolazoocycamphocarbamidsäure. Na, Ag. — IV, 1473.
 C 64,5 — H 7,4 — O 23,9 — N 4,2 — M. G. 335.
- $C_{18}H_{21}O_3N_2$ 1) 4-Methylphenylmonamid d. γ -Acetoxy- β - δ -Dimethylpentan- β - δ -Dicarbonensäure. Sm. 157—159° (C. 1898 [2] 885).
 C 61,6 — H 7,1 — O 27,3 — N 4,0 — M. G. 351.
- $C_{18}H_{25}O_6N$ 1) Triäthylester d. β -Phenylamidopropan- $\alpha\alpha\gamma$ -Tricarbonensäure. Fl. HCl (J. pr. [2] 58, 414).
- $C_{18}H_{26}OCl_4$ 1) Tetrachlorhydrocarotin (A. 117, 211). — III, 626.
 C 71,5 — H 8,6 — O 10,6 — N 9,3 — M. G. 302.
- $C_{18}H_{26}O_2N_2$ 1) 2,5-Dimethylhexahydro-1,4-Diazin + 2 Molec. Phenol. Sm. 86° (Bl. [3] 19, 619).
 2) Äthylester d. ζ -Phenylhydrazon- β -Methyl- β -Okten- θ -Carbonsäure. Sm. 93°; Sd. 235—240°₁₅ (Bl. [3] 17, 751).
- $C_{18}H_{26}O_2N$ 1) Senecionin = (C₁₈H₂₆O₂N)₂ (Bl. [3] 13, 942). — III, 931.
 C 54,2 — H 6,6 — O 32,2 — N 7,0 — M. G. 398.
- $C_{18}H_{26}O_2N_2$ 1) Tetraäthylester d. 3,6-Diamido- p -Dihydrobenzol-1,2,4,5-Tetracarbonensäure. Sm. 213° (A. 258, 274). — II, 2070.
- $C_{18}H_{26}O_2Cl_2$ 1) Diacetat d. Dichlorhexaoxydihydrobensoltetraäthyläther (Dichlordiäthoxychinondiäthylidiacetylacetal). Sm. 120—121° (Am. 20, 422).
- $C_{18}H_{26}N_2Cl_2$ 1) Äthylendiäthylidiphenyldiammoniumchlorid. 2 + PtCl₄ (J. 1859, 389). — II, 344.
 2) Tetramethyläthylidiphenyldiammoniumchlorid. 2 + 3HgCl₂ + PtCl₄ (A. 224, 348). — II, 343.

- $C_{18}H_{26}N_2Br_1$ 1) Tetramethyläthylendiphenyldiammoniumbromid (A. 224, 346). — II, 344.
- $C_{18}H_{26}N_2J_1$ 1) Aethylendiäthylendiphenyldiammoniumjodid. Sm. 70° (J. 1859, 389). — II, 344.
2) Tetramethyläthylendiphenyldiammoniumjodid (A. 224, 350). — II, 344.
- $C_{18}H_{26}N_2J_2$ 2) Dijodmethylat d. 2,4'-Di[Dimethylamido]biphenyl. Sm. 196° (B. 22, 3017). — IV, 559.
- $C_{18}H_{26}N_4J_2$ 1) Di[Jodmethylat] d. 3,3'-Di[Dimethylamido]azobenzol. Sm. 230° u. Zers. (B. 30, 2939). — IV, 1361.
- $C_{18}H_{26}Br_1P_2$ 1) Tetramethyläthylendiphenyldiphosphoniumbromid. Sm. oberh. 300° (B. 15, 199). — IV, 1656.
- $C_{18}H_{26}Br_6P_2$ 1) Tetramethyläthylendiphenyldiphosphoniumhexabromid. Sm. 171° (B. 15, 200). — IV, 1656.
- $C_{18}H_{27}OCl$ 1) Chloromethylpentaäthylphenylketon. Sm. 104° (B. 30, 579).
- $C_{18}H_{27}OBr$ 1) Bromomethylpentaäthylphenylketon. Sm. 89° (B. 30, 1714).
- $C_{18}H_{27}OBr_1$ 1) Tribromhydrocarotin (A. 117, 212). — III, 626.
- $C_{18}H_{27}O_2N$ C 74,7 — H 9,3 — O 11,1 — N 4,8 — M. G. 289.
- 1) Mentylester d. 2-Methylphenylamidoameisensäure (Ph. Ch. 14, 397). — III, 467.
2) Mentylester d. 3-Methylphenylamidoameisensäure (Ph. Ch. 14, 397). — III, 467.
3) Mentylester d. 4-Methylphenylamidoameisensäure (Ph. Ch. 14, 397). — III, 467.
- $C_{18}H_{27}O_4N$ C 67,3 — H 8,4 — O 19,9 — N 4,4 — M. G. 321.
- 1) Verbindung (Säure aus Cholesterin). K, Cu, Ag (M. 15, 110). — II, 1074.
- $C_{18}H_{27}O_7Br$ 1) Hexaglycerinbromhydrin (A. 101, 73). — I, 315.
- $C_{18}H_{27}O_{12}Cl$ 1) Pentaäthylester d. α -Chlorpropan- $\alpha\alpha\beta\beta$ -Tetracarbonsäure (B. 21, 2115). — I, 870.
- $C_{18}H_{27}O_{11}N$ C 44,9 — H 5,6 — O 46,6 — N 2,9 — M. G. 481.
- 1) Chondroitin (B. 25 [2] 473). — IV, 1628.
- $C_{18}H_{28}O_2N_2$ C 71,1 — H 9,2 — O 10,5 — N 9,2 — M. G. 304.
- 1) Tetramethyläthylendiphenyldiammoniumhydrat. Salze siehe (A. 224, 346). — II, 343.
- $C_{18}H_{28}O_2N$ 1) Capsaicin. Sm. 63–63,5° (C. 1899 [1] 293).
- $C_{18}H_{28}O_6N_2$ C 54,0 — H 7,0 — O 32,0 — N 7,0 — M. G. 400.
- 1) Tetraäthylester d. $\alpha\beta$ -Aethylendi[amidoäthen- $\alpha\alpha$ -Dicarbonsäure]. Sm. 126° (B. 28, 823).
- $C_{18}H_{28}O_8N_4$ C 50,4 — H 6,5 — O 29,9 — N 13,1 — M. G. 428.
- 1) Orylsäure. Zn, Cu, Ag₂ + 3H₂O (H. 22, 260). — IV, 1641.
- $C_{18}H_{28}O_{10}N_2$ C 50,0 — H 6,5 — O 37,0 — N 6,5 — M. G. 432.
- 1) 1,2-Diglykodiamidobenzol + 2H₂O (B. 20, 2206). — IV, 565.
2) Phenylhydrason d. Melibiose. Sm. 145° (B. 23, 1439) — IV, 794.
3) Phenylhydrason d. Milchsucker (B. 20, 2575). — IV, 794.
- $C_{18}H_{28}NJ$ 1) Jodmethylat d. Benzylbornylamin (A. 269, 352). — IV, 56.
- $C_{18}H_{28}N_4J_2$ 1) Di[Jodmethylat] d. 4,4'-Diamido-2,2'-[Dimethylamido]biphenyl (B. 30, 2942). — IV, 1275.
- $C_{18}H_{29}ON$ C 78,5 — H 10,5 — O 5,8 — N 5,1 — M. G. 275.
- 1) β -Benzoylamidoundekan. Sm. 84° (G. 24 [2] 279).
2) Phenylamid d. Laurinsäure (J. pr. [2] 52, 60).
3) Isoundekylamid d. Benzolcarbonsäure. Sm. 84° (G. 24 [2] 279). — II, 1161.
- $C_{18}H_{29}OJ$ 1) Jodhydrocarotin (A. 117, 213).
- $C_{18}H_{29}N_3S$ 1) Verbindung (aus Benzylaminrhodanid). Sm. 164° (161–162°) (Soc. 59, 552; E. 24, 2727). — II, 527.
- $C_{18}H_{30}O_2N_2$ C 70,6 — H 9,8 — O 10,4 — N 9,1 — M. G. 306.
- 1) $\alpha\beta\beta'$ -Tetraäthylidiamidoisopropylester d. Benzolcarbonsäure. (2HCl, PtCl₄) (B. 17, 511). — II, 1140.
2) $\beta\gamma$ -Tetraäthylidiamido-norm. Propylester d. Benzolcarbonsäure. (2HCl, PtCl₄) (B. 17, 511). — II, 1140.
- $C_{18}H_{30}O_2Br_6$ 1) Linolensäurehexabromid. Sm. 177° (M. 8, 268). — I, 537.
- $C_{18}H_{30}O_6Cl_2$ 1) Diäthyläther d. 3,6-Dichlor-2,5-Dioxy-1,4-Benzochinontetraäthylacetal. Sm. 101–102° (Am. 17, 633). — III, 351.
- $C_{18}H_{30}O_{11}N_2$ C 46,4 — H 6,4 — O 41,2 — N 6,0 — M. G. 468.
- 1) Colloidin (B. 22, 100). — IV, 1631.

- $C_{15}H_{30}O_1S$ 1) Stärkeschwefelsäure (A. 55, 13). — I, 1087.
 $C_{15}H_{31}O_2N$ C 73,7 — H 10,6 — O 10,9 — N 4,8 — M. G. 293.
- $C_{15}H_{31}O_2N_3$ 1) Hydroxylaminderivat d. Desoxyphoron. Sm. 133—134° (A. 296, 322).
 C 62,0 — H 8,9 — O 9,1 — N 20,0 — M. G. 349.
- $C_{15}H_{31}O_2N_3$ 1) Diamylamidokaffein. Sm. 162° (B. 31, 1140).
 C 54,4 — H 7,8 — O 20,1 — N 17,6 — M. G. 397.
- $C_{15}H_{31}O_2N_3$ 1) Amid d. Oxyhexinsäure. Sm. 214—215° (A. ch. [5] 20, 490).
 2) Amid d. Isooxyhexinsäure. Sm. 240° u. Zers. (A. ch. [5] 20, 492).
- $C_{15}H_{31}N_3S$ 1) α -Phenylamido- β -Isoundekylthioharnstoff. α -Modif. Sm. 80°; β -Modif. Sm. 109° (G. 24 [2] 287). — IV, 678.
- $C_{15}H_{32}ON_2$ C 74,0 — H 10,9 — O 5,5 — N 9,6 — M. G. 292.
 1) 6-Oxy-5-Isobutyl-2,4-Diisocamyl-1,3-Diazin. ($2HCl, PtCl_4$) (J. pr. [2] 37, 410). — IV, 1135.
- $C_{15}H_{32}O_2Cl_4$ 1) Tetrachlorstearinsäure. Sm. 124,5—125° (C. 1896 [1] 953).
- $C_{15}H_{32}O_2Br_2$ 1) Dibromölsäure (A. 140, 56). — I, 526.
 2) Taririnsäuredibromid. Sm. 32°. K (Bl. [3] 7, 233). — I, 536.
- $C_{15}H_{32}O_2Br_4$ 1) Tetrabromstearinsäure. Sm. 70° (A. 140, 56). — I, 489.
 2) Tetrabromstearinsäure (aus Leinölsäure) Fl. (J. r. 21, 214). — I, 489.
 3) Hanfölsäuretetrabromid. Sm. 114—115° (M. 8, 149, 263). — I, 536.
 4) Taririnsäuretetrabromid. Sm. 125° (138°) (Bl. [3] 7, 233; B. 27 [2] 20). — I, 536.
 5) Bromverbindung (d. Säure $C_{15}H_{32}O_2$, aus Ricinelaidsäure). Sm. 80 bis 81° (M. 15, 311).
- $C_{15}H_{32}O_2J_2$ 1) Stearinsäuredijodid. Sm. 50—51°. Ag (B. 24, 4116). — I, 527.
- $C_{15}H_{32}O_3Br_2$ 1) α, λ -Dibrom- β -Ketoheptadekan- α -Carbonsäure (Dibromketostearinsäure). Fl. (B. 28, 2249).
 2) Dibromricinölsäure. Fl. (Z. 1867, 549). — I, 613.
- $C_{15}H_{32}O_3Br_4$ 1) Ricinostearinsäuretetrabromid (Z. 1867, 549). — I, 580.
- $C_{15}H_{32}O_4N_2$ C 63,5 — H 9,4 — O 18,8 — N 8,2 — M. G. 340.
 1) Diäthylester d. Aethylendi- $[\beta$ -Amido- α -Aethylcrotonsäure]. Sm. 106 bis 107° (Soc. 63, 1310).
- $C_{15}H_{32}O_5N_2$ C 53,5 — H 7,9 — O 31,7 — N 6,9 — M. G. 404.
 1) Rhamnoliazin. Sm. 186° (B. 22, 304, 3247). — I, 290.
- $C_{15}H_{33}O_2Cl$ 1) Chlorölsäure. Sm. 12° (C. 1896 [1] 953).
 2) Chlorelaidsäure. Sm. 26—27° (C. 1896 [1] 953).
- $C_{15}H_{33}O_2Br$ 1) Bromölsäure (A. 140, 47). — I, 526.
- $C_{15}H_{33}O_2Br_3$ 1) Tribromstearinsäure. Fl. (A. 140, 59). — I, 489.
- $C_{15}H_{33}O_3J$ 1) Jodstearidensäure (B. 9, 1917). — I, 527.
- $C_{15}H_{33}O_3N_3$ C 63,7 — H 9,7 — O 14,2 — N 12,4 — M. G. 339.
 1) Triisocamylester d. norm. Cyanursäure. Sd. oberh. 360° (J. pr. [2] 33, 131). — I, 1271.
 2) Triisocamylester d. Isocyanursäure (B. 12, 1330).
- $C_{15}H_{33}O_3Cl$ 1) λ -Chlor- β -Ketoheptadekan- α -Carbonsäure (Chlorketostearinsäure). Sm. 64° (B. 28, 2248; 29, 806).
- $C_{15}H_{33}O_3Br$ 1) Bromricinölsäure. Fl. NH_4, K (Z. 1867, 546). — I, 613.
 2) Bromricinelaidsäure. Fl. (Z. 1867, 549). — I, 613.
 3) λ -Brom- β -Ketoheptadekan- α -Carbonsäure (Bromketostearinsäure). Sm. 55° (B. 29, 806).
- $C_{15}H_{33}O_3Br_3$ 1) Bromricinölsäuredibromid (Z. 1866, 545). — I, 580.
- $C_{15}H_{33}O_4N$ C 66,0 — H 10,1 — O 19,6 — N 4,3 — M. G. 327.
 1) β [oder γ]-Oximido- γ [oder β]-Ketoheptadekan- α -Carbonsäure (Oximido-ketostearinsäure). Sm. 76—81° (B. 29, 812).
 2) α -Nonanoylamido- α -Ketoalkan- β -Carbonsäure (Pelargylamidoazelaissäure) (B. 29, 813).
- $C_{15}H_{33}O_5N_3$ C 47,3 — H 7,2 — O 35,0 — N 10,5 — M. G. 457.
 1) Verbindung (aus Blut) (B. 25 [2] 476).
- $C_{15}H_{33}N_3S_3$ 1) Triisocamylester d. Trithiocyanursäure. Fl. (J. pr. [2] 33, 120). — I, 1285.
- $C_{15}H_{34}O_4Cl_2$ 1) Dichlorstearinsäure (aus Oelsäure). Sm. 36—37° (C. 1896 [1] 953).
 2) Dichlorstearinsäure (aus Elaidsäure). Sm. 49—49,5° (C. 1896 [1] 953).
 3) Dichlorstearinsäure. Sm. 32° (B. 23, 2531). — I, 476.
- $C_{15}H_{34}O_4Br_2$ 1) Dibromstearinsäure (aus Elaidsäure). Sm. 27°. Ba (J. 1864, 341; A. 140, 61). — I, 489.
 2) Dibromstearinsäure (aus Oelsäure) (A. 140, 42). — I, 488.

- $C_{16}H_{31}O_2Br_2$ 3) Dibromstearinsäure (aus Isoölsäure). Fl. (*J. pr.* [2] 37, 275; [2] 50, 64). — I, 489.
- $C_{16}H_{31}O_2Br$ 1) Ricinölsäurebromid. Fl. (*Z.* 1867, 545). — I, 580.
2) Ricinelaidsäurebromid. Fl. (*Z.* 1867, 548). — I, 580.
- $C_{16}H_{31}O_4N_2$ C 63,2 — H 9,9 — O 8,2 — N 18,7 — M. G. 342.
1) *9*-Dioximidostearinsäure. Sm. 153—154° (*B.* 23, 277).
- $C_{16}H_{31}O_2S$ 1) Ricinoschwefelsäure. Fl. (*B.* [3] 11, 281).
 $C_{16}H_{31}ON$ C 76,8 — H 12,4 — O 5,7 — N 5,0 — M. G. 281.
1) Anhydroamidostearinsäure. — IV, 1587.
2) Amid d. Oelsäure. Sm. 75° (78—81°) (*J.* 1855, 532; 1859, 368; *B.* 31, 2349). — I, 1250.
3) Amid d. Elaidinsäure. Sm. 92—94° (*J.* 1855, 532; *B.* 31, 2349). — I, 1250.
- $C_{16}H_{31}OCl$ 1) Chlorid d. Stearinsäure. Sm. 23°; Sd. 215°₁₅ u. Zers. (*B.* 17, 1380). — I, 460.
- $C_{16}H_{31}O_2N$ C 72,7 — H 11,8 — O 10,8 — N 4,7 — M. G. 297.
1) Amid d. Ricinölsäure. Sm. 66° (*A. ch.* [3] 44, 96). — I, 1356.
2) Amid d. Ricinelaidsäure. Sm. 91—92° (*J.* 1855, 533). — I, 1356.
- $C_{16}H_{31}O_2Cl$ 1) Chlorstearinsäure. Sm. 38° (*B.* 23, 2532). — I, 476.
- $C_{16}H_{31}O_2Cl_2$ 1) Cetyläther d. $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Oxyäthan (Chloralcoetylalkoholat) (*A.* 157, 244). — I, 333.
- $C_{16}H_{31}O_2Br$ 1) α -Bromstearinsäure. Sm. 60° (41°) (*J.* 1863, 334; *B.* 23, 2523; 24, 2390; 25, 482). — I, 488.
2) Äthylester d. α -Brompalmitinsäure. Sd. 241,5°₃₈ (*B.* 24, 939). — I, 488.
- $C_{16}H_{31}O_2J$ 1) α -Jodstearinsäure. Fl. (*J. pr.* [2] 37, 276). — I, 491.
2) β -Jodstearinsäure. Fl. (*J. pr.* [2] 34, 308; [2] 35, 384; *J. r.* 18, 45; *M.* 17, 310). — I, 492.
3) isom. Jodstearinsäure (*J. r.* 21, 212). — I, 492.
- $C_{16}H_{31}O_2N$ C 69,0 — H 11,2 — O 15,3 — N 4,4 — M. G. 313.
1) *9*-Oximidoheptadekan- α -Carbonsäure (Oximidostearinsäure). Sm. 75 bis 85° (*B.* 29, 808).
2) α -Oximidoheptadekan- α -Carbonsäure (*B.* 27, 174).
- $C_{16}H_{31}O_2N$ C 65,7 — H 10,6 — O 19,5 — N 4,2 — M. G. 329.
1) *9*-Oximido- λ -Oxyheptadekan- α -Carbonsäure (Ketoximoxystearinsäure). Fl. (*B.* 27, 3125).
2) Nitrostearinsäure. Na₂, K₂, Sr, Cu (*J. pr.* [2] 43, 161; siehe auch *B.* 24, 449; *J. pr.* [2] 20, 161). — I, 498.
- $C_{16}H_{31}O_6P$ 1) Diacetat d. Dioxydiönanthylunterphosphorige Säure. Sm. 94° (*A. ch.* [6] 23, 312). — I, 1505.
- $C_{16}H_{31}NS$ 1) Heptadekylsenföhl. Sm. 32° (*B.* 21, 2490). — I, 1282.
- $C_{16}H_{31}O_2N_2$ C 69,2 — H 11,5 — O 10,3 — N 9,0 — M. G. 312.
1) sym. Oktylnonoxylharnstoff. Sm. 97° (*B.* 15, 760). — I, 1304.
2) Sebacoindimidisoobutyläther]. 2HCl (Sm. 153° u. Zers.) (*B.* 26, 2841).
C 65,9 — H 11,0 — O 14,6 — N 8,5 — M. G. 328.
- $C_{16}H_{31}O_2N_2$ 1) Cetylester d. Harnstoffcarbonsäure (C. d. Allophansäure). Sm. 70° (*A.* 244, 41). — I, 1306.
- $C_{16}H_{31}O_2S$ 1) Oxystearoschwefelsäure (*B.* [3] 11, 285).
 $C_{16}H_{31}O_6S$ 1) *p*-Oxyheptadekan- α -Carbonsäure- α -Sulfonsäure (Sulfooxystearinsäure). Na₂, K₂, Ba, Cu (*J. pr.* [2] 37, 74; *M.* 8, 212; *J. r.* 18, 90). — I, 904.
2) Dioxystearoschwefelsäure. Fl. (*B.* [3] 11, 282).
 $C_{16}H_{31}O_2S$ C 76,3 — H 13,1 — O 5,6 — N 4,9 — M. G. 283.
1) *9*-Oximidoheptadekan. Sm. 44° (*B.* [3] 15, 766).
2) Myristinimidisoobutyläther. HCl (Sm. 69—70°) (*B.* 26, 2841).
3) Amid d. Stearinsäure. Sm. 108,5—109° (107,5°); Sd. 250—251°₁₉ (168 bis 169°) (*J.* 1859, 367; *B.* 15, 984, 1730; 21, 2186; 24, 2781; 26, 2840; 29, 1324; 31, 2349). — I, 1249.
- $C_{16}H_{31}O_2N$ C 72,2 — H 12,4 — O 10,7 — N 4,7 — M. G. 299.
1) Amidostearinsäure. Sm. 63°. — IV, 1587.
2) α -Amidostearinsäure. Sm. 221—222° (*B.* 24, 2395). — I, 1205.
- $C_{16}H_{31}NS_2$ 1) Hexadekylamidodithioameisensäure. Septedekylaminsalz (*B.* 21, 2489). — I, 1262.
C 72,5 — H 12,7 — O 5,4 — N 9,4 — M. G. 298.
- $C_{16}H_{31}ON_2$ 1) Heptadekylharnstoff. Sm. 103° (*B.* 21, 2491). — I, 1300.

- $C_{15}H_{21}ON$, 2) Stearinamidoxim. Sm. 106—106,5° (B. 26, 2845).
 $C_{15}H_{21}N_2S$, 1) Heptadekylthioharnstoff. Sm. 110—111° (B. 21, 2490). — I, 1321.
 $C_{15}H_{21}N_2S$, 1) Verbindung (aus Schwefelkohlenstoff u. Tetraisobutyldiamidomethan). Sm. 58° (J. pr. [2] 36, 124). — I, 1151.
 $C_{15}H_{20}O_{11}N_6$, 1) Calycanthin (Am. 11, 561). — III, 621.
 $C_{15}H_{21}OSi_4$, 1) Siliciumtripropoxyd. Sd. 290—290° (A. 222, 369). — I, 1520.
 $C_{15}H_{21}O_2Si_4$, 1) Hexapropylester d. Dikieselsäure. Sd. 195₇₆ (G. 27 [2] 445; Ph. Ch. 25, 358).
 $C_{15}H_{15}N_4Cl_4$, 1) Pentaäthylentetraäthyltetrammoniumchlorid. 2 + PtCl₄ (J. 1861, 521). — I, 1166.
 $C_{15}H_{15}N_4Br_4$, 1) Pentaäthylentetraäthyltetrammoniumbromid (J. 1861, 521). — I, 1166.
 $C_{15}H_{15}Cl_2As_2$, 1) Hexapropylarsoniumdichlorid. + 2HgCl₂, + PtCl₄ (B. 31, 597).
 2) Hexaisopropylarsoniumdichlorid. + 2HgCl₂, + PtCl₄ (B. 31, 597).
 $C_{15}H_{15}J_2As_2$, 1) Hexapropylarsoniumdijodid. Sm. 150° u. Zers. + 2HgCl₂, + 2HgJ₂ (B. 31, 597).
 2) Hexaisopropylarsoniumdijodid. Sm. 150° u. Zers. + 2HgJ₂ (B. 31, 597).
 $C_{15}H_{15}O_2As_2$, 1) Hexapropylarsoniumdihydrat. Salze, siehe diese (B. 31, 597).

C₁₅-Gruppe mit vier Elementen.

- $C_{15}H_9O_{12}N_6Br_{10}$, 1) 1,2,3,5-Tetrabrom-4,6-Dinitrobenzol + 2 Molec. *s*-Tribromdinitrobenzol. Sm. 165° (B. 21, 1707). — II, 89.
 $C_{15}H_9O_4Cl_2Br_{11}$, 1) Trichlorxanthogallol. Sm. 104° (A. 245, 343). — II, 1014.
 $C_{15}H_9O_4N_6Br_6$, 1) Hexabromdinitrophenylazophenylen (M. 8, 481). — II, 338.
 $C_{15}H_9O_4N_6Br_2$, 1) Tribromdinitrochrysen (B. 12, 1894). — II, 292.
 $C_{15}H_9O_4N_6Br_{11}$, 1) Bromdichromazin (B. 10, 1138). — II, 725.
 $C_{15}H_9O_4N_6Cl$, 1) 2-Nitro-1-[4-Chlor-*p*-Nitrophenylazo]-4-[2,4,6-Nitrosodinitrophenylazo]benzol? Sm. 189—190° (J. pr. [2] 43, 495). — IV, 1371.
 $C_{15}H_9O_4N_6Cl$, 1) 2-Nitro-1-[3-Chlor-*p*-Nitrophenylazo]-4-[2,4,6-Trinitrophenylazo]benzol? Zers. bei 157° (J. pr. [2] 44, 464). — IV, 1371.
 $C_{15}H_9O_4N_6Cl_2$, 1) Monacetat d. Verb. C₁₅H₉O₄N₆Cl₂ (A. 286, 55). — IV, 1059.
 $C_{15}H_9O_4N_6Cl$, 1) 2-Nitroso-1-[4-Chlorphenylazo]-4-[2,4,6-Dinitrosodinitrophenylazo]benzol? Zers. bei 146—147° (J. pr. [2] 43, 494). — IV, 1371.
 $C_{15}H_9O_4N_6Cl$, 1) 2-Nitroso-1-[3-Chlorphenylazo]-4-[2,4,6-Nitrosodinitrophenylazo]benzol? Zers. bei 225—226° (J. pr. [2] 44, 464). — IV, 1371.
 $C_{15}H_9O_4N_6Cl$, 1) 2-Nitroso-1-[4-Chlorphenylazo]-4-[2,4,6-Trinitrophenylazo]benzol? Sm. 202—203° u. Zers. (J. pr. [2] 43, 493). — IV, 1371.
 2) 2-Nitro-1-[4-Chlorphenylazo]-4-[2,4,6-Nitrosodinitrophenylazo]benzol? Sm. 217—218° u. Zers. (J. pr. [2] 43, 494). — IV, 1371.
 $C_{15}H_9O_4N_6Cl$, 1) 2-Nitro-1-[3-Chlorphenylazo]-4-[2,4,6-Trinitrophenylazo]benzol? Zers. bei 91° (J. pr. [2] 44, 464). — IV, 1371.
 $C_{15}H_9O_4N_6Cl$, 1) Verbindung (aus d. Nitril d. Diphenylketipinsäure). Sm. 161—162° (A. 282, 59). — II, 2032.
 $C_{15}H_{11}ON_2Cl$, 1) Chloropsofranon (B. 31, 302). — IV, 1001.
 $C_{15}H_{11}O_2N_2Cl$, 1) Chloroxyphenylphenazon. Sm. 270—272° u. Zers. (B. 24, 589). — IV, 1004.
 $C_{15}H_{11}O_3NS$, 1) 1-[1,2-Phthalyl]amidonaphtalin-4-Sulfonsäure. K + 3H₂O (A. 248, 157). — II, 1806.
 $C_{15}H_{11}O_6N_2Br$, 1) Diphenyläther d. *p*-Brom-4,6-Dinitro-1,3-Dioxybenzol. Sm. 165° (Am. 13, 178). — II, 927.
 $C_{15}H_{11}O_7N_2Cl$, 1) 3'-[3-Chlorphenyl]hydrazido-2,4,6,4'-Nitrosotrinitro-*s*-Diphenylhydrazin. Zers. bei 169—170° (J. pr. [2] 44, 462). — IV, 1500.
 2) 4-[4-Chlorphenyl]hydrazido-2,2',4',6'-Nitrosotrinitroazobenzol. Sm. 110—112° u. Zers. (J. pr. [2] 43, 493). — IV, 1359.
 $C_{15}H_{11}O_8N_2Cl$, 1) 3'-[3-Chlorphenyl]hydrazido-2,4,6,4'-Tetranitro-*s*-Diphenylhydrazin. Zers. bei 205—206° (J. pr. [2] 44, 463). — IV, 1500.
 2) 4-[4-Chlorphenyl]hydrazido-2,2',4',6'-Tetranitroazobenzol. Zers. bei 117—119° (J. pr. [2] 43, 493). — IV, 1359.
 $C_{15}H_{11}ON_2Cl_2$, 1) 10-Phenylxyhydrat d. 2,8-Dichlor-5,10-Naphtdiazin (Dichlorphenylphenazoniumhydrat). Chlorid + AuCl₃, Nitrat (B. 31, 301). — IV, 1401.

- $C_{11}H_{12}ON_2S$ 1) Carbonylphenyl- β -Naphthylpseudothioharnstoff. Sm. 117° (B. 25, 1467). — II, 619.
2) 2-Thiocarbonyl-5-Phenyl-3-[1-Naphtyl]-2,3-Dihydro-1,3,4-Ox-diazol. Sm. 164° (B. 24, 4186). — IV, 927.
3) Benzoyl-1-Naphtylthiocarbazin. Sm. 175—176° (B. 24, 4188). — IV, 928.
- $C_{11}H_{12}ON_2Cl$ 1) 5-Chlor-6-Acetyl-amido- $\alpha\beta$ -Naphthophenazin. Sm. 292° (B. 31, 2407).
- $C_{11}H_{12}O_2N_2Cl_2$ 1) 3,6-Dichlor-2,5-Di[Phenylamido]-1,4-Benzochinon. Sm. 287—290° (J. 1863, 415; A. 114, 306; 210, 187; 228, 333; J. pr. [2] 24, 431; [2] 28, 423, 427; Am. 17, 597). — III, 343.
- $C_{11}H_{12}O_2N_2Br_2$ 1) 3,6-Dibrom-2,5-Di[Phenylamido]-1,4-Benzochinon (A. Spl. 8, 22). — III, 353.
- $C_{11}H_{12}O_2N_2S$ 1) 2-Phenylsulfon-5,10-Naphtdiazin (2-Phenylsulfonphenazin). Sm. 244° (B. 29, 2021). — IV, 1001.
- $C_{11}H_{12}O_2NCl$ 1) Säure (aus *s*-Diphenylketipinsäurenitril). Ba + 10H₂O (A. 282, 61). — II, 2032.
- $C_{11}H_{12}O_2N_2S$ 1) 2,3'-Bichinoly- β -Sulfonsäure. K₂, Cu (M. 7, 323). — IV, 1067.
2) 2,3'-Bichinoly- ρ -Sulfonsäure. K + 2H₂O, Cu + 2H₂O (M. 7, 309). — IV, 1067.
3) 2,5'-Bichinoly- ρ -Sulfonsäure (M. 8, 143). — IV, 1068.
- $C_{11}H_{12}O_2Cl_2P$ 1) Phosphorigsäuretri-4-Chlorphenylester. Sm. 49°; Sd. 290—297°₁₃ (B. 31, 1053).
- $C_{11}H_{12}O_2N_2Br$ 1) Aethylbromisatoïd. Sm. 244—245° u. Zers. (B. 15, 2095). — II, 1606.
- $C_{11}H_{12}O_2Cl_2P$ 1) Tri-4-Chlorphenylester] d. Phosphorsäure. Sm. 99—100° (B. 30, 2375; H. 25, 446).
- $C_{11}H_{12}O_2Br_2S$ 1) Dibromderivat d. Säure C₁₁H₁₂O₂S (B. 18, 3244). — II, 1638.
- $C_{11}H_{12}O_2Br_2P$ 1) Tri-4-Bromphenylphosphorsäure (A. 143, 194). — II, 672.
- $C_{11}H_{12}O_2N_2S$ 1) Phenosafran-4-Sulfonsäure (N-4-Sulfophenylsafran) (B. 31, 1185). — IV, 1063.
- $C_{11}H_{12}O_6N_2S_2$ 1) 2,3'-Bichinoly- α -Disulfonsäure. K + 5H₂O, Cu + 6H₂O (M. 2, 504; 7, 317). — IV, 1067.
2) 2,7'-Bichinoly- ρ -Disulfonsäure. K₂ + 3H₂O (B. 19, 2473). — IV, 1069.
3) 6,6'-Bichinoly- ρ -Disulfonsäure. Na₂ + 5H₂O (B. 17, 1818). — IV, 1070.
4) 6,6'-Bichinoly- ρ -Disulfonsäure. K + H₂O (B. 27, 2449). — IV, 1070.
5) 6,7'-Bichinoly- ρ -Disulfonsäure. Sm. noch nicht bei 300°. Ba + 3H₂O (M. 6, 554). — IV, 1070.
- $C_{11}H_{12}O_6N_4Cl_4$ 1) Verbindung (aus Tetrachlor-1,4-Benzochinon u. 2 Molec. 3-Nitro-1-Amidobenzol) (A. 228, 326). — III, 336.
- $C_{11}H_{12}O_6N_4Cl$ 1) 2,4-Dinitrobenzoloazo-3-Chlornitrodiphenylhydrazin. Zers. bei 127—128° (J. pr. [2] 44, 465). — IV, 1499.
- $C_{11}H_{12}O_7N_4P$ 1) Tri-2-Nitrophenylphosphinoxyd. Sm. 66—68° (A. 229, 326). — IV, 1659.
2) Tri-4-Nitrophenyl]phosphinoxyd. Sm. 242° (A. 229, 325). — IV, 1659.
- $C_{11}H_{12}O_7N_4As$ 1) Tri- ρ -Nitrophenyl]arsinoxyd. Sm. 254° (B. 19, 1033). — IV, 1659.
- $C_{11}H_{12}O_8N_4S_2$ 1) 1-Phenylazo-4-Oxynaphtalin-1',3-Dicarbonsäure-1'-Sulfonsäure (B. 11, 2199). — IV, 1473.
- $C_{11}H_{12}O_8N_4S_2$ 1) 7[oder 8]-Oxy-7,8'[oder 8,8']-Dichinolyläther-5,5'-Disulfonsäure. Ba + 9H₂O, bas. Ba + xH₂O (J. pr. [2] 55, 476). — IV, 299.
- $C_{11}H_{12}O_8N_4Br_2$ 1) Verbindung (aus Benzol u. 2 Molec. γ -Brom-1,3-Dinitrobenzol). Sm. 65° (A. 197, 259).
- $C_{11}H_{12}O_{10}N_4P$ 1) Tri-2-Nitrophenylester] d. Phosphorsäure. Sm. 126° (Z. 1870, 230). — II, 680.
2) Tri-4-Nitrophenylester] d. Phosphorsäure. Sm. 155° (148°) (Z. 1870, 230; A. 224, 162). — II, 683.
- $C_{11}H_{12}ONBr_2$ 1) Dibromoxyconicin. Fl. (2HCl, PtCl₄) (B. 18, 124). — IV, 37.
- $C_{11}H_{12}ON_2S$ 1) 5-Phenylamido-2-Keto-3-[1-Naphtyl]-2,3-Dihydro-1,3,4-Thio-diazol. Sm. 219° (B. 24, 4191). — IV, 927.
2) 5-Phenylamido-2-Keto-3-[2-Naphtyl]-2,3-Dihydro-1,3,4-Thio-diazol. Sm. 198—199° (B. 24, 4181). — IV, 929.

- $C_{12}H_{11}O_2NCl_2$ 1) Acetat d. 2,4-Dichlor-1-Phenylamido-3-Oxynaphtalin. Sm. 164° (B. 21, 3546). — III, 171.
- $C_{12}H_{11}O_2N_2Cl$ 1) 6-Chlor-5-Phenylamido-2-Oxy-1,4-Benzochinonphenylimid. Sm. bei 240° u. Zers. (B. 23, 900). — III, 348.
- 2) 3-Chlor-2,5-Di[Phenylamido]-1,4-Benzochinon. Sm. 262° (A. 228, 336; B. 23, 899). — III, 341.
- 3) p-Chlor-p-Di[Phenylamido]-1,4-Benzochinon (J. pr. [2] 28, 431). — III, 341.
- 4) p-Chlor-p-Di[Phenylamido]-1,4-Benzochinon (B. 10, 1793; A. 210, 181). — III, 340.
- 5) Acetat d. 2-Oxy-1-[4-Chlorphenylazo]naphtalin. Sm. 133° (Soc. 63, 933). — IV, 1429.
- $C_{12}H_{11}O_2N_2S$ 1) β -Phenylpyridinketonphenylhydrazonsulfonsäure. Zers. bei 295° (B. 22, 410). — IV, 388.
- $C_{12}H_{11}O_2N_4Br$ 1) 6-Brom-2,4-Dinitro-1,3-Di[Phenylamido]benzol. Sm. 191—192° (B. 28, 191; Am. 18, 242). — IV, 572.
- $C_{12}H_{11}O_2N_4Cl_2$ 1) Verbindung (aus 2,3,5-Trichlor-1,4-Benzochinon u. 2 Molec. 3-Nitro-1-Amidobenzol) (A. 228, 325). — III, 334.
- $C_{12}H_{11}O_2N_4Cl_3$ 1) Diacetat d. $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[3-Nitro-4-Oxyphenyl]äthan. Sm. 197° (J. pr. [2] 47, 62). — II, 995.
- $C_{12}H_{14}ON_2Cl_2$ 1) 3,4-Dichlor-5-[4-Methylphenyl]imid-2-Keto-1-[4-Methylphenyl]-2,5-Dihydropyrrrol (Dichlormaleindi-p-Toluil). Sm. 161° (A. 295, 52).
- $C_{12}H_{14}ON_2S$ 1) α -[1-Naphtyl]- β -Benzoylthioharnstoff. Sm. 172—173° (A. ch. [5] 11, 326). — II, 1172.
- $C_{12}H_{14}O_2N_2Cl_2$ 1) p-Dichlor-p-Di[Phenylamido]-1,4-Dioxybenzol (A. 210, 181). — II, 949.
- 2) 3,6-Dichlor-2,5-Diketo-1,4-Di[2-Methylphenyl]-1,2,4,5-Tetrahydro-1,4-Diazin. Sm. 201° (J. pr. [2] 38, 310). — II, 471.
- 3) 3,6-Dichlor-2,5-Diketo-1-[2-Methylphenyl]-4-[4-Methylphenyl]-1,2,4,5-Tetrahydro-1,4-Diazin. Sm. 146° (J. pr. [2] 41, 86). — II, 506.
- $C_{12}H_{14}O_2N_2Br_2$ 1) 2,5-Diketo-1,4-Di[p-Dibrom-2-Methylphenyl]hexahydro-1,4-Diazin. Sm. 277° (J. pr. [2] 38, 296). — II, 471.
- $C_{12}H_{14}O_2N_2S$ 1) 4-[4-Oxyphenyl]azobiphenylsulfonsäure. Na, Ba (Soc. 49, 381). — IV, 1415.
- $C_{12}H_{14}O_2N_2S_2$ 1) 4-[2,4-Dioxyphenyl]azobiphenyl-p-Sulfonsäure. Na, Ba (Soc. 49, 382). — IV, 1446.
- 2) 2',5'-Dioxy-4-Phenylazobenzol-p-Sulfonsäure (Soc. 49, 382). — IV, 1447.
- $C_{12}H_{14}O_2N_2S_3$ 1) Sulfonsäure d. Monamid d. s-Diphenylketipinsäuremononitril. Na + 2H₂O, Ba + 3H₂O (A. 282, 47). — II, 2032.
- $C_{12}H_{14}O_2N_2S_4$ 1) 4-Phenylazobenzol-p-Disulfonsäure. K₂ + 1 $\frac{1}{2}$ H₂O, Ba (B. 21, 1565). — IV, 1402.
- $C_{12}H_{14}O_2N_4Cl_2$ 1) Verbindung (aus 2,5-Dichlor-1,4-Benzochinon u. 2 Molec. 3-Nitro-1-Amidobenzol). Sm. 110° (A. 228, 325). — III, 333.
- 2) Verbindung (aus 2,6-Dichlor-1,4-Benzochinon u. 2 Molec. 3-Nitro-1-Amidobenzol). Sm. 112° (A. 228, 325). — III, 334.
- $C_{12}H_{14}O_2N_2S$ 1) β -Naphtholsulfonazoanissäure. Ba + 8H₂O (B. 14, 2039). — IV, 1471.
- $C_{12}H_{14}O_2N_2S_2$ 1) Verbindung (aus 2,5,6-Trioxphenyleen-1,3-Disulfid u. m-Nitranilin) (Bl. [3] 15, 419).
- $C_{12}H_{14}O_2N_2S_3$ 1) 2-Naphthol-3,6-Disulfonsäureazoanissäure + 3H₂O. K₂ + 6H₂O (B. 14, 2040). — IV, 1471.
- $C_{12}H_{14}N_2Cl_2Hg$ 1) Quecksilberdichnolydidchlorid. + HgCl₂, + PtCl₄ (G. 25 [1] 399).
- $C_{12}H_{14}ON_2Cl_3$ 1) Verbindung (aus d. Di[4-Methylphenylamid] d. Weinsäure). Sm. 192 bis 192,5° (A. 279, 145).
- $C_{12}H_{15}ON_2Cl$ 1) Verbindung (aus α -?-Pentachlor-2-Keto-1-Methyl-?-Dihydro-R-Penten). Sm. 202° (A. 296, 191). — IV, 770.
- $C_{12}H_{15}OSP$ 1) Phenylester d. Diphenylthiophosphinsäure. Sm. 124° (B. 18, 2114). — IV, 1657.
- $C_{12}H_{15}OS_2P$ 1) Triphenyltrithiophosphorsäure. Sm. 72° (J. pr. [2] 10, 232). — II, 661.
- $C_{12}H_{15}OPSe$ 1) Phenylester d. Diphenylselenphosphinsäure. Sm. 114—115° (B. 18, 2115). — IV, 1657.

- $C_{18}H_{11}O_4NBr_2$ 1) $\alpha\beta$ -Dibrom- α -[3-Methoxyl-4-Oxyphenyl]- β -Chinoly[2]äthan (Vanilloäthylchenolinbromid). Zers. bei 202° (B. 27, 1976). — IV, 455.
- $C_{18}H_{11}O_2NS$ 1) Diphenylamid d. Benzolsulfonsäure. Sm. 124° (A. 214, 220). — II, 425.
- $C_{18}H_{11}O_7N_2Cl$ 1) 2-Chlor-3,6-Di[Phenylamido]-1,4-Dioxybenzol. Zers. bei 220 bis 225° (A. 210, 182). — II, 948.
- 2) 4-Methylphenylimid d. Chlor-[4-Methylphenyl]amidofumar-säure. Sm. 198—199° (A. 279, 145).
- $C_{18}H_{11}O_4N_2S$ 1) 4-Phenylsulfonamidoazobenzol. Sm. 133° (A. 272, 230). — IV, 1359.
- $C_{18}H_{11}O_2SP$ 1) Diphenylester d. Phenylthiophosphinsäure. Fl. (B. 9, 1054). — IV, 1653.
- $C_{18}H_{11}O_4N_2S$ 1) 4-Phenylamidoazobenzol-4'-Sulfonsäure. K, Anilinsalz (B. 12, 262; Soc. 51, 192). — IV, 1369.
- $C_{18}H_{11}O_4Cl_2P$ 1) Dichlorid d. Triphenylphosphorsäure. Fl. (A. 253, 112). — II, 660.
- $C_{18}H_{11}O_4Br_2P$ 1) Triphenylphosphitbromid (A. 218, 105). — II, 659.
- $C_{18}H_{11}O_3SP$ 1) Triphenylester d. Thiophosphorsäure. Sm. 53° (49°); Sd. 245°, (J. pr. [2] 10, 233; B. 18, 1718; 31, 1100; A. 253, 118). — II, 661.
- $C_{18}H_{11}O_4NS_2$ 1) Phenylamid d. Diphenylsulfon-3-Sulfonsäure. Sm. 130—131° (B. 19, 2420). — II, 814.
- $C_{18}H_{11}O_4N_2S$ 1) Phenylamid d. 2-Nitro-1-Phenylamidobenzol-4-Sulfonsäure. Sm. 157° (B. 24, 3794). — II, 576.
- 2) Phenylamid d. 4-Nitro-1-Phenylamidobenzol-2-Sulfonsäure. Sm. 164° (B. 24, 3799). — II, 577.
- $C_{18}H_{11}O_4NS$ 1) Diacetat d. N-Acetyl-Dioxythiodiphenylamin. Sm. 155—156° (A. 230, 194). — II, 812.
- $C_{18}H_{11}O_4NS_2$ 1) P-Diphenylsulfon-2-Amido-1-Oxybenzol. Sm. 115° (B. 29, 2029).
- $C_{18}H_{11}O_4NS_4$ 1) Verbindung (aus 2,5,6-Trioxiphenylen-1,3-Disulfid u. Anilin) (B. [3] 15, 420).
- $C_{18}H_{11}O_4N_2Bi$ 1) Phenylid[β -Nitrophenyl]wismuthdihydroxyd. Chlorid, Nitrat (B. 30, 2845).
- $C_{18}H_{11}O_4N_4Cl$ 1) Verbindung (aus 2-Chlor-1,4-Benzochinon u. 2 Molec. 3-Nitro-1-Amido-benzol) (A. 228, 324). — III, 332.
- $C_{18}H_{11}O_4NS_3$ 1) Tribenzylsulfonhydroxyamin. Sm. 99° (A. 141, 371; B. 11, 618, 1590; 29, 1563). — II, 109.
- $C_{18}H_{11}O_4N_2S$ 1) Triphenylamin-P-Trisulfonsäure. Na₃ (B. 23, 2541). — II, 577.
- $C_{18}H_{11}ONCl$ 1) 1-Oximido-2- α -Chlor- γ -Phenylpropenyl-2,3-Dihydroinden. Sm. 163—164° u. Zers. (Soc. 65, 488). — III, 253.
- $C_{18}H_{11}ONBr_3$ 1) Verbindung (aus Dibrompseudocumenolbromid u. Chinolin). Sm. 226° (B. 29, 1122). — IV, 250.
- $C_{18}H_{11}ONJ$ 1) Jodmethylat d. 6-Benzoyl-2-Methylchinolin. Sm. 220° (A. 242, 325). — IV, 375.
- $C_{18}H_{11}ON_2Cl_2$ 1) 4,4-Dichlor-5-Phenylimido-2-Keto-3,3-Dimethyl-1-Phenyltetrahydro-pyrrrol (uns-Dimethyldichlorsuccindianil). Sm. 129° (A. 295, 71).
- $C_{18}H_{11}ON_2S$ 1) Benzyläther d. α -Oxy- β -[1-Naphtyl]thioharnstoff. Sm. 132—133° (B. 24, 384). — II, 610.
- 2) 2-Phenylimido-4-Keto-3-Aethyl-5-Bensylidentetrahydrothiazol (Benzylidenäthylphenylthiohydantoin). Sm. 97° (B. 31, 137; C. 1899 [2] 805).
- 3) Verbindung (aus Thionylamidobenzol u. Diphenylamin) (A. 274, 208). — II, 355.
- $C_{18}H_{11}O_2NCl$ 1) Benzoeat d. 4-Oxy-2-Methylchinolin-1-Chlormethylat. Sm. 160 bis 161° (u. 112°) (B. 30, 927). — IV, 311.
- $C_{18}H_{11}O_2NJ$ 1) Jodmethylat d. 2-Phenylchinolin-4-Carbonsäuremethylbetaïn. Sm. 160—165° u. Zers. (A. 276, 285). — IV, 445.
- $C_{18}H_{11}O_2NP$ 1) Phenylmonamid d. Phenylphosphinsäuremonophenylester. Sm. 83°; Sd. 235°, (A. 293, 218). — IV, 1651.
- $C_{18}H_{11}O_2N_2Br_2$ 1) Dibrommethylphenylaminfumarid. Sm. 206—207° u. Zers. (G. 16, 25). — II, 416.
- $C_{18}H_{11}O_2N_2S$ 1) 4-Amido-4'-Phenylsulfonamidobiphenyl. Sm. 160—161° (A. 272, 231). — IV, 966.
- 2) Phenylsulfonhydrazobenzol. Sm. 107° (B. 30, 2555). — IV, 1348.
- $C_{18}H_{11}O_2N_2Hg$ 1) Quecksilberdichinolyoxydhydrat. Salze, siehe diese u. HNO₃, H₂SO₄, Oxalat (G. 25 [1] 394).

- $C_{18}H_{10}O_2N_2Hg_2$ 1) 3-Quecksilberdi-1-Toluylen-4-Tetramethylmerkuridiammoniumhydrat. Sm. 117°. Chlorid, Bromid, Jodid, Nitrat, Acetat (C. 1898 [2] 546).
- $C_{18}H_{10}O_2NCl$ 1) Chlormethylat d. 6-Methoxyl-2-Phenylchinolin-4-Carbonsäure. Sm. 195° (A. 282, 86). — IV, 447.
- $C_{18}H_{10}O_2NBr$ 1) Brombenzylat d. Chininsäure. Sm. 148° u. Zers. (A. 276, 278). — IV, 362.
- $C_{18}H_{10}O_2NJ$ 1) Jodmethylat d. 6-Methoxyl-2-Phenylchinolin-4-Carbonsäure. Sm. 216° (A. 282, 85). — IV, 447.
- $C_{18}H_{10}O_2NP$ 1) Phenylamid d. Phosphorsäurediphenylester. Sm. 129° (B. 8, 1236; 27, 2573, 2575; 29, 720). — II, 660.
- $C_{18}H_{10}O_2N_2S$ 1) 2-Phenylimido-4-Keto-3-Phenyltetrahydrothiazol-5-[Aethyl- α -Carbonsäure] (Diphenylthiohydantoïn- α -Propionsäure). Sm. 124° (M. 18, 75).
- $C_{18}H_{10}O_2N_2S$ 1) m-Phenylendiamindisazobenzol-p-Benzolsulfonsäure. K (B. 16, 2032). — IV, 1372.
2) Benzoldisazo-m-Phenylendiamin-p-Benzolsulfonsäure. K + 2H₂O (B. 16, 2035). — IV, 1372.
- $C_{18}H_{10}O_4N_2Cl_2$ 1) Di[2-Chlorphenylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbon-säure. Sm. 165–172° (Bh. [3] 19, 765).
- $C_{18}H_{10}O_4N_2S$ 1) 2-Oxy-1-[2,4-Dimethylphenylazo]naphtalin-1'-Sulfonsäure. Ba (B. 19, 139). — IV, 1437.
2) 2-Oxy-1-[2,5-Dimethylphenylazo]naphtalin-1'-Sulfonsäure? Na, Ag. — IV, 1437.
3) 3-Oxy-1-[2,5-Dimethylphenylazo]naphtalin-4-Sulfonsäure? (B. 17, 461). — IV, 1437.
4) 4-Oxy-1-[2,5-Dimethylphenylazo]naphtalin-7-Sulfonsäure (J. 1881, 490). — IV, 1437.
- $C_{18}H_{10}O_4N_2S_2$ 1) 2,5-Diphenylsulfon-1,4-Diamidobenzol. Sm. 115° (B. 29, 2027).
2) 1,2-Di[Phenylsulfonamido]benzol (1,2-Phenylenamid d. Benzol-sulfonsäure). Sm. 186° (A. 287, 223). — IV, 561.
3) 1,3-Di[Phenylsulfonamido]benzol. Sm. 194° (A. 287, 229). — IV, 577.
4) 1,4-Di[Phenylsulfonamido]benzol. Sm. 247° (A. 285, 188). — IV, 594.
- $C_{18}H_{10}O_4ClJ$ 1) Verbindung (aus α -Jod- β -Oxy- β -Phenylpropionsäure u. Zimmtsäure). Sm. 110–115° u. Zers. (B. 19, 2464; A. 289, 282). — II, 1573.
- $C_{18}H_{10}O_4Cl_2S_2$ 1) Chlorid d. Retendisulfonsäure. Sm. 175° (A. 185, 91). — II, 277.
- $C_{18}H_{10}O_4N_2S_2$ 1) 3-Aethylester d. 5-Keto-4-Phenylhydrazon-1-Phenyl-4,5-Di-hydropyrazol-3-Carbonsäure-1',4'-Disulfonsäure (3-Ae. d. Tar-trazinsäure). Na₂, Ba (A. 294, 236). — IV, 730.
- $C_{18}H_{10}O_4Cl_2S_2$ 1) Säure (aus α -[4-Chlorphenyl]sulfon- α -Oxypropionsäure). Sm. 153° (H. 16, 549).
- $C_{18}H_{10}ON_2P$ 1) Di[Phenylamid] d. Phenylphosphinsäure. Sm. 211° (A. 293, 215). — IV, 1651.
- $C_{18}H_{10}ON_2Cl$ 1) Verbindung (aus Pentachlorketomethylidhydro-R-Penten). Sm. 200° (A. 296, 170). — IV, 770.
- $C_{18}H_{10}O_2NS$ 1) Dimethylamidophenyl-1-Naphtylsulfon. Sm. 91° (B. 12, 1789). — II, 867.
2) Dimethylamidophenyl-2-Naphtylsulfon (B. 12, 1790). — II, 887.
- $C_{18}H_{10}O_2N_2Cl$ 1) Chlormethylat d. 5 oder 6-Methyl-2-Furanyl-1-Furylbenzimidazol. 2 + PtCl₄ (B. 11, 1659). — IV, 620.
2) Chloräthylat d. Phenylfurfuraldehydin. 2 + PtCl₄ (B. 11, 1656). — IV, 564.
3) Benzoat d. 5-Oxy-3-Methyl-1-Phenylpyrazol-2-Chlormethylat (Antipyrinchlorbenzoylat). Sm. 129–130° (A. 293, 42). — IV, 513.
- $C_{18}H_{10}O_2N_2Cl_2$ 1) $\beta\beta\beta$ -Trichloräthylidenamid d. Phenyllessigsäure (B. 10, 1651). — II, 1312.
- $C_{18}H_{10}O_2N_2J$ 1) Jodmethylat d. 5 oder 6-Methyl-2-Furanyl-1-Furylbenzimidazol. Sm. 195,5° u. Zers. + J₂ (Sm. 126–128°); + J₄ (Sm. 109°) (B. 11, 1658). — IV, 620.
2) Jodäthylat d. Phenylfurfuraldehydin (B. 11, 1656). — IV, 564.
3) Benzoat d. 5-Oxy-3-Methyl-1-Phenylpyrazol-2-Jodmethylat. Sm. 185° u. Zers. (J. pr. [2] 55, 151). — IV, 513.

- $C_{15}H_{17}O_3N_2P$ 1) Di[Phenylamid] d. Phosphorsäuremonophenylester. Sm. 165° (B. 29, 720).
- $C_{15}H_{17}O_2N_2S$ 1) Phenylamid d. 4-Amido-1-Phenylamidobenzol-2-Sulfonsäure. Sm. 171° (B. 24, 3801). — IV, 595.
2) Phenylamid d. 2-Amidodiphenylamin-4-Sulfonsäure. Sm. 157° (B. 24, 3794). — IV, 568.
- $C_{15}H_{17}O_2N_2Cl$ 1) *trans*-Chlor- α -Di[Phenylhydrason]- β -Penten- α -Carbonsäure (B. 22, 1259). — IV, 709.
- $C_{15}H_{17}O_2NS$ 1) Phenylamid d. 2-Oxynaphtalinäthyläther-1-Sulfonsäure. Sm. 178° (C. 1895 [1] 1064).
2) Phenylamid d. 2-Oxynaphtalinäthyläther-6-Sulfonsäure. Sm. 152–153° (C. 1895 [1] 1064).
3) Phenylamid d. 2-Oxynaphtalinäthyläther-8-Sulfonsäure. Sm. 158° (C. 1895 [1] 1064).
- $C_{15}H_{17}O_2N_2Br$ 1) Hydrobrombilirubidin (A. 181, 253). — III, 662.
- $C_{15}H_{17}O_2N_2S$ 1) 2-Aethylamido-1-Phenylazonaphtalin-1'-Sulfonsäure. K (B. 26, 193). — IV, 1399.
2) 4-Aethylamido-1-Phenylazonaphtalin-1'-Sulfonsäure. Na (B. 24, 2470). — IV, 1399.
3) 4-Dimethylamido-1-Phenylazonaphtalin-1'-Sulfonsäure. Ba (B. 21, 3125). — IV, 1399.
- $C_{15}H_{17}O_2NS$ 1) 2-Methyl-4-[2-Aethoxyphenyl]chinolin- β -Sulfonsäure (B. 27, 3037). — IV, 435.
- $C_{15}H_{17}O_2N_2Br_2$ 1) β -[3-Brom-4-Diazoamidophenyl]propionsäure (B. 15, 2294).
- $C_{15}H_{17}O_2N_2S_2$ 1) Verbindung (aus Phenylthiohydantoinsäure). Sm. 112–115° (A. 207, 129). — II, 402.
- $C_{15}H_{15}ONCl$ 1) Chlorbensylat d. 6-Oxychinolin-6-Aethyläther + 3H₂O. Sm. 96° (J. pr. [2] 56, 444).
- $C_{15}H_{15}ON_2S$ 1) Acetylderivat d. Verbindung $C_{15}H_{15}N_2S$ (aus 4-Amido-1,2-Dimethylbenzol). Sm. 227° (B. 22, 584). — II, 827.
2) Acetylderivat d. Verbindung $C_{15}H_{15}N_2S$ (aus 2-Amido-1,4-Dimethylbenzol). Sm. 212° (B. 22, 585). — II, 827.
- $C_{15}H_{15}ON_2P$ 1) Tri[4-Amidophenyl]phosphinoxid. Sm. 258° (A. 229, 327). — IV, 1660.
2) Tri[Phenylamid] d. o-Phosphorsäure. Sm. 208° (A. 101, 302; 229, 335; B. 27, 2575). — II, 357.
- $C_{15}H_{15}ON_2S$ 1) 2-[2-Methylphenylacetylamido]-5-[2-Methylphenyl]-1,3,4-Thio-diazol. Sm. 221° (B. 23, 367). — IV, 1236.
2) 2-[4-Methylphenylacetylamido]-5-[4-Methylphenylamido]-1,3,4-Thio-diazol. Sm. 166° (B. 23, 365). — IV, 1236.
- $C_{15}H_{15}O_2N_2Cl_2$ 1) $\alpha\beta$ -Di[Chloracetylphenylamido]äthan. Sm. 152–154° (B. 25, 3253). — II, 368.
2) *trans*-Dichlor-4,4'-Di[Acetylamido]-3,3'-Dimethylbiphenyl. Sm. bei 290° (C. 1898 [2] 522).
- $C_{15}H_{15}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[Bromacetylphenylamido]äthan. Sm. 136° (B. 25, 3254). — II, 368.
2) Di[2-Methylphenylamid] d. Dibrombernsteinsäure. Zers. bei 200° (B. 23, 183). — II, 468.
3) Di[4-Methylphenylamid] d. Dibrombernsteinsäure. Sm. 168° u. Zers. (G. 23, 182). — II, 502.
- $C_{15}H_{15}O_2N_2Cl$ 1) Acetylderivat d. Verb. $C_{15}H_{15}ON_2Cl$ (B. 31, 1414).
- $C_{15}H_{15}O_2N_2S_2$ 1) $\alpha\alpha$ -Succinylid[β -Phenylthioharnstoff]. Sm. 210–210,5° (Soc. 67, 566).
- $C_{15}H_{15}O_2Cl_2Te$ 1) Dichlortelluro-4-Tolylmethylketon. Sm. 200° (B. 30, 2834).
- $C_{15}H_{15}O_2Br_2S$ 1) Di[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl]sulfid. Sm. 243° (B. 29, 2346).
- $C_{15}H_{15}O_2NBr_2$ 1) Tribromcodein. (2HCl, PtCl₆), HBr (A. 77, 365). — III, 903.
- $C_{15}H_{15}O_2N_2Br_2$ 1) Phenylmonamid d. $\alpha\beta$ -Dibrom- β -Phenylamidoäthan- $\alpha\alpha$ -Dicarbonsäuremonäthylester. Sm. 179–185° (A. 285, 131).
- $C_{15}H_{15}O_2N_2S$ 1) Methylphenylhydrastylthioharnstoff. Sm. 126° (A. 271, 390). — III, 106.
- $C_{15}H_{15}O_2NCl$ 1) Chloräthylat d. Papaverolin. Sm. 215° (J. pr. [2] 56, 344).
- $C_{15}H_{15}O_2N_2Cl_2$ 1) 3,6-Dichlor-2,5-Dioxy-1,4-Benzochinon + 2 Molec. Phenylhydrasin (Bl. [3] 21, 91).

- $C_{10}H_{10}O_4N_2S$ 1) Sulfid d. α -[4-Merkaptohenyl]hydrazonpropionsäure (A. 270, 152). — IV, 816.
- $C_{10}H_{10}O_4Cl_2Te$ 1) Dimethyläther d. Dichlortelluro-4-Oxyphenylmethylketon. Sm. 190° (B. 23, 2833).
- $C_{10}H_{10}O_4N_2S_2$ 1) Disulfonsäure (aus 8-Oxy-1,2,3,4-Tetrahydrochinolin-5-Sulfonsäure). Sm. noch nicht bei 360°. K_1 (J. pr. [2] 54, 356). — IV, 297.
- $C_{10}H_{10}N_2SP$ 1) Triphenylamid d. Thiophosphorsäure. Sm. 78° (Z. 1868, 539). — II, 357.
- 2) Triphenylamid d. isom. Thiophosphorsäure. Sm. 153° (B. 20, 3353). — II, 357.
- $C_{10}H_{10}ON_2Br$ 1) 4-Bromphenyläther d. α -Phenylimido- α -Oxy- α -[1-Piperidyl]-methan (4-Bromdiphenylpiperidylisoharnstoff). Sm. 91° (B. 28, 984). — IV, 13.
- $C_{10}H_{10}ON_2S$ 1) Verbindung (aus Amidobenzol u. Thionylamidobenzol) (A. 274, 205). — II, 355.
- $C_{10}H_{10}ON_2S_2$ 1) Verbindung (aus 5-Dimethylamido-2,4'-Dithiocarbonimid). Sm. 170° (A. 303, 359).
- $C_{10}H_{10}ON_2P$ 1) Di[Phenylhydrazid] d. Phenylphosphinsäure. Sm. 175° (A. 293, 210). — IV, 1651.
- $C_{10}H_{10}ON_2S$ 1) 2-[2,4-Dimethylphenylnitrosamido]-5-[2,4-Dimethylphenylamido]-1,3,4-Thiadiazol. Sm. 146° (B. 23, 370). — IV, 1237.
- $C_{10}H_{10}O_2NCl_2$ 1) Base (aus Codein). Sm. 196—197°. HCl, (2HCl, PtCl₄) (A. 210, 110). — III, 907.
- $C_{10}H_{10}O_2N_2Cl$ 1) Cinchotenninchlorid. (2HCl, PtCl₄) (M. 16, 63). — III, 842.
- 2) 4-Methylphenylamid d. Chlorbernstensäure (A. 279, 136).
- 3) 4-Methylphenylamid d. Chloracetyl-[4-Methylphenyl]amido-essigsäure. Sm. 158° (B. 25, 2290). — II, 505.
- $C_{10}H_{10}O_2N_2J_2$ 1) Diodocodin. (2HCl, PtCl₄ + H₂O) (A. 92, 325, 326). — III, 903.
- $C_{10}H_{10}O_2N_2S$ 1) α -Phenylamidothioformyl- β -Phenylhydrazid d. Malonsäuremono-äthylester. Sm. 141° (B. 24, 1801). — IV, 702.
- 2) Äthylester d. 3-[β -Phenylthiouramid]-4-Methylphenylloxamin-säure. Sm. 154—155° (A. 268, 310). — IV, 605.
- $C_{10}H_{10}O_2N_4Cl$ 1) 2-Chlor-1,2-Di[4-Aethoxyphenyl]-2,2-Dihydro-1,2,3,5-Tetra-azol-4-Carbonsäure (Di-p-Phenyltetrazoliumchloridcarbonsäure). Sm. 194—195° (B. 28, 1691). — IV, 1240.
- $C_{10}H_{10}ONBr$ 1) Phenylbenzylamid d. α -Bromisovaleriansäure. Sm. 95—96° (B. 31, 2677).
- $C_{10}H_{10}ON_2S_2$ 1) Oxyd d. Äthylphenylamidothioameisensäure. Sm. 143—143,5° (B. 20, 1630).
- $C_{10}H_{10}ON_2Cl$ 1) Äthyläther d. Verb. $C_{10}H_{10}ON_2Cl$ (B. 31, 1414).
- $C_{10}H_{10}ONCl$ 1) Chlorocodin. Sm. 147—148°. HCl, (2HCl, PtCl₄), (HCl, AuCl₃) (A. Spl. 7, 366; A. 210, 107). — III, 906.
- $C_{10}H_{10}O_2NBr$ 1) Bromocodin. HBr (J. 1871, 777). — III, 907.
- $C_{10}H_{10}O_2N_2S$ 1) 2',3'-Dimethyläther d. 2-[2-Oxyphenyl]imido-3-[2-Oxyphenyl]-tetrahydro-1,3-Thiazin. Sm. 113—114° (B. 21, 1872). — II, 711.
- 2) Di[2-Acetylamidobenzyl]sulfid. Sm. 209° (B. 27, 3522).
- 3) Di[4-Acetylamidobenzyl]sulfid. Sm. 188° (B. 24, 726; 28, 880, 915, 1337).
- 4) Di[6-Acetylamido-3-Methylphenyl]sulfid. Sm. 211° (B. 20, 667). — II, 821.
- 5) Di[β -Benzoylamidoäthyl]sulfid. Sm. 109—110° (B. 24, 3102). — II, 1160.
- $C_{10}H_{10}O_2N_2S_2$ 1) Phenylthiourethansulfid. Sm. 102° (A. 207, 159; B. 13, 1575; 19, 1076, 1813; 26, 2364). — II, 384.
- 2) Di[4-Acetylamidobenzyl]disulfid. Sm. 173—174° (A. 305, 120).
- 3) Di[6-Acetylamido-3-Methylphenyl]disulfid. Sm. 204—206° (B. 22, 908). — II, 822.
- 4) Di[β -Benzoylamidoäthyl]disulfid. Sm. 132° (B. 24, 1123). — II, 1160.
- $C_{10}H_{10}O_2N_2Se_2$ 1) Di[β -Benzoylamidoäthyl]diselenid (B. 25, 3048). — II, 1161.
- $C_{10}H_{10}O_2N_2P$ 1) Tri[Phenylamid] d. Pentaoxyphosphorsäure. Sm. 217° (B. 29, 721).
- $C_{10}H_{10}O_2N_2S_2$ 1) $\alpha\alpha$ -Succinyldi[β -Phenylamidothioharnstoff]. Sm. 220° (Soc. 67, 571). — IV, 704.

- $C_{15}H_{20}O_2Br_2S$ 1) Di[3-Brom-4-Oxy-2,5-Dimethylbenzyl]sulfid. Sm. 152° (A. 302, 124).
- $C_{15}H_{20}O_2NCl$ 1) Chloroedein + $1\frac{1}{2}H_2O$. Sm. 170°. (2HCl, PtCl₄), H₂SO₄ + 4H₂O (A. 77, 368; 210, 114). — III, 903.
- $C_{15}H_{20}O_2NBr$ 1) Bromoedein + $\frac{1}{2}(1\frac{1}{2})H_2O$. Sm. 161–162°. (2HCl, PtCl₄), HBr + H₂O (A. 77, 362; 210, 112). — III, 903.
- $C_{15}H_{20}O_2NJ$ 1) Jodmethylat d. Morphothebain (B. 19, 1598; M. 18, 389). — III, 910.
- $C_{15}H_{20}O_4Br_2S_2$ 1) Verbindung (aus Sulfotolulylenäthylen). Sm. 95° (A. 143, 219). — II, 110.
- $C_{15}H_{21}ON_6P$ 1) Tri[Phenylhydrazid] d. Phosphorsäure. Sm. 204° (196°) (A. 270, 135; 272, 212). — IV, 662.
- $C_{15}H_{21}O_2N_3S$ 1) Phenylthiosemicarbazid d. β -[α -Phenylhydrazido]propionsäure-äthylester. Sm. 71–74° (B. 29, 517). — IV, 740.
- $C_{15}H_{21}O_2N_6S_2$ 1) 1-Methyl-1,2,3,4-Tetrahydrochinolinindimethylanilinthiosulfonsäureindamin (B. 23, 1382). — IV, 197.
- $C_{15}H_{21}O_2NS$ 1) Sulfococid + 5H₂O. Zers. bei 246°. — III, 902.
- $C_{15}H_{21}O_2N_2P$ 1) 2-Methylphenylamid d. Phosphorsäuredi(Oxyessigsäure). Sm. 168–170° (A. 279, 61).
- 2) 4-Methylphenylamid d. Phosphorsäuredi(Oxyessigsäure). Sm. 255–257° (A. 279, 66).
- $C_{15}H_{21}N_4SP$ 1) Tri[Phenylhydrazid] d. Thiophosphorsäure. Sm. 154° (A. 270, 136). — IV, 662.
- $C_{15}H_{22}O_2NP$ 1) Piperidid d. 4-Methylphenylphosphinsäuremonophenylester. Fl. (A. 293, 264). — IV, 1669.
- $C_{15}H_{22}O_2N_2S$ 1) Propyläther d. 2-Methoxyphenylamido-2-Methoxyphenylimidomerkaptomethan. Sm. 58°. (2HCl, PtCl₄) (B. 21, 1864). — II, 711.
- $C_{15}H_{22}O_2NCl$ 1) Chlormethylat d. Morphin + 2H₂O. (2 + PtCl₄ + H₂O) (A. 222, 208). — III, 899.
- $C_{15}H_{22}O_2NJ$ 1) Jodmethylat d. Morphin + H₂O (A. 88, 338). — III, 898.
- $C_{15}H_{22}O_2NBr$ 1) β -Bromäthylester d. Benzoylcegonin. Fl. (Am. 10, 147). — III, 867.
- $C_{15}H_{22}O_2N_2S$ 1) 4-Oxy-2, β , β -Trimethyl-5-Isopropylazobenzol- β -Sulfonsäure. Ba (B. 14, 2795). — IV, 1425.
- $C_{15}H_{22}O_2N_2S_2$ 1) 1,2-Di[Phenylsulfonamido]hexahydrobenzol. Sm. 155° (A. 295, 215). — IV, 482.
- $C_{15}H_{22}O_2N_7Hg_2$ 1) Diacetat d. Quecksilberammoniumbase $C_{15}H_{22}O_2N_7Hg_2$. Sm. 184° (G. 28 [2] 111). — IV, 1711.
- $C_{15}H_{22}O_2N_4S_2$ 1) Amid d. s-Di[Acetyl-2-Methylphenyl]hydrazin-5,5'-Disulfonsäure (A. 270, 372). — IV, 1502.
- $C_{15}H_{22}N_3ClS$ 1) Dimethyldiäthylthioninchlorid (A. 251, 86; B. 22, 2067). — II, 811.
- $C_{15}H_{22}ON_4P$ 1) 2,4,5-Trimethylphenylimid-2,4,5-Trimethylphenylamid d. Phosphorsäure. Sm. 217° (B. 29, 727).
- 2) 2,4,6-Trimethylphenylimid-2,4,6-Trimethylphenylamid d. Phosphorsäure. Sm. 240° (B. 29, 726).
- $C_{15}H_{22}O_2NBr_2$ 1) Methylalkoholat d. Verb. $C_{17}H_{19}ONBr_2$ (aus Dibrompseudocumenolbromid) + 3H₂O. Sm. 293–294° (u. 205–207°) (B. 29, 1125).
- $C_{15}H_{22}O_2NS$ 1) Phenylamid d. 1,3-Dimethyl- β -[tert.]Butylbenzol- β -Sulfonsäure. Sm. 143,5–144,5° (B. 25, 791). — II, 425.
- 2) Phenylamid d. 1,4-Propylisopropylbenzol- α -Sulfonsäure. Sm. 107–109° (G. 21, 21). — II, 425.
- $C_{15}H_{22}O_2N_2S_2$ 1) Dimethyldiäthylindaminthiosulfonat (A. 251, 83). — II, 802.
- $C_{15}H_{22}O_2NS_2$ 1) Di[4-Methylphenylsulfonäthyl]amin. Sm. 200–201° u. Zers. (HCl, AuCl₃) (J. pr. [2] 30, 359). — II, 823.
- 2) Imid d. 1,2,4-Trimethylbenzol-5-Sulfonsäure. Sm. 177° (A. 184, 185). — II, 149.
- 3) Imid d. 1,3,5-Trimethylbenzol-2-Sulfonsäure. Sm. 124° (A. 184, 187). — II, 151.
- $C_{15}H_{22}N_2JS$ 1) Jodmethylat d. 4,4'-Di[Dimethylamido]diphenylthioketon. Zers. bei 108° (B. 20, 1736). — III, 192.
- $C_{15}H_{22}ON_4Br$ 1) Dipiperidylbromisatin (B. 24, 2605). — IV, 16.
- $C_{15}H_{22}O_2N_2Br_2$ 1) Verbindung (aus Phthalylpiperidin) (A. 227, 200). — IV, 16.
- $C_{15}H_{22}O_2NCl$ 1) Chlormethylat d. Cocain. Sm. 152,5° (B. 21, 3042). — III, 867.

- $C_{18}H_{14}O_4NCl$ 2) Chlormethylat d. l-Scopolamin. + $AuCl_3$ (B. 27 [2] 883). — III, 796.
- $C_{18}H_{20}O_4NJ$ 1) Jodmethylat d. Cocain. Sm. 164° (B. 21, 3041). — III, 866.
2) Jodmethylat d. α -Cocain + H_2O . Sm. 202° (B. 29, 2227). — III, 873.
- $C_{18}H_{24}O_4N_2S_2$ 3) Jodmethylat d. l-Scopolamin. Sm. 215° (B. 27 [2] 883). — III, 796.
1) Aethylendiäthylamid d. Benzolsulfonsäure ($\alpha\beta$ -Di[Phenylsulfonäthylamid]äthau). Sm. 152,5° (A. 267, 222; B. 28, 3076).
- $C_{18}H_{24}O_6N_2S_{12}$ 1) Verbindung (aus Chloralhydrat) (J. 1875, 474). — I, 932.
- $C_{18}H_{21}N_7Cl_2Hg_2$ 1) Chlorid d. Quecksilberammoniumbase $C_{18}H_{20}O_2N_7Hg_2$. Sm. 159 bis 159,5° (G. 28 [2] 103). — IV, 1711.
- $C_{18}H_{21}N_2Br_2Hg_2$ 1) Bromid d. Quecksilberammoniumbase $C_{18}H_{20}O_2N_2Hg_2$. Sm. 149 bis 150,5° (G. 28 [2] 104). — IV, 1711.
- $C_{18}H_{21}N_2J_2Hg_2$ 1) Jodid d. Quecksilberammoniumbase $C_{18}H_{20}O_2N_2Hg_2$. Sm. 126° (G. 28 [2] 104). — IV, 1711.
- $C_{18}H_{20}O_2NS$ 1) Phenylamid d. 5-Pseudobutyl-1,3-Dimethylbenzol-*p*-Sulfonsäure. Sm. 143—144° (B. 27, 1608).
- $C_{18}H_{20}O_4N_2J$ 1) Jodmethylat d. *m*-Amido-d-Cocain. Sm. 197—198° (B. 27, 1882). — III, 868.
- $C_{18}H_{23}N_2S_2P$ 1) Phenyl-di[1-Piperidyl]phosphin + 2 Molec. Schwefelkohlenstoff. Sm. 144° (B. 31, 1042). — IV, 1682.
- $C_{18}H_{20}ON_4J_2$ 1) Di[Jodmethylat] d. 3,3'-Di[Dimethylamido]azoxybenzol. Sm. 190° u. Zers. (B. 30, 2935). — IV, 1338.
- $C_{18}H_{20}O_2N_2Hg_2$ 1) Quecksilberdi[6-Dimethylamido-3-Methylphenyl]quecksilberammoniumhydrat. Sm. 117°. Chlorid, Bromid, Jodid, Nitrat Acetat (G. 28 [2] 102). — IV, 1711.
- $C_{18}H_{20}O_2N_2S_2$ 1) $\alpha\alpha$ -Phtalyldi[β -sec. Butylthioharnstoff]. Fl. (Soc. 67, 574).
- $C_{18}H_{20}O_4NCl$ 1) Chlormethylat d. 2,6-Dimethyl-4-Phenylhexahydropyridin-3,5-Dicarbonensäuredimethylester. (2 + $PtCl_4$) (B. 25, 2791). — IV, 215.
- $C_{18}H_{20}O_4NJ$ 1) Jodmethylat d. 2,6-Dimethyl-4-Phenylhexahydropyridin-3,5-Dicarbonensäuredimethylester. Fl. (B. 25, 2791). — IV, 215.
- $C_{18}H_{27}O_7NS$ 1) Chondroitinschwefelsäure. K, Cu (B. 25 [2] 473). — IV, 1627.
- $C_{18}H_{29}ON_2P$ 1) Aethyläther d. 4-Oxyphenyl-di[1-Piperidyl]phosphin. Sm. 84° (B. 31, 1047).
- $C_{18}H_{29}N_2JP$ 1) Aethylphenyl-di[1-Piperidyl]phosphoniumjodid. Sm. 174° (B. 31, 1044). — IV, 1682.
2) Methyl-4-Methylphenyl-di[1-Piperidyl]phosphoniumjodid. Sm. 186° (B. 31, 1046). — IV, 1682.
- $C_{18}H_{23}O_2Br_2J$ 1) Dibromjodstearinsäure (B. 9, 1917). — I, 492.
- $C_{18}H_{24}O_2NCl$ 1) Chloräthylat d. Aethylcarpain. 2 + $PtCl_4$ + $AuCl_3$. — III, 804.
- $C_{18}H_{24}O_2NJ$ 1) Jodäthylat d. Aethylcarpain. — III, 804.
- $C_{18}H_{23}O_2NCl$ 1) Chloroximidostearinsäure (Nitrosylchlorid d. Elaäidinsäure). Sm. 99—100° (Soc. 65, 329).
- $C_{18}H_{26}O_3N_2S_2$ 1) Stearinamidoximschwefligesäure (B. 26, 2845).
- $C_{18}H_{40}O_6N_4Fe$ 1) Imidoferrocyanwasserstoffäthyläther. 2HCl (B. 21, 932; siehe auch A. 91, 253). — I, 1488.
- $C_{18}H_{41}O_4Cl_2P$ 1) Verbindung (aus Acetaldehyd). Fl. (B. 21, 330). — I, 921.
- $C_{18}H_{41}O_4Br_2P$ 1) Verbindung (aus Acetaldehyd). Fl. (B. 21, 331). — I, 921.

C_{18} -Gruppe mit fünf Elementen.

- $C_{18}H_{16}O_2N_2Br_2S_2$ 1) Verbindung (aus Oktobrom-*p*-Tetroliditoyl) (B. 14, 936, 2093). — IV, 1035.
- $C_{18}H_{12}ON_2Br_2P$ 1) Tri-*p*-Dibrom-4-Amidophenyl]phosphinoxid. Sm. 205—206° u. Zers. (A. 229, 333). — IV, 1660.
2) Orthophosphorsäurehexabromtrianilid. Sm. 252—253° (A. 229, 338). — II, 357.
- $C_{18}H_{12}O_2N_6Cl_2P$ 1) Tri[4-Chlor-*p*-Nitrophenylamid] d. Phosphorsäure. Sm. 249° (B. 28, 620).
- $C_{18}H_{12}O_2N_2Cl_2P$ 1) Di[2,4-Dichlorphenylamid] d. Phenylphosphorsäure. Sm. 227° (B. 29, 724).

- $C_{15}H_{15}O_2N_2ClS$ 1) Benzolsulfonat d. 2-Chlor-4'-Oxyazobenzol. Sm. 74° (B. 28, 800). — IV, 1408.
2) Benzolsulfonat d. 3-Chlor-4'-Oxyazobenzol. Sm. 97° (B. 28, 802). — IV, 1409.
- $C_{15}H_{15}O_2N_2BrS$ 1) Benzolsulfonat d. 2-Brom-4'-Oxyazobenzol. Sm. 69° (B. 31, 2116). — IV, 1409.
2) Benzolsulfonat d. 3-Brom-4'-Oxyazobenzol. Sm. 95° (B. 28, 803). — IV, 1409.
3) Benzolsulfonat d. 4-Brom-4'-Oxyazobenzol. Sm. 136° (B. 31, 2117). — IV, 1410.
- $C_{15}H_{15}O_2N_2Cl_2Bi$ 1) Phenyl-di[*p*-Nitrophenyl]wismuthdichlorid. Sm. 136° (B. 30, 2846).
- $C_{15}H_{14}O_2N_2ClBr$ 1) Methylester d. Verb. $C_{15}H_{14}O_2N_2ClBr$ (Bl. [3] 15, 407).
- $C_{15}H_{15}ON_2Cl_2P$ 1) Tri[4-Chlorphenylamid] d. Phosphorsäure. Sm. 230° (B. 28, 620).
- $C_{15}H_{16}O_2NClP$ 1) 4-Chlorphenylmonamid d. Phosphorsäurediphenylester. Sm. 117° (B. 28, 618).
- $C_{15}H_{16}ON_2Br_2P$ 1) Phenylamidi[3-Bromphenylamid] d. Phosphorsäure. Sm. 165° (B. 29, 723).
- $C_{15}H_{17}ON_2ClP$ 1) Di[Phenylamid]-4-Chlorphenylamid d. Phosphorsäure. Sm. 115° (B. 28, 620).
- $C_{15}H_{15}O_2N_2Br_2S_1$ 1) 4-Bromphenylthiourethansulfid. Sm. 86–87° (B. 26, 2371). — II, 385.
- $C_{15}H_{15}O_2NBrS$ 1) Aethylester d. α -Benzoylamido- α -Merkaptopropion-4-Bromphenyläthersäure. Sm. 104° (H. 20, 439).
- $C_{15}H_{19}ONClBr$ 1) Base (aus Bromcodein). Sm. 131°. HCl, (2HCl, PtCl₄) (A. 210, 113). — III, 907.
- $C_{15}H_{21}O_2NBrJ$ 1) Jodmethylat d. Brommorphin + H₂O. Sm. 252° (A. 297, 211).
- $C_{15}H_{21}ONBr_2J$ 1) Jodmethylat d. Verb. $C_{15}H_{21}ONBr_2$ (aus Dibrompseudocumenolbromid). Sm. 190–191° (B. 29, 1124).
- $C_{15}H_{23}O_2N_2S_1As_1$ 1) Verbindung (aus Thiolessigsäure) (G. 27 [2] 164).

C_{18} -Gruppe mit sechs Elementen.

- $C_{18}H_{12}ON_2Cl_2Br_2P$ 1) Tri[4-Chlor-*p*-Bromphenylamid] d. Phosphorsäure. Sm. 236° (B. 28, 620).
- $C_{18}H_{13}O_2Cl_2SP$ 1) Tri[4-Chlorphenylester] d. Thiophosphorsäure. Sm. 113 bis 114° (B. 31, 1108).
- $C_{18}H_{13}O_2Cl_2PSe$ 1) Tri[4-Chlorphenylester] d. Selenphosphorsäure. Sm. 88° (B. 31, 1055).
- $C_{18}H_{13}O_2N_2Cl_2S_2$ 1) 3,6-Dichlor-2,5-Di[Phenylamido]-1,4-Benzochinon-2',5'-Disulfonsäure. K₂ (Bl. [3] 19, 576).
- $C_{18}H_{16}O_2NSP$ 1) Phenylmonamid d. Thiophosphorsäurediphenylester. Sm. 92° (B. 31, 1102).
- $C_{18}H_{17}ON_2SP$ 1) Di[Phenylamid] d. Thiophosphorsäuremonophenylester. Sm. 126° (B. 31, 1104).
- $C_{18}H_{19}ON_2SP$ 1) Di[Phenylhydrazid] d. Thiophosphorsäuremonophenylester. Sm. 136° (B. 31, 1104).

C_{19} -Gruppe mit einem Element.

- $C_{19}H_{14}$ C 94,2 — H 5,8 — M. G. 242.
1) Phenylendiphenylmethan. Sm. 148,5° (Bl. [3] 1, 775). — II, 293.
2) Biphenylenphenylmethan. Sm. 145,5° (A. 194, 258; B. 5, 910, 971; 7, 1208; 11, 202, 613, 837; 14, 1522; 25, 2121, 3586; J. r. 11, 259). — II, 293.
- $C_{19}H_{16}$ C 93,4 — H 6,6 — M. G. 244.
1) Triphenylmethan. Sm. 92°; Sd. 358–359°₇₅₄. + C₆H₆. Lit. bedeutend. — II, 286.
2) 2-Benzyl-1-Phenylbenzol. Sm. 54°; Sd. 283–287°₆₃₆ (M. 2, 440). — II, 288.

- $C_{10}H_{14}$ 3) **4-Benzyl-1-Phenylbenzol**. Sm. 85°; Sd. 285—286°₆₆₀ (*M.* 2, 435). — II, 288.
C 92,7 — H 7,3 — M. G. 246.
- $C_{10}H_{18}$ 1) **Kohlenwasserstoff** (aus d. Verb. $C_{10}H_{14}O$). Sm. 92° (*B.* 14, 462; *A.* 212, 100). — II, 282.
- $C_{10}H_{20}$ C 91,9 — H 8,1 — M. G. 248.
- $C_{10}H_{22}$ 1) **9-Isomylanthracen**. Sm. 59° (Pikrat Sm. 115°) (*B.* 14, 796, 802; *A.* 212, 104). — II, 277.
C 91,2 — H 8,8 — M. G. 250.
- $C_{10}H_{24}$ 1) **9-Isomyl-9,10-Dihydroanthracen**. Sd. 350° u. Zers. (*B.* 13, 1600; 14, 457; *A.* 212, 79). — II, 254.
C 90,5 — H 9,5 — M. G. 252.
- $C_{10}H_{28}$ 1) $\alpha\alpha$ -Diphenylheptan. Sm. 14°; Sd. 190—192°₁₃ (*Bl.* 47, 49). — II, 242.
- $C_{10}H_{30}$ 2) **Di[2,4,6-Trimethylphenyl]methan**. Sm. 130° (*B.* 5, 1098). — II, 242.
- $C_{10}H_{34}$ 3) **Kohlenwasserstoff** (aus Xylol u. Allylalkohol). Fl. (*B.* 24, 2749). — II, 242.
C 89,1 — H 10,9 — M. G. 256.
- $C_{10}H_{40}$ 1) **Kohlenwasserstoff** (aus Cholesterylchlorid). Sd. 355—370° (*M.* 17, 43).
C 85,1 — H 14,9 — M. G. 268.
- 1) **norm. Nonadekan**. Sm. 32°; Sd. 330° (111°) (*B.* 15, 1704; 21, 2261; 29, 1323). — I, 106.

C_{10} -Gruppe mit zwei Elementen.

- $C_{10}H_8O_4$ C 76,0 — H 2,7 — O 21,3 — M. G. 300.
- $C_{10}H_{10}O_6$ 1) **Verbindung** (aus Diphenylmethan- α ??-Tricarbonsäure). Sm. 260—261° (*A.* 242, 237). — II, 2025.
C 68,3 — H 3,0 — O 28,7 — M. G. 334.
- $C_{10}H_{11}N$ 1) **Verbindung** (aus d. Säure $C_{10}H_{14}O_8$). Sm. 162—163° (*B.* 21, 1616). — II, 2087.
C 90,1 — H 4,3 — N 5,5 — M. G. 253.
- $C_{10}H_{11}Br$ 1) **Pyrenolin**. Sm. 152—153°. HCl, (2HCl), PtCl₄, H₂SO₄ + $\frac{1}{2}$ H₂O, Pikrat (*M.* 8, 443). — IV, 472.
- $C_{10}H_{12}O$ 2) **meso-Phenylcarbazoaekridin**. Sm. 186,5° (*G.* 20, 407). — IV, 472.
- $C_{10}H_{12}O_2$ 1) **Tribrombiphenylenphenylmethan**. Sm. 167—171° (*B.* 5, 971). — II, 293.
C 89,1 — H 4,7 — O 6,2 — M. G. 256.
- $C_{10}H_{12}O_3$ 1) **7-Keto-8-Benzylidenacenaphthen**. Sm. 107° (*A.* 290, 204). — III, 260.
C 83,8 — H 4,4 — O 11,8 — M. G. 272.
- $C_{10}H_{12}O_4$ 1) **2-Phenyl-1,4- α -Naphtopyron** (α -Naphtoflavon). Sm. 154—156° (*B.* 31, 707).
2) **Lakton d. 1-[σ -Oxy- β -(2-Naphtyl)äthenyl]benzol-2-Carbonsäure** (β -Naphtylmethylenphthalid). Sm. 170—171° (*B.* 29, 2375).
C 75,0 — H 3,9 — O 21,1 — M. G. 304.
- $C_{10}H_{12}O_5$ 1) **2-Keto-1-[3,4-Dioxybenzyliden]- α -Naphtofuran**. Sm. 240° u. Zers. (*B.* 30, 1469).
2) **Acetat d. α -Oxy- α -Phenonaphtoxanthon**. Sm. 216° (*B.* 25, 1646). — III, 256.
3) **Acetat d. β -Oxy- β -Phenonaphtoxanthon**. Sm. 206° (*B.* 25, 1647). — III, 256.
4) **$\alpha,2-\delta,2'$ -Dilakton d. $\alpha\delta$ -Dioxy- $\alpha\delta$ -Diphenyl- γ -Methyl- $\alpha\gamma$ -Butadien-2,2'-Dicarbonsäure** (Propindiphtalid). Sm. noch nicht bei 280° (*B.* 17, 2776). — II, 2035.
5) **Verbindung** (aus 1,2,3-Trioxybenzol) (*B.* 26, 1140). — II, 1044.
6) **Verbindung** (aus d. Verb. $C_{10}H_{14}O$ aus Isoamyloxanthranol). Sm. 157° (*A.* 212, 98). — III, 244.
7) **Verbindung** (aus Allo- α -Brom- β -Phenylakrylsäure). Sm. oberh. 260° (*B.* 15, 18). — II, 1412.
- $C_{10}H_{12}O_6$ C 71,2 — H 3,7 — O 25,0 — M. G. 320.
- 1) **Methyläther d. 2-Oxy-2,2'-Bi-1,3-Diketo-2,3-Dihydroinden**. Sm. bei 230°. Na + $\frac{1}{2}$ H₂O, Ag (*B.* 31, 1172).

- $C_{19}H_{13}O_5$ 2) Verbindung (aus 1,2,3-Trioxybenzol u. Benzaldehyd) (B. 26, 1144). — II, 1044.
C 67,8 — H 3,6 — O 28,6 — M. G. 336.
- $C_{19}H_{13}O_6$ 1) Verbindung (aus Resorcin u. Oxalsäure) (C. 1899 [1] 254).
C 57,0 — H 3,0 — O 40,0 — M. G. 400.
- $C_{19}H_{13}O_{10}$ 1) $\alpha\gamma$ -Diketo- $\alpha\gamma$ -Diphenylpropan- $\beta,\beta,2,2$ -Tetracarbonsäure. K₁ (B. 20, 1012). — II, 2100.
- $C_{19}H_{13}Br_3$ 1) Dibrombiphenylphenylmethan. Sm. 181—182° (B. 5, 971). — II, 293.
- $C_{19}H_{13}Br_4$ 1) Tetrabromtriphenylmethan? (B. 14, 1521). — II, 268.
C 89,4 — H 5,1 — N 5,5 — M. G. 255.
- $C_{19}H_{13}N$ 1) 2-[2-Naphtyl]chinolin. Sm. 161° (B. 25, 1755). — IV, 467.
2) 2-Phenyl- α -Naphtochinolin. Sm. 68°. (2HCl, PtCl₄ + 2H₂O), H₂Cr₂O₇, Pikrat (A. 249, 115). — IV, 466.
3) 3-Phenyl- β -Naphtochinolin. Sm. 188°. (2HCl, PtCl₄ + H₂O), H₂Cr₂O₇, Pikrat (A. 249, 133). — IV, 466.
4) 5-Phenylakridin. Sm. 181°; Sd. 403—404°. HCl, (2HCl, PtCl₄), Nitrat, + C₆H₆ (A. 192, 19; 224, 13, 28; 226, 184; B. 15, 3011; 17, 1596; 18, 2712; 20, 1552; J. pr. [2] 48, 222). — IV, 467.
5) 9-Phenylphenanthridin. Sm. 106°; Sd. oberh. 400°. HCl + H₂O, (2HCl, PtCl₄ + 2H₂O), Pikrat (B. 20, 1187). — IV, 468.
- $C_{19}H_{11}Br$ 1) Bromphenylendiphenylmethan. Sm. 110° (Bl. [3] 1, 775). — II, 294.
 $C_{19}H_{11}O$ C 88,4 — H 5,4 — O 6,2 — M. G. 258.
- 1) 4-Benzoylbiphenyl (4-Phenyldiphenylketon). Sm. 104° (M. 2, 437). — III, 257.
2) *p*-Benzoylbiphenyl. Sm. 106°. + AlCl₃ (B. 14, 2032; Bl. [3] 9, 1051). — III, 257.
3) Verbindung (aus Fluoran). Sm. 135—137° (B. 25, 3588). — II, 1984.
4) Verbindung (aus Isoamyloxanthranol). Sm. 206° (A. 212, 97). — III, 244.
C 83,2 — H 5,1 — O 11,7 — M. G. 274.
- $C_{19}H_{11}O_2$ 1) γ -Keto- α -Phenyl- γ -[1-Oxy-2-Naphtyl]propen. Sm. 125—126° (B. 31, 705).
2) γ -Keto- α -Phenyl- γ -[4-Oxy-2-Naphtyl]propen. Na + 5H₂O (A. 275, 292). — III, 257.
3) Aethylester d. Pyrencarbonsäure (M. 4, 258).
4) 2-Naphtylester d. β -Phenylakrylsäure. Sm. 101—102° (B. 18, 1946). — II, 1406.
5) Benzoesat d. 4-Oxybiphenyl. Sm. 152° (150°) (J. r. 5, 52; A. 257, 101). — II, 1149.
C 78,6 — H 4,8 — O 16,5 — M. G. 290.
- $C_{19}H_{11}O_3$ 1) Aurin (Anhydro- α -Oxytri[4-Oxytriphenyl]methan). Lit. bedeutend. — II, 1119.
2) Lakton d. 3-Oxy-1-Keto-3,4-Diphenyl-2,3-Dihydro-R-Penten-2-Methylcarbonsäure. Sm. 151—152° (Soc. 71, 148).
3) Lakton d. α -Methoxy- α -Phenyl- α -[2-Oxy-1-Naphtyl]essigsäure. Sm. 136° (B. 31, 2824).
4) Phenylester d. 2-Oxybenzolphenyläther-1-Carbonsäure. Sm. 109° (A. 257, 79). — II, 1495.
5) Phenylester d. 4-Oxybenzolphenyläther-1-Carbonsäure. Sm. 73 bis 78° (J. pr. [2] 28, 200). — II, 1527.
6) Benzoesat d. Methyl-1-Oxy-2-Naphtylketon. Sm. 96,5° (B. 30, 1467).
7) Monobenzoesat d. 7,8-Dioxyacenaphten. Sm. 189—190° (Soc. 55, 580). — II, 1144.
C 74,5 — H 4,6 — O 20,9 — M. G. 306.
- $C_{19}H_{11}O_4$ 1) Oxyaurin (B. 9, 801; II, 1436; 16, 2841). — III, 78.
2) α -Aurinoxid + 2H₂O (M. 16, 371).
3) β -Aurinoxid (M. 16, 372). — II, 1028.
4) Acetat d. 5-Oxy-1,3-Diketo-2,4-Diphenyl-2,3-Dihydro-R-Penten. Sm. 103—104°. K (A. 284, 264). — III, 320.
5) $\alpha\gamma$ -Lakton d. β -Acetoxy- γ -Oxy- $\alpha\delta$ -Diphenyl- $\alpha\gamma$ -Butadien- α -Carbonsäure (Acetylulvinon). Sm. 137—139° (A. 284, 281). — II, 1899.
6) Methylester d. 2-[2-Oxynaphtoyl]benzol-1-Carbonsäure. Sm. 199° (B. 16, 301). — II, 1909.
7) 1-Naphtylester d. 2-Acetoxybenzol-1-Carbonsäure. Sm. 91° (B. 26, 1468). — II, 1496.

- C₁₉H₁₁O₄** 8) **2-Naphtylester d. 2-Acetoxybenzol-1-Carbonsäure.** Sm. 136° (B. 26, 1468). — II, 1496.
- 9) **Verbindung (aus Isophenanthroxylacetessigsäureäthylester).** Sm. 224 bis 226° (Soc. 59, 11). — II, 1908.
- C₁₉H₁₄O₅** C 70,8 — H 4,3 — O 24,8 — M. G. 322.
- 1) **3,4,3',4'-Dimethylenäther d. γ -Keto- α -Di[3,4-Dioxyphenyl]- α - δ -Pentadien.** Sm. 185° (B. 24, 617). — III, 252.
- 2) **Vulpinsäure (Monomethylester d. Pulvinsäure).** Sm. 148°. NH₃ + H₂O, K + H₂O, Ba + 7H₂O, Piperidinsalz (A. 113, 56; 219, 1; 282, 1, 13; 284, 120, 173; B. 13, 1629, 1633; 14, 873; 15, 1546, 1550; J. 1864, 553, 554; J. pr. [2] 57, 316). — II, 2030.
- 3) **Isovulpinsäure.** Sm. 124° (A. 219, 15; B. 15, 1552). — II, 2030.
- 4) **Dilakton d. α -Dioxy- γ -Keto- α -Diphenylpentan-2,2'-Dicarbonsäure (Diphthalidimethylketon).** Sm. 156—157° (M. 19, 428).
- 5) **4-Acetat-3-Methyläther d. 1,3-Diket-2-[3,4-Dioxybenzyliden]-2,3-Dihydroinden.** Sm. 184—185° (B. 30, 1186).
- C₁₉H₁₄O₆** C 67,4 — H 4,1 — O 28,5 — M. G. 338.
- 1) **Trioxaurin (Anhydro- α -Oxytri[o-Dioxyphenyl]methan)** (B. 26, 255). — II, 1124.
- 2) **Resaurin (Anhydro- α -Oxytri[un-Dioxyphenyl]methan)** (J. pr. [2] 23, 547; [2] 25, 279). — II, 1124.
- 3) **Diacetat d. 6,8-Dioxy-1-Methyl-9,10-Anthrachinon.** Sm. 195° (Soc. 69, 71). — III, 449.
- 4) **Diacetat d. 1,3-Dioxy-2-Methyl-9,10-Anthrachinon.** Sm. 217—218° (Soc. 65, 184). — III, 451.
- 5) **Diacetat d. 1,4-Dioxy-2-Methyl-9,10-Anthrachinon.** Sm. 185° (B. 10, 2013). — III, 451.
- 6) **Diacetat d. 5,7-Dioxy-2-Methyl-9,10-Anthrachinon.** Sm. 165—167° (Soc. 65, 863). — III, 451.
- 7) **Diacetat d. Chrysin.** Sm. 185° (B. 26, 2902). — III, 628.
- 8) **Diacetat d. Chrysophansäure.** Sm. 202—204° (J. 1861, 392; A. 183, 172; 212, 37; B. 11, 1607). — III, 452.
- 9) **Diacetat d. β -Phenylidaphnetin.** Sm. 133—134° (B. 26, 2907). — III, 248.
- 10) **Diacetat d. 5,7-Dioxy-4-Phenyl-1,2-Benzpyron.** Sm. 181° (183°) (B. 26, 2907; 27, 423). — III, 248.
- 11) **Diacetat d. 7,8-Dioxy-2-Phenyl-1,4-Benzpyron.** Sm. 201° (198—199°) (B. 29, 880, 1889). — III, 248.
- 12) **Diacetat d. 7-Oxy-2-[4-Oxyphenyl]-1,4-Benzpyron.** Sm. 182—183° (B. 32, 325).
- 13) **Monomethylester d. Oxypulvinsäure (Chrysoctetrarsäure; Pimarinsäure).** Sm. 196—198°. K + 3H₂O, Ca + 4H₂O, Ba, Pb + 2H₂O (A. 284, 107, 176; B. 30, 361; J. pr. [2] 57, 309, 314). — II, 2037.
- C₁₉H₁₁O₇** C 64,4 — H 3,9 — O 31,6 — M. G. 354.
- 1) **Diacetat d. Emodin.** Sm. 182—184° (B. 21 [2] 842).
- 2) **Diacetylderivat d. Diphenylketon-2,4'-Dicarbonsäure.** Sm. 182° (B. 28, 1135). — II, 1976.
- C₁₉H₁₁O₈** C 61,6 — H 3,8 — O 34,6 — M. G. 370.
- 1) **Diacetat d. Rhein.** Sm. 236° (B. 28 [2] 1058).
- 2) **Triacetat d. 1,3,7-Trioxyanthron (Fr. d. Gentisein).** Sm. 226° (M. 12, 209). — III, 210.
- C₁₉H₁₁O₉** C 59,1 — H 3,6 — O 37,3 — M. G. 386.
- 1) **Pyrogallaurin** (B. 25, 2675). — II, 2100.
- 2) **Diacetylquercetinsäure** (A. 119, 213). — II, 2055.
- C₁₉H₁₁N₃** C 84,4 — H 5,2 — N 10,4 — M. G. 270.
- 1) **θ -Phenylhydrazonfluoren.** Sm. 151—151,5° (M. 16, 808). — IV, 778.
- 2) **2,6-Diphenylbensimidazol.** Sm. 197—198°. HCl, (2HCl, PtCl₄), H₂SO₄ (A. 209, 347). — IV, 1072.
- 3) **3-Benzylidenamidocarbazol.** Sm. 209—210° (G. 21 [2] 383). — IV, 992.
- 4) **3-Amido-5-Phenylakridin.** (2HCl, PtCl₄) (B. 18, 692). — IV, 1072.
- 5) **2-Phenylamidoakridin.** Sm. 175—176° (B. 24, 2042). — IV, 1012.
- 6) **4-Methyl-2,6'-Bichinolyl (Flavochinolin).** Sm. 138° (B. 19, 1036). — IV, 1072.
- 7) **Base (aus Isochinolinroth).** Sm. 231° (B. 20, 14). — IV, 1072.

- $C_{19}H_{14}N_4$ C 76,5 — H 4,7 — N 18,8 — M. G. 298.
 1) **Methylphenofluorindin**. 2HCl (*B.* 29, 1253). — **IV**, 1300.
 2) **C-N-Dimethyl-5,6-Imidazolonnaphthophasazin**. Sm. 264° (*B.* 31, 2406). — **IV**, 1301.
- $C_{19}H_{14}Cl_2$
 $C_{19}H_{14}Br_2$ 1) **2,5-Dichlorotriphenylmethan**. Sm. 87° (*A.* 299, 354).
 1) **Phenylendiphenylmethandibromid**. Sm. 187° (*Bl.* [3] 1, 775). — **II**, 294.
- $C_{19}H_{14}N$ C 88,7 — H 5,8 — N 5,4 — M. G. 257.
 1) α -**Phenylimidodiphenylmethan** (Diphenylmethylenanilin). Sm. 112 bis 113° (109°); Sd. oberh. 360° (*A.* 187, 201; *B.* 25, 2056). — **III**, 188.
 2) γ -[1-Naphtyl]imido- α -**Phenylpropen**. Sm. 65° (*A.* 239, 384). — **III**, 61.
 3) γ -[2-Naphtyl]imido- α -**Phenylpropen**. Sm. 95–96° (*A.* 239, 384). — **III**, 61.
 4) **5-Phenyl-5,10-Dihydroakridin**. Sm. 163–164° (*A.* 224, 25). — **IV**, 465.
 C 80,0 — H 5,3 — N 14,7 — M. G. 285.
- $C_{19}H_{13}N_3$ 1) **5-Methyl-1-Phenyl-3-[4-Chinoly]pyrazol**. Sm. 120° (*M.* 17, 408). — **IV**, 1183.
 2) **3-[4-Methylphenyl]-5-[2-Naphtyl]-1,3,4-Triazol**. Sm. 190° (*B.* 30, 1884; *A.* 298, 42). — **IV**, 1211.
 3) **1-Phenyl-2-[4-Amidophenyl]benzimidazol**. Sm. 198–199°. HCl + $\frac{1}{2}H_2O$, H_2SO_4 + $\frac{1}{2}H_2O$ (*Bl.* [3] 19, 28; *A. ch.* [7] 14, 424). — **IV**, 1181.
 4) **5-Amido-1,2-Diphenylbenzimidazol**. Sm. 191°. + H_2O (Sm. 172 bis 173°) (*Bl.* [3] 17, 870). — **IV**, 1180.
 5) **2-Amido-5-[4-Amidophenyl]akridin** (Chrysanilin). Sm. 267–270°. + C_6H_6 , HCl. 2HCl + H_2O , HNO_3 , 2HNO₃, 2Pikrat + H_2O (*B.* 2, 378; 12, 2241; 17, 436; 25 [2] 503; *A.* 226, 178, 188; *J.* 1862, 346). — **IV**, 1211.
- $C_{19}H_{13}Cl$ 1) α -**Chlortriphenylmethan**. Sm. 105–115° (*B.* 7, 1206; *A.* 194, 254; *A. ch.* [6] 1, 502). — **II**, 287.
- $C_{19}H_{13}Br$ 1) α -**Bromtriphenylmethan**. Sm. 152°. + Br_2 , + J_2 (*B.* 14, 1520; 18, 1276; 17, 700; *A.* 227, 110; *J.* 1884, 462; *C.* 1898 [2] 1131, 1132). — **II**, 287.
- $C_{19}H_{13}Br_2$
 $C_{19}H_{13}O$ 1) α -**Bromtriphenylmethanpentabromid** (*C.* 1898 [2] 1131).
 C 87,7 — H 6,1 — O 6,1 — M. G. 260.
 1) α -**Oxytriphenylmethan** (Triphenylcarbinol). Sm. 162,5° (159°); Sd. oberh. 360° (*A.* 194, 271; *J.* 1881, 518; *B.* 7, 1206; 14, 1522, 1944; 16, 1274; 26, 2225; 28, 2514; *J. pr.* [2] 36, 311; *Bl.* [3] 9, 374; [3] 21, 291; *A. ch.* [6] 1, 500; *Am.* 19, 702). — **II**, 1083.
 2) **2-Oxytriphenylmethan**. Sm. 118° (*A.* 241, 367). — **II**, 903.
 3) α -**Keto- α - η -Diphenyl- α - γ -Heptatrien**. Sm. 106° (*B.* 29, 614). — **III**, 257.
 4) **2-Keto-1,3-Dibenzyliden-R-Pentamethylen**. Sm. 189° (*B.* 29, 1837).
 5) **Verbindung** (aus Isoamylloxanthranolchlorid). Sm. 170° (*A.* 212, 91). — **III**, 244.
- $C_{19}H_{16}O_2$ C 82,6 — H 5,8 — O 11,6 — M. G. 276.
 1) **4,4'-Dioxytriphenylmethan**. Sm. 161° (*A.* 206, 153; 217, 230; *B.* 12, 1464; 22, 1944). — **II**, 1003.
 2) **Aethyläther d. Phenyl- β -Oxy-1-Naphtylketon**. Sm. 74–75° (*B.* 23, 1209). — **III**, 254.
 3) **3,5-Diketo-4-Benzyliden-1-Phenylhexahydrobenzol**. Sm. 232° (*A.* 294, 310).
 4) **Benzolat d. 2-Oxy-1,4-Dimethylnaphtalin**. Sm. 124–125° (*B.* 31, 1679).
 C 78,1 — H 5,5 — O 16,4 — M. G. 292.
- $C_{19}H_{16}O_3$ 1) α -**Trioxytriphenylmethan** (Leukaurin) (*A.* 166, 286; 194, 136; 202, 197). — **II**, 1028.
 2) α -**Oxy-4,4'-Dioxytriphenylmethan** (*A.* 217, 227; *B.* 18, 988). — **II**, 1115.
 3) **Triphenyläther d. Trioxymethan** (Orthoameisensäuretriphenyläther). Sm. 76–77°; Sd. 260–270°_{sub-133} (*B.* 15, 2685; 18, 2657). — **II**, 655.
 4) **Methyläther d. 5-Oxy-1,3-Diketo-2-Methyl-2,4-Diphenyl-2,3-Dihydro-R-Penten**. Sm. 79° (*A.* 284, 270). — **III**, 321.
 5) **Dimethyläther d. β -Oxy-2-[2-Oxybenzoyl]naphtalin**. Sm. 66–68° (*A.* 257, 91). — **III**, 256.
 6) **Dimethyläther d. β -Oxy-2-[2-Oxybenzoyl]naphtalin**. Sm. 64–66° (*A.* 257, 93). — **III**, 255.

- C₁₉H₁₆O₈**
- 7) **2-Keto-4,5-Diphenyl-2,3-Dihydro-R-Penten-1-Methylcarbonsäure.** Sm. 126—127°. Ag (Soc. 71, 150).
 - 8) **Aethyl ester d. 2,5-Diphenylfuran-3-Carbonsäure.** Sm. 82° (B. 21, 1490). — III, 713.
 - 9) **Acetat d. γ -Keto- α -Phenyl- α -[2-Oxyphenyl]- α - δ -Pentadien.** Sm. 72—73° (B. 31, 729).
- C₁₉H₁₆O₄**
- 1) **1,3,1',3'-Tetraoxytriphenylmethan.** Sm. 171° (B. 13, 611; A. 217, 235). — II, 1038.
 - 2) **3-Oxy-1-Keto-3,4-Diphenyl-2,3-Dihydro-R-Penten-2-Methylcarbonsäure.** Ag (Soc. 71, 148).
 - 3) **3-Oxy-1-Keto-3,4-Diphenyl-2,3-Dihydro-R-Penten-5-Methylcarbonsäure.** Sm. 178—179°. NH₄, Na, K, Ba + 5 H₂O (Soc. 71, 147).
 - 4) **Aethyl ester d. 1,3-Diketo-2-Phenyl-1,2-Dihydroinden-2-Methylcarbonsäure.** Sm. 104° (B. 26, 2579). — II, 1906.
 - 5) **Acetat d. Thebenol.** Sm. 102—103° (B. 30, 1381).
 - 6) **Diacetat d. 3,10-Dioxy-1-Methylantraцен.** Sm. 172—173° (B. 31, 2795).
 - 7) **Diacetat d. Methyloxanthranol.** Sm. 217° (B. 21, 1172). — III, 245.
 - 8) **Benzoat d. β -Oxy- δ -Keto- γ -Benzoyl- β -Penten (2 isom. Formen).** Sm. 102—103° u. 66—67° (A. 277, 69, 202; 291, 97, 106, 106). — III, 315. C 70,4 — H 4,9 — O 24,7 — M. G. 324.
- C₁₉H₁₆O₅**
- 1) **Trimethyläther d. Dehydrobrasilin (M. 16, 913).** — III, 655.
 - 2) **α -Acetat- β -Methyläther d. α β -Dioxy- γ - δ -Diketo- α - δ -Diphenyl- α -Buten.** Sm. 95° (B. 27, 715). — III, 317.
 - 3) **Dimethyläther d. Citrakonfluorescein (Soc. 63, 679).** — II, 2026.
 - 4) **Monäthylester d. γ -Keto- β γ -Diphenylpropen- α -Dicarbonsäure (M. d. Decylmalonsäure).** Sm. 124° (Soc. 67, 134). — II, 1981.
 - 5) **Diäthylester d. 9-Ketofluoren-1,4-Dicarbonsäure.** Sm. 114,5° (A. 229, 154). — II, 1979. C 67,1 — H 4,7 — O 28,2 — M. G. 340.
- C₁₉H₁₆O₆**
- 1) **1,2,3,1'2',3'-Hexaoxytriphenylmethan + 2 H₂O (Hydroxyrogallolbenzein) (A. 257, 65).** — II, 1043.
 - 2) **γ^2 -Acetat- α^2 -Methylenäther- γ^1 -Methyläther d. γ -Keto- γ -[2,4-Dioxyphenyl]- α -[3,4-Dioxyphenyl]propen.** Sm. 158—159° (J. 32, 313).
 - 3) **Monacetat d. Apigenindimethyläther.** Sm. 195—196° (Soc. 71, 812).
 - 4) **α α -Diketo- α α -Diphenylpentan- γ γ -Dicarbonsäure (Diphenacylmalonsäure).** Sm. 134° (B. 19, 3144). — II, 2034.
 - 5) **Verbindung (aus Pinastriinsäure)?** Sm. 171—173° (A. 294, 110). — II, 2037. C 64,0 — H 4,5 — O 31,4 — M. G. 356.
- C₁₉H₁₆O₇**
- 1) **Triacetat d. 2,3,4[oder 3,4,5]-Trioxydiphenylketon.** Sm. 117° (A. 269, 300). — III, 202.
- C₁₉H₁₆O₈**
- 1) **Parallinsäure.** Sm. 230° u. Zers. Ba + 6 H₂O (J. pr. [2] 58, 524).
- C₁₉H₁₆O₉**
- 1) **Diacetat d. Anhydro- α α -Di[2,3,4(?) -Trioxyphenyl]propionsäure.** Sm. 110° (B. 16, 2408). — II, 2078. C 56,4 — H 3,9 — O 39,6 — M. G. 404.
- C₁₉H₁₆O₁₀**
- 1) **Ampelochroinsäure.** 3 Modifik. (Bl. [3] 7, 825; B. 25 [2] 478). — III, 673.
 - 2) **Eichengerbsäure, siehe C₁₇H₁₆O₉,** — III, 586.
 - 3) **Farbstoff (aus Weintrauben) oder C₁₉H₁₆O₉.** K₂, Cu₂, Ag₂ (G. 27, [2] 479). C 53,8 — H 5,9 — N 10,3 — M. G. 272.
- C₁₉H₁₆N₂**
- 1) **4-Benzylidenamido-1-Phenylamidobenzol.** Sm. 107—109° (A. 255, 189). — IV, 596.
 - 2) **α -Phenylimido- α -Phenylamido- α -Phenylmethan (Diphenylbenzenylamidin).** Sm. 144°. HCl, (2HCl, PtCl₄), Pikrat (A. 108, 219; 135, 82; 184, 83, 354; 265, 155; Z. 1866, 165; B. 15, 233; 18, 1476). — IV, 842.
 - 3) **α -Imido- α -Diphenylamido- α -Phenylmethan (Isodiphenylbenzenylamidin).** Sm. 111,5—112°. HCl, (2HCl, PtCl₄), HNO₃, Rhodanid (A. 192, 4; 265, 157). — IV, 842.
 - 4) **α -Benzyliden- β β -Diphenylhydrazin.** Sm. 122° (A. 190, 179). — IV, 750.

- C₁₉H₁₆N₂**
- 5) **4-Benzylidenhydrazidobiphenyl**. Sm. 153° (B. 27, 3107). — IV, 970.
 - 6) **α -Phenylhydrazonodiphenylmethan** (Benzophenonphenylhydrazon). Sm. 137° (B. 17, 576; 19, 1206; 26, 2168; A. 232, 228). — IV, 775.
 - 7) **2-Phenylhydrazonmethylbiphenyl**. Sm. 115° (118—124°) (C. 1897 [1] 413; M. 19, 588).
- C₁₉H₁₆N₄**
- 8) **$\alpha\alpha$ -Diphenylazo- α -Phenylhydrazonmethan** (Formazylazobenzol). Sm. 162—163°. Cu, Ag (B. 25, 3189, 3203, 3457; 27, 148). — IV, 1492.
 - 9) **Benzhydrazoïn**. Sm. 55° (B. 19, 2239). — IV, 1502.
C 76,0 — H 5,3 — N 18,7 — M. G. 300.
 - 1) **α -Phenylhydrazon- α -Phenylimido- α -Phenylamidomethan**. Sm. 111° (B. 25, 3118). — IV, 1224.
 - 2) **α -Phenylazo- α -Phenylhydrazon- α -Phenylmethan** (Phenylformazyl; Formazylbenzol). Sm. 174—175° (B. 25, 3456; 27, 158, 162, 322, 323, 1690). — IV, 1260.
 - 3) **5-Amido-2-[4-Amidophenyl]-1-Phenylbenzimidazol**. Sm. 270—272°. H₂SO₄ + 1 $\frac{1}{2}$ H₂O (B. [3] 19, 29). — IV, 1287.
 - 4) **2-Diamido-1,2-Diphenylbenzimidazol**. Sm. 229—231° (Bl. [3] 17, 872).
 - 5) **6-Amido-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benotriazin**. Sm. 223° u. Zers. H₂SO₄ (B. 30, 2596). — IV, 1286.
 - 6) **Methylphenosafranin**. HCl (B. 30, 402). — IV, 1283.
 - 7) **Methylamidoaposafranin**. HBr (B. 30, 2490). — IV, 1279.
- C₁₉H₁₆S₃**
- 1) **Triphenyläther d. Trimerkaptomethan**. Sm. 39,5° (B. 10, 185). — II, 784.
C 88,0 — H 6,6 — N 5,4 — M. G. 259.
- C₁₉H₁₇N**
- 1) **3-Amidotriphenylmethan**. Sm. 120°. HCl (B. 21, 189). — II, 641.
 - 2) **4-Amidotriphenylmethan**. Sm. 83—84°. HCl, (2HCl, PtCl₄), + C₆H₆ (A. 206, 155; B. 23, 1623). — II, 641.
 - 3) **Triphenylmethylamin**. Sm. 105° (102°). HCl, (2HCl, PtCl₄ + 7 $\frac{1}{2}$ H₂O) (B. 16, 1276; 17, 442, 702, 741). — II, 641.
 - 4) **2-Methyltriphenylamin** (Diphenyl-*o*-Toluidin). Sm. 69—70° (B. 31, 2988).
 - 5) **Diphenylbenzylamin**. Sm. 86,5—87° (95°) (B. 8, 1196; 11, 1761; 14, 1385). — II, 518.
 - 6) **2-Dimethylamido-1-Benzylbenzol**. Sm. 89° (Soc. 41, 198). — II, 635.
 - 7) **4-[α -Amidobenzyl]biphenyl**. Sm. 77°. HCl, (2HCl, PtCl₄ + 4H₂O), HNO₃, Acetat (M. 12, 508). — II, 642.
 - 8) **3,5-Dibenzylpyridin**. Sm. 89°; Sd. oberh. 300°. HCl, HBr, HNO₃ (A. 280, 42; B. 24, 2186; 25, 2421). — IV, 456.
 - 9) **2-Phenyl-1,2,3,4-Tetrahydro- α -Naphtochinolin**. Fl. (A. 249, 127). — IV, 457.
- C₁₉H₁₇N₂**
- 10) **Base** (aus α -Methylzimmtsäurealdehyd u. Anilin). (2HCl, PtCl₄) (B. 19, 529). — IV, 456.
C 79,4 — H 5,9 — N 14,6 — M. G. 287.
 - 1) **α -Phenylimido- α -Phenylamido- α -[4-Amidophenyl]methan** (Carbotriphenyltriamin). Sm. 198°. HCl, (2HCl, PtCl₄) (J. 1858, 352; A. 160, 173; B. 10, 358; 12, 101, 104; 14, 2174). — IV, 1138.
 - 2) **α -Phenylimido- α -Phenylhydrazido- α -Phenylmethan**. Sm. 119°. HCl, Pikrat (B. 28, 2372). — IV, 1137.
 - 3) **α -Phenylamido- α -Phenylhydrazon- α -Phenylmethan**. Sm. 174—175°. HCl, Pikrat (B. 28, 2373; J. pr. [2] 54, 122). — IV, 1137.
 - 4) **α -Triphenylguanidin**. Sm. 143° (145°). HCl + H₂O, (2HCl, PtCl₄), HNO₃, H₂SO₄, Oxalat, Acetat, Pikrat. Lit. bedeutend. — II, 349.
 - 5) **uns- β -Triphenylguanidin**. Sm. 131°. HCl + H₂O, (2HCl, PtCl₄) (B. 8, 294). — II, 351.
 - 6) **Isotriphenylguanidin**. HCl + $\frac{1}{2}$ H₂O (B. 7, 1231).
 - 7) **$\alpha\alpha$ -Diphenyl- β -[α -Imidobenzyl]hydrazin** (Diphenylbenzenylhydrazidin). Sm. 170°. HCl (J. pr. [2] 54, 171). — IV, 1137.
 - 8) **1-Phenylbenzylamidodiazobenzol**. Sm. 81° (B. 19, 2037). — IV, 1572.
 - 9) **Phenylazotetrahydro- α -Naphtochinolin**. H₂SO₄ (B. 24, 2478). — IV, 1487.
 - 10) **4-Phenylazo-1,2,3,4-Tetrahydro- β -Naphtochinolin**. Sm. 96,5—97° (B. 24, 2645). — IV, 1582.
 - 11) **5-Aethylamido-10-Methyl- $\alpha\beta$ -Naphtophenazin**. Sm. 182°. (2HCl, PtCl₄), (HCl, AuCl₃), HNO₃ (B. 23, 3806). — IV, 1210.

- C₁₅H₁₇N₃** 12) **5-Dimethylamido-10-Methyl- $\alpha\beta$ -Naphthophenazin.** Sm. 230° (2HCl, PtCl₄) (HCl, AuCl₃) (B. 23, 3809). — IV, 1210.
 13) **Mauvanilin + $\frac{1}{2}$ H₂O** (Z. 1867, 236). — III, 677.
 14) **3-Aethyl-2-Phenyl-2,3-Dihydro-1,2,4-Naphtisotriazin.** Sm. 219°. HCl, (2HCl, PtCl₄) (B. 24, 1006). — IV, 1393.
- C₁₅H₁₇N₅**
 1) **Dibenzyladenin.** Sm. 171°. HCl, HNO₃ (H. 18, 427). — IV, 1320.
 2) **4-Methylphenylazophenylamidodiazobenzol.** Zers. bei 72–73° (B. 28, 171). — IV, 1572.
 3) **5-[2-Amido-1-Naphtyl]azo-1,2-Dimethylbenzimidazol.** Sm. 260° (B. 29, 1055). — IV, 1490.
 4) **6-Amido-3-[2-Amidophenyl]-2-Phenyl-2,3-Dihydro-1,2,4-Benzotriazin.** Sm. 204° u. Zers. (B. 30, 2601). — IV, 1287.
 5) **6-Amido-3-[3-Amidophenyl]-2-Phenyl-2,3-Dihydro-1,2,4-Benzotriazin.** Sm. 187° u. Zers. (B. 30, 2602). — IV, 1287.
 6) **6-Amido-3-[4-Amidophenyl]-2-Phenyl-2,3-Dihydro-1,2,4-Benzotriazin.** Sm. 200° u. Zers. (B. 30, 2602). — IV, 1287.
- C₁₅H₁₇P**
C₁₅H₁₅O 1) **Diphenyl-4-Methylphenylphosphin.** Sm. 68° (B. 21, 1511). — IV, 1671.
 C 87,0 — H 6,9 — O 6,1 — M. G. 262.
 1) **γ -Keto- $\alpha\epsilon$ -Diphenyl- $\beta\delta$ -Dimethyl- $\alpha\delta$ -Pentadiën** (Dibenzaldäthylketon). Sm. 122° (B. 31, 1887).
 2) **9-Keto-10-Isoamyliden-9,10-Dihydroanthracen** (Isoamylentantron). Sm. 71–72° (A. 212, 93, 94). — III, 244.
 C 82,0 — H 6,5 — O 11,5 — M. G. 278.
- C₁₅H₁₅O₂**
 1) **1-Oxy-3-Keto-2-Aethyl-1,5-Diphenyl-2,3-Dihydro-R-Penten.** Sm. 156° (Soc. 51, 432). — III, 253.
 2) **1-Oxy-3-Keto-2,4-Dimethyl-1,5-Diphenyl-2,3-Dihydro-R-Penten.** Sm. 150° (Soc. 51, 432). — III, 253.
 3) **Benzyläther d. 6-Oxy-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol.** Sm. 129–130° (A. 294, 304).
 4) **Formiat d. Geraniol.** Sd. 112–114°₁₅ (B. 29, 907 Anm.). — III, 477.
 C 77,5 — H 6,1 — O 16,3 — M. G. 294.
- C₁₅H₁₅O₃**
 1) **Dimethyläther d. γ -Keto- $\alpha\epsilon$ -Di[2-Oxyphenyl]- $\alpha\delta$ -Pentadiën.** Sm. 123° (B. 31, 1511; J. pr. [2] 60, 148).
 2) **Butyryldibenzoylmethan.** Sm. bei 115° (Am. 19, 880).
 3) **2-Propionylphenyl-4-Propionylphenylketon.** Sm. 105° (B. 28, 1135). — III, 321.
 4) **Aethyläther d. Thebenol** (Aethebenol). Sm. 103–105° (B. 32, 184).
 5) **Monoisovalerat d. 9,10-Dioxyphenanthren.** Sm. 149° (A. 249, 142). — II, 1001.
 C 73,6 — H 5,8 — O 20,6 — M. G. 310.
- C₁₅H₁₅O₄**
 1) **α -Methyläther- β -Aethyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten.** Sm. 105° (B. 27, 719). — III, 317.
 2) **4-Aethyläther-2-Acetat d. γ -Keto- γ -[2,4-Dioxyphenyl]- α -Phenylpropen.** Sm. 74–75° (B. 31, 638).
 3) **$\alpha\epsilon$ -Aethyläther- γ^1 -Acetat d. γ -Keto- $\alpha\gamma$ -Di[2-Oxyphenyl]propen.** Sm. 68° (B. 32, 321).
 4) **Diäthyläther d. 7,8-Dioxy-2-Phenyl-1,4-Benzpyron.** Sm. 115° (B. 29, 1889).
 5) **Phenotoluchinon.** Sm. 18° (C. 1898 [1] 887).
 6) **o-Kresophenochinon.** Sm. 67° (C. 1898 [1] 887).
 7) **p-Kresophenochinon.** Sm. 48° (C. 1898 [1] 887).
 8) **$\alpha\delta$ -Di[4-Methoxyphenyl]- $\alpha\gamma$ -Butadiën- β -Carbonsäure** (p-Dianisyl-pentolsäure). Sm. 160°. Ca + 3H₂O, Ba + 2H₂O, Ag (A. 255, 299). — II, 1899.
 9) **α -Oxy- β -Phenylakryleugenoläthersäure.** Sm. 142°. Na, Ba + $\frac{1}{2}$ H₂O, Ag (A. 23 [1] 557). — II, 1637.
 10) **α -Phenyl- β -Benzyl- α -Buten- $\gamma\delta$ -Dicarbonsäure.** Sm. 146–147°. Na₂, Ca, Ba, Ag₂ (B. 28, 3194; A. 308, 177).
 11) **Monomethylester d. α -Truxillsäure.** Sm. 195°. Ag (B. 27, 1414). — II, 1901.
 12) **Monomethylester d. γ -Truxillsäure.** Sm. 180°. Ag (B. 27, 1415). — II, 1903.

- C₁₉H₁₈O₄** 13) Aethylester d. $\alpha\delta$ -Diketo- $\alpha\delta$ -Diphenylbutan- β -Carbonsäure. Sm. 55 bis 58° (B. 21, 1487). — II, 1899.
- 14) β -Monäthylester d. $\alpha\alpha$ -Diphenylpropen- $\beta\gamma$ -Dicarbonsäure (M. d. Diphenylitalkonsäure). Sm. 124,5—125,5°. Ba, Ag (A. 282, 318; B. 28, 3192). — II, 1900.
- 15) Verbindung (aus d. Laktone d. Dihydrocornicularsäure u. Essigsäureanhydrid). Sm. 98—99° (A. 219, 29). — II, 1777.
- 16) Verbindung (aus ?-Dimethyl-*o*-Phenylcumalin u. 1,4-Dioxybenzol). Sm. 113° (B. 29, 1677; G. 26 [2] 343).
- C₁₉H₁₈O₅** C 69,6 — H 5,5 — O 24,5 — M. G. 326.
- 1) Diäthyläther d. Apigenin. Sm. 161—162° (Soc. 71, 814).
- 2) γ^2 -Acetat- $\alpha^4\gamma^4$ -Dimethyläther d. γ -Keto- γ -[2,4-Dioxyphenyl]- α -[4-Oxyphenyl]propen. Sm. 103—104° (B. 32, 322).
- 3) γ -Keto- $\alpha\delta$ -Diphenylpentan- $\beta\delta$ -Dicarbonsäure ($\alpha\alpha$ -Dibenzylacetondicarbonsäure). Sm. 115—116°. Ag₂ (A. 261, 185). — II, 1978.
- 4) Diäthylester d. 4[β]-Benzoylbenzol-1,3-Dicarbonsäure. Sm. 95° (B. 9, 1763). — II, 1975.
- 5) Diäthylester d. 2-Benzoylbenzol-1,4-Dicarbonsäure. Sm. 100—101° (J. 1878, 403). — II, 1975.
- 6) Diäthylester d. Diphenylketomethan-2,2'-Dicarbonsäure. Sm. 73 bis 74° (A. 242, 246). — II, 1975.
- C₁₉H₁₈O₆** 7) Diacetat d. Lapachol. Sm. 131—132° (G. 12, 360; 19, 606). — III, 399. C 66,7 — H 5,2 — O 28,1 — M. G. 342.
- 1) Amanitin (C. 1896 [2] 307).
- 2) Tetramethyläther d. Fisetin. Sm. 152—153° (B. 19, 1746). — III, 584.
- 3) Tetramethyläther d. Luteolin. Sm. 191—192° (Soc. 69, 211). — III, 584.
- 4) $\alpha\alpha$ -Di[β -Acetoxyphenyl]propionsäure. Ba (B. 16, 2074). — II, 1882.
- 5) α -Keto- α -[4-Methoxyphenyl]- γ -Phenylbutan- $\delta\delta$ -Dicarbonsäure. Sm. 166° u. Zers. (A. 281, 61). — II, 2027.
- 6) Trimethylester d. Diphenyläthan- $\alpha^2\beta^2$ -Tricarbonsäure. Sm. 145° (A. 242, 236). — II, 2024.
- 7) Monäthylester d. β -Oxy- α -Keto- $\alpha\beta$ -Diphenylpropan- $\gamma\gamma$ -Dicarbonsäure (M. d. Benzoinylmalonsäure). Sm. 134°. Na (Soc. 67, 133). — II, 2025.
- 8) Aethylester d. $d\alpha\beta$ -Dibenzoylpropionsäure. Sm. 25° (Soc. 69, 107).
- 9) Diacetat d. Alkamin. Ba (B. 13, 1515). — III, 650.
- 10) Diacetat d. α -Oxylapachol. Sm. 82° (Soc. 67, 791). — III, 402. C 63,7 — H 5,0 — O 31,3 — M. G. 358.
- C₁₉H₁₈O₇** 1) Tetramethyläther d. Morin. Sm. 131—132° (Soc. 69, 796). — III, 683.
- 2) Tetramethyläther d. Quercetin. Sm. 156—157° (A. 196, 317; M. 5, 83; 6, 889; 9, 552; Soc. 71, 819; 73, 271). — III, 604.
- 3) Diacetylsclorinsäure. Sm. 147—148° (A. 284, 114). — II, 1971. C 61,0 — H 4,8 — O 34,2 — M. G. 374.
- C₁₉H₁₈O₈** 1) Methylester d. Atranorsäure (Atranorin, Parmelin) oder C₂₀H₁₈O₈. Sm. 195—197° (187—188°) (J. 1877, 811; G. 10, 157; 12, 19, 256; A. 284, 174; 288, 38; 295, 224; 296, 274; B. 30, 358, 1984; J. pr. [2] 57, 274, 280, 410 Anm.). — II, 2083.
- C₁₉H₁₈O₉** C 58,5 — H 4,6 — O 36,9 — M. G. 390.
- 1) Verbindung (aus d. Trimethyläther d. ?-Trioxy-4-Methylcumarin). Sm. 253—254° (G. 23 [2] 615). — II, 2007.
- C₁₉H₁₈O₁₁** C 54,0 — H 4,3 — O 41,7 — M. G. 422.
- 1) Euxanthinsäure + 2H₂O. Sm. 156—158° u. Zers. (161—162°). (NH₄)₂, K, Mg + 5H₂O, Pb (J. pr. [1] 33, 190; A. 51, 426; 93, 87; 155, 264; 254, 267; 290, 155, 158; B. 15, 1964; 19, 2919; 25, 2569). — II, 2102. C 48,5 — H 3,8 — O 47,7 — M. G. 470.
- C₁₉H₁₈O₁₄** 1) Benzoylhexaglyoxalhydrat (A. 172, 7). — I, 966.
- C₁₉H₁₈N₂** C 83,2 — H 6,6 — N 10,2 — M. G. 274.
- 1) 3,5-Di[Phenylamido]-1-Methylbenzol. Sm. 105° (J. pr. [2] 33, 542). — IV, 625.
- 2) 4',4'-Diamidodiphenylmethan. Sm. 139°. + C₆H₆ (Sm. 106°), (2HCl, PtCl₂), H₂SO₄ (B. 11, 276, 840; 12, 975, 1693; 13, 665, 985; 15, 236, 676; A. 208, 147; 217, 246; J. pr. [2] 36, 247; G. 14, 511; 15, 51). — IV, 1041.

- C₁₉H₁₇N₃** 3) **4-Benzylamidodiphenylamin.** Sm. 124° (A. 255, 190). — IV, 586.
 4) **α -Methylimido- α -[Methyl-2-Naphtylamido- α -Phenylmethan (Benzenyl- β -Naphtylmethylamid-Methylimidin).** Fl. Pikrat (B. 28, 2369). — IV, 845.
 5) **α -[2-Naphtyl]imido- α -Dimethylamido- α -Phenylmethan (Benzenyldimethylamid- β -Naphtylimidin).** Fl. HJ, Pikrat (B. 28, 2371). — IV, 845.
- C₁₉H₁₅N₄** 6) **Dehydrocinchon + 3H₂O.** Sm. bei 60°. (2HCl, PtCl₄), 2HBr (B. 19, 2857; 28, 1077). — III, 839.
 C 75,5 — H 6,0 — N 18,5 — M. G. 302.
 1) **α -Phenylhydrazon- $\alpha\alpha$ -Di[Phenylamido]methan (Diphenylanilguanidin).** Sm. 160°. HCl, (2HCl, PtCl₄), H₂SO₄, Pikrat (B. 21, 2272; 25, 3116). — IV, 1224.
 2) **α -Phenylhydrazondi[3-Amidophenyl]methan.** Sm. 183° (B. 20, 511). — IV, 775.
 3) **α -Phenylhydrazido- α -Phenylhydrazon- α -Phenylmethan (Benzenyldiphenylazidin).** Sm. 170° (B. 17, 183). — IV, 1246.
 4) **4-Methylbenzenyl-2-Naphtenylhydrazidin.** Sm. 202° (B. 30, 1883; A. 298, 42). — IV, 1298.
- C₁₉H₁₁N₆** C 69,1 — H 5,4 — N 25,4 — M. G. 330.
 1) **Benzoldisazobenzol-2,4-Toluylendiamin (B. 16, 2035).** — IV, 1385.
 2) **Phenylendiamin-Disazobenzoltoluol.** Sm. 192° (B. 16, 2029). — IV, 1384.
 3) **isom. Phenylendiamin-Disazobenzoltoluol.** Sm. 225° (B. 16, 2030). — IV, 1385.
 4) **isom. Phenylendiamin-Disazobenzoltoluol.** Sm. 214° (B. 16, 2030). — IV, 1385.
- C₁₉H₁₁S** 1) **2,4,6-Trimethylphenyläther d. 1-Merkaptonaphtalin.** Sm. 120,6°; Sd. 245°₁₁ (B. 28, 2329).
 2) **2,4,6-Trimethylphenyläther d. 2-Merkaptonaphtalin.** Sm. 87,5°; Sd. 245°₁₁ (B. 28, 2330).
- C₁₉H₁₅N** C 87,4 — H 7,3 — N 5,3 — M. G. 261.
 1) **β -[1-Hexahydropyridyl]anthracen.** (2HCl, PtCl₄ + 2H₂O) (B. 23, 1385). — IV, 10.
 2) **β -[1-Hexahydropyridyl]phenanthren.** Sm. 113°. (2HCl, PtCl₄ + 6H₂O) (B. 23, 1386). — IV, 10.
- C₁₉H₁₅N₃** C 78,9 — H 6,6 — N 14,5 — M. G. 289.
 1) **Tri[2-Amidophenyl]methan (o-Leukanilin).** Sm. 165°. 3HCl, 4HCl + H₂O (B. 16, 1305; 28, 1701). — IV, 1193.
 2) **Tri[4-Amidophenyl]methan (p-Leukanilin).** Sm. 148°. 3HCl + H₂O (A. 194, 268, 272; B. 12, 2241; 13, 669; 15, 678; 16, 1301; J. 1862, 349). — IV, 1194.
 3) **3',4',4''-Triamidotriphenylmethan (Pseudoleukanilin).** Sm. 150°. + C₆H₆ (Sm. 145°), (6HCl, 3PtCl₄) (B. 13, 672). — IV, 1193.
 4) **2-Aethylamido-1-[2-Methylphenyl]azonaphtalin.** Sm. 132° (B. 17, 2670). — IV, 1400.
 5) **2-Aethylamido-1-[4-Methylphenyl]azonaphtalin.** Sm. 112—113° (B. 17, 2670). — IV, 1400.
 6) **3,5-Di[4-Amidobenzyl]pyridin.** Sm. 155—157°. 3HCl (A. 280, 57). — IV, 1197.
 7) **6-Aethylphenylamido-4-Methyl-2-Phenyl-1,3-Diasin.** Sm. 87° (Am. 20, 488). — IV, 1168.
- C₁₉H₁₉Cl** 1) **10-Chlor-9-Isoamylanthracen.** Sm. 70—71° (B. 14, 797; A. 212, 111). — II, 277.
- C₁₉H₁₉Br** 1) **10-Brom-9-Isoamylanthracen.** Sm. 76°. Pikrat (B. 14, 797; A. 212, 111). — II, 277.
 C 86,4 — H 7,6 — O 6,0 — M. G. 264.
- C₁₉H₂₁O** 1) **10-Keto-9-Isoamyl-9,10-Dihydroanthracen.** Sm. 252—253° (B. 21, 2509). — III, 250.
- C₁₉H₂₁O₂** C 81,4 — H 7,1 — O 11,4 — M. G. 280.
 1) **Isoamylloxanthranol.** Sm. 125° (B. 13, 1598; A. 212, 73). — III, 244.
 2) **$\alpha\eta$ -Diketo- $\alpha\eta$ -Diphenylheptan.** Sm. 67—68°; Sd. oberh. 300° u. ger. Zers. (Soc. 55, 347). — III, 301.
 3) **$\alpha\gamma$ -Diketo- $\alpha\gamma$ -Di[4-Aethylphenyl]propan.** Sm. 42° (Bl. [3] 9, 700). — III, 301.

- C₁₉H₂₀O₂**
- 4) $\alpha\gamma$ -Diketo- $\alpha\gamma$ -Di[2,4(P)-Dimethylphenyl]propan. Sm. 82° (Bl. [3] 9, 701). — III, 301.
 - 5) $\alpha\gamma$ -Diketo- $\alpha\gamma$ -Di[2,5-Dimethylphenyl]propan. Sm. 101—102° (Bl. [3] 9, 702). — III, 301.
 - 6) $\alpha\gamma$ -Diketo- $\alpha\gamma$ -Di[3,4(P)-Dimethylphenyl]propan. Sm. 138° (Bl. [3] 9, 700). — III, 301.
 - 7) Diphenyloxeton. Fl. (A. 288, 200).
 - 8) 2,6-Diphenyl-3,5-Dimethyltetrahydro-1,4-Pyron. Sm. 106° (109°); Sd. 235—237° (B. 29, 1352, 1836; 30, 2262 Anm.; 31, 1887). — III, 239.
 - 9) Säure (aus Benzyl-4-Methylphenylketon). Sm. 92,5°. Ca, Ba (B. 14, 1646). — II, 1477.
 - 10) Aethylester d. Distyrensäure. Fl. (A. 216, 185). — II, 1476.
 - 11) 3-Methyl-6-Isopropylphenylester d. β -Phenylakrylsäure. Sm. 69 bis 70°; Sd. 239—240° (B. 18, 1946). — II, 1406.
 - 12) Acetat d. Oxyretenfluoren. Sm. 70—71° (B. 17, 694; A. 229, 142). — II, 1082.
- C₁₉H₂₀O₃**
- C 77,0 — H 6,7 — O 16,2 — M. G. 296.
 - 1) Diäthyläther d. γ -Keto- γ -[2,4-Dioxyphenyl]- α -Phenylpropan. Sm. 92—93° (B. 29, 1887).
 - 2) Diäthyläther d. γ -Keto- γ -[2,5-Dioxyphenyl]- α -Phenylpropan. Sm. 50—51° (B. 32, 329).
 - 3) β -2-Methoxyphenyl]- α -[4-Isopropylphenyl]akrylsäure. Sm. 198 bis 199°. Ag (G. 15, 511). — II, 1737.
 - 4) α -Oxy- β -Phenylakryl[4-Isopropyl-1-Methylphenyl-3-Aether]säure. Sm. 136°. Ba + 2 $\frac{1}{2}$ H₂O (G. 19, 357). — II, 1637.
 - 5) Aethylester d. γ -Benzoyl- γ -Phenylbutersäure. Sm. 33—34° (B. 21, 1353). — II, 1716.
 - 6) Aethylester d. γ -Keto- $\alpha\alpha$ -Diphenylbutan- β -Carbonsäure. Sm. 85° (Soc. 71, 676).
- C₁₉H₂₀O₄**
- C 73,1 — H 6,4 — O 20,5 — M. G. 312.
 - 1) Dibenzylidenäther d. Pentaerythrit. Sm. 160° (A. 289, 34). — III, 8.
 - 2) Dimethyläther d. 2,6-Di[2-Oxyphenyl]tetrahydro-1,4-Pyron. Sm. 173° (170°) (B. 31, 1510; J. pr. [2] 60, 147).
 - 3) $\alpha\delta$ -Di[4-Methoxyphenyl]- α -Buten- γ -Carbonsäure. Sm. 101°. Ca + 2H₂O, Ag (A. 255, 302). — II, 1892.
 - 4) $\alpha\gamma$ -Lakton d. α -Oxy- $\alpha\delta$ -Di[4-Methoxyphenyl]butan- γ -Carbonsäure (Dianisylpentalakton). Sm. 83° (A. 255, 306). — II, 1971.
 - 5) Aethylester d. α -Acetoxy- $\beta\beta$ -Diphenylpropionsäure. Sm. 53° (A. 248, 44). — II, 1699.
 - 6) Diäthylester d. Diphenylmethan-2,4-Dicarbonsäure. Fl. (B. 9, 1765). — II, 1888.
 - 7) Dibenzolat d. Amylenglykol. Sm. 123° (A. 133, 256). — II, 1141.
 - 8) Dibenzolat eines isom. Amylenglykol. Sm. 40° (G. 21, 541). — II, 1141.
 - 9) Dibenzolat d. $\delta\delta$ -Dioxy- β -Methylbutan. Sm. 111°; Sd. 264° (A. 109, 299). — II, 1153.
 - 10) Dibenzolat d. $\alpha\gamma$ -Dioxy- $\beta\beta$ -Dimethylpropan. Sm. 53° (B. 27, 1089; A. 289, 41). — II, 1142.
 - 11) Isoamylester d. 2-Benzoxylbenzol-1-Carbonensäure (A. 92, 314). — II, 1497.
- C₁₉H₂₀O₅**
- C 69,5 — H 6,0 — O 24,4 — M. G. 328.
 - 1) Isovaleryloresolin. Sm. 95—97° (A. 174, 82). — III, 620.
 - 2) Trimethyläther d. Brasilin. Sm. 158—139°; anorphe Modif. Sm. 82 bis 86° (B. 20, 3365; 21, 3009; 22, 1547; 23, 1430; 27, 525; M. 14, 56; 15, 269). — III, 652.
 - 3) Dibenzylidenadonit. Sm. 164—165° (B. 26, 638). — III, 8.
 - 4) Guajakonsäure. Sm. 95—100°. + PbO (F. 1862, 467; M. 3, 125, 822). — II, 1974.
 - 5) Diacetat d. Hydrolapachon. Sm. 161° (G. 19, 611). — II, 1028.
 - 6) Verbindung (aus Papaverinbromäthylat). Sm. 180—181° (M. 10, 688). — IV, 441.
- C₁₉H₂₀O₆**
- C 66,3 — H 5,8 — O 27,9 — M. G. 344.
 - 1) Pinoresinol. Sm. 122°. K₂ + 4H₂O, Ca (M. 15, 507; 18, 481). — III, 563.

- C₁₉H₂₀O₆**
- 2) *α,ε*-Dioxypentandiphenyläther-*γ,γ*-Dicarbonsäure. *Sir.* 150—152° u. *Zers.* Ag₂ (*Soc.* **69**, 169, 1501).
 - 3) Diäthylester d. Dioxymalondiphenyläthersäure. *Sd.* 250—260°₆₀ (*B.* **24**, 3004). — **II**, 667.
 - 4) Diäthylester d. 1,3,4-Trimethyl-*p*-*β*-Benzodifuran-2,5-Dicarbon-säure. *Sm.* 133° (*A.* **283**, 267). — **III**, 736.
 - 5) Acetat d. Toluresitannol (*C.* **1895** [1] 353).
 - 6) Diacetat d. Verb. C₁₅H₁₆O₄. *Sm.* 126° (*Bl.* [3] **7**, 564). — **II**, 919.
- C₁₉H₂₀O₇**
- 1) Monacetat d. 3,4,2',4',6'-Pentaoxydiphenylketontetramethyläther. *Sm.* 170° (*B.* **25**, 1135). — **III**, 208.
 - 2) Diacetat d. Osthin. *Sm.* 183—186° (*C.* **1896** [1] 561).
 - 3) Barbatinsäure oder C₂₂H₂₄O₆. *Sm.* 186° (*A.* **203**, 302; *B.* **30**, 358; *J. pr.* [2] **57**, 237). — **II**, 2054.
 - 4) Rhisonsäure. *Sm.* 185°. K, Ca, Ba + 3H₂O, Pb, Cu + 4H₂O, Ag (*B.* **31**, 664; *J. pr.* [2] **58**, 527).
 - 5) Diacetyldecarbonylnsäure. *Sm.* 130—131° (*G.* **12**, 236). — **II**, 2058.
 - 6) Methyl ester d. Saligeninglykolsäure? *Fl.* (*G.* **21** [1] 258). — **II**, 1109.
 - 7) Acetylderivat d. Decarbusnein. *Sm.* 112° (*A.* **284**, 166). — **II**, 2057.
- C₁₉H₂₀O₈**
- 1) 3,4-Dioxybensoldimethyl norm. Propylenäther-1-Carbonsäure (*Bl.* **29**, 270). — **II**, 1744.
 - 2) Diacetat d. Pikrotoxinin. *Sm.* 254—255° (*G.* **9**, 60; *B.* **31**, 2969). — **III**, 643.
C 55,9 — H 4,9 — O 39,2 — M. G. 408.
- C₁₉H₂₀O₁₀**
- 1) Tetracetylcarmisinsäure? (*B.* **30**, 1738).
- C₁₉H₂₀N₂**
- 1) Cinchen. *Sm.* 123—125°. (2HCl, PtCl₄) (*B.* **14**, 103, 1854; **17**, 1985, 1987; **18**, 1219; **23**, 2677; **31**, 2361; *J.* **1882**, 366). — **III**, 836.
 - 2) 1-Aethylamido-2-[4-Methylphenyl]amidonaphtalin. *Sm.* 68° (*B.* **27**, 2778). — **IV**, 918.
 - 3) 5-Pseudobutyl-1,3-Diphenylpyrazol. *Sm.* 77°; *Sd.* 229—231°₃₅ (*B.* **30**, 2273). — **IV**, 943.
 - 4) 2-Isobutyl-4,5-Diphenylimidazol. *Sm.* 223°. (2HCl, PtCl₄) (*Soc.* **49**, 476). — **IV**, 1035.
C 86,7 — H 8,0 — N 5,3 — M. G. 263.
- C₁₉H₂₁N**
- 1) 3-Hexyl-*β*-Naphtochinolin. *Sm.* 83° (*B.* **27**, 2023).
- C₁₉H₂₁N₂**
- 1) 4-Phenylasooctohydro-*β*-Naphtochinolin. *Sm.* 95°. Pikrat (*B.* **24**, 2656). — **IV**, 1581.
- C₁₉H₂₁O**
- 1) 10-Oxy-10-Isosamyl-9,10-Dihydroanthracen. *Sm.* 73—74° (*B.* **14**, 801; *A.* **212**, 103). — **II**, 900.
 - 2) *α*-Keto-*α,γ*-Di[2,6-Dimethylphenyl]propan. *Sm.* 52°; *Sd.* 255—265°₃₀ (*A. ch.* [7] **2**, 206). — **III**, 239.
 - 3) Benzylidenxyliton. *Sd.* 230—240°₁₁ (*A.* **299**, 230).
 - 4) Cinnamylcampher. *Sd.* 280—290°₃₀ (*B.* **24** [2] 732). — **III**, 514.
C 80,8 — H 7,8 — O 11,4 — M. G. 282.
- C₁₉H₂₁O₂**
- 1) Diäthyläther d. *α,α*-Di[*p*-Oxyphenyl]propen. *Sm.* 76—77° (*B.* **22**, 1130). — **II**, 999.
 - 2) *α,α*-Di[*p*-Aethylphenyl]propionsäure. *Sm.* 116° (*B.* **14**, 1597). — **II**, 1472.
 - 3) Aethyl ester d. *α,α*-Di[4-Methylphenyl]propionsäure. *Sm.* 145° (*B.* **15**, 1476). — **II**, 1471.
 - 4) Acetat d. 3-Oxy-*p*-Benzyl-4-Isopropyl-1-Methylbenzol. *Sd.* 245° (*G.* **11**, 348). — **II**, 899.
 - 5) Acetat d. *α*-Oxy-2,3,4,6-Tetramethyldiphenylmethan. *Sd.* oberh. 360° (*Bl.* **42**, 172). — **II**, 1081.
C 76,5 — H 7,4 — O 16,1 — M. G. 298.
- C₁₉H₂₁O₃**
- 1) Pyrogallacin. *Sm.* 183° (181°). Na + H₂O, K + 1½ H₂O (*A.* **52**, 404; **119**, 277; *J.* **1854**, 612; *B.* **30**, 379; *C.* **1897** [1] 167). — **II**, 1878.
 - 2) Diäthyläther d. Di[*p*-Oxy-*p*-Methylphenyl]keton. *Sm.* 105—106° (*B.* **28**, 2872). — **III**, 232.

- $C_{19}H_{21}O_3$ 3) Dipropyläther d. 4,4'-Dioxydiphenylketon. Sm. 127° (B. 28, 2871). — III, 199.
C 69,1 — H 6,7 — O 24,2 — M. G. 330.
- $C_{19}H_{21}O_5$ 1) Tetramethyläther d. Phloretin. Sm. 58° (B. 28, 1397). — III, 230.
2) Diäthylester d. 1-Keto-6-Methyl-3-Phenyl-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonensäure. Sm. 87—88° (B. 18, 2584; A. 281, 77). — II, 1971.
C 65,9 — H 6,3 — O 27,7 — M. G. 346.
- $C_{19}H_{21}O_6$ 1) Tetramethyläther-Aethyläther d. 3,4,2',4',6'-Pentaoxydiphenylketon. Sm. 162° (B. 25, 1138). — III, 208.
2) Laricresinol. Sm. 169° (164°). K + H₂O (M. 18, 502; 20, 647).
C 63,0 — H 6,1 — O 30,9 — M. G. 362.
- $C_{19}H_{21}O_7$ 1) Benzylarbutin + H₂O. Sm. 161° wasserfrei (A. 221, 366). — III, 572.
2) Triäthylester d. δ -Keto- δ -Phenyl- α -Buten- $\alpha\beta\gamma$ -Tricarbonensäure. Sd. 242—245°₂₀ (Soc. 69, 1384; 71, 324).
C 57,9 — H 5,6 — O 36,5 — M. G. 394.
- $C_{19}H_{21}O_9$ 1) Lignon (B. 26, 2528).
2) Diacetat d. Pikrotoxin + 2H₂O. Sm. 207—210° (B. 31, 2973).
3) Verbindung (aus Pikrotoxin). Sm. 227° (G. 11, 51). — III, 643.
C 55,6 — H 5,3 — O 39,0 — M. G. 410.
- $C_{19}H_{21}O_{10}$ 1) Cyclopiaroth (J. 1881, 1019). — III, 629.
C 51,6 — H 5,0 — O 43,4 — M. G. 442.
- $C_{19}H_{21}O_{12}$ 1) Oxy cyclopiaroth (J. 1881, 1019). — III, 629.
C 82,0 — H 7,9 — N 10,1 — M. G. 278.
- $C_{19}H_{21}N_3$ 1) Di[4-Propylphenylimido]methan. Sm. 168°. HCl (B. 17, 1228). — II, 549.
2) Dihydrocinchen. Sm. 145°. Pikrat (B. 27, 1504, 2291; 31, 2363). — III, 837.
3) Desoxycinchonin. Sm. 90—92°. (2HCl, PtCl₄) (B. 28, 3145; 31, 2355). — III, 837.
4) Desoxycinchonidin. Sm. 61°. (2HCl, PtCl₄) (B. 29, 373; 31, 2355). — III, 852.
C 68,3 — H 6,6 — N 25,1 — M. G. 334.
- $C_{19}H_{21}N_6$ 1) Di[Benzylidenamido]pentamethylentetramin. Sm. 226—227° (A. 288, 233). — III, 29.
- $C_{19}H_{21}O_2$ C 80,3 — H 8,4 — O 11,3 — M. G. 284.
1) $\delta\delta$ -Di[β -Oxyphenyl]heptan. Sm. 155° (J. r. 23, 502). — II, 996.
2) Aethyläther d. 2-Oxybenzylidenecampher (C. 1898 [2] 381).
3) Diphenyläther d. $\alpha\eta$ -Dioxyheptan. Sm. 54,5—55° (C. 1899 [1] 26).
C 72,2 — H 7,6 — O 20,2 — M. G. 316.
- $C_{19}H_{21}O_4$ 1) Acetylpodocarpinsäure. Sm. 152° (A. 170, 238). — II, 1685.
2) Methyl-Geraniolester d. Benzol-1,2-Dicarbonensäure (Methylester d. Rhodinolphalsäure). Fl. (J. pr. [2] 56, 22).
C 65,5 — H 6,9 — O 27,6 — M. G. 348.
- $C_{19}H_{21}O_6$ 1) Diacetylmetasantonsäure. Sm. 207° (G. 25 [2] 462).
2) Diäthylester d. $\beta\zeta$ -Dioxy- δ -Phenyl- $\beta\epsilon$ -Heptadien- $\gamma\epsilon$ -Dicarbonensäure. Sm. 60° (B. 32, 88).
3) Diäthylester d. $\beta\zeta$ -Diketo- δ -Phenylheptan- $\gamma\epsilon$ -Dicarbonensäure (Benzylidenbisacetessigsäureäthylester). Sm. 150° (152°) (B. 18, 2583; 31, 605, 608, 747, 1390, 2773; 32, 88, 333; A. 281, 76). — II, 2019.
4) isom. Benzylidenbisacetessigsäureäthylester. Sm. 120° (B. 31, 606; 32, 335).
5) isom. Benzylidenbisacetessigsäureäthylester. Sm. 133—134° (B. 31, 606; 32, 335).
6) isom. Benzylidenbisacetessigsäureäthylester. Sm. 142—143° (B. 32, 336).
7) Triäthylester d. δ -Phenyl- α -Buten- $\alpha\gamma\gamma$ -Tricarbonensäure. Sd. 237 bis 239°₂₅ (J. pr. [2] 58, 406).
C 62,6 — H 6,6 — O 30,8 — M. G. 364.
- $C_{19}H_{21}O_7$ 1) α ,2-Lakton d. $\alpha\alpha$ -Dioxy- α -Phenylbutanäthyläther- $\beta\beta$,2-Tricarbonensäure- $\beta\beta$ -Diäthylester. Fl. (A. 242, 52). — II, 2071.
2) Triäthylester d. α -Benzoylpropan- $\alpha\beta\gamma$ -Tricarbonensäure. Sd. 250°₁₀ (J. pr. [2] 53, 312; Soc. 73, 728).

- $C_{19}H_{24}O_7$ 3) Triäthylester d. β -Benzoylpropan- $\alpha\beta\gamma$ -Tricarbonsäure. Sd. 225°, (*J. pr.* [2] 53, 313).
C 57,6 — H 6,0 — O 36,4 — M. G. 396.
- $C_{19}H_{24}O_9$ 1) Bastin (*See* 38, 667; 41, 99; 43, 19; 55, 204). — I, 1080.
C 55,3 — H 5,8 — O 38,8 — M. G. 412.
- $C_{19}H_{24}O_{10}$ 1) Anamirtin (*M.* 1, 131). — III, 644.
2) Tetraäthylester d. 3,6-Dioxybenzol-3-Methyläther-1,2,4,5-Tetra-carbonsäure. Na (*A.* 258, 288). — II, 2095.
C 81,4 — H 8,6 — N 10,0 — M. G. 280.
- $C_{19}H_{24}N_2$ 1) 2-Methyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 105° (*B.* 26, 3278). — II, 488.
C 74,0 — H 7,8 — N 18,2 — M. G. 308.
- $C_{19}H_{24}N_4$ 1) $\gamma\delta$ -Di[Phenylhydrazon]heptan. Sm. 106° (*J. pr.* [2] 55, 194). — IV, 782.
2) $\beta\epsilon$ -Diphenylhydrazon- β -Methylhexan. Sm. 115–116° (116,5°) (*G.* 27 [1] 276; *B.* 22, 2122). — IV, 782.
C 85,4 — H 9,3 — N 5,3 — M. G. 267.
- $C_{19}H_{25}N$ 1) Isoamylidi[4-Methylphenyl]amin. Sd. 290–300°, (*B.* 24, 120). — II, 487.
C 77,3 — H 8,5 — N 14,2 — M. G. 295.
- $C_{19}H_{25}N_3$ 1) 4-[4-Diäthylamidobensyliden]amido-1-Dimethylamidobenzol. Sm. 140–141° (*B.* 31, 2253).
2) Di[4-Propylphenyl]guanidin. Sm. 113°. (2HCl, PtCl₄) (*B.* 17, 1225). — II, 549.
3) Di[2,4,6-Trimethylphenyl]guanidin. Sm. 218° (*B.* 15, 1014). — II, 554.
C 79,7 — H 9,1 — O 11,2 — M. G. 286.
- $C_{19}H_{26}O_4$ 1) Äthyläther d. 2-Oxybenzylcampher (*C.* 1896 [2] 590).
C 75,5 — H 8,6 — O 15,9 — M. G. 302.
- $C_{19}H_{26}O_5$ 1) Äthylester d. Podocarpinsäure. Sm. 143–146° (*A.* 170, 223). — II, 1685.
C 71,7 — H 8,2 — O 20,1 — M. G. 318.
- $C_{19}H_{26}O_6$ 1) Cerbertin. Sm. 85,5 (*R.* 12, 26). — III, 573.
2) Cerberitrin (*B.* 26 [2] 679).
3) Methyl-Citronellolester d. Benzol-1,2-Dicarbonsäure (Methylester d. Citronellalphaltsäure). Fl. (*J. pr.* [2] 56, 41).
C 65,1 — H 7,4 — O 27,4 — M. G. 350.
- $C_{19}H_{26}O_8$ 1) Diacetylisophotosantonsäure. Sm. 163–166° (*B.* 19, 2263). — II, 1933.
2) Triäthylester d. α -Phenylbutan- $\beta\beta\gamma$ -Tricarbonsäure. Sd. 337,8° (*B.* 23, 654). — II, 2016.
C 62,3 — H 7,1 — O 30,6 — M. G. 366.
- $C_{19}H_{26}O_7$ 1) Essigsäureverbindung d. Acetylsantonsäure. Sm. 126–128° (*J.* 1875, 608). — II, 1789.
C 55,1 — H 6,3 — O 38,6 — M. G. 414.
- $C_{19}H_{26}O_{10}$ 1) Cocculin (*A.* 222, 353). — III, 644.
C 49,4 — H 5,6 — O 45,0 — M. G. 462.
- $C_{19}H_{26}O_{13}$ 1) Hexaacetat d. α -Glykoheptose. Sm. 156° (*A.* 270, 78). — I, 1057.
C 80,8 — H 9,2 — N 9,9 — M. G. 282.
- $C_{19}H_{26}N_2$ 1) $\alpha\alpha$ -Di[β -Amidophenyl]heptan. Fl. HNO₃ (*B.* 47, 49). — IV, 986.
2) $\alpha\gamma$ -Di[2-Dimethylamidophenyl]propan. Sd. 227–229°, (2HCl, PtCl₄) (*B.* 25, 2408). — IV, 983.
3) $\beta\beta$ -Di[4-Dimethylamidophenyl]propan. Sm. 83°. 2HCl, (4HCl, 3HgCl₂), (2HCl, PtCl₄), 2HBr, 2HJ (*B.* 4, 743; 6, 347; 12, 813). — IV, 984.
4) Di[Äthylamidomethylphenyl]methan (aus 2-Äthylamido-1-Methylbenzol). Sm. 96°; Sd. bei 300°, (*M.* 19, 632).
C 73,5 — H 8,4 — N 18,1 — M. G. 310.
- $C_{19}H_{25}N_4$ 1) 2,2-Di[4-Dimethylamidophenyl]tetrahydroimidazol (Äthylauramin). (2HCl, PtCl₄), Pikrat (*B.* 20, 2855). — IV, 1174.
C 76,8 — H 9,1 — N 14,1 — M. G. 297.
- $C_{19}H_{27}N_3$ 1) Morrhuin. Fl. (2HCl, PtCl₄) (*B.* [3] 2, 229). — III, 888.
C 79,1 — H 9,7 — O 11,1 — M. G. 288.
- $C_{19}H_{25}O_2$ 1) 2,4-Divaleryl-1,3,5-Trimethylbenzol. Sm. 55°; Sd. 210–211°, (*B.* 30, 1286).

- $C_{19}H_{28}O_2$ 2) **Abietinsäure**. Sm. 153—154°. Salze meist bek. Lit. bedeutend. — II, 1435.
- $C_{19}H_{28}O_3$ 3) **Menthylester d. β -Phenylpropionsäure**. Sd. 203°₁₅ (H. 31, 1778).
4) **Benzoat d. Lanolinalkohol**. Sm. 65—66° (G. 25 [1] 46).
C 75,0 — H 9,2 — O 15,8 — M. G. 304.
- 1) **Aethylester d. d-7-Aethoxyl-5,8-Dimethyl-1,2,3,4-Tetrahydronaphtalin-2-Aethyl- α -Carbonsäure** (Ac. d. d-Aethyläthersantonigen Säure). Sm. 31—32° (B. 16, 427). — II, 1671.
- 2) **Aethylester d. i-7-Aethoxyl-5,8-Dimethyl-1,2,3,4-Tetrahydronaphtalin-2-Aethyl- α -Carbonsäure** (Ac. d. Aethylätherisantonigen Säure). Sm. 54° (B. 16, 428). — II, 1671.
- 3) **Verbindung** (aus Boldoglykosid) (B. 42, 291). — III, 573.
C 71,2 — H 8,7 — O 20,0 — M. G. 320.
- $C_{19}H_{28}O_4$ 1) **Strophanthidin**. Sm. 195° (M. 19, 399).
2) **Benzoxyllaurinsäure**. Sm. 41,5° (C. 1897 [1] 419).
3) **Diäthylester d. i-Dehydronaphtosantonsäure**. Fl. (B. 18, 2863; G. 23 [1] 289). — II, 1932.
- 4) **Isobutylester d. Santonsäure**. Sm. 67° (B. 13, 2209). — II, 1788.
C 67,8 — H 8,3 — O 23,8 — M. G. 336.
- $C_{19}H_{28}O_5$ 1) **Diäthylester d. α -Oxyheptanphenyläther- $\delta\delta$ -Dicarbonsäure**. Sd. 279°₁₀₀ (B. 28, 1198, 1200).
C 59,4 — H 7,3 — O 33,3 — M. G. 384.
- $C_{19}H_{28}O_6$ 1) **Triisobutylrylshikiminsäure** (B. 24, 1284). — I, 769.
C 54,8 — H 6,7 — O 38,5 — M. G. 416.
- $C_{19}H_{28}O_{10}$ 1) **Tetraäthylester d. β' -Diketoheptan- $\alpha\gamma\epsilon\eta$ -Tetracarbonsäure** (T. d. Methylenebisacetondicarbonsäure). Sm. 105° (A. 288, 354).
2) **Pentaäthylester d. α -Buten- $\alpha\beta\gamma\delta$ -Pentacarbonsäure**. Sd. 229 bis 231°₁₀ (B. 31, 48).
3) **Verbindung** (aus Acetyldicarbonsäurediäthylester u. Aethantricarbonsäuretriäthylester). Fl. (J. pr. [2] 49, 22).
C 52,8 — H 6,5 — O 40,7 — M. G. 432.
- $C_{19}H_{28}O_{11}$ 1) **Pentacetat d. Anhydro- $\alpha\gamma\epsilon$ -Trioxy- $\beta\beta\delta\delta$ -Tetra[Oxymethyl]pentan**. Sm. 84° (B. 27, 1089; A. 289, 49).
C 49,1 — H 6,0 — O 44,8 — M. G. 464.
- $C_{19}H_{28}O_{13}$ 1) **Helicinyglykose** (A. 244, 26). — III, 68.
C 80,3 — H 9,8 — N 9,8 — M. G. 284.
- $C_{19}H_{28}N_2$ 1) **Oktohydrocinchen**. Fl. (2HCl, CdCl₂ + H₂O), (2HCl, PtCl₄) (B. 25, 1547). — III, 840.
2) **1-Phenylhydrazon-3-Hexyl-5-Methyl-1,2,3,4-Tetrahydrobenzol**. Sm. 157—159° (A. 288, 346). — IV, 770.
C 78,6 — H 10,3 — O 11,0 — M. G. 290.
- $C_{19}H_{30}O_2$ 1) **4-Methylphenylester d. Laurinsäure**. Sm. 28°; Sd. 219,5°₁₈ (B. 17, 1378). — II, 749.
- $C_{19}H_{30}O_3$ C 74,5 — H 9,8 — O 15,7 — M. G. 306.
- 1) **Verbindung** (aus Cholsäure) (H. 16, 492). — I, 782.
- $C_{19}H_{30}O_5$ C 67,4 — H 8,9 — O 23,7 — M. G. 338.
- 1) **Helleboretin**, siehe auch $C_{19}H_{30}O_4$ (C. 1897 [2] 764).
2) **Acetyllichestersäure**. Sm. 124° (J. pr. [2] 67, 305).
3) **Diäthylester d. 1-Keto-3-Hexyl-5-Methyl-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäure**. Sd. 202—204°₁₇ (A. 288, 341).
C 61,6 — H 8,1 — O 30,3 — M. G. 370.
- $C_{19}H_{30}O_7$ 1) **Panakon** (A. 90, 234). — III, 640.
- $C_{19}H_{30}O_{10}$ C 54,5 — H 7,2 — O 38,3 — M. G. 418.
- 1) **Herniarin** (C. 1895 [1] 352).
2) **Pentaäthylester d. Butan- $\alpha\beta\gamma\delta$ -Pentacarbonsäure**. Sd. 216—218°₁₈ (B. 23, 3760). — I, 871.
3) **Pentaäthylester d. Butanpentacarbonsäure**. Sd. 232—233°₁₂ (Soc. 73, 1014).
C 70,4 — H 9,9 — O 19,7 — M. G. 324.
- $C_{19}H_{32}O_4$ 1) **Lichestersäure**. Sm. 124,5—125°. K, Cu, Ag (C. 1898 [2] 964).
C 67,1 — H 9,4 — O 23,5 — M. G. 340.
- $C_{19}H_{32}O_5$ 1) **Säure** (aus Cholesterin). Cu (M. 17, 593).

- C₁₉H₃₂O₆**
 C 64,0 — H 9,0 — O 27,0 — M. G. 356.
 1) Diäthylester d. $\beta\beta$ -Diketo- $\gamma\eta$ -Diäthylnonan- $\gamma\eta$ -Dicarbonsäure (D. d. Diacetyl-diäthylmelinsäure). Sm. 44–45°; Sd. 249–252°_{45–50} (Soc. 57, 30). — I, 822.
 2) Diäthylester d. $\beta\zeta$ -Diketo- δ -Hexylheptan- $\gamma\epsilon$ -Dicarbonsäure (D. d. Oenanthylidendiacetessigsäure). Sm. 71° (A. 268, 340).
 3) Triäthylester d. Hydrocampherylmalonsäure. Sd. 253–255°₈₀ (A. 257, 302). — I, 822.
- C₁₉H₃₃O₆**
 C 58,8 — H 8,2 — O 33,0 — M. G. 388.
 1) Tetraäthylester d. Heptan- $\alpha\alpha\epsilon\epsilon$ -Tetracarbonsäure. Sd. 275°₇₅ (Soc. 65, 990).
 2) Tetraäthylester d. Heptan- $\alpha\alpha\eta\eta$ -Tetracarbonsäure. Sd. 270–275°₅₀ (Soc. 65, 104).
 3) Tetraäthylester d. Heptan- $\beta\beta\zeta\zeta$ -Tetracarbonsäure. Sd. 238–240°₃₀ (Soc. 59, 829; B. 28, 2828). — I, 862.
 4) Tetraäthylester d. Heptan- $\gamma\gamma\epsilon\epsilon$ -Tetracarbonsäure. Sm. 61°; Sd. 195°₁₂ (A. 256, 185). — I, 862.
 5) Tetraäthylester d. $\beta\delta$ -Dimethylpentan- $\beta\gamma\delta$ -Tetracarbonsäure. Sd. 315–334° (B. 23, 666). — I, 862.
 6) Tetraäthylester d. β -Isobutylpropan- $\alpha\alpha\gamma\gamma$ -Tetracarbonsäure. Sd. 204°₁₅ (B. 31, 2590; Soc. 73, 1012).
- C₁₉H₃₃N₃**
 C 79,2 — H 11,1 — N 9,7 — M. G. 288.
 1) η -Phenylhydrazontridekan. Fl. (Soc. 57, 536). — IV, 769.
- C₁₉H₃₄O₆**
 C 63,7 — H 9,5 — O 26,8 — M. G. 358.
 1) Triäthylester d. $\beta\eta$ -Dimethyloktan- $\gamma\delta\delta$ -Tricarbonsäure. Sd. 290 bis 295° (B. 29, 977).
- C₁₉H₃₄N₆**
 C 65,9 — H 9,8 — N 24,3 — M. G. 346.
 1) Verbindung (Base aus Isobuttersäurenitril). Sm. 241°. (2HCl, PtCl₄ + 2 $\frac{1}{2}$ H₂O) (J. pr. [2] 37, 400). — I, 1466.
- C₁₉H₃₆O₂**
 C 77,0 — H 12,2 — O 10,8 — M. G. 296.
 1) Döglingsäure. Ba (J. 1847/48, 568). — I, 527.
 2) Methyl ester d. Oelsäure (A. 28, 257). — I, 526.
 3) Methyl ester d. Elaidinsäure (A. 28, 256). — I, 527.
- C₁₉H₃₆O₄**
 C 69,5 — H 11,0 — O 19,5 — M. G. 328.
 1) Heptadekan- $\alpha\alpha$ -Dicarbonsäure (Cetylmalonsäure). Sm. 121,5–122° (115–117°). Ba, Cd, Zn, Cu, Ag, (A. 206, 359; B. 24, 2781). — I, 690.
 2) Heptadekan- α -Dicarbonsäure (Dioktylmalonsäure). Sm. 75°. Ca (A. 204, 164). — I, 690.
 3) Diäthylester d. $\beta\alpha$ -Dimethylundekan- $\delta\delta$ -Dicarbonsäure. Sd. 235 bis 237°₁₀₀ (Soc. 59, 842). — I, 689.
- C₁₉H₃₈O₁₂**
 C 50,0 — H 7,9 — O 42,1 — M. G. 456.
 1) Oenantholaccarose (A. 244, 23). — I, 1070.
- C₁₉H₃₈O**
 C 80,8 — H 13,5 — O 5,7 — M. G. 282.
 1) β -Ketononadekan (Methylseptidekylketon). Sm. 55,5°; Sd. 266,5°₁₁₀ (B. 12, 1672; 15, 1707, 1724). — I, 1005.
 2) δ -Ketononadekan. Sm. 50,5°; Sd. 211°₁₇ (Bl. [3] 15, 766).
 3) α -Ketononadekan (Dinonylketon; Caprinon). Sm. 58°; Sd. über 350° (A. 157, 270). — I, 1005.
 4) β -Keto- γ -Oktylundekan (Dioktylacetone). Sd. 325–330° (A. 204, 10). — I, 1005.
- C₁₉H₃₈O₂**
 C 76,5 — H 12,7 — O 10,7 — M. G. 298.
 1) Oktadekan- β -Carbonsäure. Sm. 66,5°; Sd. 297–299°₁₀₀. Ba, Cu, Ag (J. 1854, 1193). — I, 447.
 2) Methyl ester d. Stearinsäure. Sm. 38° (J. 1858, 301). — I, 445.
 3) Äthylester d. Daturinsäure. Sm. 27° (Bl. [3] 5, 96; B. 26 [2] 288). — I, 444.
- C₁₉H₃₈O₄**
 C 69,1 — H 11,5 — O 19,4 — M. G. 330.
 1) Säure (aus Dorschlebertran) (C. 1896 [1] 171).
 2) Methyl ester d. Dioxystearinsäure. Sm. 106–108° (J. pr. [2] 40, 245; Bl. [3] 13, 239). — I, 637.
 3) Glycerinmonopalmitin. Sm. 63° (56°) (A. ch. [3] 41, 238; Am. 6, 225). — I, 444.
- C₁₉H₃₈O₅**
 C 65,9 — H 11,0 — O 23,1 — M. G. 346.
 1) Methyl ester d. Trioxystearinsäure. Sm. 110° (J. pr. [2] 39, 341). — I, 738.

C₁₀-Gruppe mit drei Elementen.

- C₁₀H₆O₆Br₄ 1) Tetrabromderivat d. Verb. C₁₀H₁₀O₈ (aus Resorcin) (C. 1899 [1] 254).
- C₁₀H₆O₆Br₅ 1) Pentabromresorcinbenzein (J. pr. [2] 48, 393). — II, 1123.
- C₁₀H₁₀O₄Br₄ 1) Tetrabromaurin. Ag₂ (A. 196, 81; M. 3, 466; B. 17, 1626). — II, 1120.
- C₁₀H₁₀O₄Br₄ 1) Tetrabromresorcinbenzein. Sm. 290–300° (J. pr. [2] 48, 392). — II, 1123.
- C₁₀H₁₀O₆N₄ 1) C 58,4 — H 2,6 — O 24,6 — N 14,4 — M. G. 390.
- C₁₀H₁₀O₆N₄ 1) P-Trinitro-5-Phenylakridin (A. 224, 29). — IV, 468.
- C₁₀H₁₀O₁₀Br₄ 1) Tetrabromdehydroeichenrindengerbäure (A. 240, 336). — III, 588.
- C₁₀H₁₀O₁₁N₄ 1) C 48,5 — H 2,1 — O 37,5 — N 11,9 — M. G. 470.
- C₁₀H₁₀O₁₁N₄ 1) Tetranitroaurin. Sm. bei 140°. Ba (B. 17, 1625). — II, 1120.
- C₁₀H₁₁ON 1) C 84,7 — H 4,1 — O 5,9 — N 5,2 — M. G. 269.
- C₁₀H₁₁O₂N 1) Chrysalisocyanat. Sm. oberhalb 280° (B. 24, 950). — II, 643.
- C₁₀H₁₁O₂N 1) C 80,0 — H 3,9 — O 11,2 — N 4,9 — M. G. 285.
- C₁₀H₁₁O₂N 1) 2-Furanylphenanthrenoxazol (Furenylamidophenanthrol). Sm. 231° (Soc. 39, 227). — III, 724.
- C₁₀H₁₁O₂N 2) Acetylderivat d. Phenylnaphtylcarbazolcarbonsäure. Sm. noch nicht bei 350° (B. 29, 269). — IV, 458.
- C₁₀H₁₁O₂N 1) C 75,7 — H 3,7 — O 16,0 — N 4,6 — M. G. 301.
- C₁₀H₁₁O₂N 1) α-Phenylpyridinphenylenketoncarbonsäure. Sm. 226°. Ag (A. 249, 123). — IV, 459.
- C₁₀H₁₁O₂N₂ 1) C 69,3 — H 3,3 — O 14,6 — N 12,8 — M. G. 329.
- C₁₀H₁₁O₂N₂ 1) peri-Naphtolmethylen-m-Nitroisobenzalazin. Sm. 253° u. Zers. (C. 1899 [1] 114).
- C₁₀H₁₁O₂N 1) C 71,9 — H 3,5 — O 20,2 — N 4,4 — M. G. 317.
- C₁₀H₁₁O₂N 1) Phtalon d. 2-Methylchinolin-4-Carbonsäure. Sm. oberh. 300° u. Zers. (J. pr. [2] 56, 292).
- C₁₀H₁₁O₂N₂ 1) C 66,1 — H 3,2 — O 18,5 — N 12,2 — M. G. 345.
- C₁₀H₁₁O₂N₂ 1) P-Dinitro-5-Phenylakridin (A. 224, 29). — IV, 468.
- C₁₀H₁₁O₂Br 1) Verbindung (aus 1,2,3-Trioxylbenzol) (B. 26, 1143). — II, 1044.
- C₁₀H₁₁O₂Br₂ 1) Diacetat d. P-Pentabrom-α-Di[2,3,4(P)-Trioxyphenyl]propionsäure (B. 16, 2409). — II, 2078.
- C₁₀H₁₁NS 1) Chrysalisöl. Sm. 176° (B. 24, 955). — II, 643.
- C₁₀H₁₁ON₂ 1) C 49,6 — H 2,6 — O 41,7 — N 6,1 — M. G. 460.
- C₁₀H₁₁ON₂ 1) Dichinolylketon. Sm. 174°. 2HCl (B. 24, 1609). — IV, 376.
- C₁₀H₁₂ON₄ 1) C 73,1 — H 3,8 — O 5,1 — N 17,9 — M. G. 312.
- C₁₀H₁₂OS 1) Leukonditolylenchinoxalin. Sm. oberh. 300° (B. 19, 776). — IV, 1302.
- C₁₀H₁₂OS 1) Verbindung (aus Phenanthrenchinon u. Methylthiophen) (B. 16, 1624; 17, 1338). — III, 448.
- C₁₀H₁₂O₂N₂ 1) C 76,0 — H 4,0 — O 10,7 — N 9,3 — M. G. 300.
- C₁₀H₁₂O₂N₂ 1) Methyltriphendioxazin (B. 29, 2077). — IV, 1078.
- C₁₀H₁₂O₂N₂ 1) C 72,2 — H 3,8 — O 15,2 — N 8,8 — M. G. 316.
- C₁₀H₁₂O₂N₂ 1) P-Nitro-9-Benzoylcarbazol. Sm. 181° (B. 24, 280). — IV, 393.
- C₁₀H₁₂O₂N₂ 2) 2-Oxybenzylidenamidobenzolazoxindol. Sm. oberh. 300° (B. 28, 298). — IV, 1005.
- C₁₀H₁₂O₂N₂ 3) Benzoylamidobenzolazoxindon. Sm. 264,5° (A. 226, 65). — IV, 1005.
- C₁₀H₁₂O₂N₂ 1) C 68,7 — H 3,6 — O 19,3 — N 8,4 — M. G. 332.
- C₁₀H₁₂O₂N₂ 1) Dinitrophenylendiphenylmethan. Sm. bei 240° u. Zers. (Bl. [3] 1, 775). — II, 294.
- C₁₀H₁₂O₂N₂ 2) 7-Oxy-5-Phenylphenazon-8-Carbonsäure (N-Phenylsaffranolcarbonsäure). Na (B. 31, 1184). — IV, 1020.
- C₁₀H₁₂O₂N₄ 1) C 63,3 — H 3,3 — O 17,8 — N 15,6 — M. G. 360.
- C₁₀H₁₂O₂N₄ 1) 2,7-Dinitro-9-Phenylhydrasonfluoren. Sm. 257–258° u. Zers. (M. 16, 825).
- C₁₀H₁₂O₂N₄ 2) P-Dinitro-9-Phenylhydrasonfluoren. Sm. 227–228° u. Zers. (M. 16, 826).
- C₁₀H₁₂O₂N₄ 3) 5, P-Dinitro-1,2-Diphenylbenzimidazol. Sm. 220° (Bl. [3] 17, 872). — IV, 562.
- C₁₀H₁₂O₂N₄ 4) 5-Nitro-1-Phenyl-2-[3-Nitrophenyl]benzimidazol. Sm. 218–220° (Bl. [3] 19, 519). — IV, 1008.

- $C_{10}H_{11}O_4N_4$ 5) 5-Nitro-1-Phenyl-2-[4-Nitrophenyl]benzimidazol. + C_6H_6 (Sm. 195°) (Bl. [3] 17, 1029). — IV, 1008.
- $C_{10}H_{11}O_4Br_2$ 1) Dibromresorcinbensein (J. pr. [2] 48, 390). — II, 1123.
- $C_{10}H_{11}O_3N_2$ C 65,5 — H 3,4 — O 23,0 — N 8,0 — M. G. 348.
1) $\alpha\gamma$ -Di[1,2-Phthalamido]- β -Ketopropan. Sm. 264–268° (B. 27, 1042). — II, 1814.
2) Verbindung (aus Nitrophenylacetylen). Zers. bei 165° (B. 15, 213). — II, 174.
- $C_{10}H_{11}O_3Br_2$ 1) 3,4,3',4'-Dimethylenäther d. γ -Keto- $\alpha\alpha$ -Di[β -Brom-3,4-Dioxyphenyl]- $\alpha\delta$ -Pentadien (B. 24, 2596). — III, 252.
- $C_{10}H_{11}O_3N_2$ C 62,6 — H 3,3 — O 26,4 — N 7,7 — M. G. 364.
1) 1,2-Phthalylasparagin-3-Amidobenzol-1-Carbonsäure. Ag (G. 16, 7). — II, 1813.
- $C_{10}H_{11}O_3Cl_2$ 1) Diacetat d. 7,8-Dioxy-2-[β -Chlorphenyl]-1,4-Benzopyron. Sm. 189 bis 191° u. Zers. (B. 29, 2434).
- $C_{10}H_{12}O_8$ 1) Sulfonfluorescein + H_2O . Sm. oberh. 300° (Am. 11, 78; 14, 471; 18, 802; Bl. [3] 17, 822). — III, 200.
2) Resorcinsulfonphtalein (Am. 20, 266).
C 57,6 — H 3,0 — O 32,3 — N 7,1 — M. G. 396.
1) Dinitroresorcinbensein (J. pr. [2] 48, 395). — II, 1123.
C 53,8 — H 2,8 — O 30,2 — N 13,2 — M. G. 424.
- $C_{10}H_{12}O_8N_4$ 1) Benzocat d. 2-[2,4,6-Trinitrophenylamido]-1-Oxybenzol. Sm. 157° (Soc. 59, 722). — II, 1147.
2) Benzocat d. 4-[2,4,6-Trinitrophenylamido]-1-Oxybenzol. Sm. 191° (Soc. 59, 720). — II, 1147.
- $C_{10}H_{12}O_8S$ 1) Pyrogallolsulfonphtalein (Am. 20, 268).
C 55,3 — H 2,9 — O 34,9 — N 6,8 — M. G. 412.
- $C_{10}H_{12}O_8N_2$ 1) 3,4,3',4'-Dimethylenäther d. γ -Keto- $\alpha\alpha$ -Di[β -Nitro-3,4-Dioxyphenyl]- $\alpha\delta$ -Pentadien. Sm. 218° u. Zers. (B. 24, 618). — III, 252.
C 53,3 — H 2,8 — O 37,4 — N 6,5 — M. G. 428.
- $C_{10}H_{12}O_8N_2$ 1) Diacetat d. Dinitrochrysin. Sm. 229° (B. 27, 22). — III, 628.
- $C_{10}H_{12}N_2Cl_2$ 1) β -Dichlor-9-Phenylhydrazonfluoren. Sm. 185–186° (M. 16, 811). — IV, 778.
- $C_{10}H_{12}N_2Br_2$ 1) β -Dibrom-9-Phenylhydrazonfluoren. Sm. 190° (M. 16, 812). — IV, 778.
2) β -Dibrom-9-Phenylhydrazonfluoren. Sm. 252° u. Zers. (M. 16, 822). — IV, 778.
- $C_{10}H_{13}ON$ C 84,1 — H 4,8 — O 5,9 — N 5,2 — M. G. 271.
1) 7-Oximido-8-Benzylidenacenaphten. Sm. 48° (A. 290, 204). — III, 260.
2) 3-[2-Oxyphenyl]- β -Naphtochinolin. Sm. 217° (B. 27, 2029).
3) 2-Oxy-5-Phenylakridin. HCl (B. 24, 2046). — IV, 468.
4) 3-Oxy-5-Phenylakridin. Sm. oberh. 275° (B. 18, 695). — IV, 468.
5) 9-Benzoylcarbazol. Sm. 95,5° (98,5°) (G. 20, 413; B. 24, 279). — IV, 392.
- $C_{10}H_{13}ON_3$ C 76,3 — H 4,3 — O 5,4 — N 14,0 — M. G. 299.
1) β -[2-Naphtylazo-6-Oxychinolin (B. 21, 1643). — IV, 1486.
2) β -[2-Naphtylazo-8-Oxychinolin (B. 19, 1645). — IV, 1486.
3) 8-Keto-5,7-Diphenyl-7,8-Dihydro-1,6,7-Benstriazin. Sm. 233–235° (M. 17, 525). — IV, 799.
- $C_{10}H_{13}O_2N$ C 79,4 — H 4,5 — O 11,1 — N 4,9 — M. G. 287.
1) 3,5-Dibenzoylpyridin. Sm. 123°. (2HCl, PtCl₄) (A. 280, 47, 69). — IV, 186.
2) 2,4-Dimethylchinolinphtalon. Sm. 237–238° (J. pr. [2] 33, 407). — IV, 328.
3) 2,6-Dimethylchinolinphtalon. Sm. 203° (B. 16, 2603). — IV, 329.
4) Benzylimid d. Naphtalin-1,8-Dicarbonsäure. Sm. 196,6° (G. 25 [1] 251; B. 28, 362). — II, 1880.
5) 2-Methylphenylimid d. Naphtalin-1,8-Dicarbonsäure. Sm. 214° (G. 25 [1] 251; B. 28, 362). — II, 1880.
- $C_{10}H_{13}O_2N_2$ 1) Verbindung (aus Salicylaldehydphenylhydrazon = ($C_{10}H_{13}O_2N_2$),₂). Sm. 184° (A. 305, 183).
- $C_{10}H_{13}O_2N_3$ C 72,4 — H 4,1 — O 10,2 — N 13,3 — M. G. 315.
1) 2-Nitro-9-Phenylhydrazonfluoren. Sm. 257–258° u. Zers. (M. 16, 825). — IV, 778.

- C₁₀H₁₁O₂N₂** 2) **isom. Nitro-9-Phenylhydrazonfluoren.** Sm. 227—228° u. Zers. (*M.* 16, 826). — **IV, 778.**
 3) **5-Nitro-1,2-Diphenylbenzimidazol.** Sm. 181° (*Bl.* [3] 17, 867). — **IV, 562.**
 4) **1-Phenyl-2-[4-Nitrophenyl]benzimidazol.** Sm. 174° (*Bl.* [3] 17, 1028). — **IV, 1007.**
 5) **α -Cyan- β - β -Di-2-Cyanphenylisobuttersäure.** Sm. 160° u. Zers. (*B.* 25, 3026). — **II, 1470.**
- C₁₀H₁₁O₂N₂** 1) **peri-Naphtylenhydrazimethylen-m-Nitroisobenzalazin.** Sm. 215 bis 216° u. Zers. (*C.* 1899 [1] 114).
- C₁₀H₁₁O₂N** C 71,5 — H 4,1 — O 20,0 — N 4,4 — M. G. 319.
- C₁₀H₁₁O₂N₂** 1) **1-[1-Naphtyl]imidomethylbenzol-2,6-Dicarbonensäure.** Sm. 202—207°. Ba, Ag₂ (*B.* 30, 695).
 2) **Dibenzoat d. 2,4-Dioxypyridin.** Sm. 103° (*B.* 31, 1690).
 C 62,8 — H 3,6 — O 22,0 — N 11,6 — M. G. 363.
 1) ***p*-Dinitro-4-Benzoylamidobiphenyl.** Sm. 206° (*A.* 209, 346; *B.* 8, 873). — **II, 1169.**
 2) **Monobenzoat d. 4'-Nitro-2,5-Dioxyazobenzol.** Sm. 195—197° (*B.* 26, 1910). — **IV, 1447.**
 3) **Di[2-Nitrophenyl]amid d. Benzolcarbonsäure** (*A.* 132, 166; *B.* 15, 829). — **II, 1164.**
 4) **Di[4-Nitrophenyl]amid d. Benzolcarbonsäure.** Sm. 224° (*A.* 132, 167; *B.* 15, 828). — **II, 1164.**
 C 60,1 — H 3,4 — O 25,3 — N 11,1 — M. G. 379.
 1) ***p*-Trinitrotriphenylmethan.** Sm. 203° (206—207°) (*A.* 194, 254; *B.* 7, 1208; *21*, 2476). — **II, 288.**
- C₁₀H₁₁O₂N₂** C 57,7 — H 3,3 — O 28,3 — N 10,6 — M. G. 395.
 1) **α -Oxytri-4-Nitrophenylmethan.** Sm. 171—172° (*A.* 194, 256; *B.* 21, 2476). — **II, 1084.**
 2) **Fluoränpikrat.** Sm. 79—80° (*A. ch.* [5] 7, 486). — **II, 245.**
 C 53,9 — H 3,1 — O 26,5 — N 16,5 — M. G. 423.
 1) **2,4,6-Trinitrophenyläther d. 2-Oxybenzylidenphenylhydrazin.** Sm. 217° (*G.* 26 [2] 559). — **IV, 759.**
- C₁₀H₁₁O₂N** C 59,5 — H 3,4 — O 33,4 — N 3,6 — M. G. 383.
 1) **Diacetat d. 7,8-Dioxy-2-[3-Nitrophenyl]-1,4-Benzopyron.** Sm. 218 bis 219° (*B.* 29, 2434).
- C₁₀H₁₁O₂N₃** C 53,4 — H 3,0 — O 33,7 — N 9,8 — M. G. 427.
 1) **Tri[2-Nitrophenyläther] d. Trioxymethan.** Sm. 182° (*J. pr.* [2] 26, 445). — **II, 680.**
 2) **Tri[4-Nitrophenyläther] d. Trioxymethan.** Sm. 232° (*J. pr.* [2] 26, 446). — **II, 682.**
- C₁₀H₁₁O₂Br₃** 1) **Diacetat d. *p*-Tribrom- α -Di[2,3,4(*p*)Trioxyphenyl]propionsäure** (*B.* 16, 2409). — **II, 2078.**
- C₁₀H₁₁N₂Cl** 1) ***p*-Chlor-9-Phenylhydrazonfluoren.** Sm. 139—141° (*M.* 16, 810). — **IV, 778.**
- C₁₀H₁₁N₂Cl** 1) **Tri[4-Diazophenyl]methan** (*A.* 199, 269). — **IV, 1544.**
 C 79,7 — H 4,9 — O 5,6 — N 9,8 — M. G. 286.
- C₁₀H₁₁ON₂** 1) **9-Phenylhydrazon-1-Oxyfluoren.** Sm. 173—174° (*B.* 31, 3034).
 2) **2-Phenyläther d. 2-[2-Oxyphenyl]benzimidazol.** Sm. 147°. HCl (*A.* 257, 81). — **II, 1495.**
 3) **3-Benzoylamidocarbazol.** Sm. 250—251° (*G.* 21 [2] 385). — **IV, 992.**
 4) **Methyläther d. 6-Oxy-*p*-Bichinoly.** Sm. 120° (2HCl, PtCl₄) (*B.* 20, 1926). — **IV, 1071.**
 5) **Methyläther d. 6-Oxy-*p*-Bichinoly.** Sm. 151°. 2HCl + 2H₂O, (2HCl, PtCl₄ + 2H₂O) (*B.* 20, 1925). — **IV, 1071.**
 6) **Chrysofenol + 2H₂O.** HCl, 2HCl (*A.* 226, 181). — **IV, 1072.**
 C 72,6 — H 4,4 — O 5,1 — N 17,8 — M. G. 314.
- C₁₀H₁₁ON₄** 1) **4-Phenylazo-5-Keto-3-Methyl-1-Phenyl-2,5-Dihydrobenzol.** Sm. 155° (*B.* 29, 1602).
 2) **5-Keto-4-[1-Naphtyl]hydrazon-3-Phenyl-4,5-Dihydropyrazol.** Sm. 216° (*B.* 27, 784; *J. pr.* [2] 51, 62). — **IV, 1940.**
 3) **5-Keto-4-[2-Naphtyl]hydrazon-3-Phenyl-4,5-Dihydropyrazol.** Sm. oberh. 250° (*B.* 27, 784; *J. pr.* [2] 51, 62). — **IV, 1490.**

- C₁₀H₁₁O₂N₂** C 75,5 — H 4,6 — O 10,6 — N 9,3 — M. G. 302.
- 1) **4-Benzoylphenylhydrazon-1-Keto-1,4-Dihydrobenzol.** Sm. 171° (*B.* 28, 2415). — *IV*, 795.
 - 2) **2-Phenylacetyl-amido- α -Naphthoxazol.** Sm. 104—105° (*B.* 22, 3242). — *II*, 865.
 - 3) **2-Oxy-1[oder 4]-Methylphenylphenazon.** Sm. 245—265° (*A.* 290, 303). — *IV*, 1009.
 - 4) **Methyläther d. Safranols.** Sm. 206° (*A.* 286, 213; *B.* 29, 369 Ann.). — *IV*, 1003.
 - 5) **Methyläther d. Oxyposafranons.** Sm. 246—248° (*B.* 29, 365). — *IV*, 1004.
 - 6) **Benzoat d. 4-Oxyazobenzol.** Sm. 136° (138°) (*B.* 6, 561; 28, 2416). — *IV*, 1408.
 - 7) ***p*-Nitrosodiphenylamid d. Benzolcarbonsäure.** Sm. 156° (*A.* 277, 103). — *II*, 1164.
 - 8) **Nitril d. β -Acetoxyl- β -[4-Methylphenyl]- α -[2-Cyanphenyl]akrylsäure (p-Methyl- α -*a*-Dicyan- β -Acetoxylstilben).** Sm. 186—188° (*B.* 29, 2547).
- C₁₀H₁₁O₃N₂** C 71,7 — H 4,4 — O 15,1 — N 8,8 — M. G. 318.
- 1) **3-Nitro-4-Benzoylamidobiphenyl.** Sm. 143° (*B.* 8, 873; *A.* 209, 346). — *II*, 1163.
 - 2) **3-Nitro-4-Phenylamidodiphenylketon.** Sm. 157° (*B.* 24, 3772). — *III*, 183.
 - 3) **Monobenzoat d. 2,5-Dioxyazobenzol.** Sm. 110—112° (*B.* 26, 1910). — *IV*, 1447.
 - 4) **Phenylester d. 4-Oxyazobenzol-3-Carbonsäure.** Sm. 121° (*A.* 263, 229). — *IV*, 1468.
 - 5) **4-Nitrodiphenylamid d. Benzolcarbonsäure.** Sm. 129° (*A.* 132, 167; *B.* 15, 825). — *II*, 1164.
- C₁₀H₁₁O₃S**
- 1) **2-Benzoyldiphenylsulfon.** Sm. 183,5—184° (186°) (*Am.* 17, 363; *B.* 29, 2298; 31, 1663). — *III*, 192.
 - 2) **4-Benzoyldiphenylsulfon.** Sm. 133° (*Am.* 20, 310).
- Verbindung (aus d. Chlorid d. Benzol-1-Carbonsäure-2-Sulfonsäure).** Sm. 162° (*Am.* 17, 366; *B.* 29, 2298; 31, 1664).
- C₁₀H₁₁O₄N₂** C 68,2 — H 4,2 — O 19,2 — N 8,4 — M. G. 334.
- 1) **α -Di[1,2-Phtalylamido]propan (Trimethylendiphtalimid).** Sm. 197 bis 198° (*B.* 21, 2669). — *II*, 1807.
 - 2) **1-Benzoyl-4-Benzoylimido-2,6-Diketo-2,3,5,6-Tetrahydropyridin (Dibenzoylglutazin).** Sm. 215—216° (*B.* 20, 2658). — *II*, 1174.
 - 3) **1-Acetoxyl-2-Phenylazonaphthalin-2³-Carbonsäure.** Sm. 210° (*B.* 24, 1600). — *IV*, 1463.
 - 4) **2-Nitrophenylester d. Diphenylamidoameisensäure.** Sm. 112—114° (*B.* 20, 2122). — *II*, 680.
 - 5) **3-Nitrophenylester d. Diphenylamidoameisensäure.** Sm. 90° (*B.* 24, 2111). — *II*, 684.
 - 6) **4-Nitrophenylester d. Diphenylamidoameisensäure.** Sm. 116° (*B.* 24, 2111). — *II*, 683.
 - 7) **2-Nitrodiphenylamid d. 2-Oxybenzolphenyläther-1-Carbonsäure.** Sm. 121° (*A.* 257, 81). — *II*, 1495.
- C₁₀H₁₁O₄N₂** C 63,0 — H 3,9 — O 17,7 — N 15,4 — M. G. 362.
- 1) **α -[2,4-Dinitrophenyl]hydrazondiphenylmethan.** Sm. 229° (*G.* 24 [1] 570).
 - 2) **α -Phenylhydrazondi[3-Nitrophenyl]methan.** Sm. 219—220° (*B.* 20, 510). — *IV*, 775.
 - 3) **α -Phenylhydrazondi[*p*-Nitrophenyl]methan.** Sm. 234° (*A.* 279, 327).
- C₁₀H₁₁O₅N₂** C 65,1 — H 4,0 — O 22,9 — N 8,0 — M. G. 350.
- 1) **α -Di[1,2-Phtalylamido]- β -Oxypropan (β -Oxytrimethylendiphtalimid).** Sm. 205° (*B.* 21, 2690; 22, 224). — *II*, 1807.
- C₁₀H₁₁O₅S**
- 1) **Phenolsulfonphtalein** (*Am.* 20, 263).
 - 2) **Diphenylester d. Benzol-1-Carbonsäure-2-Sulfonsäure.** Sm. 117,5 bis 118,5° (*Am.* 17, 353; 18, 798; *B.* 31, 1661).
- C₁₀H₁₁O₆N₂** C 62,3 — H 3,8 — O 26,2 — N 7,6 — M. G. 366.
- 1) ***p*-Dinitro-4,4'-Dioxytriphenylmethan.** Sm. 133—134° (*B.* 22, 1946). — *II*, 1003.

- $C_{10}H_{14}O_6N_4$ C 57,8 — H 3,6 — O 24,4 — N 14,2 — M. G. 394.
 1) Methylester d. *p*-Naphthylazo-2,4-Dinitrophenyllessigsäure. Sm. 94° (B. 22, 326). — IV, 1465.
- $C_{10}H_{14}O_6N_6$ C 54,0 — H 3,3 — O 22,7 — N 19,9 — M. G. 422.
 1) Tri[3-Nitrophenyl]guanidin. Sm. 189° (B. 16, 50). — II, 351.
- $C_{10}H_{14}O_7N_2$ C 59,7 — H 3,7 — O 29,3 — N 7,3 — M. G. 382.
 1) Acetyondiphthalaminsäure? Sm. 105–107°. Ag₂ (B. 27, 1043).
 2) $\alpha\gamma$ -Di[Benzoylamido]- β -Ketopropan-2,2'-Dicarbonsäure (Acetondiphthalamidsäure). Sm. 105–107°. Ag₂ (B. 27, 1043). — II, 1798.
- $C_{10}H_{14}O_8S$ 1) Hydrochinonsulfonphtalein (Am. 20, 268).
- $C_{10}H_{14}O_{10}Br_2$ 1) Dibromweichenrindengerbsäure (A. 240, 331). — III, 588.
- $C_{10}H_{14}N_2Br_2$ 1) α -Phenylhydrazondi[4-Bromphenyl]methan. Sm. 138° (B. 24, 3768). — IV, 775.
- $C_{10}H_{14}N_2S$ 1) Chrysilthioharnstoff. Sm. 238° (B. 24, 956). — II, 643.
- $C_{10}H_{14}N_2Cl_2$ 1) Tri[4-Chlorphenyl]guanidin. HCl, HJ, H₂SO₄ (A. 176, 51). — II, 350.
- $C_{10}H_{14}N_2Br_3$ 1) Tribromisotriphenylguanidin. HCl, (2 HCl, PtCl₄) (B. 13, 233). — II, 351.
 2) 2,4,6-Tribrom-4'-Methylphenylamidoazobenzol. Sm. 138° (J. pr. [2] 27, 125). — IV, 1356.
- $C_{10}H_{14}N_2J_2$ 1) Tri[4-Jodphenyl]guanidin (B. 5, 158). — II, 350.
- $C_{10}H_{14}N_2Cl_2$ 1) 4,4'-Bidiazotriphenylmethanchlorid. + 2 AuCl₃ (G. 15, 45). — IV, 1544.
- $C_{10}H_{14}Br_2S$ 1) Di[4-Bromphenyläther] d. Dimerkaptomethylbenzol. Sm. 79 bis 80° (B. 18, 885). — III, 10.
- $C_{10}H_{16}ON$ C 83,5 — H 5,5 — O 5,9 — N 5,1 — M. G. 273.
 1) γ -[2-Naphthyl]imido- α -Keto- α -Phenylpropan. Sm. 180–182° (B. 21, 2193). — III, 95.
 2) Phenyläther d. Phenylimido- α -Oxyphenylmethan. Sm. 104° (B. 26, 927). — II, 1162.
 3) *p*-Benzoylamidoacenaphten. Sm. 210° (B. 21, 1458). — II, 1169.
 4) 2-Benzoylamidobiphenyl. Sm. 85–86° (B. 29, 1187).
 5) 4-Benzoylamidobiphenyl. Sm. 226° (230°) (B. 13, 1968; A. 209, 345). — II, 1169.
 6) Oxim d. 4-Benzoylbiphenyl. Sm. 193–194° (M. 12, 502). — III, 257.
 7) meso-Keto-*N*-Aethyldihydrophenonaphhtakridin. Sm. 174–175° (B. 26, 2594). — IV, 464.
 8) Acetyldihydrophenonaphhtakridin. Sm. 181–181,5° (B. 27, 2842). — IV, 456.
 9) Phenylamid d. 1-Phenylbenzol-2-Carbonsäure. Sm. 100° (A. 279, 265). — II, 1462.
 10) Phenylamid d. 1-Phenylbenzol-4-Carbonsäure. Sm. 212° (224°) (J. pr. [2] 41, 309; M. 12, 504). — II, 1463.
- 11) Diphenylamid d. Benzolcarbonsäure. Sm. 180° (176,5–177°). + 5 PCl₅ (A. 132, 166; 192, 13; B. 14, 2368; 15, 1288, 3013; 20, 2119). — II, 1164.
- $C_{10}H_{16}ON_2$ C 75,7 — H 5,0 — O 5,3 — N 14,0 — M. G. 301.
 1) 4-[2-Oxybenzyliden]amidoazobenzol. Sm. 155° (G. 28 [1] 243). — IV, 1357.
 2) Benzoyldiazoamidobenzol. Sm. 131° u. Zers. (B. 27, 2315). — IV, 1561.
- $C_{10}H_{16}ON_2$ C 69,3 — H 4,6 — O 4,8 — N 21,3 — M. G. 329.
 1) 5-[β -Phenylätheryl]-3-[5-Methyl-1,2,4-Oxdiazolyl-3-]-1-Phenyl-1,2,4-Triazol. Sm. 201–202°. — IV, 1170.
 2) Azofarbstoff (aus 2-Amidonaphthalin u. 5-Methyl-3-[2-Amidophenyl]-1,2,4-Oxdiazol). Sm. 153–154° (B. 29, 629). — IV, 1138.
- $C_{10}H_{16}O_2N$ C 78,9 — H 5,2 — O 11,0 — N 4,8 — M. G. 289.
 1) 3-Nitrotriphenylmethan. Sm. 90° (B. 21, 188). — II, 288.
 2) 4-Nitrotriphenylmethan. Sm. 93° (B. 23, 1622). — II, 288.
 3) Diphenyläther d. $\alpha\alpha$ -Dioxy- α -Phenylimidomethan (D. d. Phenylimidokohlensäure). Sm. 136° (B. 28, 977).
 4) Aethylester d. Phenylnaphtylcarbazolcarbonsäure. Sm. 175° (B. 29, 268). — IV, 458.
 5) Phenylamid d. 2-Oxybenzolphenyläther-1-Carbonsäure. Sm. 97° (A. 257, 80). — II, 1495.

- C₁₀H₁₀O₂N₂** C 71,9 — H 4,7 — O 10,1 — N 13,2 — M. G. 317.
- 1) 4-(3-Nitrobenzyliden)amido-1-Phenylamidobenzol. Sm. 123° (A. 255, 190). — IV, 596.
 - 2) 4-(4-Nitrobenzyliden)amido-1-Phenylamidobenzol. Sm. 172° (A. 255, 190). — IV, 596.
 - 3) α-Phenylimido-α-Phenylamido-α-[3-Nitrophenyl]methan (B. 12, 103). — IV, 843.
 - 4) α-[3-Nitrophenyl]imido-α-Phenylamido-α-Phenylmethan (Benzenyl-3-Nitrodiphenylamidin). Sm. 118° (B. 30, 1785). — IV, 843.
 - 5) 4,4'-(4-Nitrobenzyliden)diamidobiphenyl. Sm. 221—222° (J. r. 23, 69). — IV, 967.
 - 6) 3-Aethyl-2-(4-Nitrophenyl)-α-Naphtimidazol. Sm. 225° (B. 26, 194). — IV, 1062.
 - 7) Phenylamidoformiat d. 4-Oxyazobenzol. Sm. 149° (B. 23, 489). — IV, 1408.
 - 8) Nitril d. 4-Phenylhydrazon-3,5-Diketo-1-Phenylhexahydrobenzol-2-Carbonsäure. Sm. 110° (A. 294, 290). — IV, 1475.
 - 9) Phenylamid d. 4-Oxyazobenzol-3-Carbonsäure. Sm. 188—189° (A. 263, 231). — IV, 1468.
 - 10) Di(Phenylamid) d. Pyridin-3,4-Dicarbonsäure. Sm. 199—206° (M. 11, 145). — IV, 165.
- C₁₀H₁₀O₂N₃** C 66,1 — H 4,3 — O 9,3 — N 20,3 — M. G. 345.
- 1) III-2-Nitroformasybenzol. Sm. 150° (B. 31, 1756).
 - 2) III-3-Nitroformasybenzol. Sm. 180° (B. 31, 1756).
 - 3) III-4-Nitroformasybenzol. Sm. 165—170° (B. 31, 1756).
 - 4) 6-Amido-3-[2-Nitrophenyl]-2-Phenyl-2,3-Dihydro-1,2,4-Benstriazin. Sm. 118—119° u. Zers. (B. 30, 2601). — IV, 1287.
 - 5) 6-Amido-3-[3-Nitrophenyl]-2-Phenyl-2,3-Dihydro-1,2,4-Benstriazin. Sm. 204—205° u. Zers. (B. 30, 2601). — IV, 1287.
 - 6) 6-Amido-3-[4-Nitrophenyl]-2-Phenyl-2,3-Dihydro-1,2,4-Benstriazin. Sm. 211° u. Zers. (B. 30, 2602). — IV, 1287.
- C₁₀H₁₀O₂N** C 74,7 — H 4,9 — O 15,7 — N 4,6 — M. G. 305.
- 1) α-Oxy-3-Nitrotriphenylmethan. Sm. 75° (B. 21, 190). — II, 1084.
 - 2) α-Oxy-4-Nitrotriphenylmethan. Sm. 136° (B. 23, 1623). — II, 1084.
 - 3) Benzoesat d. 8-Oxy-10-Keto-3,4-Dihydrojulol (Benzoesat d. γ-Oxy-α-Ketojulolin). Sm. 151° (B. 25, 1199). — IV, 195.
 - 4) 3-Phenylacetylamidonaphtalin-2-Carbonsäure. Sm. 225—227° (B. 26, 2955). — II, 1468.
 - 5) 1-Naphtylamid d. Benzoxylessigsäure. Sm. 190—191,5° (C. 1896[1] 996).
 - 6) 2-Naphtylamid d. Benzoxylessigsäure. Sm. 163° (C. 1896[1] 996).
- C₁₀H₁₀O₂N₃** C 68,4 — H 4,5 — O 14,4 — N 12,7 — M. G. 333.
- 1) 4-Nitro-2-Benzoylamido-1-Phenylamidobenzol. Sm. 201—202° (B. [3] 17, 866). — IV, 562.
 - 2) αα-Diphenyl-β-[3-Nitrophenyl]harnstoff. Sm. 154—155° (B. 20, 2121). — II, 381.
 - 3) αα-Diphenyl-β-[4-Nitrophenyl]harnstoff. Sm. 175—176° (B. 20, 2121). — II, 381.
 - 4) Phenylamid d. 5-Nitro-2-Phenylamidobenzol-1-Carbonsäure. Sm. 159° (B. 24, 3810). — II, 1283.
 - 5) Phenylamid d. 3-Nitro-4-Phenylamidobenzol-1-Carbonsäure. Sm. 215—216° (B. 23, 3445, 3448). — II, 1285.
- C₁₀H₁₀O₂N₅** C 63,1 — H 4,1 — O 13,3 — N 19,4 — M. G. 361.
- 1) α-Phenyl-β-Phenylazo-β-[3-Nitrophenyl]harnstoff. Sm. 104° (B. 21, 2573). — IV, 1563.
 - 2) α-Phenyl-β-Phenylazo-β-[4-Nitrophenyl]harnstoff. Sm. 115° (B. 21, 2572). — IV, 1563.
 - 3) α-Phenylhydrazon-α-[4-Oxyphenyl]azo-α-[4-Nitrophenyl]methan. Sm. 194° (B. 31, 479). — IV, 1419.
- C₁₀H₁₀O₄N** C 71,0 — H 4,7 — O 19,9 — N 4,4 — M. G. 321.
- 1) 3-Nitro-4',4'-Dioxytriphenylmethan. Sm. 59—60° (G. 21, 175). — II, 1003.
 - 2) γ-Cyan-αε-Diketo-αε-Diphenylpentan-γ-Carbonsäure (Diphenacylcyanessigsäure). Sm. 172—174°. NH₃ + 2½H₂O, Na + 2H₂O, Ba + H₂O (B. [3] 15, 1008).

- C₁₉H₁₅O₄N** 3) **1-Methyl-2, 5-Diphenylpyrrol-2', 5'-Dicarbonsäure.** Sm. 231° (B. 20, 1487). — IV, 452.
 4) **2-Methyl-1, 5-Diphenylpyrazol-1', 3-Dicarbonsäure.** Sm. 210° (B. 19, 3162). — IV, 358.
 5) **Säure** (aus Apocinchenäthyläther). Sm. bei 230° u. Zers. (B. 20, 2683). — III, 539.
 6) **1,2-Lakton d. 3,4-Dioxy-1-[2-Naphtyl]amidooxymethylbenzol-3 (oder 4)-Methyläther-2-Carbonsäure**(Methylnoropian-β-Naphtalidsäure). Sm. 225° (B. 29, 2033).
 7) **Aethyl ester d. β-Cyan-β-Benzoyl-β-Phenyl-α-Ketoäthan-α-Carbonsäure.** Sm. 102–103° (A. 282, 79). — II, 1642.
 8) **Monamid d. Pulvinsäuremonomethylester.** Sm. 216–217° (A. 282, 49). — II, 2031.
 9) **Monomethylamid d. Pulvinsäure.** Sm. 237°. Methylaminsalz (A. 282, 25). — II, 2031.
 10) **Benzoylimid d. Phenyloxymaleinäthyläthersäure.** Sm. 105–106° (A. 282, 78).
- C₁₉H₁₅O₄N₂**
 C 65,3 — H 4,3 — O 18,3 — N 12,0 — M. G. 349.
 1) **3,5-Di[4-Nitrobenzyl]pyridin.** Sm. 144–146°. HCl, (2HCl, PtCl₄), HNO₃, Pikrat (A. 280, 52). — IV, 456.
 2) **Acetat d. 2-[4-Nitro-2-Methylphenyl]azo-1-Oxynaphtalin.** Sm. 172 bis 173° (B. 28, 854, 1125). — IV, 1436.
 3) **Acetat d. 4-[4-Nitro-2-Methylphenyl]azo-1-Oxynaphtalin.** Sm. 163° (B. 28, 854, 1125). — IV, 1436.
 4) **β-Naphtolazohippursäure** (B. 14, 2040). — IV, 1464.
- C₁₉H₁₅O₄N₃**
 C 60,5 — H 4,0 — O 17,0 — N 18,5 — M. G. 377.
 1) **3-Nitro-1-[Benzyl-3-Nitrophenyl]amidodiazobenzol.** Sm. 142° (B. 19, 3250). — IV, 1572.
 2) **4-Nitro-1-[Benzyl-3-Nitrophenyl]amidodiazobenzol.** Sm. 180° (B. 19, 3251). — IV, 1572.
 3) **4-Nitro-1-[Benzyl-4-Nitrophenyl]amidodiazobenzol.** Sm. 187–190° (B. 19, 3249). — IV, 1572.
- C₁₉H₁₅O₄Br** 1) **2'-Methyläther-2'-Acetat d. 6-Brom-1-Keto-2-[3,4-Dioxybenzyliden]-2,3-Dihydroindol.** Sm. 201–202° (B. 31, 725).
- C₁₉H₁₅O₅N**
 C 67,6 — H 4,4 — O 23,7 — N 4,2 — M. G. 337.
 1) **Dilakton d. α,ε-Dioxy-γ-Oximido-α,ε-Diphenylpentan-2,2'-Dicarbonsäure.** Sm. 197–203° (M. 19, 432).
- C₁₉H₁₅O₅N**
 C 64,6 — H 4,2 — O 27,2 — N 4,0 — M. G. 353.
 1) **3'-Nitro-1,3,1',3'-Tetraoxytriphenylmethan.** Sm. 97–100° (G. 21, 180). — II, 1039.
 2) **4'-Nitro-1,3,1',3'-Tetraoxytriphenylmethan** (G. 21, 341). — II, 1039.
 3) **2'-Nitro-1,4,1',4'-Tetraoxytriphenylmethan** (G. 21, 343). — II, 1039.
 4) **3'-Nitro-1,4,1',4'-Tetraoxytriphenylmethan.** Zers. bei 264° (G. 21 [2] 331). — II, 1039.
 5) **4'-Nitro-1,4,1',4'-Tetraoxytriphenylmethan.** Zers. bei 260° (G. 21 [2] 335). — II, 1039.
 6) **Methylimid d. α,β-Dibensoxyläthan-α,β-Dicarbonsäure.** α-Modif. Sm. 56°; β-Modif. Sm. 106–108°. 4 + 3C₂H₅O (B. 29, 2716).
- C₁₉H₁₅O₆N**
 C 61,8 — H 4,1 — O 30,0 — N 3,8 — M. G. 369.
 1) **Methylester d. Aristinsäure.** Sm. 250° (B. 29 [2] 38). — III, 780.
- C₁₉H₁₅O₆N**
 C 59,2 — H 3,9 — O 33,2 — N 3,6 — M. G. 385.
 1) **3'-Nitro-1,2,3,1',2',3'-Hexaoxytriphenylmethan.** Sm. 245° (G. 21, 173). — II, 1044.
- C₁₉H₁₅O₆Cl₄** 1) **Verbindung** (aus Hanf) (Soc. 43, 19; 55, 204).
- C₁₉H₁₅NBr₂** 1) **α,β-Dibrom-γ-[1-Naphtyl]imido-α-Phenylpropan.** Sm. bei 154° u. Zers. (A. 239, 384). — III, 54.
 2) **α,β-Dibrom-γ-[2-Naphtyl]imido-α-Phenylpropan.** Sm. bei 191° u. Zers. (A. 239, 384). — III, 54.
- C₁₉H₁₅NS** 1) **Diphenylamid d. Benzolthiocarbonsäure.** Sm. 150–151° (A. 192, 37). — II, 1293.
- C₁₉H₁₅N₂Cl** 1) **4-Chlor-4'-Benzylidenamidodiphenylamin.** Sm. 144° (A. 303, 315).
 2) **α-Phenylhydrazon-4-Chlordiphenylmethan.** Sm. 106° (B. 26, 27). — IV, 775.

- $C_{10}H_{11}N_3Cl$ 3) 5-Chlorphenylat d. 2-Methyl-5,10-Naphtdiazin (Phenyltoluophenazoniumchlorid). + $FeCl_3$ (B. 31, 973). — IV, 1009.
- $C_{10}H_{11}N_3J$ 1) Jodmethylat d. 2,3'-Bichinolyt. Sm. 286° u. Zers. (A. 287, 44; M. 2, 499). — IV, 1067.
- 2) Jodmethylat d. 2,5'-Bichinolyt + H_2O . Sm. 231—232° u. Zers. (M. 8, 142). — IV, 1068.
- 3) Jodmethylat d. 6,6'-Bichinolyt (M. 5, 422). — IV, 1069.
- 4) Jodmethylat d. 6,7'-Bichinolyt. Sm. 126° (M. 6, 552). — IV, 1070.
- 5) Jodmethylat d. isom. Bichinolyt (vom Sm. 159°). Sm. 263° (B. 18, 1913). — IV, 1070.
- $C_{10}H_{11}N_3S$ 1) 6-Phenylamido-2-Merkapto-1-Phenylbenzimidazol. Sm. 208° (A. 286, 182). — IV, 1123.
- $C_{10}H_{11}N_3Cl$ 1) 2-Chlorphenylat d. 1,4-Diphenyl-1,2,3,5-Tetrazol. Sm. 243° u. Zers. + C_2H_6O , + $CHCl_3$, 2 + $PtCl_4$ (B. 27, 323, 2928). — IV, 1268.
- $C_{10}H_{11}N_3Br$ 1) 2-Bromphenylat d. 1,4-Diphenyl-1,2,3,5-Tetrazol + $1/2 H_2O$. Sm. 255° u. Zers. + C_2H_6O (B. 27, 323, 2929). — IV, 1268.
- $C_{10}H_{11}N_3Cl$ 1) 2-Chlorphenylat d. 4-Phenylazo-1-Phenyl-1,2,3,5-Tetrazol. Sm. 249° u. Zers. (B. 27, 2930). — IV, 1492.
- $C_{10}H_{11}BrJ$,
 $C_{10}H_{11}ON_2$ 1) α -Bromtriphenylmethantetraiodid. Sm. 121—122° (C. 1898 [2] 1132). C 79,2 — H 5,5 — O 5,5 — N 9,7 — M. G. 288.
- 1) 4-[2-Oxybenzyliden]amido-1-Phenylamidobenzol. Sm. 120° (A. 255, 190). — IV, 597.
- 2) 4-Amido-1-Benzoylphenylamidobenzol (B. 15, 826). — IV, 594.
- 3) α -[2-Naphtyl]imido- α -Acetylamidophenylmethan. Sm. 137° (Am. 20, 575).
- 4) Triphenylharnstoff. Sm. 136° (B. 9, 398, 715; 17, 2093). — II, 381.
- 5) β -Phenylamido-2-Methyl-1,4-Benzochinonphenylimid. Sm. 151° (A. 256, 259). — III, 359.
- 6) $\alpha\alpha$ -Diphenyl- β -[2-Oxybenzyliden]hydrazin. Sm. 138,5° (A. 258, 248). — IV, 759.
- 7) β -Benzoyl- $\alpha\alpha$ -Diphenylhydrazin. Sm. 192° (183°) (A. 190, 178; B. 25, 415, 1078). — IV, 669.
- 8) α -Phenylhydrazon-2-Oxydiphenylmethan. Sm. 155° (M. 17, 108). — IV, 776.
- 9) 5-Keto-3-Methyl-1-Phenyl-4-[γ -Phenylallyliden]pyrazol. Sm. 159° (A. 238, 180). — IV, 993.
- 10) 3-Aethyl-2-[2-Oxyphenyl]- α -Naphtimidazol. Sm. 133° (B. 26, 194). — IV, 1062.
- 11) Aethyläther d. 5-Oxy-3-Phenyl- α -Naphtimidazol. Sm. 184—186° (B. 25, 1017). — II, 866.
- 12) γ -Phenylamido- α -Keto- α -[4-Chinoly]- β -Buten. Sm. 129,5°. 2HCl (M. 17, 412). — IV, 374.
- 13) α -[4-Acetylamidophenyl]- β -[2-Chinoly]äthen. Sm. 194° (B. 22, 287). — IV, 1040.
- 14) 5-Phenyloxyhydrat d. 2-Methyl-5,10-Naphtdiazin. Chlorid, Chlorid + $FeCl_3$, Nitrat (B. 31, 973). — IV, 1009.
- 15) Aethyläther d. 5-Oxy-10-Methyl- $\alpha\beta$ -Naphtophenazin. Sm. 195° (B. 19, 916). — IV, 1063.
- 16) Nitril d. 6-Phenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 230° (A. 294, 288). C 72,2 — H 5,0 — O 5,0 — N 17,7 — M. G. 316.
- $C_{10}H_{10}ON_2$ 1) α -Phenylhydrazon- α -[4-Oxyphenylazo]phenylmethan (μ -Monoxyformazylbenzol). Sm. 153—155° (B. 29, 1855).
- 2) β -Nitroso- $\alpha\alpha$ -Diphenyl- β -[α -Imidobenzyl]hydrazin. Sm. 206° u. Zers. (J. pr. [2] 54, 174). — IV, 1137.
- 3) Phenylamidoformyl diazoamidobenzol. Sm. 125° (B. 21, 2559). — IV, 1561.
- 4) Benzoldiazobenzolazo-4-Kresol. Sm. 160° (B. 17, 354). — IV, 1424.
- 5) 4-Phenylazo-2-[4-Methylphenyl]azo-1-Oxybenzol. Sm. 121° (B. 9, 628; 25, 1336). — IV, 1416.
- 6) 2-Phenylazo-4-[4-Methylphenyl]azo-1-Oxybenzol. Sm. 115—116° (B. 25, 1337). — IV, 1416.
- 7) 3,5-Di[Phenylazo]-2-Oxy-1-Methylbenzol. Sm. 114—115° (B. 17, 364). — IV, 1423.

- C₁₉H₁₄ON**, 5) **4,6-Di[Phenylazo]-3-Oxy-1-Methylbenzol**. Sm. 149° (B. 17, 367). — IV, 1424.
 9) **Methyläther d. 4-Oxy-1,3-Di[Diphenylazo]benzol**. Sm. 110° (B. 17, 368). — IV, 1415.
 10) **4-Phenylursidoazobenzol**. Sm. 216° (B. 23, 506). — IV, 1357.
 11) **2-Oxy-1,2,4-Triphenyl-1,2-Dihydro-1,2,3,5-Tetrazol**. Salze, siehe diese (B. 27, 323, 2629).
 12) **3-(2-Oxy-1-Naphtylazo-5,7-Dimethylindazol**. Sm. 261—262° (266 bis 267°) (A. 305, 331).
 13) **Verbindung** (aus Benzenylamidoxim). Na (B. 31, 245). — IV, 1582.
 14) **Verbindung** (aus 3-Oxyhexahydrobenzol-1-Carbonsäure u. Diazobenzolchlorid). Sm. 131° (A. 291, 302). — IV, 1468.
- C₁₉H₁₄OBr**, 1) **1,3-Dibrom-2-Keto-1,3-Di[α-Brombenzyl]-R-Pentamethylen**. Sm. 175° u. Zers. (B. 29, 1837).
- C₁₉H₁₄O₂N₂**, C 75,0 — H 5,3 — O 10,5 — N 9,2 — M. G. 304.
 1) **p-Nitro-2-Methyltriphenylamin**. Sm. 164—165° (B. 31, 2969).
 2) **p-Di[Phenylamido]-2-Methyl-1,4-Benzochinon**. Sm. 232° (A. 287, 153; B. 16, 1559). — III, 360.
 3) **5,6[?]-Di[Phenylamido]-2-Methyl-1,4-Benzochinon**. Sm. noch nicht bei 300° (A. 297, 152). — III, 359.
 4) **p-Phenylamido-p-Oxy-2-Methyl-1,4-Benzochinonphenylimid** (B. 16, 1561). — III, 361.
 5) **Methyläther d. 5-Phenylamido-2-Oxy-1,4-Benzochinonphenylimid**. Sm. 194° (188—189°) (B. 18, 788; 21, 677). — III, 347.
 6) **α-Diphenylhydrasondi[2-Oxyphenyl]methan**. Sm. 152° (B. 19, 2610). — IV, 776.
 7) **3',4'-Dioxy-2-Benzylazobenzol** (Diphenylmethan-α-Azodioxybenzol). Sm. 170° (B. 27, 2788). — IV, 1446.
 8) **Phenylazopropionyl-α-Naphtol**. Sm. 110° (J. pr. [2] 43, 96). — IV, 1478.
 9) **Acetat d. 2-Oxy-1-[2-Methylphenyl]azonaphtalin** (Soc. 63, 929). — IV, 1435.
 10) **Acetat d. 2-Oxy-1-[4-Methylphenyl]azonaphtalin**. Sm. 99° (Soc. 63, 925). — IV, 1435.
 11) **Acetat d. 4-Oxy-1-[4-Methylphenyl]azonaphtalin**. Sm. 101—102° (B. 19, 2488). — IV, 1435.
 12) **3,5-Dimethyl-1,4-Dibenzoylpyrazol**. Sm. 124—125,5° (G. 24 [1] 9). — IV, 551.
 13) **4-Phenylhydrason-2-Phenyl-1,4-Dihydrobenzol-6-Carbonsäure** (B. 17, 2762). — IV, 698.
 14) **Aethylester d. 2,3-Diphenyl-1,4-Diazin-5-Carbonsäure**. Sm. 91 bis 92° (Soc. 63, 1307). — IV, 1049.
 15) **2-Amidophenylester d. Diphenylamidoameisensäure**. Sm. 189—191° (B. 20, 2125). — II, 706.
 16) **3-Amidophenylester d. Diphenylamidoameisensäure**. Sm. 132—133° (B. 24, 2111). — II, 715.
 17) **4-Amidophenylester d. Diphenylamidoameisensäure**. Sm. 146° (B. 24, 2111). — II, 716.
 18) **Benzoat d. 4-Oxy-α-Diphenylhydrasin**. Sm. 173° (B. 24, 2310; 28, 2416). — IV, 1504.
 19) **β,2'-Methylimid d. α-[Cyanphenyl]-β-Phenylpropan-β,2'-Dicarbonsäure**. Sm. 117—118° (B. 27, 2437). — II, 2027.
 C 68,7 — H 4,8 — O 9,6 — N 16,9 — M. G. 332.
- C₁₉H₁₄O₂N₄**, 1) **3,5-Di[Phenylnitrosamido]-1-Methylbenzol**. Sm. 170° u. Zers. (J. pr. [2] 33, 545). — IV, 625.
 2) **3-Nitrotriphenylguanidin**. Sm. 159°. (2HCl, PtCl₄) (B. 7, 1236; 16, 50). — II, 350.
 3) **Resorcindisazobenzoltoluol**. Sm. 195—196° (B. 15, 2823). — IV, 1444.
 4) **isom. Resorcindisazobenzoltoluol**. Sm. 204—206° (B. 15, 2822). — IV, 1444.
 5) **isom. Resorcindisazobenzoltoluol**. Sm. 240—241° (B. 15, 2824). — IV, 1444.
 6) **2-Methyläther d. 4,6[?]-Diphenylazo-1,2-Dioxybenzol** (Guajakoldisazobenzol). Sm. 150—150,5° (B. 29, 2686). — IV, 1441.

- $C_{10}H_{10}O_2N_2$ 7) 4'-Methyläther d. 2-Phenylazo-4-[4-Oxyphenyl]azo-1-Oxybenzol. Sm. 117° (B. 32, 124).
- $C_{10}H_{10}O_2N_0$ 1) Phenylendiamindiasobenzol-3-Carbonsäure (B. 16, 2032). — IV, 1461.
- $C_{10}H_{10}O_2N_2$ 1) Diacetylderivat d. 5-Imido-3,4-Diphenyl-4,5-Dihydroisoxazol. Sm. 144–145° (J. pr. [2] 55, 313).
- 2) Acetat d. 6-Oxy-2-[4-Acetylamidophenyl]chinolin (M. 9, 149). — IV, 1025.
- 3) Benzoat d. 6-Oxy-4-Methyl-2-[α -Oxybenzyl]-1,3-Diazin. Sm. 205 bis 208°. HCl (PINNER, Imidoäther 284). — IV, 972.
- Aethylester d. 2-Oxy-1-Phenylazonaphtalin-1³-Carbonsäure. Sm. 104° (B. 14, 2035). — IV, 1463.
- $C_{10}H_{10}O_2S_2$ 1) Phenyläther d. α -Merkapto- γ -[2-Naphtyl]sulfon- β -Ketopropan. Sm. 141° (J. pr. [2] 55, 413).
- $C_{10}H_{10}O_4N_2$ 1) C 67,8 — H 4,8 — O 19,1 — N 8,3 — M. G. 336.
- 2) 2,3-Di[4-Methoxy]-1,4-Diazin-5-Carbonsäure. Sm. 224–225°. Ag (Soc. 63, 1308). — IV, 1049.
- 2) Aethylester d. 3-Nitro-4-[1-Naphtyl]amidobenzol-1-Carbonsäure. Sm. 109° (B. 23, 3458). — II, 1286.
- 3) Aethylester d. 3-Nitro-4-[2-Naphtyl]amidobenzol-1-Carbonsäure. Sm. 127,5° (B. 23, 3457). — II, 1286.
- $C_{10}H_{10}O_4N_4$ 1) C 62,6 — H 4,4 — O 17,6 — N 15,4 — M. G. 364.
- 1) Di[Carbonylphenylhydrazid] d. Propan- $\alpha\alpha$ -Dicarbonsäure. Sm. 112–113° (B. 21, 1243). — IV, 704.
- $C_{10}H_{10}O_4S_2$ 1) Benzylidendi[phenylsulfon]. Sm. 262° (B. 25, 355). — III, 10.
- $C_{10}H_{10}O_4S_2$ 1) Phenyläther d. α -Merkaptodiphenylsulfonmethan. Sm. 174–175° (B. 25, 347; J. pr. [2] 51, 315). — II, 784.
- $C_{10}H_{10}O_2N_2$ 1) C 64,8 — H 4,5 — O 22,7 — N 7,9 — M. G. 352.
- 1) Nitroderivat d. Kohlenw. $C_{10}H_{10}$ (A. 212, 100).
- $C_{10}H_{10}O_2N_0$ 1) C 55,9 — H 3,9 — O 19,6 — N 20,6 — M. G. 408.
- 1) s-Harnstoff d. 2-Keto-5-Methyl-3-[4-Amidophenyl]-2,3-Dihydro-1,3,4-Oxidiazol. Sm. 290° (B. 26, 1320). — IV, 1127.
- $C_{10}H_{10}O_2S_2$ 1) α -Phenylsulfon- γ -[2-Naphtyl]sulfon- β -Ketopropan. Sm. 144° (J. pr. [2] 55, 411).
- $C_{10}H_{10}O_6N_2$ 1) C 61,9 — H 4,3 — O 26,1 — N 7,6 — M. G. 368.
- 1) Aethylester d. 4,5-Diketo-2-Phenyl-1-[3-Nitrophenyl]tetrahydropyrrol-3-Carbonsäure. Sm. 199–200° (B. 30, 604). — IV, 368.
- 2) Aethylester d. 4,5-Diketo-2-[3-Nitrophenyl]-1-Phenyltetrahydropyrrol-3-Carbonsäure. Sm. 208–209° (B. 30, 604). — IV, 368.
- $C_{10}H_{10}O_6Br_2$ 1) β -Dibrom- $\alpha\alpha$ -Di[β -Acetoxyphenyl]propionsäure (B. 16, 2074). — II, 1882.
- 2) γ^2 -Acetat- α^{24} -Methylenäther- γ^4 -Methyläther d. $\alpha\beta$ -Dibrom- γ -Keto- γ -[2,4-Dioxyphenyl]- α -[3,4-Dioxyphenyl]propan. Sm. 137–138° (B. 32, 313).
- $C_{10}H_{10}O_6S_2$ 1) Tri[Phenylsulfon]methan. Sm. 215°. K, Ba, Ag (B. 25, 348). — II, 784.
- $C_{10}H_{10}O_6Br_2$ 1) Tetracetat d. 2,4-Dibrom-3,5,7,8-Tetraoxy-1-Methylnaphtalin. Sm. 206° (B. 26, 2671). — II, 1036.
- $C_{10}H_{10}O_6S_2$ 1) Triphenylmethantrisulfonsäure. $Ba_3 + 8H_2O$ (B. 5, 908; 7, 1205). — II, 288.
- $C_{10}H_{10}O_6Cl_2$ 1) Dichloreuxanthinsäure (J. pr. [1] 37, 392). — II, 2103.
- $C_{10}H_{10}O_6Br_2$ 1) Dibromeuxanthinsäure (J. pr. [1] 37, 392). — II, 2103.
- $C_{10}H_{10}NJ$ 1) Jodäthylat d. Anthrachinolin (A. 201, 348). — IV, 461.
- 2) Jodäthylat d. Phenonaphtrakridin (B. 27, 2844). — IV, 464.
- $C_{10}H_{10}N_2Cl_2$ 1) 2³,5⁴-Dichlor-4',4'-Diamidotriphenylmethan. Sm. 107° (A. 299, 351). — IV, 1043.
- 2) Chinolinmethylenchlorid. Sm. 168°. 2 + PtCl₄ (B. 16, 2004). — IV, 250.
- $C_{10}H_{10}N_2J_2$ 1) Chinolinmethylenjodid. Sm. 132° (B. 16, 880, 2004). — IV, 250.
- $C_{10}H_{10}N_2S$ 1) Triphenylthioharnstoff. Sm. 152° (B. 17, 2092). — II, 397.
- 2) 2-[1-Naphtyl]imido-3-Phenyltetrahydrothiazol. Sm. 134,5°. (2HCl, PtCl₄) (B. 21, 1869). — II, 609.

- C₁₉H₁₆N₂S** 3) 2-Phenylimido-3-[1-Naphtyl]tetrahydrothiazol. Sm. 184,5°. (2HCl, PtCl₄) (B. 21, 1869). — II, 609.
- 4) 2-Thiocarbonyl-1-Methyl-3-[1-Naphtyl]-1,2,3,4-Tetrahydro-1,3-Benzdiazin. HJ (J. pr. [2] 52, 410). — IV, 635.
- 5) 2-Thiocarbonyl-1-Methyl-3-[2-Naphtyl]-1,2,3,4-Tetrahydro-1,3-Benzdiazin. Sm. 140°. HJ (J. pr. [2] 52, 414). — IV, 635.
- 6) 2-Thiocarbonyl-1-Aethyl-3-Phenyl-1,2-Dihydro- α -Naphtimidazol (Aethylphenylnaphtylenthioharnstoff). Sm. über 300° (B. 27, 2775). — IV, 319.
- C₁₉H₁₆N₂Cl** 1) 5-Chlorphenylat d. 3-Amido-2-Methyl-5,10-Naphtdiazin (Methylaposaframinchlorid). 2 + PtCl₄ (B. 31, 967, 974). — IV, 1182.
- C₁₉H₁₆N₂S** 1) 4-Phenylthioureidoazobenzol. Sm. 179° (B. 17, 1405). — IV, 1357.
- C₁₉H₁₇ON** C 82,9 — H 6,2 — O 5,8 — N 5,1 — M. G. 275.
- 1) α -Oxy-3-Amidotriphenylmethan. Sm. 155°. HCl (B. 21, 190). — II, 1084.
- 2) α -Oxy-4-Amidotriphenylmethan. Sm. 116°. HCl + H₂O, H₂SO₄ + H₂O (B. 23, 1625). — II, 1084.
- 3) Aethyläther d. 4-Oxy-1-Phenylimidomethylnaphtalin. Sm. 72° (Bl. [3] 17, 811).
- 4) α -[1-Naphtyl]amidoäthylphenylketon. Sm. 161–163° (Bl. [3] 17, 74).
- 5) α -[2-Naphtyl]amidoäthylphenylketon. Sm. 120–121° (Bl. [3] 17, 74).
- 6) t -Oximido- $\alpha\gamma$ -Diphenyl- $\alpha\gamma$ -Heptatriën. Sm. 127–128° (B. 29, 615). — III, 257.
- 7) [4-Methylphenyl]-[2-Naphtyl]amid d. Essigsäure. Sm. 85° (B. 16, 2079). — II, 616.
- C₁₉H₁₇ON₂** C 75,2 — H 5,6 — O 5,3 — N 13,9 — M. G. 303.
- 1) β -Diphenylamido- α -Phenylharnstoff. Sm. 193°. — IV, 674.
- 2) Verbindung (aus p-Rosanilin) (M. 17, 10).
- C₁₉H₁₇OP** 1) Diphenylbenzylphosphoxyd. Sm. 192–193° (B. 18, 2116). — IV, 1662.
- 2) Diphenyl-4-Methylphenylphosphoxyd. Sm. 129–130° (B. 21, 1511). — IV, 1671.
- C₁₉H₁₇O₂N** C 78,3 — H 5,8 — O 11,0 — N 4,8 — M. G. 291.
- 1) Aethyläther d. 4-Benzoylamido-1-Oxynaphtalin. Sm. 214–215° (J. pr. [2] 45, 549). — II, 1180.
- 2) Aethyläther d. 4-[4-Methylphenyl]imido-2-Oxy-1-Keto-1,4-Dihydronaphtalin. Sm. 135–137° (B. 15, 287, 1970). — III, 394.
- 3) Propyläther d. 4-Phenylimido-2-Oxy-1-Keto-1,4-Dihydronaphtalin. Sm. 103–104° (B. 15, 283). — III, 393.
- 4) Isopropyläther d. 4-Phenylimido-2-Oxy-1-Keto-1,4-Dihydronaphtalin. Sm. 99–100° (B. 15, 283). — III, 393.
- 5) 2-Methyl-5-Phenyl-1-[2-Methylphenyl]pyrrol-3-Carbonsäure. Sm. 199° (B. 18, 2596). — IV, 357.
- 6) 2-Methyl-5-Phenyl-1-[4-Methylphenyl]pyrrol-3-Carbonsäure. Sm. 227° (B. 18, 2597). — IV, 357.
- 7) 2-[4-Isopropylphenyl]chinolin-4-Carbonsäure. Sm. 201°. Ag (A. 249, 102). — IV, 450.
- 8) Aethylester d. α -Cyan- $\beta\gamma$ -Diphenylpropen- α -Carbonsäure. Sm. 163° (J. pr. [2] 54, 549).
- 9) Aethylester d. Phenyl-2-Naphtylamidoameisensäure. Sm. 93° (B. 24, 2919). — II, 617.
- 10) Aethylester d. 2,5-Diphenylpyrrol-3-Carbonsäure. Sm. 159° (B. 21, 3060). — IV, 449.
- C₁₉H₁₇O₂N₂** C 71,5 — H 5,3 — O 10,0 — N 13,2 — M. G. 319.
- 1) 2'-Nitro-4²,4²-Diamidotriphenylmethan (B. 16, 1305). — IV, 1043.
- 2) 3'-Nitro-4²,4²-Diamidotriphenylmethan. Sm. 136°. + C₆H₆ (Sm. 81°) (B. 13, 671). — IV, 1043.
- 3) 4'-Nitro-4²,4²-Diamidotriphenylmethan. + Toluol. 2HCl, (2HCl, PtCl₄) (B. 15, 678). — IV, 1043.
- 4) $\alpha\alpha$ -Diphenyl- β -[2-Nitrobenzyl]hydrazin. Sm. 143° (B. 28, 933). — IV, 811.
- 5) 2-Oxy-1-[5-Acetylamido-2-Methylphenylazo]naphtalin. Sm. 275 bis 276° (B. 15, 2830). — IV, 1436.

- C₁₈H₁₇O₂N₃** 6) **Methyläther d. 4-Acetylamido-2-Phenylazo-1-Oxynaphtalin.** Sm. 218—220° u. Zers. (B. 29, 2950). — IV, 1431.
 7) **Methyläther d. 2-Oxyphenylacetylhydrazinido-β-Naphtalin.** Sm. 198—199° (B. 18, 3131). — IV, 1576.
 8) **Aethyl ester d. 5-[β-Phenyläthyl]-1-Phenyl-1,2,4-Triazol-3-Carbonsäure.** Sm. 148°. — IV, 1170.
 9) **Phenylamidoformiat d. 4-Oxy-α-Diphenylhydrazin (Carbanilidooxyhydrazobenzol).** Sm. 155° (B. 23, 491). — IV, 1504.
 10) **Isocarbanilidooxyhydrazobenzol.** Sm. 218—220° (B. 23, 494). — IV, 1504.
- C₁₈H₁₇O₂N₂** 1) **Acetat d. 3-Oximidoamidomethyl-5-[β-Phenyläthyl]-1-Phenyl-1,2,4-Triazol.** Sm. 158° u. Zers. — IV, 1170.
 2) **Di[Phenylhydrazid] d. Cinchomeronsäure.** Zers. bei 100—110° (M. II, 146). — IV, 799.
- C₁₈H₁₇O₂N** 1) **Cusparin (oder C₂₀H₁₉O₃N).** Sm. 92° (G. 13, 363). — III, 777.
 2) **Cusparidin.** Sm. 79°. HCl + 3H₂O, (2HCl, PtCl₄), (HCl, AuCl₃), HBr, H₂SO₄ (B. 25 [2] 201). — III, 778.
 3) **Methylapocinchensäure (B. 18, 2383).** — III, 838.
 4) **2-Oximido-4,5-Diphenyl-2,3-Dihydro-R-Penten-1-Methylcarbon-säure.** Sm. 183—184° (Soc. 71, 151).
 5) **6-Phenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure.** Sm. 190° u. Zers. (A. 294, 280).
 6) **Methyl ester d. γ-Cyan-α-Keto-α-Diphenylbutan-γ-Carbonsäure.** Sm. 133—134° (C. 1895 [2] 918).
 7) **Aethyl ester d. 3-Phenylamido-1-Oxynaphtalin-2-Carbonsäure.** Sm. 185° (A. 298, 385).
 8) **Aethyl ester d. 4-Oxy-6-Methyl-2-Phenylchinolin-3-Carbonsäure.** Sm. 236° (B. 19, 1542). — IV, 448.
 9) **Aethyl ester d. 4-Oxy-8-Methyl-2-Phenylchinolin-3-Carbonsäure.** Sm. 208,5° (B. 19, 1545). — IV, 449.
 10) **Aethyl ester d. 6-Methoxyl-2-Phenylchinolin-4-Carbonsäure.** Sm. 105° (A. 282, 106). — IV, 447.
- C₁₈H₁₇O₂N₃** 1) **1-Nitro-2-Naphtyläther d. β-Phenylhydrazon-α-Oxypropan.** Sm. 120° (B. 31, 759).
 2) **Amid d. 2,3-Di[4-Methoxyl]-1,4-Diazin-5-Carbonsäure.** Sm. 240 bis 241° (Soc. 63, 1308). — IV, 1049.
- C₁₈H₁₇O₂P** 1) **Diphenylester d. 4-Methylphenylphosphinsäure.** Sd. oberh. 360° (A. 293, 262). — IV, 1668.
 2) **Diphenylester d. Benzylphosphinsäure.** Sm. 60° (B. 31, 1051). — IV, 1663.
- C₁₈H₁₇O₂N** 1) **Opiansäuremethylketolid.** Sm. 194° (B. 29, 2035). — IV, 221.
 2) **Dimethylester d. α-Cyan-α-β-Diphenyläthan-α-β-Dicarbon-säure.** Sm. 101° (B. 23, 115). — II, 1891.
 3) **Aethyl ester d. 4,5-Diketo-1,2-Diphenyltetrahydropyrrrol-3-Carbon-säure.** Sm. 171°. Na (B. 30, 602). — IV, 368.
 4) **β,2'-Methylimid d. α-β-Diphenylpropan-β,2,2'-Tricarbon-säure.** Sm. 145—147° (B. 27, 2495). — II, 2027.
 5) **Verbindung (aus 2-Nitrobenzoylbenzylmalonsäurediäthylester).** Sm. 147° u. Zers. (A. 251, 384). — II, 1978.
- C₁₈H₁₇O₄N₃** 1) **Aethyl ester d. 4-Benzoylamido-5-Keto-1-Phenyl-4,5-Dihydropyrazol-3-Carbonsäure.** Sm. 194—195° (B. 24, 1260). — IV, 713.
 2) **Aethyl ester d. 3-Methyl-1-Phenyl-5-[2-Nitrophenyl]pyrazol-4-Carbonsäure.** Sm. 146° (B. 18, 2260). — IV, 949.
 3) **Aethyl ester d. 3-Methyl-1-Phenyl-5-[4-Nitrophenyl]pyrazol-4-Carbonsäure.** Sm. 128° (B. 18, 2257). — IV, 949.
 4) **Dibenzoxid d. 2,6-Di[Oximido]hexahydropyridin (Dibenzoylglutarenimidooxim).** Sm. 179—180° (B. 22, 2971). — II, 1210.
- C₁₈H₁₇O₂Br₃** 1) **αγ-Lakton d. βγδ-Tribrom-α-Oxy-α-δ-Di[4-Methoxyphenyl]butan-γ-Carbonsäure.** Sm. 140° u. Zers. (A. 255, 302). — II, 1971.

- $C_{19}H_{17}O_2Br$ 1) Trimethyläther d. Tribrombrasilin. Sm. 109—112° (B. 27, 527). — III, 654.
- $C_{19}H_{17}O_2N_2$ C 59,5 — H 4,4 — O 25,1 — N 11,0 — M. G. 383.
- 1) Aethyl ester d. α -Cyan- $\beta\beta$ -Di[2-Nitrophenyl]isobuttersäure. Sm. 81° (B. 29, 638).
- $C_{19}H_{17}O_2N$ C 61,4 — H 4,6 — O 30,2 — N 3,8 — M. G. 371.
- 1) Normarkotin (A. Spl. 7, 59, 62). — III, 916.
- 2) Triacetat d. α -Oximido-2,3,4[oder 3,4,5]-Trioxydiphenylmethan. Sm. 135° (A. 269, 303). — III, 202.
- 3) Phenylamid d. 3,4,5-Triacetoxybenzol-1-Carbonsäure. Sm. 161 bis 162° (A. 272, 206; B. [3] 9, 847). — II, 1923.
- $C_{19}H_{17}O_{12}N_2$ C 45,0 — H 3,4 — O 37,8 — N 13,8 — M. G. 507.
- 1) Diäthylester d. 2,4,6-Trinitro-3-Phenylamidophenylnitromethandicarbonsäure. Sm. 119° u. Zers. (Am. 14, 342). — II, 1842.
- $C_{19}H_{17}O_{12}N$ C 48,8 — H 3,6 — O 44,5 — N 3,0 — M. G. 467.
- 1) Nitrosuxanthinsäure. Pb (J. pr. [1] 37, 392). — II, 2103.
- $C_{19}H_{17}NBr_2$ 1) Triphenylmethylamindibromid (B. 17, 750). — II, 641.
- $C_{19}H_{17}NJ_2$ 1) Triphenylmethylamindijodid (B. 17, 749). — II, 641.
- $C_{19}H_{17}N_2Cl$ 1) α -Chlor-4,4'-Diamidotriphenylmethan (A. 217, 245). — II, 1084.
- $C_{19}H_{17}N_2P$ 1) Phenylbenzylhydrazonphenylphosphin. Sm. 141° (A. 270, 132). — IV, 1647.
- $C_{19}H_{17}N_2S$ 1) α -Phenylamido- $\alpha\beta$ -Diphenylthioharnstoff. Sm. 173—174° (B. 25, 3115). — IV, 1496.
- 2) β -Diphenylamido- α -Phenylthioharnstoff. Sm. 181° (B. 25, 3113). — IV, 680.
- 3) α -Phenyl- β -[4-Biphenylamido]thioharnstoff. Sm. 182° (B. 27, 3106). IV, 970.
- $C_{19}H_{17}Cl_2P$ 1) Diphenylbenzylphosphindichlorid. Sm. 187° (B. 21, 1506). — IV, 1662.
- $C_{19}H_{17}SP$ 1) Diphenyl-4-Methylphenylphosphinsulfid. Sm. 139° (B. 21, 1512). — IV, 1671.
- $C_{19}H_{18}ON_2$ C 78,6 — H 6,2 — O 5,5 — N 9,7 — M. G. 290.
- 1) β -Diamido-2-Oxytriiphenylmethan (B. 16, 1307). — II, 904.
- 2) α -Oxy-4,4'-Diamidotriphenylmethan. Sm. unter 100°. HCl (B. 15, 234; A. 217, 241). — II, 1084.
- 3) α -Phenylhydrazon- α -[1-Oxy-2-Naphtyl]propan. Sm. 128° (J. pr. [2] 43, 96). — IV, 775.
- 4) 2-Naphtyläther d. β -Phenylhydrazon- α -Oxypropan. Sm. 154° (B. 28, 1254).
- 5) 2-Oxy-1-[2,4,5-Trimethylphenyl]azonaphtalin. Sm. 163—164° (Soc. 63, 934). — IV, 1438.
- 6) Aethyläther d. 4-Oxy-1-[2-Methylphenyl]azonaphtalin. Sm. 94° (B. 19, 2488). — IV, 1435.
- 7) Aethyläther d. 4-Oxy-1-[4-Methylphenyl]azonaphtalin. Sm. 126 bis 127° (B. 19, 2487; 27, 2353). — IV, 1435.
- 8) 6-Oxy-4-Phenyl-2-[4-Isopropylphenyl]-1,3-Diazin. Sm. 227° (B. 30, 2008). — IV, 1045.
- 9) 6-Oxy-4-Methyl-2,5-Dibenzyl-1,3-Diazin. Sm. 192° (B. 22, 1623). — IV, 1044.
- 10) 6-Oxy-4-Methyl-2-[4-Methylphenyl]-5-Benzyl-1,3-Diazin. Sm. 240° (B. 23, 3826). — IV, 1045.
- 11) 2-Oxy-1-Aethyl-3-Phenyl-1,2-Dihydro- α -Naphtimidazol. Sm. 161° (2HCl, PtCl) (B. 27, 2776). — IV, 978.
- 12) Phenylimid d. Phenylacetylamidopropan- $\alpha\beta$ -Dicarbonsäure. Sm. 168—169° (A. 261, 145). — II, 440.
- $C_{19}H_{18}ON_4$ C 71,7 — H 5,7 — O 5,0 — N 17,6 — M. G. 318.
- 1) Benzoldiazo-4-Nitrosophenyl-4-Tolylamin. Sm. bei 125° u. Zers. (A. 255, 165). — IV, 798.
- $C_{19}H_{18}OBr_2$ 1) Verbindung (aus Isoamyloxanthranol). Sm. 120° u. Zers. (A. 212, 95). — III, 244.
- $C_{19}H_{18}OBr_4$ 1) $\alpha\beta\delta\epsilon$ -Tetrabrom- γ -Keto- $\alpha\epsilon$ -Diphenyl- $\beta\delta$ -Dimethylpentan. Sm. bei 180° u. Zers. (B. 31, 1888).
- $C_{19}H_{18}O_2N_2$ C 74,5 — H 5,9 — O 10,4 — N 9,1 — M. G. 306.
- 1) Methylenäther d. ϵ -Phenylhydrazon- α -[3,4-Dioxyphenyl]- $\alpha\gamma$ -Hexadien. Sm. 141° (B. 28, 1193). — IV, 775.

- $C_{10}H_{10}O_2N_2$ 2) **Aethylester d. 5-Methyl-1,3-Diphenylpyrazol-4-Carbonsäure.** Sm. 110° (B. 18, 932). — IV, 949.
 3) **Aethylester d. 3-Methyl-1,5-Diphenylpyrazol-4-Carbonsäure.** Sm. 121—122° (B. 18, 312). — IV, 948.
- $C_{10}H_{10}O_2Br_2$ 1) **p-Dibrom-2,6-Diphenyl-3,5-Dimethyltetrahydro-1,4-Pyron.** Sm. 144° u. Zers. (B. 29, 1353). — III, 239.
- $C_{10}H_{10}O_2N_2$ C 70,8 — H 5,6 — O 14,9 — N 8,7 — M. G. 322.
 1) **Dehydrodiacetylphenolphenylhydrazon.** Sm. 213° (B. 25, 1298). — IV, 772.
 2) **Aethylester d. 5-Keto-3-Benzyl-1-Phenyl-4,5-Dihydropyrazol-4-Carbonsäure.** Sm. 124—127° (B. 29, 1990). — IV, 718.
 3) **Aethylester d. 5-Keto-4-Benzyl-1-Phenyl-4,5-Dihydropyrazol-3-Carbonsäure.** Sm. 194° (B. 31, 556). — IV, 949.
- $C_{10}H_{10}O_2N_4$ C 65,1 — H 5,1 — O 13,7 — N 16,1 — M. G. 350.
 1) **$\alpha\gamma$ -Di[Acetylphenylhydrazon]- γ -Ketopropan.** Sm. 167—168° u. Zers. (B. 27, 220). — IV, 762.
- $C_{10}H_{10}O_2Br_4$ 1) **Dimethyläther d. $\alpha\beta\delta\epsilon$ -Tetrabrom- γ -Keto- $\alpha\epsilon$ -Di[2-Oxyphenyl]pentan.** Sm. 197° (B. 31, 1511; J. pr. [2] 60, 148).
- $C_{10}H_{10}O_2N_2$ C 67,4 — H 5,3 — O 18,9 — N 8,3 — M. G. 338.
 1) **4[oder 5]-Oximido-5[oder 4]-Keto-1,2-Diphenyltetrahydropyrrrol-3-Carbonsäure.** 2 isom. Formen. Sm. 110° u. 224° (B. 30, 603). — IV, 368.
- $C_{10}H_{10}O_2Br_2$ 1) **4-Aethyläther-2-Acetat d. $\alpha\beta$ -Dibrom- γ -Keto- γ -[2,4-Dioxyphenyl]- α -Phenylpropan.** Sm. 118—119° (B. 31, 698).
- $C_{10}H_{10}O_2S_2$ C 67,4 — H 5,3 — O 18,9 — N 8,3 — M. G. 338.
 1) **β -Phenylsulfon- α -[2-Naphtylsulfon]propan.** Sm. 123° (J. pr. [2] 53, 498).
- $C_{10}H_{10}O_2N_2$ C 64,4 — H 5,1 — O 22,6 — N 7,9 — M. G. 354.
 1) **α -[3-Methylphenyl]amido- α -[3-Methylphenyl]imido- β -Ketopropan-6',6''-Dicarbonsäure (Pyrotraubenmetadihomooanthranilsäure).** Sm. 230° u. Zers. (B. 30, 1192).
- $C_{10}H_{10}O_2N_2$ C 61,6 — H 4,9 — O 25,9 — N 7,6 — M. G. 370.
 1) **$\alpha\gamma$ -Di[Benzoylamido]propan-2,2'-Dicarbonsäure (Trimethylenphthalamidsäure).** Ag₂ (B. 21, 2670). — II, 1798.
 2) **Di[4-Acetoxyphenylamid] d. Methandicarbonsäure.** Sm. bei 210° (G. 25 [2] 538).
- $C_{10}H_{10}O_2Br_2$ 1) **Dibrompinoresinoldibromid.** Sm. 254° (M. 18, 492).
- $C_{10}H_{10}O_2N_2$ C 59,1 — H 4,7 — O 29,0 — N 7,2 — M. G. 386.
 1) **$\alpha\gamma$ -Di[Benzoylamido]- β -Oxypropan-2,2'-Dicarbonsäure (β -Oxytrimethylendiphtalamidsäure).** Sm. 120° (u. 205°). 2 HCl, Ag₂ (B. 21, 2690). — II, 1798.
- $C_{10}H_{10}O_2N_4$ C 55,1 — H 4,3 — O 27,1 — N 13,5 — M. G. 414.
 1) **Carboxamidohippursäure.** Ba (J. pr. [2] 1, 235). — II, 1188.
- $C_{10}H_{10}O_2Cl_2$ 1) **Verbindung (aus Hanf) (Soc. 43, 19; 55, 204; B. 26, 2525).** — I, 1080.
- $C_{10}H_{10}O_2N_4$ C 49,3 — H 3,9 — O 34,6 — N 12,1 — M. G. 462.
 1) **Diäthylester d. 2,4,6-Trinitro-3-Phenylamidophenylmethandicarbonsäure.** Sm. 133° (Am. 14, 354). — II, 1842.
- $C_{10}H_{10}O_2N_4$ C 47,7 — H 3,8 — O 36,8 — N 11,7 — M. G. 478.
 1) **Diäthylester d. α -Oxy- α -[β -Trinitro- β -Amidophenyl]methan- $\alpha\alpha$ -Dicarbonsäure. α -Modif. Sm. 143°; β -Modif. Sm. 122°. Na₂, K (Am. 14, 347). — II, 1947.**
- $C_{10}H_{10}N_2Cl_2$ 1) **Verbindung (Base aus 4-Amido-1-Methylbenzol).** Acetat (B. 23, 1483). — II, 511.
- $C_{10}H_{10}N_2Br_2$ 1) **Dehydrocinchendibromid.** (2HCl, PtCl₄) (B. 25, 1549). — III, 840.
- $C_{10}H_{10}N_2S_2$ 1) **s-[4-Aethylphenyl]-1-Naphtylthioharnstoff.** Sm. 148° (B. 16, 2023). — II, 610.
 2) **s-[4-Aethylphenyl]-2-Naphtylthioharnstoff.** Sm. 158—159° (B. 16, 2022). — II, 619.
- $C_{10}H_{10}N_2Cl$ 1) **Chlormethylat d. 3-Methyl-2-Phenyl-2,3-Dihydro-1,2,4-Naphtisotriazin.** 2 + PtCl₄ (B. 24, 1006). — IV, 1393.
- $C_{10}H_{10}N_2J$ 1) **Jodmethylat d. 3-Methyl-2-Phenyl-2,3-Dihydro-1,2,4-Naphtisotriazin.** Sm. 244° (B. 24, 1006). — IV, 1393.
- $C_{10}H_{10}ClP$ 1) **Methyltriphenylphosphoniumchlorid + H₂O.** Sm. 212—213° (wasserfrei). 2 + PtCl₄ (A. 229, 310; B. 27, 273). — IV, 1660.

- C₁₉H₁₉JP** 1) Methyltriphenylphosphoniumjodid. Sm. 182—183° (A. 229, 310). — IV, 1660.
- C₁₉H₁₉ON** C 82,3 — H 6,8 — O 5,8 — N 5,1 — M. G. 277.
- 1) γ -Oximido- $\alpha\alpha$ -Diphenyl- $\beta\beta$ -Dimethyl- $\alpha\delta$ -Pentadien. Sm. 157—159° (B. 31, 1888).
- 2) 6-[4-Methylphenyl]amido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol. Sm. 215° (A. 294, 307).
- 3) Acetylderivat d. 2-Methylen-1,3-Dimethyl-3-Phenyl-2,3-Dihydroindol. Sm. 142° (J. 28 [2] 397).
- 4) Benzoyltrimethyldihydrochinolin. Sm. 137—138° (G. 28 [1] 193).
- 5) Apocinchen. Sm. 209—210°. HCl. (2HCl, PtCl₄), HBr, HJ (B. 14, 1855; 18, 1226; 20, 2675; 27, 903). — III, 837.
- 6) Base (aus Dimethylcinchoninjodmethylat). (2HCl, PtCl₄) (A. 277, 288). — III, 833.
- C₁₉H₁₉ON₂** C 74,7 — H 6,2 — O 5,2 — N 13,8 — M. G. 305.
- 1) α -Oxytri[4-Amidophenyl]methan (p-Rosanilin). Chlorid, Jodid, Sulfat + 3H₂O (A. 194, 274; A. ch. [5] 8, 192; B. [3] 9, 690; B. 15, 678; 17, 2936; 18, 997; 19, 110; 26, 1789; 28, 521, 1696, 1703, 1705; M. 17, 5). — II, 1087.
- C₁₉H₁₉ON₃** C 68,5 — H 5,7 — O 4,8 — N 21,0 — M. G. 333.
- 1) 5-[2-Amido-1-Naphtyl]azo-4-Methylnitrosamido-1,3-Dimethylbenzol. Sm. 184° (B. 31, 2933). — IV, 1400.
- C₁₉H₁₉OCl** 1) Verbindung (aus Isoamyloxanthranol). Sm. 85° (B. 14, 459, 798; A. 212, 88). — III, 244.
- C₁₉H₁₉O₂N** C 77,8 — H 6,5 — O 10,9 — N 4,8 — M. G. 293.
- 1) Apocinchen. Sm. 246°. HBr (B. 18, 1226; 20, 2686; 23, 2671). — III, 817.
- 2) Oxyapocinchen. Sm. 267° (B. 14, 1858; 18, 2385; 20, 2685). — III, 838.
- 3) Ditamin. Sm. 75°. (2HCl, PtCl₄) (A. 178, 56; 203, 147). — III, 880.
- 4) α -Phenylbenzylamido- γ -Keto- β -Aethanoyl- α -Buten. Sm. 106° (A. 297, 69).
- 5) Methyläther d. 2-[4-Isopropylphenyl]-5-[4-Oxyphenyl]oxazol. Sm. 55°. HCl (B. 29, 2101). — IV, 445.
- C₁₉H₁₉O₂N₂** C 71,0 — H 5,9 — O 10,0 — N 13,1 — M. G. 321.
- 1) 1-Phenylhydrazon-5-Methyl-3-[3-Nitrophenyl]-1,2,3,4-Tetrahydrobenzol. Sm. 135—150° u. Zers. (A. 303, 235).
- 2) 1-Phenylhydrazon-5-Methyl-3-[4-Nitrophenyl]-1,2,3,4-Tetrahydrobenzol. Sm. 173° (A. 303, 239).
- 3) Benzocat d. 3-Oxy-5-Butyl-1-Phenyl-1,2,4-Triazol. Sm. 87—88° (B. 29, 1951). — IV, 1111.
- C₁₉H₁₉O₃N** C 73,8 — H 6,1 — O 15,5 — N 4,5 — M. G. 309.
- 1) Galipidin. Sm. 182°. HCl + 3H₂O, (2HCl, PtCl₄), (HCl, AuCl₃), HBr (B. 25 [2] 201). — III, 778.
- 2) Acetylapomorphin. HCl + H₂O, (2HCl, PtCl₄ + 4H₂O). — III, 901.
- C₁₉H₁₉O₄N** C 70,2 — H 5,8 — O 19,7 — N 4,3 — M. G. 325.
- 1) Bulbocapnin. Sm. 199°. HCl, (2HCl, PtCl₄), HBr, HJ, HNO₃, H₂SO₄ + 2H₂O (A. 277, 10; C. 1896 [2] 793; M. 18, 385). — III, 877.
- 2) Naudinin. (2HCl, PtCl₄) (R. 3, 196). — III, 894.
- 3) Acetylmorphothebain. Sm. 183° (B. 17, 531). — III, 910.
- 4) 2,3,4,5-Tetraacetyl-1-[4-Methylphenyl]pyrrol (B. 14, 935). — IV, 67.
- 5) 4-Oximido-1-Oxy-1,2-Diphenyl-R-Pentamethylen-3-Methylcarbonensäure. Sm. 122—123° u. Zers. K, Ag (Soc. 71, 149).
- 6) 1,2-Lakton d. 3,4-Dioxy-1-1,2,3,4-Tetrahydro-1-Chinolin[oxymethylbenzol-3,4-Dimethyläther-2-Carbonensäure (Opiansäuretrihydrochinolid)]. Sm. 180° (B. 29, 182). — IV, 195.
- C₁₉H₁₉O₄N₂** C 64,6 — H 5,4 — O 18,1 — N 11,9 — M. G. 353.
- 1) Aethylester d. β -[2-(4-Nitrobenzyliden)amidophenyl]imidobuttersäure. Sm. 99° (B. 29, 1501). — IV, 563.
- C₁₉H₁₉O₄Br** 1) $\alpha\gamma$ -Lakton d. β -Brom- α -Oxy- $\alpha\delta$ -Di[4-Methoxyphenyl]butan- γ -Carbonensäure (Dianisylbrompentalakton). Sm. 136° (A. 255, 306). — II, 1971.
- C₁₉H₁₉O₅N** C 66,9 — H 5,5 — O 23,5 — N 4,1 — M. G. 341.
- 1) Benzoylcotarnin + $\frac{1}{2}$ H₂O. Sm. 122—123° (A. 254, 335). — III, 917.

- C₁₀H₉O₆N** C 63,9 — H 5,3 — O 26,9 — N 3,9 — M. G. 357.
- C₁₀H₉O₆Br** 1) Verbindung (aus 1,4-Dioxybenzol u. CHN) (*B.* 19, 1008). — II, 939.
- C₁₀H₁₀O₆N₂** 1) Diäthylester d. 3-Brom-1,4,6-Trimethylisobenzodifuran-2,5-Dicarbonsäure (*A.* 283, 267).
- C₁₀H₁₀O₆N₂** C 54,7 — H 4,5 — O 30,7 — N 10,1 — M. G. 417.
- 1) Diäthylester d. 4,6-Dinitro-3-Phenylamidophenylmethandicarbon-säure. Sm. 118°. Na (*Am.* 11, 102). — II, 1841.
- C₁₀H₁₀N₂Cl** 1) Dehydrocinchoninchlorid. Sm. 148—149° (*B.* 19, 2857). — III, 839.
- 2) Verbindung (Base aus 4-Amido-1-Methylbenzol). Sm. 135°. HCl, Di-acetat (*B.* 23, 1480). — II, 511.
- C₁₀H₁₀N₂S** 1) α -[4-Methylphenyl]- β -[2,4-Dimethyl-5- oder 7-Chinoly]thioharnstoff. Sm. 142° (*A.* 274, 372). — IV, 938.
- C₁₀H₁₀ON₂** C 78,0 — H 6,8 — O 5,5 — N 9,6 — M. G. 292.
- 1) Äthyläther d. 4-Amido-3-[4-Methylphenyl]amido-1-Oxynaphtalin. Sm. 118—119° (*B.* 27, 2354).
- 2) Äthyläther d. 5-Oxy-3-Phenyl-6,7,8,9-Tetrahydro- α -Naptimidazol. Sm. 139° (*B.* 31, 902).
- 3) Dehydrocinchonin. Sm. 202—203°. HBr (*B.* 19, 2856). — III, 839.
- 4) Oxycinehon. Sm. 100—110°. (2HCl, PtCl₄) (*B.* 23, 2670). — III, 837.
- 5) Verbindung (aus Anilin, Brenztraubensäure u. Isobuttersäurealdehyd). Sm. 222° (*A.* 242, 275). — IV, 358.
- 6) Verbindung (aus 4-Amido-1-Methylbenzol u. Brenztraubensäure). Sm. 238° (*B.* 17, 998). — II, 501.
- C₁₀H₁₀ON₄** C 71,3 — H 6,2 — O 5,0 — N 17,5 — M. G. 320.
- 1) Verbindung (aus 2,6-Dimethyl-1,4-Pyron-3-Carbonsäure). Sm. 140—142° (*A.* 257, 294). — II, 1757.
- C₁₀H₁₀O₂N₂** C 74,0 — H 6,5 — O 10,4 — N 9,1 — M. G. 308.
- 1) 1,4-Dibenzoyl-2-Methylhexahydro-1,4-Diazin + 2H₂O. Sm. 146 bis 147° (wasserfrei) (*J. pr.* [2] 51, 476). — IV, 481.
- 2) 4-Acetylamido-3-Methyl-6-Isopropyl-1-Phenylbenzoxazol. Sm. 207 bis 208° (*G.* 25 [2] 403).
- 3) 4,5-Dimethyl-1,3-Diphenyl-4,5-Dihydropyrazol-5-Methylcarbon-säure. Sm. 169—170° (*G.* 29 [1] 8).
- 4) Phenylamid d. cis-R-Pentamethylen-1,3-Dicarbon-säure. Sm. 222 bis 224° (*B.* 31, 1957).
- 5) β -[2,4,5-Trimethylphenyl]amidoäthylimid d. Benzol-1,2-Dicarbon-säure. Sm. 143° (*B.* 24, 2198). — II, 1800.
- 6) γ -[4-Methylphenyl]methylamidopropylimid d. Benzol-1,2-Dicarbon-säure. Sm. 125° (*B.* 30, 2505).
- C₁₀H₁₀O₂N₄** C 67,8 — H 6,0 — O 9,5 — N 16,7 — M. G. 336.
- 1) Ketobisphenylhydrazid d. β -Acetylpropan- $\alpha\gamma$ -Dicarbon-säure. Sm. 222—223° (*A.* 295, 121). — IV, 715.
- 2) Anhydrodi[Phenylhydrazid] d. Hydrochelidonsäure. Sm. noch nicht bei 290° (*A.* 256, 330; 267, 96). — IV, 714.
- C₁₀H₁₀O₃N₂** C 70,4 — H 6,2 — O 14,8 — N 8,6 — M. G. 324.
- 1) Di[3-Acetylamido-4-Methylphenyl]keton. Sm. 196—197° (*A.* 271, 7). — III, 232.
- 2) γ -Benzolat d. β -Benzoylamido- γ -Oximido- β -Methylbutan. Sm. 142 bis 143° (*A.* 262, 332). — II, 1194.
- 3) s-Diphenyldiamid d. Hydrochelidonsäure. Sm. 186—187° (*A.* 267, 67). — II, 420.
- C₁₀H₁₀O₃N₄** C 64,8 — H 5,7 — O 13,6 — N 15,9 — M. G. 352.
- 1) Dinitrosooicinchotoxin. Sm. 198—199° u. Zers. (*B.* 28, 1070). — III, 846.
- C₁₀H₁₀O₄N₂** C 67,1 — H 5,9 — O 18,8 — N 8,2 — M. G. 340.
- 1) Ornithursäure (Dibenzoylamidovaleriansäure?). Sm. 182° (184°). Ca, Ba (*B.* 10, 1925; 11, 406; 30, 2880; *H.* 26, 4). — II, 2111.
- 2) $\alpha\alpha$ -Di[Phenylacetylamido]propionsäure. Sm. 145° (*B.* 14, 1600). — II, 1313.
- 3) α ,2-Lakton d. α -Oxy- γ -Phenylhydrazon- α -[3,4-Dioxyphenyl]butan-3,4-Dimethyläther-2-Carbon-säure. Sm. 159—160° (*M.* 14, 395). — II, 2008.
- 4) Acetat d. 2-Acetylamido-1-[2-Oxybenzyl]acetylamidobenzol. Sm. 133° (*B.* 28, 935). — IV, 556.

- C₁₉H₂₀O₄N₂** 5) β -Phenylmonamid d. β -Phenylacetylamidopropan- $\alpha\beta$ -Dicarbonsäure + H₂O. Sm. 140—141° (A. 261, 148). — II, 439.
- C₁₉H₂₀O₄N₃** 1) Di[3-Nitrobenzylidenamido]pentamethylendiamin. Sm. 134° (A. 288, 235). — III, 32.
- C₁₉H₂₀O₅N₂** C 64,0 — H 5,6 — O 22,5 — N 7,9 — M. G. 356.
- 1) Nitrocodein. (2HCl, PtCl₄ + 4H₂O), H₂SO₄ (A. 77, 358). — III, 903.
- 2) Oxim d. Benzoylcotarnin. Sm. 165—166° (A. 254, 336). — III, 917.
- 3) Diäthylester d. *s*-Diphenylharnstoff-3,3'-Dicarbonsäure. Sm. 160,5° (162°) (J. pr. [2] 4, 294; B. 11, 702). — II, 1260.
- 4) Di[4-Propionylamidophenylester] d. Kohlensäure. Sm. 180° (C. 1897 [1] 469).
- C₁₉H₂₀O₆N₂** C 59,4 — H 5,2 — O 20,8 — N 14,6 — M. G. 384.
- 1) Verbindung (aus 2-Nitrobenzaldehyd u. Acetessigsäureäthylester). Sm. 189°. HCl, (2HCl, PtCl₄) (B. 20, 1341). — IV, 370.
- 2) isom. Verbindung (aus 2-Nitrobenzaldehyd u. Acetessigsäureäthylester). Sm. 192° (B. 20, 1343). — IV, 370.
- C₁₉H₂₀O₆N₃** C 61,3 — H 5,4 — O 25,8 — N 7,5 — M. G. 372.
- 1) 3-Nitro- α -Oxybenzylhydrocotarnin. Sm. 170—171°. (2HCl, PtCl₄) (B. 31, 2100).
- 2) Diäthylester d. 2,6-Dimethyl-4-[3-Nitrophenyl]pyridin-3,5-Dicarbonsäure. Sm. 65°. (2HCl, PtCl₄), Nitrat (B. 20, 1339). — IV, 386.
- C₁₉H₂₀O₇N₂** C 58,7 — H 5,2 — O 28,9 — N 7,2 — M. G. 388.
- 1) Noryohimbinsäure (C. 1899 [1] 529).
- 2) Carbonat d. 4-Oxyphenylamidoameisensäure. Sm. 184° (C. 1897 [1] 469).
- C₁₉H₂₀O₈N₂** C 47,9 — H 4,2 — O 30,2 — N 17,6 — M. G. 476.
- 1) Tetranitrohydrocinchonin (J. pr. [2] 8, 300). — III, 836.
- C₁₉H₂₀N₂Br** 1) Cinchenbromid. α -Modif. Sm. 115°; β -Modif. Sm. 133—134° (B. 19, 2858; 20, 2512). — III, 837.
- C₁₉H₂₀N₃J** 1) Jodäthylat d. 6-Phenylamido-4-Methyl-2-Phenyl-1,3-Diazin + H₂O. Sm. 215° u. Zers. (Am. 20, 487). — IV, 1163.
- C₁₉H₂₁O₇N** C 77,3 — H 7,1 — O 10,8 — N 4,7 — M. G. 295.
- 1) Benzoesat d. 3-Dimethylamido-2-Oxy-1,2,3,4-Tetrahydronaphthalin. Fl. HCl (A. 288, 120).
- 2) Aldehyd d. β -[2,4-Dimethylphenyl]benzoylamidobuttersäure. Sm. 157° (B. 29, 1469).
- 3) $\beta\gamma$ -Diphenyl-norm.-Propylimid d. Essigsäure. Sm. 85° (B. 23, 2863). — II, 637.
- C₁₉H₂₁O₇N₂** C 70,6 — H 6,5 — O 9,9 — N 13,0 — M. G. 323.
- 1) Nitrosocinchotoxin. Sm. 98° (B. 28, 1069). — III, 846.
- C₁₉H₂₁O₈N** C 73,3 — H 6,7 — O 15,4 — N 4,5 — M. G. 311.
- 1) α -Oxyacanthin. Sm. 208—214° (202—204°) wasserfrei. HCl + 2H₂O, (2HCl, PtCl₄ + 5[6]H₂O), (HCl, AuCl₃ + 4H₂O), HBr + 2H₂O, HJ + 2H₂O, HNO₃, H₂SO₄ + 2(4 u. 6)H₂O (J. 1861, 545; B. 19, 3190; 28 [2] 614; C. 1895 [1] 924). — III, 803.
- 2) β -Oxyacanthin (B. 19, 3192). — III, 803.
- 3) Protocuridin. Sm. 274—276°. (2HCl, PtCl₄) (C. 1897 [2] 1079).
- 4) Thebain. Sm. 193°. Salze meist bek. (A. 66, 184; 153, 61; 176, 196; B. 13, 1074; 27, 2961; 28, 941; 30, 1374; J. 1866, 823; 1867, 525; A. Spl. 8, 264; Soc. 29, 652). — III, 909.
- 5) Thebenin, siehe C₁₈H₁₉O₃N. — III, 910.
- 6) Methyläther d. Thebenin (Methebenin). HCl, HJ (B. 32, 179).
- 7) Äthylester d. α -Phenylamido- γ -Oxy- α -Phenyl- β -Buten- β -Carbonsäure. Sm. 103—104° (B. 30, 601; 31, 207, 602, 1967).
- 8) Äthylester d. α -Phenylamido- γ -Keto- α -Phenylbutan- β -Carbonsäure. Sm. 78° (B. 30, 601; 31, 207, 602, 1967).
- 9) Äthylester d. 1-Benzoyl-2,4,5-Trimethylphenyl- β -Amidoameisensäure. Sm. 105° (B. 17, 2675). — III, 236.
- C₁₉H₂₁O₈N** C 69,7 — H 6,4 — O 19,6 — N 4,3 — M. G. 327.
- 1) Tubocurarin. (2HCl, PtCl₄) (C. 1895 [2] 1086).
- 2) Acetylmorphin. α -Modif. + 2H₂O Sm. 187°; β -Modif. amorph. HCl + 3H₂O, (2HCl, PtCl₄) (Soc. 27, 1038; 28, 315). — III, 899.
- 3) Oxybenzylhydrocotarnin. Sm. 240° u. Zers. (B. 29, 2045). — III, 909.

- C₁₀H₁₁O₂N** 4) Diacetat d. 5-Aethyl-2-[α - β -Dioxy- β -Phenyläthyl]pyridin. Sd. 315 bis 320° u. Zers. (B. 22, 1059). — IV, 398.
5) Dibenzolat d. γ -Dimethylamido- α - β -Dioxypropan. Fl. Pikrat (B. 15, 1154). — II, 1441.
- C₁₀H₁₁O₂N** 6) Diäthylester d. 2,6-Dimethyl-4-Phenylpyridin-3,5-Dicarbonensäure. Sm. 66–67° (B. 16, 1608). — IV, 386.
C 66,5 — H 6,1 — O 23,3 — N 4,1 — M. G. 343.
1) Trimethylcolchicinsäure + 2H₂O. Sm. 159°. + 2CH₄O, HCl + 1/4 H₂O, (2HCl, PtCl₄ + 2H₂O) (M. 9, 10, 875). — III, 874.
2) Methylester d. Morphincarbonensäure. Sm. 116°. H₂SO₄ (B. 25 [2] 202). — III, 900.
3) Diäthylester d. 2,6-Dimethyl-4-[3-Oxyphenyl]pyridin-3,5-Dicarbonensäure. Sm. 174° (G. 17, 465). — IV, 387.
4) Diäthylester d. 4-Keto-2,6-Dimethyl-1-Phenyl-1,4-Dihydropyridin-3,5-Dicarbonensäure. Sm. 170–171°. (2HCl, PtCl₄) (B. 19, 25). — II, 2005.
- C₁₀H₁₁O₂Cl** 1) Diäthylester d. 1-Keto-5-Methyl-3-[4-Chlorphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonensäure. Sm. 100–101° (A. 303, 255).
- C₁₀H₁₁O₂N** C 63,5 — H 5,8 — O 26,7 — N 3,9 — M. G. 359.
1) Helicinmonanlid + H₂O (A. 154, 31). — III, 69.
2) Diäthylester d. 6-Oxy-2-Keto-1-Phenyl-1,2-Dihydropyridinäthyläther-3,5-Dicarbonensäure. Sm. 115° (A. 285, 119).
- C₁₀H₁₁O₂N** C 56,0 — H 5,2 — O 35,4 — N 3,4 — M. G. 407.
1) Benzylnitroarbutin + H₂O. Sm. 142–143° u. Zers. (A. 221, 370). — III, 572.
- C₁₀H₁₁O₁₁N** C 49,0 — H 4,6 — O 42,2 — N 4,1 — M. G. 455.
1) Corydalinsäure + 3H₂O. Sm. 175–180° u. Zers. (wasserfrei). K₂, Ba₂, Pb₂, Ag₂, Ag₂ (Soc. 65, 58; 67, 21). — III, 876.
- C₁₀H₁₁N₂Cl** 1) Cinchoninchlorid. Sm. 72° (B. 13, 287; 14, 103, 1854; 17, 1985; 18, 2379; 25, 1545; J. 1881, 937). — III, 836.
2) Cinchonidinchlorid. Sm. 108–109° (B. 17, 1986). — III, 852.
- C₁₀H₁₁N₂Br** 1) Hydrobromcinchen. Sm. 105–116° (B. 20, 2522). — III, 817.
- C₁₀H₁₁N₂Cl** 1) Verbindung (aus α -Oxytri[4-Amidophenyl]methan) (Bl. [3] 9, 690). — II, 1087.
- C₁₀H₁₁N₂Br** 1) Verbindung (aus α -Oxytri[4-Amidophenyl]methan) (Bl. [3] 9, 699). — II, 1087.
- C₁₀H₁₁N₂S₂** 1) α -Phenylmethylidithiomonobenzyl- α -Methylkuret. Sm. 85° (B. 28, 1108).
2) 4,4'-Biphenylenamid d. Amylimidodithioameisensäure. Sm. 148° (B. 27, 1559). — IV, 965.
- C₁₀H₁₂ON₂** C 77,5 — H 7,5 — O 5,4 — N 9,5 — M. G. 294.
1) Camphyloxyphenylpyrimidin. Sm. 140° (PINNER, Imidoäther 291). — IV, 1018.
2) 3-Keto-2-Methyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 117–118° (B. 25, 2937). — II, 507.
3) Cinchonin. Sm. 255,4°. Salze meist bek. Lit. bedeutend. — III, 828.
4) β -Cinchonin. (2HCl, PtCl₄), 2HJ, 3HJ, H₂SO₄ + 2H₂O (M. 13, 680; B. 28, 1426). — III, 848.
5) γ -Cinchonin. Sm. 235–236°. (2HCl, PtCl₄), H₂SO₄ (M. 13, 688). — III, 848.
6) δ -Cinchonin. Sm. 150° (144°). HCl + 1/2 H₂O (C. r. 118, 29; M. 19, 467, 472).
7) ϵ -Cinchonin. Sm. 151,5–152°. HCl (M. 19, 467, 473).
8) α -Isocinchonin. Sm. 126°. HCl + 3(2)H₂O, (2HCl, PtCl₄ + 2H₂O), 2HJ, Rhodanat (A. 276, 91; B. 20, 2521; 28, 1426; M. 13, 676; 19, 466, 472). — III, 846.
9) β -Isocinchonin. Sm. 125°. Salze meist bek. (A. 216, 213; 260, 216; 276, 97; J. 1888, 2286; Bl. 49, 747; M. 13, 687; B. 28, 1421; 31, 2360). — III, 846.
10) Allocinchonin. Sm. 214–216°. (2HCl, PtCl₄), 2HJ + 2H₂O, H₂SO₄ (B. 26, 2005; 31, 2360; M. 14, 371). — III, 847.
11) Apocinchonin. Sm. 228°. HCl + 2H₂O, (2HCl, PtCl₄ + 2H₂O), HClO₄, HClO₄ + H₂O, HBr + H₂O, HJ, H₂SO₄ + 3H₂O, Oxalat + 2H₂O (A. 205, 330; 276, 115; B. 16, 384; R. 1, 175). — III, 844.

- C₁₁H₂₁ON₂**
- 12) **Apoisocinchonin.** Sm. 216°. (2HCl, PtCl₄ + 2H₂O), 2HJ, H₂SO₄ + 2H₂O (A. 276, 99; B. 31, 2360; M. 19, 467, 475). — III, 847.
 - 13) **Isapocinchonin.** Sm. 232—234°. (2HCl, PtCl₄), H₂SO₄ + 2H₂O (A. 276, 116). — III, 847.
 - 14) **Diapocinchonin.** (2HCl, PtCl₄ + 2H₂O), Oxalat (A. 205, 333; 276, 118). — III, 845.
 - 15) **Homocinchonin.** Sm. 251°. HCl + 2H₂O, 2HCl (2HCl, PtCl₄ + 2H₂O), H₂SO₄ + 2H₂O (A. 243, 149; 276, 103). — III, 848.
 - 16) **Pseudocinchonin.** Sm. 252°. HCl + H₂O, 2HCl (2HCl, PtCl₄ + 2H₂O), 2HJ, H₂SO₄ + 3H₂O (A. 276, 106; M. 19, 481). — III, 847.
 - 17) **Tautocinchonin.** Sm. 252,5°. 2HJ, H₂SO₄ + 2H₂O (M. 19, 463, 468).
 - 18) **Apochinamin.** Sm. 114°. HCl + 1¹/₂ H₂O, (2HCl, PtCl₄ + 2H₂O), HNO₃, H₂SO₄ + 2H₂O, Oxalat + H₂O, Tartrat + xH₂O (A. 207, 294). — III, 857.
 - 19) **Cinchonibin.** Sm. bei 259°. (2HCl, PtCl₄ + 1¹/₂ H₂O), Rhodanat, Oxalat, Succinat, Tartrat (Bl. 49, 747; J. 1888, 2287; A. 260, 222). — III, 848.
 - 20) **Cinchonin (Cinchotoxin).** Sm. 58—59° (49—50°). (2HCl, ZnCl₂ + 2H₂O), (2HCl, CdCl₂ + 2¹/₂ H₂O), (2HCl, PtCl₄ + H₂O), (3HCl, 2PtCl₄ + 4H₂O), HJ, Oxalat + 4H₂O, Ditartrat (J. 1853, 423, 473; Soc. 25, 102; A. 147, 242; 166, 277; 178, 253; 201, 333; B. 28, 1071; Bl. [3] 13, 1005). — III, 845.
 - 21) **Apocinchonin.** (2HCl, PtCl₄ + 2H₂O), Oxalat (A. 205, 331). — III, 845.
 - 22) **Cinchonidin.** Sm. 207,2° (202,4°). Salze meist bek. Lit. bedeutend. — III, 848.
 - 23) **β-Cinchonidin.** Sm. 244°. (2HCl, PtCl₄), 3HJ, Oxalat, Ditartrat, Pikrat (M. 13, 653). — III, 853.
 - 24) **γ-Cinchonidin.** Sm. 238°. (2HCl, PtCl₄), Ditartrat (M. 13, 659). — III, 853.
 - 25) **Isocinchonidin.** Sm. 235° (A. 243, 149). — III, 553.
 - 26) **Apocinchonidin.** Sm. 225° u. Zers. (2HCl, PtCl₄ + 2H₂O), Tartrat (A. 205, 327). — III, 853.
 - 27) **Homocinchonidin.** Sm. 207,6°. Salze meist bek. (A. 205, 203; 207, 310; 243, 148; 258, 140; B. 14, 46, 1890; M. 2, 343; Fr. 35, 134). — III, 854.
 - 28) **Cinchonin.** Sm. 273,6°. HCl + 2H₂O, Br + H₂O, HJ + H₂O, HNO₃ + H₂O, H₂SO₄ + 2H₂O, Succinat, Oxalat + H₂O, Tartrat + 1¹/₂ H₂O (Bl. 49, 747; B. 27 [2] 256). — III, 848.
 - 29) **Cinchonilin.** Sm. 130,4°. HCl + 3H₂O, (2HCl, PtCl₄ + H₂O), 2(HCl, AuCl₃) + H₂O, HBr + 3H₂O, HJ + H₂O, 2HJ, Rhodanat + H₂O (Bl. 49, 747; J. 1888, 2287). — III, 848.
 - 30) **Cinchotoxin (siehe Cinchonin).** Sm. 58—59° (B. 28, 1064). — III, 846.
- C₁₁H₁₇O₂N₂**
- C 73,6 — H 7,1 — O 10,3 — N 9,0 — M. G. 310.
- 1) **αβ-Di[Acetylphenylamido]propan.** Sm. 146—147° (B. 25, 3272). — II, 368.
 - 2) **Di[5-Acetylamido-2-Methylphenyl]methan.** Sm. 270° (B. 27, 3315). — IV, 984.
 - 3) **Di[4-Acetylamido-3-Methylphenyl]methan.** Sm. 198° u. Zers. (B. 27, 1811). — IV, 984.
 - 4) **αα-Di[Benzoylamido]pentan.** Sm. 129,5° (H. 13, 567; 16, 196). — II, 1170.
 - 5) **ββ-Di[Benzoylamido]pentan.** Sm. 189° (B. 31, 550).
 - 6) **isom. ββ-Di[Benzoylamido]pentan.** Sm. 189—190° (B. 31, 551).
 - 7) **d-αδ-Di[Benzoylamido]-β-Methylbutan.** Sm. 151—152° (Bl. [3] 17, 807).
 - 8) **αη-Dioximido-αη-Diphenylheptan.** Sm. 175—176° (Soc. 55, 347). — III, 301.
 - 9) **Phenylhydrason d. 3-Methyläther-4-Acetylmethyläther d. 3,4-Dioxy-1-Allylbenzol** (Ph. d. Acetonyleugenol). Sm. 93° (B. 27, 2465). — IV, 768.
 - 10) **Phenylhydrason d. 3-Methyläther-4-Acetylmethyläther d. 3,4-Dioxy-1-Propenylbenzol** (Ph. d. Acetonylisoeugenol). Sm. 145° (B. 27, 2466). — IV, 768.
 - 11) **p-Furfurtoluidin.** HCl, HNO₃ (A. 156, 203). — III, 723.

- $C_{19}H_{21}O_3N_2$ 12) Apochinin + $2H_2O$. Sm. 210° u. Zers. ($2HCl, PtCl_4$), $2HJ + H_2O$, Oxalat (A. 205, 323; 230, 65; B. 28, 1972; M. 16, 34). — III, 818.
- 13) Apoconchinin + $2H_2O$. Sm. 137° (wasserfrei). HCl , ($2HCl, PtCl_4 + 3H_2O$ (A. 205, 326). — III, 826.
- 14) Cuprein + $2H_2O$. Sm. 198° . Salze meist bek. (A. 230, 57; B. [3] 7, 305; R. 8, 147). — III, 821.
- 15) α -Oxycinchonin. Sm. 252° u. Zers. $HCl + H_2O$, ($2HCl, PtCl_4 + \frac{1}{2}H_2O$), ($HCl, AuCl_3 + H_2O$), $HBr + H_2O$, $HJ + H_2O$, Oxalat (B. 49, 748; J. 1889, 2019). — III, 840.
- 16) β -Oxycinchonin. Sm. 273° . $HCl + H_2O$, $2HCl + 3H_2O$, ($2HCl, CdCl_2 + 2H_2O$), ($2HCl, PtCl_4$), $HBr + H_2O$, $2HBr$, HJ , HNO_3 , $H_2SO_4 + 4H_2O$, Oxalat + H_2O , Succinat + $3H_2O$, Tartrat + H_2O (B. 49, 748; C. 1895 [1] 436; B. 28 [2] 61). — III, 840.
- 17) isom. Oxycinchonin. ($2HCl, PtCl_4$), H_2SO_4 (A. 108, 347; 123, 381). — III, 840.
- 18) isom. ρ -Oxycinchonin. Sm. 205° (J. 1876, 822). — III, 835.
- 19) Methylester d. 4,5-Camphyl-1-Phenylpyrazol-3-Carbonsäure. Sm. $80,5-81,5^\circ$ (Am. 20, 337).
- 20) Nitril d. β -Valeroxyl- α -[2-Cyanphenyl]- α -Hexen- α -Carbonsäure. Sm. $119-120^\circ$. + C_2H_6O (Sm. 153-154^a) (B. 30, 895).
- 21) Phenylamid d. Pentan- α -Dicarbonsäure. Sm. 155° (A. 205, 179).
- 22) Phenylamid d. β -Methylbutan- $\alpha\delta$ -Dicarbonsäure. Sm. $199-200^\circ$ (B. [3] 15, 228).
- 23) Verbindung (aus Furfurol u. Methylanilin). HCl (Sm. 94°) (A. 239, 354). — III, 723.
- 24) Base (aus Dihydrojodapoconchinin). Sm. 157° . ($2HCl, PtCl_4$) (M. 12, 675). — III, 826.
- $C_{19}H_{21}O_3N_2$
C 62,3 — H 6,0 — O 8,7 — N 23,0 — M. G. 366.
- 1) Di[2-Oxybenzylidenamido]- ρ -Pentamethylentetramin. Sm. 213° (A. 288, 234). — III, 72.
- $C_{19}H_{21}O_3S$
1) Diäthyläther d. Di[ρ -Oxy- ρ -Methylphenyl]thioketon. Sm. 117 bis 118° (B. 28, 2872). — III, 232.
- 2) Dipropyläther d. 4,4'-Dioxydiphenylthioketon. Sm. $105-106^\circ$ (B. 28, 2871). — III, 211.
- $C_{19}H_{21}O_3N_2$
C 69,9 — H 6,7 — O 14,7 — N 8,6 — M. G. 326.
- 1) Dioxycinchonidin. ($2HCl, PtCl_4$), H_2SO_4 , $H_2SO_4 + 2H_2O$ (A. 172, 104). — III, 852.
- 2) Äthyläther d. 6-[4-Acetylamidophenyl]acetylamido-3-Oxy-1-Methylbensol. Sm. 153° (A. 287, 158).
- 3) Äthyläther d. 2-Acetylamido-5-[4-Oxyphenyl]acetylamido-1-Methylbensol. Sm. $180-181^\circ$ (A. 287, 166).
- 4) Isoamylester d. Diphenylallophansäure. Sm. 58° (B. 4, 248). — II, 382.
- 5) α -Benzyl- β -Phenylhydrazid d. Bernsteinsäuremonoäthylester. Sm. 79° (B. 26, 678). — IV, 812.
- $C_{19}H_{21}O_3N_2$
C 66,7 — H 6,4 — O 18,7 — N 8,2 — M. G. 342.
- 1) $\alpha\alpha$ -Di[ρ -Nitrophenyl]heptan. Fl. (B. 47, 49). — II, 242.
- 2) Chitenin + $4H_2O$. Sm. 286° u. Zers. (wasserfrei). ($2HCl, PtCl_4 + 3H_2O$), $2HBr + 1(1\frac{1}{2})H_2O$, $2H_2SO_4 + 15H_2O$, Ag (A. 199, 352; Z. 1869, 594; M. 14, 598). — III, 319.
- 3) Chitenidin + $2H_2O$. Sm. 246° u. Zers. ($2HCl, PtCl_4 + 3H_2O$), $H_2SO_4 + 3H_2O$ (B. 15, 1659). — III, 826.
- 4) Diäthylester d. Di[Phenylamido]methan- $\alpha\alpha$ -Dicarbonsäure. Sm. $117-118^\circ$ (Am. 19, 695).
- 5) Diäthylester d. 2,6-Dimethyl-4-[3-Amidophenyl]pyridin-3,5-Dicarbonsäure. Sm. $109-110^\circ$. ($2HCl, PtCl_4 + H_2O$) (B. 20, 1340). — II, 387.
- 6) 4-Methylphenylamid d. Mesoxaläthyläthersäure (Am. 16, 382).
- 7) Di[4-Aethoxyphenylamid] d. Methandicarbonsäure. Sm. 233 bis 234° (226°) (G. 25 [2] 540; B. 31, 3257).
- 8) Verbindung (aus s -Diphenylharnstoff u. Acetessigsäureäthylester). Fl. (A. 233, 11). — II, 379.
- $C_{19}H_{21}O_3N_4$
C 54,1 — H 5,7 — O 20,7 — N 14,5 — M. G. 386.
- 1) Dinitrocinchonamin. Sm. 118° . ($2HCl, PtCl_4 + 3H_2O$) (A. 225, 227; A. ch. [6] 19, 119). — III, 929.

- C₁₀H₂₁O₅N₂** 2) Diäthylester d. *s*-Diphenylcarbasiddicarbonssäure. Sm. 158—159° (B. 32, 15).
C 61,0 — H 5,9 — O 25,6 — N 7,5 — M. G. 374.
- C₁₉H₂₇O₆N₂** 1) Helicinphenylhydrazon. Sm. 187° (B. 18, 1659). — IV, 759.
2) Diäthylester d. 2,6-Dimethyl-4-[2-Nitrophenyl]-1,4-Dihydropyridin-3,5-Dicarbonssäure. Sm. 119—120° (B. 20, 1341). — IV, 370.
3) Diäthylester d. 2,6-Dimethyl-4-[3-Nitrophenyl]-1,4-Dihydropyridin-3,5-Dicarbonssäure. Sm. 161° (B. 20, 1338). — IV, 371.
4) Diäthylester d. 2,6-Dimethyl-4-[4-Nitrophenyl]-1,4-Dihydropyridin-3,5-Dicarbonssäure. Sm. 118—122° (B. 20, 1340). — IV, 371.
C 54,5 — H 5,3 — O 26,8 — N 13,4 — M. G. 418.
- C₁₉H₂₃O₇N₄** 1) Verbindung (aus Harnstoff u. 2-Nitrobenzol-1-Carbonssäurealdehyd). Sm. 170° (M. 10, 305). — III, 33.
- C₁₀H₂₀O₂S₂** 1) Di[*p*-Trimethylphenyl]keton-*p*-Disulfonsäure (Dipseudocumylketondisulfonsäure). Bu (J. pr. [2] 47, 50). — III, 239.
- C₁₀H₁₁ON** C 81,1 — H 8,2 — O 5,7 — N 5,0 — M. G. 281.
- C₁₉H₂₃O₂N** 1) *α*-Oximido-*αγ*-Di[2,5-Dimethylphenyl]propan. Sm. 82—84° (A. ch. [7] 2, 206). — III, 239.
C 76,8 — H 7,7 — O 10,8 — N 4,6 — M. G. 297.
1) *α*-Naphtolconicinurethan. Sd. oberh. 300° (B. [3] 19, 189).
2) *β*-Naphtolconicinurethan. Sd. oberh. 300° (B. [3] 19, 180).
3) 2-Methylphenylamid d. Oxyessig-4-Isobutylphenyläthersäure. Sm. 91° (Am. 19, 75).
4) 4-Methylphenylamid d. Oxyessig-4-Isobutylphenyläthersäure. Sm. 122° (Am. 19, 76).
C 72,9 — H 7,3 — O 15,3 — N 4,5 — M. G. 313.
- C₁₉H₂₃O₂N** 1) *α*-Methylmorphimethin (Methocodain). Sm. 118,5°. HCl + 2H₂O, (2HCl, PtCl₄ + 2H₂O) (A. ch. [5] 27, 276; A. 222, 218; B. 22, 185, 1113; 27, 1145; 30, 355). — III, 903.
2) *β*-Methylmorphimethin (Methocodain). Fl. HCl, Tartrat (B. 22, 1133; 27, 1145). — III, 904.
3) Dihydrothebain. Sm. 154° (B. 32, 192).
4) Isohydrothebain. Sm. 138°. HJ (B. 32, 195).
5) Äthyläther d. Morphin + H₂O (Codäthylin). Sm. 83°. HCl + H₂O (A. ch. [5] 27, 278; C. 1899 [1] 430, 705). — III, 908.
6) Äthylpiperin (3,4-Methyläther d. *s*-Keto-*s*-Piperidyl-*α*-[3,4-Dioxyphenyl]-*β*-Äthyl-*αγ*-Pentadien). Sm. 118—119° (B. 28, 1196). — IV, 17.
7) Dipropyläther d. *α*-Oximido-4,4'-Dioxydiphenylmethan. Sm. 113° (B. 28, 2871). — III, 199.
8) Äthylester d. 3-Benzoyl-1,2,4,6-Tetramethyl-1,4-Dihydropyridin-5-Carbonssäure. Sm. 97° (B. 24, 1669). — IV, 90.
- C₁₉H₂₃O₄N** C 69,3 — H 7,0 — O 19,4 — N 4,2 — M. G. 329.
1) *d*-Cinnamylcocain. Sm. 68°. HCl, (2HCl, PtCl₄), (HCl, AuCl₃), HBr, HNO₃ (B. 24, 7). — III, 869.
2) *l*-Cinnamylcocain. Sm. 121°. HCl + 2H₂O, (2HCl, PtCl₄), (HCl, AuCl₃) (B. 21, 3374; 22, 132, 2661; A. 271, 184). — III, 869.
3) Allocinnamylcocain. Fl. (2HCl, PtCl₄) (B. 27, 2046). — III, 869.
4) *γ*-Isatropylcocain + 1/2 H₂O (Cocamin; *α*-Truxillin) (B. 22, 665, 682; A. 271, 187). — III, 869.
5) *δ*-Isatropylcocain (Isococamin; *β*-Truxillin). Zers. oberh. 120°. (2HCl, PtCl₄), (HCl, AuCl₃) (B. 21, 2342, 3196; 22, 681; A. 271, 191). — III, 869.
6) *ε*-Isatropylcocain (*γ*-Truxillin). Sm. bei 63° (B. 22, 130). — III, 869.
7) Diäthylester d. 2,5-Dimethyl-1-[4-Methylphenyl]pyrrol-2,4-Dicarbonssäure. Sm. 67° (B. 18, 304). — IV, 92.
8) Diäthylester d. 2,6-Dimethyl-4-Phenyl-1,4-Dihydropyridin-3,5-Dicarbonssäure. Sm. 157° (B. 18, 1607; 31, 742; M. 17, 349). — IV, 370.
- C₁₉H₂₃O₄N₂** C 63,9 — H 6,4 — O 17,9 — N 11,8 — M. G. 357.
- C₁₉H₂₃O₂N** 1) Isoamylid[4-Nitrobenzyl]amin. Sm. 57° (B. 30, 67).
C 66,1 — H 6,7 — O 23,2 — N 4,0 — M. G. 345.
1) Laurotetanin. Sm. 134°. HCl + 6H₂O, HBr + 2H₂O, HJ + 2H₂O, H₂SO₄ + 5H₂O (C. 1899 [1] 122).
2) Acetylscopolamin. (HCl, AuCl₃). — III, 796.

- $C_{19}H_{23}O_2N$ 3) Diäthylester d. 1-Oximido-5-Methyl-3-Phenyl-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonensäure. Sm. 173° (*A.* 281, 78). — II, 1971.
- $C_{19}H_{23}O_2Cl$ 1) Diäthylester d. β ;-Diketo- δ -[4-Chlorphenyl]heptan- γ -Dicarbonensäure. Sm. 150—151° (*A.* 303, 253).
- $C_{19}H_{23}O_2Br$ 1) Diäthylester d. β -Brom- β ;-Diketo- δ -Phenylheptan- γ -Dicarbonensäure. Sm. 159° (*B.* 18, 2584). — II, 2020.
- $C_{19}H_{23}O_2N$ C 60,5 — H 8,1 — O 29,7 — N 3,7 — M. G. 377.
- 1) α -Phenylmonamid d. Propen- $\alpha\alpha\gamma\gamma$ -Tetracarbonensäure- $\alpha\gamma\gamma$ -Triäthylester. Fl. (*A.* 285, 140).
- $C_{19}H_{23}O_2N$ C 58,0 — H 5,8 — O 32,6 — N 3,6 — M. G. 393.
- 1) Diäthylester d. β ;-Diketo- δ -[2-Nitrophenyl]heptan- γ -Dicarbonensäure. Sm. 163—164° (*A.* 303, 231).
- 2) Diäthylester d. β ;-Diketo- δ -[3-Nitrophenyl]heptan- γ -Dicarbonensäure. Sm. 146° (*A.* 303, 232).
- 3) Diäthylester d. β ;-Diketo- δ -[4-Nitrophenyl]heptan- γ -Dicarbonensäure. Sm. 170—171° (*A.* 303, 236).
- $C_{19}H_{23}N_2Cl$ 1) Cinchotinchlorid. Sm. 85—87° (*B.* 27, 2291). — III, 858.
- $C_{19}H_{24}ON_2$ C 76,9 — H 8,1 — O 5,4 — N 9,5 — M. G. 296.
- 1) α -Di[4-Propylphenyl]harnstoff. Sm. 205° (*B.* 17, 1224). — II, 549.
- 2) α -Di[2,4,5-Trimethylphenyl]harnstoff. Sm. 274° (subl. bei 280°) (*B.* 21, 528; 25, 1089; *B.* [3] 17, 732). — II, 552.
- 3) α -Di[2,4,6-Trimethylphenyl]harnstoff. Sm. oberh. 300° (*B.* 15, 1017). — II, 554.
- 4) α -Di[β -Trimethylphenyl]harnstoff. Sm. oberh. 290° (*B.* 18, 2233). — II, 556.
- 5) α -Isobutyl- $\beta\beta$ -Dibenzylharnstoff. Sm. 108—109° (*B.* 25, 1821). — II, 526.
- 6) α -Isobutyl- β -Benzyl- β -[4-Methylphenyl]harnstoff. Sm. 41° (*B.* 25, 1824). — II, 526.
- 7) α -Isobutyl- $\beta\beta$ -[4-Methylphenyl]harnstoff. Sm. 118—119° (*B.* 25, 1822). — II, 495.
- 8) Cinchonamin. Sm. 185°. Salze meist bek. (*A.* 225, 218; *A. ch.* [6] 19, 23, 100; *G.* 22 [2] 637; *B.* 16, 62; *B.* [3] 19, 39). — III, 928.
- 9) Cinchotin. Sm. 277,3° (268°). Salze meist bek. (*A. Spl.* 7, 249; *A.* 166, 256; 197, 362; 260, 220; 300, 42, 357; *B.* 14, 436, 1266; 15, 519; 27, 2290; 28, 1076; *M.* 16, 68; 18, 414). — III, 858.
- 10) Dihydrocinchonin. Sm. 265°. (2HCl, PtCl₄ + 2H₂O) (*J. pr.* [2] 8, 294; *B.* 11, 314; 15, 855; *M.* 16, 326). — III, 836.
- 11) isom. Hydrocinchonin. Sm. 256°. (2HCl, PtCl₄ + 2H₂O) (*B.* 15, 855). — III, 858.
- 12) Hydrocinchonidin (Cinchamidin). Sm. 229—230°. Salze meist bek. (*B.* 14, 1270, 1683, 1893; 15, 520; *A.* 214, 1). — III, 857.
- 13) amorphes Hydrocinchonidin. Sm. unter 100°. (2HCl, PtCl₄ + 2H₂O), Oxalat (*A.* 214, 13). — III, 858.
- 14) Pereirin. Sm. 124° u. Zers. (2HCl, PtCl₄ + 4H₂O) (*A.* 202, 147). — III, 923.
- $C_{19}H_{24}ON_2$ C 70,4 — H 7,4 — O 4,9 — N 17,3 — M. G. 324.
- 1) Benzaldehydphenylhydrazin. Sm. 154° (*B.* [3] 15, 845). — IV, 748.
- 2) 4-Diäthylamido-5-Acetylamido-2-Methylasobenzol. Sm. 159° (*A.* 234, 359). — IV, 1384.
- $C_{19}H_{24}O_2N_2$ C 73,1 — H 7,7 — O 10,2 — N 9,0 — M. G. 312.
- 1) Diäthyläther d. 1,3-Di[4-Oxyphenyl]tetrahydroimidazol. Sm. 214° (*B.* 31, 3256).
- 2) Chinamin. Sm. 172°. HCl + H₂O, (2HCl, PtCl₄ + 6H₂O), HClO₄, HBr + H₂O, HJ, HNO₃, Oxalat (*A.* 166, 266; 182, 163; 197, 48; 199, 333; 207, 288; 209, 42; *B.* 10, 2157; *J.* 1874, 874). — III, 856.
- 3) Chinamicin. Sm. 109°. (2HCl, PtCl₄ + 3H₂O) (*A.* 207, 303). — III, 857.
- 4) Chinamidin. Sm. 93°. HCl + H₂O, (2HCl, PtCl₄ + 6H₂O), HBr + H₂O, Oxalat + 4H₂O (*A.* 207, 293, 299). — III, 856.
- 5) Conchinamin. Sm. 123° (121°). Salze meist bek. (*A.* 207, 289; 209, 38, 62). — III, 859.
- 6) Hydrocuprein + 2H₂O. Sm. 168—170°. 2HCl + H₂O, (2HCl, PtCl₄), 2HJ, H₂SO₄, Tarrat + 2H₂O (*A.* 241, 280; *M.* 12, 431; 16, 73). — III, 861.

- C₁₉H₂₁O₂N₂**, 7) Geissospermin + H₂O. Sm. bei 160°. (2HCl, PtCl₄) (*A.* 202, 143). — III, 923.
- 8) Nichin + 2H₂O. Sm. bei 102° (130—132°; 146° wasserfrei). 2HCl, (2HCl, PtCl₄ + 3H₂O), HJ, 2HJ, H₂SO₄ + 3¹/₂ H₂O, H₂SO₄ + 10H₂O, Biazolat (*M.* 14, 431, 556). — III, 820.
- 9) Isonichin. Sm. 208—209°. (2HCl, PtCl₄) (*M.* 14, 441). — III, 827.
- 10) Methylester d. Di[4-Dimethylamidophenyl]essigsäure. Sm. 68° (*C.* 1895 [1] 201).
- C₁₉H₂₁O₂N₄**, 1) Orcin + 2Molec. Phenylhydrazin. Sm. 61—62° (*B.* 24 [2] 904). — IV, 654.
- 2) Aethylester d. γ -Phenylhydrazon- β -Phenylhydrazidovaleriansäure. Sm. 205° u. Zers. (*B.* 21, 2494). — IV, 741.
- C₁₉H₂₁O₂N₂**, 1) Methylester d. Phenylhydrazoncampheroxalsäure. Sm. 204—205° (*Am.* 20, 336).
- 2) Aethylester d. Phenylazocamphocarbonsäure. Sm. 65,5° (*B.* 25 [2] 726). — IV, 1468.
- C₁₉H₂₁O₄N₂**, 1) C 66,3 — H 7,0 — O 18,6 — N 8,1 — M. G. 344.
- 1) Diäthylester d. 2,5-Dimethyl-1-m-Amidotolyl]pyrazol-3,4-Dicarbonsäure. Sm. 134° (*A.* 236, 311). — IV, 549.
- 2) Diäthylester d. 1-Methylphenylamido-2,5-Dimethylpyrazol-3,4-Dicarbonsäure. Fl. (*A.* 236, 309). — IV, 549.
- C₁₉H₂₁O₄N₄**, 1) C 61,3 — H 6,5 — O 17,2 — N 15,0 — M. G. 372.
- 1) Di[Phenylhydrazon] d. Rhamnose. Sm. 200° u. Zers. (*B.* 23, 3105). — IV, 792.
- 2) Di[Phenylhydrazid] d. $\beta\delta$ -Dioxyptan- $\beta\delta$ -Dicarbonsäure. Sm. 176,5° (*B.* 25, 3244). — IV, 721.
- 3) isom. Di[Phenylhydrazid] d. $\beta\delta$ -Dioxyptan- $\beta\delta$ -Dicarbonsäure. Sm. 186° (*B.* 25, 3246). — IV, 722.
- C₁₉H₂₁O₄N₆**, 1) C 57,0 — H 6,0 — O 16,0 — N 21,0 — M. G. 400.
- 1) Verbindung (aus Aceton, Benzaldehyd u. Harnstoff). Sm. 186—187° (*G.* 23 [1] 404). — III, 38.
- C₁₉H₂₁O₄S₂**, 1) Arabinosobenzylmerkaptal. Sm. 144° (*B.* 29, 552).
- C₁₉H₂₁O₅N₂**, 1) C 63,3 — H 6,7 — O 22,2 — N 7,8 — M. G. 360.
- 1) m-Acetylamido-d-Cocain. Sm. 44—45°. HCl (*B.* 27, 1882). — III, 868.
- C₁₉H₂₁O₅N₄**, 1) C 58,8 — H 6,2 — O 20,6 — N 14,4 — M. G. 388.
- 1) Di[Phenylhydrazon] d. α -Galaheptose. Sm. 218° (224° cor.) u. Zers. (*A.* 288, 146). — IV, 794.
- 2) Di[Phenylhydrazon] d. Glykoheptose. Sm. 195° u. Zers. (*A.* 270, 77, 88). — IV, 792.
- 3) Di[Phenylhydrazon] d. d-Mannoheptose. Sm. 200° u. Zers. (*B.* 23, 2231). — IV, 793.
- 4) Di[Phenylhydrazon] d. l-Mannoheptose. Sm. bei 203° u. Zers. (*A.* 272, 187). — IV, 793.
- 5) Di[Phenylhydrazon] d. i-Mannoheptose. Sm. bei 210° u. Zers. (*A.* 272, 188). — IV, 793.
- 6) Di[Phenylhydrazon] d. Volemit. Sm. 196° u. Zers. (*B.* 28, 1974). — IV, 794.
- C₁₉H₂₁O₅N₆**, 1) C 54,8 — H 5,8 — O 19,2 — N 20,2 — M. G. 416.
- C₁₉H₂₁O₆N₂**, 1) Dianisotriureid (*A.* 151, 199). — III, 86.
- 1) C 58,2 — H 6,1 — O 28,6 — N 7,1 — M. G. 392.
- 1) Verbindung (aus Kakothelin). (2HCl, PtCl₄ + H₂O), Ag (*B.* 20, 456). — III, 948.
- C₁₉H₂₁O₇N₄**, 1) C 54,3 — H 5,7 — O 26,7 — N 13,3 — M. G. 420.
- 1) Phenylhydrazid d. α -Pentaoxypimelinsäurelaktone. Sm. 200° u. Zers. (*A.* 270, 91). — IV, 732.
- 2) Phenylhydrazid d. isom. Pentaoxypimelinsäure. Sm. 225° u. Zers. (*A.* 272, 197). — IV, 732.
- C₁₉H₂₁O₈N₂**, 1) C 55,9 — H 5,9 — O 31,4 — N 6,8 — M. G. 408.
- 1) Diäthylester d. ζ -Oximido- β -Keto- δ -[3-Nitrophenyl]heptan- γ -e-Dicarbonsäure. Sm. 201° (*A.* 303, 233).
- 2) Diäthylester d. ζ -Oximido- β -Keto- δ -[4-Nitrophenyl]heptan- γ -e-Dicarbonsäure. Sm. 208° u. Zers. (*A.* 303, 237).

- C₁₀H₁₁N₂S**
- 1) **s-Di[4-Propylphenyl]thioharnstoff.** Sm. 138° (*B.* 17, 1222). — II, 549.
 - 2) **αβ-Dipropyl-αβ-Diphenylthioharnstoff.** Sm. 103,5° (*B.* 21, 103). — II, 397.
 - 3) **s-Di[2,4,6-Trimethylphenyl]thioharnstoff.** Sm. 196° (*B.* 15, 1013). — II, 555.
 - 4) **s-Di[*p*-Trimethylphenyl]thioharnstoff.** Sm. 146° (*B.* 18, 2233). — II, 556.
 - 5) **s-Di[2,4-Dimethylbenzyl]thioharnstoff.** Sm. 176—177° (*B.* 22, 123). — II, 553.
 - 6) **s-Di[3,5-Dimethylbenzyl]thioharnstoff.** Sm. 165° (*B.* 25, 3014). — II, 555.
 - 7) ***s-p*-Aethylphenyl-4-Isobutylphenylthioharnstoff.** Sm. 140° (*B.* 16, 2023). — II, 558.
- C₁₀H₁₁N₂S**
C₁₀H₂₃ON₂
- 1) **Methylsulfauramin.** Sm. 203—203,5° (*J. pr.* [2] 50, 442). — IV, 1175. C 73,3 — H 8,0 — O 5,1 — N 13,5 — M. G. 311.
 - 1) **β-Isopropylphenylamido-α-2,4,5-Trimethylphenylharnstoff.** Sm. 155°. — IV, 674.
 - 2) **β-[2,4,5-Trimethylphenyl]amido-α-2,4,5-Trimethylharnstoff.** Sm. 240°. — IV, 813.
- C₁₀H₂₃O₂N**
- 1) **Protocurarin (C. 1897 [2] 1080).** C 76,2 — H 8,4 — O 10,7 — N 4,7 — M. G. 299.
- C₁₀H₂₃O₂N₂**
- 1) **Nitrosotetrahydrocinchonin.** HNO₂ (Sm. 200° u. Zers.) (*B.* 28, 1639). — III, 836.
 - 2) **Nitrosotetrahydrocinchonidin.** HNO₂ (*B.* 29, 802). — III, 853. C 61,4 — H 6,7 — O 12,9 — N 18,9 — M. G. 371.
- C₁₀H₂₃O₂N₂**
- 1) **Verbindung (aus d. Acetylcyanessigsäureäthylester u. Phenylhydrazin).** Sm. 86° (*C.* 1895 [2] 83).
- C₁₀H₂₃O₂Br**
- 1) **Brompodocarpinäthyläthersäure.** Sm. 158°. + C₂H₆O (*A.* 170, 237). — II, 1685.
- C₁₀H₂₃O₂P**
- 1) **Di[2,4,5-Trimethylphenylester] d. Methylphosphinsäure.** Sm. 79 bis 90° (?) (*B.* 31, 1053). C 68,9 — H 7,6 — O 19,3 — N 4,2 — M. G. 331.
- C₁₀H₂₃O₂N**
- 1) **Corytuberin.** Zers. bei 200°. HCl, (2HCl, PtCl₄), H₂SO₄ (*Soc.* 63, 485). — III, 877.
 - 2) **Propylester d. Benzoylcegonin.** Sm. 78 — 79,5° (*Am.* 10, 147). — III, 867.
 - 3) **Propylester d. d-Benzoylcegonin.** HCl + H₂O (*B.* 23, 987). — III, 867. C 60,8 — H 6,7 — O 21,3 — N 11,2 — M. G. 375.
- C₁₀H₂₃O₂N₂**
- 1) **Jaborinsäure.** Ag, Ag + AgNO₃, + PtCl₄, + 2AuCl₃, (2HCl, PtCl₄) (*B.* 46, 479; 48, 225). — III, 925. C 58,3 — H 6,4 — O 24,6 — N 10,7 — M. G. 391.
- C₁₀H₂₃O₂N₂**
- 1) **Phenylhydrazid d. Phenylamidogalaktosecarbonsäure.** Sm. 203° (*B.* 27, 1290). — IV, 726.
 - 2) **Phenylhydrazid d. Phenylamidoglykosecarbonsäure.** Sm. 210° (*B.* 27, 1290). — IV, 726.
- C₁₀H₂₃N₂Br**
- 1) **4-Bromphenylhydrazon d. α-Jonon.** Sm. 142—143° (*B.* 28, 1755; 31, 852, 877; *J. pr.* [2] 57, 494). — IV, 770.
 - 2) **4-Bromphenylhydrazon d. β-Jonon.** Sm. 115—116° (*B.* 31, 872).
 - 3) **4-Bromphenylhydrazon d. Pseudojonon.** Sm. 102—104° (*B.* 31, 846).
 - 4) **4-Bromphenylhydrazon d. Iron.** Sm. 168—170° (*B.* 28, 1757). — IV, 770.
 - 5) **Verbindung (aus α-Jonon-4-Bromphenylhydrazon).** Sm. 165° (*B.* 28, 1756). — IV, 770.
- C₁₀H₂₃N₂J**
- 1) **α-Jod-α-Di[Phenylamido]heptan (A. ch. [6] 16, 172).** — II, 445.
 - 2) **Jodmethylat d. 1,4-Dibenzylhexahydro-1,4-Diazin (J. d. Dibenzylpiperazin).** Sm. 217° (*C.* 1898 [1] 381, 727).
 - 3) **Jodmethylat d. Diäthylendi[4-Methylphenyl]diamin (A. 173, 141).** — II, 487. C 76,5 — H 8,7 — O 5,4 — N 9,3 — M. G. 298.
- C₁₀H₂₃ON₂**
- 1) **Tetrahydrocinchonin.** Fl. (*B.* 28, 1425, 1638). — III, 836.
 - 2) **Tetrahydrocinchonidin.** Fl. (*B.* 29, 802). — III, 853.
 - 3) **Curarin (siehe auch C₁₀H₂₃N)** (*C.* 1897 [2] 1078).

- $C_{19}H_{20}O_2Cl_2$ 1) Dichlorabietinsäure. Sm. 124° (*J.* 1861, 391). — II, 1436.
C 48,5 — H 5,5 — O 34,0 — N 11,9 — M. G. 470.
- $C_{19}H_{20}O_2N_4$ 1) Verbindung (aus Glykoseamidoguanidin) + H_2O (*B.* 27, 973).
C 48,1 — H 5,5 — O 40,5 — N 5,9 — M. G. 474.
- $C_{19}H_{20}O_2N_2$ 1) Maltose-2,3-Diamidobenzol-1-Carbonsäure. *Ba* (*B.* 20, 2212). — II, 1274.
2) Verbindung (aus Glykuronsäure u. 3,4-Diamido-1-Methylbenzol). *K* (*Zers.* bei 130°) (*H.* 13, 278). — IV, 616.
- $C_{19}H_{24}N_2S_2$ 1) γ -Phenylpropylamidodithioameisensaures γ -Phenylpropylamin. Sm. 90° (*B.* 27, 2311).
- $C_{19}H_{20}N_4S$ 1) s-Di[4-Aethylamid-3-Methylphenyl]thioharnstoff. Sm. 163° (*A.* 286, 165). — IV, 609.
- $C_{19}H_{17}O_2Br$ 1) Bromabietinsäure. Sm. 134° (*B.* 12, 1443). — II, 1436.
 $C_{19}H_{17}O_2N$ C 71,9 — H 8,5 — O 15,1 — N 4,4 — M. G. 317.
- $C_{19}H_{27}O_2N$ 1) Aethylatropin. (2HCl, PtCl₄), HJ (*A.* 138, 239). — III, 784.
C 68,5 — H 8,1 — O 19,2 — N 4,2 — M. G. 333.
- $C_{19}H_{27}O_2N$ 1) Piperidinguajakol (Guajaperol). Sm. 79,8° (*C.* 1898 [1] 857; 1898 [2] 836; *Soe.* 73, 141, 145).
2) Methyl ester d. 4-Benzoxyl-1, 2, 2, 6, 6-Pentamethylhexahydropyridin-4-Carbonsäure. HCl (*C.* 1898 [1] 1131).
3) Diäthylester d. α -[1-Piperidyl]- α -Phenyläthan- $\beta\beta$ -Dicarbonsäure. Sm. 53—59°. HCl (*B.* 29, 814). — IV, 21.
- $C_{19}H_{21}O_2N$ C 65,3 — H 7,7 — O 22,9 — N 4,0 — M. G. 349.
1) Aethyl ester d. Sebacin säuremonophenylamid-3-Carbonsäure. Sm. 146°. *Ba* + 2H₂O (*G.* 15, 551). — II, 1266.
- $C_{19}H_{27}N_3J$ 1) Jodmethylat d. $\alpha\beta$ -Di[4-Dimethylamidophenyl]äthan (*B.* 20, 912). — IV, 978.
2) Jodmethylat d. $\alpha\beta$ -Di[Methyl-4-Methylphenylamido]äthan. *Zers.* bei 100° (*A.* 224, 342). — II, 487.
- $C_{19}H_{29}N_3Cl_2$ 1) Dichlormethylat d. Di[4-Dimethylamidophenyl]methan (*B.* 12, 1170). — IV, 975.
- $C_{19}H_{25}N_3J_2$ 1) Dijodmethylat d. Di[4-Dimethylamidophenyl]methan. Sm. 214° u. *Zers.* (*B.* 12, 1170). — IV, 974.
- $C_{19}H_{25}N_3S_2$ 1) Verbindung (aus Schwefelkohlenstoff u. Trimethylenphenylendiamin). *Zers.* bei 105° (116°) (*G.* 19, 692; *B.* 23, 1171).
 $C_{19}H_{25}O_2N$ C 68,1 — H 8,6 — O 19,1 — N 4,2 — M. G. 335.
- $C_{19}H_{25}O_2N$ 1) Diäthylester d. 2,6-Dimethyl-4-Hexylpyridin-3,5-Dicarbonsäure. *Fl.* (2HCl, PtCl₄) (*A.* 246, 39). — IV, 171.
- $C_{19}H_{19}N_3S$ 1) Phenylthioharnstoff d. Base $C_{18}H_{14}N_3$ (aus Nitroso- α -Pipekolin). Sm. 116° (*B.* 31, 2278).
- $C_{19}H_{20}O_2N_2$ C 51,1 — H 6,7 — O 35,9 — N 6,3 — M. G. 446.
1) Glykose-3,4-Diamido-1-Methylbenzol. Sm. 160° u. *Zers.* (*B.* 20, 495). — IV, 621.
- $C_{19}H_{20}O_2N_2$ 1) Lanugininsäure. *Ba*, *Pb* (*J.* 1871, 857; *B.* 22, 1120). — II, 2110.
 $C_{19}H_{21}O_2N$ C 67,6 — H 9,2 — O 19,0 — N 4,1 — M. G. 337.
- $C_{19}H_{21}O_2N$ 1) Diäthylester d. Hexyldihydrolutindicarbonsäure. Sm. 54° (*A.* 246, 38). — IV, 96.
C 64,5 — H 8,8 — O 22,7 — N 4,0 — M. G. 353.
- $C_{19}H_{21}O_2N$ 1) Diäthylester d. 1-Oximido-3-Hexyl-5-Methyl-1, 2, 3, 4-Tetrahydrobenzol-2, 4-Dicarbonsäure. Sm. 116—118° (*A.* 288, 342).
- $C_{19}H_{23}O_2S_2$ 1) Diamyläther d. α -Phenylsulfon- $\beta\gamma$ -Dimerkaptopropan. *Fl.* (*J. pr.* [2] 56, 453).
- $C_{19}H_{23}O_2S_2$ 1) $\beta\gamma$ -Diamylsulfon- α -Phenylsulfonpropan. Sm. 120° (*J. pr.* [2] 56, 454).
 $C_{19}H_{24}N_3J_2$ 1) Di[Jodmethylat] d. 2-Diäthylamidomethyl-1-Piperidylmethylbenzol. Sm. 216° (*B.* 31, 428).
C 73,8 — H 11,3 — O 10,4 — N 4,5 — M. G. 309.
- $C_{19}H_{25}O_2N$ 1) α -Cyanstearinsäure. Sm. 83,5° (*B.* 24, 2778). — I, 1221.
C 74,0 — H 11,7 — O 5,2 — N 9,1 — M. G. 308.
- $C_{19}H_{20}ON_2$ 1) s-Dicamphylharnstoff. *Sd.* 220—221° (*G.* 22 [1] 220). — I, 1301.
- $C_{19}H_{20}O_2N_4$ C 64,8 — H 10,2 — O 9,1 — N 15,9 — M. G. 352.
1) β -Nitro- $\alpha\gamma$ -Dipiperidyl- β -Piperidylmethylpropan. Sm. 86—87° (*Bl.* [3] 15, 1226).
- $C_{19}H_{20}O_2Cl_2$ 1) Methyl ester d. Dichlorstearinsäure (*B.* 23, 2531). — I, 476.
- $C_{19}H_{20}N_2S$ 1) s-Dicamphylthioharnstoff. Sm. 108—109° (*G.* 23 [2] 507).

- $C_{19}H_{27}O_2N$ C 69,7 — H 11,3 — O 14,7 — N 4,3 — M. G. 327.
 1) Monamid d. Heptadekan- $\alpha\alpha$ -Dicarbonsäure (B. 24, 2780). — I, 1388.
 $C_{19}H_{25}N_2S_2$ 1) Camphelylaminsalz d. Camphelylamidodithioameisensäure. Sm. 95 bis 96° (G. 23 [2] 504).
 $C_{19}H_{19}ON$ C 76,8 — H 13,1 — O 5,4 — N 4,7 — M. G. 297.
 1) β -Oximidononadekan. Sm. 28° (Bl. [3] 15, 706).
 $C_{19}H_{16}Cl_3P_3$ 1) Formylnonäthyltriphosphoniumchlorid. $6 + 3PtCl_4$ (J. 1659, 377; 1861, 488). — I, 1507.
 $C_{19}H_{16}J_3P_3$ 1) Formylnonäthyltriphosphoniumjodid (J. 1859, 377). — I, 1507.

C_{19} -Gruppe mit vier Elementen.

- $C_{19}H_8O_6Br_2S$ 1) Tetrabromsulfonylfluorescein (Bl. [3] 17, 823).
 $C_{19}H_{10}ONBr_3$ 1) *p*-Tribrom-9-Benzoylcarbazol. Sm. 228–230° (G. 25 [2] 397). — IV, 393.
 $C_{19}H_{10}O_2N_2Br$ 1) Diäthylester d. *p*-Brom-*p*-Dinitro-*p*-Phenylamidophenylmethandicarbonsäure. Sm. 127° (Am. 12, 299). — II, 1842.
 $C_{19}H_{10}O_2Br_2S$ 1) Dibromsulfonylfluorescein + H_2O (Am. 9, 377; 17, 548). — III, 200.
 $C_{19}H_{11}ONBr_3$ 1) *p*-Dibrom-9-Benzoylcarbazol. Sm. 215–216° (G. 25 [2] 395). — IV, 393.
 $C_{19}H_{11}O_2N_2Cl$ 1) 3-Chlor-6-Nitro-9-Benzoylcarbazol. Sm. 257–258° (G. 26 [1] 289). — IV, 393.
 $C_{19}H_{11}O_2N_2Br$ 1) 9-Benzoyl-*p*-Bromnitrocarbazol. Sm. 267–268° (G. 22 [2] 573). — IV, 393.
 $C_{19}H_{12}ONBr$ 1) 9-Benzoyl-*p*-Bromcarbazol. Sm. 124–125° (G. 22 [2] 570). — IV, 392.
 $C_{19}H_{12}O_2Br_2S$ 1) Dibromphenolsulfonphtalein (Am. 20, 264).
 $C_{19}H_{12}O_2N_2Cl$ 1) 2,4,6-Trinitro-1-Chlorbenzol + Fluoren. Sm. 69–70° (B. 8, 378).
 $C_{19}H_{13}ONCl_2$ 1) Di[*p*-Chlorphenyl]amid d. Benzolcarbonsäure. Sm. 153° (B. 14, 2369; 15, 1285). — II, 1164.
 $C_{19}H_{13}ONBr_2$ 1) Di[*p*-Bromphenyl]amid d. Benzolcarbonsäure. Sm. 142° (B. 15, 830). — II, 1164.
 $C_{19}H_{13}ONS$ 1) Benzoyldihydroxyphenylamin. Sm. 170,5° u. Zers. (B. 18, 1844). — II, 1179.
 $C_{19}H_{13}ON_6Cl_3$ 1) Diazo-4-Rosanilinchlorid. + $3AuCl_3$ (A. 194, 268). — IV, 1552.
 $C_{19}H_{13}O_2N_2Br_2$ 1) Di[4-Bromphenyläther] d. $\alpha\alpha$ -Dioxy-*a*-Phenylimidomethan. Sm. 106° (B. 28, 978).
 $C_{19}H_{13}O_2NS$ 1) Phenylester d. Thiodiphenylamidoameisensäure. Sm. 164° (B. 24, 2908). — II, 806.
 $C_{19}H_{13}O_2N_2Cl$ 1) [oder 4'-Chlor-2-Oxybenzylphenazon. Sm. 234° (A. 290, 306). — IV, 1004.
 2) Acetylmethylchlornaphteurhodon. Sm. oberh. 220° (Soc. 63, 1386). — IV, 1063.
 3) Benzoesäure d. 2-Chlor-4'-Oxyazobenzol. Sm. 131° (B. 26, 2977). — IV, 1408.
 4) Benzoesäure d. 3-Chlor-4'-Oxyazobenzol. Sm. 118° (B. 26, 2977). — IV, 1409.
 5) Benzoesäure d. 4-Chlor-4'-Oxyazobenzol. Sm. 154° (B. 26, 2978). — IV, 1409.
 $C_{19}H_{13}O_2N_2Br$ 1) Benzoesäure d. 2-Brom-4'-Oxyazobenzol. Sm. 122–123° (B. 31, 2115). — IV, 1409.
 2) Benzoesäure d. 3-Brom-4'-Oxyazobenzol. Sm. 122° (B. 28, 803). — IV, 1409.
 3) Benzoesäure d. 4-Brom-4'-Oxyazobenzol. Sm. 166° (B. 31, 2116). — IV, 1410.
 $C_{19}H_{13}O_2N_2Br$ 1) 4'-Brom-3-Nitro-4-Phenylamidodiphenylketon. Sm. 180° (B. 24, 3773). — III, 183.
 $C_{19}H_{13}O_4N_2Cl$ 1) β -Chlor- $\alpha\gamma$ -Di[1,2-Phthylamido]propan (β -Chlortrimethylendiphtalimid). Sm. 208–209° (B. 25, 3056). — II, 1807.
 2) Verbindung (aus Chlordioxybenzochinon u. Benzoyl-*o*-Phenylendiamin). Sm. 237° (B. 28, 357). — IV, 565.

- $C_{19}H_{13}O_2NS$ 1) Resorcinsaccharin. Sm. 265—267° (*Bl.* [3] 17, 695).
 $C_{19}H_{13}O_2NS_2$ 1) 5-Phenylakridin-*p*-Sulfonsäure. Na₂ (*A.* 224, 32). — IV, 468.
 $C_{19}H_{13}O_{12}NS$ 1) Helicinleucindisulfid (*A.* 210, 126). — III, 68.
 $C_{19}H_{14}ON_2S$ 1) α -Phenyl- β -Thiodiphenylharnstoff. Sm. 168—169° (*B.* 24, 2910). — II, 806.
 $C_{19}H_{14}ON_2Cl$ 1) Phenylamid d. 4'-Chlorazobenzol-3-Carbonsäure. Sm. 198° (*A.* 263, 232). — IV, 1461.
 $C_{19}H_{14}O_2NBr$ 1) Phenyläther-4-Bromphenyläther d. $\alpha\alpha$ -Dioxy- α -Phenylimido-methan. Sm. 83° (*B.* 28, 981).
 $C_{19}H_{14}O_2N_2S$ 1) Verbindung (aus 2-Cyanbenzol-1-Sulfonsäurechlorid u. Anilin). Sm. 187 bis 189° (189,5°) (*B.* 26, 2292; *Am.* 18, 810). — II, 1297.
 $C_{19}H_{14}O_2N_2Cl$ 1) 2-[4-Oxychlorphenylat] d. 4-[4-Nitrophenyl]-1-Phenyl-1,2,3,5-Tetrazol. Zers. bei 206—209° (*B.* 31, 477). — IV, 1232.
 $C_{19}H_{14}O_2N_2Br$ 1) α -Phenyl- β -[3-Bromphenyl]azo- β -[3-Nitrophenyl]harnstoff. Sm. 128° (*B.* 21, 2576). — IV, 1566.
 2) α -Phenyl- β -[4-Bromphenyl]azo- β -[3-Nitrophenyl]harnstoff. Sm. 134° (*B.* 21, 2575). — IV, 1566.
 3) α -Phenyl- β -[4-Bromphenyl]azo- β -[4-Nitrophenyl]harnstoff. Sm. 129° (*B.* 21, 2574). — IV, 1566.
 $C_{19}H_{14}O_2NP$ 1) Phenylimid d. Phenylphosphorsäure-2-Carbonsäurephenylester. Sm. 152° (*B.* 31, 2178).
 $C_{19}H_{14}O_2N_2S$ 1) 3-Amidophenolsulfonphtalein (*Am.* 20, 268).
 2) 4-Amidophenolsulfonphtalein (*Am.* 20, 269).
 $C_{19}H_{14}O_4N_2S$ 1) Monobenzoat d. 2,5-Dioxyazobenzol-4'-Sulfonsäure. Ba (*B.* 26, 1912). — IV, 1447.
 $C_{19}H_{14}O_2N_2P$ 1) *p*-Trinitrodiphenylbenzylphosphoxyd. Sm. 206° (*B.* 21, 1507). — IV, 1662.
 $C_{19}H_{15}ON_2Cl$ 1) 4-Chlor-4'-(2-Oxybenzyliden)amidodiphenylamin. Sm. 170° (*A.* 303, 315).
 $C_{19}H_{15}ON_2Br$ 1) 6-Brom-2-[2-Oxyphenyl]-1-Phenyl-2,3-Dihydrobenzimidazol. Sm. 155° (*A.* 303, 325).
 $C_{19}H_{15}ON_2Cl$ 1) 2-Chlor-2-[4-Oxyphenyl]-1,4-Diphenyl-2,2-Dihydro-1,2,3,5-Tetrazol. Sm. 243—244° u. Zers. (*B.* 29, 1852). — IV, 1268.
 2) α -Phenyl- β -Phenylazo- β -[4-Chlorphenyl]harnstoff. Sm. 126—127° (*B.* 30, 1408). — IV, 1561.
 $C_{19}H_{15}ON_2Br$ 1) α -Phenyl- β -Phenylazo- β -[4-Bromphenyl]harnstoff. Sm. 131° (*B.* 21, 2569; 30, 1405). — IV, 1562.
 $C_{19}H_{15}ON_2J$ 1) α -Phenyl- β -Phenylazo- β -[4-Jodphenyl]harnstoff. Sm. 132° (*B.* 30, 1409).
 $C_{19}H_{15}O_2NS$ 1) 3,3-Diphenyl-2,3-Dihydro-1,2-Benzsulfonazol (Diphenylbenzylsultam). Sm. 210°. K (*B.* 29, 2296).
 $C_{19}H_{15}O_2N_2Br$ 1) Acetat d. 4-Oxy-1-[2-Brom-4-Methylphenyl]azonaphtalin. Sm. 155° (*B.* 31, 1784). — IV, 1436.
 $C_{19}H_{15}O_2NS$ 1) α -Oximido-4-Phenylsulfondiphenylmethan. Sm. 201° (*Am.* 20, 314).
 2) Phenylamid d. Diphenylketon-2-Sulfonsäure. Sm. 143—145° (*Am.* 17, 359). — III, 192.
 3) Phenylamid d. Diphenylsulfon-4-Carbonsäure. Sm. 202—203° (*Am.* 20, 309).
 4) Benzoylphenylamid d. Benzolsulfonsäure. Sm. 114—115° (*Am.* 19, 763).
 $C_{19}H_{15}O_4N_4Cl$ 1) 7-Chlormethylat d. 9-Nitro-5-Acetylamido- $\alpha\beta$ -Naphtophenazin (*B.* 31, 3093).
 $C_{19}H_{15}O_4ClS_2$ 1) α -Chlortriphenylsulfonmethan. Sm. 260° (*B.* 25, 350). — II, 784.
 $C_{19}H_{15}O_4BrS_2$ 1) α -Bromtriphenylsulfonmethan. Sm. 255° u. Zers. (*B.* 25, 351). — II, 784.
 $C_{19}H_{15}O_2NBr_2$ 1) Phenylamid d. 2,6-Dibrom-3,4,5-Triacetoxylbenzol-1-Carbonsäure (*Bl.* [3] 11, 325). — II, 1924.
 $C_{19}H_{15}O_2NBr_2$ 1) Oxim d. Dibromeichenrindengerbsäure (*A.* 240, 336). — III, 588.
 $C_{19}H_{16}ON_2S$ 1) Verbindung (aus 4-Thionylamido-1-Methylbenzol) (*A.* 274, 228). — II, 489.
 $C_{19}H_{16}ON_2Cl$ 1) 7-Chlormethylat d. 10-Acetylamido- $\alpha\beta$ -Naphtophenazin. 2 + PtCl₄ (*B.* 31, 3097).
 $C_{19}H_{16}O_2N_2S$ 1) α -Phenylsulfonimido- α -Phenylamido- α -Phenylmethan. Sm. 138 bis 139° (*A.* 214, 214; *B.* 11, 754). — IV, 847.

- $C_{10}H_{10}O_2N_2Br$ 1) Verbindung (aus d. α -Cyan- β -[4-Oxyphenyl]akrylsäureäthylester) = $(C_{10}H_{10}O_2N_2Br)_2$. Sm. 183° (*J. pr.* [2] 54, 537).
- $C_{10}H_{10}O_2N_2S$ 1) β -Benzyliden- α -Diphenylhydrasin- β -Sulfonsäure. Na (*B.* 24, 792). — IV, 754.
 2) s -Di[Phenylamid] d. Benzol-1-Carbonsäure-2-Sulfonsäure. Sm. 190° (*Am.* 17, 316, 339; 18, 809; *B.* 31, 1658).
 3) uns -Di[Phenylamid] d. Benzol-1-Carbonsäure-2-Sulfonsäure. Sm. 270° u. Zers. (270–280° u. Zers.). + C_2H_5O (*Am.* 17, 317, 341; 18, 809; *B.* 31, 1658).
 4) Di[Phenylamid] d. Benzol-1-Carbonsäure-3-Sulfonsäure (*A.* 102, 258). — II, 1300.
 5) Di[Phenylamid] d. Phenylsulfon-2-Amidobenzol-1-Carbonsäure. Sm. 144–144,5° (*J. pr.* [2] 44, 428). — II, 1253.
 6) Verbindung (aus 2,3'-Bichinoly) (*B.* 18, 333). — IV, 1067.
- $C_{10}H_{10}O_2N_2S$ 1) 6-Amido-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benzotriazin-2'-Sulfonsäure (*B.* 30, 2600). — IV, 1287.
 2) 6-Amido-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benzotriazin-2'-Sulfonsäure (*B.* 30, 2600). — IV, 1287.
 3) 6-Amido-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benzotriazin-2'-Sulfonsäure (*B.* 30, 2599). — IV, 1287.
- $C_{10}H_{10}O_2N_2S$ 1) Phenyl-2-Nitrobenzylamid d. Benzolsulfonsäure. Sm. 143° (*J. pr.* [2] 51, 263).
- $C_{10}H_{10}O_2N_2S_2$ 1) 1,3-Di[Phenylsulfon]-2,3-Dihydrobenzimidazol (Dibenzolsulfonmethylen- o -Phenylendiamin). Sm. 147–148° (*A.* 287, 224). — IV, 561.
- $C_{10}H_{10}O_2N_2S$ 1) 4-Oxy-3-Phenylhydrasonmethylazobenzol-4'-Sulfonsäure. Na (*A.* 251, 178). — IV, 1476.
- $C_{10}H_{10}O_2N_2S$ 1) s -Thioharnstoff d. 2-Keto-5-Methyl-3-[4-Amidophenyl]-2,3-Dihydro-1,3,4-Oxiazol. Sm. 208° (*B.* 26, 1319). — IV, 1127.
- $C_{10}H_{11}ONBr$ 1) 3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl-2-Naphtylamin. Sm. 181 bis 182° (*B.* 29, 1120).
- $C_{10}H_{11}ON_2Cl$ 1) 2,2'-Dichlor-4,4',4''-Triamidotriphenyl-Oxymethan (*B.* 19, 1989). — II, 1087.
- $C_{10}H_{11}O_2NS$ 1) Phenylbenzylamid d. Benzolsulfonsäure. Sm. 119° (*A.* 273, 14). — II, 531.
- $C_{10}H_{11}O_2NS$ 1) Phenylacetotetrahydro- α -Naphtochinolinsulfonsäure (*B.* 24, 2478). — IV, 1487.
- $C_{10}H_{11}O_2NS$ 1) Furfuramidallysenf6l. Sm. 118° (*B.* 10, 1191). — III, 724.
- $C_{10}H_{11}O_2NS_2$ 1) Benzylimid d. Benzolsulfonsäure. Sm. 136° (*C.* 1897 [2] 848).
- $C_{10}H_{11}O_2NS_2$ 1) α -Phenylsulfon- γ -[2-Naphtyl]sulfon- β -Oximidopropan. Sm. 167° (*J. pr.* [2] 55, 412).
- $C_{10}H_{11}O_2NS_2$ 1) Verbindung (aus 2,5,6-Trioxyphenylen-1,3-Disulfid u. o -Toluidin) (*B.* [3] 15, 418).
- $C_{10}H_{11}O_2NS_2$ 1) 2-Oxy-1-[3-Nitro-2,4,5-Trimethylphenylazo]naphtalin-1'-Sulfonsäure + $2H_2O$. Ca (*B.* 20, 2067). — IV, 1438.
- $C_{10}H_{11}ONBr$ 1) Bromapocinchen. Sm. 186–188° (*B.* 20, 2678). — III, 838.
- $C_{10}H_{11}ON_2Cl_2$ 1) Hexachlorhydrocinchonin + $\frac{1}{2}H_2O$ (*J. pr.* [2] 8, 302). — III, 836.
- $C_{10}H_{11}O_2JP$ 1) Jodmethylat d. Diphenylphenoxyphosphin. Sm. 134–136° u. Zers. (*B.* 18, 2116). — IV, 1657.
- $C_{10}H_{11}O_2NJ$ 1) Jodmethylat d. 2-Methylchinolin-3-Carbonsäurebenzylester. Sm. 172° u. Zers. (*A.* 282, 125). — IV, 353.
- $C_{10}H_{11}O_2NP$ 1) Phenylmonamid d. 4-Methylphenylphosphinsäuremonophenylester. Sm. 59°; Sd. 283° (*A.* 293, 268). — IV, 1669.
- $C_{10}H_{11}O_2N_2S$ 1) α -[2-Naphtyl]sulfon- β -Phenylhydrasonpropan. Sm. 147° (*J. pr.* [2] 55, 401). — IV, 768.
 2) Phenyl-2-Amidobenzylamid d. Benzolsulfonsäure. Sm. 139–140° (*J. pr.* [2] 51, 263). — IV, 627.
- $C_{10}H_{11}O_2NP$ 1) 2-Methylphenylamid d. Phosphorsäurediphenylester. Sm. 176° (*B.* 27, 2578).
 2) 4-Methylphenylamid d. Phosphorsäurediphenylester. Sm. 134° (*B.* 27, 2576).
- $C_{10}H_{11}O_2N_2S$ 1) Benzoldisazo-2,4-Toluyldiamin-4'-Sulfonsäure (*B.* 16, 2036). — IV, 1385.
- $C_{10}H_{11}O_2JP$ 1) Jodmethylat d. Phosphorigsäuretriphenylester. Sm. 70–75° (*B.* 31, 1049).

- $C_{19}H_{15}O_4NBr$ 1) Verbindung (aus Hydroberberindibromid). Sm. 153—154°. + $AgNO_3$. — III, 801.
- $C_{19}H_{15}O_4N_2S_2$ 1) 3,4-Di[Phenylsulfonamido]-1-Methylbenzol. Sm. 178—179° (A. 265, 190). — IV, 617.
 2) Di[Phenylamid] d. 1-Methylbenzol-2,4-Disulfonsäure. Sm. 187° (Soc. 73, 754).
 3) Di[Phenylamid] d. 1-Methylbenzol-2,5-Disulfonsäure. Sm. 178° (Soc. 73, 744, 758).
 4) Di[Phenylamid] d. 1-Methylbenzol-2,6-Disulfonsäure. Sm. 162° (Soc. 73, 772).
 5) Di[Phenylamid] d. 1-Methylbenzol-3,4-Disulfonsäure. Sm. 190° (Soc. 73, 746, 752).
 6) Di[Phenylamid] d. 1-Methylbenzol-3,5-Disulfonsäure. Sm. 153° (Soc. 73, 749).
- $C_{19}H_{15}O_4N_2S$ 1) Benzaldehyd-2-Nitrophenylthionaminsäures-2-Nitro-1-Amidobenzol. Sm. 88° (A. 274, 226). — III, 7.
 2) Benzaldehyd-3-Nitrophenylthionaminsäures-3-Nitro-1-Amidobenzol. Sm. 90—91° (A. 274, 224). — III, 7.
 3) Benzaldehyd-4-Nitrophenylthionaminsäures-4-Nitro-1-Amidobenzol. Sm. 95—96° (A. 274, 225). — III, 7.
- $C_{19}H_{19}ON_2P$ 1) Di[Phenylamid] d. 2-Methylphenylphosphinsäure. Sm. 234° (A. 293, 295). — IV, 1668.
 2) Di[Phenylamid] d. 4-Methylphenylphosphinsäure. Sm. 209° (A. 293, 267). — IV, 1669.
- $C_{19}H_{19}O_2N_2P$ 1) Monophenylhydrasid d. 4-Methylphenylphosphinsäuremonophenylester. Sm. 173—174° (A. 293, 263). — IV, 1669.
- $C_{19}H_{19}O_2NS$ 1) Verbindung (aus d. Benzylamid d. Benzolsulfonsäure u. Benzol). Sm. 92—93° (B. 29, 1566).
- $C_{19}H_{20}ON_2Cl_2$ 1) Dichloreinchonin. Sm. 220—230°. 2HCl, (2HCl, $PtCl_4 + H_2O$), 2HBr (J. 1847/48, 618; B. 12, 423; 25, 1543). — III, 835.
- $C_{19}H_{20}ON_2Br_2$ 1) Dibromcinehonidin. 2HBr (A. 172, 103). — III, 852.
 2) Dehydrocinehonindibromid. Sm. 172—173°. HBr (B. 25, 1544). — III, 839.
- $C_{19}H_{20}ON_2S$ 1) 5-Aethyläther d. 2-Merkapto-5-Oxy-3-Phenyl-6,7,8,9-Tetrahydro- α -Naphthimidazol. Sm. 269—270° (B. 31, 903).
- $C_{19}H_{20}ON_2P$ 1) Di[Phenylamid]-2-Methylphenylamid d. Phosphorsäure. Sm. 175° (B. 27, 2579).
 2) Di[Phenylamid]-4-Methylphenylamid d. Phosphorsäure. Sm. 168° (B. 27, 2577).
- $C_{19}H_{20}O_2NBr$ 1) Bromthebain (B. 17, 528). — III, 910.
- $C_{19}H_{20}O_2NBr_2$ 1) Bromthebaintetrabromid (B. 17, 528). — III, 910.
- $C_{19}H_{20}O_2N_2J$ 1) Jodmethylat d. Difuraltropinon. Sm. 281° u. Zers. (B. 30, 2716).
- $C_{19}H_{20}O_2N_2S$ 1) Sulfocinchen. Zers. bei 280° (B. 31, 2361).
 2) Cinchensulfonsäure (B. 31, 2363).
 3) Verbindung (aus Benzaldehyd u. Anilinsulfid). Sm. 24° (B. 24, 749). — III, 6.
- $C_{19}H_{20}O_4NBr$ 1) Brompropylat d. Papaverolin. Sm. 140° (J. pr. [2] 56, 344).
- $C_{19}H_{21}ON_2Br$ 1) Bromcinehonin (J. 1847/48, 619; 1878, 822). — III, 835.
 2) Hydrobromoxycinehonin. Sm. 180—190°. 2HBr (B. 23, 2669). — III, 837.
 3) Hydrobromdehydrocinehonin. Sm. bei 235° u. Zers. HBr (B. 20, 2524). — III, 839.
- $C_{19}H_{21}ON_2P$ 1) Di[Phenylhydrasid] d. 4-Methylphenylphosphinsäure. Sm. 171° (A. 293, 269). — IV, 1669.
- $C_{19}H_{21}O_2NBr_4$ 1) Methyl-di-3,6-Dibrom-4-Oxy-2,5-Dimethylbenzylamin. Sm. 168 bis 169° (173°). HBr (B. 29, 1113).
- $C_{19}H_{21}O_2N_2Cl$ 1) Verbindung (aus d. 2-Methylphenylamid d. α -Chlor- α -Oxybuttersäure). Sm. 105—107° (B. 21, 305). — II, 466.
- $C_{19}H_{21}O_2N_2S$ 1) 6-Phenylazo-1,2,3,4,7,8,9,10-Oktahydro- α -Naphthochinolin-6-Sulfonsäure (B. 24, 2490). — IV, 1435.
- $C_{19}H_{21}O_4NS$ 1) Diäthylester d. 4-Thiocarbonyl-2,6-Dimethyl-1-Phenyl-1,4-Dihydropyridin-3,5-Dicarbonsäure. Sm. 245—246° (B. 20, 2112). — II, 2006.

- $C_{10}H_{21}ON_2Br$ 1) Cinchonindibromid + H_2O . Zers. bei 110° . $2HCl$, HBr (*J.* 1849, 376; 1876, 822; *B.* 17, 1995; 19, 2854; 20, 2515). — III, 831.
- $C_{10}H_{21}ON_2S$ 1) Valerylimidophenylbenzylamidomerkaptomethan. Sm. 125–126° (*Soe.* 67, 1043).
2) α -Acetyl- α - β -Di[β -Phenyläthyl]thioharnstoff. Sm. 73° (*B.* 19, 1824). — II, 539.
- $C_{10}H_{21}ON_2S_2$ 1) Isoamylester d. Diphenylidithioallophansäure. Sm. 87° (*J. pr.* [2] 32, 258). — II, 398.
- $C_{10}H_{21}ON_2Cl$ 1) Propyläther d. Verb. $C_{10}H_{16}ON_2Cl$ (*B.* 31, 1414).
 $C_{10}H_{21}O_2N_2S$ 1) Isoamylester d. Thiodiphenylallophansäure. Sm. 70° (*B.* 4, 248). — II, 382.
- $C_{10}H_{21}O_2NBr$ 1) Brommethylmorphimethin. 2 Modif. Sm. 132° u. 182 – 184° . ($2HCl$, $PtCl_4$ + $4H_2O$) (*A.* 297, 213).
- $C_{10}H_{21}O_2NJ$ 1) Jodmethylat d. Curin. Sm. 252 – 253° (*C.* 1895 [2] 1086).
2) Jodmethylat d. Morphothebaïn. Sm. 221 – 222° (*B.* 32, 191).
- $C_{10}H_{21}O_4N_2S$ 1) Cinchonidinsulfonsäure. Sm. 225° . ($2HCl$, $PtCl_4$ + $3H_2O$) (*A.* 267, 142). — III, 853.
2) Isocinchonidinsulfonsäure. (HCl , $AuCl_3$) (*A.* 267, 140). — III, 853.
3) Isocinchoninsulfonsäure. ($2HCl$, $AuCl_3$ + $2H_2O$) (*A.* 267, 141). — III, 855.
- $C_{10}H_{21}O_3NCl$ 1) Diäthylester d. 1-Oximido-5-Methyl-3-[4-Chlorphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäure. Sm. 187 – 188° (*A.* 303, 254).
- $C_{10}H_{21}N_3ClBr$ 1) Hydrobromcinchoninchlorid + $2H_2O$ (*B.* 25, 1546). — III, 836.
- $C_{10}H_{21}N_3ClJ$ 1) Hydrojodecinchoninchlorid (*B.* 31, 2358).
2) Hydrojodecinchonidinchlorid (*B.* 31, 2359).
- $C_{10}H_{21}ONBr$ 1) Verbindung (aus Diäthylanilin u. Dibrompseudocumenolbromid). Sm. 89 – 90° (*B.* 29, 1124).
- $C_{10}H_{21}ON_2Cl$ 1) Hydrochlorcinchonin. Sm. 212 – 213° . Salze meist bek. (*A.* 205, 348; 276, 109, 112; *J. pr.* [2] 8, 280; *M.* 16, 328; *B.* 20, 2519; *R.* 1, 108). — III, 831.
2) Hydrochlor-*n*-Isocinchonin. Sm. 172° . ($2HCl$, $PtCl_4$ + $3H_2O$) (*A.* 276, 96). — III, 846.
3) Hydrochlorapoisocinchonin. Sm. 203° . HCl + H_2O , $2HCl$, ($2HCl$, $PtCl_4$ + $2H_2O$), $2HJ$ + H_2O , H_2SO_4 + $3H_2O$ (*A.* 276, 101). — III, 847.
4) Hydrochlorapoicinonidin. Sm. 200° . $2HCl$, ($2HCl$, $PtCl_4$ + $2H_2O$), H_2SO_4 (*A.* 205, 346; *J. pr.* [2] 8, 283). — III, 853.
- $C_{10}H_{21}ON_2Br$ 1) Hydrobromcinchonin. $2HBr$ (*A.* 201, 324; *B.* 20, 2520). — III, 832.
- $C_{10}H_{21}ON_2J$ 1) Hydrojodecinchonin. Sm. 158 – 160° . $2HCl$, ($2HCl$, $PtCl_4$), $2HNO_3$ (*M.* 12, 662; 13, 432). — III, 832.
- $C_{10}H_{21}O_2N_2Cl$ 1) Hydrochlorapochinin. Sm. 160° . $2HCl$ + $3H_2O$, ($2HCl$, $PtCl_4$ + $2H_2O$) (*J. pr.* [2] 8, 285; *A.* 205, 341). — III, 819.
2) Hydrochlorapoconchinin + $2H_2O$. Sm. 164° (wasserfrei). $2HCl$, ($2HCl$, $PtCl_4$ + $4H_2O$) (*A.* 205, 343). — III, 826.
- $C_{10}H_{21}O_2N_2Br$ 1) Hydrobromapochinin. Sm. 209 – 210° . ($2HCl$, $PtCl_4$), HBr + H_2O (*M.* 6, 751). — III, 819.
- $C_{10}H_{21}O_2N_2J$ 1) Hydrojodapochinin. ($2HCl$, $PtCl_4$ + H_2O), $2HJ$ (*M.* 12, 330). — III, 819.
- $C_{10}H_{21}O_2NJ$ 1) Codeinmethylenjodid. Sm. 214 – 216° (*C.* 1899 [1] 118).
- $C_{10}H_{21}ONBr_2$ 1) Diäthylphenyl-3,6-Dibrom-4-Oxy-2,5-Dimethylbenzylammoniumbromid. Sm. 245 – 246° (u. 256 – 257°) (*B.* 29, 1123).
2) Bromäthylat d. Verb. $C_{17}H_{19}ONBr_2$ (aus Dibrompseudocumenolbromid). Sm. 189 – 192° u. Zers. (*B.* 29, 1125).
- $C_{10}H_{21}ONJ$ 1) Jodmethylat d. *p*-Dimethylamido-2,4,5-Trimethyldiphenylketon + xH_2O . Sm. 187° u. Zers. (wasserfrei) (*B.* 17, 2675). — III, 236.
- $C_{10}H_{21}ON_2J_2$ 1) Dihydrojodecinchonin. Sm. 187 – 190° u. Zers. HJ , HNO_3 , H_2SO_4 (*M.* 12, 583; 13, 431, 676; 15, 447). — III, 832.
- $C_{10}H_{21}O_2N_2J_2$ 1) Dihydrojodapoconchinin. HJ (*M.* 12, 684). — III, 819.
2) Dihydrojodapoconchinin. Sm. bei 220° . HCl , HJ , HNO_3 (*M.* 12, 669). — III, 826.
- $C_{10}H_{21}O_2NCl$ 1) Chlormethylat d. Codein + H_2O . 2 + $PtCl_4$ + $3H_2O$ (*A.* 222, 215). — III, 903.
- $C_{10}H_{21}O_2NJ$ 1) Jodmethylat d. Bebeerin (*J.* d. Bebirin). Sm. 268 – 270° (*B.* 29, 2057). — III, 798.

- $C_{19}H_{21}O_3NJ$ 2) Jodmethylat d. Codeïn + $2H_2O$. Zers. bei 270° (*C. r.* **92**, 1140; *M.* **10**, 733; *A. ch.* [5] **27**, 276; *A.* **222**, 215; *B.* **27**, 1149; **30**, 355). — **III**, 903.
- 3) Jodäthylat d. Morphin + $\frac{1}{2}H_2O$ (*A.* **88**, 340; *C. r.* **92**, 1140). — **III**, 898.
- $C_{19}H_{21}O_4N_2S$ 1) Cinchotinsulfonsäure + H_2O . Sm. 245—246° u. Zers. (224°). $HCl + 5H_2O$, ($2HCl, PtCl_4 + 6H_2O$), $H_2SO_4 + 8H_2O$ (*M.* **18**, 415; *A.* **267**, 139; **300**, 54, 358).
- $C_{19}H_{23}O_2N_2J$ 1) Hydrojodnichin + xH_2O . Sm. bei 60° . 2HJ (*M.* **14**, 440). — **III**, 820.
- $C_{19}H_{26}ON_2J_2$ 1) Jodmethylat d. 4,4'-Di[Dimethylamido]diphenylketon. Sm. 105° (*B.* **22**, 1878). — **III**, 186.
- $C_{19}H_{26}O_4NCl$ 1) Chloräthylat d. l-Scopolamin. + $AuCl_3$ (*B.* **27** [2] 883). — **III**, 796.
- $C_{19}H_{26}O_2NJ$ 1) Jodäthylat d. l-Scopolamin. Sm. 185—186° (*B.* **27** [2] 883). — **III**, 796.
- $C_{19}H_{27}O_2N_2Cl$ 1) Hydrochlorapotetrahydrochinin (*M.* **16**, 635). — **III**, 816.
- $C_{19}H_{27}N_2S_4P$ 1) 4-Methylphenyl-di[1-Piperidyl]phosphin + 2 Molec. Schwefelkohlenstoff. Sm. 139° (*B.* **31**, 1046). — **IV**, 1682.
- $C_{19}H_{27}N_2J_2S$ 1) Jodmethylat d. N-Methyl-Tetramethyldiamidodiphenylamin (*A.* **230**, 114, 151). — **II**, 808.
- $C_{19}H_{29}ON_2J_2$ 1) Jodmethylat d. α -Oxy- β -Tetramethyldiamidodiphenylmethan. Sm. 195° (*B.* **22**, 1882). — **II**, 1079.
- $C_{19}H_{21}O_4N_2S$ 1) Diäthylester d. $\alpha\beta$ -Di[Hexahydrophenyl]thioharnstoff-2,2'-Dicarbonsäure. Sm. 133° (*A.* **295**, 206).
- $C_{19}H_{21}N_3JP$ 1) Aethyl-4-Methylphenyl-di[1-Piperidyl]phosphoniumjodid. Sm. 191° (*B.* **31**, 1046). — **IV**, 1682.
- $C_{19}H_{29}N_3JP$ 1) Isobutyl-1-Tripiperidylphosphoniumjodid. Sm. 172° (*B.* **28**, 2210). — **IV**, 11.

C_{19} -Gruppe mit fünf Elementen.

- $C_{19}H_9ONCl_2Br_2$ 1) *p*-Dichlor-*p*-Dibrom-1-Benzoylcarbazol. Sm. 267—268° (*G.* **25** [2] 363). — **IV**, 393.
- 2) *p*-Dichlor-*p*-Dibrom-1-Benzoylcarbazol. Sm. 238—240° (*G.* **25** [2] 363). — **IV**, 393.
- $C_{19}H_{11}ONClBr$ 1) 3-Chlor-6-Brom-9-Benzoylcarbazol. Sm. 202° (*G.* **25** [2] 360). — **IV**, 393.
- $C_{19}H_{12}O_2NBrS$ 1) Bromresorcinsacchareïn (*Bt.* [3] **17**, 696).
- $C_{19}H_{12}O_2NJS$ 1) Jodresorcinsacchareïn (*Bt.* [3] **17**, 696).
- $C_{19}H_{15}O_2N_2ClS$ 1) Phenylamid d. 4-Chlorbenzol-1-Carbonsäure-3-Sulfonsäure. Sm. 219—220° (*Am.* **16**, 543). — **II**, 1303.
- $C_{19}H_{15}O_2N_2BrS$ 1) Benzolsulfonat d. 2-Brom-4'-Oxy-4-Methylazobenzol. Sm. 115° (*B.* **31**, 1783). — **IV**, 1414.
- $C_{19}H_{15}O_2Cl_2JP$ 1) Jodmethylat d. Phosphorigsäuretri-4-Chlorphenylester. Sm. 71° (*B.* **31**, 1053).
- $C_{19}H_{15}O_2N_2J_2S$ 1) Benzaldehyd-2,4-Dijodphenylaminsäures 2,4-Dijod-1-Amidobenzol. Sm. 78° (*A.* **274**, 224). — **III**, 7.
- $C_{19}H_{17}O_4N_2ClS_2$ 1) Di[Phenylamid] d. 2-Chlor-1-Methylbenzol-3,5-Disulfonsäure. Sm. 183° (*Soc.* **73**, 751).
- 2) Di[Phenylamid] d. 2-Chlor-1-Methylbenzol-4,5-Disulfonsäure. Sm. 183° (*Soc.* **73**, 747).
- 3) Di[Phenylamid] d. 2-Chlor-1-Methylbenzol-4,6-Disulfonsäure. Sm. 180° (*Soc.* **73**, 776).
- 4) Di[Phenylamid] d. 4-Chlor-1-Methylbenzol-2,5-Disulfonsäure. Sm. 245° (*Soc.* **73**, 744).
- 5) Di[Phenylamid] d. 4-Chlor-1-Methylbenzol-2,6-Disulfonsäure. Sm. 188° (*Soc.* **73**, 771).
- 6) Di[Phenylamid] d. 4-Chlor-1-Methylbenzol-3,5-Disulfonsäure. Sm. 184° (*Soc.* **73**, 743).
- $C_{19}H_{17}O_4N_2BrS_2$ 1) Di[Phenylamid] d. 2-Brom-1-Methylbenzol-3,5-Disulfonsäure. Sm. 194° (*Soc.* **73**, 750).
- $C_{19}H_{19}O_2N_2Cl_2S$ 1) Benzaldehyd-3-Chlorphenylthionaminsäures 3-Chlor-1-Amidobenzol. Sm. 108° (*A.* **274**, 218). — **III**, 7.

- C₁₉H₁₉O₂N₂Br₂S** 1) Benzaldehyd-2-Bromphenylthionaminsaures 2-Brom-1-Amidobenzol. Sm. 93° (A. 274, 221). — III, 7.
 2) Benzaldehyd-3-Bromphenylthionaminsaures 3-Brom-1-Amidobenzol. Sm. 101—102° (A. 274, 220). — III, 7.
 3) Benzaldehyd-4-Bromphenylthionaminsaures 4-Brom-1-Amidobenzol. Sm. 122° (A. 274, 220). — III, 7.
- C₁₉H₁₉O₂N₂J₂S** 1) Benzaldehyd-4-Jodphenylthionaminsaures 4-Jod-1-Amidobenzol. Sm. 121—122° (A. 274, 223). — III, 7.
- C₁₉H₂₀O₂NClJ** 1) Jodmethylat d. Chlorocodid (A. 297, 215).
- C₁₉H₂₀O₂NClBr** 1) Chlormethylat d. Bromcodein + 2 1/2 H₂O (A. 297, 218).
- C₁₉H₂₁O₂NClJ** 1) Codeinmethylenchlorojodid. Sm. 235—238° u. Zers. (C. 1899 [1] 118).
- C₁₉H₂₁O₂NBrJ** 1) Jodmethylat d. Bromcodein. Sm. 242—244° (A. 297, 212).
- C₁₉H₂₁O₂N₂ClS** 1) Hydrochloro-einchoninsulfonsäure. Sm. 227°. HCl + 3H₂O, (2HCl, PtCl₄ + 2H₂O), (HCl, AuCl₃), HJ + 2 1/2 H₂O, H₂SO₄ + 8H₂O (A. 276, 112). — III, 835.

C₂₀-Gruppe mit einem Element.

- C₂₀H₁₄** C 94,5 — H 5,5 — M. G. 254.
 1) 1,1'-Binaphthyl. Sm. 154°. Pikrat (A. 144, 78; B. 10, 1272, 1603; 15, 2170; 17, 3020; Soc. 35, 225). — II, 294.
 2) 1,2'-Binaphthyl. Sm. 79—80° (76°) (J. 1877, 392; Soc. 35, 227; B. 23, 3199). — II, 295.
 3) 2,2'-Binaphthyl. Sm. 187° (183,5°); Sd. 452°₁₃₃ (B. 10, 1272, 1603; 12, 2131; 20, 662; 23, 3200; J. 1870, 568; Soc. 35, 229; 40, 5; 47, 104; 65, 879; 67, 653; A. 284, 74). — II, 295.
 4) Phenylanthracen. Sm. 152—153°; Sd. 417° (A. 202, 61; 209, 276; Am. 13, 554; A. ch. [6] 1, 495). — II, 294.
- C₂₀H₁₆** C 93,8 — H 6,2 — M. G. 256.
 1) Benzylfluoren. Sm. 102° (M. 2, 443). — II, 294.
 2) 9-*β*-Methylphenylfluoren. Sm. 128° (B. 11, 203). — II, 294.
 3) Phenylidihydroanthracen. Sm. 120° (A. 202, 63). — II, 294.
 4) Kohlenwasserstoff (aus Benzaldehyd u. Benzol). Sm. oberh. 360° (A. 242, 331). — II, 287.
- C₂₀H₁₈** C 93,0 — H 7,0 — M. G. 258.
 1) $\alpha\alpha\beta$ -Triphenyläthan. Sm. 53,5—54,5°; Sd. 396—400° (B. 15, 1128; A. 296, 247). — II, 289.
 2) 2-Methyltriphenylmethan. Sm. 59—59,5°; Sd. 353—354,7°₁₇₄ (A. 194, 282; A. ch. [6] 2, 342). — II, 288.
 3) 3-Methyltriphenylmethan. Sm. 62°; Sd. oberh. 360° (B. 18, 2368). — II, 289.
 4) 4-Methyltriphenylmethan. Sm. 71°; Sd. oberh. 360° (A. 194, 263; B. 7, 1209; B. [3] 17, 978). — II, 289.
 5) α -Dibenzylbenzol. Sm. 86° (B. 6, 120, 221; 9, 31; 27, 3237). — II, 289.
 6) β -Dibenzylbenzol. Sm. 78° (B. 6, 121, 222; 9, 31; 27, 3237). — II, 289.
- C₂₀H₂₂** C 91,6 — H 8,4 — M. G. 262.
 1) Hexamethylanthracen. Sm. 220°. Pikrat (Sm. 203°) (A. ch. [6] 11, 272). — II, 278.
- C₂₀H₂₄** C 90,9 — H 9,1 — M. G. 264.
 1) 9,9-Dipropyl-9,10-Dihydroanthracen. Sm. 46—47° (B. 22, 1070). — II, 255.
 2) 2,6-Diisopropyl-9,10-Dihydroanthracen. Sm. 90°; Sd. oberh. 360° (G. 14, 290). — II, 255.
 3) 1,2-Dimethyl-4,5-Diphenylhexahydrobenzol. Sm. 97°; Sd. 270° (B. 29, 2123).
 4) $\alpha\beta$ -Di[*p*-Trimethylphenyl]äthan. Sm. 161°. Pikrat (J. pr. [2] 47, 51). — II, 255.
 5) polym. 4-Allyl-1-Methylbenzol. Sd. 350° (G. 14, 283, 505). — II, 171.
 6) polym. 4-Allyl-1-Methylbenzol (G. 14, 283, 505). — II, 171.
- C₂₀H₂₆** C 90,2 — H 9,8 — M. G. 266.
 1) $\alpha\beta$ -Di[4-Isopropylphenyl]äthan. Sd. über 360° (A. 121, 251). — II, 242.

- C₂₀H₂₀** 2) *αα*-Di[1,2,4-Trimethylphenyl]äthan (*J. pr.* [2] 47, 51). — II, 242.
C 89,6 — H 10,4 — M. G. 268.
- C₂₀H₂₈** 1) Diterephenylen. Sd. 345—350° (*Bl.* 50, 420; 51, 119). — II, 220.
C 88,9 — H 11,1 — M. G. 270.
- C₂₀H₃₀** 1) Diterephenyl. Sd. 343—346°. 2 + HCl (*Soc.* 54, 161; *Bl.* 50, 420). — II, 176.
2) Pinakonen. Sm. 55—56° (*A.* 292, 17; *B.* 27, 2350).
C 88,2 — H 11,8 — M. G. 272.
- C₂₀H₃₂** 1) Bisabolen. Sd. 259—260° (*C.* 1897 [2] 428).
2) Camphotereben. Sd. 260—280° (*A.* 197, 332). — III, 539.
3) Colophen. Sd. 318—320° (*A.* 37, 192; 71, 350; *A. ch.* [5] 6, 40; *B.* 12, 1755). — III, 539.
4) Copaivabalsamöl. Sd. 252—256° (*A.* 7, 157; 34, 321; 148, 152; 242, 191; *M.* 2, 510). — III, 539.
5) Dicinen. Sd. 328—333° (*B.* 17, 1973). — III, 540.
6) Diterpilen. Sd. 210—212°₄₀ (*A. ch.* [6] 15, 174, 191). — III, 541.
7) Metaterebenten. Sd. oberh. 360° (*A. ch.* [3] 39, 19). — III, 540.
8) Nephtrin + H₂O. Sm. 168° (wasserfrei) (*J. pr.* [2] 57, 443).
9) Paracajeputen. Sd. 310—316° (*J.* 1860, 482). — III, 541.
10) Petrolen. Sd. 280° (*A.* 23, 265).
11) Pinakanon. Sm. 98° (*B.* 27, 2350; *A.* 292, 21).
12) Diterpen (aus Colophonium). Sd. 305—310° (*A. ch.* [6] 1, 240). — III, 537.
C 87,6 — H 12,4 — M. G. 274.
- C₂₀H₃₄** 1) Colophenhydrür. Sd. 320—330° (*B.* 19, 2174). — II, 39.
2) Dicumphenhydrür. Sm. 94°; Sd. 321—323,6° (*B.* 13, 793). — II, 39.
3) Dicumphenhydrür. Sd. 321° (*A. ch.* [5] 19, 150; *B.* 13, 793). — II, 39.
4) Hydrodicamphen. Sm. 75°; Sd. 326—327° (*Bl.* [3] 19, 318).
C 87,0 — H 13,0 — M. G. 276.
- C₂₀H₃₈** 1) Dimenthen. Sd. 320° (*Bl.* 31, 530). — II, 19.
2) Kohlenwasserstoff (aus Harzöl). Sd. 330—335° (*Bl.* 31, 119). — I, 140.
3) Kohlenwasserstoff (aus Menthol). Sd. 190—191°₃₀ (*C.* 1898 [1] 105).
C 86,3 — H 13,7 — M. G. 278.
- C₂₀H₄₀** 1) Eikoesylen. Sd. 314—315° (*B.* 12, 69). — I, 137.
C 85,7 — H 14,3 — M. G. 280.
- C₂₀H₄₂** 1) Tetraamylen. Sd. 390—400° (*J.* 1861, 660). — I, 125.
C 85,1 — H 14,9 — M. G. 282.
- C₂₀H₄₄** 1) norm. Eikosan. Sm. 36,7°; Sd. 205°₁₅ (*B.* 15, 1718; 19, 2220; 21, 2261; 29, 1323). — I, 107.
2) Bryonan. Sm. 69°; Sd. 400° (*B.* 25 [2] 287).
3) Kohlenwasserstoff (aus Braunkohlenparaffin) (*B.* 12, 73).

C₂₀-Gruppe mit zwei Elementen.

- C₂₀H₂Cl₂** 1) Enneachlordinaphtalin. Sm. 156—158° (*A.* 160, 73). — II, 189.
- C₂₀H₂Br₂** 1) Heptabrom-2,2'-Binaphtyl (*J.* 1874, 446). — II, 295.
C 69,8 — H 2,3 — O 27,9 — M. G. 344.
- C₂₀H₂O₂** 1) Coerulein (*B.* 4, 455, 555, 665; *A.* 209, 258, 271; *Bl.* [3] 11, 1136). — II, 2088.
2) Dianhydrobisdiketodihydroinden-4,4'-Dicarbonsäure. Ag₂ (*B.* 31, 2088).
- C₂₀H₂Cl₆** 1) Hexachlor-1,1'-Binaphtyl (*A.* 144, 82). — II, 295.
- C₂₀H₂Br₆** 1) Hexabrom-1,1'-Binaphtyl (*A.* 144, 81). — II, 295.
C 76,4 — H 3,2 — O 20,4 — M. G. 314.
- C₂₀H₁₀O₂** 1) *o*-Dixanthon. Sm. 317° (*B.* 26, 75). — III, 306.
2) *m*-Dixanthon. Sm. 256° (*B.* 25, 1655). — III, 306.
3) *α*-Dinaphtyldichinon (*B.* 15, 1812). — III, 376.
4) 2,2'-Bi[1,4-Naphtochinon]. Sm. 216—217° u. Zers. (*Zers.* bei 270°) (*Soc.* 57, 632, 808; 67, 661; *B.* 30, 2663; 32, 546). — III, 463.
5) 1,1'-Binaphtyl-3,4,3',4'-Dichinon. Sm. noch nicht bei 300° (*A.* 194, 206; *B.* 19, 2483; *Soc.* 67, 663). — II, 396.
C 72,7 — H 3,0 — O 24,3 — M. G. 330.
- C₂₀H₁₀O₂** 1) *α*-Oxydixanthon. Sm. 258° (*B.* 24, 3981; 25, 1655). — III, 306.

- $C_{20}H_{10}O_2$ 2) β -Oxydixanthon. Sm. 326° (B. 25, 1056). — III, 306.
- $C_{20}H_{10}O_6$ 3) 4,4'-Di[1,2-Naphtochinon]oxyd. Sm. 245° (B. 30, 2199).
C 69,3 — H 2,9 — O 27,7 — M. G. 346.
- $C_{20}H_{10}O_7$ 1) 2,2'-Bi[3-Oxy-1,4-Naphtochinon]. Sm. 215° (Soc. 67, 662). — III, 463.
C 66,3 — H 2,8 — O 30,9 — M. G. 362.
- $C_{20}H_{10}Cl_4$ 1) Gallein (B. 4, 457; 14, 1326; A. 209, 249, 261). — II, 2087.
- $C_{20}H_{11}O$ 2) Anhydrodibiketodihydroinden-4,4'-Dicarbonensäure (B. 31, 2088).
- $C_{20}H_{11}O$ 1) Tetrachlor-2,2'-Binaphtyl (J. 1874, 446). — II, 295.
C 89,5 — H 4,5 — O 6,0 — M. G. 268.
- $C_{20}H_{11}O$ 1) α -Binaphtylenoxyd. Sm. 182–182,5° (184°). Pikrat (A. 209, 134; B. 13, 1724; 14, 196; 15, 1122; J. r. 14, 130). — II, 1005.
- $C_{20}H_{11}O$ 2) 2,6- β -Binaphtylenoxyd. Sm. 161° (158°). Pikrat (B. 13, 1724; 14, 200; 15, 1122; A. 209, 136, 146; J. r. 14, 132; Soc. 59, 1096). — II, 1005.
- $C_{20}H_{11}O_2$ 3) isom. Binaphtylenoxyd. Sm. 157°. Pikrat (B. 15, 2171). — II, 1006.
C 84,5 — H 4,2 — O 11,3 — M. G. 284.
- $C_{20}H_{11}O_2$ 1) 2-[2-Naphtyl]-1,4-Naphtochinon. Sm. 177° (Soc. 67, 657). — III, 463.
C 80,0 — H 4,0 — O 16,0 — M. G. 300.
- $C_{20}H_{11}O_2$ 1) Anhydrophenolphthalein (Fluoran). Sm. 180° (173–175°). + $\frac{1}{2}C_8H_8O$ (A. 212, 349; B. 24, 1417; 25, 1386, 3589; 28, 430). — II, 1983.
- $C_{20}H_{11}O_2$ 2) 3-Oxy-2-[2-Naphtyl]-1,4-Naphtochinon. Sm. 187° u. Zers. (Soc. 67, 659). — III, 463.
- $C_{20}H_{11}O_4$ 3) Benzoesäure d. 1-Oxy-9-Ketofluoran. Sm. 128–129° (B. 31, 3034).
C 75,9 — H 3,8 — O 20,2 — M. G. 316.
- $C_{20}H_{11}O_4$ 1) Binaphtylidichinhydrone (A. 194, 205). — III, 396.
- $C_{20}H_{11}O_4$ 2) 3,4-Methylenäther d. 2-[3,4-Dioxyphenyl]-1,4- α -Naphtopyron. Sm. 253–254° (B. 31, 708).
- $C_{20}H_{11}O_4$ 3) 3,4-Methylenäther d. 2-Keto-1-[3,4-Dioxybenzyliden]- α -Naphtofuran (B. 30, 1469).
- $C_{20}H_{11}O_4$ 4) Benzoesäure d. 1-Oxyxanthon. Sm. 206,5° (B. 27, 1996). — III, 201.
- $C_{20}H_{11}O_4$ 5) Benzoesäure d. 2-Oxyxanthon. Sm. 151° (B. 27, 1996). — III, 201.
- $C_{20}H_{11}O_4$ 6) Benzoesäure d. 3-Oxyxanthon. Sm. 147° (B. 27, 1996). — III, 201.
- $C_{20}H_{11}O_4$ 7) Benzoesäure d. 4-Oxyxanthon. Sm. 172° (B. 27, 1996). — III, 201.
- $C_{20}H_{11}O_4$ 8) Säure (aus 2-Oxynaphtalin). Sm. 281°. Ba + 7H₂O, Ag (M. 10, 116). — II, 1914.
- $C_{20}H_{11}O_4$ 9) Verbindung (aus Diphenacylfumarsäure) (A. 299, 60).
- $C_{20}H_{11}O_4$ 10) Verbindung (aus d. Laktone d. γ -Oxy- γ -Phenylcrotonensäure) (A. 299, 56).
C 72,3 — H 3,6 — O 24,1 — M. G. 332.
- $C_{20}H_{11}O_5$ 1) Fluorescein (Dioxyfluoran). Zers. oberh. 290°. Ca + 4H₂O, Ba + 9H₂O (A. 183, 2; 212, 351; 215, 83; 238, 360; B. 11, 1342; 21, 3377; 24, 1413; 28, 312, 428; 29, 2623). — II, 2060.
- $C_{20}H_{11}O_5$ 2) Hydrochinonphthalein (2,7-Dioxyfluoran). Sm. 226–227° (B. 6, 507; 11, 714; 28, 2959; 31, 1743). — II, 2065.
C 68,9 — H 3,4 — O 27,6 — M. G. 348.
- $C_{20}H_{11}O_5$ 1) Cörolin (B. 14, 1326; A. 209, 274). — II, 2088.
- $C_{20}H_{11}O_5$ 2) Diresorcinphthalein + $3\frac{1}{2}H_2O$. Zers. bei 245° (B. 13, 1654; M. 5, 182). — II, 2067.
- $C_{20}H_{11}O_5$ 3) Anhydrid d. Resorcinoxalein (B. 14, 2565). — II, 937.
C 65,9 — H 3,3 — O 30,8 — M. G. 364.
- $C_{20}H_{11}O_5$ 1) Hydrogallein (A. 209, 266). — II, 2093.
- $C_{20}H_{11}O_5$ 2) Phloroglucinphthalein. Zers. bei 240° (B. 13, 1652). — II, 2093.
- $C_{20}H_{11}O_5$ 3) 1,9-Laktone d. 1-Oxy-2,3-Diacetoxy-10-Keto-9,10-Dihydroanthracen-9-Methenylcarbonensäure (Diacetat d. α -Dioxyanthracumarin). Sm. 260° (B. 20, 3143). — II, 2028.
C 63,2 — H 3,1 — O 33,7 — M. G. 380.
- $C_{20}H_{11}O_5$ 1) Pyrogallinphthaleinsäure (B. 4, 457, 663; A. 209, 261). — II, 2087.
C 58,2 — H 2,9 — O 38,8 — M. G. 412.
- $C_{20}H_{11}O_5$ 1) Verbindung (aus d. Purpurogallin $C_{20}H_{11}O_5$) (J. 1882, 682). — III, 346.
C 85,7 — H 4,3 — N 10,0 — M. G. 280.
- $C_{20}H_{11}N_2$ 1) Dinaphtasin. Sm. 283–284° (Gm. 7, 24; B. 3, 291; 10, 573, 772; 19, 2795; 23, 1329; 26, 183; 29, 2089; Soc. 51, 100; A. 253, 28; 255, 147; 272, 351). — IV, 1083.
- $C_{20}H_{11}N_2$ 2) α - β -Dinaphtasin. Sm. 242–243° (B. 23, 1333; 26, 184; 29, 2089, 2091; A. 272, 333). — IV, 1084.

- C₂₀H₁₁N₂**
- 3) $\alpha\beta$ - $\beta\beta$ -Dinaphtazin. Sm. 240° (B. 20, 2087). — IV, 1085.
 - 4) 2,3-Biphenylen-1,4-Benzdiazin (Phenanthrophenazin). Sm. 217°. HCl (A. 237, 340; 202, 264). — IV, 1085.
 - 5) Chinakridin. Sm. 221° (B. 20, 81). — IV, 1086.
 - 6) Chrysoptazin. Sm. 128–129° (Soc. 63, 1290). — IV, 1087.
 - 7) Base (aus Oxychinakridon). Sm. 213° (B. 20, 81). — IV, 1087.
- C₂₀H₁₁Br₂**
C₂₀H₁₁Br₃
C₂₀H₁₁S
C₂₀H₁₁N
- 1) Dibrom-1,1'-Binaphtyl. Sm. 215° (A. 144, 80). — II, 295.
 - 1) $\alpha\beta$ -Tribrom- $\alpha\beta$ -Tri[*p*-Bromphenyl]äthan. Sm. 245° (A. 206, 247).
 - 1) Dinaphtylthiophen. Sm. 147° (B. 27, 3001).
 - C 89,8 — H 4,9 — N 5,2 — M. G. 267.
 - 1) $\beta\beta$ -Dinaphtylenamin (β -Dinaphtylcarbazol). Sm. 159° (cor.). Pikrat (B. 15, 2174). — IV, 472.
 - 2) isom. $\beta\beta$ -Dinaphtylcarbazol. Sm. 169–170°. Pikrat (B. 10, 2242). — IV, 473.
 - 3) isom. Dinaphtylcarbazol. Sm. 216°. Pikrat (B. 18, 3259). — IV, 473.
 - 4) 2,3-Diphenylenindol. Sm. 188–189° (Soc. 71, 1124).
- C₂₀H₁₁N₃**
- C 81,4 — H 4,4 — N 14,2 — M. G. 295.
 - 1) 2-[2-Naphtyl]- $\beta\beta$ -Naphttriazol. Sm. 186° (B. 28, 2202). — IV, 1170.
 - 2) α -Amido- $\alpha\beta$ -Naphtazin. Sm. bei 325° (B. 20, 2080). — IV, 1215.
 - 3) Amidophenanthrophenazin. Sm. 279° (B. 21, 2306). — IV, 1214.
- C₂₀H₁₁O**
- C 88,9 — H 5,2 — O 5,9 — M. G. 270.
 - 1) 10-Oxy-9-Phenylanthracen (Phenylanthranol). Sm. 141–144° u. Zers. (A. 202, 54). — II, 1094.
 - 2) 1,1-Dinaphtyläther. Sm. 109–110°. Pikrat (B. 14, 195). — II, 857.
 - 3) 2,2'-Dinaphtyläther. Sm. 105°; Sd. über 360°. Pikrat. Sm. 122 bis 122,5° (A. 209, 149; B. 13, 1850; 14, 199; 15, 306; Soc. 40, 5). — II, 877.
 - 4) Verbindung (aus α -Diketo- $\alpha\beta$; oder $\alpha\gamma\delta$; Tetraphenyl- $\beta\delta$ -Hexadin). Sm. 92–94° (A. 302, 214).
- C₂₀H₁₁O₂**
- C 83,9 — H 4,9 — O 11,2 — M. G. 286.
 - 1) 1,4-Dioxy-2-[2-Naphtyl]naphtalin. Sm. 169–170° (Soc. 67, 658).
 - 2) α -Dioxybinaphtyl. Sm. 300° (J. r. 6, 183). — II, 1004.
 - 3) 2,2'-Dioxy-1,1'-Binaphtyl. Sm. 217°. Pikrat (J. r. 6, 187; B. 14, 2345; 15, 2166; 21, 3562; 23, 3368; B. [3] 19, 610). — II, 1004.
 - 4) isom. *p*-Dioxybinaphtyl. Sm. 195° (B. 15, 807). — II, 1005.
 - 5) 9-Oxy-10-Oxyphenylanthracen (A. 202, 58; 209, 277; B. 13, 1617). — II, 1112.
 - 6) 10-Oxy-9-Keto-10-Phenyl-9,10-Dihydroanthracen (Phenylloxanthranol). Sm. 208° (A. 202, 58; 209, 277; B. 13, 1617). — III, 260.
 - 7) Benzyläther d. 1-Oxy-9-Ketofluoren. Sm. 93–94° (B. 31, 3034).
 - 8) 1,2-Dibenzoylbenzol. Sm. 145–146° (B. 9, 32, 309). — III, 305.
 - 9) 1,3-Dibenzoylbenzol (Isophthalophenon). Sm. 99,5–100° (B. 13, 320). — III, 304.
 - 10) 1,4-Dibenzoylbenzol (Terephthalophenon). Sm. 159–160° (B. 9, 31, 309; 19, 147, 1847). — III, 305.
 - 11) Laktone d. α -Oxytriphenylmethan-2-Carbonsäure (Phtalophenon; Diphenylphtalid). Sm. 115°; Sd. 419–428° u. Zers. (B. 14, 1866; 17, 387; A. 202, 50; 200, 234; A. ch. [6] I, 523). — II, 1722.
 - 12) Laktone d. α -Oxy- α' -Phenyl- α' -Biphenylmethan-2-Carbonsäure (L. d. Phenylbenzhydriyl-*o*-Benzoësäure). Sm. 204–206° (J. pr. [2] 41, 149). — II, 1722.
 - 13) Benzoeat d. Cyklophenylenbenzylidenoxyd. Sm. 150–190° (M. 16, 279).
- C₂₀H₁₁O₃**
- C 79,5 — H 4,6 — O 15,9 — M. G. 302.
 - 1) 2-[1-Naphtyl]äther d. 1,2,4-Trioxynaphtalin. Sm. 240–245° (B. 30, 2566).
 - 2) 4-[1-Naphtyl]äther d. 1,2,4-Trioxynaphtalin. Zers. bei 220° (B. 30, 2567).
 - 3) 9,*p*-Dioxy-10-Oxyphenylanthracen (A. 202, 91). — II, 1116.
 - 4) 10-Oxy-9-Keto-10-[*p*-Oxyphenyl]-9,10-Dihydroanthracen (Oxyphenylloxanthranol). Sm. 194° u. Zers. (B. 13, 1618). — III, 260.
 - 5) 2-[4-Phenylbenzoyl]benzol-1-Carbonsäure. Sm. 225° (220°). Ca, Ni, Pb, Cu, Ag (J. pr. [2] 41, 147; A. 257, 96). — II, 1726.
 - 6) Hydrofluoransäure (Anhydro-*p*-Dioxytriphenylmethan-2-Carbonsäure). Sm. 226–228° (214–217°). Ag (A. 212, 356; B. 25, 1388; 28, 431). — II, 1911.

- C₂₀H₁₄O₂**
- 7) **α ,2-Lakton d. α -Oxy- ρ -Oxytriphenylmethan-2-Carbonsäure** (Monoxydiphenylphthalid). Sm. 61—66° u. 155° (B. 13, 1613). — II, 1910.
 - 8) **Benzoesat d. 2-Oxydiphenylketon**. Fl. (M. 17, 107). — III, 193.
 - 9) **Benzoesat d. 4-Oxydiphenylketon**. Sm. 112,5° (A. 210, 251; B. 6, 1245; 14, 1841). — III, 194.
 - 10) **Verbindung** (aus Phenanthroxylacetessigsäureäthylester). Zers. bei 285° (Soc. 59, 14). — II, 1908.
 - 11) **Verbindung** (aus β -Benzoylpropionsäure). Sm. 191—192° (A. 299, 61).
 - 12) **Verbindung** (aus β -Phtalylpropionsäure). Sm. 235—237° (B. 11, 1680). — II, 1875.
- C₂₀H₁₄O₂**
- C 75,4 — H 4,4 — O 20,1 — M. G. 318.
- 1) **ρ -Dibenzoyl-1,3-Dioxybenzol**. Sm. 149° (A. 210, 259). — III, 305.
 - 2) **ρ -Dibenzoyl-1,4-Dioxybenzol**. Sm. 207° (A. 210, 264). — III, 305.
 - 3) **3,4-Methylenäther d. γ -Keto- γ -[1-Oxy-2-Naphtyl]- α -[3,4-Dioxyphenyl]propen**. Sm. 154—155° (B. 31, 707).
 - 4) **2,2'-Bi-1,3-Diketo-2-Methyl-2,3-Dihydroindolen**. Sm. 203—205° (B. 31, 1163).
 - 5) **Naphtochinhydrin** (A. 167, 359). — II, 982.
 - 6) **Binaphtyldihydrochinon** (Binaphtyldichinol). Sm. 176—178° (A. 194, 297; B. 17, 3024; 19, 2492). — III, 397.
 - 7) **Isobinaphtyldichinon**. Sm. 250—260° u. Zers. (Soc. 47, 104). — III, 397.
 - 8) **Diacetat d. Dioxypyren**. Sm. 166—167° (M. 4, 322). — II, 1003.
 - 9) **Dibenzoesat d. 1,2-Dioxybenzol**. Sm. 84° (88°) (A. 107, 247; 210, 261; 301, 104). — II, 1149.
 - 10) **Dibenzoesat d. 1,3-Dioxybenzol**. Sm. 117°. + AlCl₃ (A. 138, 78; 210, 256; 301, 104; B. 11, 2269; 26 [2] 492; J. pr. [2] 26, 64, [2] 36, 10; G. 15, 261). — II, 1149.
 - 11) **Dibenzoesat d. 1,4-Dioxybenzol**. Sm. 199° (A. 210, 263; B. 12, 661). — II, 1150.
 - 12) **Säure** (aus Naphtalin). Pb, Pb₂, Ag₂ (A. 144, 86). — II, 1912.
 - 13) **Säure** (aus 2-Oxynaphtalin). Sm. 223—224°. Ba + 2H₂O (M. 10, 120). — II, 1912.
 - 14) **α ,2'-Lakton d. α -Oxy- α -[2,4-Dioxyphenyl]- $\alpha\alpha$ -Diphenylmethan-2'-Carbonsäure** (Benzolresorcinphtalein). Sm. 175—176°. + CHCl₃. Sm. 113—114° (B. 14, 1860). — II, 1985.
 - 15) **α ,2'-Lakton d. α -Oxy- $\alpha\alpha\alpha$ [ρ -Dioxytriphenyl]methan-2'-Carbonsäure** (Phenolphthalin). Sm. 100° (amorph); 253—255° (krystal.) (A. 202, 68; B. 16, 319; 29, 131; G. 25 [2] 142). — II, 1982.
 - 16) **Isphenolphthalin**. Sm. 69—70° (B. 28, 108, 431).
 - 17) **Phenolphthalidin**. Sm. 212° (A. 202, 100). — III, 260.
 - 18) **Corallinphtalein** (B. 11, 1427; A. 194, 140). — II, 1121.
 - 19) **Acetylderivat d. Säure C₂₀H₁₄O₂** (aus Dehydrobenzoylessigsäure). Sm. 145—150° (Soc. 47, 290). — II, 1906.
 - 20) **Phenylester d. 6-Oxy-3-Benzoylbenzol-1-Carbonsäure**. Sm. 84° (A. 290, 168).
 - 21) **Diphenylester d. Benzol-1,2-Dicarbonsäure**. Sm. 70° (B. 7, 705; 13, 419; 28, 108, 431). — II, 1794.
 - 22) **Diphenylester d. Benzol-1,3-Dicarbonsäure**. Sm. 120° (B. 7, 708). — II, 1826.
 - 23) **Diphenylester d. Benzol-1,4-Dicarbonsäure**. Sm. 191° (B. 7, 707; A. 121, 89). — II, 1832.
- C₂₀H₁₄O₂**
- C 71,8 — H 4,2 — O 23,9 — M. G. 334.
- 1) **Di[3,4-Dioxy-1-Naphtyl]äther**. Sm. 138° (B. 30, 2201).
 - 2) **Methyläther d. 2-Oxy-2-Methyl-2,2'-Bi-1,3-Diketo-2,3-Dihydroindolen**. Sm. 214—216° (B. 31, 1174).
 - 3) **Fluorescin**. Sm. 125—127° (A. 183, 26; M. 13, 423). — II, 2037.
 - 4) **Hydrochinonphtalin**. Sm. 202—203°. + C₆H₆ (B. 11, 716). — II, 2038.
 - 5) **Benzoylpyrogallolphtalein**. Sm. 189—190°. + 1 Molec. Essigsäure (B. 14, 1864). — II, 2037.
 - 6) **2-[2-Acetoxylnaphtoyl]benzol-1-Carbonsäure**. Sm. 170° (B. 16, 302). — II, 1909.
 - 7) **Aurincarbonsäure**. C₂₀ (B. 25, 948). — II, 2037.
 - 8) **Diphenylester d. 2-Oxybenzol-1,3-Dicarbonsäure**. Sm. 99°. Na (J. pr. [2] 44, 10). — II, 1936.

- $C_{20}H_{14}O_2$
 $C_{20}H_{14}O_2$
- 9) Dibenzooat d. 1,2,3-Trioxybenzol. Sm. 108° (A. 301, 106).
 C 68,6 — H 4,0 — O 27,4 — M. G. 350.
 - 1) Dimethylenäther d. 2,2'-Bi-2-Oxy-1,3-Diketo-2,3-Dihydroinden. Sm. 175—180° (B. 31, 1169).
 - 2) Acetat d. Calycin. Sm. 178° (J. pr. [2] 58, 540).
 - 3) Diresorcinphtalin. Sm. 138° u. Zers. (B. 13, 1655; M. 5, 186). — II, 2038.
 - 4) Brenskatechinphtalein (B. 22, 2196). — II, 2065.
 - 5) Allofluorescein (B. 28, 109; 31, 512, 1302).
 - 6) Diacetat d. 1,3-Diketo-2-[3,4-Dioxybenzyliden]-2,3-Dihydroinden. Sm. 186° (B. 30, 1185).
 - 7) 1,3-Phenyleneester d. 2-Oxybenzol-1-Carbonsäure. Sm. 111° (B. 26, 79). — II, 1493.
 - 8) 1,4-Phenyleneester d. 2-Oxybenzol-1-Carbonsäure. Sm. 148° (B. 26, 81). — II, 1493.
- $C_{20}H_{14}O_2$
- 1) Hydrat d. 4,4'-Di[1,2-Naphtochinon]oxyd (B. 30, 2200).
 - 2) Gallin (A. 209, 268). — II, 2086.
 - 3) Phloroglucinphtalin (B. 13, 1653). — II, 2086.
 - 4) Resorcinoxalein (B. 10, 1305; 14, 2563). — II, 937.
- $C_{20}H_{14}O_2$
- 1) 3,4-Methylenäther-7,8-Diacetat d. 7,8-Dioxy-2-[3,4-Dioxyphenyl]-1,4-Benzopyron (B. 29, 2435).
 - 2) Triacetat d. 1,2,3-Trioxy-9,10-Anthrachinon. Sm. 181—182° (B. 10, 40; Soc. 63, 1170). — III, 433.
 - 3) Triacetat d. 1,2,4-Trioxy-9,10-Anthrachinon. Sm. 192—193° (198 bis 200°) (A. 183, 192; B. 10, 553). — III, 434.
 - 4) Triacetat d. 1,2,5[*P*]-Trioxy-9,10-Anthrachinon. Sm. 205° (192 bis 193°) (B. 12, 1289; A. 183, 192; 280, 17). — III, 435.
 - 5) Triacetat d. 1,2,6-Trioxy-9,10-Anthrachinon. Sm. 195—196° (B. 10, 1822). — III, 435.
 - 6) Triacetat d. 1,2,7-Trioxyanthrachinon. Sm. 220° (J. 1873, 452; A. 280, 15). — II, 436.
 - 7) Säure (aus 1-Oxynaphtalin). Sm. 246°. Ba (B. 21, 1614). — II, 2087.
 C 60,3 — H 3,5 — O 36,2 — M. G. 398.
- $C_{20}H_{14}O_2$
- 1) Psoromsäure (Parelsäure). Sm. 263—264°. Ag (G. 12, 431; A. 284, 129; 288, 59; 295, 226). — II, 2093, 2112.
 - 2) Benzooat d. Sordidin. Sm. 222—223° (G. 24 [2] 330). — II, 2059.
 - 3) Verbindung (aus d. Glykosid $C_{22}H_{14}O_{10}$). Sm. 250—255° (J. 1876, 852). — III, 576.
 C 45,6 — H 2,7 — O 51,7 — M. G. 526.
- $C_{20}H_{14}O_{17}$
- 1) Anhydrid d. Prenomalsäure. Sm. 210° (B. 4, 275).
 C 85,1 — H 5,0 — N 9,9 — M. G. 282.
- $C_{20}H_{14}N_2$
- 1) *P*-Diimido-1,1'-Binaphtyl. 2HCl (B. 19, 2551). — IV, 1073.
 - 2) 1,1'-Azonaphtalin. Sm. 190° (B. 18, 298, 3252; 30, 81). — IV, 1389.
 - 3) 1,2'-Azonaphtalin. Sm. 136° (B. 20, 612). — IV, 1389.
 - 4) 2,2'-Azonaphtalin. Sm. 204° (B. 30, 82). — IV, 1389.
 - 5) α -[2-Chinoly]l- β -[6-Chinoly]äthen. Sm. 146—147° (B. 22, 287). — IV, 1078.
 - 6) α -[2-Chinoly]l- β -[7-Chinoly]äthen. Fl. (B. 23, 3650). — IV, 1078.
 - 7) 2,4-Diphenyl-1,3-Benzodiazin. Sm. 119—120°. (2HCl, PtCl₄), Pikrat (B. 25, 3091). — IV, 1079.
 - 8) 2,3-Diphenyl-1,4-Benzodiazin (Diphenylchinoxalin). Sm. 124° (126°). HCl (B. 24, 720; 27, 2181; J. pr. [2] 57, 540). — IV, 1079.
 - 9) Dihydrophenanthophenazin. HCl (A. 292, 264). — IV, 1080.
 - 10) Dihydrochrysoptiazin. Sm. 132—133° (Soc. 63, 1289). — IV, 1080.
 C 77,4 — H 4,5 — N 18,1 — M. G. 310.
- $C_{20}H_{14}N_2$
- 1) Verbindung (aus 2,2'-Azobenzol-1-Diazochlorid). Sm. 202—204° (B. 20, 2901). — IV, 1542.
 - 2) Verbindung (aus Aposafrafin u. α - β -Diamidoäthan) (B. 30, 2492). — IV, 1279.
 - 3) Azinverbindung (aus 1,2,4,5-Tetraamidobenzol u. Penanthrenchinon) (B. 20, 338). — IV, 1244.
- $C_{20}H_{14}Cl_2$
- 1) 1,4-Di[*aa*-Dichlorbenzyl]benzol. Sm. 91—92° (B. 9, 311). — III, 305.

- C₂₀H₁₄S**
- 1,1'-Dinaphtylsulfid. Sm. 110°; Sd. 290°₁₅ (197—198°) (B. 7, 407; 22, 823; 23, 3046; 28, 2330; 29, 1327; J. pr. [2] 41, 217). — II, 867.
 - 1,2'-Dinaphtylsulfid. Sm. 60—61°; Sd. 290—291°₁₅ (B. 23, 2368; 28, 2330). — II, 887.
 - 2,2'-Dinaphtylsulfid. Sm. 151°; Sd. 295—296°₁₅ (201—202°) (B. 22, 825; 26, 2816; 28, 2330; 29, 1327). — II, 887.
- C₂₀H₁₄S₂**
- 1,1'-Dinaphtyldisulfid. Sm. 91° (85°) (A. 132, 94; J. pr. [2] 47, 97). — II, 868.
 - 2,2'-Dinaphtyldisulfid. Sm. 139° (132°) (Z. 1869, 711; B. 8, 463; 21, 1100; J. pr. [2] 47, 98; [2] 49, 387; [2] 58, 181, 189). — II, 888.
- C₂₀H₁₄As**
- 1-Arsenonaphtalin. Sm. 221° (B. 14, 913; 15, 1954). — IV, 1693.
- C₂₀H₁₄Hg**
- Quecksilberdi[1-Naphtyl]. Sm. 243° (A. 147, 166; 154, 188; B. 12, 564; 27, 249; 31, 1530). — IV, 1712.
 - Quecksilberdi[2-Naphtyl]. Sm. 238° (B. 27, 251; Soc. 65, 878). — IV, 1712.
- C₂₀H₁₄Se**
- 2,2'-Dinaphtylselenid. Sm. 138,5°; Sd. 298°₁₇ (B. 27, 1767).
C 89,2 — H 5,6 — N 5,2 — M. G. 269.
- C₂₀H₁₅N**
- 1,1'-Dinaphtylamin. Sm. 113° (111°); Sd. 310—315°₁₅. Pikrat (B. 18, 68; B. 11, 639; 15, 615; 16, 14, 17). — II, 600.
 - 1,2'-Dinaphtylamin. Sm. 110—111°. Pikrat (B. 16, 17). — II, 604.
 - 2,2'-Dinaphtylamin. Sm. 170,5°; Sd. 471°. HCl, Pikrat (A. 211, 43; 279, 108; B. 13, 1300; 14, 1791, 2343; 15, 611; 18, 10; 18, 1586; 19, 2016; 20, 2619; 23, 1541; C. 1896 [1] 997). — II, 603.
 - 1,2-Diphenylindol. Sd. oberh. 360° (A. 239, 223). — IV, 413.
 - 2,3-Diphenylindol. Sm. 123—124°; Sd. 290—296°₁₀. Pikrat, + Aceton (A. 236, 136; M. 14, 282; 15, 402; B. 26, 1341; Soc. 65, 892). — IV, 469.
 - 3-Methyl-5-Phenylakridin. Sm. 135—136°. HJ, H₂SO₄, Pikrat (A. 239, 60). — IV, 469.
 - Nitril d. Triphenylmethan- α -Carbonsäure. Sm. 127,5° (A. 194, 260; J. 1881, 518; Bl. [3] 9, 374). — II, 1481.
 - polym. Nitril d. Triphenylmethan- α -Carbonsäure. Sm. 210° (A. 194, 262). — II, 1481.
 - Nitril d. Triphenylmethan-2-Carbonsäure. Sm. 89°; Sd. 270—285°₁₀₋₁₅ (B. 24, 2572). — II, 1481.
 - Nitril d. Triphenylmethan-4-Carbonsäure. Sm. 99° (B. 26, 3089). — II, 1482.
- C₂₀H₁₅N₃**
- C 80,8 — H 5,0 — N 14,1 — M. G. 297.
- 1-[1-Naphtyl]amidodiazonaphtalin (α -Diazoamidonaphtalin) (Z. 1866, 137). — IV, 1574.
 - 2-[2-Naphtyl]amidodiazonaphtalin. Sm. 156° (B. 19, 1282; Soc. 51, 191). — IV, 1574.
 - 4-Amido-1-[1-Naphtylazo]naphtalin. Sm. 173—175°. HCl, 2HCl, H₂SO₄ (Z. 1866, 138, 331, 568; A. 129, 108; B. 7, 1291; 17, 477; 18, 297; 22, 590; 28, 2198; Soc. 51, 190). — IV, 1390.
 - α -Amido- β -Azonaphtalin. Sm. 152° (B. 20, 612). — IV, 1390.
 - β -Amido- β -Azonaphtalin. HCl, H₂SO₄ (B. 20, 2900; 28, 2202; Soc. 59, 698). — IV, 1390.
 - isom. Amido- β -Azonaphtalin. Sm. 149° (B. 18, 2422). — IV, 1391.
 - 1,3,5-Triphenyl-1,2,4-Triazol. Sm. 104°; Sd. oberh. 360°. HCl (J. pr. [2] 54, 152). — IV, 1187.
 - 1,3,4-Triphenyl-1,2,5-Triazol. Sm. 122° (B. 21, 2806; 25, 2599). — IV, 785.
 - 6-Amido-2,3-Diphenyl-1,4-Benzdiazin. Sm. 175°. HCl (A. 292, 254). — IV, 1213.
 - 5-Phenylhydrasonmethylakridin. H₂SO₄ (B. 20, 1549). — IV, 422.
- C₂₀H₁₅N₃**
- C 73,9 — H 4,6 — N 21,5 — M. G. 325.
- β -Phenylazo- β -[2-Naphtyl]asopyrrol. Sm. 151° (B. 19, 2256). — IV, 1483.
 - Phenylhydrason d. 3-Benzoyl-1,2,4-Benztriazin. Sm. 185° (B. 26, 2789). — IV, 1166.
- C₂₀H₁₅Cl**
- β -Chlor- $\alpha\alpha\beta$ -Triphenyläthen. Sm. 117° (C. 1897 [2] 662).
- C₂₀H₁₅Br**
- β -Brom- $\alpha\alpha\beta$ -Triphenyläthen. Sm. 115° (C. 1897 [2] 662).

- C₂₀H₁₆O** C 88,2 — H 5,9 — O 5,9 — M. G. 272.
- 1) β -Oxy- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 136°; Sd. 270—280°₆₀. Na (Bl. [3] 13, 858; [3] 15, 22; B. 26, 1957; 29, 2080; 32, 654; A. 275, 88; 296, 242; C. 1897 [2] 660). — II, 1094; III, 258.
 - 2) $\alpha\alpha\beta$ -Triphenyläthanoxyd. Sm. 105° (C. 1897 [2] 662).
 - 3) α -Keto- β -Phenyl- α -Biphenyläthan (Biphenylbenzylketon). Sm. 150°; Sd. oberh. 360° (B. 21, 1339). — III, 258.
 - 4) 4-Benzoyldiphenylmethan. Sm. 157° (Bl. [3] 15, 948).
 - 5) Benzylacenaphtylketon. Sm. 114° (B. 21, 1342). — III, 258.
 - 6) Aldehyd d. Triphenylmethan-4-Carbonsäure. S.-l. 190—195°₆₀. + NaHSO₄ (B. 19, 2028). — III, 64.
 - 7) Verbindung (aus Zimmtaldehyd) (A. 34, 160). — III, 58.
- C 83,3 — H 5,5 — O 11,1 — M. G. 288.
- 1) α -Oxy- β -Keto- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 84° (Bl. [3] 13, 860; C. 1897 [2] 661; B. 32, 655). — III, 258.
 - 2) β -Keto- $\alpha\beta$ -Diphenyl- α -[4-Oxyphenyl]äthan (p-Desylphenol). Sm. 133°; Sd. 300—314°₆₀ (Soc. 57, 965). — III, 258.
 - 3) Triphenylessigsäure (Triphenylmethan- α -Carbonsäure). Sm. 264° u. Zers. (255—258° u. Zers.). Ag (A. 194, 261; Bl. [3] 1, 778; J. 1881, 853; J. pr. [2] 32, 624; B. 26, 2225; 28, 2782). — II, 1481.
 - 4) Triphenylmethan-2-Carbonsäure. Sm. 162°. Ag (A. 202, 52; 234, 242; B. 14, 1866; 24, 2573; Bl. [3] 17, 979). — II, 1481.
 - 5) Triphenylmethan-4-Carbonsäure. Sm. 161° (B. 26, 3079). — II, 1482.
 - 6) 1-(β -Phenylbenzyl)benzol-2-Carbonsäure. Sm. 184—185°. Ag (J. pr. [2] 41, 150). — II, 1482.
 - 7) Benzoat d. α -Oxydiphenylmethan. Sm. 87,5—89° (A. 133, 20). — II, 1144.
 - 8) Benzoat d. 4-Oxydiphenylmethan. Sm. 86° (G. 3, 254; J. 1873, 440). — II, 1149.
- C 78,9 — H 5,2 — O 15,8 — M. G. 304.
- 1) 9,10-Dioxy-10-Oxyphenyl-9,10-Dihydroanthracen (A. 202, 96). — II, 1116.
 - 2) Methylaurin + H₂O. 2 + H₂SO₄ (A. 194, 133; 202, 201; M. 3, 485; 16, 362). — II, 1121.
 - 3) Rosolsäure (A. 179, 184; 196, 91; B. 10, 1201; J. pr. [1] 100, 49). — II, 1121.
 - 4) Isorosolsäure (A. 243, 162). — II, 1028.
 - 5) α -Oxytriphenylmethan-3-Carbonsäure. Sm. 160—162° (B. 16, 2369). — II, 1723.
 - 6) α -Oxytriphenylmethan-4-Carbonsäure. Sm. 200°. Ba + 7H₂O (B. 7, 1210; 19, 2029; 26, 3081). — II, 1723.
 - 7) 2'-Oxytriphenylmethan-4-Carbonsäure. Sm. 210° (B. 13, 1616). — II, 1724.
 - 8) Lakton d. α -Aethoxy- α -Phenyl- α -[2-Oxy-1-Naphtyl]essigsäure. Sm. 145° (B. 31, 2824).
 - 9) Aethylester d. γ -[9-Keto-9,10-Dihydro-10-Phenanthrylen]propen- γ -Carbonsäure (α -Phenanthroxylencrotonsäure). Sm. 124° (B. 16, 278; Soc. 59, 8). — II, 1721.
- C 75,0 — H 5,0 — O 20,0 — M. G. 320.
- 1) Phenolecorallin (B. 11, 1427; A. 194, 140). — II, 1121.
 - 2) Farbstoff (aus Corallin) + H₂O (M. 16, 378, 394).
 - 3) Resorcinnphenylacetin. Sm. 266—268° (J. pr. [2] 48, 397). — II, 1123.
 - 4) Aethylderivat d. 3-Benzoyl-4-Keto-6-Phenyl-3,4-Dihydro-1,2-Pyron. Sm. 159° (Soc. 47, 283). — II, 1909.
 - 5) Acetat d. 5-Oxy-1,3-Diketo-2-Methyl-2,4-Diphenyl-2,3-Dihydro-R-Penten. Sm. 111—112° (A. 284, 268). — III, 321.
 - 6) Diacetat d. 1,3-Dioxy-2-Phenylnaphtalin. Sm. 136—137,5° (A. 296, 17).
 - 7) Diacetat d. 1,4-Dioxy- β -Phenylnaphtalin. Sm. 151,5—152,5° (A. 226, 31). — III, 460.
 - 8) β -Dioxytriphenylmethan-2-Carbonsäure. Sm. 225° (A. 202, 80). — II, 1910.
 - 9) β -Dioxytriphenylmethan- β -Carbonsäure. Sm. 184° (B. 14, 1862). — II, 1911.

- $C_{20}H_{16}O_4$
- 10) Dimethylester d. 1-Phenylnaphtalin-2,3-Dicarbonsäure. Sm. 118 bis 120° (*Am.* 20, 95).
 - 11) Äthylester d. 2-[2-Oxynaphthoxy]benzol-1-Carbonsäure. Sm. 206° (*B.* 16, 302). — II, 1909.
 - 12) Äthylester d. 4,6-Diphenyl-1,2-Pyron-5-Carbonsäure. Sm. 120 bis 121° (*Soc.* 75, 253).
 - 13) Äthylester d. 9-Ketophenanthren-10-[Acetylmethylencarbonsäure] (Ac. d. Phenanthroxylencarbonsäure). Sm. 184,5—185,5° u. Zers. (*Soc.* 43, 28; 59, 14). — II, 1908.
 - 14) Äthylester d. Isophenanthroxylencarbonsäure. Sm. 177° (*Soc.* 59, 3). — II, 1908.
 - 15) Diphenylester d. 1,2-Dihydrobenzol-3,6-Dicarbonsäure. Sm. 175° (*A.* 258, 26). — II, 1759.
 - 16) Diphenylester d. cis. trans-1,4-Dihydrobenzol-1,4-Dicarbonsäure. Sm. 146° (*A.* 258, 17). — II, 1761.
 - 17) Diphenylester d. 1,4-Dihydrobenzol-2,5-Dicarbonsäure. Sm. 191° (*A.* 258, 31). — II, 1760.
- $C_{20}H_{16}O_5$
- 1) 3,4-Methylenäther-2-Acetat d. γ -Keto- ϵ -[2-Oxyphenyl]- α -[3,4-Dioxyphenyl]- $\alpha\delta$ -Pentadien. Sm. 144—145° (*B.* 31, 729).
 - 2) Anhydrid d. $\alpha\beta\beta'$ -Tri[1,3-Dioxyphenyl]äthan (*A.* 243, 171). — II, 1045.
 - 3) α -[β -Trioxyphenyl]- $\alpha\alpha$ -Diphenylmethan-2'-Carbonsäure (*B.* 14, 1865). — II, 1986.
 - 4) α -Oxy- α -[2,4-Dioxyphenyl]- $\alpha\alpha$ -Diphenylmethan-2'-Carbonsäure (*B.* 14, 1860). — II, 1986.
 - 5) $\alpha\gamma$ -Lakton d. $\alpha\delta$ -Dioxy- $\alpha\delta$ -Diphenylbutan- $\beta\gamma$ -Dicarbonsäure- β -Monäthylester. Sm. 64—68° (*A.* 293, 85).
 - 6) Dimethylester d. Pulvinsäure. Sm. 141° (138—136°). Piperidinverbindung (*B.* 13, 1634; *A.* 282, 40). — II, 2030.
 - 7) Monäthylester d. Pulvinsäure. Sm. 127—128° (125—127°) (*B.* 13, 1633; *A.* 219, 14; 282, 14; 284, 116, 123). — II, 2030.
 - 8) Verbindung (aus Corallin) + 2 $\frac{1}{2}$ H₂O (*M.* 16, 393). C 68,1 — H 4,5 — O 27,3 — M. G. 352.
- $C_{20}H_{16}O_6$
- 1) Gallol (*B.* 4, 556; *A.* 209, 264). — II, 1124.
 - 2) Pterocarpin. Sm. 152° (*B.* 23, 97; 48, 88; *A. ch.* [6] 17, 124). — III, 672.
 - 3) 2,5-Dimethyläther-3,6-Diphenyläther d. 2,3,5,6-Tetraoxy-1,4-Benzochinon. Sm. 171° (*Am.* 17, 650). — III, 355.
 - 4) Diacetat d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten. Sm. 158° (isom. Form. Sm. 124—125°) (*B.* 27, 719). — III, 317.
 - 5) Diacetat d. 3,5-Dioxy-1,7-Dimethyl-9,10-Anthrachinon. Sm. 236 bis 237° (*A.* 240, 277). — III, 457.
 - 6) Diacetat d. Dimethylanthraflavinsäure. Sm. 223° (*A.* 240, 278). — III, 457.
 - 7) Diacetat d. Dimethylbendioxyanthrachinon. Sm. 188° (*A.* 240, 278). — III, 457.
 - 8) Triacetat d. 1,2,9-Trioxyanthracen. Sm. 188° (*B.* 14, 1263). — II, 1115.
 - 9) Triacetat d. Verb. C₁₁H₁₀O₆. Sm. 165° (*B.* 21, 446). — III, 430.
 - 10) $\alpha\delta$ -Dibenzoyl- β -Buten- $\beta\gamma$ -Dicarbonsäure (Diphenacylfumarsäure?). Zers. bei 130°. Ag₂ (*A.* 299, 58).
 - 11) Dehydroanisoylessigsäure (*C.* 1897 [2] 616).
 - 12) Dimethylester d. Oxypulvinsäure. Sm. 117° (*J. pr.* [2] 57, 314).
 - 13) Monoäthylester d. Oxypulvinsäure. Sm. 139° (*J. pr.* [2] 57, 315).
 - 14) Verbindung (aus $\alpha\alpha\beta$ -Tri[1,2-Dioxyphenyl]äthan) (*A.* 243, 183). — II, 1045.
 - 15) Verbindung (aus $\alpha\alpha\beta$ -Tri[1,3-Dioxyphenyl]äthan) (*A.* 243, 177). — II, 1045.
 - 16) Verbindung (aus $\alpha\alpha\beta$ -Tri[1,4-Dioxyphenyl]äthan) (*A.* 243, 187). — II, 1046.
- $C_{20}H_{16}O_7$
- 1) Hydrochinonphtaleinsäure (*B.* 6, 507). — II, 2065.
 - 2) Anhydrid d. Diphenylessigweinsäure. Sm. 117,5° (*A. ch.* [7] 3, 484). — II, 1310.

- C₂₀H₁₆O₇** 3) Diacetylphyscion. Sm. 183° (A. 284, 182). — III, 641.
4) Diacetat d. *p*-Trioxy-*p*-Methyl-9,10-Anthrachinonmonomethyläther. Sm. 148° (Soc. 65, 562). — III, 455.
- C₂₀H₁₆O₈** 5) Diacetat d. Emodinmonomethyläther. Sm. 185—186° (Soc. 65, 932). — III, 454.
C 62,5 — H 4,2 — O 33,3 — M. G. 384.
1) Laktone d. 2'-Oxy-2,4,4'-Triacetoxyldiphenylsäure. Sm. 152° (160,5°) (Soc. 69, 1267; 71, 1087).
2) α ,2- β ,2'-Dilaktone d. $\alpha\beta$ -Dioxy- $\alpha\beta$ -Di[5,6-Dimethoxyphenyl]äthen-2,2'-Dicarbonsäure (Tetramethoxylphthalyl). Sm. noch nicht bei 300° (M. 12, 53). — II, 2099.
3) Diacetat d. Maleinfluorescein. Sm. 157° (B. 18, 2865). — II, 2050.
4) Diacetat d. Kämpferid. Sm. 188—189° (B. 14, 2388). — III, 632.
5) Verbindung (aus 1,3-Dioxybenzol). Sm. 210° (Am. 9, 136). — II, 919.
6) Verbindung (aus Scoparin) + 1½ H₂O. Sm. 297° (M. 15, 351). — III, 648.
- C₂₀H₁₆O₉** C 60,0 — H 4,0 — O 36,0 — M. G. 400.
1) Purpurogallin (siehe C₁₈H₁₄O₈). Na₂, Ba₂ (J. 1862, 682). — III, 346.
2) Triacetylphlobaphen (A. 202, 277). — III, 588.
3) Rheumsäure (Z. 1868, 308). — III, 591.
- C₂₀H₁₆O₁₁** C 55,6 — H 3,7 — O 40,7 — M. G. 432.
1) Acetylderivat d. Dipyrogallolessigsäure + H₂O (C. 1895 [1] 530).
- C₂₀H₁₆O₁₂** C 51,7 — H 3,4 — O 44,8 — M. G. 464.
1) Granatgerbsäure (A. 143, 285). — III, 590.
- C₂₀H₁₆N₂** C 84,5 — H 5,6 — N 9,9 — M. G. 284.
1) 1,2-Di[Benzylidenamido]benzol. Sm. 106° (B. 29, 1499). — IV, 563.
2) 1,4-Di[Benzylidenamido]benzol. Sm. 138—140° (B. 11, 599). — IV, 596.
3) 4-Amido-1-[1-Naphtyl]amidonaphtalin (A. 243, 303). — IV, 922.
4) *p*-Diamido-1,1-Binaphtyl. 2HCl (B. 19, 2551). — IV, 1073.
5) *p*-Diamidinaphtyl (α -Naphtidin). Sm. 198°. 2HCl, (2HCl, PtCl₄), H₂SO₄ (B. 18, 3254). — IV, 1073.
6) *p*-Diamido-*p*-Binaphtyl (Dinaphtylin). Sm. 273°. (2HCl, PtCl₄) (B. 18, 3257). — IV, 1073.
7) *s*-Di[1-Naphtyl]hydrazin. Sm. 275° (B. 18, 3253). — IV, 1503.
8) *s*-Di[2-Naphtyl]hydrazin. Sm. 162—164° (B. 30, 82). — IV, 1504.
9) α -Benzyliden- β -Diphenylmethylenhydrazin. Sm. 75° (J. pr. [2] 44, 204). — III, 187.
10) 2-Phenyl-1-Benzylbenzimidazol (Phenylbenzaldehydin). Sm. 133 bis 134°. HCl, (2HCl, PtCl₄), HNO₃, H₂SO₄ (B. 11, 1653; 29, 1499). — IV, 563.
11) 2,2'-Dimethyl-3,3'-Bichinolyll + H₂O. Sm. 104—105° (144° wasserfrei). (2HCl, PtCl₄) (B. 25, 1757). — IV, 1073.
12) 3,3'-Dimethyl-5,5'-Bichinolyll. Sm. 188°; Sd. 250°. 2HCl, (2HCl, PtCl₄ + 2H₂O). — IV, 1074.
13) 2,2'-Dimethyl-6,6'-Bichinolyll (Dichinaldin). Sm. 206—207°; Sd. oberh. 360°. (2HCl, PtCl₄ + 2H₂O), 2HNO₃, H₂Cr₂O₇ (A. 242, 326). — IV, 1073.
14) $\alpha\beta$ -Di[6-Chinolyll]äthan. Sm. 124°. 2HCl + 4H₂O, (2HCl, PtCl₄), (2HCl, AuCl₃) (B. 23, 1115). — IV, 1074.
15) α -[2-Chinolyll]- β -[6-Chinolyll]äthan. Sm. 106,5° (B. 22, 289). — IV, 1074.
16) 2,3-Diphenyl-1,2-Dihydro-1,4-Benzdiazin (Diphenyldihydrochinoxalin). Sm. 146° (148—149°) (HCl, SnCl₄) (B. 24, 720; 27, 2181). — IV, 1074.
17) 1-Phenylamido-3-Methyl- β -Naphtochinolin. Sm. 168° (B. 25, 2708). — IV, 1016.
18) 2-Phenylamido-5-Methylakridin. Sm. 215—216° (B. 24, 2044). — IV, 1015.
19) Tetrahydrochinakridin. Sm. 272° (B. 29, 83). — IV, 1075.
20) Tetrahydrophenanthrochinoxalin. Sm. 202—204° (A. 295, 221). — IV, 482.
21) Nitril d. α -Phenylamido- $\alpha\alpha$ -Diphenylsäure. Sm. 146,5° (B. 25, 2056). — II, 1465.

- C₂₀H₁₆N₄**
 C 76,9 — H 5,1 — N 17,9 — M. G. 312.
 1) 1,8-Diamidoazonaphthalin. HCl (B. 13, 717). — IV, 1391.
 2) 8,8'-Dimethyl-5,5'-Asochinolin. Sm. 260° (B. 23, 3677). — IV, 1486.
 3) 5,7-Diamido-2,3-Diphenyl-1,4-Benzdiazin. Sm. 260° (B. 30, 541). — IV, 1243.
 4) 6,7-Diamido-2,3-Diphenyl-1,4-Benzdiazin. Sm. 245° (B. 22, 446). — IV, 1244.
 5) Phenylsazon d. Phenylglyoxal. Sm. 152° (A. 243, 247; J. pr. [2] 49, 406).
 6) Triphenyldicarbimid. Sm. 70—74°. HCl, (2HCl, PtCl₄ + 2H₂O), H₂SO₄ + 2H₂O (B. 23, 1670). — II, 352.
- C₂₀H₁₇N**
 C 88,6 — H 6,3 — N 5,1 — M. G. 271.
 1) α -[4-Methylphenyl]imidodiphenylmethan. Sd. oberh. 360° (A. 187, 214). — III, 188.
 2) α -Benzylimidodiphenylmethan. Sm. 64° (B. 30, 3007).
 3) α -Benzylidenamidodiphenylmethan (Benzylidenbenzhydramin). Sm. 98—99° (B. 26, 2169). — III, 31.
 4) 10-Methyl-5-Phenyl-5,10-Dihydroakridin. Sm. 104° (B. 16, 1815). — IV, 465.
- C₂₀H₁₇N₂**
 C 80,3 — H 5,7 — N 14,0 — M. G. 299.
 1) 4-Benzylidenamido-1-Phenylhydrazonmethylbenzol. Sm. 140° (J. pr. [2] 56, 105). — IV, 753.
 2) α -Amido- α -Cinnamylidenhydrazon- α -[2-Naphtyl]methan (Cinnamyliden- β -Naphtenylhydrazidin). Sm. 170°. Pikrat (A. 298, 37; B. 30, 1885). — IV, 1168.
 3) α -Azobenzylanilin. Sm. 226° (B. 25, 3578). — IV, 1385.
 4) 5[oder 6]-Amido-2-Phenyl-1-Benzylbenzimidazol (Amidobenzaldehydin). Sm. 121°. 211Cl (B. 29, 1502). — IV, 1181.
 5) 5-Amido-2-Phenyl-1-[2-Methylphenyl]benzimidazol. Sm. 145° (Bl. [3] 17, 870). — IV, 1180.
 6) 5-Amido-2-Phenyl-1-[4-Methylphenyl]benzimidazol. Sm. 193° (Bl. [3] 17, 870). — IV, 1180.
 7) 2-[4-Amidophenyl]-1-[4-Methylphenyl]benzimidazol. Sm. 187—188°. + $\frac{1}{2}$ C₂H₄O, HCl + $\frac{1}{2}$ H₂O, H₂SO₄ + H₂O (Bl. [3] 19, 28; A. ch. [7] 14, 426). — IV, 1181.
 8) 5-Phenylamido-2-Methyl-1-Phenylbenzimidazol. Sm. 162—164°. + C₂H₄O, HCl, (2HCl, PtCl₄) (B. 25, 2720). — IV, 1150.
 9) 6-Phenylamido-2-Methyl-1-Phenylbenzimidazol. Sm. 115° (A. 286, 180). — IV, 1150.
 10) 1-Phenylhydrazido-3-Methyl- β -Naphtochinolin. Sm. 189° (B. 25, 2708). — IV, 1185.
- C₂₀H₁₇Cl**
C₂₀H₁₈O
 C 87,6 — H 6,6 — O 5,8 — M. G. 274.
 1) β -Chlor- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 84° (A. ch. [6] 12, 272). — II, 289.
 2) β -Oxy- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 87° (C. 1897 [2] 661).
 3) α -Oxy- β -Methyltriphenylmethan. Sm. 150° (A. 194, 283). — II, 1089.
 4) Methyläther d. α -Oxytriphenylmethan. Sm. 82° (A. ch. [6] 1, 503). — II, 1083.
 5) 2-Keto-1,3-Dibenzylidenhexahydrobenzol. Sm. 118° (B. 29, 1840, 2052).
 6) 3-Keto- β -Dibenzyliden-1-Methyl-R-Pentamethylen. Sm. 149—151° (B. 29, 1601).
- C₂₀H₁₈O₂**
 C 82,8 — H 6,2 — O 11,0 — M. G. 290.
 1) β -Di[α -Oxybenzyl]benzol. Sm. 171° (B. 9, 310). — II, 1103.
 2) $\alpha\beta$ -Dioxy- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 164° (C. 1897 [2] 662).
 3) β -Oxy- $\alpha\beta$ -Diphenyl- α -[4-Oxyphenyl]äthan. Sm. 161—162° (Soc. 57, 970). — II, 1112.
 4) Dibenzyläther d. 1,2-Dioxybenzol. Sm. 61° (A. 221, 378). — II, 1050.
 5) Dibenzyläther d. 1,3-Dioxybenzol. Sm. 76° (A. 221, 376). — II, 1050.
 6) Dibenzyläther d. 1,4-Dioxybenzol. Sm. 128° (130°) (Bl. [3] 1, 347; A. 221, 370). — II, 940, 1050.
 7) Säure (aus Polyporsäure). Sm. 156°. Ag₂ (A. 195, 368). — II, 1907.
- C₂₀H₁₈O₃**
 C 78,4 — H 5,9 — O 15,7 — M. G. 306.
 1) Methylleukaurin (A. 202, 210). — II, 1121.

- 2) $\alpha\alpha\beta$ -Tri[p -Oxyphenyl]äthan. Erweicht bei 140° (A. 243, 153). — II, 1028.
- 3) Di[p -Oxyphenyl]-[p -Oxy- p -Methylphenyl]methan (A. 179, 198). — II, 1028.
- 4) Phenolphthalol (Dioxidiphenyl-Oxymethylphenylmethan). Sm. 190° (A. 202, 87). — II, 1115.
- 5) Triphenyläther d. $\alpha\alpha\alpha$ -Trioxyäthan (Orthoessigsäuretriphenyläther). Sm. 98–98,5° (B. 24, 3678). — II, 655.
- 6) Dibenzoylmesityloxyd β Sm. 213° (A. 278, 138).
- 7) Dehydrodiacetonphenanthrenchinon. Sm. 179–181° (B. 17, 2827). — III, 448.
- 8) $\alpha\gamma$ -Lakton d. α -Oxy- $\alpha\eta$ -Diphenyl- γ -Heptan- $\delta\eta$ -Oxyd- γ -Carbonsäure (Diphenyldibutolakton). Sm. 83–84° (A. 266, 193).
C 74,5 — H 5,6 — O 19,9 — M. G. 322.
- C₂₀H₁₆O₄**
- 1) 3,4-Methylenäther-2-Aethyläther d. γ -Keto- ϵ -[2-Oxyphenyl]- α -[3,4-Dioxyphenyl]- $\alpha\delta$ -Pentadien. Sm. 90° (B. 31, 730).
- 2) $\beta\epsilon$ -Diketo- $\gamma\delta$ -Dibenzoylhexan. Sm. 173–175° (B. 18, 2133). — III, 325.
- 3) $\alpha\beta\gamma\delta$ -Tetraketo- $\alpha\delta$ -Di[2,4-Dimethylphenyl]butan. Sm. 180° (B. 25, 3475). — III, 325.
- 4) α -Aethoxy- α -Phenyl- α -[2-Oxy-1-Naphtyl]essigsäure. Ba (B. 31, 2825).
- 5) Dimethylester d. Polyporsäure. Sm. 187° (A. 187, 193). — II, 1907.
- 6) Aethylester d. 1,3-Diketo-6-Methyl-2-Phenyl-2,3-Dihydroinden-2-Methylcarbonsäure. Sm. 95–96° (B. 29, 2378).
- 7) Aethylester d. 1,3-Diketo-2-[3-Methylphenyl]-2,3-Dihydroinden-2-Methylcarbonsäure. Sm. 116–118° (B. 28, 1391). — II, 1906.
- 8) Diphenylester d. cis-1,2,3,4-Tetrahydrobenzol-1,4-Dicarbonensäure. Sm. 107° (A. 258, 39). — II, 1733.
- 9) Diphenylester d. 1,2,3,4-Tetrahydrobenzol-2,5-Dicarbonensäure. Sm. 145° (A. 258, 32). — II, 1833.
- 10) Verbindung (aus Aethyloxanthranol). Sm. 84° (A. 212, 92). — III, 244.
- 11) Leukoverbindung d. Farbstoffes C₂₀H₁₆O₄ (aus Corallin) (M. 16, 379).
C 71,0 — H 5,3 — O 23,7 — M. G. 338.
- C₂₀H₁₆O₅**
- 1) Tetramethyläther d. Dehydrobrasilin. Sm. 136–139° (M. 16, 914). — III, 655.
- 2) Säure (aus d. Verbindung C₂₀H₂₀O₄). Sm. 203° u. Zers. Ag₂ + H₂O (Soc. 59, 20). — II, 1981.
- 3) Anhydrid d. β -Benzoylpropionsäure. Fl. (Bl. [3] 19, 390).
- 4) Aethylester d. α -Benzoyl- β -Acetoxy- β -Phenylakrylsäure. Fl. (A. 282, 184). — II, 1896.
- 5) Aethylester d. β -Keto- $\alpha\alpha$ -Dibenzoylpropan- α -Carbonsäure (Ac. d. Dibenzoylacetessigsäure). Fl. (A. 258, 273; 266, 100; 282, 184). — II, 1981.
- 6) Aethylester d. 4[oder 5]-Benzoxyl-1,6[oder 1,3]Dimethylbenzofuran-2-Carbonsäure. Sm. 94–95° (A. 283, 256). — III, 732.
- 7) α -Acetat- β -Aethyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten. Sm. 121–122° (B. 25, 3472; 27, 713). — III, 317.
- 8) β -Acetat- α -Aethyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten. Sm. 114–115° (B. 27, 718). — III, 317.
- 9) Verbindung (aus Cubebin). Sm. 78° (M. 8, 469). — II, 1114.
C 67,8 — H 5,1 — O 27,1 — M. G. 354.
- C₂₀H₁₆O₆**
- 1) $\alpha\alpha\beta$ -Tri[1,2-Dioxyphenyl]äthan (A. 243, 181). — II, 1044.
- 2) $\alpha\alpha\beta$ -Tri[1,3-Dioxyphenyl]äthan (A. 243, 173). — II, 1045.
- 3) $\alpha\alpha\beta$ -Tri[1,4-Dioxyphenyl]äthan (A. 243, 185). — II, 1045.
- 4) Tetramethyläther d. Dehydrohämatoxylin. Sm. 202–206° (M. 16, 910). — III, 664.
- 5) Tri[3-Oxyphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 155–159° u. Zers. (B. 24, 3684). — II, 917.
- 6) α^{β} -Methylenäther- γ^{δ} -Aethyläther- γ^{δ} -Acetat d. γ -Keto- γ -[2,4-Dioxyphenyl]- α -[3,4-Dioxyphenyl]propen. Sm. 100–101° (B. 31, 704).
- 7) Hydromethylumbelliferon (oder C₁₀H₁₀O₅). Sm. 257–259° (Am. 5, 436). — II, 1780.
- 8) Opiaurin (B. 20, 873). — II, 1942.

- C₂₀H₁₄O₆** 9) α ,2-Lakton d. α -Oxydiphenylmethan- α ,2,2'-Tricarbonsäure- α ,2'-Diäthylester. Sm. 108° (A. 242, 234). — II, 2055.
- 10) Diäthylester d. Diphtalysäure. Sm. 154—155° (A. 242, 225; B. 31, 2650). — II, 2029.
- C₂₀H₁₈O₇** C 64,9 — H 4,8 — O 30,3 — M. G. 370.
- 1) Hydrastonsäure. Sm. 168—169° (B. 23 [2] 492; 26 [2] 1006). — II, 2055.
- 2) Dibenzolat d. Glykogen (J. r. 23, 379). — II, 1143.
- 3) Verbindung (aus Filixsäure) (B. 21, 2966). — II, 1967.
- C₂₀H₁₈O₈** C 62,2 — H 4,7 — O 33,1 — M. G. 386.
- 1) Ratanhiaroth (J. 1880, 1060). — III, 591.
- 2) Phloroglucinvanillein (Methyläther d. Oktooxytriphenylmethan) (M. 3, 641). — II, 1046.
- 3) Pyrogallolvanillein (Methyläther d. Oktooxytriphenylmethan) (M. 3, 639). — II, 1046.
- 4) Diacetyl- α -Dikresoldicarbonsäure. Zers. bei 163° (B. 21, 1640). — II, 2023.
- 5) Methylester d. Succinyl-2-Oxybenzol-1-Carbonsäure (A. 89, 362). — II, 1497.
- 6) Dimethylester d. Dibenzoylweinsäure. Sm. 132° (135,5°) (B. 15, 2243; Bl. [3] 11, 473; Soc. 69, 1585). — II, 1155.
- 7) Tetramethylester d. 1-Phenylbenzol-2,3,5,6-Tetracarbonsäure. Sm. 130—133° (Am. 20, 105).
- 8) Tetramethylester d. 1-Phenylbenzol- β -Tetracarbonsäure. Fl. (Am. 20, 109).
- 9) Tetracetat d. Sappanin (B. 5, 574). — II, 1038.
- 10) Tetracetat d. 1,3,1',3'-Tetraoxybiphenyl. Sm. 157—159° (M. 5, 178; 11, 420). — II, 1036.
- 11) Verbindung (aus 1,3-Dioxybenzol) (Am. 9, 136). — II, 919.
- C₂₀H₁₈O₉** C 59,7 — H 4,5 — O 35,8 — M. G. 402.
- 1) Dibenzoylglykuronsäure. Sm. 107° (H. 13, 275). — II, 1155.
- 2) α ,2-Lakton d. $\alpha\beta$ -Dioxy- $\alpha\beta$ -Di[5,6-Dimethoxyphenyl]äthen-2,2'-Dicarbonsäure (Tetramethoxydiphtalaktonsäure). Sm. 284—292° u. Zers. Cu (M. 14, 133). — II, 2099.
- 3) Anhydrid d. Opiansäure. Sm. 234° (A. Spl. 7, 65; M. 4, 262; B. 19, 2286). — II, 1941.
- 4) Monacetat d. Irigenin. Sm. 169° (B. 26, 2014). — III, 596.
- 5) Triacetat d. Baptigenin. Sm. 214—215° (C. 1897 [2] 429, 430). C 57,4 — H 4,3 — O 38,3 — M. G. 418.
- C₂₀H₁₈O₁₀** 1) Hemlockgerbsäure (B. 17, 1041). — III, 684.
- 2) $\alpha\beta$ -Diketo- $\alpha\beta$ -Di[5,6-Dimethoxyphenyl]äthan-2,2'-Dicarbonsäure (Tetramethoxydiphtalysäure). Sm. 270° u. Zers. Ba + 3 H₂O (M. 12, 68). — II, 2100.
- C₂₀H₁₈N₂** C 83,9 — H 6,3 — N 9,8 — M. G. 286.
- 1) 2-Benzylidenamido-1-Phenylamidomethylbenzol. Sm. 107—108° (B. 27, 3241). — IV, 637.
- 2) 4-Benzylidenamido-1-[4-Methylphenyl]amidobenzol. Sm. 139° (A. 255, 167). — IV, 596.
- 3) α -Phenylimido- α -Diphenylamidoäthan (Triphenyläthanamidin) (J. 1865, 415). — II, 347.
- 4) β -Phenylimido- β -Phenylamido- α -Phenyläthan. Sm. 107—108° (2 HCl, PtCl₄) (B. 17, 1427). — IV, 850.
- 5) α -Benzylimido- α -Phenylamido- α -Phenylmethan. Sm. 100° (B. 23, 3337; 30, 1787; A. 273, 9). — IV, 843.
- 6) α -[4-Methylphenyl]imido- α -Phenylamido- α -Phenylmethan. Sm. 133° HCl, HNO₃, Pikrat (B. 27, 1701; 28, 871; A. 286, 356). — IV, 844.
- 7) α -Phenylimido- α -[2-Methylphenyl]amido- α -Phenylmethan. Sm. 110° (A. 273, 10). — IV, 844.
- 8) α -Phenylimido- α -Phenylamido- α -[4-Methylphenyl]methan. Sm. 168° (B. 21, 2656). — IV, 851.
- 9) α -Methylimido- α -Diphenylamido- α -Phenylmethan. Fl. HCl, (2 HCl, PtCl₄), Nitrat (A. 192, 16). — IV, 843.
- 10) β -Benzyliden- α -Phenyl- α -Benzylhydrazin. Sm. 111° (A. 252, 289). — IV, 812.

- C₂₀H₁₃N₂** 11) α -Diphenylhydrazon- α -Phenyläthan. Sm. 97–98° (A. 239, 222). — IV, 771.
 12) β -Phenylhydrazon- $\alpha\alpha$ -Diphenyläthan (A. 246, 102). — IV, 755.
 13) α -Phenylhydrazon- $\alpha\beta$ -Diphenyläthan. Sm. 116° (106°; 135°) (A. 236, 135; 305, 173; Am. 16, 111). — IV, 777.
 14) α -Phenylhydrazon-4-Methyldiphenylmethan. Sm. 109° (B. 26, 26). — IV, 777.
 15) α -Phenyl- α -Biphenylhydrazon[4]äthan (Acetophenonhydrazonbiphenyl). Sm. 148° (B. 27, 3107). — IV, 970.
 16) Dilepidin. Fl. HNO₃ (J. 1878, 891). — IV, 1065.
 17) 2,3-[Methylisopropylbiphenylen]-1,4-Diazin (Methylisopropylphenanthrapiazin). Sm. 110–111° (Soc. 63, 1288). — IV, 1064.
 18) α -2,3-Diphenyl-1,2,3,4-Tetrahydro-1,4-Benzdiazin. Sm. 105–106°. HCl (B. 27, 2183). — IV, 1065.
 19) β -2,3-Diphenyl-1,2,3,4-Tetrahydro-1,4-Benzdiazin. Sm. 142,5°. HCl (B. 27, 2184). — IV, 1065.
 20) Tetrahydrophenanthrodihydrochinoxalin. Sm. 145,5° (A. 295, 219). — IV, 482.
- C₂₀H₁₃N₄** 21) Verbindung (aus d. Verb. C₁₄H₁₃N₃). Sm. 114–115° (Am. 21, 57).
 C 76,4 — H 5,7 — N 17,8 — M. G. 314.
 1) 1,4-Di[4-Amidobenzylidenamido]benzol. Sm. bei 190° (B. 31, 2254).
 2) $\alpha\beta$ -Di[Phenylhydrazon]- α -Phenyläthan. Sm. 152° (148°) (B. 21, 2496; 22, 2558; A. 243, 247). — IV, 761.
 3) Dibenzylglykosin. Sm. 145° (Soc. 51, 555). — II, 523.
 4) III-2-Methylformazybenzol. Sm. 154–155° (B. 31, 1756).
 5) α -Phenylazo- α -[4-Methylphenyl]hydrazon- α -Phenylmethan. Sm. 155° (B. 27, 1691). — IV, 1261.
 6) α -[4-Methylphenyl]azo- α -Phenylhydrazon- α -Phenylmethan. Sm. 153,5° (B. 27, 1690). — IV, 1261.
 7) Tetraamidoisobinaphthyl. Sm. 164–167° u. Zers. (Soc. 47, 106). — IV, 1299.
 8) 5,5'-Dimethyl-1,1'-Diphenyl-3,3'-Bipyrazol. Sm. 142° (A. 278, 295). — IV, 1262.
 9) 5-Amido-2-(4-Amidophenyl)-1-[4-Methylphenyl]benzimidazol. Sm. 252–253°. H₂SO₄ + 4H₂O (Bl. [3] 19, 29). — IV, 1288.
 10) P-Diamido-2-Phenyl-1-[4-Methylphenyl]benzimidazol. Sm. 213° (Bl. [3] 17, 873). — IV, 1299.
 11) α -Aethylphenosafranin. (2HCl, PtCl₄), HNO₃ (B. 19, 151). — IV, 1283.
 12) β -Aethylphenosafranin. (2HCl, PtCl₄), HNO₃ (B. 19, 152). — IV, 1283.
 13) Dimethylphenosafranin. HCl, (2HCl, PtCl₄), HNO₃ (Bl. 48, 637). — IV, 1283.
 14) Dimethylsafranin. HCl (A. 263, 337). — IV, 1288.
 15) Parasafranin. HCl, H₂, HNO₃ (Soc. 35, 728). — IV, 1299.
 16) Nitril d. Tri[4-Amidophenyl]methan- α -Carbonsäure (Hydrocyanrosanilin). 3HCl, + HgCl₂ (A. 194, 274; Z. 1866, 2; B. 28, 1698, 1706). — II, 1481.
 17) isom. Hydrocyanrosanilin. + Hg(CN)₂, 2 + Hg(CN)₂ (B. 28, 1705).
 18) Safraninfarbstoff. HCl (B. 28, 273). — IV, 1286.
 19) Verbindung (aus Aposafranin u. $\alpha\beta$ -Diamidoäthan) (B. 30, 2491). — IV, 1279.
 C 70,2 — H 5,3 — N 24,5 — M. G. 342.
- C₂₀H₁₃N₆** 1) α -Phenylazo- α -[4-Methylphenyl]azo- α -Phenylhydrazonmethan. Sm. 174–175° (B. 27, 1689). — IV, 1492.
 2) $\alpha\alpha$ -Diphenylazo- α -[4-Methylphenyl]hydrazonmethan. Sm. 173–174° (B. 27, 1689). — IV, 1493.
- C₂₀H₁₁S₃** 1) Triphenyläther d. $\alpha\alpha\alpha$ -Trimerkaptoäthan. Sm. 71° (B. 25, 353). — II, 784.
 2) Triphenyläther d. $\alpha\alpha\beta$ -Trimerkaptoäthan. Sd. über 300° u. Zers. (B. 27, 3056).
- C₂₀H₁₉N** C 87,9 — H 6,9 — N 5,1 — M. G. 273.
 1) α -Methylamidotriphenylmethan. Sm. 73°. (2HCl, PtCl₄ + 6H₂O) (B. 17, 745). — II, 642.
 2) Methylphenylamidodiphenylmethan (B. 15, 1581).
 3) β -Amido- $\alpha\alpha\alpha$ -Triphenyläthan. Sm. 116°. HCl (B. 17, 700; A. 296, 254). — II, 643.

- C₂₀H₁₉N** 4) Phenylidibenzylamin. Sm. 67° (70°). HCl + H₂O, (2HCl, PtCl₄), Pikrat (B. 20, 1611; 31, 2674; 32, 522). — II, 521.
- C₂₀H₁₉N₃** C 79,7 — H 6,3 — N 13,9 — M. G. 301.
- 1) Phenylimidodi[Phenylamido]äthan (Acetyltrienphenyltriamin). Sm. 190° (4HCl, 3HgCl₂), (2HCl, PtCl₄) (A. 178, 125; J. r. 6, 148). — II, 348.
 - 2) 5-Amido-1-Phenylimido-4-[4-Methylphenyl]imido-2-Methyl-1,4-Dihydrobenzol. Sm. 204° (B. 26, 2781). — III, 359.
 - 3) α -Phenylhydrason- α -[4-Amidophenyl]- α -[4-Methylphenyl]methan. Sm. 163° (A. 286, 330). — IV, 777.
 - 4) Diphenyl-2-Methylphenylguanidin. Sm. 112°. (2HCl, PtCl₄), HNO₃ (A. 286, 367).
 - 5) Diphenyl-4-Methylphenylguanidin. Sm. 128—129°. HCl, (2HCl, PtCl₄) (B. 2, 459; 19, 2412; A. 286, 357). — II, 488.
 - 6) α -Amidotetrahydroazonaphthalin. Sm. 135° (B. 22, 627). — IV, 1389.
- C₂₀H₁₉N₅** C 72,9 — H 5,8 — N 21,3 — M. G. 329.
- 1) Triphenylbiguanid. Sm. 137—138°. HCl, (2HCl, PtCl₄) (B. 23, 1672). — II, 353.
 - 2) 1-[4-Methylphenylazo-4-Methylphenyl]amidodiazobenzol. Zers. bei 76° (B. 28, 170). — IV, 1572.
 - 3) 6-[2-Naphtyl]amidoazo-1,2,5-Trimethylbensimidazol. Sm. 254 bis 257° u. Zers. (B. 31, 2518). — IV, 1562.
 - 4) 7-[2-Naphtyl]amidoazo-1,2,5-Trimethylbensimidazol. Sm. 258 bis 259° (B. 31, 2521). — IV, 1583.
- C₂₀H₁₉P** 1) Phenylidi[4-Methylphenyl]phosphin. Sm. 57° (B. 21, 1512). — IV, 1671.
- C₂₀H₂₀O** C 86,9 — H 7,2 — O 5,8 — M. G. 276.
- 1) Keton (aus $\beta\gamma$ -Diketo- $\delta\epsilon$ -Diphenylloktan). Sm. 87°; Sd. 330—335° (B. 29, 386). — III, 253.
- C₂₀H₂₀O₂** C 82,2 — H 6,8 — O 10,9 — M. G. 292.
- 1) α' -Phenyl- $\alpha''\alpha'$ -Di[4-Methylphenyl]methan- α' -2-Carbonsäure. Sm. 172°. Ba + 2 $\frac{1}{2}$ H₂O (Bl. [3] 17, 972).
- C₂₀H₂₀O₃** C 77,9 — H 6,4 — O 15,6 — M. G. 308.
- 1) Propyläther d. Thebenol (Prothebenol). Sm. 103—105° (B. 32, 187). C 74,1 — H 6,2 — O 19,7 — M. G. 324.
- C₂₀H₂₀O₄** C 74,1 — H 6,2 — O 19,7 — M. G. 324.
- 1) Diisosafröl. Sm. 145° (G. 24 [2] 127). — II, 977.
 - 2) Diacetonphenanthrenchinon. Sm. 187° u. Zers. (B. 17, 2826). — III, 448.
 - 3) β -Oxy- $\alpha\gamma\delta$ -Triketo- $\alpha\delta$ -Di[2,4-Dimethylphenyl]butan (1,3,4-Xyloylformoin). Sm. 155° (B. 25, 3475). — III, 320.
 - 4) β -Oxy- $\alpha\gamma\delta$ -Triketo- $\alpha\delta$ -Di[2,5-Dimethylphenyl]butan (1,4,2-Xyloylformoin). Sm. 164—168° (B. 27, 662). — III, 321.
 - 5) β -Oxy- $\alpha\gamma\delta$ -Triketo- $\alpha\delta$ -Di[3,4-Dimethylphenyl]butan (1,2,4-Xyloylformoin). Sm. 140° (B. 27, 659). — III, 321.
 - 6) Bisäthylbenzoylcarbinol. Sm. 190—192° (B. 28, 3032).
 - 7) β -Äthyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -[4-Methylphenyl]- α -Buten. Sm. 140—146° (B. 27, 716). — III, 320.
 - 8) Diäthyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten. Sm. 83 bis 84° (B. 27, 717). — III, 317.
 - 9) Monoisomyläther d. Chrysin. Sm. 125° (B. 10, 177). — III, 628.
 - 10) o-Kresochinon. Sm. 64° (C. 1898 [1] 887).
 - 11) p-Kresochinon. Sm. 62° (C. 1898 [1] 887).
 - 12) Diphenyloxetoncarbonsäure. Sm. 145—148° u. Zers. Ca, Ba, Ag (A. 288, 198).
 - 13) γ -Polyphenylcrotonsäure. Sm. 179°. Ca, Ag (A. 227, 258; 228, 177; 256, 74). — II, 1425.
 - 14) Dimethylester d. β -Cocasäure. Fl. (A. 271, 204). — II, 1404.
 - 15) Dimethylester d. β -Isotropensäure. Sm. 91° (B. 21, 2349). — II, 1404.
 - 16) Dimethylester d. α -Truxillsäure. Sm. 174°; Sd. bei 300° (B. 22, 127). — II, 1901.
 - 17) Dimethylester d. β -Truxillsäure. Sm. 76° (B. 21, 2348; 22, 2247; Ph. Ch. 10, 421). — II, 1902.
 - 18) Dimethylester d. γ -Truxillsäure. Sm. 126° (B. 22, 127). — II, 1903.
 - 19) Dimethylester d. δ -Truxillsäure. Sm. 77° (B. 22, 2250). — II, 1903.

- C₂₀H₂₀O₂** 20) Monäthylester d. γ -Truxillsäure. Sm. 171—172°. Ag (B. 22, 2243). — II, 1903.
- 21) Monäthylester d. α -Isotropensäure. Sm. 186°. Ba (B. 28, 140). — II, 1403.
- 22) Äthylester d. α -Diketo- α -Diphenylpentan- γ -Carbonsäure. Sm. 64° (B. 26, 914). — II, 1900.
- 23) Monäthylester d. α -Diphenyl- α -Buten- β -Dicarbonsäure. Sm. 143,5 bis 144,5° (B. 28, 3193).
- 24) Monoäthylester d. β -Diphenyl- α -Buten- α -Dicarbonsäure. Sm. 98° (Soc. 75, 250).
- 25) Diäthylester d. α - β -Diphenyläthen- α - β -Dicarbonsäure (D. d. Diphenylmaleinsäure) (B. 13, 745). — II, 1897.
- 26) Diäthylester d. α - β -Diphenyläthen-2,2'-Dicarbonsäure. Sm. 79—80° (A. 243, 258). — II, 1896.
- 27) Diäthylester d. Säure C₁₆H₁₂O₄. Fl. (B. 27, 212). — II, 1899.
- 28) Diphenylester d. trans-Hexahydrobenzol-1,4-Dicarbonsäure. Sm. 151° (A. 258, 43). — II, 1834.
- C₂₀H₂₀O₂** C 70,6 — H 5,9 — O 23,5 — M. G. 340.
- 1) β -Dioxy- α - γ -D-Triketo- α -Di[2,5-Dimethylphenyl]butan (1,4,2-Dixyltetraketon). Sm. 109—110° (B. 27, 662). — III, 325.
- 2) β -Dioxy- α - γ -D-Triketo- α -Di[3,4-Dimethylphenyl]butan (1,2,4-Dixyltetraketon). Sm. 108° u. Zers. (B. 27, 660). — III, 325.
- 3) γ -Acetat- α -Methyläther- γ -Äthyläther d. γ -Keto- γ -[2,4-Dioxyphenyl]- α -[4-Oxyphenyl]propen. Sm. 75° (B. 32, 323).
- C₂₀H₂₀O₂** C 67,4 — H 5,6 — O 27,0 — M. G. 356.
- 1) Pseudocubebin. Sm. 122° (C. 1898 [2] 127).
- 2) Chinhydrondimethyläther (A. 200, 255; B. 12, 1501). — III, 344.
- 3) Guajakblau (C. 1897 [1] 168).
- 4) Bim. β -[2-Methoxyphenyl]akrylsäure (bimere β -Cumarmethyläthersäure). Sm. 280—262° (J. pr. [2] 51, 323). — II, 1629.
- 5) Methyl ester d. 1- α -Di[Phenacetoxy]propionsäure. Sd. 266—270°, (Soc. 69, 111).
- 6) Propylester d. d- α - β -Dibenzoxylpropionsäure. Sd. 267—269°, (Soc. 69, 110).
- C₂₀H₂₀O₂** C 64,5 — H 5,3 — O 30,1 — M. G. 372.
- 1) Guajakgelb. Sm. 115° (C. 1897 [1] 167).
- 2) Dibenzat d. Dulcitan (BERTHELOT, Chim. org. synth. 2, 193). — II, 1142.
- 3) Dibenzat d. Mannitan (BERTHELOT, Chim. org. synth. 2, 193). — II, 1142.
- 4) Verbindung (aus 5-Oxy-1,4-Naphtochinon) (B. 18, 474). — III, 380.
- C₂₀H₂₀O₂** C 61,8 — H 5,1 — O 33,0 — M. G. 388.
- 1) Benzoylhelicin (A. 96, 379; 154, 24). — III, 68.
- 2) Triäthyläther d. 1,2,3,5,6,7-Hexaoxy-9,10-Anthrachinon. Sm. 195° (B. 21, 1171; Ph. Ch. 18, 560). — III, 439.
- 3) Diacetat d. 3,4,2',4',6'-Pentaoxydiphenylketontrimethyläther. Sm. 126—127° (B. 25, 1131). — III, 208.
- 4) α ,2-Lakton d. α -Oxy- α - β -Di[5,6-Dimethoxyphenyl]äthan-2,2'-Dicarbonsäure (Tetramethoxyldihydrodiphtalylaktonsäure). Sm. 186—187° (M. 14, 137). — II, 2091.
- C₂₀H₂₀O₂** C 59,4 — H 4,9 — O 35,6 — M. G. 404.
- 1) Eichengerbsäure. Sm. 140° (M. 4, 523). — III, 588.
- 2) Ratanhiagerbsäure. Pb (J. 1854, 656; 1880, 1060; A. 143, 274). — III, 590.
- 3) Diacetat d. Barbaloin (C. 1897 [2] 525).
- C₂₀H₂₀O₁₀** C 57,1 — H 4,8 — O 38,1 — M. G. 420.
- 1) Hydrat d. 4,4'-Di[1,2-Naphtochinon]oxyd (B. 30, 2200).
- 2) Scoparin + 5H₂O. Sm. 202—219° u. Zers. Ba + 2H₂O (A. 78, 16; 138, 190; M. 14, 202; 15, 342). — III, 648.
- 3) isom. Scoparin (A. 78, 17). — III, 648.
- 4) Verbindung (Weintraubenfarbstoff) (Bl. [3] 7, 823).
- C₂₀H₂₀O₁₁** C 55,0 — H 4,6 — O 40,4 — M. G. 436.
- 1) α -Oxy- α -Di[5,6-Dimethoxyphenyl]methan- α ,2,2'-Tricarbonsäure. Sm. 140°. Ba₂ + 5H₂O (M. 12, 72). — II, 2102.
- 2) Verbindung (aus Pyrogallol) (Bl. [3] 19, 829).

- $C_{30}H_{30}O_{13}$ C 53,1 — H 4,4 — O 42,5 — M. G. 452.
- 1) Luteinsäure. Sm. 273—274° (*J.* 1870, 873). — II, 2107.
- $C_{26}H_{30}O_{14}$ C 49,6 — H 4,1 — O 46,3 — M. G. 484.
- 1) Pentaacetylpyrogallocarbonsäure (*A.* 245, 39). — II, 1918.
- $C_{30}H_{30}O_{16}$ C 46,5 — H 3,9 — O 49,6 — M. G. 516.
- 1) Verbindung (aus Pyrogallol) (*Bh.* [3] 19, 829).
- $C_{26}H_{30}N_2$ C 83,3 — H 6,9 — N 9,7 — M. G. 288.
- 1) $\alpha\beta$ -Di[γ -Phenylallylidenamido]äthan. Sm. 109—110° (*B.* 20, 271). — III, 60.
- 2) 1,2-Di[Phenylamidomethyl]benzol. Sm. 114° (*B.* 17, 1825; 31, 1708 Anm.). — IV, 641.
- 3) 1,4-Di[2-Methylphenylamido]benzol. Sm. 135°; Sd. bei 420° (i. H-Strom). 2HCl (*J. pr.* [2] 34, 65). — IV, 585.
- 4) 1,3-Di[4-Methylphenylamido]benzol. Sm. 138—139°. 2HCl (*J. pr.* [2] 33, 219; [2] 51, 333). — IV, 572.
- 5) 1,4-Di[4-Methylphenylamido]benzol. Sm. 182°. 2HCl (*B.* 16, 2810; *J. pr.* [2] 33, 230). — IV, 586.
- 6) 4-Amido-1-Dibenzylamidobenzol (4-Amidophenyldibenzylamin). Sm. 89—90°. + Benzaldehyd (*B.* 20, 1614). — IV, 586.
- 7) 2-Benzylamido-1-Phenylamidomethylbenzol. Sm. 88°. 2HCl (*B.* 27, 3241). — IV, 627.
- 8) 2,5-Diäthyl-3,6-Diphenyl-1,4-Diazin. Sm. 140°. (2HCl, PtCl₄) (*Bh.* [3] 17, 76). — IV, 1045.
- 9) 1-Aethyl-3-[4-Methylphenyl]-2,3-Dihydro- α -Naphtimidazol. Sm. 175—178° (*B.* 27, 2778). — IV, 918.
- 10) 2,3-Diphenyl-5,6,7,8,9,10-Hexahydro-1,4-Benzdiazin. Sm. 167 bis 169° (*A.* 295, 217). — IV, 482.
- 11) $\alpha\alpha$ -Di[2-Methyl-1-Indolyl]äthan (Aethylidenmethylketol). Sm. 191 (*A.* 242, 376). — IV, 1046.
- 12) 2,3- β -Methylisopropylbiphenylen]-1,4-Dihydro-1,4-Diazin (1,4-Dihydromethylisopropylphenanthropiazin). Sm. 77—79° (*Soc.* 63, 1288). — IV, 1045.
- 13) Verbindung (aus Biacenaphtylidenon) (*A.* 290, 203).
- $C_{30}H_{30}N_4$ C 76,0 — H 6,3 — N 17,7 — M. G. 316.
- 1) β -Diamidotetrahydroazonaphthalin. Sm. 226° u. Zers. (*B.* 22, 959). — IV, 1401.
- 2) Verbindung (aus Succinazon). Sm. 184—185° u. Zers. (*B.* 23, 1784). — IV, 758.
- $C_{30}H_{30}N_6$ C 69,7 — H 5,8 — N 24,4 — M. G. 344.
- 1) $\alpha\beta\gamma$ -Tri[Phenylhydrason]propan. Sm. 166° (*B.* 24, 3258; 27, 221).
- 2) 5,5'-Diäthyl-1,1'-Diphenyl-3,3'-Bi-1,2,4-Triazol. Sm. 186,5—187°. 2HCl (*B.* 22, 3115). — IV, 1331.
- 3) 5,5'-Dimethyl-1,1'-Di[4-Methylphenyl]-3,3'-Bi-1,2,4-Triazol. Sm. 259—260° (*B.* 22, 3116). — IV, 1331.
- 4) Verbindung (aus Benzenyldiamidoaceton) (*B.* 25, 1566). — II, 1194.
- $C_{30}H_{31}N_3$ C 79,2 — H 6,9 — N 13,9 — M. G. 303.
- 1) 4',4'',4'''.Triamido- β -Methyltriphenylmethan (Leukanilin). Sm. 100°. 3HCl + H₂O, (6HCl, 3PtCl₄), 3HNO₃ (*J.* 1862, 349; *A. ch.* [6] 2, 441). — IV, 1197.
- 2) Phenyl-di[2-Amidobenzyl]amin. Sm. 187°. (6HCl, SnCl₄) (*B.* 25, 3584). — IV, 628.
- 3) α -Phenyl- α -[2-Benzylamidobenzyl]hydrazin. Sm. 110° (*B.* 27, 3243). — IV, 1130.
- $C_{30}H_{31}N_5$ C 71,5 — H 6,6 — N 21,9 — M. G. 319.
- 1) β -Di[4-Methylphenylazo]-1-Aethylpyrrol. Sm. 180° (*B.* 19, 2254). — IV, 1483.
- $C_{30}H_{32}O$ C 86,3 — H 7,9 — O 5,7 — M. G. 278.
- 1) Propyläther d. 10-Oxy-9-Propylanthracen. Sm. 72°. Pikrat (*B.* 22, 1070). — II, 502.
- 2) 10-Keto-9,9-Dipropyl-9,10-Dihydroanthracen. Sm. 124° (*B.* 22, 1069). — III, 250.
- 3) Keton (aus Methyl- α -Xylolketon). Sm. 113° (*J. pr.* [2] 41, 411). — III, 250.

- C₂₀H₁₇O₂** C 81,6 — H 7,5 — O 10,9 — M. G. 294.
- 1) α - δ -Diketo- α - β -Diphenyloktan. Sm. 83—85° (C. 1896 [2] 1091).
 - 2) β -Diketo- δ - ϵ -Diphenyloktan. Sm. 161°; Sd. 335—340° (B. 29, 384, 2121). — III, 301.
 - 3) α - δ -Diketo- α - δ -Di[2,4-Dimethylphenyl]butan. Sm. 126° (B. 20, 1375). — III, 301.
 - 4) α - δ -Diketo- α - δ -Di[2,5-Dimethylphenyl]butan. Sm. 123° (B. 20, 1378). — III, 302.
 - 5) α - β -Diketo- α - β -Di[4(β)-Isopropylphenyl]äthan. Sm. 84° (B. 14, 325, 610; A. 84, 103; 128, 300). — III, 301.
 - 6) α -Dipropylcarbobenzonsäure. Sm. 139° (A. 184, 167). — II, 1477.
 - 7) β -Dipropylcarbobenzonsäure. Sm. 90° (A. 184, 167). — II, 1477.
 - 8) Aethylester d. Diäthylcarbobenzonsäure. Sd. 207—209°₁₁ (A. 184, 166; 261, 300). — II, 1476.
- C₂₀H₁₇O₂** C 77,4 — H 7,1 — O 15,5 — M. G. 310.
- 1) Anhydrid d. 3,4-Dioxy-1-Allylbenzol-3-Methyläther (A. 131, 281). — II, 973.
 - 2) Anhydrid d. 1-Isopropylbenzol-4-Carbonsäure. Fl. (A. 87, 77). — II, 1385.
 - 3) Aethylester d. Dibenzylacetessigsäure. Sm. 57° (A. 268, 123). — II, 1717.
 - 4) Eugenolester d. 1-Isopropylbenzol-4-Carbonsäure (A. 108, 323). — II, 1385.
- C₂₀H₁₇O₄** C 73,6 — H 6,7 — O 19,6 — M. G. 326.
- 1) Chekenon. Sm. 204—205° (B. 21 [2] 481). — III, 627.
 - 2) Diäthyläther d. α - δ -Diketo- α - δ -Di[4-Oxyphenyl]butan. Sm. 132° (R. 10, 220). — III, 298.
 - 3) α -Diphenylhexan- β - ϵ -Dicarbonsäure (Dibenzyladipinsäure). α -Modif. Sm. 211—213°. Ag₂. β -Modif. Sm. 152°. Ag₂ (Soc. 65, 1021). — II, 1895.
 - 4) Superoxyd d. 1-Isopropylbenzol-4-Carbonsäure (J. 1863, 317). — II, 1385.
 - 5) Dimethylester d. Hydropolyporsäure (A. 195, 368). — II, 1907.
 - 6) Diäthylester d. α -Diphenyläthan- β - β -Dicarbonsäure. Sm. 54° (Soc. 59, 731). — II, 1892.
 - 7) Diäthylester d. α - β -Diphenyläthan- α - α -Dicarbonsäure. Sm. 140—141° (136°) (B. 14, 1804; 28, 2448; A. 259, 72). — II, 1891.
 - 8) Diäthylester d. isom. β - α - β -Diphenyläthan- α - α -Dicarbonsäure. Sm. 48 bis 49°; Sd. 224°₁₉ (B. 28, 816). — II, 1890.
 - 9) Diäthylester d. α - β -Diphenyläthan- α - β -Dicarbonsäure. Sm. 84—85° (B. 14, 1804; 28, 2449). — II, 1890.
 - 10) Diäthylester d. α - β -Diphenyläthan-2,2'-Dicarbonsäure. Sm. 69—71° (A. 239, 68). — II, 1889.
 - 11) Acetat d. Ostruthin. Sm. 81° (A. 183, 330). — III, 639.
- C₂₀H₁₇O₅** C 70,2 — H 6,4 — O 23,4 — M. G. 342.
- 1) Mangostin. Sm. 190° (A. 93, 83). — III, 637.
 - 2) Tetramethyläther d. Brasillin. Sm. 138—139,5° (66—69° amorph) (B. 27, 524; M. 15, 140). — III, 653.
 - 3) Anhydrid d. 2-Oxy-1-Isopropylbenzol-4-Carbonsäure (B. 11, 1576). — II, 1582.
 - 4) Diäthylester d. α -Oxy- α - β -Diphenyläthan-2,2'-Dicarbonsäure (D. d. Hydrodiphthalylsäure). Fl. (A. 243, 256). — II, 1974.
- C₂₀H₁₇O₆** C 67,0 — H 6,1 — O 26,8 — M. G. 358.
- 1) β - β -Tetraoxy- α - δ -Diketo- α - δ -Di[2,4-Dimethylphenyl]butan (B. 25, 3475). — III, 325.
 - 2) Dibenzylidendulett. Sm. 215—220° (B. 27, 1534). — III, 9.
 - 3) Dibenzylidensorbit. Sm. 162° (A. ch. 76] 22, 424). — III, 9.
 - 4) Dimethyläther d. α -Di[2,5-Dioxy-1-Methyl]- β -Biphenyldiacetat. Sm. 123° (B. 23, 3249). — II, 956.
 - 5) Tetramethyläther d. Hämatoxylin. Sm. 139—140° (M. 15, 143). — III, 664.
 - 6) Acetat d. Peruresinotannol (B. 27 [2] 312).
 - 7) Dibenzooat d. Mannit. Sm. 132° (B. 21 [2] 737). — II, 1142.

- C₂₀H₂₂O₆** 8) kryst. Physodsäure. Sm. 190—192° u. Zers. Pb (B. 30, 1987; J. pr. [2] 57, 416).
 9) amorphe Physodsäure (J. pr. [2] 57, 421).
 10) Diäthylester d. 2-Oxybenzyläthyläther-1-Carbonsäure. Sm. 96 bis 97° (J. pr. [2] 21, 128). — II, 1494.
- C₂₀H₂₂O₇** 11) Verbindung (aus d. Glykosid C₂₀H₂₂O₁₁). Sm. 70° (R. 5, 127). — III, 600.
 C 64,2 — H 5,9 — O 29,9 — M. G. 374.
- C₂₀H₂₂O₈** 1) Coccolensäure. Sm. 178° (A. 284, 175; 300, 356; J. pr. [2] 58, 472). — II, 2059.
 2) Diäthylester d. 1-Keto-5-Methyl-3-[3,4-Dioxyphenyl]-1,2,3,4-Tetrahydrobenzol-3,4-Methylenäther-2,4-Dicarbonsäure. Sm. 102° (A. 303, 230).
 C 61,5 — H 5,6 — O 32,8 — M. G. 390.
 1) Coccochin (Z. 1870, 681). — III, 628.
 2) Populin + 2H₂O (Benzolat d. Salicin). Sm. 180° (wasserfrei) (Berz. J. 11, 286; J. 1852, 179; A. 96, 375; 101, 372; 119, 92; 154, 5; B. 6, 890; 12, 1648). — III, 608.
 3) Hexamethyläther d. αβ-Diketo-αβ-Di[3,4,5-Trioxyphenyl]äthan (Hexamethoxybenzil). Sm. 189° (A. 263, 253). — III, 296.
 4) Diacetat d. α-Hexaoxybiphenyltetramethyläther. Sm. 217—225° (A. 169, 236). — II, 1041.
 5) Dibenzolat d. Mannit. Sm. 178° (A. 301, 102).
 6) isom. Dibenzolat d. Mannit. Sm. 132° (C. r. 107, 326).
- C₂₀H₂₂O₁₀** C 56,9 — H 5,2 — O 37,9 — M. G. 422.
 1) Erythrin + H₂O (Zweifach orsellinsaurer Erythrit). Sm. 148° (wasserfrei). Pb, Pb₂, Pb₃ + 3H₂O, Pb₄ (A. 61, 64; 68, 72; 117, 304; 134, 255; 139, 29; 149, 290; J. pr. [2] 57, 257). — II, 1752.
- C₂₀H₂₂O₁₁** C 54,8 — H 5,0 — O 40,2 — M. G. 438.
 1) Assamar (A. 85, 74; J. 1860, 506). — I, 1107.
- C₂₀H₂₂O₁₂** C 52,9 — H 4,8 — O 42,3 — M. G. 454.
 1) Thujin (J. 1858, 513). — III, 614.
 2) Diäthylester d. Tetracetoxylbenzol-1,4-Dicarbonsäure. Sm. 202° (B. 20, 2798). — II, 2068.
 C 82,8 — H 7,6 — N 9,6 — M. G. 290.
- C₂₀H₂₂N₂** 1) Diallyldiend[4-Methylphenyl]diamin. (2HCl, PtCl₄) (A. 140, 96). — II, 511.
 2) 2,3,5,6-Tetramethyl-1,4-Dihydro-1,4-Diazin. Sm. 107—108; Sd. 281° (B. 20, 429). — IV, 530.
 3) 2-Phenyl-1-Benzylhexahydrobenzimidazol. Sm. 132,5° (B. 29, 965; A. 295, 217). — IV, 452.
 4) Base (aus d. Chlorid C₂₀H₁₉N₂Cl). Sd. 260°. (2HCl, PtCl₄) (Bl. [3] 11, 1037).
 C 75,5 — H 6,9 — N 17,6 — M. G. 318.
- C₂₀H₂₂N₄** 1) 4,4'-Bi[1-Phenyl-3-Methyl-4,5-Dihidropyrazol]. Sd. bei 300°₁₀₀ (B. 28, 714).
 2) 5,5'-Bi[1-Phenyl-3-Methyl-4,5-Dihidropyrazol]. Sm. 275—278° (B. 28, 102). — IV, 937.
 3) 3,6-Di[4-Isopropylphenyl]-1,2,4,5-Tetrazin. Sm. 156—157° (B. 30, 2011). — IV, 1295.
- C₂₀H₂₂Cl₂** 1) ββ-Dichlor-αα-Di[1,2,4-Trimethylphenyl]äthen. Sm. 118° (J. pr. [2] 47, 48). — II, 255.
- C₂₀H₂₂N** C 86,6 — H 8,3 — N 5,0 — M. G. 277.
 1) P-Amyl-P-Hexyl-1,2,3,4-Tetrahydrochinolin. Sd. 270—310° (B. 17, 1720). — IV, 211.
- C₂₀H₂₂N₃** 1) Nitril d. α-Phenyl-α-Benzyl-δ-Methylpentan-α-Carbonsäure. Sm. 74°; Sd. 330—350° (B. 22, 1236). — II, 1472.
 C 78,7 — H 7,5 — N 13,8 — M. G. 303.
 2) 2,5-Di[4-Isopropylphenyl]-1,3,4-Triazol. Sm. 210° (B. 30, 2011). — IV, 1189.
 3) 4-Phenylazo-3-Methyl-1,2,3,4,5,6,7,8,9,10-Oktahydro-β-Naphtochinolin. Sm. 97,5—98° (B. 24, 2964). — IV, 1581.
 4) 5-Phenylazo-3-Methyl-1,2,3,4,7,8,9,10-Oktahydro-β-Naphtochinolin (B. 24, 2966). — IV, 1485.

- C₁₀H₉Cl₃** 1) $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[1,2,4-Trimethylphenyl]äthan. Sm. 143° (*J. pr.* [2] 47, 48). — II, 242.
- C₁₀H₉Br₂** 1) $\alpha\beta$ -Dibrom- α -[1,2,4-Trimethylphenyl]- β -[*p*-Brom-1,2,4-Trimethylphenyl]äthan. Sm. bei 250° (*J. pr.* [2] 47, 53). — II, 243.
- C₁₀H₇O** 1) α -Keto- $\alpha\beta$ -Diphenyloktan (Hexyldeoxybenzoin). Sm. 59°; Sd. 344 bis 346° (*B. 23*, 347). — III, 239.
- 2) α -Keto- $\alpha\beta$ -Di[4-Isopropylphenyl]äthan. Sm. 58° (*B. 14*, 325). — III, 239.
- C₁₀H₇O₂** C 81,0 — H 8,1 — O 10,8 — M. G. 296.
- 1) β -Oxy- α -Keto- $\alpha\beta$ -Di[4-Isopropylphenyl]äthan (Cuminoïn). Sm. 101° (98°) (*B. 14*, 324, 609). — III, 239.
- 2) isom. Cuminoïn. Sm. 138° (*B. 10*, 55). — III, 239.
- 3) α -Naphtholcampher. Fl. (*Bl.* [3] 4, 72). — III, 487.
- 4) Benzoesäure d. δ -[4-Oxyphenyl]heptan. Sm. 29,5–30° (*J. r.* 23, 542). — II, 1148.
- C₁₀H₇O₃** C 76,9 — H 7,7 — O 15,4 — M. G. 312.
- 1) α -Oxy- $\alpha\alpha$ -Di[4-Isopropylphenyl]essigsäure (Cuminisäure). Sm. 119 bis 120°. Ba (*B. 14*, 326). — II, 1702.
- C₁₀H₇O₄** C 73,2 — H 7,3 — O 19,5 — M. G. 328.
- 1) Bisäthylbenzoylcarbinol. Sm. 190–192° (*B. 28*, 3032). — III, 132.
- 2) Disoogenol. Sm. 180–181° (*B. 24*, 2875; *G. 23* [1] 556). — II, 980.
- 3) Äthyläther d. Resitannol (*B. 26* [2] 679). — III, 554.
- 4) Bidurochinon. Sm. 202–203° (*B. 29*, 2180).
- 5) Bithymochinon. Sm. 200–201° (*B. 10*, 2177; 18, 3195; 27, 958). — III, 365.
- 6) Guajakharssäure (oder C₁₀H₉O₄). Sm. 86° (*C. 1897* [1] 167; *M. 18*, 719).
- 7) Verbindung (aus Tiglinaldehyd, Guajakol u. Kreosol) (*C. 1897* [1] 168).
- C₁₀H₇O₅** C 69,8 — H 7,0 — O 23,2 — M. G. 344.
- 1) Physol. Sm. 145° (*J. pr.* [2] 57, 415).
- C₁₀H₇O₆** 2) Guajakonsäure. Sm. 74–76° (*C. 1897* [1] 167).
- C 66,7 — H 6,7 — O 26,6 — M. G. 360.
- 1) Tetraäthyläther d. Tetraoxybiphenylchinon + HNO₃ (*B. 11*, 801; *M. 2*, 216). — II, 1042.
- 2) Dimethylester d. Dicumphenylsäure. Sm. 226–227° (*Soc. 75*, 182).
- 3) Dimethylester d. Säure C₁₀H₉O₆ (*B. 27* [2] 594).
- 4) Diäthylester d. 1-Keto-5-Methyl-3-[2-Methoxyphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäure. Sm. 113° (*A. 303*, 252).
- 5) Diäthylester d. 1-Keto-5-Methyl-3-[4-Methoxyphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäure. Sm. 103° (*A. 303*, 248).
- C₁₀H₇O₇** C 63,8 — H 6,4 — O 29,8 — M. G. 376.
- 1) Hexamethyläther d. Hexaoxydesoxybenzoin. Sm. 161–162° (*A. 263*, 255). — III, 227.
- C₁₀H₇O₈** C 61,2 — H 6,1 — O 32,7 — M. G. 392.
- 1) Diäthylester d. β -Diketo- δ -[3,4-Dioxyphenyl]heptan-3,4-Methylenäther- γ -Dicarbonsäure. Sm. 146–147° (*A. 303*, 228).
- C₁₀H₇O₉** C 58,8 — H 5,9 — O 35,3 — M. G. 408.
- 1) Podophylsäure. Sm. 158–160° (*B. 15* [2] 378; 24 [2] 646). — III, 645.
- 2) α -Oxy- α -Di[*p*-Trimethoxyphenyl]essigsäure (Hexamethoxybenzoesäure). Sm. 175° u. Zers. (*A. 263*, 255). — II, 2090.
- C₁₀H₇O₁₀** C 56,6 — H 5,6 — O 37,7 — M. G. 424.
- 1) Tetracetat d. Phenylglykosid (*Am. 5*, 171). — II, 656.
- C₁₀H₇O₁₂** C 52,6 — H 5,3 — O 42,1 — M. G. 456.
- 1) Tetracetat d. Inulinanhydrid (*A. 160*, 86). — I, 1096.
- C₁₀H₇N₃** C 82,2 — H 8,2 — N 9,6 — M. G. 292.
- 1) Di[2,4,5-Trimethylbenzyliden]hydrazin. Sm. 181° (*Bl.* [3] 17, 370).
- 2) Di[2,4,6-Trimethylbenzyliden]hydrazin. Sm. 171° (*Bl.* [3] 17, 372).
- 3) Methyldeoxycinechonidin. Sm. 64–65°. (2HCl, PtCl₄) (*B. 31*, 2355).
- C₁₀H₇N₄** C 75,0 — H 7,5 — N 17,5 — M. G. 320.
- 1) Diallyldi[4-Methylphenyl]tetrason. Sm. 104° (*B. 26*, 2180). — IV, 1309.
- C₁₀H₇Cl₂** 1) $\alpha\beta$ -Dichlor- $\alpha\beta$ -Di[4-Isopropylphenyl]äthan. Sm. 184–185° (*B. 10*, 54). — II, 242.
- C₁₀H₇Br₂** 1) $\alpha\beta$ -Dibrom- $\alpha\beta$ -Di[1,2,4-Trimethylphenyl]äthan. Sm. 238–243° u. Zers. (*J. pr.* [2] 47, 52). — II, 242.

- C₂₀H₂₁Br₄** 1) Tetrabromditerebenthylen (*B.* 50, 420; 51, 119). — II, 220.
- C₂₀H₂₁Br₂** 1) Hexabromditerebenthylen (*Soc.* 54, 161). — II, 176.
- C₂₀H₁₇O₂₀** 1) Eupatorin = (C₂₀H₂₀O₂₀)_x. Zers. bei 250°. HNO₂ (*Ann.* 14, 224). — III, 631.
- C₂₀H₁₅Br** 1) α -Brom- α - β -Di-[1,2,4-Trimethylphenyl]äthan. Sm. 177° (*J. pr.* [2] 47, 52). — II, 242.
- C₂₀H₁₈O** 1) 4-Isopropylbenzylidencampher. Sd. 62°; Sd. 230—237°₂₀ (*B.* 24 [2] 732). — III, 514.
- 2) Di-[4-Isopropylbenzyl]äther (Cuminaläther). Sd. bei 350° u. Zers. (*G.* 14, 500). — II, 1066.
- C₂₀H₂₀O₂** 1) C 80,5 — H 8,7 — O 10,7 — M. G. 208.
- 1) β -Dioxy- δ -Diphenyloktan. Sm. 64° (*B.* 6, 499). — II, 1103.
- 2) β -Di[ρ -Oxyphenyl]oktan. Sm. 83,5° (*J. r.* 23, 503). — II, 996.
- 3) γ - δ -Dioxy- γ - δ -Diphenyl- β -Dimethylhexan. Sm. 96° (*J. pr.* [2] 46, 481). — II, 1103.
- 4) α - β -Dioxy- α - β -Di-[4-Isopropylphenyl]äthan (Hydrocumoin). Sm. 135° (*A.* 137, 104; *B.* 8, 1152; 10, 54; 14, 324; 19, 256). — II, 1103.
- 5) 2,2'-Dioxy-4,4'-Dipropyl-1,1'-Dimethyl- ρ -Biphenyl. Sm. 154° (*J. r.* 14, 141). — II, 997.
- 6) 3,3'-Dioxy-4,4'-Dipropyl-1,1'-Dimethyl- ρ -Biphenyl + H₂O. Sm. 165,5° (160°) (*J. r.* 14, 135; *B.* 23, 2761). — II, 996.
- 7) Dimethyläther d. 5,5'-Dioxy-1,2,4,1',2',4'-Hexamethyl- ρ -Biphenyl. Sm. 126° (*B.* 17, 2983; 18, 2659). — II, 996.
- 8) Diäthyläther d. 4,4'-Dioxy-3,3'-Diäthylbiphenyl. Sm. 120° (*B.* 17, 475). — II, 996.
- 9) Dipropyläther d. 4,4'-Dioxy-3,3'-Dimethylbiphenyl. Sm. 115° (*B.* 21, 1068). — II, 993.
- 10) Diphenyläther d. α - γ -Dioxyoktan. Sd. 240—250°₂₀₋₂₅ (*C.* 1899 [1] 26).
- 11) Diphenyläther d. α - β -Dioxyoktan. Sm. 83,5—84° (*C.* 1899 [1] 26).
- C₂₀H₂₀O₃** 1) C 76,4 — H 8,3 — O 15,3 — M. G. 314.
- 1) Toxigenon (*B.* 31, 2459, 2462).
- 2) Acetat d. Cannabinol. Sm. 75° (*C.* 1898 [1] 850).
- C₂₀H₂₀O₄** 1) C 72,7 — H 7,9 — O 19,4 — M. G. 330.
- 1) Tetraäthyläther d. 1,3,1',3'-Tetraoxybiphenyl. Sm. 110° (*B.* 20, 1143). — II, 1036.
- 2) Guajakharzsäure (oder C₂₀H₂₂O₄). Sm. 75—80° (83—85°). Na₂ + 2H₂O, Na + H₂O, K₂ + 2H₂O, K + H₂O. Ba, Pb₂ (*A.* 112, 183; 119, 226; *J.* 1862, 466; *M.* 3, 822; 18, 719; 19, 102; *C.* 1897 [1] 167; *B.* 30, 378). — II, 1877.
- 3) Aethyl-Geraniolester d. Benzol-1,2-Dicarbonensäure (Aethylester d. Rhodinolphthalsäure). *Fl.* (*J. pr.* [2] 56, 23).
- C₂₀H₂₀O₅** 1) C 69,3 — H 7,5 — O 23,1 — M. G. 346.
- 1) Opiansäurepseudoeoster d. Geraniol (O. d. Rhodinol). Sm. 48,5° (*B.* 31, 358).
- C₂₀H₂₀O₆** 1) C 66,3 — H 7,2 — O 26,5 — M. G. 362.
- 1) Tetraäthyläther d. α -Hexaoxybiphenyl. Sm. 176° u. Zers. (*B.* 11, 802). — II, 1041.
- C₂₀H₂₀O₇** 1) C 63,5 — H 6,9 — O 29,6 — M. G. 378.
- 1) Laktonanhydrid d. trans- π -Oxycamphersäure. Sm. 205—206° (*Soc.* 69, 942).
- 2) Anhydrid d. cis- π -Camphansäure. Sm. 164—165° (*C.* 1896 [2] 248; *Soc.* 69, 946).
- 3) Anhydrid d. trans- π -Camphansäure (*C.* 1896 [2] 248; *Soc.* 69, 933).
- 4) Diäthylester d. β -Diketo- δ -[2-Methoxyphenyl]heptan- γ -Dicarbonensäure. Sm. 125° (*A.* 303, 250).
- 5) Diäthylester d. β -Diketo- δ -[4-Methoxyphenyl]heptan- γ -Dicarbonensäure. Sm. 173° (*A.* 303, 247).
- 6) Triäthylester d. δ -Keto- γ -Phenylpentan- α - γ -Tricarbonensäure (Tr. d. Malonsäurebenzylidenacetessigsäure). Sm. 148° (*B.* 27, 2330). — II, 2048.
- C₂₀H₁₈O₁₀** 1) C 56,3 — H 6,1 — O 37,6 — M. G. 426.
- 1) Tetraäthylester d. 3,6-Dioxybenzoldimethyläther-1,2,4,5-Tetra-carbonsäure. Sm. 95° (*Ann.* 11, 12). — II, 2095.

- $C_{30}H_{20}O_{10}$ C 46,0 — H 5,0 — O 49,0 — M. G. 522.
- $C_{30}H_{20}N_2$ 1) Säure (aus Muskatnussöl) + $2H_2O$ (B. 6, 149). — III, 543.
C 81,6 — H 8,8 — N 9,5 — M. G. 294.
2) 2,2'-Dimethyl-5,5'-Diisopropylazobenzol (Azocymol). Sm. 86° (J. 1864, 532; J. r. 19, 118). — IV, 1389.
- 2) 1-Dibenzylamidomethylhexahydropyridin. Sm. 101–102° (Bl. [3] 13, 158). — IV, 21.
- 3) α -[2,4-Dimethylphenyl]imido- γ -[2,4-Dimethylphenyl]amidobutan. Sm. 147° (B. 29, 1467).
- $C_{30}H_{28}N_4$ C 74,5 — H 8,1 — N 17,4 — M. G. 322.
- 1) $\beta\gamma$ -Di[Phenylhydrazon]oktan. Sm. 117–118° (G. 28 [2] 265, 283; J. pr. [2] 58, 364, 402).
- 2) $\delta\gamma$ -Di[Phenylhydrazon]oktan. Sm. 96–97° (G. 28 [2] 265; J. pr. [2] 58, 364).
- 3) $\delta\epsilon$ -Di[Phenylhydrazon]oktan. Sm. 138° (B. 31, 1219).
- 4) $\epsilon\zeta$ -Di[Phenylhydrazon]- β -Methylheptan. Sm. 114° (115°) (B. 22, 2124; G. 28 [2] 266). — IV, 782.
- 5) $\beta\epsilon$ -Di[Methylphenylhydrazon]hexan. Sm. 143–144° (G. 253, 23). — IV, 782.
- 6) bimeres-4-Amido-1-Isopropylbenzocyanid (A. 66, 145). — II, 550.
- 7) Di[4-Isopropylbenzenyl]hydrazidin. Sm. 193° (B. 30, 2011). — IV, 1289.
- 8) 4-Dimethylamido-4'-[1-Piperidyl]methylazobenzol. Sm. 109° (A. 259, 44). — IV, 1386.
- $C_{30}H_{28}S_2$ 1) Di[2-Methyl-5-Isopropylphenyl]disulfid. Fl. (B. 6, 480). — II, 828.
- $C_{30}H_{28}Hg$ 1) Quecksilberdi[2-Methyl-5-Isopropylphenyl]. Sm. 134° (B. 10, 1749; 28, 592). — IV, 1712.
- $C_{30}H_{27}N$ C 85,4 — H 9,6 — N 5,0 — M. G. 281.
- 1) Di[4-Isobutylphenyl]amin. Sd. 305–315°. (2HCl, PtCl₄) (B. 20, 1250). — II, 557.
- 2) Di[2-Methyl-5-Isopropylphenyl]amin. Sd. 344–348°. HCl, (2HCl, PtCl₄) (B. 20, 1262). — II, 559.
- 3) Di[3-Methyl-6-Isopropylphenyl]amin. Sd. 340–345°. (2HCl, PtCl₄) (B. 20, 1260). — II, 560.
- 4) Di[4-Isopropylbenzyl]amin. Sm. 168°; Sd. 280–300°₁₀₀. HCl, (2HCl, PtCl₄) (A. Spl. 1, 143; A. 245, 309). — II, 560.
- $C_{30}H_{26}O$ C 84,5 — H 9,9 — O 5,6 — M. G. 284.
- 1) 4-Isopropylbenzylcampher. Sd. 225–230°₉₈ (B. 24 [2] 732). — III, 514.
- $C_{30}H_{26}O_2$ C 80,0 — H 9,3 — O 10,7 — M. G. 300.
- 1) Dicamphochinon. Sm. 128–130°; Sd. 320–325° (G. 23 [2] 316; 27, [1] 182). — III, 501.
- 2) Dicanphanhexan-1,4-dion. Sm. 192–193°; Sd. 332–335° (G. 27 [1] 169, 203).
- $C_{30}H_{26}O_3$ C 76,0 — H 8,8 — O 15,2 — M. G. 316.
- 1) Oxycopaivaensäure. Pb, Ag (A. 40, 111). — III, 554.
- 2) Verbindung (aus Harzessenz) (B. 13, 1606). — III, 563.
- $C_{30}H_{26}O_4$ C 72,3 — H 8,4 — O 19,3 — M. G. 332.
- 1) Absinthiin + $\frac{1}{2}H_2O$. Sm. 120–125° (J. 1861, 745). — III, 616.
- $C_{30}H_{26}O_5$ C 69,0 — H 8,0 — O 23,0 — M. G. 348.
- 1) Elaterin. Sm. 200° (A. 2, 366; 43, 359; J. 1875, 829; Fr. 17, 500; 24, 150; Bl. [3] 17, 85). — III, 630.
- 2) Diäthylester d. η -Keto- η -Phenyl- β -Methylheptan- $\epsilon\epsilon$ -Dicarbonsäure (D. d. β -Benzoyl- α -Isoamylisobornsteinsäure). Fl. (B. 23, 1500). — II, 1968.
- $C_{30}H_{26}O_6$ C 65,9 — H 7,7 — O 26,4 — M. G. 364.
- 1) Triäthylester d. α -Phenylpentan- $\beta\beta\gamma$ -Tricarbonsäure. Sd. 336,1° (B. 22, 1818; 23, 654). — II, 2016.
- 2) Triäthylester d. β -Phenyl- β -Methylbutan- $\beta\gamma\gamma$ -Tricarbonsäure. Sd. 336,6° (B. 23, 655, 1943; 24, 1063; Ph. Ch. 10, 575). — II, 2016.
- $C_{30}H_{26}O_{13}$ C 50,4 — H 5,8 — O 43,7 — M. G. 476.
- 1) Amygdalinsäure. Ba (A. 22, 11; 154, 337). — II, 2108.
- $C_{30}H_{26}O_{14}$ C 48,8 — H 5,7 — O 55,5 — M. G. 492.
- 1) Tetraacetylarabin (Z. 1869, 265). — I, 1101.
- 2) Tetraacetylululin (A. 160, 84). — I, 1096.

- C₂₀H₂₅N₂**
 C 81,1 — H 9,4 — N 9,4 — M. G. 296.
 1) **4,4'-Di[Diäthylamido]biphenyl**. Sm. 85°. (2HCl, PtCl₄) (*A.* **115**, 366; *B.* **14**, 2166). — **IV**, 963.
 2) **Dicamphanhexanazin**. Sm. 201—202°. HCl, (2HCl, PtCl₄), (HCl, AuCl₃), Pikrat, + HgCl₂ (*G.* **27** [1] 172).
C₂₀H₂₅N₄
 C 74,1 — H 8,6 — N 17,3 — M. G. 324.
 1) **4,4'-Di[Diäthylamido]azobenzol**. Sm. 170°. (2HCl, PtCl₄), 2 + 6J, (4HCN, Fe[CN]₂), Pikrat (*M.* **3**, 710; **4**, 285). — **IV**, 1362.
 2) **Diisobutyldiphenyltetrazon**. Sm. 106—107° (*A.* **252**, 284). — **IV**, 1308.
C₂₀H₂₅N
 3) **Verbindung** (Base aus Chlorhydrinimid). (2HCl, PtCl₄) (*B.* **8**, 245).
 C 84,8 — H 10,2 — N 4,9 — M. G. 283.
C₂₀H₂₅O
 1) **3-Amyl-2-Hexylechinolin**. Sd. 355°. (2HCl, PtCl₄), Pikrat (*B.* **17**, 1719; **28**, 2820). — **IV**, 343.
 C 83,9 — H 10,5 — O 5,6 — M. G. 286.
C₂₀H₂₅O
 1) **Verbindung** (aus Sandelöl). Sd. 240° (*Bl.* **37**, 303). — **III**, 549.
 2) **Verbindung** (aus Pinakonen). Sm. bei 70° (*A.* **292**, 22).
C₂₀H₂₅O₂
 C 79,5 — H 9,9 — O 10,6 — M. G. 302.
 1) **ββ-Dicampher** (Dicamphoryl; Dicamphan-1,4-dion). Sm. 165—166°; Sd. oberh. 350° (*G.* **23** [2] 327; **27** [1] 159). — **III**, 501.
 2) **d-α-Dicarvelon**. Sm. 148—149° (*A.* **279**, 380; **305**, 225; *B.* **31**, 1807). — **III**, 505.
 3) **l-α-Dicarvelon**. Sm. 148—149° (*A.* **279**, 380; **305**, 225). — **III**, 505.
 4) **i-α-Dicarvelon**. Sm. 120—121° (*A.* **305**, 226).
 5) **d-β-Dicarvelon**. Sm. 207° (*A.* **305**, 229).
 6) **l-β-Dicarvelon**. Sm. 207° (*A.* **305**, 229).
 7) **i-β-Dicarvelon**. Sm. 168° (*A.* **305**, 229).
 8) **d-γ-Dicarvelon**. Sm. 126° (*A.* **305**, 230).
 9) **l-γ-Dicarvelon**. Sm. 126° (*A.* **305**, 230).
 10) **i-γ-Dicarvelon**. Sm. 112° (*A.* **305**, 231).
 11) **Dieucarvelon**. Sm. 172° (*A.* **305**, 236).
 12) **isom. Dieucarvelon**. Sm. 128° (*A.* **305**, 236).
 13) **Copaivasäure**. Ca, Pb, Ag (*A.* **13**, 177; **40**, 310; *J.* **1867**, 727; *M.* **2**, 516). — **II**, 1437.
 14) **Metacopaivasäure**. Sm. 126—129° (*M.* **2**, 516). — **III**, 559.
 15) **Dextropimar säure**. Sm. 210—211°. NH₃, Na + 5H₂O, K, Ca + H₂O, Ba + 9H₂O, Pb, Ag (*A.* **34**, 272; **148**, 143; *J.* **1859**, 510; *Bl.* **21**, 387; *B.* **11**, 447; **17**, 1885; **18**, 2167, 3331; **19**, 2167; **20**, 3252; *C.* **1896** [1] 756). — **II**, 1437.
 16) **Lävopimarsäure**. Sm. 140—150° (*B.* **20**, 3248). — **II**, 1438.
 17) **Sylvinsäure**. Sm. 162° (129°; 145°) (*A.* **148**, 147; **161**, 115; *J.* **1847/48**, 572; **1859**, 506; **1861**, 390; *B.* **17**, 1885; **18**, 2166). — **II**, 1438.
 18) **Säure** (aus Terpentinöl) (*J.* **1854**, 589). — **III**, 517.
 19) **Isoylvinsäure**. Sm. 60,5—62,5° (*B.* **23**, 1921). — **II**, 1438.
 20) **Verbindung** (aus Bromcampher). Sm. 150° (*G.* **23** [1] 76).
 21) **Verbindung** (aus α-Dibromcampher). Sm. 248° (*C.* **1896** [1] 1168).
C₂₀H₂₅O₃
 C 75,5 — H 9,4 — O 15,1 — M. G. 318.
 1) **Camphanoncamphersäure**. Sm. 224—225°. Na, Ag (*G.* **27** [1] 183).
 2) **Säure** (aus Colophonium). Ca, Ba + 2H₂O, Cu, Ag (*J. r.* **30**, 477). — **II**, 1674.
 3) **Anhydrid d. Camphorensäure**. Sm. 84—85° (*C.* **1896** [1] 306; *Soc.* **69**, 53).
 4) **Anhydrid d. α-Dicamphandisäure**. Sm. 143—144° (*G.* **27** [1] 193).
 5) **Anhydrid d. β-cis-Dicamphandisäure**. Sm. 162° (*G.* **27** [1] 191).
C₂₀H₂₅O₄
 C 71,8 — H 9,0 — O 19,2 — M. G. 334.
 1) **Arnica** (*J.* **1859**, 584; **1860**, 544; **1861**, 753). — **III**, 619.
 2) **Prophetin** (Prophetin) (*J.* **1859**, 566).
 3) **Diacetat d. 1,3-Dioxy-*p*-Diisocamylbenzol**. Sm. 89° (*B.* **25**, 2653). — **II**, 972.
 4) **Diacetat d. 1,4-Dioxy-*p*-Diisocamylbenzol**. Sm. 116° (*B.* **25**, 2650). — **II**, 972.
C₂₀H₂₅O₅
 C 68,6 — H 8,6 — O 22,8 — M. G. 350.
 1) **Säure** (aus Onoketon). Sm. 75—80°. Ag (*B.* **29**, 2990).
C₂₀H₂₅O₆
 C 65,6 — H 8,2 — O 26,2 — M. G. 366.
 1) **Atractylin** (*J.* **1873**, 846). — **II**, 2109.

- C₃₀H₃₀O_n** C 60,2 — H 7,5 — O 32,2 — M. G. 398.
- C₃₀H₃₀O₁₀**
- 1) Eudesmin. Sm. 99° (C 1897 [1] 170).
C 55,8 — H 7,0 — O 37,2 — M. G. 430.
 - 2) Ciliensäure. Sm. 242°. Ag₂ (B. 32, 686).
 - 3) Tetraäthylester d. β₂-Diketo-δ-Methylheptan-αγδζ-Tetracarbonsäure (T. d. Äthylidenbisacetondicarbonsäure). Sm. 115° (A. 288, 356).
 - 4) Pentaäthylester d. α-Penten-αβγγε-Pentacarbonsäure. Sd. 240 bis 250°₁₅ (B. 31, 50).
 - 4) Farbstoff (aus Lithospermum erythrorhizon). Ba (Soc. 35, 22). — III, 667.
- C₃₀H₃₀O₁₂**
- 1) C 52,0 — H 6,5 — O 41,5 — M. G. 462.
 - 1) Gentiopikrin. Sm. 120–125° (J. 1862, 483). — III, 585.
 - 2) Hexaäthylester d. Äthanhexacarbonsäure. Sm. 101° (Am. 15, 527; 18, 574).
- C₃₀H₃₀O₁₄** C 48,6 — H 6,1 — O 45,3 — M. G. 494.
- C₃₀H₃₀O₁₅**
- 1) Tetraäthylester d. Succinylweinsäure. Fl. (A. Spl. 5, 281). — I, 797.
 - 1) C 47,1 — H 5,9 — O 47,0 — M. G. 510.
 - 1) Tetracetat d. Milchsucker (Bl. 12, 206). — I, 1064.
 - 2) Tetracetat d. Rohrzucker (Bl. 12, 207). — I, 1069.
- C₃₀H₃₀N₂** C 80,5 — H 10,1 — N 9,4 — M. G. 298.
- 1) 7-Amino-3-Amyl-2-Hexylchinolin. Sm. 68–69°. (2HCl, PtCl₄ + 4H₂O), Pikrat (B. 24, 1738). — IV, 944.
 - 2) Dicumphandihydropryridazin (Dicumphanazin). Sm. 155–156°. HCl, (HCl, AuCl₃), Pikrat (G. 27 [1] 164).
- C₃₀H₃₀Br₂**
- 1) Diterebenthylidibromid (Soc. 54, 161). — II, 176.
 - 2) Dibrompinakonan. Sm. 157° (B. 27, 2350; A. 292, 20).
- C₃₀H₃₀Cl**
- 1) Verbindung (aus Asphalt). — III, 565.
- C₃₀H₃₀S**
- 1) Chlorecumpherpinakonan. Sm. 75° (B. 27, 2349; A. 292, 6).
 - 2) Verbindung (aus Pinen). Sd. 180–185° (i. V.) (Soc. 55, 47). — III, 519.
- C₃₀H₃₁Br**
- 1) Bromcumpherpinakonan. Sm. 103° (B. 27, 2349; A. 292, 8).
- C₃₀H₃₁O**
- 1) C 83,3 — H 11,1 — O 5,6 — M. G. 288.
 - 1) Cerin. Sm. 250° (J. 1854, 1461). — III, 627.
 - 2) Fluavil. Sm. 42° (J. 1852, 644; 1859, 518). — III, 552.
 - 3) Hämosterin. Sm. 37–42° (C. 1896 [1] 562).
 - 4) Oxycumpherpinakonan. Sm. 120° (B. 27, 2349; A. 292, 15).
- C₃₀H₃₁O₂**
- 1) C 79,0 — H 10,5 — O 10,5 — M. G. 304.
 - 1) Caryophyllin. subl. bei 280° (Berz. J. 22, 452; J. 1850, 510; B. 13, 800). — III, 626.
 - 2) Laktucerin. Sm. 210° (Hesse, N. Handwört. d. Ch. 4, 8; J. 1847/48, 824; A. 234, 243). — III, 634.
 - 3) Vitin. Sm. 250–255° u. Zers. NH₄, Ca, Pb, Cu, Ag (M. 14, 719). — III, 649.
 - 4) Glykol d. Kohlenw. C₃₀H₃₀ (aus Campher). Sm. 150° (B. 27, 2350).
 - 5) Phenylester d. Myristinsäure. Sm. 36°; Sd. 230°₁₅ (B. 17, 1379). — II, 662.
 - 6) Verbindung (aus Terpentinsel) (J. 1854, 589).
- C₃₀H₃₁O₃** C 71,4 — H 9,5 — O 19,1 — M. G. 336.
- 1) α-Dicumphandisäure. Ag₂ (G. 27 [1] 194).
 - 2) β-cis-Dicumphandisäure. Sm. 178–180° (G. 27 [1] 191).
 - 3) β-trans-Dicumphandisäure. Sm. 265–266°. K, Ag₂ (G. 27 [1] 188).
 - 4) d-Monoborneolester d. Camphersäure. Sm. 176–177° (B. 23 [2] 284). — III, 471.
 - 5) l-Monoborneolester d. Camphersäure. Sm. 164–166° (B. 23 [2] 284). — III, 471.
 - 6) Monogeraniolester d. Camphersäure (J. pr. [2] 53, 44).
 - 7) Acetat d. Ammoresitannol (B. 29 [2] 37).
 - 8) Verbindung (aus Bisabolharz) (C. 1897 [2] 429).
- C₃₀H₃₁O₅** C 68,2 — H 9,2 — O 22,7 — M. G. 352
- 1) Verbindung (aus Terpentinsel). Fl. (J. 1854, 589). — III, 517.
- C₃₀H₃₁O₆** C 65,2 — H 8,7 — O 26,1 — M. G. 368.
- 1) α-Condurangin. Sm. 60–61° (G. 22 [1] 239). — III, 577.
 - 2) Caryophyllinsäure. Na₂, Ba + 1½ H₂O, Ag₂ (B. 8, 1053). — III, 626.
- C₃₀H₃₁O₇** C 62,5 — H 8,3 — O 29,2 — M. G. 384.
- 1) Senegenin (G. 19, 32). — III, 610.

- C₃₀H₃₂N₂** C 80,0 — H 10,7 — N 9,3 — M. G. 300.
1) **Lepamin.** *Sd.* 275°. 2 HCl, (2 HCl, PtCl₄) (*J.* 1863, 430). — IV, 314.
- C₃₀H₃₂S₄** 1) **Thiuramsulfür d. Dekahydrochinolin.** *Sm.* 80—81° (*B.* 23, 1152). — IV, 56.
- C₃₀H₃₂O₇** 1) **Melanthin** = (C₃₀H₃₂O₇)₂ (*J.* 1880, 1077). — III, 597.
C 82,7 — H 11,7 — O 5,5 — M. G. 290.
- C₃₀H₃₄O** 1) **Cinchool** + H₂O. *Sm.* 139° (wasserfrei) (*A.* 228, 294). — II, 1069.
2) **Cupreol** + H₂O. *Sm.* 140° (*A.* 228, 291). — II, 1068.
3) **Quebrachol** + x H₂O. *Sm.* 125° (*A.* 211, 272). — II, 1068.
4) **d-Borneoläther.** *Sd.* 285—290° (*B.* 11, 456). — III, 470.
5) **i-Bornyläther.** *Sm.* 90—91°; *Sd.* 322° (*Bl.* [3] 11, 902). — III, 473.
6) **Geranioläther.** *Sd.* 187—190° (*A.* 157, 238). — III, 477.
7) **d-Licarhodoläther.** *Sm.* 145—150°₁₀ (*Bl.* [3] 17, 591).
8) **l-Linaloloxyd.** *Sd.* bei 320° (*Bl.* [3] 9, 806). — III, 478.
9) **Verbindung** (aus Citronellal). *Sd.* 185°₁₀ (*C.* 1897 [2] 305).
10) **Verbindung** (aus Onodaphne californica). *Sd.* 167—168° (*B.* 13, 630). — III, 548.
- C₃₀H₃₄O₂** C 78,4 — H 11,1 — O 10,5 — M. G. 306.
1) **Dibornyl.** *Sm.* 164—166° (*G.* 23 [2] 329). — III, 501.
2) **Dicampholyl.** *Sm.* 90°; *Sd.* 330—335° u. *Zers.* (*Bl.* [3] 11, 616).
3) **d-Campherpinakon.** *Sm.* 157—158° (*B.* 22, 912; 27, 2348; *A.* 292, 1; *G.* 27 [1] 206).
4) **l-Campherpinakon** (*A.* 292, 25).
5) **Isobutyläther d. Benzoesäure.** *Sm.* 210° (*B.* 26 [2] 679). — III, 554.
6) **Verbindung** (aus Chlorameisensäureäthylester). *Sd.* 249° u. *Zers.* (*J. pr.* [2] 6, 168). — I, 609.
7) **Verbindung** (aus d. Keton C₁₀H₁₆O aus Isolauronsäure). *Sm.* 120° (*C.* 1897 [1] 814).
- C₃₀H₃₄O₃** C 74,5 — H 10,6 — O 14,9 — M. G. 322.
1) **Asclepien.** *Sm.* 104° (*A.* 69, 125). — III, 619.
2) **Pyrolithofellinsäure** (*A.* 44, 290). — I, 629.
3) **Dichromatinsäure.** *Ba* (*H.* 4, 194; 5, 75; *A.* 284, 92). — I, 629.
4) **Divaleryldivaleriansäure.** *Sm.* 125,5—128,5°; *Sd.* 295°. *Na*, *Pb*, *Zn*, *Ag* (*Z.* 1866, 462; *B.* 20, 2339). — I, 629.
5) **Anhydrid d. Campholsäure.** *Sm.* 56°; *Sd.* 209—210°₃₀ (*Bl.* [3] 11, 610).
6) **Lakton d. Lithofellinsäure.** *Sd.* 245—248°₁₆ (*B.* 26, 3047).
- C₃₀H₃₄O₄** C 71,0 — H 10,0 — O 18,9 — M. G. 338.
1) **Methylester d. Lichesterinsäure.** *Sm.* 96—97° (*C.* 1898 [2] 964).
2) **Monäthylester d. Camphothetischen Säure.** *Sd.* 135—140°₁₈ (*Soc.* 63, 504).
- C₃₀H₃₄O₆** C 64,9 — H 9,2 — O 25,9 — M. G. 370.
1) **Norringformsäure** + H₂O. *Sm.* 119° (wasserfrei). *Ba*₃ (*J. pr.* [2] 57, 279).
- C₃₀H₃₄O₇** C 62,2 — H 8,8 — O 29,0 — M. G. 386.
1) **Gratiolin** (*J.* 1858, 518). — III, 592.
- C₃₀H₃₄O₈** C 59,7 — H 8,4 — O 31,8 — M. G. 402.
1) **Tetraäthylester d. Oktan-ααθθ-Tetracarbonsäure.** *Sd.* 277—280°₄₀ (*Soc.* 65, 600).
2) **Tetraäthylester d. Oktan-γγζζ-Tetracarbonsäure.** *Sm.* 93—94° (*Soc.* 65, 1007).
3) **Tetraäthylester d. β-Methylheptan-ααηη-Tetracarbonsäure.** *Sd.* 273 bis 276°₉₀ (*Soc.* 53, 201). — I, 862.
4) **Diäthylester d. Dicaproylweinsäure.** *Fl.* (*Bl.* [3] 11, 314).
5) **Dipropylester d. norm. Divalerylweinsäure.** *Sd.* 223°₁₂ (*Bl.* [3] 11, 313).
6) **Dipropylester d. Diisovalerylweinsäure.** *Fl.* (*Bl.* [3] 11, 369).
7) **norm. Dibutylester d. Dibutrylweinsäure.** *Sd.* 232—234°₁₈ (*B.* 25 [2] 859; *Bl.* [3] 9, 683; [3] 11, 312).
8) **Diisobutylester d. Dibutrylweinsäure.** *Sd.* 221—223°₃₀ (*B.* 25 [2] 859; *Bl.* [3] 11, 367).
9) **Diisobutylester d. Diisobutrylweinsäure.** *Fl.* (*Bl.* [3] 11, 369).
- C₃₀H₃₄O₁₀** C 55,3 — H 7,8 — O 36,9 — M. G. 434.
1) **Cyclamin.** *Sm.* 236° (*J.* 1857, 518; 1887, 2305; *A.* 165, 214; *Bl.* 32, 417). — III, 579.
- C₃₀H₃₄S** 1) **Geraniolsulfid.** *Fl.* (*A.* 157, 238). — III, 477.

- C₂₀H₃₅N** C 83,0 — H 12,1 — N 4,8 — M. G. 289.
 1) Dibornylamin. Sm. 43—44°; Sd. 180—181°₁₂. HCl, (2HCl, PtCl₄), (HBr, Br₂), HNO₃ (A. 269, 354; B. 22, 1851). — IV, 56.
 2) 2,6-Dimethyl-4-Tridekylpyridin. Sd. 215—217°₁₂. (2HCl, PtCl₄) (B. 22, 1758). — IV, 140.
- C₂₀H₃₆O** C 82,2 — H 12,3 — O 5,5 — M. G. 292.
 1) Euphorbon. Sm. 67—68° (J. 1896, 1821). — III, 631.
 2) Excretin. Sm. 95—96° (J. 1854, 713; A. 166, 213). — III, 631.
- C₂₀H₃₆O₂** C 77,9 — H 11,7 — O 10,4 — M. G. 308.
 1) Gallocerin (B. 28 [2] 613).
 2) Alkohol (aus Dicumpholyl). Sm. 50° (Bl. [3] 11, 617).
 3) Nonadekin- α -Carbonsäure. Sm. 69°; Sd. 270°₁₂ (B. 27, 3404).
 4) Aethylester d. Leinölsäure. Sd. 270—275°₁₂₀ (J. pr. [2] 41, 534). — I, 536.
- C₂₀H₃₆O₄** C 70,5 — H 10,6 — O 18,8 — M. G. 340.
 1) Lithofellinsäure. Sm. 204—205°. Na, Ba + 10H₂O, Ag (A. 39, 242; 41, 150; 44, 289; 67, 53; J. 1863, 655; 1880, 831; J. Th. 1879, 241; B. 12, 1925; 28, 3045). — I, 695.
 2) Acetylricinolsäure. Fl. (J. pr. [2] 39, 339). — I, 613.
 3) Diisovalerat d. ϵ -Dioxy- ϵ -Dekon. Sd. 270—280° u. Zers. (B. 12, 318; 24, 1275; 31, 1222; G. 25 [2] 57, 132). — I, 429.
- C₂₀H₃₆O₅** C 67,4 — H 10,1 — O 22,5 — M. G. 356.
 1) β -Keto- λ -Acetoxyheptadekan- α -Carbonsäure (Ketoacetoxylostearinsäure). Fl. (B. 27, 3124).
- C₂₀H₃₆O₈** C 59,4 — H 8,9 — O 31,7 — M. G. 404.
 1) Convallamaretin (J. 1858, 519). — III, 578.
 2) Trisämylester d. $\alpha\beta$ -Dioxyäthan- $\alpha\alpha\beta$ -Tricarbonsäure (Tr. d. Desoxalsäure) (Z. 1865, 50). — I, 857.
- C₂₀H₃₆Cl₄** 1) Bisabolentetrahydrochlorid. Sm. 79,3° (C. 1897 [2] 428).
 2) Tetrahydrochlorid d. Copaivabalsamöl. Sm. 77° (54°) (A. 7, 158; 34, 321). — III, 539.
- C₂₀H₃₆O** C 81,6 — H 12,9 — O 5,4 — M. G. 294.
 1) Verbindung (aus d. Saure C₁₀H₁₆O₂ aus Petroleum) (B. 24, 1813). — I, 523.
- C₂₀H₃₆O₂** C 77,4 — H 12,3 — O 10,3 — M. G. 310.
 1) Menthonpinakon. Sm. 94° (J. pr. [2] 55, 23).
 2) α -Nonadeken- α -Carbonsäure^P Sm. 50°; Sd. 267°₁₅. Na, Ba, Ag (B. 27, 3403).
 3) Aethylester d. Oelsäure (A. 28, 256). — I, 526.
 4) Aethylester d. Elaidinsäure. Sd. über 370° u. Zers. (A. 28, 255). — I, 527.
- C₂₀H₃₆O₃** C 73,6 — H 11,6 — O 14,7 — M. G. 326.
 1) Aethylester d. ϵ -Ketoheptadekan- α -Carbonsäure (Ac. d. Ketostearinsäure). Sm. 41° (B. 27, 174).
 2) Aethylester d. β -Keto- γ -Heptyldekan- γ -Carbonsäure (Aethylester d. norm. Diheptylacetessigsäure). Sd. 331—333° (A. 200, 114). — I, 613.
 3) Aethylester d. Ricinolsäure. Fl. (A. 64, 123). — I, 613.
 4) Aethylester d. Pseudoricinolsäure (C. 1897 [1] 662).
 5) Aethylester d. Ricinoläidinsäure. Sm. 16° (A. 60, 324). — I, 613.
 6) Bryoidin. Sm. 135—136° (J. 1875, 860). — III, 557.
 7) Verbindung (aus Isovaleraldehyd). Sd. 260—290° (B. 5, 481; 6, 982; 16, 1038). — I, 950.
- C₂₀H₃₆O₄** C 70,2 — H 11,1 — O 18,7 — M. G. 342.
 1) Aethylester d. β -Keto- λ -Oxyheptadekan- α -Carbonsäure (Ac. d. Keto-oxyostearinsäure). Sm. 54,5° (B. 27, 3124).
 2) Aethylester d. Acetyljalapinolsäure. Sd. 224—225°₅₀ (J. pr. [2] 57, 431).
 3) Diisämylester d. Oktan- α - β -Dicarbonsäure (Diisämylester d. Sebacininsäure). Sd. über 360° (J. 1876, 577). — I, 686.
 4) Diacetat d. Cetenglykol. Sm. 55—56° (B. 23, 2353; A. 143, 270). — I, 414.
 5) Verbindung (aus Isobuttersäurealdehyd). Sd. 223—225° (Sec. 43, 95; M. 19, 374). — I, 947.

- C₂₀H₂₈N₂** C 78,4 — H 12,4 — N 9,1 — M. G. 306.
 1) **Menthyhydrasonmenthon.** Sm. 92—93°. HCl (*J. pr.* [2] 52, 424; *J. r.* 27, 544). — IV, 486.
- C₂₀H₃₈Cl₂** 1) **Dichloreikosen** (Eikosylenchlorid) (*B.* 12, 72). — I, 137.
C₂₀H₃₈Br₂ 1) **Dibromeikosen** (Eikosylenbromid) (*B.* 12, 73). — I, 137.
- C₂₀H₃₀Cl** 1) **Eikosylenhydrochlorid.** Sd. 225—230° (*B.* 12, 71). — I, 137.
C₂₀H₁₀O C 81,1 — H 13,5 — O 5,4 — M. G. 296.
 1) **γ-Ketoikosen** (Hexyltridecylketon). Sm. 210—211°₁₁ (*B.* 15, 1717). — I, 1005.
- C₂₀H₄₀O₂** C 76,9 — H 12,8 — O 10,3 — M. G. 312.
 1) **Arachinsäure.** Sm. 77° (73,5°). K, Ba, Sr, Cu, Ag (*P.* 90, 146; *A.* 89, 1; 97, 257; 101, 97; *J.* 1877, 729; 1884, 1193; *Z.* 1867, 256; *B.* 16, 1104; 26, 644; *J. pr.* [2] 48, 328, 487; *M.* 16, 877; 17, 528). — I, 447.
 2) **Säure** (aus Onoketon). Sm. 73—74° (*B.* 29, 2990).
 3) **Aethylester d. Stearinsäure.** Sm. 32,9° (33,7°); Sd. 224° u. Zers. (*A.* 84, 302; 88, 292; 91, 154; *J.* 1858, 301; *C.* 1898 [2] 757). — I, 445.
 4) **Aethylester d. Neurostearinsäure** (*J. pr.* [2] 25, 27). — I, 447.
 5) **Aethylester d. Dioktylessigsäure.** Sd. 275—280°₁₀₀ (*A.* 204, 13). — I, 447.
 6) **Cotylester d. Buttersäure.** Sm. 20°; Sd. 260—270°_{200,5} (*A.* 131, 285). — I, 422.
 7) **Oktadekylester d. Essigsäure.** Sm. 31°; Sd. 222—223°₁₅ (*B.* 16, 1722). — I, 411.
- C₂₀H₄₀O₃** C 73,2 — H 12,2 — O 14,6 — M. G. 328.
 1) **α-Oxyarachinsäure.** Sm. 91—92°. Na, Ba (*M.* 17, 534).
 2) **Aethylester d. β-Oxyheptadekan-α-Carbonsäure** (Ae. d. β-Oxystearinsäure). Sm. 44° (*J. r.* 18, 44). — I, 579.
- C₂₀H₄₀O₄** C 69,8 — H 11,6 — O 18,6 — M. G. 344.
 1) **Dracoalban** (*C.* 1896 [2] 713).
 2) **Aethylester d. d-9-α-Dioxyheptadekan-α-Carbonsäure.** Sm. 128 bis 130° (*Bl.* [3] 13, 1054).
 3) **Aethylester d. l-9-α-Dioxyheptadekan-α-Carbonsäure.** Sm. 98—99° (*Bl.* [3] 13, 1054).
 4) **Aethylester d. i-9-α-Dioxyheptadekan-α-Carbonsäure** (Ae. d. Dioxy-stearinsäure). Sm. 98,8—100° (104—106°) (*J. pr.* [2] 40, 244; *Bl.* [3] 13, 230). — I, 636.
- C₂₀H₄₀Cl₂** 1) **Dichloreikosan** (*B.* 12, 71, 72). — I, 137.
 2) **Dichloreikosan** (aus d. Kohlenw. C₂₀H₄₄) (*B.* 12, 73).
- C₂₀H₄₁O** C 80,5 — H 14,1 — O 5,4 — M. G. 298.
 1) **Medicagol.** Sm. 80°; Sd. 395° (*B.* 25 [2] 286). — I, 240.
- C₂₀H₄₂O₂** C 76,4 — H 13,4 — O 10,2 — M. G. 314.
 1) **Verbindung** (aus Dammarharz). Sm. 62° (*B.* 22 [2] 345). — III, 555.
- C₂₀H₄₂O₃** C 66,3 — H 11,6 — O 22,1 — M. G. 362.
 1) **Verbindung** (aus Isovaleraldehyd). Sm. 70° (*B.* 6, 983, 984). — I, 950.
- C₂₀H₄₁O₁₅** C 46,0 — H 8,0 — O 46,0 — M. G. 522.
 1) **Panaquillon** (*A.* 90, 231). — III, 639.
- C₂₀H₄₃N** C 80,8 — H 14,5 — N 4,7 — M. G. 297.
 1) **α-Diäthylamidoheptadekan** (Cetyldiäthylamin). Sm. 6—8°; Sd. 355° (2HCl, PtCl₄) (*B.* 22, 814). — I, 1138.
- C₂₀H₄₄O₂₀** C 32,1 — H 5,9 — O 62,0 — M. G. 374.
 1) **Säure** (aus Jute). Ba (*Soc.* 41, 92). — I, 1080.
- C₂₀H₄₄Sb₂** 1) **Antimontraisocamyl.** Fl. (*A.* 97, 321). — I, 1516.
C₂₀H₄₄Sn 1) **Zinntraisocamyl.** Fl. (*A.* 92, 394). — I, 1529.
- C₂₀O₄Cl₂** 1) **Perchlordiisocamylester d. Hexadekyloroktan-α-β-Dicarbonsäure** (P. d. Perchlorsebacinsäure). Sm. 179° (*Soc.* 52, 802). — I, 687.

C₂₀-Gruppe mit drei Elementen.

- C₂₀H₆O₃Cl₆** 1) **Tetrachlorfluoresceindichlorid.** Sm. 259° (*A.* 238, 336). — II, 2063.
C₂₀H₆O₄Cl₄ 1) **Tetrachlorgallein** (*A.* 238, 337). — II, 2088.
C₂₀H₆O₃Br₃ 1) **Pentabromhydrochinonphtalein.** Sm. über 300° (*B.* 11, 715; 28, 2062). — II, 2066.

- $C_{20}H_7O_2Br_5$ 1) Pentabromoresorcinoxaleinanhydrid. *Ba* (B. 14, 2566). — II, 937.
 $C_{20}H_7O_2Br_5$ 1) Bromderivat d. Verbindung $C_{20}H_{14}O_6$ (aus $\alpha\beta$ -Tri[2,5-Dioxyphenyl]-
 äthan) (A. 243, 188). — II, 1046.
- $C_{20}H_7O_{13}N_5$ C 45,7 — H 1,3 — O 39,6 — N 13,3 — M. G. 525.
- $C_{20}H_7NBr_5$ 1) Pentanitrofluoran. Sm. noch nicht bei 335° (B. 31, 1744).
 2) Oktobrom-2,2'-Dinaphtylamin. Sm. oberh. 300° (B. 20, 2621). — II, 603.
- $C_{21}H_7N_3Br_3$ 1) Pentabromdinaphtasin. Sm. oberh. 320° (B. 10, 576). — IV, 1084.
- $C_{20}H_8O_2Br_4$ 1) Tetrabrom- β -Binaphtylenoxyd (Soc. 59, 1100). — II, 1006.
 $C_{20}H_8O_2N_4$ C 71,4 — H 2,4 — O 9,5 — N 16,7 — M. G. 336.
- $C_{20}H_8O_2Cl_6$ 1) Nitril d. Triphendioxasindicarbonsäure (B. 30, 996). — IV, 1083.
 2) Verbindung (aus 1,1,3,4-Tetrachlor-2-Keto-1,2-Dihydronaphtalin u. 1,1,3,3,4,4-Hexachlor-2-Keto-1,2,3,4-Tetrahydronaphtalin). Sm. 86–87° (B. 22, 1032). — III, 172.
- $C_{20}H_8O_2Cl_6$ 1) Di[2,4,6-Trichlorphenylester] d. Benzol-1,2-Dicarbonsäure. Sm. 193 bis 194° (B. 18, 1164). — II, 1794.
- $C_{20}H_8O_2Cl_4$ 1) Tetrachlorfluorescein (A. 238, 333, 360). — II, 2062.
- $C_{20}H_8O_2Cl_4$ 1) Anhydrid d. 2-Trichloracetylphenyldichloressigsäure. Sm. 224° (A. 300, 200).
- $C_{20}H_8O_2Br_4$ 1) Tetrabromfluorescein (Eosin). Salze meist bek. (A. 183, 38; 238, 360; J. 1878, 1185; B. 28, 312, 1576; 29, 2625). — II, 2063.
 C 64,5 — H 2,1 — O 25,8 — N 7,5 — M. G. 372.
- $C_{20}H_8O_6N_2$ 1) 1,6-Anhydrid d. 3,4-Dimethoxyl-6-Diazobenzol-1,2-Dicarbonsäure. Zers. bei 140–150° (B. 19, 2302). — IV, 1558.
- $C_{20}H_8O_2Br_2$ 1) Dibromgallein (A. 209, 265). — II, 2088.
- $C_{20}H_8O_2S_2$ 1) Verbindung (aus Trioxyphenylendisulfid). Sm. 185° (B. [3] 15, 1048).
- $C_{20}H_8O_2J_2$ 1) Verbindung (aus Phenol). Sm. 180° (B. 27 [2] 82).
- $C_{20}H_8O_2N_4$ C 53,6 — H 1,8 — O 32,1 — N 12,5 — M. G. 448.
 1) Tetrinitro- β -Binaphtylenoxyd. Sm. 250° u. Zers. (Soc. 59, 1100). — II, 1006.
 C 46,9 — H 1,6 — O 40,6 — N 10,9 — M. G. 512.
- $C_{20}H_8O_{12}N_4$ 1) Tetranitrofluorescein (A. 183, 33; B. 30, 334; M. 19, 150). — II, 2064.
 C 44,4 — H 1,5 — O 38,5 — N 15,6 — M. G. 540.
- $C_{20}H_8O_{12}N_6$ 1) *p*-Hexanitro-2,2'-Dinaphtyläther. Zers. bei 270° (B. 26, 253). — II, 884.
 C 45,4 — H 1,5 — O 42,4 — N 10,6 — M. G. 528.
- $C_{20}H_8O_{11}N_4$ 1) Tetrinitroresorcinoxaleinanhydrid (B. 14, 2569). — II, 937.
 C 55,2 — H 2,1 — O 33,1 — N 10,6 — M. G. 435.
- $C_{20}H_8O_9N_6$ 1) Trinitrofluoran. Sm. 250° (B. 31, 1743).
 C 51,8 — H 1,9 — O 31,2 — N 15,1 — M. G. 463.
- $C_{20}H_8O_9N_5$ 1) Trinitrooxychinakridon. Zers. bei 270–280° (B. 29, 80). — IV, 1087.
 C 44,5 — H 1,7 — O 35,6 — N 18,2 — M. G. 539.
- $C_{20}H_8O_{11}N_7$ 1) *p*-Hexanitro-2,2'-Dinaphtylamin. K, Ba (B. 20, 2624). — II, 604.
- $C_{20}H_8Cl_4Br_2$ 1) α -Tetrachlortribromdinaphtalin. Sm. 74–76° (A. 160, 69). — II, 193.
 2) β -Tetrachlortribromdinaphtalin. Sm. 71–73° (A. 160, 71). — II, 193.
- $C_{20}H_{10}OCl_2$ 1) Dichlor- α -Binaphtylenoxyd. Sm. 150–151° (A. 209, 136). — II, 1005.
 2) Dichlor-2,6-[β]-Binaphtylenoxyd. Sm. 245° (A. 209, 140). — II, 1006.
- $C_{20}H_{10}OBr_2$ 1) Dibrom- α -Binaphtylenoxyd. Sm. 287° (A. 209, 137). — II, 1005.
 2) Dibrom-2,6-[β]-Binaphtylenoxyd. Sm. 247° (B. 26, 853; A. 209, 140). — II, 1006.
- $C_{20}H_{10}O_2Cl_2$ 1) Verbindung (aus 2,4-Dichlor-1-Oxynaphtalin). subl. (B. 21, 891). — II, 859.
- $C_{20}H_{10}O_2Cl_2$ 1) Chlorid d. Fluorescein. Sm. 252° (A. 183, 18). — II, 2061.
- $C_{20}H_{10}O_2Br_2$ 1) Dibromfluoran. Sm. 255–258° (A. 212, 350). — II, 1984.
- $C_{20}H_{10}O_2Br_4$ 1) *p*-Tetrabrom-9,*p*-Dioxy-10-Oxyphenylanthracen (A. 202, 93). — II, 1116.
- $C_{20}H_{10}O_2Cl_4$ 1) Dibenzooat d. 2,3,5,6-Tetrachlor-1,4-Dioxybenzol. Sm. 232° (A. 210, 156). — II, 1150.
 2) Di[2,4-Dichlorphenylester] d. Benzol-1,2-Dicarbonsäure. Sm. 168° (J. 1887, 1301). — II, 1794.
- $C_{20}H_{10}O_2Br_4$ 1) Tetrabromphenolphthalein. Sm. 220–230° u. Zers. (A. 202, 77). — II, 1984.
 2) Tetrabromphenolphthalein. Sm. oberh. 280° (A. 202, 106). — III, 261.
- $C_{20}H_{10}O_2J_4$ 1) Tetrajodphenolphthalein. Zers. bei 220° (B. 28, 1606). — II, 1984.

- $C_{22}H_{10}O_2N_2$ C 67,0 — H 2,8 — O 22,3 — N 7,8 — M. G. 358.
 1) Dinitro- α -Binaphtylenoxyd. Sm. 270° (A. 209, 137). — II, 1005.
 2) Dinitro-2,6-[β]Binaphtylenoxyd. Sm. 221° (A. 209, 140). — II, 1006.
- $C_{20}H_{10}O_2Cl_2$ 1) Dichlorfluorescein (A. 238, 357). — II, 2062.
- $C_{20}H_{10}O_2Br_2$ 1) Dibromfluorescein. Sm. 260—270° (A. 183, 36). — II, 2063.
- $C_{20}H_{10}O_2Cl_4$ 1) Tetrachlorfluoresceinsäure (A. 238, 333). — II, 2062.
- $C_{20}H_{10}O_2Br_4$ 1) Tetrabromfluoresceinsäure (A. 183, 55). — II, 2063.
- $C_{20}H_{10}O_2Br_2$ 1) Hexabromderivat d. Verbindung $C_{20}H_{10}O_2$ (aus $\alpha\alpha\beta$ -Tri[1,2-Dioxyphenyl]äthan) (A. 243, 184). — II, 1045.
 2) Hexabromderivat d. Verbindung $C_{20}H_{10}O_2$ (aus $\alpha\alpha\beta$ -Tri[1,3-Dioxyphenyl]äthan) (A. 243, 180). — II, 1045.
- $C_{20}H_{10}O_2N_2$ C 61,5 — H 2,6 — O 28,7 — N 7,2 — M. G. 390.
 1) 2,7-Dinitrofluoran. Sm. 261—264° (B. 31, 1741). — II, 295.
 2) Tetranitro-1,1'-Binaphtyl (A. 144, 83). — II, 295.
- $C_{20}H_{10}O_2N_2$ C 56,9 — H 2,4 — O 34,1 — N 6,6 — M. G. 422.
 1) Dinitrofluorescein (A. 183, 30; B. 30, 332; M. 19, 149). — II, 2064.
- $C_{20}H_{10}O_2N_4$ C 48,2 — H 2,0 — O 38,5 — N 11,2 — M. G. 498.
 1) Tetranitrophenolphthalein. Sm. 244—245° (B. 27 [2] 593). — II, 1985.
 2) Tetranitroceallinphthalein (B. 11, 1428). — II, 1121.
- $C_{20}H_{10}N_2Br_2$ 1) Dibromphenanthrophenazin. Sm. 286° (M. 11, 340). — IV, 1086.
- $C_{20}H_{11}O_2N_2$ C 73,8 — H 3,4 — O 9,8 — N 12,9 — M. G. 325.
 1) Nitrophenanthrophenazin. Sm. 251° (B. 21, 2306). — IV, 1086.
- $C_{20}H_{11}O_2N$ C 76,7 — H 3,5 — O 15,3 — N 4,5 — M. G. 313.
 1) Dinaphthoresorufin (Oxyketodinaphtoxazin). HCl (B. 28, 358). — IV, 476.
 2) Nitro- β -Binaphtylenoxyd. Sm. 185° (Soc. 59, 1100). — II, 1006.
- $C_{20}H_{11}O_2Cl_2$ 1) Dibenzoesäure d. Trichlor-1,3-Dioxybenzol. Sm. 133° (J. pr [2] 17, 340). — II, 1150.
 2) Dibenzoesäure d. Trichlor-1,4-Dioxybenzol. Sm. 174° (A. 210, 153). — II, 1150.
- $C_{20}H_{11}O_2Br$ 1) 3,4-Methylenäther d. *p*-Brom-2-Keto-1-[3,4-Dioxybenzyliden]- α -Naphthofuran (B. 30, 1470).
- $C_{20}H_{11}O_2Br_3$ 1) Pentabromresorcinphenylacetatein (J. pr. [2] 48, 402). — II, 1123.
- $C_{20}H_{11}O_2N_2$ C 57,0 — H 2,6 — O 30,4 — N 10,0 — M. G. 421.
 1) Dinitrofluoresceingelb. Na₂ (B. 30, 332).
- $C_{20}H_{11}O_2N_2$ C 53,4 — H 2,4 — O 28,5 — N 15,6 — M. G. 449.
 1) *p*-Tetranitro-2,2'-Dinaphtylamin. Sm. 285—286° (B. 17, 198; 20, 2624). — II, 603.
 2) 2,4-Diketo-1-[2,4,6-Trinitrophenyl]-3-Phenyl-1,2,3,4-Tetrahydro-1,3-Benzodiazin. Sm. 237—238° (J. pr. [2] 49, 319).
- $C_{20}H_{11}O_2N_3$ C 53,0 — H 2,4 — O 35,3 — N 9,3 — M. G. 506.
 1) Di[3-Nitrobenzoesäure] d. 4-Nitro-1,3-Dioxybenzol. Sm. 123° (G. 15, 260). — II, 1150.
- $C_{20}H_{11}NBr_4$ 1) Di[*p*-Dibrom-2-Naphtylamin]. Sm. 245—246° (B. 20, 2621). — II, 603.
- $C_{20}H_{11}ON_2$ C 81,1 — H 4,1 — O 5,4 — N 9,4 — M. G. 296.
 1) α -Oxy- $\alpha\beta$ -Naphtazin. Sm. noch nicht bei 380° (B. 29, 2088). — IV, 1084.
 2) Oxy- $\alpha\beta$ -Dinaphtazin (A. 272, 349). — IV, 1084.
 3) Oxyphenanthrophenazin. Sm. oberh. 300° (B. 25, 497). — IV, 1086.
- $C_{20}H_{12}OCl_2$ 1) *p*-Chlor-10-Oxy-9-[*p*-Chlorphenyl]anthracen. Sm. 170° (A. 202, 95). — II, 1094.
 2) 1,1'Dichlor-2,2'-Dinaphtyläther. Sm. 128° (B. 26, 252). — II, 878.
- $C_{20}H_{12}OBr_2$ 1) *p*-Dibrom-1,1'-Dinaphtyläther. Sm. 158° (B. 26, 254). — II, 860.
 2) *p*-Dibrom-2,2'-Dinaphtyläther. Sm. 132°. (+ 3C₆H₆, Sm. 89°) (B. 26, 252). — II, 880.
- $C_{20}H_{12}O_2N_2$ C 76,9 — H 3,8 — O 10,3 — N 9,0 — M. G. 312.
 1) 2,3-Difuranyl-1,4-Naphtisodiazin. Sm. 147° (B. 25, 2844). — IV, 1087.
- $C_{20}H_{12}O_2Cl_2$ 1) Phenolphthaleinchlorid. Sm. 156° (A. 202, 109). — III, 261.
 2) Verbindung (aus Phenolphthalein). Sm. 155—156° (A. 202, 76). — II, 1983.
- $C_{20}H_{12}O_2S$ 1) Verbindung (aus Di[2-Oxy-*p*-Naphtyl]sulfid). Sm. 164° (B. 23, 3358). — II, 986.

- $C_{20}H_{11}O_2S$ 2) Verbindung (aus Di[2-Oxy-?-Naphtyl]sulfid). Sm. 155° (159—160°) (B. 27, 3000, 3448).
C 73,2 — H 3,7 — O 14,6 — N 8,5 — M. G. 328. •
- $C_{20}H_{17}O_3N_2$ 1) Oxychinakridon. Zers. bei 410° (B. 29, 78). — IV, 1087.
2) 3-[2-Naphtyl]azo-2-Oxy-1,4-Naphtochinon. Zers. bei 247—248° (B. 30, 2130). — IV, 1481.
- $C_{20}H_{11}O_2Cl_2$ 1) Anhydro-*p*-Dichlor-*p*-Dioxytriphenylmethan-2-Carbonsäure. Sm. 226—230° (A. 183, 21; 212, 352). — II, 1911.
- $C_{20}H_{11}O_2Br_2$ 1) α ,2-Lakton d. *p*-Dibrom- α -Oxy-*p*-Oxytriphenylmethan-2-Carbonsäure. Sm. 196° (B. 13, 1615). — II, 1910.
- $C_{20}H_{11}O_2Br_4$ 1) Tetrabrommethylaurin. $HBr + 2H_2O$ (M. 3, 472). — II, 1121.
2) Tetrabromrosolsäure. Ag_2 (A. 179, 201; B. 17, 1627). — II, 1122.
C 69,7 — H 3,5 — O 18,6 — N 8,1 — M. G. 347.
- $C_{20}H_{11}O_4N_2$ 1) *p*-Dinitro-1,1'-Binaphtyl. Sm. 280° (B. 19, 2550). — II, 295.
C 64,5 — H 3,2 — O 17,2 — N 15,1 — M. G. 372.
- $C_{20}H_{11}O_4N_4$ 1) Dioxybensodiphenyldipyrasolon. Sm. 150° u. Zers. + 2NH₃, Phenylhydrazinsalz (E. 22, 1201). — IV, 732.
- $C_{20}H_{11}O_4Cl_2$ 1) Dibensoat d. Dichlor-1,3-Dioxybenzol. Sm. 127° (J. pr. [2] 17, 335). — II, 1150.
2) Dibensoat d. 2,3-Dichlor-1,4-Dioxybenzol. Sm. 173—174° (G. 24 [2] 379). — II, 1150.
3) Dibensoat d. 2,5-Dichlor-1,4-Dioxybenzol. Sm. 185° (A. 210, 150). — II, 1150.
4) Dibensoat d. 2,6-Dichlor-1,4-Dioxybenzol. Sm. 105° (B. 16, 1447). — II, 1150.
5) Di[2-Chlorphenylester] d. Benzol-1,2-Dicarbonsäure. Sm. 95° (J. 1887, 1301). — II, 1794.
6) Di[4-Chlorphenylester] d. Benzol-1,4-Dicarbonsäure. Sm. 111° (J. 1887, 1301). — II, 1794.
- $C_{20}H_{11}O_4Br_2$ 1) α ,2'-Lakton d. α -Oxy- α' -[*p*-Dibrom-2,4-Dioxyphenyl]- $\alpha\alpha'$ -Diphenylmethan-2'-Carbonsäure (Dibrombenzolresorcinphtalein). Sm. 219° (B. 14, 1861). — II, 1986.
- $C_{20}H_{11}O_4Br_4$ 1) Tetrabromresorcinphenylacetin. Sm. 236° (J. pr. [2] 48, 400). — II, 1123.
2) *p*-Tetrabrom-*p*-Dioxytriphenylmethan-2-Carbonsäure. Sm. 205° (A. 202, 85). — II, 1911.
- $C_{20}H_{11}O_5N_2$ 1) C 66,7 — H 3,3 — O 22,2 — N 7,8 — M. G. 360.
1) *p*-Dinitro-2,2'-Dinaphtyläther. Sm. 145° (B. 26, 253). — II, 884.
2) Dioxim d. 4,4'-Di[1,2-Naphtochinon]oxyd (B. 30, 2202).
- $C_{20}H_{11}O_5J_2$ 1) Tetrajodphenolphthaleinsäure (B. 28, 1006). — II, 1984.
 $C_{20}H_{11}O_5N_2$ 1) C 63,8 — H 3,2 — O 25,5 — N 7,4 — M. G. 376.
1) *p*-Dinitro-1,3-Dibenzoylbenzol. α -Modif. Sm. 200°; β -Modif. Sm. 100° (B. 13, 322). — III, 304.
2) Lakton d. α -Oxy- α' -[*p*-Dinitrodiphenyl]- α' -Phenylmethan- α '-2-Carbonsäure (Dinitrodiphenylphtalid). 2 isom. Formen (A. 202, 66). — II, 1722.
- $C_{20}H_{12}O_6Cl_2$ 1) Dichlorfluoresceinsäure (A. 238, 357). — II, 2062.
- $C_{20}H_{12}O_6N_2$ 1) C 58,8 — H 2,9 — O 31,4 — N 6,9 — M. G. 408.
1) Dinitrophenolphthalein. Sm. 196° (197°) (B. 27 [2] 593; G. 26 [1] 265). — II, 1985.
- $C_{20}H_{12}O_6N_4$ 1) C 55,0 — H 2,8 — O 29,3 — N 12,8 — M. G. 436.
1) 1,4-Benzochinon-2,5-[*p*]-Di[Nitrosamidobenzol-2-Carbonsäure](Bl.[3] 13, 749). — III, 343.
- $C_{20}H_{12}O_6Br_4$ 1) Tetracetat d. Hexabrom-1,3,1',3'-Tetraoxybiphenyl. Sm. 258° (M. 1, 356). — II, 1037.
- $C_{20}H_{12}O_6S$ 1) Fluoresceinsulfonsäure. Ca₃ (B. 18, 1120). — II, 2065.
2) Fluoresceinsulfat. Sm. 140—150° (A. 183, 27). — II, 2062.
- $C_{20}H_{12}O_6Br_2$ 1) Tetrabrompurpurogallin. Sm. 202—204° (J. 1882, 683). — III, 346.
 $C_{20}H_{12}O_{11}N_2$ 1) C 54,5 — H 2,7 — O 36,4 — N 6,4 — M. G. 440.
1) Dinitrofluoresceinsäure (A. 183, 31). — II, 2064.
- $C_{20}H_{12}O_{11}N_4$ 1) C 48,0 — H 2,4 — O 38,4 — N 11,2 — M. G. 500.
1) Tetranitroresorcinphenylacetin (J. pr. [2] 48, 403). — II, 1123.
- $C_{20}H_{12}O_{11}S_4$ 1) α -Binaphtylenoxydtetrasulfonsäure. Ba₂ + 2H₂O (A. 209, 138). — II, 1005.

- C₂₀H₁₃O₁₃S₄** 2) **2,6-[β]Binaphtylenoxyd-tetrasulfonsäure.** Ba₂ + 2H₂O (Soc. 59, 1068; A. 209, 141). — II, 1006.
- C₂₀H₁₃O₁₃S₃** 1) **Resorcinoxaleinhydrid-trisulfonsäure.** Ba₃, Pb₄, Pb₅ (B. 14, 2569). — II, 937.
- C₂₀H₁₁N₂Br** 1) **Verbindung (aus Oktobrom-p-Tetroliditoly)** (B. 14, 936). — IV, 1035.
- C₂₀H₁₁N₂S₂** 1) **Phthalimidothiophenol.** Sm. 112° (B. 13, 1233). — II, 1809.
- C₂₀H₁₁N₄Cl** 1) **Tetrazodichlorid (aus ?-Diamidobinaphtyl).** + PtCl₄ (B. 18, 3256). — IV, 1073.
- C₂₀H₁₁N₂Cl** 1) **Diazohydrocyan-4-Rosanilinchlorid + 2H₂O** (A. 194, 275). — IV, 1552.
- C₂₀H₁₁Cl₂S₂** 1) **Di[5-Chlor-1-Naphtyl]disulfid.** Sm. 173–174°. — II, 868.
- 2) **Di[8-Chlor-1-Naphtyl]disulfid.** Sm. 110° (B. 23, 963). — II, 868.
- C₂₀H₁₁F₂S₂** 1) **Di[4-Fluor-1-Naphtyl]disulfid.** Sm. 143°. — II, 868.
- C₂₀H₁₁ON** C 84,8 — H 4,6 — O 5,6 — N 4,9 — M. G. 283.
- C₂₀H₁₁O₂N** 1) **Oxy-2-Dinaphtylamin.** Sm. 301° (B. 19, 2244). — II, 886.
- C 80,3 — H 4,3 — O 10,7 — N 4,7 — M. G. 299.
- 1) **p-Nitro-1,1'-Binaphtyl.** Sm. 188° (B. 19, 2550). — II, 295.
- 2) **3-[3,4-Dioxyphenylmethyl-äther]-β-Naphtochinolin (Piperonyl-β-Naphtochinolin).** Sm. 178° (B. 27, 2030).
- 3) **Benzoat d. 9-Oximidofluoren.** Sm. 179° (A. 252, 36). — III, 240.
- 4) **2-Phenyl-α-Naphtochinolin-4-Carbonsäure.** Sm. 300° u. Zers. Na + ½H₂O, Ca + 4H₂O, Zn, Pb, Cu, Ag (A. 249, 110). — IV, 471.
- 5) **3-Phenyl-β-Naphtochinolin-1-Carbonsäure.** Sm. 296° u. Zers. Na + 5H₂O, K + 5H₂O, Ca + 6H₂O, Zn + 2H₂O, Cu + H₂O, Ag (A. 249, 129). — IV, 471.
- 6) **5-Phenylakridin-3-Carbonsäure.** Sm. 252–255°. Ba, Ag (A. 239, 62). — IV, 471.
- 7) **5-Phenylakridin-5'-Carbonsäure.** Na, HCl (A. 224, 45). — IV, 470.
- 8) **Lakton d. α-Oximido-α'-Phenyl-α'-Biphenylmethan-α'-2-Carbonsäure.** Sm. 180° (A. 257, 99). — II, 1726.
- C₂₀H₁₁O₂N₂** C 73,4 — H 4,0 — O 9,8 — N 12,8 — M. G. 327.
- 1) **6-Nitro-2,3-Diphenyl-1,4-Benzdiazin.** Sm. 188° (A. 292, 254). — IV, 1079.
- C₂₀H₁₁O₃N** C 76,2 — H 4,1 — O 15,2 — N 4,4 — M. G. 315.
- 1) **3-[1-Naphtyl]amido-2-Oxy-1,4-Diketo-1,4-Dihydronaphtalin.** Sm. 174° (A. 286, 74). — III, 385.
- 2) **3-[2-Naphtyl]amido-2-Oxy-1,4-Diketo-1,4-Dihydronaphtalin.** Sm. 178° (A. 286, 75). — III, 385.
- 3) **3-[2-Oxyphenyl]-β-Naphtochinolin-1-Carbonsäure.** Sm. 226° (B. 27, 2029). — IV, 471.
- 4) **3-Oxy-5-Phenylakridin-5'-Carbonsäure.** Sm. oberh. 250° (B. 24, 2048). — IV, 471.
- 5) **Phenylamidoformiat d. 1-Oxy-9-Ketofluoren.** Sm. 148–149° (B. 31, 3034).
- C₂₀H₁₁O₄N** C 72,5 — H 3,9 — O 19,3 — N 4,2 — M. G. 331.
- 1) **Imidohydrochinonphtalein.** Sm. noch nicht bei 310° (B. 28, 2961).
- 2) **Lakton d. Acetyldiphenylketipinsäuremononitril.** Sm. 141–142° (A. 282, 57). — II, 2032.
- 3) **Acetat d. Anhydrodiketodihydroindoxim.** Zers. oberh. 180° (A. 277, 370). — III, 276.
- C₂₀H₁₁O₄N₂** C 66,9 — H 3,6 — O 17,8 — N 11,7 — M. G. 359.
- 1) **p-Dinitro-2,2'-Dinaphtylamin.** Sm. 224–225° (B. 17, 197; 20, 2623). — II, 603.
- 2) **2-Carboxyphenylamid d. 5-Keto-5,10-Dihydro-α-Chinochinolin-3-Carbonsäure.** Sm. 336°. Ba (B. 28, 125). — IV, 1020.
- C₂₀H₁₁O₄N₃** C 62,0 — H 3,4 — O 16,5 — N 18,1 — M. G. 387.
- 1) **Verbindung (aus 4-Nitro-1-Amidonaphtalin)** (A. 183, 234). — IV, 1574.
- C₂₀H₁₁O₄Cl** 1) **Dibenzosäure d. p-Chlor-1,3-Dioxybenzol.** Sm. 98° (J. pr. [2] 17, 327). — II, 1150.
- 2) **Benzoat d. 2-Chlor-1,4-Dioxybenzol.** Sm. 130° (A. 210, 142; B. 13, 1428). — II, 1150.
- C₂₀H₁₁O₄N₂** C 64,0 — H 3,5 — O 21,3 — N 11,2 — M. G. 375.
- 1) **p-Dinitro-p-Acetylamidochrysen.** Sm. 160° u. Zers. (B. 24, 952). — II, 643.

- $C_{20}H_{13}O_6N$ C 66,1 — H 3,6 — O 26,4 — N 3,9 — M. G. 363.
 1) 2,6-Diphenylpyridin-2',3,4-Tricarbonsäure. Sm. 250° u. Zers. Ag (A. 249, 119). — IV, 459.
 2) Dibenzolat d. 4-Nitro-1,3-Dioxybenzol. Sm. 107° (111°) (B. 16, 872; G. 15, 271). — II, 1150.
 3) Dibenzolat d. 2-Nitro-1,4-Dioxybenzol. Sm. 140—142° (J. pr. [2] 48, 182). — II, 1150.
- $C_{20}H_{13}O_6N_2$ C 61,4 — H 3,3 — O 24,5 — N 10,7 — M. G. 391.
 1) 3'-Nitro-4-Benzoxylazobenzol-3-Carbonsäure. Sm. oberh. 240° (A. 251, 189). — IV, 1469.
- $C_{20}H_{13}O_7N$ C 59,0 — H 3,2 — O 27,5 — N 10,3 — M. G. 407.
 1) Phenanthrenpikrat. Sm. 144° (A. 166, 363; 167, 137, 180). — II, 267.
- $C_{20}H_{13}O_7N_2$ C 51,8 — H 2,8 — O 24,2 — N 21,2 — M. G. 463.
 1) Trinitroderivat d. Verbindung $C_{20}H_{13}ON_3$. Sm. 363° (B. 26, 1186). — IV, 1225.
- $C_{20}H_{13}O_8Cl$ 1) Verbindungs- (aus 2-Chlor-1-Ketoinden-3-Carbonsäure). Sm. 245° (A. 283, 353).
- $C_{20}H_{13}NS$ 1) α -Thio- β -Dinaphtylamin. Sm. 236°. Pikrat (B. 19, 2241; 21, 2811). — II, 869.
 2) β -Thio- β -Dinaphtylamin. Sm. 280° (u. 307°) (B. 21, 2811). — II, 869.
- $C_{20}H_{13}NS_2$ 1) 2-Imidodinaphtylidisulfid. Sm. 205° (B. 21, 2808). — II, 870.
 2) isom. 2-Imidodinaphtylidisulfid. Sm. 220° (B. 21, 2808). — II, 870.
- $C_{20}H_{13}N_2Cl$ 1) 2,2'-Azonaphtalin-1-Diazochlorid (B. 20, 2901). — IV, 1542.
- $C_{20}H_{14}ON_2$ C 80,5 — H 4,7 — O 5,4 — N 9,4 — M. G. 298.
 1) *p*-Nitroso-1,1'-Dinaphtylamin. Sm. 169° (A. 243, 301). — II, 600.
 2) 1,1'-Dinaphtylnitrosamin. Sm. 260—262° u. Zers. (B. 11, 641). — II, 600.
 3) 2,2'-Dinaphtylnitrosamin. Sm. 139—140° (B. 20, 2621). — II, 603.
 4) Phenylhydrazon d. Phenanthrenchinon. Sm. 165° (B. 16, 1564). — IV, 795.
 5) 1,1'-Asoxynaphtalin (J. 1864, 532). — IV, 1341.
 6) 2-Oxy-1,1'-Azonaphtalin. Sm. 228—229° (B. 31, 1531; Soc. 65, 837). — IV, 1438.
 7) 4-Oxy-1,1'-Azonaphtalin (Soc. 37, 752). — IV, 1438.
 8) 2-Oxy-1,2'-Azonaphtalin. Sm. 176° (B. 19, 1282). — IV, 1438.
 9) 6-Oxy-4-Phenyl-2-[2-Naphtyl]-1,3-Diazin. Sm. 265° (B. 25, 1427). — IV, 1080.
 10) 2-Phenyl-3-Phenylimido-1-Keto-1,3-Dihydroisindol. Sm. 152 bis 153° (B. 13, 420). — II, 1559.
 11) 6-Oxy-2,3-Diphenyl-1,4-Benzdiazin. Sm. 251° (B. 25, 495). — IV, 1079.
 12) 2-Benzoylbenzol-1-Carbonsäurephenylhydrazon. Sm. 180—182° (B. 18, 805). — IV, 698.
- $C_{20}H_{14}OCl_2$ 1) Hydrophenolphthalidinchlorid (?-Chlor-9-[?-Chlorphenyl]-10-Oxy-9,10-Dihydroanthracen). Sm. 56° (A. 202, 97). — II, 1094.
- $C_{20}H_{14}OS$ 1) 1,1'-Dinaphtylsulfoxyd. Sm. 164,5° (162,5°) (B. 17, 2603; 23, 2367; J. pr. [2] 38, 142). — II, 868, 871.
- $C_{20}H_{14}O_2N_2$ C 76,4 — H 4,5 — O 10,2 — N 8,9 — M. G. 314.
 1) 4-Phtalylamido-1-Phenylamidobenzol. Sm. 270° (A. 255, 191). — IV, 595.
 2) β -Phtalyl- $\alpha\alpha$ -Diphenylhydrazin. Sm. 154—155° (J. pr. [2] 35, 271). — IV, 710.
 3) 1-[2-Naphtyl]azo-2,7-Dioxyaphtalin. Sm. 202° (B. 23, 524). — IV, 1450.
 4) 2-Benzoyl-3-Keto-1-Phenyl-2,3-Dihydroindazol. Sm. 89° (B. 32, 789).
 5) 2,4-Diketo-1,3-Diphenyl-1,2,3,4-Tetrahydro-1,3-Benzdiazin. Sm. 234—235° (J. pr. [2] 40, 319).
 6) Acetat d. *p*-Oxy-2,3'-Bichinolyl. Sm. 156—157° (M. 7, 316). — IV, 1068.
 7) 9-Phenylhydrazonfluoren-4-Carbonsäure. Sm. 205° (A. 247, 281). — IV, 699.
 8) Phenylamidoimid d. Biphenyl-2,2'-Dicarbonsäure. Sm. 150° (A. 247, 274). — IV, 712.

- C₂₀H₁₁O₂N₁** C 70,2 — H 4,1 — O 9,3 — N 16,4 — M. G. 342.
 1) 1,5-Di[Phenylamido]benzodioxazol. Sm. oberh. 270° u. Zers. Pikrat (B. 22, 3239). — II, 530.
- C₂₀H₁₄O₂Cl₂** 1) Dichlortriphenylmethan-2-Carbonsäure. Sm. 205–206° (A. 202, 84). — II, 1481.
- C₂₀H₁₄O₄S** 1) Di[2-Oxy-*p*-Naphtyl]sulfid. Sm. 152°. Pb (B. 27, 3000).
 2) Di[2-Oxy-*p*-Naphtyl]sulfid. Sm. 215° (211°). Na₂ + 6H₂O, Pb (G. 17, 94; B. 21, 261, 3559; 23, 3356; 27, 2996, 2998). — II, 985.
 3) 1,1'-Dinaphtylsulfon. Sm. 187° (123°) (A. 28, 39; 100, 216; B. 9, 683; 23, 2368; J. pr. [2] 41, 218). — II, 868.
 4) 1,2'-Dinaphtylsulfon. Sm. 122,5–123° (B. 23, 2369). — II, 887.
 5) 2,2'-Dinaphtylsulfon. Sm. 177°; Sd. 245° (B. 9, 684; 23, 2366; 29, 1327; Bl. 25, 25). — II, 887.
- C₂₀H₁₄O₂S₂** 1) Di[2-Oxy-*p*-Naphtyl]disulfid. Sm. 169° (166°). Pb (B. 21, 262; 23, 3363; 27, 2998). — II, 986.
 2) 1,1'-Dinaphtyldisulfoxyd. Sm. 104–106° (J. pr. [2] 47, 97). — II, 871.
 3) 2,2'-Dinaphtyldisulfoxyd. Sm. 106–108° (J. pr. [2] 47, 97). — II, 887.
- C₂₀H₁₄O₂S₃** 1) Di[1-Oxy-*p*-Naphtyl]trisulfid. Zers. bei 190° (B. 23, 3368). — II, 986.
- C₂₀H₁₄O₂S₄** 1) Di[2-Oxy-*p*-Naphtyl]tetrasulfid. Sm. 141°. Pb (B. 27, 2997).
- C₂₀H₁₄O₂Hg** 1) Verbindung (aus 2-Oxynaphtalin u. HgCl₂) (Bl. [3] 11, 265).
- C₂₀H₁₄O₂Se** 1) Di[2-Oxynaphtyl]selenid. Sm. 186° (B. 30, 2825).
- C₂₀H₁₄O₄N₂** C 72,7 — H 4,2 — O 14,5 — N 8,5 — M. G. 330.
 1) 4-Nitroso-1-Dibenzoylamidobenzol. Sm. 142° (A. 286, 153).
 2) 2,7-Diamidofluoran. Sm. 280–282° (B. 31, 1742).
 3) Acetylsafrol. Sm. 265–268° (B. 30, 401). — IV, 1003.
 4) Inneres Anhydrid d. 2-[3,4-Dimethoxyphenyl]- α oder β -Naphtimidazol-2'-Carbonsäure. Sm. 191–192° (B. 25, 1896). — IV, 1066.
 5) Nitril d. Acetyldiphenylketipinsäure. Sm. 208–209,5°. Na + 3H₂O, Ag (A. 282, 54). — II, 2032.
 6) Acetylphenylamidoimid d. Naphtalin-1,8-Dicarbonsäure. Sm. 230° (B. 28, 363). — IV, 712.
- C₂₀H₁₄O₂Br₂** 1) *p*-Tetrabrom- α -[Dioxydiphenyl]- α -[Oxy-*p*-Methylphenyl]methan (A. 179, 28). — II, 1028.
- C₂₀H₁₄O₂S** 1) 2,2'-Binaphtyl- α -Sulfonsäure (J. 1877, 391). — II, 296.
 2) 2,2'-Binaphtyl- β -Sulfonsäure. Ca + 2H₂O, Ba + 2H₂O (J. 1877, 391; Soc. 39, 551). — II, 296.
- C₂₀H₁₄O₄N₂** C 69,4 — H 4,0 — O 18,5 — N 8,1 — M. G. 346.
 1) *p*-Nitro-2-[1,2-Phtalyl]methyl-6,8-Dimethylchinolin (Nitro- α -*p*-Dimethylchinophtalon) (B. 28, 1512). — IV, 459.
 2) *N*-Diacetyldindigo (B. 24, 4130). — II, 1621.
 3) Diacetat d. 5,6-Dioxy- α - β -Naphtophenazin (D. d. α - β -Oxynaphteurhodol) Sm. 208° (A. 288, 78). — IV, 1058.
- C₂₀H₁₄O₄N₄** C 64,2 — H 3,7 — O 17,1 — N 15,0 — M. G. 374.
 1) 1,2-Di[4-Nitrobenzyliden]amidobenzol. Sm. 222° (B. 27, 2191). — IV, 563.
 2) 5,*p*-Dinitro-2-Phenyl-1-[4-Methylphenyl]benzimidazol. Sm. 192° (Bl. [3] 17, 872). — IV, 562.
 3) 5-Nitro-1-[4-Methylphenyl]-2-[3-Nitrophenyl]benzimidazol. Sm. 213–215° (Bl. [3] 19, 519). — IV, 1008.
 4) 5-Nitro-1-[4-Methylphenyl]-2-[4-Nitrophenyl]benzimidazol. Sm. 250° (Bl. [3] 17, 1030). — IV, 1008.
 5) 1-[4-Nitrobenzyl]-2-[4-Nitrophenyl]benzimidazol. Sm. 212,5° (B. 27, 2192). — IV, 1006.
 6) *p*-Diphenylazobenzol-1,4-Dicarbonsäure. Sm. oberh. 250°. Ag₂ (B. 24, 2694). — IV, 1475.
- C₂₀H₁₄O₄Cl₂** 1) Dibenzyläther d. 3,6-Dichlor-2,5-Dioxy-1,4-Benzochinon. Sm. 142° (Am. 18, 12). — III, 351.
- C₂₀H₁₄O₅N₄** C 61,5 — H 3,6 — O 20,5 — N 14,4 — M. G. 390.
 1) β -[2,4-Dinitrophenylhydrason]- α -Keto- α - β -Diphenyläthan. Sm. 183 bis 184° (G. 21 [1] 571). — IV, 784.
- C₂₀H₁₄O₅N₂** C 57,4 — H 3,3 — O 19,1 — N 20,1 — M. G. 418.
 1) Dinitroderivat d. Verb. C₂₀H₁₀ON₄. Sm. 253° (B. 26, 1186). — IV, 1225.

- C₂₀H₁₄O₆N₂** C 63,5 — H 3,7 — O 25,4 — N 7,4 — M. G. 378.
 1) 1,4-Benzochinondi[Amidobenzol-2-Carbonsäure]. K₂ + 2H₂O (*Bt.* [3] 13, 746; [3] 15, 1025). — III, 343.
 2) 1,4-Benzochinondi[Amidobenzol-3-Carbonsäure] (*Bt.* [3] 15, 1027).
 3) 1,4-Benzochinondi[Amidobenzol-4-Carbonsäure] (*Bt.* [3] 15, 1027).
 4) Base (aus Tarkonin). 4 + 3HBr, H₂SO₄ (Soc. 32, 535). — III, 921.
- C₂₀H₁₄O₆N₄** C 59,1 — H 3,4 — O 23,6 — N 13,8 — M. G. 406.
 1) *p*-Dinitro-1,4-Di[Formylphenylamido]benzol. Sm. 215° (*B.* 25, 2722). — IV, 588.
 2) Anthracen + 2,4,6-Trinitro-1-Amidobenzol. Sm. 165–170° (*B.* 8, 378). — II, 319.
 3) Di[2-Nitrophenylamid] d. Benzol-1,2-Dicarbonsäure. Sm. 180–184° (*B.* 28, 1120). — II, 1807.
 4) Di[4-Nitrophenylamid] d. Benzol-1,2-Dicarbonsäure. Sm. 232–234° (*B.* 28, 1120). — II, 1808.
- C₂₀H₁₄O₈S** 1) 4-Methylsulfonylfluorescein + H₂O (*Am.* 17, 563). — III, 212.
 2) 2-[*p*-Sulfonylbenzoyl]benzol-1-Carbonsäure. Ba + 2H₂O (*J. pr.* [2] 41, 146). — II, 1726.
- C₂₀H₁₄O₈S₂** 1) 2,2'-Binaphthyl- α -Disulfonsäure. Ba (Soc. 39, 553). — II, 296.
 2) 2,2'-Binaphthyl- β -Disulfonsäure. Ba (Soc. 39, 553). — II, 296.
- C₂₀H₁₄O₈S₄** 1) 1,1'-Dinaphthyldisulfid-*p*-Disulfonsäure. K₂ (*J. pr.* [2] 41, 219). — II, 875.
 2) 2,2'-Dinaphthyldisulfid-*p*-Disulfonsäure. K₂ (*J. pr.* [2] 41, 223). — II, 892.
- C₂₀H₁₄O₈Br₂** 1) Diacetat d. Dibrombrasilin + 1 $\frac{1}{2}$ H₂O (*B.* 23, 1428). — III, 655.
C₂₀H₁₄O₈S₂ 1) 2,2'-Dinaphthyläther-6,6'-Disulfonsäure. K₂ (*B.* 14, 1482). — II, 891.
 2) 6-Sulfo-2-Naphtylester d. 2-Oxynaphtalin-6-Sulfonsäure. K (*B.* 14, 1481). — II, 890.
- C₂₀H₁₄O₈Br** 1) Tetracetat d. *p*-Tetrabrom-*p*-Tetraoxybiphenyl. Sm. 195° (*M.* 1, 353). — II, 1037.
- C₂₀H₁₄O₁₀Br** 1) Tetrabromhemlockgerbsäure (*B.* 17, 1041). — III, 684.
- C₂₀H₁₄O₁₂S₂** 1) 2,2'-Binaphthyltetrasulfonsäure. Pb₂ + 6H₂O (Soc. 39, 553). — II, 296.
- C₂₀H₁₄NJ** 1) Jodmethylat d. meso-Phenylcarbazokridin (*G.* 20, 409). — IV, 472.
 2) Jodmethylat d. Pyrenolin. Sm. 212° (*M.* 8, 447). — IV, 472.
- C₂₀H₁₄N₂Br** 1) $\alpha\beta$ -Dibrom- α -[2-Chinoly]- β -[6-Chinoly]äthan. Sm. noch nicht bei 300° (*B.* 22, 288). — IV, 1074.
- C₂₀H₁₅ON** C 84,2 — H 5,3 — O 5,6 — N 4,9 — M. G. 285.
 1) β -Phenylimido- α -Keto- α - β -Diphenyläthan (Anilbenzil). Sm. 105° (*M.* 9, 687; *J. pr.* [2] 34, 24). — III, 284.
 2) Acetylamidochrysen. Sm. 285° (*B.* 24, 951). — II, 643.
 3) 9-Keto-10-Benzyl-9,10-Dihydrophenanthridin. Sm. 115° (112,5°) (*B.* 26, 1967; *A.* 276, 253). — IV, 408.
 4) 3-[2-Methoxyphenyl]- β -Naphthochinolin. Sm. 184° (*B.* 27, 2029).
- C₂₀H₁₅ON₃** C 76,7 — H 4,8 — O 5,1 — N 13,4 — M. G. 313.
 1) Carbonyltriphenylguanidin. Sm. 134°. + H₂O (Sm. 141°) (*B.* 14, 2181). — II, 351.
 2) isom. Carbonyltriphenylguanidin. HCl, HNO₃ (*J. pr.* [2] 32, 23). — II, 351.
 3) 2-Phenylimido-3,5-Diphenyl-2,3-Dihydro-1,3,4-Oxiazol. HCl (Sm. 106°) (*B.* 26, 2872). — IV, 675.
 4) 6-Phenylformylamido-1-Phenylbenzimidazol. Sm. 124° (*A.* 286, 179). — IV, 1147.
 5) 5- oder 6-Benzoylamido-2-Phenylbenzimidazol + H₂O. Sm. 125 bis 214°(?). HCl (*B.* 14, 2653). — IV, 1180.
 6) 2-Phenylimido-4-Keto-3-Phenyl-1,2,3,4-Tetrahydro-1,3-Benzdiazin. Sm. 163° (*B.* 30, 1093, 1082, 1087; *Am.* 21, 143). — IV, 1158.
 7) 1-Nitroso-2,3-Diphenyl-1,2-Dihydro-1,4-Benzdiazin (Nitrosodiphenyldihydrochinoxalin). Sm. 138° (*B.* 27, 2182). — IV, 1074.
 8) 8-Keto-7-Phenyl-5-[4-Methylphenyl]-7,8-Dihydro-1,6,7-Benstriazin. Sm. 247°. (2HCl, PtCl₂) (*M.* 18, 456). — IV, 799.
 9) *N*-Aethyltriphenasinoxazin. Sm. 229° (*B.* 31, 499). — IV, 1213.
 10) Acetylposafranin. HCl (*B.* 21, 1590; *J. r.* 29, 542). — IV, 1177.
- C₂₀H₁₆OCl** 1) α -Chlor- β -Keto- $\alpha\alpha\beta$ -Triphenyläthan. Fl. (C. 1897 [2] 661).

- C₂₀H₁₁OBr** 1) *α*-Brom-*γ*-Keto-*ααβ*-Triphenyläthan. Sm. 97° (Bl. [3] 13, 861; C. 1897 [2] 661). — III, 258.
- C₂₀H₁₂O₂N** C 79,7 — H 5,0 — O 10,6 — N 4,6 — M. G. 301.
- 1) 2-Benzoylamidodiphenylketon. Sm. 80,5° (B. 25, 3090). — III, 182.
- 2) 4-Benzoylamidodiphenylketon. Sm. 152° (Soc. 41, 133; A. 210, 271; B. 14, 1438). — III, 184.
- 3) 3-Benzoyl-1-[*α*-Oximidobenzyl]benzol. Sm. 201° (B. 19, 146). — III, 304.
- 4) 4-Benzoyl-1-[*α*-Oximidobenzyl]benzol. Sm. 212–213° (B. 19, 147). — III, 305.
- 5) 2-Keto-3,3-Diphenyl-5-[2-Pyrryl]furan (Anhydro-*αα*-Diphenyl-*β*-Pyrrylpropionsäure). Sm. 184° (B. 23, 1355). — IV, 90.
- 6) 2-[1,2-Phtalyl]methyl-6,8-Dimethylchinolin (o-p-Dimethylchinophthalon). Sm. 282° (B. 28, 1512). — IV, 459.
- 7) 4-Diphenylmethylenamidobenzol-1-Carbonsäure. Sm. 240° (B. 24, 3522). — III, 188.
- 8) 5-Phenyl-*p*-Dihydroakridin-5¹-Carbonsäure. Sm. 160–165° u. Zers. (A. 224, 49). — IV, 471.
- 9) Phenylimid d. Benzolcarbonsäure. Sm. 161° (155°) u. 136° (J. 1856, 501; A. 178, 235; B. 6, 176; 26, 2852; Soc. 41, 133; Am. 19, 153). — II, 1171.
- C₂₁H₁₁O₂N₂** C 73,0 — H 4,5 — O 9,7 — N 12,8 — M. G. 329.
- 1) 6-Phenylhydrazon-5-Oxy-3-Methyl-1-Phenylbenzoxazol. Sm. 169 bis 170°. HCl (M 19, 500). — IV, 1448.
- 2) 1-[4-Methylphenyl]-2-[4-Nitrophenyl]benzimidazol. Sm. 176° (Bl. [3] 17, 1029). — IV, 1008.
- 3) 5-Nitro-2-Phenyl-1-[2-Methylphenyl]benzimidazol. Sm. 172–173° (Bl. [3] 17, 869). — IV, 562.
- 4) 5-Nitro-2-Phenyl-1-[4-Methylphenyl]benzimidazol. Sm. 177–178° (Bl. [3] 17, 869). — IV, 562.
- 5) Acetylsafuraninon (Acetylamidobenzolindon). Sm. oberh. 280° (B. 30, 400). — IV, 1179.
- 6) Acetat d. 3-Oxy-5-Phenyl-1-[2-Naphtyl]-1,2,4-Triazol. Sm. 142 bis 143° (Soc. 73, 371). — IV, 1158.
- C₂₀H₁₁O₄P** 1) Di[1-Naphtyl]phosphinsäure. Sm. 202–204° (H. 11, 1502). — IV, 1681.
- C₂₀H₁₁O₂N** C 75,7 — H 4,7 — O 15,1 — N 4,4 — M. G. 317.
- 1) 2-Keto-3,3-Di[*p*-Oxyphenyl]-2,3-Dihydroindol (Phenolisatin). Sm. 220° (B. 18, 2641). — II, 1618.
- 2) 1-Keto-2,3-Di[4-Oxyphenyl]-1,3-Dihydroisindol. Sm. 252–256° (B. 26, 176; M. 17, 436; 20, 363). — II, 1986.
- 3) 1-Keto-3,3-Di[4-Oxyphenyl]-1,3-Dihydroisindol (Imidophenolphthalin). Sm. 262° u. Zers. (G. 24 [1] 71). — II, 1985.
- 4) 3-[2-Naphtylamido]-2-Oxy-1,4-Diketo-1,2,3,4-Tetrahydronaphtalin (A. 286, 73). — III, 382.
- 5) Benzoesat d. 2-Benzoylamido-1-Oxybenzol. Sm. 182° (176°) (A. 210, 387; B. 16, 1828). — II, 1176.
- 6) Benzoesat d. 3-Benzoylamido-1-Oxybenzol. Sm. 153° (Am. 15, 43). — II, 1177.
- 7) Benzoesat d. 4-Benzoylamido-1-Oxybenzol. Sm. 231° (234°) (B. 9, 1529; 27, 3358; 29, 1484). — II, 1177.
- 8) Benzoesat d. Benzoylphenylhydroxylamin. Sm. 118–119° (J. pr. [2] 56, 87).
- 9) Diphenylmonamid d. Benzol-1,2-Dicarbonensäure (Diphenylphthalamid-säure). Sm. 147–148°. Ag (A. 227, 190). — II, 1797.
- 10) Verbindung (aus Phenolphthalidin). Sm. bei 260° (A. 202, 120). — III, 261.
- C₂₁H₁₂O₂N₂** C 69,6 — H 4,3 — O 13,9 — N 12,2 — M. G. 345.
- 1) *α*-Benzoyl-*α*-Phenyl-*β*-[2-Nitrobenzyliden]hydrazin. Sm. 166–167° (J. pr. [2] 53, 462). — IV, 752.
- 2) *α*-Benzoyl-*α*-Phenyl-*β*-[3-Nitrobenzyliden]hydrazin. Sm. 197° (J. pr. [2] 53, 457). — IV, 752.
- 3) *α*-Benzoyl-*α*-Phenyl-*β*-[4-Nitrobenzyliden]hydrazin. Sm. 169° (J. pr. [2] 53, 459). — IV, 752.

- C₂₀H₁₅O₃N₃** 4) β -[3-Nitrophenylhydrason]- α -Keto- $\alpha\beta$ -Diphenyläthan. Sm. 158° (B. 22, 2814). — IV, 784.
- 5) Verbindung (aus 1,5-Diamidonaphtalin) (Z. 1865, 558). — IV, 1541.
- C₂₀H₁₅O₃N₂** C 64,3 — H 4,0 — O 12,9 — N 18,8 — M. G. 373.
- 1) Mononitroderivat d. Verb. C₂₀H₁₅ON₂. Sm. 197,5°; S-l. 272° u. Zers. (B. 26, 1184). — IV, 1225.
- C₂₀H₁₅O₃Cl** 1) Verbindung (aus Phenanthroxylenacetessigsäureäthylester). Sm. 145 bis 146° (Soc. 59, 22). — II, 1908.
- C₂₀H₁₅O₃Br** 1) Äthyläther d. 2-Brom-*p*-Oxy-1,1'-Diketo-2,3-Dihydro-2,2'-Biinden. Sm. 173—174° u. Zers. (Soc. 71, 247).
- C₂₀H₁₅O₃Br₂** 1) Tri[4-Bromphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 132—133° (B. 24, 3680). — II, 672.
- C₂₀H₁₅O₄N** C 72,1 — H 4,5 — O 19,2 — N 4,2 — M. G. 333.
- 1) Sanguinarin + H₂O. Sm. 213°. HCl + H₂O, (2 HCl, PtCl₄), (HCl, AuCl₃), HNO₃ + H₂O (Berz. J. 9, 221; J. 1855, 566; Z. 1870, 119; A. 43, 233; Soc. 56, 62). — III, 805.
- 2) Phenolphthaleinoxim. Sm. 212° u. Zers. HCl (B. 26, 174). — II, 1985.
- 3) Phenylester d. 2-[Phenylamidoformyl]oxybenzol-1-Carbonsäure. Sm. 241° (B. 26, 1466). — II, 1496.
- 4) Acetat d. *p*-Oxy-*p*-Phenyl-1,4-Naphtochinonacetylimid. Sm. 200 bis 201° (A. 326, 39). — III, 460.
- 5) Phenyl-3-Oxyphenylmonamid d. Benzol-1,2-Dicarbonensäure. Sm. 191—192°. Ag (B. 31, 1331).
- 6) Phenyl-4-Oxyphenylmonamid d. Benzol-1,2-Dicarbonensäure. Sm. 191—192°. Cu + 4H₂O, Ag + 3 $\frac{1}{2}$ H₂O (B. 31, 1329).
- C₂₀H₁₅O₄N₂** C 66,5 — H 4,1 — O 17,7 — N 11,6 — M. G. 361.
- 1) *p*-Nitro-1,3-Di[Benzoylamido]benzol. Sm. 222° (235—236°) (B. 14, 2653; A. 273, 351). — IV, 578.
- 2) $\alpha\beta$ -Dibenzoyl- α -[3-Nitrophenyl]hydrasin. Sm. 153° (B. 22, 2811). — IV, 670.
- C₂₀H₁₅O₄N₃** C 61,6 — H 3,9 — O 16,4 — N 18,0 — M. G. 389.
- 1) III-3-Nitroformazylbenzol-II-3-Carbonsäure. Sm. 185° (B. 31, 1756). — IV, 1261.
- C₂₀H₁₅O₄P** 1) 2,2'-Dinaphtylester d. Phosphorsäure. Sm. 142° (147—148°) (B. 27, 2865; 30, 2377). — II, 877.
- C₂₀H₁₅O₅N₂** C 63,7 — H 4,0 — O 21,2 — N 11,1 — M. G. 377.
- 1) *p*-Nitro-2,4-Di[Benzoylamido]-1-Oxybenzol. Sm. 167—170° (A. 205, 70). — II, 1178.
- 2) *p*-Nitro-2,6-Di[Benzoylamido]-1-Oxybenzol. Sm. 201—202° (A. 205, 84). — II, 1178.
- 3) 4'-Benzoat-3'-Methyläther d. 3-Nitro-3',4'-Dioxyazobenzol. Sm. 135—136° (Soc. 69, 1333). — IV, 1441.
- 4) Dinitroderivat d. Phenyl[*p*-Methylphenyl]amid d. Benzolcarbonensäure (A. 132, 293). — II, 1165.
- C₂₀H₁₅O₅Br** 1) Diacetat d. 6-Brom-1-Keto-2-[3,4-Dioxybenzyliden]-2,3-Dihydroinden. Sm. 153° (B. 31, 724).
- C₂₀H₁₅O₅N** C 65,8 — H 4,1 — O 26,3 — N 3,8 — M. G. 365.
- 1) Acetat d. 1-Diacetylamido-2-Oxy-9,10-Anthrachinon. Sm. 181° (B. 28, 1423). — III, 420.
- C₂₀H₁₅O₅Br** 1) Brompteroecarpin (A. ch. [6] 17, 127). — III, 672.
- C₂₀H₁₅O₅N** C 63,0 — H 3,9 — O 29,4 — N 3,7 — M. G. 381.
- 1) Verbindung (aus d. Methyläther d. 7-Amido-6-Oxy-1,2-Benzpyron) (G. 27 [2] 353).
- C₂₀H₁₅O₅N** C 60,5 — H 3,8 — O 32,2 — N 3,5 — M. G. 397.
- 1) Berilsäure. Sm. 198—200° u. Zers. Ag (Soc. 57, 1091). — III, 803.
- C₂₀H₁₅O₅N₂** C 54,4 — H 3,4 — O 32,6 — N 9,5 — M. G. 441.
- 1) Tri[2-Nitrophenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 167—168° (B. 24, 3680). — II, 680.
- 2) Verbindung (aus Azoopiensäure). Sm. noch nicht bei 280° (J. pr. [2] 55, 184).
- C₂₀H₁₅NS** 1) α -Rhodantriphenylmethan. Sm. 137° (B. 17, 700). — II, 1089.
- C₂₀H₁₅N₂S** 1) 1-Phenylamidophenylimidomethylbenzthiasol. Sm. 129°. (2 HCl, 2 AuCl₃) (B. 20, 2255). — II, 799.

- $C_{20}H_{15}N_5S$ 2) Verbindung (aus Anilindodiphenylthioiazolin). Sm. oberh. 280° u. Zers. (*B.* 30, 853). — IV, 686.
- $C_{20}H_{15}N_5S$ 1) 2-Phenylimido-5-Phenylazo-3-Phenyl-2,3-Dihydro-1,3,4-Thio-diazol. Sm. $180-181^\circ$ (*B.* 26, 2874). — IV, 687.
- $C_{20}H_{15}N_6Cl$ 1) Diazoleukanilinchlorid. + $3AuCl_3 + H_2O$ (*A.* 194, 281). — IV, 1544.
- $C_{20}H_{15}ON_2$ C 80,0 — H 5,3 — O 5,3 — N 9,3 — M. G. 300.
- 1) α -Oximido- β -Phenylimido- α - β -Diphenyläthan (Benziloximanil). Sm. 211 bis 212° (*B.* 25, 2597; 26, 794). — III, 290.
- 2) α -Phenylimido- α -Benzoylamidophenylmethan (Phenylbenzoylbenzamidin). Sm. 143° (*A.* 296, 286; *Am.* 20, 573). — IV, 648.
- 3) 4-Benzylidenhydrazidodiphenylketon. Sm. 188° (*Soc.* 55, 615). — III, 186.
- 4) α -Benzoyl- β -Diphenylmethylenhydrazin. Sm. $116,5^\circ$ (*J. pr.* [2] 44, 197). — III, 187.
- 5) α -Benzoyl- α -Phenyl- β -Benzylidenhydrazin. Sm. 122° (114°) (*B.* 20, 1717; *J. pr.* [2] 53, 463). — IV, 750.
- 6) Phenylhydrason d. Acetyldiphenylenoxyd. Sm. $132-133^\circ$ u. Zers. (*A.* 264, 191). — IV, 777.
- 7) β -Phenylhydrason- α -Keto- α - β -Diphenyläthan. Sm. 134° ($128-129^\circ$) (*A.* 236, 197; *B.* 26, 793). — IV, 784.
- 8) β -Phenylazo- α -Keto- α - β -Diphenyläthan (Benzolazodesoxybenzoin). Sm. 159° (*J. pr.* [2] 55, 319). — IV, 1479.
- 9) 3-Keto-2- $[\beta$ -Phenyläthenyl]-1,2,3,4-Tetrahydro-1,4-Benzodiazin. Sm. 174° (*B.* 25, 955). — IV, 1075.
- $C_{20}H_{15}ON_4$ C 73,2 — H 4,8 — O 4,8 — N 17,1 — M. G. 328.
- 1) β -Phenylazo- β -Phenylhydrason- α -Keto- α -Phenyläthan (Formazylphenylketon). Sm. $141-142^\circ$. Na, Ag (*B.* 26, 2787). — IV, 1230.
- 2) 2,2'-Diamido-1,1'-Azoxynaphtalin. Sm. $121-122^\circ$ (*A.* 255, 160). — IV, 1341.
- 3) 8,8'-Dimethyl-5,5'-Azoxychinolin. Sm. 201° (*B.* 23, 3679). — IV, 1345.
- 4) Verbindung (aus d. Verb. $C_{20}H_{15}O_4N_4$). Sm. 161° . Pikrat (*B.* 26, 1185). — IV, 1224.
- $C_{20}H_{15}O_4N_2$ C 75,9 — H 5,1 — O 10,1 — N 8,9 — M. G. 316.
- 1) α -Di-[2-Acetylamidophenyl]butadiin. Sm. 231° (*B.* 15, 61). — IV, 1039.
- 2) p -Diamido-1,3-Dibenzoylbenzol. 2 Modif.; β Modif. Zers. bei 70° (*B.* 13, 322). — III, 304.
- 3) 1,2-Di-Benzoylamido]benzol. Sm. 301° (*B.* 23, 1878; *A.* 254, 254; 273, 346). — IV, 662.
- 4) 1,3-Di-Benzoylamido]benzol. Sm. 240° (*B.* 14, 2652; *A.* 293, 385). — IV, 578.
- 5) 1,4-Di-Benzoylamido]benzol. Sm. oberh. 300° (*A.* 254, 254). — IV, 594.
- 6) 1,4-Di[Formylphenylamido]benzol. Sm. 168° (*B.* 25, 2722). — IV, 588.
- 7) β -Phenylnitrosamido- α -Keto- α - β -Diphenyläthan. Sm. 140° u. Zers. (*J. pr.* [2] 34, 7). — III, 220.
- 8) 2-[4-Nitrobenzyliden]amidodiphenylmethan. Sm. 105° (*B.* 27, 2787). — III, 31.
- 9) 4,4'-Diamido-1,1'-Dioxy-2,2'-Binaphtyl. $2HCl + 3H_2O$, ($2HCl, SnCl_4$) (*B.* 30, 2662).
- 10) 1,3-Di[α -Oximidobenzyl]benzol. Sm. $70-75^\circ$ (*B.* 19, 1849). — III, 304.
- 11) 1,4-Di[α -Oximidobenzyl]benzol. Sm. 235° (*B.* 19, 1847). — III, 305.
- 12) α - β -Dibenzoyl- α -Phenylhydrasin. Sm. $177-178^\circ$. Na (*A.* 190, 128; *B.* 18, 1740; 20, 46, 1713). — IV, 669.
- 13) Benzoesat d. 4-Oxy-3-Methylazobenzol. Sm. $110-111^\circ$ (*B.* 17, 364). — IV, 1420.
- 14) Benzoesat d. 6-Oxy-3-Methylazobenzol. Sm. 113° (*B.* 17, 353). — IV, 1420.
- 15) 6-Methyläther d. 6-Oxy-2-[2-Oxyphenyl]-1-Phenylbenzimidazol. Sm. 123° (*B.* 29, 2682).
- 16) 2-Phthalyl-4-Methyl-5,6-Dihydro-peri-Chinolinazol (*B.* 24, 2052). — IV, 862.
- 17) Äthyläther d. Safranöl. Sm. 265° u. Zers. (*A.* 286, 212; *B.* 30, 401). — IV, 1003.
- 18) 2,2'-Dioxy-4,4'-Dimethyl-6,6'-Bichinolyli. Sm. oberh. 300° (*M.* 10, 705).

- $C_{20}H_{15}O_7N$, 19) Phenylamidoformiat d. α -Oximidodiphenylmethan. Sm. 176° (B. 22, 3108). — III, 189.
- 20) 1-Diphenylhydrazonmethylbenzol-2-Carbonsäure. Sm. 187°. Ca (B. 24, 2349). — IV, 696.
- 21) 3-Phenyl- α -Naphtimidazol-2-[Aethyl- β -Carbonsäure]. Sm. 180–181°. Ag, HCl, Pkrat (B. 27, 2774). — IV, 997.
- 22) Dimidophenylphtalein. Sm. 265–266° (A. 202, 112; G. 24 (1 75). — II, 1985.
- 23) Lakton d. α -Oxy- α' - β -Diamidodiphenyl- α' -Phenylmethan- α' -2-Carbonsäure (Diamidodiphenylphtalid). 2 isom. Formen. 1) Sm. 179–180°; 2) Sm. 205° (A. 202, 66, 67). — II, 1722.
- 24) Lakton d. 1- α' - β -Diphenylhydrazido]oxymethylbenzol-2-Carbonsäure (Phtalidylhydrazobenzol). Sm. 202–203° u. Zers. (B. 24, 2350). — IV, 696.
- 25) Oximbenzoesat d. Benzoylphenylamidoxim. Sm. 116° (B. 19, 1670). — II, 1208.
- 26) β -[1-Naphtyl]amidoäthylimid d. Benzol-1,2-Dicarbonsäure. Sm. 158° (B. 24, 2198). — II, 1800.
- 27) β -[2-Naphtyl]amidoäthylimid d. Benzol-1,2-Dicarbonsäure. Sm. 141° (B. 24, 2199). — II, 1800.
- 28) Di-Phenylamid] d. Benzol-1,2-Dicarbonsäure. Sm. 231° u. Zers. (251 bis 252°) (B. 30, 1442; R. 15, 345 Aum.).
- 29) Di-Phenylamid] d. Benzol-1,3-Dicarbonsäure. Sm. 250° (C. 1895 (2) 217).
- $C_{20}H_{15}O_7N_2$
- 1) C 69,8 — H 4,6 — O 9,3 — N 16,3 — M. G. 344.
- 2) Dichinolinohydrobenzol. Zers. oberh. 300° (B. 17, 2055). — IV, 723.
- 3) Pyrasolblau (A. 238, 171; B. 25, 765). — IV, 1271.
- 4) Formazylbenzol-II-3-Carbonsäure. Sm. 202° (B. 31, 1755). — IV, 1261.
- 5) Acetat d. 4-Oxy-1,3-Di-Diphenylazo]benzol. Sm. 146° (B. 17, 369; 25, 1334). — IV, 1416.
- 6) Diacetylderivat d. Base $C_{14}H_{11}N_2$ (aus d. Verb. $C_{14}H_{11}O_2N_2$). Sm. 176 bis 177° (A. 255, 333). — IV, 1171.
- $C_{20}H_{15}O_7Br$, 1) α -[2,3,5-Hexabrom- γ -Diketo- β -Diphenyl]oktan. Sm. 190–191° (B. 29, 2126).
- $C_{20}H_{15}O_8S$, 1) 3,4-Methylenäther-1,1-Diphenyläther d. 3,4-Dioxy-1-Dimerkaptomethylbenzol. Sm. 48° (S. 18, 886). — III, 102.
- 2) α -Dimerkaptophenylsindiphenyläthersäure. Sm. 143°. $K+11H_2O$ (K. 18, 84; 19, 1789). — II, 1529.
- $C_{20}H_{15}O_8N_2$
- 1) C 72,3 — H 4,8 — O 14,3 — N 8,4 — M. G. 352.
- 2) 2,4-Di-Benzoylamido-1-Oxybenzol. Sm. 187–188° (A. 205, 68). — II, 1777.
- 3) 2,6-Di-Benzoylamido-1-Oxybenzol. Sm. 208–213° (A. 205, 82). — II, 1778.
- 4) Phenyl-3-Nitrobenzoylamid d. Benzolcarbonsäure. Sm. 101° (B. 19, 148). — II, 1776.
- 5) Phenyl-4-Nitrobenzoylamid d. Benzolcarbonsäure. Sm. 147° (Soc. 53, 8). — II, 1775.
- 6) Benzoesat d. α -Oxy- β -Diphenylarnstoff. Sm. 100° (J. pr. 2 58, 8).
- 7) Methylbenzoesat d. 2,5-Dioxy-4-Methylazobenzol. Sm. 115–115,5° (B. 26, 11). — IV, 1647.
- 8) Phenylamidoformiat d. Benzoylphenylhydroxylamin. Sm. 127° (J. pr. 2 36, 8).
- 9) Methylacetylderivat d. Verb. $C_{14}H_{11}O_2N_2$ (aus Diacetyl d. α -Diphenyl- β -kaptomethylbenzol). Sm. 176 bis 177° (A. 255, 333).
- 10) Phenylmonohydrazid d. Diphenyl-2,2-Dicarbonsäure. Sm. 174° (A. 245, 17). — IV, 1270.
- $C_{20}H_{15}O_9N_2$
- 1) C 68 — H 4,7 — O 15,4 — N 8,4 — M. G. 358.
- 2) Di-3-Nitrobenzoylbenzol. Sm. 140° (S. 15, 9). — II, 1589.
- 3) Di-4-Nitrobenzoylbenzol. Sm. 140° (S. 16, 10). — II, 1589.
- 4) α -Diacetylarnstoffweiss. Sm. 200° (S. 21, 9). — II, 1588.
- 5) β -Diacetylarnstoffweiss. Sm. 24, 40. — II, 1588.
- 6) β -Diacetylarnstoffweiss. Sm. 24, 40. — II, 1588.
- 7) β -Diacetylarnstoffweiss. Sm. 24, 40. — II, 1588.
- 8) Cotonnsebenzol. Sm. 18–18,5° (S. 71, 11). — IV, 1478.

- $C_{20}H_{16}O_4N_2$ 7) 3-Acetat d. Phenylacetylhydrazon-3-Oxy-1-Keto-1,4-Dihydro-naphtalin. Sm. 123° (A. 286, 82).
- 8) Diacetat d. 1-Phenylazo-2,4-Dioxynaphtalin. Sm. 122–123° (B. 22, 3167). — IV, 1449.
- 9) Diacetat d. 1-Phenylazo-3,4-Dioxynaphtalin. Sm. 153° (A. 286, 83). — IV, 1449.
- 10) 2-[3,4-Dimethoxyphenyl]- α oder β -Naphthimidazol-2'-Carbonsäure. Sm. 242° u. Zers. (B. 25, 1986). — IV, 1066.
- 11) 1,2-Phenyleneester d. Phenylamidoameisensäure. Sm. 165° (B. 18, 2429). — II, 910.
- 12) 1,3-Phenyleneester d. Phenylamidoameisensäure. Sm. 164° (B. 18, 2429). — II, 918.
- 13) 1,4-Phenyleneester d. Phenylamidoameisensäure. Sm. 205–207° (B. 18, 2429). — II, 941.
- 14) Di[Phenylimid] d. n-Butan- $\alpha\beta\gamma\delta$ -Tetracarbonsäure. Sm. 210–230° (B. 28, 889).
- 15) Di[Phenylimid] d. n-Butan- $\alpha\beta\gamma\delta$ -Tetracarbonsäure. Sm. 194–197° (B. 28, 886).
- 16) Verbindung (aus Furfurin). Sm. 174° (B. 22, 2305). — III, 722.
- $C_{20}H_{16}O_4N_4$ C 63,8 — H 4,3 — O 17,0 — N 14,9 — M. G. 376.
- 1) Monacetat d. 2,4-Diphenylazo-1,3,5-Trioxybenzol. Sm. 222–223° u. Zers. (Soc. 71, 190). — IV, 1450.
- $C_{20}H_{16}O_4N_6$ C 59,4 — H 4,0 — O 15,8 — N 20,8 — M. G. 404.
- 1) Dimethylester d. 4,4'-Biphenylendi[Hydrasoncyanessigsäure]. Sm. 270° u. Zers. (Bl. 3] 19, 1034). — IV, 1276, 1457.
- $C_{20}H_{16}O_4Cl_2$ 1) 1,4-Dibenzyläther d. 3,6-Dichlor-1,2,4,5-Tetraoxybenzol. Sm. 122 bis 123° (Am. 18, 13).
- $C_{20}H_{16}O_6S$ 1) β -Keto- $\alpha\beta$ -Diphenyl- α -[4-Oxyphenyl]äthan- β -Sulfonsäure. Ca + 7H₂O (Soc. 57, 967). — III, 258.
- 2) α ,3-Lakton d. α -Oxy- $\alpha\alpha$ -Di[β -Oxyphenyl]- α -[4-Methylphenyl]methan-3-Sulfonsäure + 3H₂O (4-Methylphenolsulfonphalein) (Am. 16, 514).
- $C_{20}H_{16}O_6N_2$ C 63,2 — H 4,2 — O 25,3 — N 7,3 — M. G. 380.
- 1) Nartinsäure. Zers. unterh. 200°. HCl, 2HCl, H₂SO₄, Ba (A. 212, 70; B. 14, 313). — III, 920.
- 2) 1,2-Lakton d. 6-Nitro-3,4-Dioxy-1-[2-Naphtyl]amidooxymethylbenzol-3,4-Dimethyläther-2-Carbonsäure (Nitroopiansäure- β -Naphtylamid). Sm. 232° u. Zers. (B. 29, 2033).
- 3) Diacetat d. Dioxydihydroindigotin (J. pr. [2] 58, 104).
- $C_{20}H_{16}O_6N_4$ C 58,8 — H 3,9 — O 23,5 — N 13,7 — M. G. 408.
- 1) 2,5-Di[2-Nitro-4-Methylphenylamido]-1,4-Benzochinon. Zers. bei 140° (B. 23, 2795). — III, 340.
- $C_{20}H_{16}O_6N_6$ C 55,0 — H 3,7 — O 22,0 — N 19,3 — M. G. 436.
- 1) Verbindung (aus γ -Benzoïnphenylhydrazon). Sm. 137° u. Zers. + 3Br (Am. 21, 50).
- $C_{20}H_{16}O_7N_2$ C 60,6 — H 4,0 — O 28,3 — N 7,1 — M. G. 396.
- 1) Verbindung (aus Essigsäureanhydrid u. Dibenzoyl glyoximsuperoxyd). Sm. 149° (B. 21, 2839). — III, 298.
- $C_{20}H_{16}O_7Br_2$ 1) Diacetat d. Dibrombrasilin. Sm. 249° (B. 27, 528). — III, 654.
- $C_{20}H_{16}O_8N_4$ C 54,5 — H 3,6 — O 29,1 — N 12,7 — M. G. 440.
- 1) 2,3,2',3'-Diimid d. 4,5,4',5'-Tetraoxyazobenzoltetramethyläther-2,3,2',3'-Tetracarbonsäure (Imid d. Azohemipinsäure). Sm. 250° u. Zers. (J. pr. [2] 55, 180).
- $C_{20}H_{16}O_8N_6$ C 51,3 — H 3,4 — O 27,3 — N 18,0 — M. G. 468.
- 1) 1,4-Di[β -Dinitro-4-Methylphenylamido]benzol. Sm. oberh. 300° (B. 25, 3007). — IV, 586.
- $C_{20}H_{16}O_8Br_2$ 1) α ,2- β ,2'-Dilakton d. $\alpha\beta$ -Dibrom- $\alpha\beta$ -Dioxy- $\alpha\beta$ -Di[5,6-Dimethoxyphenyl]äthan-2,2'-Dicarbonsäure (Tetramethoxydiphtalylidibromid). Sm. 260° u. Zers. (M. 14, 142). — II, 2096.
- $C_{20}H_{16}O_8S$ 1) Methyläther d. 4-Oxysulf fluorescein (Am. 20, 295).
- $C_{20}H_{16}O_8N_4$ C 52,6 — H 3,5 — O 31,6 — N 12,3 — M. G. 456.
- 1) Verbindung + H₂O (aus 4-Hydrazidophenoxylessigsäure). Sm. 242° (B. 30, 2104). — IV, 815.
- $C_{20}H_{16}O_8S$ 1) 4-Methylsulfongallein (Am. 16, 526).

- $C_{20}H_{16}O_2N_4$ C 50,8 — H 3,4 — O 33,9 — N 11,9 — M. G. 472.
- 1) Bis-Nitro-m-Opindolon. Sm. noch nicht bei 325° (B. 31, 934).
- $C_{99}H_{16}O_{16}S$ 1) Tetracetat d. 1,3,1',3'-Tetraoxybiphenyl-*p*-Disulfon. Sm. 256° (M. 14, 3). — II, 1037.
- $C_{20}H_{16}NCl$ 1) Chlorbenzylat d. β -Naphtochinolin + 2H₂O. Sm. 196° (J. pr. [2] 57, 53).
- $C_{20}H_{16}NJ$ 1) Jodmethylat d. 5-Phenylakridin (A. 224, 20; B. 19, 426). — IV, 467.
- $C_{21}H_{16}N_2S$ 1) *s*-Methylchrysythioharnstoff. Sm. 231° (B. 24, 957). — II, 643.
- $C_9H_{16}N_2S_2$ 1) Di[2-Amido-1-Naphtyl]disulfid. HCl (B. 26, 2367). — II, 869.
- 2) Di[5-Amido-1-Naphtyl]disulfid. Sm. 192–193°. 2HCl (B. 23, 1121). — II, 869.
- 3) Di[1-Amido-2-Naphtyl]disulfid. Sm. 131–132° (B. 20, 1900). — II, 888.
- 4) Di[5-Amido-2-Naphtyl]disulfid. Sm. 166°. 2HCl, 2HJ (B. 24, 332). — II, 889.
- 5) 2,2'-Di[4-Methylchinolyl]disulfid. Sm. 167° (B. 21, 627). — IV, 318.
- $C_{23}H_{16}N_2S$ 1) 2-Phenylimido-5-Phenylamido-3-Phenyl-2,3-Dihydro-1,3,4-Thio-diazol. Sm. 154°. HCl (B. 26, 2873). — IV, 667.
- $C_{23}H_{16}N_2S_2$ 1) 4,4'-Biphenylenphenylthiosemicarbaid. Sm. 220–230° u. Zers. (B. 27, 1560). — IV, 965.
- $C_{20}H_{17}ON$ C 83,6 — H 5,9 — O 5,6 — N 4,9 — M. G. 287.
- 1) α -[2-Oxybenzyliden]amidodiphenylmethan. Sm. 131° (B. 26, 2170). — III, 73.
- 2) 2-[4-Oxybenzyliden]amidodiphenylmethan. Sm. 110° (B. 27, 2787).
- 3) 2-Benzoylamidodiphenylmethan. Sm. 116° (B. 27, 2786). — II, 1169.
- 4) Benzyläther d. α -Oximidodiphenylmethan. Sm. 55–56° (M. 5, 205). — III, 189.
- 5) β -Phenylamido- α -Keto- α - β -Diphenyläthan (Anilbenzoin; Desylanilid). Sm. 97–98°. HCl (J. pr. [2] 34, 2; M. 14, 280; B. 26, 1337). — III, 220.
- 6) Methyloxyhydrat d. 5-Phenylakridin. Sm. 140°. Jodid (A. 224, 20; B. 19, 426; 25, 1747; J. pr. [2] 45, 197). — IV, 467.
- 7) Benzyl oxyhydrat d. β -Naphtochinolin. Chlorid + 2H₂O, Bichromat + 2H₂O (J. pr. [2] 57, 53).
- 8) Phenylamid d. Diphenyllessigsäure. Sm. 180° (A. 275, 84). — II, 1464.
- 9) Diphenylamid d. Phenyllessigsäure. Sm. 72° (B. 22, 324). — II, 1311.
- 10) Diphenylamid d. 1-Methylbenzol-4-Carbonsäure. Sm. 153–155° (B. 20, 2118). — II, 1341.
- 11) Phenylbenzylamid d. Benzolcarbonsäure. Sm. 104° (A. 138, 229). — II, 1166.
- 12) Phenyl[*p*-Methylphenyl]amid d. Benzolcarbonsäure (A. 132, 293). — II, 1165.
- $C_{20}H_{17}ON_2$ C 76,2 — H 5,4 — O 5,1 — N 13,3 — M. G. 315.
- 1) α -Phenyl- β -[α -Benzoylamidobenzyliden]hydrasin. Sm. 105°. HCl (A. 296, 290, 293). — IV, 1137.
- 2) 4-[2-Oxybenzyliden]amido-1-Phenylhydrasonmethylbenzol. Sm. 173–174° (J. pr. [2] 56, 106). — IV, 759.
- 3) 4-Benzoylamido-1-Phenylhydrasonmethylbenzol. Sm. 159–160° (J. pr. [2] 56, 104). — IV, 753.
- 4) α -Oximido- β -Phenylhydrason- α - β -Diphenyläthan. Sm. 173–174° (B. 26, 792). — IV, 785.
- 5) 1-[4-Methylphenylbenzoylamido]diazobenzol. Sm. 124–125° (B. 28, 875). — IV, 1570.
- 6) 5-Aethylacetylamido- α - β -Naphtophenazin (B. 23, 3805). — IV, 1204.
- 7) Phenylamid d. Phenylimidophenylamidoessigsäure. Sm. 134–135° (A. 184, 281; B. 28, 62). — II, 407.
- $C_{20}H_{17}ON_2S$ C 70,0 — H 4,9 — O 4,7 — N 20,4 — M. G. 343.
- 1) 4-Phenylazo-1-[4-Acetylamidophenylazo]benzol (Acetylamidodisazobenzol). Sm. 227° (B. 21, 2144). — IV, 1371.
- $C_{20}H_{17}O_2N$ C 79,2 — H 5,2 — O 10,6 — N 4,6 — M. G. 303.
- 1) α -Oxy-4-Benzoylamidodiphenylmethan. Sm. 145° (B. 30, 1138).
- 2) β -Oximido- α -Oxy- α - β -Triphenyläthan. Sm. 153,5° (Bl. [3] 13, 861). — III, 258.
- 3) Benzoylmethyl- β -Naphtomorpholin. Sm. 183,5° (B. 31, 760).

- C₂₀H₁₇O₂N** 4) *α*-Phenylamidodiphenylessigsäure. Sm. 168° u. Zers. (*B.* 22, 1213). — II, 1465.
- 5) Lakton d. 1-[*α*-Oxy-*β*-(6,8-Dimethyl-2-Chinoly)äthyl]benzol-2-Carbonsäure (Monophthalidyl-*op*-Dimethylchinaldin). Sm. 116° (*B.* 29, 190). — IV, 451.
- 6) 4-Methylphenylester d. Diphenylamidoameisensäure. Sm. 81° (*B.* 24, 2111). — II, 750.
- 7) 1-Naphtylester d. 1,2,3,4-Tetrahydrochinolin-1-Carbonsäure. Sm. 73° (*Bl.* [3] 21, 13).
- 8) 2-Naphtylester d. 1,2,3,4-Tetrahydrochinolin-1-Carbonsäure. Sm. 118—119° (*Bl.* [3] 21, 13).
- 9) Benzoat d. *α*-Amido-2-Oxydiphenylmethan. Sm. 208° (*M.* 15, 664).
- C₂₀H₁₇O₂N₂** 10) Phenylamid d. 2-Oxydiphenylessigsäure. Sm. 143—146° (*B.* 31, 2815). C 72,5 — H 5,1 — O 9,7 — N 12,7 — M. G. 331.
- 1) 2-[2-Nitrobenzylidenamido]-1-Phenylamidomethylbenzol. Sm. 132 bis 134° (*B.* 27, 3247). — IV, 638.
- 2) 4-[4-Nitrobenzyliden]amido-1-[4-Methylphenyl]amidobenzol. Sm. 130° (*A.* 255, 168). — IV, 596.
- 3) *α*-Phenylimido-*α*-[Methyl-3-Nitrophenyl]amido-*α*-Phenylmethan. Sm. 97,5°. HJ (*B.* 30, 1787). — IV, 843.
- 4) *α*-[3-Nitrophenyl]imido-*α*-Methylphenylamido-*α*-Phenylmethan. Sm. 107,5°. HJ (*B.* 30, 1786). — IV, 843.
- 5) *α*-Phenylimido-*α*-[4-Methylphenyl]amido-*α*-[4-Nitrophenyl]methan. Sm. 260° (*B.* 25, 1084). — IV, 844.
- 6) *α*-Benzoylamido-*αβ*-Diphenylharnstoff. Sm. 156° (*B.* 27, 1518). — IV, 675.
- 7) *α*-Triphenylbiuret. Sm. 147° (*B.* 4, 250; 21, 504). — II, 383.
- 8) *β*-Triphenylbiuret. Sm. 105° (*B.* 3, 651). — II, 383.
- 9) *α*-Phenylhydrazon-*α*-[4-Nitrophenyl]-*α*-[4-Methylphenyl]methan. Sm. 154° (*A.* 286, 329). — IV, 777.
- 10) *α*-Phenyl-*α*-Benzyl-*β*-[3-Nitrobenzyliden]hydrazin. Sm. 140—141° (*G.* 27 [2] 238). — IV, 812.
- 11) Phenylamid d. *αβ*-Diphenylharnstoff-2-Carbonsäure. Sm. 218° (*J. pr.* [2] 32, 292). — II, 1251.
- C₂₀H₁₇O₂N₂** C 66,9 — H 4,7 — O 8,9 — N 19,5 — M. G. 359.
- 1) *α*-[4-Nitrophenyl]azo-*α*-Methylphenylhydrazon-*α*-Phenylmethan. Sm. 201—202° (*B.* 29, 1387). — IV, 1260.
- 2) Rubazonsäure. Sm. 181° (*A.* 238, 192). — IV, 1325.
- C₂₀H₁₇O₂P** 1) Triphenylphosphidoessigsäureanhydrid (Triphenylphosphorbetain). Sm. 124—126°. (2HCl, PtCl₄) (*B.* 27, 274). — IV, 1661.
- C₂₀H₁₇O₂N** C 75,2 — H 5,3 — O 15,0 — N 4,4 — M. G. 319.
- 1) *αα*-Diphenyl-*β*-[2-Pyrrolyl]propionsäure. Sm. 216°. Ag (*B.* 23, 1355). — IV, 90.
- 2) 1-Naphtylamid d. *α*-Benzoxypropionsäure. Sm. 155° (*A.* 279, 97).
- 3) 2-Naphtylamid d. *α*-Benzoxypropionsäure. Sm. 177° (*A.* 279, 99). — II, 1154.
- C₂₀H₁₇O₂N₂** C 69,2 — H 4,9 — O 13,8 — N 12,1 — M. G. 347.
- 1) *αβ*-Diphenyl-*α*-[2-Nitrobenzyl]harnstoff. Sm. 124—125° (*B.* 24, 1158; 27, 39). — II, 526.
- 2) *αα*-Diphenyl-*β*-[2-Nitro-4-Methylphenyl]harnstoff. Sm. 138—139,5° (*B.* 20, 2121). — II, 495.
- 3) 4-Nitro-2-Benzoylamido-1-[2-Methylphenyl]amidobenzol. Sm. 164 bis 165° (*Bl.* [3] 17, 867). — IV, 562.
- 4) 4-Nitro-2-Benzoylamido-1-[4-Methylphenyl]amidobenzol. Sm. 210 bis 211° (*Bl.* [3] 17, 866). — IV, 562.
- 5) Acetat d. 3-Oxybenzolazo-1-Acetylamidonaphtalin. Sm. 226° (*B.* 27, [2] 596).
- 6) Gallocyaninanalid (*B.* 21, 1741; 25, 2995). — III, 677.
- C₂₀H₁₇O₂N₂** C 64,0 — H 4,5 — O 12,8 — N 18,7 — M. G. 375.
- 1) *α*-Phenyl-*β*-[4-Methylphenyl]azo-*β*-[3-Nitrophenyl]harnstoff. Sm. 96° (*B.* 21, 2574). — IV, 1572.
- 2) *α*-Phenylhydrazon-*α*-[4-Methoxyphenyl]azo-*α*-[4-Nitrophenyl]methan. Sm. 199° (*B.* 31, 475). — IV, 1419.
- C₂₀H₁₇O₂Br** 1) Bromdiphenyldibutylakton. Sm. 109° (*A.* 288, 196).

- $C_{20}H_{17}O_2Br$ 2) isom. Bromdiphenyldibutolaktone. Sm 150—151° (A. 286, 196).
 $C_{20}H_{17}O_4N$ C 71,6 — H 5,1 — O 19,1 — N 4,2 — M. G. 335.
- 1) Berberin + 6H₂O. Sm. 145° (wasserfrei). Salze meist bek. Lit. bedeutend. — III, 798.
- 2) Opianylehinaldin + H₂O. Sm. 103° (174—175° wasserfrei). HCl, (2HCl, PtCl₄ + 4H₂O) (B. 27, 1978; 29, 188). — IV, 309.
- 3) Dibenzyläther d. 2-Nitro-1,4-Dioxybenzol. Sm. 83° (78°) (A. 221, 374; Bl. [3] 1, 348). — II, 1050.
- 4) Acetat d. 1-Diacetylamido-2-Oxyanthracen. Sm. 164° (B. 28, 1423).
- 5) Acetat d. Phenoldichroin (B. 21, 250). — III, 679.
- 6) 3,4-Dioxy-1-[2-Naphtyl]imidomethylbenzoldimethyläther-2-Carbonsäure. Sm. 195—200°, Na (B. 29, 181).
- 7) 1-Aethyl-2,5-Diphenylpyrrol-2',5'-Dicarbonsäure. Sm. 220°. Ag (B. 20, 1488). — IV, 452.
- 8) 1,2-Laktone d. 3,4-Dioxy-1-[1-Naphtylamido]oxymethylbenzoldimethyläther-2-Carbonsäure (Opiansäure- α -Naphtylamid). Sm. 212° u. Zers. (B. 29, 180).
- 9) 1,2-Laktone d. 3,4-Dioxy-1-[2-Naphtylamido]oxymethylbenzoldimethyläther-2-Carbonsäure (Opiansäure- β -Naphtylamid). Sm. 213° (207—207,5°) (B. 29, 181, 2081; M. 13, 114).
- 10) Methylester d. β -Cyan- α - γ -Dibenzoylpropan- β -Carbonsäure. Sm. 195° (B. 27 [2] 666).
- 11) Dimethylmonamid d. Pulvinsäure. Sm. 211°. Dimethylaminsalz (A. 282, 31). — II, 2031.
- $C_{20}H_{17}O_2N_2$ C 66,1 — H 4,7 — O 17,6 — N 11,6 — M. G. 363.
- 1) Phenylidi(2-Nitrobenzyl)amin. Sm. 206° (B. 19, 1608). — II, 521.
- 2) Phenylidi(4-Nitrobenzyl)amin. Sm. 169° (B. 30, 69).
- $C_{20}H_{17}O_2N$ C 68,4 — H 4,8 — O 22,8 — N 4,0 — M. G. 351.
- 1) Protopin (Macleyin) oder C₂₀H₁₉O₂N. Sm. 207°. HCl, (2HCl, PtCl₄ + 4H₂O), (HCl, AuCl₃ + H₂O), HNO₃, H₂Cr₂O₇ (A. Spl. 8, 318; R. 3, 182; B. 23 [2] 698; M. 19, 183). — III, 806.
- 2) Oxyberberin. Sm. 198—200°. Acetat (Soc. 57, 1085). — III, 802.
- 3) Hydrastiphtalimidin. Sm. 226° (B. 23, 2014). — II, 2054.
- 4) Acetat d. Phenoloxychroin (B. 21, 251). — III, 679.
- 5) α -Aethyl-2-Benzylester d. β -Cyan- α -Keto- α -Phenyläthan- β ,2-Dicarbonsäure. Sm. 74° (A. ch. [7] 1, 496). — II, 1962.
- $C_{20}H_{17}O_3N_2$ C 63,3 — H 4,5 — O 21,1 — N 11,1 — M. G. 379.
- 1) 2-Nitrobenzyläther d. 3-[2-Nitrobenzyl]amido-1-Oxybenzol. Sm. 190° (B. 25, 3583). — II, 1058.
- $C_{20}H_{17}O_5N$ C 65,4 — H 4,6 — O 26,2 — N 3,8 — M. G. 367.
- 1) Dioxerberberin (Soc. 57, 1087). — III, 803.
- 2) 3-Aethyl-ester d. 4,6-Diketo-1,2-Diphenyltetrahydropyrrol-1',3-Dicarbonsäure. Sm. 230° (B. 30, 604). — IV, 369.
- 3) Aethylimid d. α - β -Dibenzoyläthan- α - β -Dicarbonsäure. Sm. 159—160° (B. 30, 3040).
- 4) Verbindung (aus d. Jodmethylat d. Dioxymethylhydrastimid). Sm. 184 bis 185° (A. 271, 395).
- $C_{20}H_{17}O_7N$ C 62,7 — H 4,4 — O 29,2 — N 3,7 — M. G. 383.
- 1) Berberal. Sm. 148—150° (Soc. 55, 81; 57, 1062). — III, 802.
- 2) Isoberberal. Sm. 185° (Soc. 57, 1081). — III, 802.
- 3) Pelagin (C. 1895 [2] 870; 1896 [1] 113).
- 4) Tetramethoxydiphtalylimid. Zers. oberh. 200° (M. 14, 144). — II, 2100.
- $C_{20}H_{17}O_7N_2$ C 58,4 — H 4,1 — O 27,2 — N 10,2 — M. G. 411.
- 1) Verbindung (aus d. Methylenäther d. 3,4-Dioxyphenyl-Isonitrosodimethylketon). Sm. 112° (G. 22 [2] 466). — II, 978.
- $C_{20}H_{17}O_8N$ C 60,2 — H 4,3 — O 32,0 — N 3,5 — M. G. 399.
- 1) Anhydrid d. Berberilsäure. Sm. 236—237°. Cu + 2H₂O, Ag (Soc. 55, 78; 57, 1037). — III, 801.
- $C_{20}H_{17}N_4Cl$ 1) 2-Benzylidenamido-1-[4-Chlorphenylamido]methylbenzol. Sm. 115 bis 116° (J. pr. [2] 52, 383). — IV, 627.
- 2) 5-Chlorphenylat d. 2,8-Dimethyl-5,10-Naphtdiazin (Dimethylphenylphenazoniumchlorid). + FeCl₃, 2 + PtCl₄ (B. 31, 975). — IV, 1016.
- $C_{20}H_{17}N_7Br$ 1) 2-Benzylidenamido-1-[4-Bromphenylamido]methylbenzol. Sm. 122° (J. pr. [2] 52, 390). — IV, 637.

- C₁₀H₁₁N₃J** 1) Jodmethylat d. 4-Methyl-2,6'-Bichinoly (B. 19, 1037). — IV, 1072.
2) Jodäthylat d. 2,3'-Bichinoly (B. 17, 2769). — IV, 1067.
3) Jodäthylat d. 2,7'-Bichinoly (B. 19, 2472). — IV, 1069.
- C₁₀H₁₁N₃S** 1) α -Benzylidenamido- α - β -Diphenylthioharnstoff. Sm. 182° (B. 27, 1514). — IV, 750.
2) 5-Phenylamido-2,3-Diphenyl-2,3-Dihydro-1,3,4-Thiodiazol. Sm. 105—106°. HCl (B. 30, 852). — IV, 686.
- C₁₀H₁₁N₄Cl** 1) 2-Chlor-1,4-Diphenyl-2-[4-Methylphenyl]-1,2-Dihydro-1,2,3,5-Tetrazol. Sm. 229°. + C₂H₅O (B. 27, 2930). — IV, 1268.
- C₁₀H₁₁N₄Br** 1) α - β -Di[Phenylhydrazon]- α -[4-Bromphenyl]äthan. Sm. 178—179°. — IV, 761.
- C₁₀H₁₁ON₂** C 79,5 — H 5,9 — O 5,3 — N 9,3 — M. G. 302.
1) 2-[2-Oxybenzylidenamido]-1-Phenylamidomethylbenzol. Sm. 124° (B. 27, 3247). — IV, 638.
2) 4-[2-Oxybenzylidenamido]-1-[4-Methylphenyl]amidobenzol. Sm. 142° (A. 256, 167). — IV, 597.
3) 2-Amido-1-Benzoylphenylamidomethylbenzol. Sm. 119° (115°) (B. 19, 1008; 23, 2193; 27, 3524). — IV, 631.
4) 2-Benzoylamido-1-Phenylamidomethylbenzol (o-Benzamidobenzylamin). Sm. 113—114° (B. 27, 3524). — IV, 631.
5) 4-Acetylamidotriphenylamin. Sm. 197° (B. 23, 2538). — IV, 585.
6) α -Diphenyl- β -[4-Methylphenyl]harnstoff. Sm. 130° (B. 9, 713). — II, 495.
7) 4-Nitrosophenylidibenzylamin. Sm. 91—92° (B. 20, 1616). — II, 521.
8) β -Hydrazon- α -Oxy- α - β -Triphenyläthan. Sm. 167—168° (B. 32, 656).
9) α -Phenylhydrazon- β -Oxy- α - β -Diphenyläthan (Phenylhydrazon d. Benzol). Sm. 158—159° (155°) (Am. 16, 113; 21, 47; A. 232, 229). — IV, 777.
10) isom. Benzolphenylhydrazon (β -Modif.). Sm. 106° (Am. 16, 113; 21, 49). — IV, 777.
11) isom. Benzolphenylhydrazon (γ -Modif.). Sm. 162° (Am. 21, 45).
12) Phenyläther d. α -Phenylhydrazon- β -Oxy- α -Phenyläthan. Sm. 85 bis 87° (B. 28, 3031). — IV, 772.
13) β -Benzoyl- α -Phenyl- α -Benzylhydrazin. Sm. 139—140° (G. 22 [2] 223). — IV, 812.
14) α -Phenyl- α -Benzyl- β -[2-Oxybenzyliden]hydrazin. Sm. 117,5° (G. 27 [2] 239). — IV, 812.
15) Methyläther d. α -Phenylhydrazon-4-Oxydiphenylmethan. Sm. 132° (B. 24, 3526; 26, 21). — IV, 776.
16) Methyläther d. isom. α -Phenylhydrazon-4-Oxydiphenylmethan. Sm. 90° (B. 24, 3526; 26, 21). — IV, 776.
17) α -Benzoyloxamido- α -Phenylimido- α -Phenylmethan. Sm. 148°. Cu (B. 31, 243).
18) O-Benzyläther d. Benzenylphenylamidoxim. Sm. 76—77° (B. 31, 241).
19) Benzyläther d. 4'-Oxy-4-Methylazobenzol. Sm. 128° (A. 287, 162). — IV, 1413.
20) 5-Phenyloxyhydrat d. 2,8-Dimethyl-5,10-Naphtdiazin. Chlorid, Chlorid + FeCl₃, 2Chlorid + PtCl₄, Nitrat (B. 31, 975). — IV, 1016.
21) Phenylamid d. 1-Phenylamidomethylbenzol-4-Carbonsäure. Sm. 183° (B. 28, 1144).
22) Phenylhydrazid d. Diphenylessigsäure. Sm. 168° (A. 275, 85). — IV, 671.
23) β β -Diphenylhydrazid d. Phenylessigsäure. Sm. 188° (B. 25, 1553). — IV, 670.
- C₁₀H₁₁ON₄** C 72,7 — H 5,4 — O 4,8 — N 17,0 — M. G. 330.
1) α -Phenyl- β -Phenylazo- β -[4-Methylphenyl]harnstoff. Sm. 126° (B. 21, 2563). — IV, 1570.
2) α -Phenyl- β -Phenylazo- β -Benzylharnstoff. Sm. 119° (B. 21, 1021). — IV, 1573.
3) 2,4-Di[2-Methylphenylazo]-1-Oxybenzol. Sm. 146° (116—117°) (B. 23, 3257; 24, 366). — IV, 1416.
4) 2,4-Di[4-Methylphenylazo]-1-Oxybenzol. Sm. 170° (B. 25, 1334). — IV, 1416.

- $C_{20}H_{15}ON_4$
- 5) Methyläther d. α -Phenylhydrason- α -[4-Oxyphenyl]aso- α -Phenylmethan (M. d. 4 Oxyformazylbenzol). Sm. 154° (B. 29, 1850) — IV, 1261.
 - 6) 4-Methylphenylamidofornylidiasoamidobenzol. Sm. 134° (B. 21, 2561). — IV, 1561.
- $C_{20}H_{15}O_2N_4$
- 7) 3-Methyl-2-[4-Acetylamidophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 161—162° (Soc. 59, 712). — IV, 1396.
C 75,5 — H 5,7 — O 10,0 — N 8,8 — M. G. 318.
 - 1) 4-Nitrophenylidibenzylamin. Sm. 130° (B. 20, 1613). — II, 521.
 - 2) 3-Acetylamido-1-[Acetyl-2-Naphtyl]amidobenzol. Sm. 147—148° (B. 26, 979). — IV, 573.
 - 3) *p*-Acetylamido-1-[*p*-Acetylamidophenyl]naphtalin. Sm. 285° (B. 26, 144). — IV, 1033.
 - 4) 1,4-Diacetyl-2,3-Diphenyl-1,4-Dihydro-1,4-Diazin. Sm. 132—133° (Soc. 63, 1293). — III, 284.
 - 5) 3,6-Di[Phenylamido]-2,5-Dimethyl-1,4-Benzochinon. Sm. 264° (A. 255, 171). — III, 364.
 - 6) Methyläther d. *p*-Phenylamido-*p*-Oxy-2-Methyl-1,4-Benzochinonphenylimid. Sm. 131° (B. 16, 1561). — III, 361.
 - 7) Äthyläther d. 5-Phenylamido-2-Oxy-1,4-Benzochinonphenylimid. Sm. 134° (137°) (B. 18, 788; 21, 676). — III, 347.
 - 8) 3-Phenylhydrason-2,4-Diketooktohydrophenanthren. Sm. 156° (B. 31, 1902). — IV, 1480.
 - 9) 6-Methyläther d. 6-Oxy-2-[2-Oxyphenyl]-1-Phenyl-2,3-Dihydrobenzimidazol. Sm. 132° (B. 29, 2682).
 - 10) Diäthylamidophenonaphtoxazon. Sm. 205° (A. 289, 126). — IV, 1061.
 - 11) Diäthylindigo (B. 16, 2202). — II, 1621.
 - 12) Phenylharnstoff d. Methyl- β -Naphtomorpholin. Sm. 180° (B. 31, 760).
 - 13) Äthylester d. 3-[β -Phenyläthenyl]-1-Phenylpyrazol-5-Carbonsäure. Sm. 120° (B. 31, 1309). — IV, 988.
 - 14) α - β -Diacetyl- α -Phenyl- β -[1-Naphtyl]hydrazin. Sm. 264° (B. 26, 144). — IV, 1504.
 - 15) Benzoesäure d. 6-Oxy-3-Methyl-*s*-Diphenylhydrasin. Sm. 151—152° (B. 24, 2305). — IV, 1506.
 - 16) α -Benzoyl- α -Phenyl- β -[4-Oxy-3-Methylphenyl]hydrazin. Sm. 142° (B. 25, 1331). — IV, 1505.
C 69,4 — H 5,2 — O 9,2 — N 16,2 — M. G. 346.
- $C_{20}H_{15}O_3N_4$
- 1) 2-Benzylnitrosamido-1-Phenylnitrosamidomethylbenzol. Sm. 124° (B. 27, 3243). — IV, 628.
 - 2) 1,3-Di[4-Methylphenylnitrosamido]benzol. Zers. bei 150° (J. pr. [2] 33, 223). — IV, 573.
 - 3) 1,4-Di[2-Methylphenylnitrosamido]benzol. Sm. 140° (J. pr. [2] 34, 69). — IV, 585.
 - 4) 1,4-Di[4-Methylphenylnitrosamido]benzol. Sm. 152° u. Zers. (J. pr. [2] 33, 234). — IV, 586.
 - 5) *s*-Diphenyl-1,3-Phenylendiharnstoff (B. 18, 1478). — IV, 575.
 - 6) 3,5-Dioxy-1,2-Di[Phenylhydrasonmethyl]benzol. Sm. 230° u. Zers. (A. 248, 105; B. 24, 3652). — IV, 764.
 - 7) *p*-Di[2-Methylphenylazo]-1,3-Dioxybenzol. Sm. 194—195° (B. 15, 2825). — IV, 1445.
 - 8) isom. *p*-Di[2-Methylphenylazo]-1,3-Dioxybenzol (B. 15, 2825). — IV, 1445.
 - 9) *p*-Di[4-Methylphenylazo]-1,3-Dioxybenzol. Sm. 255—256° (B. 15, 2825). — IV, 1445.
 - 10) isom. *p*-Di[4-Methylphenylazo]-1,3-Dioxybenzol. Sm. 202—203° (B. 15, 2825). — IV, 1445.
 - 11) 4'-Äthyläther d. 2-Phenylazo-4-[4-Oxyphenyl]azo-1-Oxybenzol. Sm. 142° (B. 32, 125).
 - 12) 3,3'-Diketo-5,5'-Dimethyl-2,2'-Diphenyl-2,3,2',3'-Tetrahydro-4,4'-Bipyrazol (B. 16, 2597; 17, 2044, 2059; 20, 2749; 22, 160; 29, 1658; Soc. 59, 339; A. 238, 168; J. pr. [2] 64, 185). — IV, 1262.
 - 13) Di[Phenylhydrazid] d. Benzol-1,2-Dicarbonensäure. Sm. 191° (J. pr. [2] 35, 282). — IV, 711.
 - 14) *s*-Di[Cinnamylidenhydrazid] d. Oxalsäure (J. pr. [2] 51, 196). — III, 62.

- $C_{20}H_{14}O_2N_2$, 15) Verbindung (aus Benzaldoxim u. Diazobenzolchlorid). Sm. 125° u. Zers. (B. 25, 1688). — IV, 754.
- $C_{20}H_{18}O_2N_2$, C 71,8 — H 5,4 — O 14,4 — N 8,4 — M. G. 334.
- 1) Phenylhydrason d. Oreoselon. Sm. 194° (C. 1899 [1] 432).
 - 2) 2-Methylphenylamid-2-Methylphenylimid d. Akonitsäure. Sm. 214° (Soc. 55, 239). — II, 468.
- $C_{20}H_{18}O_2N_4$, C 60,3 — H 5,0 — O 13,2 — N 15,5 — M. G. 362.
- 1) 3,5-Di[4-Methylphenylnitrosamido]-1-Oxybenzol. Zers. bei 230° (G. 20 [1] 321). — II, 724.
 - 2) 2,4-Di[4-Methylphenylazo]-1,3,5-Trioxybenzol (B. 12, 227). — IV, 1451.
 - 3) Phenylhydrasonoxydehydracetsäure. Sm. 105° u. Zers. (B. 25, 325). — IV, 716.
 - 4) Amid d. 3-[2-Methylphenyl]imido-5-[2-Methylphenyl]amido-2-Keto-6-Oxy-2,3-Dihydropyridin-4-Carbonsäure (B. 27, 3449). — IV, 1140.
- $C_{20}H_{18}O_4N_2$, C 68,6 — H 5,1 — O 18,3 — N 8,0 — M. G. 350.
- 1) 5,5'-Diketo-3,3'-Dimethyl-1,1'-Diphenyl-4,5,4',5'-Tetrahydro-4,4'-Bipyrazol (Am. 16, 584).
 - 2) Diacetat d. 1-Phenylhydrazido-3,4-Dioxynaphtalin. Sm. 178° (A. 286, 84). — IV, 1449.
 - 3) α ,2-Lakton d. γ -Phenylhydrason- α -Oxy- α -Phenyl- α -Buten- β ,2-Di-carbonsäure- β -Aethylester. Sm. 238–239° (A. 236, 189). — IV, 725.
 - 4) Verbindung (aus Isosafrol). Sm. 180° (G. 22 [2] 483). — II, 979.
 - 5) Verbindung (aus 1,4-Benzochinon u. 2-Amido-1-Oxybenzolmethyläther). Sm. 230° (A. 226, 69). — III, 346.
- $C_{20}H_{18}O_4N_4$, C 63,5 — H 4,7 — O 16,9 — N 14,8 — M. G. 378.
- 1) 1,2-Di[2-Nitrophenylamidomethyl]benzol. Sm. 211–212° (B. 31, 630).
 - 2) 1,3-Di[2-Nitrobenzylamido]benzol. Sm. 134° (B. 25, 3583). — IV, 573.
 - 3) Diacetyltolanharbstoff. Sm. 266° u. Zers. (O. 19, 564). — III, 285.
 - 4) α -Phenyl- α - β -Di[2-Nitrobenzyl]hydrazin. Sm. 128° (B. 25, 2899). — IV, 412.
- $C_{20}H_{18}O_4Br_2$, Monoisoamyläther d. Dibromchrysin (B. 10, 177). — III, 628.
- $C_{20}H_{18}O_4S_2$, 1) Disulfid d. β -Merkapto- α - γ -Diketo- α -Phenylbutan (Dithiobenzoylaceton). Sm. 117–118°. Na₂, Fe₂, Cu, + 2NH₃ (Bl. [3] 19, 835).
- $C_{20}H_{18}O_4S_3$, 1) Phenyläther d. α , α -Diphenylsulfon- α -Merkaptoäthan. Sm. 194° (B. 23, 1416). — II, 784.
- $C_{20}H_{18}O_4N_2$, C 65,6 — H 4,9 — O 21,9 — N 7,6 — M. G. 366.
- 1) Anhydrid d. α , β -Di[Phenylacetylamido]bernsteinsäure. Sm. 192° (B. 26, 1772). — II, 438.
- $C_{20}H_{18}O_4Br_2$, 1) Tetramethyläther d. Dibrombrasilindibromid. + C₁₁H₁₀O₂ (B. 23, 1432). — III, 653.
- 2) Dibromid (aus Brasilintetramethyläther) (B. 21, 3014). — III, 653.
- $C_{20}H_{18}O_4S_2$, 1) α -[4-Methylphenyl]sulfon- γ -[2-Naphtyl]sulfon- β -Ketopropan. Sm. 185° u. Zers. (J. pr. [2] 55, 409).
- $C_{20}H_{18}O_4N_2$, C 62,8 — H 4,7 — O 25,1 — N 7,3 — M. G. 382.
- 1) Cupronin. HCl, HBr (A. 212, 190). — III, 921.
 - 2) Diäthyläther d. 4,6-Di[4-Oxybenzoyl]-1,2,4,6-Dioxidiazol (I. d. 4-Dioxydiphenylendisacyl). Sm. 131° (R. 10, 220). — III, 134.
 - 3) Verbindung (aus Opiansäure) (B. 26, 536). — II, 1941.
- $C_{20}H_{18}O_4Br_2$, 1) α^{β} -Methylenäther- γ^{δ} -Aethyläther- γ^{δ} -Acetat d. α , β -Dibrom- γ -Keto- γ -[2,4-Dioxyphenyl]- α -[3,4-Dioxyphenyl]propan. Sm. 130° (B. 31, 705).
- 2) Dibrompseudocubebin. Sm. 177° (C. 1896 [2] 127).
- $C_{20}H_{18}O_4S_3$, 1) α , α , α -Triphenyltrisulfonäthan. Sm. 182° (B. 25, 353). — II, 784.
- 2) α , α , β -Triphenyltrisulfonäthan. Sm. 85–86° (B. 24, 1835; 27, 3057). — II, 785.
- $C_{20}H_{18}O_4N_2$, C 60,3 — H 4,5 — O 28,1 — N 7,0 — M. G. 398.
- 1) Diemyctilin (C. 1895 [1] 163).
 - 2) Diopianhydrasonsäureanhydrid. Sm. 225° (B. 26, 534). — II, 1942.
 - 3) Diacetat d. Gallocyaninmethyläther (B. 21, 1744). — III, 677.
 - 4) Amid d. Anhydroberberilsäure. Sm. 203° (Soc. 57, 1046). — III, 802.
- $C_{20}H_{18}O_4N_2$, C 58,0 — H 4,3 — O 30,9 — N 6,8 — M. G. 414.
- 1) Tetracetat d. β -Tetraoxyazobenzol. Sm. 240–242° (C. 1897 [2] 588).

- C₂₀H₁₈O₁₀N₂** C 53,8 — H 4,0 — O 35,9 — N 6,3 — M. G. 446.
 1) Dinitrocubebin (*C.* 1896 [2] 128).
 2) Dinitropseudocubebin (*C.* 1896 [2] 127).
 3) 2,2'-Dialdehyd d. 4,5,4',5'-Tetraoxyazobenzoltetramethyläther-2,3,2',3'-Tetracarbonsäure (Azoopiinsäure). Sm. 174° u. Zers. Na₂ + 3H₂O, K₂ + 6H₂O, Pb, Cu (*J. pr.* [2] 55, 173).
- C₂₀H₁₈O₁₀S₂** 1) Triacetylalanhydrid d. 1,2,3-Trioxybenzol-*p*-Sulfonsäure (A. 178, 187). — II, 1016.
- C₂₀H₁₈N₂Cl₂** 1) 1,2-Di[2-Chlorphenylamidomethyl]benzol. Sm. 79° (*B.* 31, 1157).
 2) Chinolinäthylenchlorid. 2 + PtCl₄ (*B.* 16, 879). — IV, 252.
 3) Dichlormethylat d. 2,3'-Bichinolyll + 6H₂O. + Cl₄J₂ (*B.* 18, 597). — IV, 1067.
- C₂₀H₁₈N₂Br₂** 1) 1,2-Di[2-Bromphenylamidomethyl]benzol. Sm. 132° (*B.* 31, 1157)
- C₂₀H₁₈N₂J₂** 1) Dijodmethylat d. 6,6'-Bichinolyll. Sm. oberh. 290° (*M.* 5, 422; *B.* 17, 1819, 2447). — IV, 1069.
- C₂₀H₁₈N₂S** 1) α -Phenyl- β -Diphenylmethylthioharnstoff (s. Phenylbenzhydrilthioharnstoff). Sm. 180,5° (*B.* 26, 2170). — II, 635.
 2) α - β -Diphenyl- α -Benzylthioharnstoff. Sm. 103°. Ag (*B.* 26 [2] 607). — II, 528.
 3) Benzyläther d. Diphenylamidoimidomerkaptomethan. Sm. 125°. HCl (*B.* 26 [2] 607). — II, 396.
 4) Benzyläther d. α -Phenylamido- α -Phenylimidomerkaptomethan. Fl. HCl, (HCl, Hg₂Cl₂) (*Soc.* 57, 297). — II, 1654.
- C₂₀H₁₈N₂Cl** 1) 5-Chlorphenylat d. 3-Amido-2,8-Dimethyl-5,10-Naphtdiazin. 2 + PtCl₄ (*B.* 31, 968, 976). — IV, 1185.
- C₂₀H₁₈N₂S** 1) α -Methyl- β -[4-Phenylhydrasonmethylphenyl]thioharnstoff. Sm. 220—221° (*J. pr.* [2] 56, 106). — IV, 753.
 2) Triphenylguanylthioharnstoff (Triphenylthiodicyandiamin). Sm. 150° (*B.* 12, 774). — II, 398.
 3) Thiotetrapyridin. Sm. 155°. 2HCl, (HCl, HgCl₂), (2HCl, PtCl₄) (*Bl.* 34, 450). — IV, 859.
- C₂₀H₁₈N₂S₂** 1) 1,2-Phenylendi[Phenylthioharnstoff]. Sm. 290° u. Zers. (*A.* 228, 200). — IV, 560.
 2) 1,3-Phenylendi[Phenylthioharnstoff]. Sm. 160—161° (*A.* 228, 203). — IV, 576.
- C₂₀H₁₈ON** 1) 1,4-Phenylendi[Phenylthioharnstoff] (*A.* 221, 28). — IV, 592.
 C 83,0 — H 6,6 — O 5,5 — N 4,8 — M. G. 289.
 1) β -Phenylamido- α -Oxy- α - β -Diphenyläthan (Hydrobenzoinanilid). Sm. 119° (*J. pr.* [2] 34, 13). — III, 220.
 2) α -[1-Naphtyl]amidopropylphenylketon. Sm. 137—138° (*Bl.* [3] 17, 78).
 3) α -[2-Naphtyl]amidopropylphenylketon. Sm. 151—152° (*Bl.* [3] 17, 78).
 4) Benzyläther d. Diphenylmethylhydroxyamin. HCl (*A.* 278, 363). — II, 636.
- C₂₀H₁₈ON₃** C 75,7 — H 6,0 — O 5,0 — N 13,3 — M. G. 317.
 1) $\alpha\alpha$ -Diphenyl- β -[2-Amido-4-Methylphenyl]harnstoff. Sm. 135—137° (*B.* 20, 2123). — IV, 614.
 2) α - β -Diphenyl- α -[2-Amidobenzyl]harnstoff. Sm. 177°. HCl, (2HCl, PtCl₄), Oxalat, Pikrat (*B.* 27, 40; *J. pr.* [2] 55, 240). — IV, 632.
 3) β -Phenylbenzylamido- α -Phenylharnstoff. Sm. 163°. — IV, 674.
 4) α -Phenyl- β -[2-Phenylamidomethylphenyl]harnstoff. Sm. 102° (*B.* 27, 45). — IV, 633.
 5) 4-Amidophenyläther d. α -Phenylhydrason- β -Oxy- α -Phenyläthan. Sm. 128° (*C.* 1897 [1] 411).
 6) 4-Cinnamylidenamido-3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazol. Sm. 160° (*A.* 293, 62). — IV, 1109.
 7) Diäthylamidophenonaphtoxazin + xH₂O (Aethylnilblau). HCl (*A.* 289, 115). — IV, 1209.
 8) Dimethylaposafranin. 2 Chlorid + PtCl₄, Nitrat + 1/2 H₂O, Bichromat (*B.* 30, 2624). — IV, 1177.
- C₂₀H₁₈ON₃** C 69,6 — H 5,5 — O 4,6 — N 20,3 — M. G. 345.
 1) 6-Dimethylamido-4-Oxy-1,3-Di[Phenylazo]benzol. Sm. 136° (*B.* 31, 490). — IV, 1417.

- $C_{20}H_{19}ON_2$ 2) 4-[4-Dimethylamidophenyl]azo-1-[4-Oxyphenylazo]benzol (Soc. 45, 111). — IV, 1416.
- $C_{20}H_{19}ON_2$ C 64,3 — H 5,1 — O 4,3 — N 26,3 — M. G. 373.
- 1) Verbindung (aus Phenylhydrazoncyanacetone u. Phenylhydrazondiacetone). Sm. 165° (J. pr. [2] 52, 94). — IV, 1477.
- $C_{20}H_{19}O_3N$ C 78,7 — H 6,2 — O 10,5 — N 4,6 — M. G. 305.
- 1) Isopropyläther d. 4-[4-Methylphenyl]imido-2-Oxy-1-Keto-1,4-Dihydrophtalin. Sm. 137—139° (B. 15, 1970). — III, 394.
- 2) Äthylester d. 2-Methyl-1,5-Diphenylpyrrol-3-Carbonsäure. Sm. 100° (B. 18, 2595). — IV, 357.
- $C_{20}H_{19}O_2N_2$ C 72,1 — H 5,7 — O 9,6 — N 12,6 — M. G. 333.
- 1) Di[Phenylamid] d. 2,4-Dimethylpyrrol-3,5-Dicarbonsäure. Sm. 255° (A. 236, 331). — IV, 93.
- $C_{22}H_{19}O_2N_5$ C 66,5 — H 5,3 — O 8,8 — N 19,4 — M. G. 361.
- 1) 1-[4-Dimethylamidophenyl]azo-4-[2,4-Dioxyphenylazo]benzol (Soc. 45, 110). — IV, 1444.
- $C_{20}H_{19}O_3N$ C 74,8 — H 5,9 — O 14,9 — N 4,4 — M. G. 321.
- 1) Cusparin (oder $C_{19}H_{17}O_3N$). Sm. 92° (89°). HCl + 3H₂O, (2HCl, PtCl₄ + 6H₂O), (HCl, AuCl₃), HBr, (HBr, Br₂), HJ, H₂SO₄ + 7H₂O (G. 13, 363; B. 25 [2] 201; 29 [2] 35; C. 1895 [2] 826). — III, 777.
- 2) Äthylapocinchensäure + H₂O. Sm. 124—126° (161—162° wasserfrei). Ag, (2HCl, PtCl₄) (B. 18, 2384; 20, 2680). — III, 839.
- 3) 6-[4-Methylphenyl]amido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 190° u. Zers. (A. 294, 280).
- 4) Cantharidin-1-Naphtylimid. Sm. 230—232° (O. 21 [1] 467). — III, 623.
- 5) Verbindung (Säure aus Rosanilin) (B. 5, 144). — II, 1090.
- $C_{20}H_{19}O_3N_2$ C 68,8 — H 5,4 — O 13,7 — N 12,0 — M. G. 349.
- 1) Verbindung (aus $\alpha\beta\gamma\delta$ -Tetraketo- $\alpha\delta$ -Diphenylbutan). Sm. 167° (B. 25, 3473). — III, 323.
- $C_{20}H_{19}O_4N$ C 71,2 — H 5,6 — O 19,0 — N 4,2 — M. G. 337.
- 1) Äthylester d. 4,5-Diketo-2-Phenyl-1-[4-Methylphenyl]tetrahydro-pyrrol-3-Carbonsäure. Sm. 152—153° (B. 30, 603). — IV, 369.
- 2) $\beta,2'$ -Methylimid d. $\alpha\beta$ -Diphenylpropan- $\beta,2,2'$ -Tricarbonsäure-2-Methylester. Sm. 145° (B. 27, 2945). — II, 2027.
- 3) $\alpha\gamma$ -Phenylimid d. β -Phenylpropan- $\alpha\alpha\gamma$ -Tricarbonsäure- α -Äthylester. Sm. 166° (C. 1899 [1] 730).
- $C_{20}H_{19}O_4Br$ 1) Diphenylester d. 2-Bromhexahydrobenzol-1,4-Dicarbonsäure. Sm. 127° (A. 258, 33). — II, 1835.
- $C_{20}H_{19}O_4P$ 1) Citronellalphosphorsäure. Sm. 203° (Am. 12, 555). — III, 475.
- $C_{20}H_{19}O_5N$ C 68,0 — H 5,4 — O 22,7 — N 3,9 — M. G. 353.
- 1) Tetramethyläther d. 6,7-Dioxy-1-[3,4-Dioxybenzoyl]isochinolin (Papaveraldin). Sm. 210°. HCl + 2 $\frac{1}{2}$ H₂O, (2HCl, PtCl₄ + H₂O), HNO₃ + 2H₂O, H₂SO₄, Pikrat (M. 6, 956; 7, 486). — IV, 442.
- 2) Hydrocotarninphthalid. Sm. 193°. (2HCl, PtCl₄), HJ (B. 29, 186). — III, 909.
- 3) Chelidonin + H₂O. Sm. 135°. HCl, (2HCl, PtCl₄ + 2H₂O), (HCl, AuCl₃), HNO₃, H₂SO₄ + 2H₂O (A. 29, 123, 131; 35, 113; R. 3, 190; B. [3] 13, 446; Fr. 24, 165; M. 18, 387). — III, 805.
- 4) Protopin, siehe $C_{20}H_{17}O_5N$. — III, 806.
- $C_{20}H_{19}O_5Br_2$ 1) Tetramethyläther d. Brombrasleindibromid. + 2C₂H₄O₂ (B. 23, 1432). — III, 653.
- $C_{20}H_{19}O_6N_2$ C 60,4 — H 4,8 — O 24,2 — N 10,6 — M. G. 397.
- 1) Diäthyläther d. 1-(2,4-Dinitro-3,6-Dioxyphenyl)amidonaphtalin. Sm. 128° (B. 24, 3830). — II, 949.
- $C_{20}H_{19}O_7N$ C 62,3 — H 4,9 — O 29,1 — N 3,6 — M. G. 385.
- 1) Methylnarkotin (A. Spl. 7, 62). — III, 915.
- 2) Oxim d. Hydrastonsäure. Na (B. 26 [2] 1008). — II, 2056.
- 3) 4-Methylphenylamid d. 3,4,5-Triacetoxylbenzol-1-Carbonsäure (B. [3] 11, 83). — II, 1923.
- 4) Verbindung (aus Berberisäureanhydrid). Sm. 139—140° (Soc. 57, 1044). — III, 802.
- $C_{20}H_{19}O_8N$ C 59,9 — H 4,7 — O 31,9 — N 3,5 — M. G. 401.
- 1) Opisammon (A. 50, 6). — II, 1941.

- C₂₀H₁₉O₈N** C 57,6 — H 4,6 — O 34,5 — N 3,3 — M. G. 417.
 1) Berberisäure. Sm. 177—182°. Ag₂ (Soe. 57, 1048). — III, 801.
 2) Verbindung (aus Hemipinsäure u. Amidoäthylpiperonylcarbonäureanhydrid). Sm. 180° (Soe. 55, 77; 57, 1099). — II, 1995.
- C₂₀H₁₉O₁₀Br₂** 1) Tribomerythrin + 1½ H₂O. Sm. 139° (wasserfrei) (A. 117, 310). — II, 1753.
- C₂₀H₁₉O₁₂Cl₂** 1) Verbindung (aus Katechin) (Soe. 41, 92). — III, 685.
 2) Base (aus Methylacetanilid). HCl, 2HCl (Bl. [3] 11, 1028). — IV, 1046.
- C₂₀H₁₉N₃Cl** 1) Phenylamidothioformyl-4-Methyl-s-Diphenylhydrazin. Sm. 152° (A. 303, 371). — IV, 1502.
- C₂₀H₁₉N₃S** 1) β-Phenylbenzylamido-α-Phenylthioharnstoff. Sm. 150° (A. 252, 289). — IV, 680.
- C₂₀H₂₀ON₂** C 78,9 — H 6,6 — O 5,3 — N 9,2 — M. G. 304.
 1) 3,5-Di[4-Methylphenylamido]-1-Oxybenzol. Sm. 120—121° (2HCl, PtCl₄) (G. 20, 321). — II, 724.
 2) Methyläther d. p-Diamido-4-Oxytriphenylmethan (G. 15, 57). — II, 904.
 3) 1-Aethylacetylamido-2-Phenylamidonaphthalin. Sm. 197—198° (B. 26, 190). — IV, 918.
 4) Äthyläther d. α-Phenylhydrazon-α-[1-Oxy-2-Naphtyl]äthan. Sm. 117° (B. 28, 1947). — IV, 775.
 5) Dehydrochinen (B. 20, 2517). — III, 817.
 6) Chinolinmethoxyd. Sm. unterh. 50° (B. 15, 195). — IV, 250.
 7) isom. Chinolinmethoxyd. Sm. 72—75°. (HCl, AuCl₃) (B. 18, 595).
- C₂₀H₂₀ON₄** C 72,3 — H 6,0 — O 4,8 — N 16,9 — M. G. 332.
 1) Acetylamidodiphenylindulin. Sm. 160° (A. 266, 199).
- C₂₀H₂₀O₂N₂** C 75,0 — H 6,2 — O 10,0 — N 8,7 — M. G. 320.
 1) Diäthyläther d. 4-Oxy-1-[4-Oxyphenyl]azonaphthalin. Sm. 122—123° (B. 27, 2358). — IV, 1440.
 2) 2'-Äthyläther d. 8-Oxy-4-Methyl-2-[4-Oxyphenyl]-5-Benzyl-1,3-Diazin. Sm. 242° (B. 23, 2955). — IV, 1041.
 3) Dimethoxyhydrat d. 6,6'-Bichinoly. Jodid, Sulfat + 2H₂O (B. 17, 2447). — IV, 1069.
 4) Hydroxylepidin. Sm. 280° (B. 19, 3300). — IV, 317.
 5) Benzoyldihydroharmalin. Sm. 158—159° (B. 30, 2485).
- C₂₀H₂₀O₂N₄** C 68,9 — H 5,7 — O 9,2 — N 16,1 — M. G. 348.
 1) Verbindung (Base aus Rosanilin). Sm. 176° (B. 5, 144). — II, 1090.
 2) Phenylhydrazin + αβ-Dioximido-αβ-Diphenyläthan. Sm. 149—150° (B. 21, 183). — IV, 785.
 3) 1,4-Diacetyl-3,6-Dibenzyl-1,4-Dihydro-1,2,4,5-Tetrazin. Sm. 93° (B. 30, 1889; A. 298, 23). — IV, 1290.
 4) Di[Phenylhydrasid] d. Isodehydracetsäure. Sm. 125° (A. ch. [6] 24, 107). — IV, 715.
- C₂₀H₂₀O₃N₂** C 71,4 — H 5,9 — O 14,3 — N 8,3 — M. G. 336.
 1) 1-Acetyl-3-[4-Methylphenyl]acetylamido-2-Keto-5-Methyl-2,3-Dihydroindol. Sm. 147° (B. 18, 193). — II, 1653.
 2) αδ-Di[Phenylamido]-γ-Ketopentan-α-Carbonsäure. Sm. 146° (Bl. [3] 13, 479).
- C₂₀H₂₀O₃N₄** C 65,9 — H 5,5 — O 13,2 — N 15,4 — M. G. 364.
 1) α-Phenylhydrazon-β-Phenylhydrazido-α-[2,3,4-Trioxypheyl]-äthan. Sm. 214—215° (B. 27, 1973; J. r. 25, 123). — IV, 772, 800.
 2) 2-Dimethylalloxanylamidodi[4-Methylphenyl]amin. Sm. 217—218° u. Zers. (B. 26, 544). — IV, 616.
- C₂₀H₂₀O₄N₂** C 68,2 — H 5,7 — O 18,2 — N 7,9 — M. G. 352.
 1) 4,4'-Di[β-Ketobutyrylamido]biphenyl. Sm. 233—235°. Na₂ (M. 10, 694).
 2) 4,4'-Di[Diacetylamido]biphenyl. Sm. 214—215° (176°) (Soe. 65, 56; B. 31, 663).
 3) Diacetat d. αβ-Dioximido-αβ-Di[4-Methylphenyl]äthan. Sm. 133 bis 134° (B. 22, 382). — III, 299.
 4) Diacetat d. isom. αβ-Dioximido-αβ-Di[4-Methylphenyl]äthan. Sm. 144° (B. 22, 382). — III, 299.
 5) Dipropionat d. αβ-Dioximido-αβ-Diphenyläthan (D. d. α-Benzyl-dioxim). Sm. 103—104° (B. 21, 801). — III, 294.

- $C_{22}H_{17}O_4N_2$ 6) Dipropionat d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. β -Benzildioxim). Sm. 121° (B. 21, 802). — III, 294.
- 7) Dipropionat d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. γ -Benzildioxim). Sm. 86–87° (B. 22, 714). — III, 294.
- 8) Diäthylester d. α -Diphenylazimethylenedicarbonsäure. Sm. 135° (J. pr. [2] 44, 567). — II, 1598.
- 9) 4-Methylphenylimid-4-Methylphenylamid d. Citronensäure. Sm. 205° (B. 19, 2352). — II, 503.
- $C_{20}H_{20}O_4N_4$ 1) C 63,2 — H 5,2 — O 16,8 — N 14,7 — M. G. 380.
 2) Diäthylester d. 2,3-Diphenyl-2,3-Dihydro-1,2,3,4-Tetrazin-5,6-Dicarbonsäure. Sm. 143° u. Zers. (B. 28, 66). — IV, 728.
- 3) Phenylhydrazid d. R-Tetramethylen-1,3-Di[Oxymethylen-carbonsäure]. Sm. 225–227° (B. 29, 2277). — IV, 724.
- $C_{20}H_{20}O_4N_6$ 1) C 58,8 — H 4,9 — O 15,7 — N 20,6 — M. G. 408.
 2, 3, 7, 8-Tetra[Acetylamido]-5, 10-Naphtdiazin (B. 22, 449). — IV, 1244.
- $C_{20}H_{20}O_4S_2$ 1) Dimethylester d. $\alpha\beta$ -Dimerkapt- $\alpha\beta$ -Diphenyläthendimethyläther-2,2'-Dicarbonsäure? Sm. 160–161° (B. 31, 2651).
- $C_{20}H_{20}O_5N_2$ 1) C 65,2 — H 5,4 — O 21,7 — N 7,6 — M. G. 368.
 1^a, 1^b, 6, 7-Tetramethyläther d. 6,7-Dioxy-1-[α -Oximido-3,4-Dioxybenzyl]isochinolin (Papaveraldoxim). Labile Form, Sm. 235°; stabile Form, Sm. 254°. HCl, HCl + 2H₂O, HCl + 3(4)H₂O, HCl + 10H₂O, 2HCl + 12H₂O (M. 7, 489; 16, 828). — IV, 442.
- 2) Tetramethyläther d. 6,7-Dioxy-1-[3,4-Dioxybenzoylamido]isochinolin. Sm. bei 170°. HCl (M. 16, 844). — IV, 442.
- $C_{20}H_{20}O_5N_6$ 1) C 56,6 — H 4,7 — O 18,9 — N 19,8 — M. G. 424.
 1) Anhydro- β -Oximido- α -Phenylhydrazonbuttersäure. Sm. 185° (B. 30, 1163). — IV, 690.
- $C_{20}H_{20}O_5Br_2$ 1) γ^1 -Acetat- α^1 -Methyläther- γ^1 -Aethyläther d. $\alpha\beta$ -Dibrom- γ -Keto- γ -[2,4-Dioxyphenyl]- α -[4-Oxyphenyl]propan. Sm. 130–131° (B. 32, 323).
 2) Tetramethyläther d. Dibrombrasilin. Sm. 215° (B. 23, 1431). — III, 653.
- $C_{20}H_{20}O_6N_2$ 1) C 62,5 — H 5,2 — O 25,0 — N 7,3 — M. G. 384.
 1) Tetramethoxydihydrodiphtalylidimid. Sm. 249° u. Zers. (B. 26, 538). — II, 1941.
- 2) $\alpha\beta$ -Diacetat-4,4'-Dimethyläther d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Di[4-Oxyphenyl]äthan. Sm. 139° (B. 22, 379). — III, 296.
- 3) $\alpha\beta$ -Diacetat-4,4'-Dimethyläther d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Di[4-Oxyphenyl]äthan. Sm. 130° (B. 22, 379). — III, 296.
- 4) Nitropapaverin + H₂O. Sm. 163°. HCl + 1½ H₂O, (2 HCl), PtCl₄, HJ, HNO₃ + H₂O, H₂SO₄ + 8H₂O, Dioxalat + 2H₂O (A. 94, 237; A. Spl. 8, 292). — IV, 440.
- 5) $\alpha\beta$ -Di[Phenylacetylamido]bernsteinsäure. Sm. 172–173° u. Zers. Na₂, Ca, Ag₂ (B. 26, 1772). — II, 438.
- 6) Dimethylester d. Bis-2-Aldehydophenoxyessigsäurehydrazon. Sm. 159–160° (B. 31, 2810).
- 7) Diäthylester d. Bis-2-Aldehydophenylkohlenensäurehydrazon. Sm. 109–110° (B. 31, 2808).
- 8) Diäthylester d. 1,3-Phtalylid[cyanmethylessigsäure]. Sm. 188° (Bl. [3] 11, 1098). — II, 2019.
- 9) Dinitro- α -Dipropylcarbogensäure. Sm. 176° (A. 184, 171). — II, 1477.
- 10) Diphenylamid d. Diacetylweinsäure. Sm. 214–215° (227°) (B. 24, 2960; A. 279, 138). — II, 422.
- 11) Di[Phenylamid] d. n-Butan- $\alpha\beta\gamma\delta$ -Tetracarbonsäure Sm. 187° (B. 28, 885).
- 12) Di[Phenylamid] d. h-Butan- $\alpha\beta\gamma\delta$ -Tetracarbonsäure. Sm. 167° (B. 28, 889).
- 13) Diacetat d. 3,3'-Di[Acetylamido]-4,4'-Dioxybiphenyl. Sm. 225° (B. 21, 3332). — II, 939.
- $C_{20}H_{20}O_6Br_2$ 1) Diacetat d. Dibromhexaoxybiphenyltetramethyläther. Sm. 178° (B. 9, 930). — II, 1042.

- C₂₀H₁₆O₂N₂** C 60,0 — H 5,0 — O 28,0 — N 7,0 — M. G. 400.
 1) **Oxycannabin.** Sm. 175–176° (Z. 1870, 86; J. 1871, 786; C. 1898 [1] 849). — III, 639.
 2) **Aethylester d. β-Keto-α-Di[2-Nitrobenzyl]propan-α-Carbonsäure.** Sm. 103° (B. 29, 637).
- C₂₀H₂₀O₆N₂** C 57,7 — H 4,8 — O 30,8 — N 6,7 — M. G. 416.
 1) **Di[3,4-Dimethoxybenzyliden]hydrazin-α-α'-Dicarbonsäure + H₂O.** Sm. 184° (B. [3] 17, 946).
- C₂₀H₂₀O₄Cl₂** 1) **Diacetat d. Dichlorhexaoxybiphenyltetramethyläther.** Sm. 172° (B. 9, 929). — II, 1042.
- C₂₀H₂₀O₆N₂** C 55,6 — H 4,6 — O 33,3 — N 6,5 — M. G. 432.
 1) **Azoopiansäure.** Sm. 245° u. Zers. Ag₂ (B. 20, 879). — IV, 1475.
- C₂₀H₂₀N₂J** 1) **Jodmethylat d. 3,5-Dibenzylpyridin (A. 280, 45).**
- C₂₀H₂₀N₂NP** 1) **4-Dimethylamidotriphenylphosphin.** Sm. 152° (B. 21, 1502; A. 260, 27). — IV, 1659.
- C₂₀H₂₀N₂Cl** 1) **7-Chloräthylat d. 9-Dimethylamido-α-β-Naphtophenazin. 2 + PtCl₄ (C. 1898 [2] 920).** — IV, 1201.
- C₂₀H₂₀N₂S** 1) **Verbindung (aus 2,5-Di-2,4-[Dimethylphenylamido]-1,3,4-Thiadiazol).** Sm. 103° (B. 23, 370). — IV, 1237.
- C₂₀H₂₀N₂S₂** 1) **Dithiocarbonyltri-1,3-Diamidobenzol (B. 17, 2657).** — IV, 576.
- C₂₀H₂₀JP** 1) **Aethyltriphenylphosphoniumjodid.** Sm. 164–165° (A. 229, 311). — IV, 1661.
- C₂₀H₂₁ON** C 82,5 — H 7,2 — O 5,5 — N 4,8 — M. G. 291.
 1) **6-Aethylphenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol.** Sm. 135° (A. 294, 306).
 2) **Benzoylderivat d. 2-Methylen-1,3-Dimethyl-3-Aethyl-2,3-Dihydroindol.** Sm. 119–120° (G. 28 [2] 380).
 3) **Benzoylderivat d. 2-Methylen-3,3-Dimethyl-1-Aethyl-2,3-Dihydroindol.** Sm. 140° (G. 29 [1] 87).
 4) **1-Benzoyl-β-Diäthyl-1,2-Dihydrochinolin.** Sm. 74–75° (B. 29, 2479). — IV, 230.
 5) **3- oder 2-Benzoyl-1,2,4,4- oder 1,3,4,4-Tetramethyl-1,4-Dihydrochinolin.** Sm. 102° (G. 28 [1] 192).
 6) **Methyläther d. Apocinehen.** Fl. HCl + 1/2 H₂O (B. 18, 2380). — III, 838.
 7) **Base (aus d. Verb. C₁₈H₁₇N).** HCl, (2HCl, PtCl₄) (A. 100, 65). — II, 342.
 C 75,2 — H 6,6 — O 5,0 — N 13,2 — M. G. 319.
 1) **4,4',4''-Triamido-α-Oxy-3''-Methyltriphenylmethan (Rosanilin).** Salze meist bek. Lit. bedeutend. — II, 1089.
 2) **4-Oxy-3-Phenylhydrazon-2,5,6,8-Tetramethylchinolin (B. 21, 1976).** — IV, 373.
- C₂₀H₂₁ON₃** C 69,1 — H 6,0 — O 4,6 — N 20,2 — M. G. 347.
 1) **Di[Phenylhydrazon]tropinon.** Sm. 130° u. Zers. + CHCl₃, HCl, Acetat (B. 30, 2708). — IV, 798.
- C₂₀H₂₁O₂N** C 78,2 — H 6,8 — O 10,4 — N 4,6 — M. G. 307.
 1) **6-[4-Aethoxyphenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol.** Sm. 207° (A. 294, 307).
 2) **Diäthyläther d. 2,6-Di[4-Oxyphenyl]pyrrol.** Sm. 210° (R. 10, 220). — IV, 439.
 3) **3-Hexyl-β-Naphtochinolin-1-Carbonsäure.** Sm. 291° (B. 27, 2022). — IV, 423.
- C₂₀H₂₁O₂N₂** C 71,6 — H 6,3 — O 9,6 — N 12,5 — M. G. 335.
 1) **1,4-Diacetyl-3,5-Di[4-Methylphenyl]4,5-Dihydro-1,2,4-Triazol.** Sm. 117° (B. 27, 3290; A. 298, 19).
 2) **Acetylderivat d. Verb. C₁₈H₁₉ON₃.** Sm. 173° (B. 21, 1596). — IV, 1284.
- C₂₀H₂₁O₂P** 1) **β-Oxyäthyltriphenylphosphoniumhydrat.** Salze, siehe diese (B. 27, 276).
- C₂₀H₂₁O₂N** C 74,3 — H 6,5 — O 14,9 — N 4,3 — M. G. 323.
 1) **Gallpein.** Sm. 115,5°. HCl + 4H₂O, (2HCl, PtCl₄), (HCl, AuCl₃), H₂SO₄ + 7H₂O (G. 13, 363; B. 25 [2] 260). — III, 778.
- C₂₀H₂₁O₂N₂** C 68,4 — H 6,0 — O 13,7 — N 11,9 — M. G. 351.
 1) **Codeincyanid (A. 77, 371).** — III, 903.
- C₂₀H₂₁O₂N** C 70,8 — H 6,2 — O 18,9 — N 4,1 — M. G. 339.
 1) **Canadin.** Sm. 132,5°. HCl, (2HCl, PtCl₄), (HCl, AuCl₃), HNO₃, H₂SO₄ (B. 27 [2] 312; J. 1873, 819; 1875, 784). — III, 804.

- C₂₀H₂₁O₅N** 2) Hydroberberin. Sm. 167°. HCl, (2HCl, PtCl₄), (HBr, Br₂), HJ, HNO₃, H₂SO₄ + xH₂O, + Br₂ (A. *Spt.* 2, 191; J. 1889, 1970). — III, 800.
- 3) Tetramethyläther d. 6,7-Dioxy-1-[3,4-Dioxybenzyl]isochinolin (Papaverin). Sm. 147°. Salze meist bek. Lit. bedeutend. — IV, 439.
- 4) Phenylamidoflizzsäure. Sm. 140° (B. 21, 2065). — II, 1968.
- 5) 1,2-Lakton d. 3,4-Dioxy-1-[2-Methyl-1,2,3,4-Tetrahydro-1-Chinoly]-oxymethylbenzol-3,4-Dimethyläther-2-Carbonsäure (Opiansäuretetrahydrochinolid) Sm. 180° (B. 20, 182). — IV, 204.
- 6) Diäthylester d. α -Phenylimido- α -Phenyläthan- β - β -Dicarbonsäure. Sm. 75° (B. 18, 2624). — II, 1850.
- C₂₀H₂₁O₅Br** 1) Tetramethyläther d. Brombrasilin. Sm. 180–181° (B. 21, 3014). — III, 653.
- C₂₀H₂₁O₄N** C 62,0 — H 5,4 — O 28,9 — N 3,6 — M. G. 387.
- 1) Dibenzoylglykosamin. Sm. 168° u. Zers. (H. 14, 363). — II, 1194.
- C₂₀H₂₁O₁₀N** C 55,2 — H 4,8 — O 36,8 — N 3,2 — M. G. 435.
- 1) Verbindung (aus Hemipinsäure u. ω -Amidoäthylpiperonylcarbonsäure). Sm. 155–160° u. Zers. (Soc. 57, 1062). — II, 1994.
- C₂₀H₂₁N₃Cl** 1) α -Phenyl- α -Dibenzylhydrasoniumchlorid. Sm. 153–154° (A. 252, 291). — IV, 811.
- C₂₀H₂₁ON₂** C 78,4 — H 7,2 — O 5,2 — N 9,1 — M. G. 306.
- 1) Chinen. Sm. 81–82°. (2HCl, ZnCl₂ + 2H₂O) (B. 17, 1960; 18, 1223). — III, 817.
- 2) Verbindung (aus Anilin, Brenztraubensäure u. Isovaleraldehyd). Sm. 160° (A. 242, 280). — IV, 359.
- C₂₁H₂₃O₂N₂** C 74,5 — H 6,8 — O 9,9 — N 8,7 — M. G. 322.
- 1) 1,2-Di-Benzoylamido]hexahydrobenzol. Sm. noch nicht bei 280° (A. 295, 215).
- 2) Diäthyläther d. 3-[4-Oxyphenyl]amido-4-Amido-1-Oxynaphtalin. Sm. 103° (B. 27, 2361).
- 3) 2,5-Diketo-1,4-Di[2,6-Dimethylphenyl]hexahydro-1,4-Diazin. Sm. 203° (J. pr. [2] 40, 436). — II, 547.
- 4) 3,6-Diketo-2,5-Diäthyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 268° (B. 23, 2014, 2022; 25, 2316, 2924). — II, 494.
- 5) isom. 3,6-Diketo-2,5-Diäthyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 145° (B. 23, 2023; 25, 2317). — II, 434.
- 6) isom. 3,6-Diketo-2,5-Diäthyl-1,4-Diphenylhexahydro-1,4-Diazin. Sm. 163° (B. 23, 2015). — II, 434.
- 7) 3,6-Diketo-2,5-Dimethyl-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin. Sm. 183–184° (B. 25, 2920). — II, 472.
- 8) isom. 3,6-Diketo-2,5-Dimethyl-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin. Sm. 155–162° (B. 25, 2921). — II, 472.
- 9) 3,6-Diketo-2,5-Dimethyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 248° (B. 25, 2307, 2921). — II, 508.
- 10) isom. 3,6-Diketo-2,5-Dimethyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 191–195° (191–202°) (B. 25, 2307, 2921). — II, 508.
- 11) α -1,4-Dibenzoyl-2,5-Dimethylhexahydro-1,4-Diazin. Sm. 224–225° (B. 30, 226; J. pr. [2] 47, 505). — IV, 483.
- 12) β -1,4-Dibenzoyl-2,5-Dimethylhexahydro-1,4-Diazin + H₂O. Sm. 147 bis 148° (wasserfrei) (J. pr. [2] 55, 60). — IV, 483.
- 13) Diacetylderivat d. 3-Methyl-2-[3-Amidophenyl]-1,2,3,4-Tetrahydrochinolin. Sm. 178° (B. 19, 535). — IV, 996.
- 14) Äthylester d. β -[α -Benzylidenamidobenzyl]amidopropen- α -Carbonsäure. Sm. 129° (M. 17, 347).
- 15) 1-Allylamid-2-[2,4,5-Trimethylphenyl]amid d. Benzol-1,2-Dicarbonsäure. Sm. 179° u. Zers. (B. 17, 1806). — II, 1808.
- 16) 4'-Amido-4-Biphenylimid d. β -Dimethylbutan- β - γ -Dicarbonsäure. Sm. 196° (A. 292, 177). — IV, 965.
- C₂₁H₂₃O₂N₂** C 68,6 — H 6,3 — O 9,1 — N 16,0 — M. G. 350.
- 1) p-Diacetylditolonylhydrazidin. Sm. 185° (B. 27, 3282). — IV, 1289.
- 2) Di[α -Phenyläthylidenhydrazid] d. Äthan- α - β -Dicarbonsäure. Sm. 238° (J. pr. [2] 51, 192). — III, 130.
- C₂₁H₁₉O₂Br** 1) bism. Bromanethol. Sm. bei 200° (J. pr. [2] 51, 425).
- C₂₁H₂₃O₂N₂** C 71,0 — H 6,5 — O 14,2 — N 8,3 — M. G. 338.
- 1) Isoamylfurfurin. (2HCl, PtCl₄), HJ (J. 1855, 560). — III, 722.

- C₂₀H₂₁O₂N₂** 2) Verbindung (aus Benzil u. Propionsäurenitril). Sm. 207° (B. 16, 2652; Soc. 57, 705). — III, 295.
- C₂₀H₂₂O₄N₂** C 67,8 — H 6,2 — O 18,1 — N 7,9 — M. G. 354.
- 1) *p*-Dinitro-2,6-Diisopropyl-9,10-Dihydroanthracen (G. 14, 282). — II, 255.
- 2) Diäthyläther d. 2,5-Diketo-1,4-Di[4-Oxyphenyl]hexahydro-1,4-Diazin. Sm. 265° (B. 22, 1789). — II, 721.
- 3) Tetramethyläther d. 6,7-Dioxy-1-[α -Amido-3,4-Dioxybenzyl]isochinolin (Papaveraldylamin). Sm. 80–85°. HCl (M. 16, 846). — IV, 443.
- 4) Acetylcinchoenin. 2HCl (M. 15, 797). — III, 841.
- 5) Di[Benzoylamido]capronsäure (Lyasursäure). Sm. 144–145°. Na + H₂O, Ba + 1½ H₂O, Sr, Ag + ½ H₂O (B. 28, 3190; H. 25, 528). — III, 893.
- 6) 2,2'-Diisopropylazobenzol-5,5'-Dicarbonsäure. Sm. 280° u. Zers. Na₂ + H₂O, K₂ + H₂O, Ba + 2H₂O, Ag₂ (J. r. 16, 162; 21, 489). — IV, 1466.
- 7) β -Äthylester d. γ -Phenylhydrason- α -Phenylbutan- α,β -Dicarbonsäure. Sm. 235° u. Zers. (A. 236, 193). — IV, 718.
- 8) Diäthylester d. β -Phenylhydrason- α -Phenyläthan- α,β -Dicarbonsäure. Sm. 69–70° (A. 246, 341). — IV, 718.
- 9) Di[2-Methylphenylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure. Sm. 135° (Bl. [3] 19, 766).
- 10) Di[3-Methylphenylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure. Sm. 138° (Bl. [3] 19, 766).
- 11) Di[4-Methylphenylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure. Sm. 238° (Bl. [3] 19, 766).
- 12) polym. 2-Methylphenylamid d. Acetylamisensäure. Sm. 177° (A. 270, 317; 279, 84).
- 13) polym. 4-Methylphenylamid d. Acetylamisensäure. Sm. 207° (A. 279, 90).
- 14) Di[4-Aethoxyphenylamid] d. Fumarsäure. Sm. 214° (G. 28 [2] 195).
- 15) Verbindung (aus d. Verb. C₁₆H₁₂O₂N₂Cl₂). Sm. 90,5° (B. 19, 2341). — II, 347.
- C₂₀H₂₁O₂N₄** C 62,8 — H 5,7 — O 16,8 — N 14,7 — M. G. 382.
- 1) 4,4'-Di[Isopropylidenedehydrasido]biphenyl-3,3'-Dicarbonsäure. Sm. 265–267° (B. 31, 2581).
- 2) Diäthylester der Di[Phenylhydrason]äthan- α,β -Dicarbonsäure. α -Modif. Sm. 120–121°; β -Modif. Sm. 136–137° u. Zers.; γ -Modif. Sm. 173–175° u. Zers. (A. 261, 130; B. 28, 65). — IV, 728.
- 3) Diphenylamidoformiat d. $\beta\gamma$ -Dioximidopentan. Sm. 164–170° u. Zers. (B. 22, 3108). — II, 446.
- 4) Di[β -Acetyl- α -Phenylhydrazid] d. Bernsteinsäure. Sm. 219° (B. 26, 2496). — IV, 704.
- C₂₀H₂₁O₄Br** 1) Tetrabromguajakharzsäure (A. 119, 275). — II, 1878.
- C₂₀H₂₁O₂N₂** C 64,9 — H 5,9 — O 21,6 — N 7,6 — M. G. 370.
- 1) Di[4-Methylphenylamid] d. Citronensäure. Sm. 161° (B. 19, 2353). — II, 503.
- 2) isom. Di[4-Methylphenylamid] d. Citronensäure. Sm. 189°. Ag (B. 22, 987; Soc. 63, 699). — II, 503.
- C₂₀H₂₁O₂N₄** C 60,3 — H 5,5 — O 20,1 — N 14,1 — M. G. 398.
- 1) Anhydrid d. Succinphenylhydrazinsäure. Sm. 137° (B. 25, 2750). — IV, 703.
- C₂₀H₂₃O₆N₂** C 62,2 — H 5,7 — O 24,8 — N 7,2 — M. G. 356.
- 1) 2,2'-Di[α -Oxyisopropyl]azobenzol-5,5'-Dicarbonsäure. Na₂ + 10 H₂O (B. 15, 2550). — IV, 1471.
- 2) Diäthylester d. 2,2'-Azophenoxyleisigsäure. Sm. 110–111° (J. pr. [2] 29, 171). — IV, 1405.
- 3) Di[2-Methoxyphenylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure (Guajakolpiperazindiurethan). Sm. 181° (Bl. [3] 19, 187).
- C₂₀H₂₁O₄N₄** C 58,0 — H 5,3 — O 23,2 — N 13,5 — M. G. 414.
- 1) Dinitrochinin + H₂O (Soc. 39, 470). — III, 815.
- 2) 3,5,3',5'-Tetra[Acetylamido]-4,4'-Dioxybiphenyl. Sm. 280° (B. 21, 3532). — II, 989.

- C₂₀H₂₇O₂N₂** C 59,7 — H 5,5 — O 27,8 — N 7,0 — M. G. 402.
 1) Diäthylester d. **2,2'-Asoxyphenoxylessigsäure**. Sm. 113—114° (*J. pr.* [2] **29**, 160). — **IV**, 1342.
 2) Verbindung (aus Helicin u. 3-Amidobenzol-1-Carbonsäureamid) + 2 H₂O. Sm. 112,5—113° (wasserfrei) (*A.* **218**, 192). — **III**, 74.
- C₂₀H₂₂O₂N₄** C 53,8 — H 4,9 — O 28,7 — N 12,6 — M. G. 446.
 1) **Phenylglykosazon-3-Carbonsäure**. Sm. 206—208° u. Zers. (*A.* **236**, 172). — **II**, 1289.
- C₃₀H₂₂O₁₀Cl₂** 1) **Tetraäthylester d. 3,6-Dichlor-1,4-Diketo-1,4-Dihydrobenzol-2,5-Di[Methyldicarbonsäure]**. Sm. 132°. Na₂ (*Am.* **13**, 38; **17**, 598; *B.* **26**, 398). — **II**, 2097.
- C₂₀H₂₂O₁₀N₄** C 41,8 — H 3,8 — O 44,6 — N 9,7 — M. G. 574.
 1) **Tetraäthylester d. 2,4,6-Trinitrobenzol-1-Methyldicarbonsäure-3-Nitromethyldicarbonsäure** (T. d. Trinitrophenylennitrodimalonsäure). Sm. 111° (*A.* **14**, 356). — **II**, 2075.
- C₂₀H₂₂N₂S** 1) **2,6-Di[4-Isopropylphenyl]-1,3,4-Thiodiazol**. Sm. 45° (*B.* **6**, 333). — **II**, 1388.
- C₂₀H₂₂N₂S₂** 1) **Di[Allylamid] d. Biphenylendi-4,4'-Amidothioameisensäure** (Diallyl-4,4'-Biphenylendithioharnstoff) (*B.* **11**, 833). — **IV**, 965.
- C₂₀H₂₂O₂N** C 77,7 — H 7,4 — O 10,4 — N 4,5 — M. G. 309.
 1) **Di[3-Oxy-1,2,3,4-Tetrahydro-2-Naphtyl]amin**. Sm. 165—166°. (2HCl, PtCl₄) (*B.* **26**, 1838; *A.* **288**, 129). — **II**, 855.
 2) **2-Naphtylimid d. βε-Dimethylhexan-γδ-Dicarbonsäure**. Sm. 126° (*A.* **292**, 174).
- C₂₀H₂₂O₂N** C 73,8 — H 7,1 — O 14,8 — N 4,3 — M. G. 325.
 1) **Protocurin**. Sm. 306° u. Zers. (2HCl, PtCl₄), H₂SO₄ (*C.* **1897** [2] 1079).
- C₂₀H₂₂O₂N₂** 2) **Aethyläther d. Thebenin** (Aethebenin). HCl, HJ + H₂O (*B.* **32**, 182).
 C 68,0 — H 6,5 — O 13,6 — N 11,9 — M. G. 353.
 1) **4,4',6'-Tri[Acetylamido]-3,3'-Dimethylbiphenyl**. Sm. oberh. 290° (*B.* **25**, 1035). — **IV**, 1169.
 2) **Diäthyläther d. 6-Acetylamido-5,8-Dioxy-1-Phenyl-1,2-Dihydro-1,4-Benzdiazin**. Sm. 162° (*B.* **24**, 3826). — **II**, 950.
 3) **Verbindung (aus Acetessigsäureäthylester u. α-Phenylhydrazidoessigsäurephenylamid)**. Sm. 147° (*A.* **301**, 61).
 C 70,4 — H 6,7 — O 11,8 — N 4,1 — M. G. 341.
 1) **Acetylcodein**. Sm. 133,5°. HCl + 2H₂O, (2HCl, PtCl₄) (*Soc.* **27**, 1031; *A.* **222**, 212). — **III**, 905.
 2) **Benzoylpellotin**. Fl. (2HCl, PtCl₄), (HCl, AuCl₃) (*B.* **29**, 217). — **III**, 778.
 3) **Diäthylester d. α-Phenylamido-α-Phenyläthan-ββ-Dicarbonsäure**. Sm. 98—100°. HCl (*B.* **28**, 1451; **31**, 607). — **II**, 1850.
 4) **Acetat d. Beberin** (A. d. Bebirin). Sm. 147—148° (*B.* **29**, 2057). — **III**, 798.
- C₂₀H₂₂O₄N₂** C 65,0 — H 6,2 — O 17,3 — N 11,4 — M. G. 369.
 1) **3,3'-Diisopropylidiazaoamidobenzol-6,6'-Dicarbonsäure**. Ba, Ag (*A.* **117**, 62). — **IV**, 1578.
- C₂₀H₂₂O₂N** C 67,2 — H 6,4 — O 22,4 — N 3,9 — M. G. 357.
 1) **Aethylester d. Morphincarbonsäure**. Sm. 113°. Oxalat + 2H₂O (*B.* **25** [2] 202). — **III**, 900.
- C₂₀H₂₂O₆N** C 64,3 — H 6,2 — O 25,7 — N 3,7 — M. G. 373.
 1) **Helicintoluid** (*A.* **154**, 32). — **III**, 69.
- C₂₀H₂₂O₆N₂** C 59,9 — H 5,7 — O 23,9 — N 10,5 — M. G. 401.
 1) **Diäthylester d. 6,6'-Dimethoxyidiazaoamidobenzol-3,3'-Dicarbonsäure**. Sm. noch nicht bei 250° (*A.* **117**, 50). — **IV**, 1578.
- C₂₀H₂₂O₃P** 1) **Aethylester d. Di[α-Acetoxybenzyl]phosphinsäure** (*B.* **50**, 604). — **IV**, 1664.
- C₂₀H₂₂O₂N** C 61,7 — H 5,9 — O 28,8 — N 3,6 — M. G. 389.
 1) **Diäthylester d. 1-Oximido-5-Methyl-3-[3,4-Dioxyphenyl]-1,2,3,4-Tetrahydrobenzol-3,4-Methylenäther-2,4-Dicarbonsäure**. Sm. 202° u. Zers. (*A.* **303**, 229).
- C₂₀H₂₂O₉N** C 57,0 — H 5,5 — O 34,2 — N 3,3 — M. G. 421.
 1) **3-Amidobenzol-1-Carbonsäures Helicin**. Sm. 142° (*B.* **12**, 2033). — **III**, 68.
- C₂₀H₂₂O₁₂N** C 51,2 — H 4,9 — O 40,9 — N 3,0 — M. G. 469.
 1) **Indikanin** (*J.* **1858**, 471). — **III**, 596.

- C₂₃H₂₁O₁N₃** C 45,4 — H 4,3 — O 42,3 — N 8,0 — M. G. 529.
- 1) Tetraäthylester d. 2,4,6-Trinitrobenzoldi-1,3-[Methyldicarbon säure] (T. d. s-Trinitrophenylendimalonsäure). Sm. 123° (Am. 12, 20). — II, 2075.
- C₂₀H₂₃N₁Cl** 1) Chlormethylat d. Cinchen. 2 + PtCl₄ (B. 18, 1221). — III, 837.
- C₂₀H₂₇N₁J** 1) Jodmethylat d. Cinchen. Sm. 186° (B. 18, 1221). — III, 837.
- 2) 1-Jodäthylat d. 2-Methyl-1-Aethyl-4,5-Diphenylimidasol. Sm. 163° (Soc. 67, 44). — IV, 1032.
- C₂₀H₂₁ON₂** C 77,9 — H 7,8 — O 5,2 — N 9,1 — M. G. 308.
- 1) Desoxychinin + 2 1/2 H₂O. Sm. 52°. (2HCl, PtCl₄) (B. 29, 372). — III, 817.
 - 2) Desoxyconchinin + 2 H₂O. Sm. 80—82° (B. 28, 3147). — III, 825.
 - 3) Methylcinchonin. Sm. 74—75°. (2HCl, PtCl₄ + H₂O) (2HCl, AuCl₃ + H₂O) (B. 13, 2292; 28, 1066; A. 90, 219; J. pr. [2] 3, 151). — III, 832.
 - 4) Methylcinchonidin. Sm. 75—76°. (2HCl, PtCl₄ + 3 H₂O), HBr + H₂O, (2HJ + H₂O) (A. 90, 221; 269, 255; B. 13, 2192; J. 1882, 1109). — III, 851.
 - 5) Methylcinchotoxin. Sm. 74—75° (B. 27, 1280; 28, 1066). — III, 846.
 - 6) 3-Keto-2-Aethyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 98—99,5° (B. 25, 2938). — II, 508.
 - 7) 3-Keto-2-Dimethyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin. Sm. 129—130° (B. 25, 2940). — II, 508.
 - 8) Phenylmonamid d. Diäthyl-1,2,3,4-Tetrahydrochinolin-1-Carbon säure. Sm. 149—150° (B. 29, 2480). — IV, 210.
- C₂₀H₂₁O₂N₂** C 74,1 — H 7,4 — O 9,9 — N 8,6 — M. G. 324.
- 1) αβ-Dioximido-αβ-Diphenyloktan. Sm. 192—193° (C. 1896 [2] 1091).
 - 2) βγ-Dioximido-δε-Diphenyloktan. Sm. 235—237° (B. 29, 385). — III, 301.
 - 3) αδ-Dioximido-αδ-Di[2,4-Dimethylphenyl]butan. Sm. 140° (B. 20, 1375). — III, 301.
 - 4) αβ-Dioximido-αβ-Di[4(p)-Isopropylphenyl]äthan (Cumindioxim). Sm. 249° (B. 23, 2065). — III, 301.
 - 5) isom. αβ-Dioximido-αβ-Di[4(p)-Isopropylphenyl]äthan. Sm. 227° (B. 23, 2066). — III, 301.
 - 6) α'-Di[Benzoylamido]hexan. Sm. 154—155° (B. 29, 1167).
 - 7) βε-Di[Benzoylamido]hexan. Sm. 238° (B. 28, 383).
 - 8) isom. βε-Di[Benzoylamido]hexan. Sm. 193—198° (B. 28, 385).
 - 9) isom. ρ-Di[Benzoylamido]hexan. Sm. 125° (H. 17, 547).
 - 10) βγ-Di[Phenylacetylamido]butan. Sm. 195—196° (B. 25, 3281). — II, 368.
 - 11) αβ-Di[Acetyl-2-Methylphenylamido]äthan. Sm. 152—153° (B. 25, 3257). — II, 461.
 - 12) αβ-Di[Acetyl-4-Methylphenylamido]äthan. Sm. 137—139° (B. 25, 3261). — II, 491.
 - 13) 4,4'-Di[Acetylamido]-3,3'-Diäthylbiphenyl. Sm. 307° (B. 17, 474). — IV, 985.
 - 14) 2,2'-Di[Acetylamido]-3,5,3',5'-Tetramethylbiphenyl. Sm. 210° (B. 28, 2862). — IV, 985.
 - 15) Aethyläther d. 8-(4-Acetylamidophenyl)amido-5-Oxy-1,2,3,4-Tetrahydro-naphthalin. Sm. 177—178° (B. 31, 905).
 - 16) αβ-Di[8-Oxy-1,2,3,4-Tetrahydro-1-Chinoly]äthan. Sm. 233° (B. 19, 1047). — IV, 200.
 - 17) Pinolnitro-2-Naphtylamin. Sm. 194—195° (A. 253, 266). — III, 508.
 - 18) Chinin + 3 H₂O. Sm. 57° (174,5—175° wasserfrei); subl. 170—180°. Salze meist bekannt. Lit. bedeutend. — III, 507.
 - 19) Isochinin. Sm. 185°. HCl + 2 H₂O, 2 HCl, (2HCl, PtCl₄), H₂SO₄ + 10 H₂O, + AgNO₃ (M. 12, 332; 14, 554). — III, 821.
 - 20) Conchinin (Chinidin). Sm. 171,5°. Salze meist bekannt. Lit. bedeutend. — III, 823.
 - 21) Isoconchinin. (2HCl, PtCl₄ + 3 H₂O), H₂SO₄ + 8 H₂O (A. 243, 149). — III, 826.
 - 22) Chinicin. Sm. 60°. Salze meist bekannt (Soc. 24, 61; 25, 101; J. 1853, 473; A. 166, 277; 178, 244; 243, 148; M. 10, 227). — III, 827.

- C₂₀H₂₁O₂N₂** 23) Pseudonichin. Sm. 190—191°. HCl + 1¹/₂ H₂O, (2HCl, PtCl₄), HNO₃ + 3H₂O (M. 14, 416). — III, 821.
- 24) Methyleuprein. Chlorid, Jodid, Sulfat (A. 230, 66). — III, 822.
- 25) Aethylester d. 1-Phenyl-4,5-Camphylpyrazol-3-Carbonsäure. Sm. 114° (Am. 19, 404). — IV, 864.
- 26) Aethylester d. Verb. C₁₂H₁₉O₂N₂ (aus Desoxycinchonin). (2HCl, PtCl₄) (B. 28, 3146). — III, 837.
- 27) Phenylamid d. Hexan-*αα*-Dicarbonsäure. Sm. 166—167° (A. 295, 179).
- 28) Phenylamid d. *β*-Methylpentan-*αα*-Dicarbonsäure. Sm. 136° (A. 295, 181).
- 29) Phenylamid d. *γ*-Methylpentan-*αα*-Dicarbonsäure. Sm. 158—159° (A. 295, 186).
- 30) Di[Aethylphenylamid] d. Bernsteinsäure. Sm. 101—101,5° (A. 292, 193).
- 31) Di[2,4,5-Trimethylphenylamid] d. Oxalsäure. Sm. 230° (M. 9, 750). — II, 552.
- 32) Diphenylamid d. Korksäure (Suberanilid). Sm. 183° (A. 68, 30). — II, 415.
- 33) Base (aus Dihydrojodconchinin). Sm. 78—79°. (2HCl, PtCl₄) (M. 12, 675). — III, 825.
- 34) Verbindung (aus 1,4-Dioxybenzol u. 2-Amido-1-Methylbenzol) (B. 15, 1974).
- 35) Verbindung (aus 1,4-Dioxybenzol u. 4-Amido-1-Methylbenzol). Sm. 95 bis 98° (B. 15, 1974). — II, 939.
- C₂₀H₂₁O₂S** 1) Aethylester d. *ββ*-Dimerkaptο-*α*-Aethylbutterdiphenyläthersäure. Sm. 70—71° (A. 259, 371). — II, 789.
- 2) Aethylester d. *ββ*-Dimerkaptοbutterdibenzyläthersäure. Fl. (B. 29, 1648).
- C₂₀H₂₄O₂N₂** C 70,6 — H 7,1 — O 14,1 — N 8,2 — M. G. 340.
- 1) Aethyläther d. Cinchotenin. Sm. 210,5°. 2HCl, (2HCl, PtCl₄) (M. 15, 171, 788; 16, 65). — III, 841.
- 2) Aethyläther d. 6-[4-Acetylamido-3-Methylphenyl]acetylamido-3-Oxy-1-Methylbenzol. Sm. 115° (A. 287, 206).
- 3) Aethyläther d. 5-Acetylamido-2-[4-Methylphenyl]acetylamido-4-Oxy-1-Methylbenzol. Sm. 165° (B. 27, 2709).
- 4) Diäthyläther d. 2-Keto-1,4-Di[*α*-Oxyphenyl]hexahydro-1,4-Diazin. Sm. 162° (B. 23, 2030). — II, 721.
- 5) Säure (aus 3,6-Diketo 2,5-Diäthyl-1,4-Diphenylhexahydro-1,4-Diazin). Sm. 40—80° (B. 23, 2023). — II, 434.
- 6) Aethylester d. Phenylazocamphoformencarbonsäure. Sm. 210° (Am. 21, 258).
- 7) Verbindung (aus *αβ*-Diamido-*αβ*-Diphenyläthan u. Oxalsäurediäthylester). Sm. 242° u. Zers. (B. 28, 3179). — IV, 978.
- C₂₀H₂₄O₂N₄** C 65,2 — H 6,5 — O 13,0 — N 15,2 — M. G. 368.
- 1) Diäthyläther d. 3-Acetylamido-6-Dimethylamido-1,4-Dioxyphenazin. Sm. 179° (B. 24, 3828). — II, 949.
- C₂₀H₂₁O₂N₂** C 67,4 — H 6,7 — O 18,0 — N 7,9 — M. G. 356.
- 1) Aethylenäther d. Aethylbenzhydroxamsäure. Fl. (B. 29, 1163).
- 2) Diäthyläther d. *αα*-Dibenzoyl-*ββ*-Dioxyäthyl]hydrazin. Sm. 125° (B. 27, 182). — II, 1191.
- 3) *s*-Di[2-Isopropylphenyl]phenylhydrazin-5,5'-Dicarbonsäure (J. r. 19, 295; 21, 489). — IV, 1508.
- 4) Diäthylester d. Phenylhydrazonanemonsäure. Sm. 167° (M. 17, 294). — IV, 797.
- 5) Diäthylester d. *αβ*-Di[Phenylamido]bernsteinsäure. Sm. 152° (150°; 145°) (B. 21, 1797; 27, 1604; B. 48, 728; A. 252, 170). — II, 438.
- 6) Diäthylester d. Aethylendiphenyldi[amidameisensäure]. Sm. 87 bis 88° (B. 20, 785). — II, 374.
- 7) Diäthylester d. *αβ*-Di[Phenylamido]äthan-2,2'-Dicarbonsäure (l. d. Aethylendianthranilsäure). Sm. 117° (B. 28, 1686).
- 8) Diäthylester d. *αβ*-Phenylhydrazido-*α*-Phenyläthan-*ββ*-Dicarbonsäure. Sm. 79—80°. HCl (B. 28, 1451) — IV, 741.
- 9) Diäthylester d. 3,3'-Dimethyl-4,4'-Biphenylendiamidoameisensäure. Sm. 187° (B. 21, 1066). — IV, 981.
- 10) Di[4-Aethoxyphenylamid] d. Bernsteinsäure. Sm. 258° (C. 1897 [1]49).

- C₂₀H₂₄O₄N₄** C 62,5 — H 6,2 — O 16,7 — N 14,6 — M. G. 384.
 1) Aethylester d. 4-Aethoxyphenylazo-4-Aethoxyphenylhydrazonessigsäure. Sm. 127—128° (B. 28, 1691). — IV, 1240.
 2) Diäthylester d. Diphenyltetrazondioessigsäure. Sm. 117° (B. 28, 1226). — IV, 1309.
- C₂₀H₂₄O₂N₂** C 64,5 — H 6,4 — O 21,5 — N 7,5 — M. G. 372.
 1) Nitrosotetrahydropapaverin. Sm. 180—182° (M. 19, 327).
 2) Säure (aus d. 4-Aethoxyphenylamidoessigsäure). Sm. 157° (B. 22, 1780). — II, 721.
- C₂₀H₂₄O₆N₂** C 61,9 — H 6,2 — O 24,7 — N 7,2 — M. G. 388.
 1) Tetramethyläther d. *p*-Diacetyldiamido-1,4,1',4'-Tetraoxybiphenyl. Sm. 251° (B. 17, 2128). — II, 1037.
 2) Hexamethyläther d. Di[2,4,5-Trioxybenzyliden]hydrasin. Sm. 203° (B. 32, 290).
 3) Yohimbinsäure (C. 1899 [1] 529).
 4) 4-Methylphenylamid d. Schleimsäure (J. pr. [2] 6, 153). — II, 503.
 5) Di[4-Aethoxyphenylamid] d. $\alpha\beta$ -Dioxyäthan- $\alpha\beta$ -Dicarbonsäure. Sm. 271° (C. 1897 [1] 49).
- C₂₀H₂₄O₄N₄** C 57,7 — H 5,8 — O 23,1 — N 13,4 — M. G. 416.
 1) Verbindung (aus d. Diäthyläther d. 1,4-Di[4-Oxyphenyl]hexahydro-1,4-Diazin). Zers. bei 120—130° (B. 23, 1980). — II, 717.
- C₂₀H₂₄O₄S₂** 1) Aethylester d. $\beta\beta$ -Diphenyldisulfon- α -Aethylbuttersäure. Sm. 111° (A. 259, 372). — II, 789.
- C₂₀H₂₄O₇N₂** C 59,5 — H 5,7 — O 27,8 — N 6,9 — M. G. 403.
 1) Glykovanillinphenylhydrason. Sm. 195° (B. 18, 1661). — IV, 763.
 2) Monacetat d. Dioxim d. Säure C₁₈H₂₀O₆. Sm. 195° (B. 27 [2] 594).
- C₂₀H₂₄O₁₀N₂** C 53,1 — H 5,3 — O 35,4 — N 6,1 — M. G. 452.
 1) Diäthylester d. Tetracetyldiamidodihydrochinondicarbonsäure. Sm. 206° (B. 21, 1764). — II, 2004.
- C₂₀H₂₁O₁₀Cl₂** 1) Tetraäthylester d. 2,5-Dichlor-3,6-Dioxybenzol-1,4-Di[Methyl-dicarbonsäure]. Sm. 160—161° (Am. 13, 39). — II, 2096.
- C₂₀H₂₁O₁₁J₂** 1) Thymljodid (C. 1898 [1] 1063).
- C₂₀H₂₁N₂Cl** 1) dimolec. Formmesididchlorid. Sm. 178° (B. 28, 750).
- C₂₀H₂₁N₂S** 1) *s*-Onanthyliendiphenylthioharnstoff (A. 148, 335). — II, 445.
- C₂₀H₂₁ON** C 81,4 — H 8,5 — O 5,4 — N 4,7 — M. G. 295.
 1) 6[4-Isopropylbenzyliden]amido-3-Oxy-4-Isopropyl-1-Methylbenzol. Sm. 153—154° (G. 25 [2] 391). — III, 56.
 2) α -Oximido- $\alpha\beta$ -Diphenylloktan. Sm. 89° (B. 22, 347). — III, 239.
- C₂₀H₂₁O₂N** C 77,2 — H 8,0 — O 10,3 — N 4,5 — M. G. 311.
 1) Benzoat d. Pulegenacetoxim. Sm. 178—179° (C. 1899 [1] 38).
- C₂₀H₂₁O₂N** C 73,4 — H 7,6 — O 14,7 — N 4,3 — M. G. 327.
 1) Aethocodein (B. 15, 1486). — III, 904.
 2) 2-Naphtylmonamid d. $\beta\epsilon$ -Dimethylhexan- $\gamma\delta$ -Dicarbonsäure. Sm. 164° (A. 292, 174).
- C₂₀H₂₁O₂N₃** C 67,6 — H 7,0 — O 13,5 — N 11,8 — M. G. 355.
 1) 1,4-Diäthyläther d. 2-Oximido-1,4-Di[4-Oxyphenyl]hexahydro-1,4-Diazin. Sm. bei 80° (B. 23, 1980). — II, 717.
- C₂₁H₂₃O₂N** C 69,9 — H 7,3 — O 18,6 — N 4,1 — M. G. 343.
 1) Codamin. Sm. 121°. (2HCl, PtCl₄ + 2H₂O), HJ + 1½ H₂O (A. 153, 56; 282, 213; A. Spl. 8, 280). — III, 911.
 2) Laudanin. Sm. 166°. HCl + 6H₂O, (2HCl, PtCl₄ + 2H₂O), HBr + 2H₂O, HJ + H₂O, H₂SO₄ + 4H₂O, Dioxalat + 6H₂O, Ditartrat + 3H₂O (A. 153, 53; 176, 201; 282, 208; A. Spl. 8, 272; B. 13, 1074, 1075; M. 13, 693). — III, 912.
 3) Laudanidin. Sm. 177°. (2HCl, PtCl₄ + 4H₂O), HJ, Oxalat + 2H₂O (A. 282, 209). — III, 912.
 4) d-Tetrahydropapaverin. Sm. 223—224°. d-Bromcamphersulfonat (Soc. 73, 898).
 5) l-Tetrahydropapaverin. Sm. 223—224°. d-Chlorcamphersulfonat, d-Bromcamphersulfonat (Soc. 73, 897, 901).
 6) l-Tetrahydropapaverin. Sm. 200—201°. + CH₃O, HCl + 3H₂O, (2HCl, PtCl₄ + 3H₂O), H₂SO₄ + 7H₂O, H₂Cr₂O₇, Pikrat, Tartrat + H₂O (M. 7, 495; 19, 321; Soc. 73, 896, 902). — IV, 440.

- $C_{20}H_{25}O_4N$ 7) Diäthylester d. 2,6-Dimethyl-4-Benzyl-1,4-Dihydropyridin-3,5-Dicarbonensäure. Sm. 115° (B. 21, 1783). — IV, 371.
C 64,0 — H 6,7 — O 25,6 — N 3,7 — M. G. 375.
- $C_{20}H_{25}O_6N$ 1) Diäthylester d. α -Phtalylamidopentan- $\gamma\gamma$ -Dicarbonensäure. Sm. 62° (B. 23, 3692). — II, 1812.
2) Diäthylester d. 1-Oximido-5-Methyl-3-[2-Methoxyphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonensäure. Sm. 145° (A. 303, 251).
C 59,5 — H 6,2 — O 23,8 — N 10,4 — M. G. 403.
1) Trinitroditerebenthylen (B. 50, 420; 51, 119). — II, 220.
- $C_{20}H_{25}O_6Cl$ 1) Tetraäthyläther d. Chlorhexaoxybiphenyl. Sm. 129–130° (B. 31, 616).
 $C_{20}H_{25}O_6N$ 1) C 56,7 — H 5,9 — O 34,0 — N 3,3 — M. G. 423.
1) Verbindung (aus d. Diäthyläther d. 1,2,3-Trioxibenzol) (M. 2, 216).
- $C_{20}H_{25}O_{10}Br_2$ 1) Pentabromderivat d. Farbstoffs $C_{20}H_{25}O_{10}$ (Soc. 35, 22). — III, 667.
- $C_{20}H_{25}NS_2$ 1) Diphenyläther d. 4,4-Dimerkapto-2,2,6-Trimethylhexahydropyridin. Sm. 87°. HCl (B. 31, 3149).
- $C_{20}H_{25}N_2J$ 1) Jodmethylat d. Desoxycinchonin. Sm. 176° (B. 31, 2357).
2) Jodmethylat d. Desoxycinchonidin. Sm. 167–168° (B. 31, 2355).
C 77,4 — H 8,4 — O 5,2 — N 9,0 — M. G. 310.
- $C_{20}H_{26}ON_2$ 1) Methylcinchonamin. Sm. 139°. (2HCl, PtCl₄) (A. 225, 230; A. ch. [6] 19, 115). — III, 928.
2) Di[4-Isopropylbenzyl]nitrosamin (A. 245, 310). — II, 560.
C 73,6 — H 8,0 — O 9,8 — N 8,6 — M. G. 326.
- $C_{20}H_{26}O_2N_2$ 1) Hydrochinin + 2H₂O. Sm. 172,3° (wasserfrei). Salze meist bek. (B. 15, 856; A. 241, 257; Fr. 27, 561; M. 16, 72). — III, 859.
2) Hydroconchinin (Hydrochinidin) + 2½H₂O. Sm. 166–167°. Salze meist bek. (B. 14, 1955; 15, 520, 855, 1656, 3008; A. 243, 146). — III, 827.
3) Hydrochinicin. (2HCl, PtCl₄ + H₂O), Oxalat (A. 241, 273). — III, 860.
4) Diäthyläther d. 1,4-Di[4-Oxyphenyl]hexahydro-1,4-Diazin. Sm. 223° (B. 22, 1782; 23, 1979). — II, 717.
5) dimolec. Formmesidid. Sm. 285° (B. 28, 751).
- $C_{20}H_{26}O_2S$ 1) Di[2,3,5,6-Tetramethylphenyl]sulfon. Sm. 37° (B. 18, 2843). — II, 828.
2) Di[3-Oxy-4-Isopropyl-1-Methylphenyl]-P-Sulfid. Sm. 152–153° (G. 17, 93). — II, 971.
C 70,2 — H 7,6 — O 14,0 — N 8,2 — M. G. 342.
- $C_{20}H_{26}O_3N_2$ 1) Hydrochinin + H₂O. Sm. bei 100°. (2HCl, PtCl₄) (A. 108, 347). — III, 815.
2) Cupreinmethoxyhydrat. Salze siehe (A. 230, 66). — III, 822.
3) Äthylester d. Phenylhydrasoncampheroxalsäure. Sm. 212° (Am. 19, 402). — IV, 709.
4) Verbindung (Base aus Harn) (B. 25 [2] 755).
C 67,0 — H 7,3 — O 17,9 — N 7,8 — M. G. 358.
- $C_{20}H_{26}O_4N_2$ 1) Tetraäthyläther d. 2,6,2',5'-Tetraoxyazobenzol. Sm. 128° (A. 215, 147). — IV, 1446.
 $C_{20}H_{26}O_4N_4$ C 62,2 — H 6,7 — O 16,6 — N 14,5 — M. G. 386.
1) Di[Methylphenylhydrason] d. Glykose. Sm. 152° u. Zers. (B. 22, 91). — IV, 792.
2) Di[2-Methylphenylhydrason] d. Glykose. Sm. 201° u. Zers. (A. 239, 229). — IV, 804.
3) Di[4-Methylphenylhydrason] d. Glykose. Sm. 193–194° (A. 239, 229). — IV, 810.
4) Harnstoff (aus Acetylphenylsemicarbazid). Sm. 171–172° (B. 27, 2207).
- $C_{20}H_{26}O_5S$ 1) Di[3-Oxy-4-Isopropyl-1-Methylphenyl]-P-Sulfon. Sm. 213–214° (G. 19, 348). — II, 971.
2) 3-Methyl-6-Isopropylphenylester d. 3-Oxy-4-Isopropyl-1-Methylbenzol-6-Sulfonsäure (J. pr. [2] 13, 172). — II, 847.
- $C_{20}H_{26}O_5S_2$ 1) Rhamnosebenzylmercaptal. Sm. 125° (B. 29, 552).
 $C_{20}H_{26}O_5N_4$ C 59,7 — H 6,5 — O 19,9 — N 13,9 — M. G. 402.
1) Di[Phenylhydrason] d. Rhamnoheptose. Sm. bei 200° u. Zers. (B. 23, 3108). — IV, 793.
- $C_{20}H_{26}O_6S$ 1) Triphenylmethan- α -Carbonsäure-P-Sulfonsäure. Ba + H₂O (J. pr. [2] 32, 624). — II, 1481.
- $C_{20}H_{26}O_6S_2$ 1) Glykosebenzylmercaptal. Sm. 133° (B. 29, 551).

- C₂₀H₁₆O₅S₂** 2) Galaktosebensylmerkaptal. Sm. 130° (B. 29, 551).
3) Di[γ-4-Methylphenylsulfonpropyl]äther. Sm. 79—80° (B. 24, 1835; J. pr. [2] 51, 297).
- C₂₀H₂₀O₈N₂** C 61,5 — H 6,7 — O 24,6 — N 7,2 — M. G. 390.
1) m-d-Cocainurethan. Sm. 100—101° HCl (B. 27, 1884). — III, 868.
2) m-l-Cocainurethan. Sm. 143°. HCl, HBr (B. 27, 1878). — III, 868.
C 57,4 — H 6,2 — O 23,0 — N 13,4 — M. G. 418.
- C₃₀H₂₆O₆N₄** 1) Di[Phenylhydrazon] d. α-Glykooktose. Sm. 210—212° u. Zers. (A. 270, 98). — IV, 792.
2) Di[Phenylhydrazon] d. d-Mannoktose. Sm. bei 223° u. Zers. (B. 23, 2235). — IV, 794.
3) Diäthylester d. α,β-Di[Phenylhydrazido]-α,β-Dioxyäthan-α,β-Dicarbon-säure. Sm. 116—118° u. Zers. (B. 28, 67). — IV, 728.
4) Diäthylester d. 1,3-Phталyldi[β-Hydrazonbuttersäure] (D. d. Iso-phталyldihydrazinacetessigsäure). Sm. 145° (J. pr. [2] 54, 77).
5) Diäthylester d. 1,4-Phталyldi[β-Hydrazonbuttersäure]. Sm. 240° (J. pr. [2] 54, 83).
6) Verbindung (d. 2-Amidobenzol-1-Carbonsäureamid mit Oxalsäurediäthyl-ester). Sm. 87—90° (J. pr. [2] 43, 231). — II, 1246.
C 55,3 — H 6,0 — O 25,8 — N 12,9 — M. G. 434.
- C₂₀H₂₀O₇N₄** 1) Verbindung (aus Acetessigsäureäthylester u. Hydroxylamin). Zers. bei 140° (B. 24, 500). — I, 495.
- C₃₀H₂₆O₉N₂** C 54,8 — H 5,9 — O 32,9 — N 6,4 — M. G. 438.
1) Verbindung (aus Acetchloroessigsäureäthylester). Sm. 82° (A. 278, 74).
- C₃₀H₂₆O₁₀N₂** C 52,9 — H 5,7 — O 35,2 — N 6,2 — M. G. 454.
1) Tetraäthylester d. 3,6-Diamido-1,4-Diketo-1,4-Dihydrobenzol-2,5-Di[Methyldicarbon-säure]. Sm. 159—160° (Am. 13, 40). — II, 2097.
- C₂₀H₂₀N₂S** 1) Benzylimidobenzylamidomethylisoamylsulfid (B. 19, 2349). — II, 529.
C₂₀H₂₀N₂S 1) Aethylsenfölsauramin. Sm. 179° (J. pr. [2] 50, 442). — IV, 1175.
- C₃₀H₂₆N₄S₂** 1) 4,4'-Biphenylendi[Isopropylthioharnstoff]. α-Modif. Sm. noch nicht bei 300°, β-Modif. Sm. 170° (B. 27, 1559). — IV, 965.
C 76,7 — H 8,6 — O 10,2 — N 4,5 — M. G. 313.
- C₃₀H₂₇O₂N** 1) Benzoat d. l-Oximido-3-Hexyl-5-Methyl-1,2,3,4-Tetrahydrobenzol. Sm. 150—152° (A. 288, 345).
C 73,0 — H 8,2 — O 14,6 — N 4,2 — M. G. 329.
- C₃₀H₂₇O₃N** 1) Äthylester d. Propylphenyltetrahydroazindoncarbonsäure. Sm. 150—152°. (2HCl, PtCl₄), (HCl, AuCl₃) (B. 29, 816). — IV, 367.
C 67,2 — H 7,6 — O 13,4 — N 11,8 — M. G. 357.
- C₃₀H₂₇O₃N₂** 1) Nitrosotetrahydrochinin. Fl. HNO₂ (B. 29, 803). — III, 816.
2) Nitrosotetrahydrochinidin. Fl. HNO₂ (B. 29, 804). — III, 826.
C 62,3 — H 7,0 — O 12,5 — N 18,2 — M. G. 385.
- C₃₀H₂₇O₃N₃** 1) Verbindung (aus d. Propionylcyanessigsäureäthylester u. Phenylhydrazin). Sm. 87° (C. 1895 [2] 83).
- C₃₀H₂₇O₄N** C 69,6 — H 7,8 — O 18,6 — N 4,0 — M. G. 345.
1) Echitenin. Sm. oberh. 120°. (2HCl, HgCl₂ + 2H₂O), (2HCl, PtCl₄) (A. 203, 164). — III, 881.
2) Codeinäthylloxxyhydrat. Jodid (A. 88, 339; C. r. 93, 591). — III, 904.
3) Morphinäthyläthermethyloxxyhydrat. Sm. 132° (A. ch. [5] 27, 278). — III, 908.
4) Isobutylester d. Benzoylcegonin. Sm. 61—62° (Am. 10, 148). — III, 867.
5) Isobutylester d. d-Benzoylcegonin. HCl + H₂O (B. 23, 987). — III, 867.
- C₃₀H₂₇O₄P** 1) Di[3-Methyl-6-Isopropylphenyl]phosphorsäure. Na, Ba + 5H₂O (B. 18, 1705; G. 15, 280). — II, 770.
2) Di[α-Oxy-4-Isopropylbenzyl]phosphinsäure (Dioxyamylphosphin-säure). Sm. bei 140°. Ba + H₂O (Bl. [3] 2, 206). — IV, 1680.
- C₃₀H₂₇O₅N₂** C 59,3 — H 6,7 — O 23,7 — N 10,5 — M. G. 405.
1) Phenylhydrazid d. 4-Methylphenylgalaktosecarbonsäure. Sm. 206° (B. 27, 1291). — IV, 726.
2) Phenylhydrazid d. 4-Methylphenylamidoglykosecarbonsäure. Sm. 211—212° (B. 27, 1290). — IV, 726.
- C₃₀H₂₇O₆N₂** C 53,0 — H 5,9 — O 31,8 — N 9,3 — M. G. 453.
1) Trinitroditerebenthyll (Soc. 54, 161). — II, 176.

- $C_{30}H_{27}O_{11}N$ C 52,5 — H 5,9 — O 38,5 — N 3,1 — M. G. 457.
 1) Amygdalin + $3H_2O$. Sm. 200° (wasserfrei). Lit. bedeutend. — III, 569.
 2) amorphes Amygdalin (A. 31, 263; *Berz. J.* 20, 428; *J.* 1874, 887). — III, 570.
- $C_{30}H_{17}N_2J$ 1) Jodäthylat d. 1,4-Dibenzylhexahydro-1,4-Diazin. Sm. 197° (C. 1898 [1] 381).
 C 76,9 — H 9,0 — O 5,1 — N 9,0 — M. G. 312.
- $C_{29}H_{29}ON_2$ 1) Tetraäthylamidophenyläther. Sm. 89°. (2HCl, PtCl₄), Pikrat (B. 21, 2061). — II, 657.
- $C_{29}H_{29}O_2N_2$ 1) 7-Nitro-3-Amyl-2-Hexylchinolin. Sm. 53°. Pikrat (B. 24, 1737). — IV, 344.
 C 73,2 — H 8,5 — O 9,8 — N 8,5 — M. G. 328.
 2) Tetrahydrochinin. HCl + H_2O , (2HCl, PtCl₄) (M. 16, 631; B. 29, 803). — III, 816.
 3) Tetrahydrochinidin. Fl. (B. 29, 804). — III, 826.
 4) Azocamphanon (Bicamphanonazin). Sm. bei 222° (217–218°) (G. 24 [2] 47, 319; 26 [2] 292; 27 [2] 118). — III, 495.
 5) Tetraäthylamidophenyldioxyd. Sm. 67° (B. 20, 1640). — II, 817.
 6) Äthylester d. 1-Phenylhydrason-3-Isobutyl-5-Methyl-1,2,3,4-Tetrahydrobenzol-2-Carbonsäure. Sm. 162–163° (A. 288, 335). — IV, 693.
- $C_{29}H_{29}O_3N_2$ C 69,8 — H 8,1 — O 13,9 — N 8,1 — M. G. 344.
 1) Anhydrid d. Camphersäuremononitril. Sm. 172–173° (175–176°) (G. 26 [1] 420; B. [3] 15, 986).
 C 66,7 — H 7,8 — O 17,7 — N 7,8 — M. G. 360.
 2) Tetraäthyläther d. p-Diamido-1,4,1',4'-Tetraoxybiphenyl. Sm. 129°. 2HCl, (2HCl, PtCl₄) (E. 12, 40; A. 215, 148). — II, 1037.
- $C_{29}H_{29}O_4Br$ 1) Verbindung (aus Dammarharz). — III, 555.
- $C_{29}H_{29}O_5N_2$ C 63,8 — H 7,4 — O 21,3 — N 7,4 — M. G. 376.
 1) Anhydropseudonitrocampher. Sm. 190° u. Zers. (Soc. 73, 996).
- $C_{29}H_{29}O_6N_2$ C 61,2 — H 7,1 — O 24,5 — N 7,1 — M. G. 392.
 1) Acetat d. 2,6-Tetracetyldiamido-3-Oxy-4-Isopropyl-1-Methylbenzol. Sm. 184–186° (G. 20, 418). — II, 773.
 2) Triäthylester d. γ -Phenylhydrasonbutan- α - β -Dicarbonsäure- β -Methylcarbonsäure (Tr. d. Phenylhydrason- β -Acettricarbaldehydsäure). Sm. 100–101° (B. 21, 3756). — IV, 727.
- $C_{29}H_{29}O_6N_4$ C 57,1 — H 6,7 — O 22,9 — N 13,3 — M. G. 420.
 1) Di[Phenylhydrason] d. Galaaktose. Sm. 220–225° u. Zers. (A. 288, 151). — IV, 794.
- $C_{29}H_{29}O_7N_2$ C 58,8 — H 6,9 — O 27,4 — N 6,9 — M. G. 408.
 1) Diäthylester d. 1-Oxamido-5-Oximido-3-[4-Methoxyphenyl]-1-Methylhexahydrobenzol-2,4-Dicarbonsäure. Sm. 195° (A. 303, 248).
 Dichloriderivat d. Farbstoffs $C_{29}H_{29}O_{10}$ (Soc. 35, 22). — III, 667.
- $C_{29}H_{29}N_2J_2$ 1) Jodmethylat d. Base $C_{19}H_{23}N_2$ (aus Di-o-Xylylendiimin) (B. 24, 2406). — IV, 996.
- $C_{29}H_{29}N_2S$ 1) s-Tetraäthylamidodiphenylsulfid. Sm. 83° (79,5–80°). 2HCl, (2HCl, PtCl₄), H_2SO_4 , Pikrat (B. 21, 2059; 23, 556). — II, 804.
- $C_{29}H_{29}N_2S_2$ 1) Tetraäthylamidodiphenyldisulfid. Sm. 72°. (2HCl, PtCl₄ + $4H_2O$), Pikrat (B. 20, 1637). — II, 817.
- $C_{29}H_{29}N_2As_2$ 1) Di[4-Diäthylamidophenyl]diarsenid. Sm. 180° (A. 270, 147). — IV, 1686.
- $C_{29}H_{29}N_2Hg$ 1) Quecksilberdi[4-Diäthylamidophenyl]. Sm. 160,5° (G. 23 [2] 541). — IV, 1707.
- $C_{29}H_{29}N_2Se$ 1) Tetraäthylamidodiphenylselenid. Sm. 83°. 2HCl, Pikrat (B. 24, 766). — II, 819.
- $C_{29}H_{29}OCl$ 1) Chlorid d. Dextropimarsäure. Sm. 64–66° (B. 19, 2172). — II, 1437.
- $C_{29}H_{29}N_2Cl$ 1) Chlormethylat d. β -Di[4-Dimethylamidophenyl]propan. 2 + PtCl₄ (B. 6, 350). — IV, 984.
- $C_{29}H_{29}N_2J$ 1) Jodmethylat d. β -Di[4-Dimethylamidophenyl]propan (B. 6, 349). — IV, 984.
- $C_{29}H_{29}ON_2$ C 76,4 — H 9,6 — O 5,1 — N 8,9 — M. G. 314.
 1) Methyloxyhydrat d. β -Di[4-Dimethylamidophenyl]propan. Chlorid, Jodid (B. 6, 349). — IV, 984.

- C₂₇H₃₀O₂N₄** C 67,0 — H 8,4 — O 8,9 — N 15,6 — M. G. 358.
 1) **Aethylsäther d. 6-Oxy-5-Methyl-2,4-Diäthyl-1,3-Diazin**. Sm. 153,5°.
 (2 HCl, PtCl₄) (*J. pr.* [2] **26**, 351). — **IV**, 829.
- C₂₇H₃₀O₂Br₂** 1) **Dibrombicampher**. Sm. 128—129° (*G.* **27** [2] 127).
- C₂₇H₃₀O₂S** 1) **Diterebenthylsulfonsäure** (*Soc.* **54**, 162). — **II**, 176.
- C₂₉H₃₆O₂N₂** C 66,2 — H 8,3 — O 17,7 — N 7,7 — M. G. 362.
 1) **d-Bisnitrosocaron**. *Zers.* bei 112—118° (*B.* **28**, 641, 652). — **III**, 502.
 2) **i-Bisnitrosocaron**. Sm. 145° u. *Zers.* (*B.* **28**, 642). — **III**, 503.
 3) **Bisnitrosocarveol**. Sm. 133° u. *Zers.* (*B.* **28**, 646). — **III**, 504.
 4) **Binotropulegon** (*B.* **28**, 654; **29**, 1080). — **III**, 510.
 5) **2,5-Dimethylhexahydro-1,4-Diazin + 2 Molec. Guajakol**. Sm. 66 bis 67° (*B.* [3] **19**, 620).
- C₂₉H₃₀O₂N₂** C 46,7 — H 5,8 — O 31,1 — N 16,3 — M. G. 514.
 1) **Säure** (aus Fleisch) (*B.* **26** [2] 897).
- C₂₉H₃₀O₂Cl₂** 1) **Diäthylester d. 3,6-Dichlor-2,5-Diäthoxy-1,4-Benzochinondiäthylacetaldehidsäure**. Sm. 122° (*Am.* **17**, 645). — **III**, 351.
- C₂₇H₃₀N₂Cl₂** 1) **Tetramethyldi-4-Methylphenyläthylendiammoniumchlorid**. + PtCl₄, + 2 HgCl₂ (*A.* **224**, 338). — **II**, 487.
- C₂₇H₃₀N₂Br₂** 1) **Tetramethyldi-4-Methylphenyläthylendiammoniumbromid** (*A.* **224**, 337). — **II**, 487.
- C₂₇H₃₀N₂S** 1) **Di[2-Amido-6-Diäthylamidophenyl]disulfid**. Fl. Pikrat (*A.* **251**, 57). — **II**, 817.
- C₂₉H₃₁O₂N** C 75,7 — H 9,8 — O 10,1 — N 4,4 — M. G. 317.
 1) **Dicamphorylimid**. Sm. 160° (*B.* **13**, 1405). — **III**, 497.
- C₂₉H₃₁O₂Cl** 1) **Verbindung** (aus Dammarharz). — **III**, 555.
- C₂₉H₃₁ON₂** C 72,3 — H 10,1 — O 5,1 — N 8,8 — M. G. 316.
 1) **Verbindung** (aus Isodicampher). Sm. 165—166° (*G.* **27** [1] 168).
- C₂₉H₃₁O₂N₂** C 72,3 — H 9,6 — O 9,6 — N 8,4 — M. G. 332.
 1) **Bisnitrocaron**. Sm. 120—130° (*B.* **28**, 644). — **III**, 503.
 2) **Dioxim d. 1- α -Dicarvelon**. Sm. 223° (*A.* **305**, 227).
 3) **Dioxim d. 1- α -Dicarvelon**. Sm. 287° u. *Zers.* (*A.* **305**, 227).
 4) **Verbindung** (aus Campherroxim). Sm. 100—105° (*G.* **26** [2] 513).
- C₂₉H₃₁O₂N₂** C 61,9 — H 8,2 — O 8,2 — N 21,6 — M. G. 388.
 1) **2,3,5,6-Tetramethyl-1,4-Diazin + $\beta\gamma$ -Dioximidobutan**. Sm. 178° (*A.* **264**, 244). — **IV**, 827.
- C₂₉H₃₁O₂Br₂** 1) **1- α -Dicarvelondihydrobromid**. Sm. 165° (*A.* **305**, 228).
- C₂₉H₃₁O₂Hg** 1) **Myristinat d. Quecksilberphenyloxyhydrat** (*J. pr.* [2] **1**, 185). — **IV**, 1765.
- C₂₉H₃₁O₂N₂** C 65,9 — H 8,8 — O 17,6 — N 7,7 — M. G. 364.
 1) **Caronbisnitrosen** (*B.* **28**, 645, 1602).
 2) **Succinyltropein**. HBr (*C.* **1895** [1] 434).
- C₂₉H₃₁O₂N₂** C 63,2 — H 8,4 — O 21,0 — N 7,4 — M. G. 380.
 1) **Malyltropein**. (HCl, AuCl₃), HBr (*C.* **1895** [1] 434).
- C₂₉H₃₁O₂P₂** 1) **Anhydrid d. α -Camphenphosphonsäure**. Sm. 184° (*Soc.* **65**, 37). — **IV**, 1681.
- C₂₉H₃₁O₂N₂** C 60,6 — H 8,1 — O 24,2 — N 7,1 — M. G. 396.
 1) **Tetryltropein**. (HCl, AuCl₃), HBr (*C.* **1895** [1] 434).
 2) **Tetraäthyläther d. Di[$\beta\beta$ -Dioxyäthylamid] d. Benzol-1,2-Dicarbonsäure** (Phthalyldiamidoacetal). Sm. 90° (*B.* **27**, 3102). — **II**, 1813.
 3) **Tetraäthyläther d. Di[$\beta\beta$ -Dioxyäthylamid] d. Benzol-1,3-Dicarbonsäure**. Sm. bei 75° (*B.* **27**, 3105). — **II**, 1827.
 4) **Tetraäthyläther d. Di[$\beta\beta$ -Dioxyäthylamid] d. Benzol-1,4-Dicarbonsäure** (Terephthalyldiamidoacetal). Sm. 165° (*B.* **27**, 3103). — **II**, 1832.
- C₂₉H₃₁O₂N₂** C 58,2 — H 7,8 — O 27,2 — N 6,8 — M. G. 412.
 1) **Camphernitrat**. Fl. (*A.* **159**, 283). — **III**, 487.
- C₂₉H₃₁O₂N₂** C 47,2 — H 6,3 — O 40,9 — N 5,5 — M. G. 508.
 1) **Triacetylchitosan** (*H.* **20**, 503). — **III**, 576.
- C₂₉H₃₁O₂S** 1) **Stärkeschwefelsäure** (*A.* **55**, 13). — **I**, 1087.
- C₂₉H₃₁ON** C 79,2 — H 10,9 — O 5,3 — N 4,6 — M. G. 303.
 1) **Phenylamid d. Myristinsäure**. Sm. 84° (*A.* **202**, 174; *J. pr.* [2] **52**, 60). — **II**, 370.
- C₂₉H₃₁OCl** 1) **Verbindung** (aus Pinen). Fl. (*Soc.* **55**, 47). — **III**, 519.
- C₂₉H₃₁O₂N** C 75,2 — H 10,3 — O 10,0 — N 4,4 — M. G. 319.
 1) **Phenylamidostearinsäure**. Sm. 143° (*B.* **22**, 1748). — **II**, 436.

- C₂₀H₃₀O₂N₂** 2) β -Diisoamylamidoisopropylester d. Benzolcarbonsäure. Oxalat (A. ch. [6] 13, 439). — II, 1140.
- C₂₀H₃₁ON₂** C 75,5 — H 10,7 — O 5,0 — N 8,8 — M. G. 318.
- 1) Humulennitrolpiperidin. Sm. 153°. HCl, (2HCl, PtCl₄) (Soc. 67, 62, 780). — IV, 23.
- 2) Caryophyllennitrolpiperidin. Sm. 141—143° (A. 279, 392). — III, 538.
- C₂₀H₃₁OBr₂** 1) Dibromexoretin (A. 166, 215). — III, 631.
- C₂₀H₃₁O₂S₂** 1) Diamyläther d. α -[2-Methylphenyl]sulfon- $\beta\gamma$ -Dimerkaptopropan. Fl. (J. pr. [2] 56, 463).
- 2) Diamyläther d. α -[4-Methylphenyl]sulfon- $\beta\gamma$ -Dimerkaptopropan. Fl. (J. pr. [2] 56, 459).
- C₂₀H₃₁O₄N₂** C 65,6 — H 9,3 — O 17,5 — N 7,6 — M. G. 366.
- 1) tert. Nitrosomenthon (3-Keto-4-Nitroso-1-Methyl-4-Propylhexahydrobenzol; Bisnitrosomenthon). Sm. 112,5° (B. 27, 1915; 28, 1586). — III, 480.
- 2) act. Bisnitrotetrahydrocarvon. Sm. 119° (B. 29, 33). — III, 484.
- C₂₀H₃₁O₄S₂** 1) $\beta\gamma$ -Diamylsulfon- α -[4-Methylphenyl]sulfonpropan. Sm. 112—113° (J. pr. [2] 56, 460).
- C₂₀H₃₁N₂J** 1) Di[*l*-Jodmethylat] d. 1,2-Di[*l*-Piperidylmethyl]benzol. Sm. 234° (B. 31, 427).
- C₂₀H₃₂N₂Cl** 1) Verbindung (Basc aus Iso-*l*-Menthonoxim). Sm. 59—60°. 2HCl, 2HJ (A. 278, 305). — III, 479.
- C₂₀H₃₀O₂Br₂** 1) Verbindung (aus Cincol) (A. 230, 228). — III, 474.
- C₂₀H₃₀N₂Cl₂** 1) Dichlorisoamylat d. Nikotin. + PtCl₄ (A. 90, 226). — IV, 857.
- C₂₀H₃₀N₂J₂** 1) Dijodisoamylat d. Nikotin (A. 90, 226). — IV, 857.
- C₂₀H₃₁O₁₀N₃** C 50,1 — H 7,7 — O 33,4 — N 8,8 — M. G. 479.
- 1) Trinitrodracoalban (C. 1896 [2] 713).
- C₂₀H₃₂ON₂** C 74,5 — H 11,8 — O 5,0 — N 8,7 — M. G. 322.
- 1) s-Campheylcampholyharnstoff. Sm. 259—260° (G. 22 [2] 113). — I, 1301.
- C 44,0 — H 6,9 — O 44,0 — N 5,1 — M. G. 546.
- C₂₀H₃₀O₁₅N₂** 1) Achillein (A. 58, 27; 155, 153). — III, 772.
- C₂₀H₃₂N₂Cl** 1) Dichloräthylat d. 1,2-Di[Diäthylamidomethyl]benzol. + PtCl₄ (B. 31, 594).
- C₂₀H₃₂N₂Br₂** 1) Dibromäthylat d. 1,2-Diäthylamidomethylbenzol (B. 31, 593).
- C₂₀H₃₁OCl** 1) Chlorid d. Arachinsäure. Sm. 66—67° (B. 11, 2031). — I, 460.
- C₂₀H₃₀O₂Br** 1) α -Bromarachinsäure. Sm. 62—64°. Na, Ca, Cu, Ag (M. 17, 530).
- 2) Äthylester d. α -Bromstearinsäure. Sm. 35—36° (33—34,5°) (B. 24, 2227, 2391). — I, 488.
- C₂₀H₃₀O₂J** 1) α -Jodarachinsäure. Sm. 70° (M. 17, 533).
- C₂₀H₃₀O₂N** C 67,2 — H 10,9 — O 17,9 — N 3,9 — M. G. 357.
- 1) Nitroarachinsäure. Sm. 70° (B. 11, 2031). — I, 498.
- C₂₀H₄₀O₂N₂** C 70,6 — H 11,8 — O 9,4 — N 8,2 — M. G. 340.
- 1) sym. Nonyldekoxyharnstoff. Sm. 101° (B. 15, 761). — I, 1304.
- 2) Dinonylamid d. Oxalsäure. Sm. 92° (B. 24, 3358). — I, 1366.
- C₂₀H₄₁ON** C 77,1 — H 13,2 — O 5,1 — N 4,5 — M. G. 311.
- 1) Palmitinimidoisobutyläther. HCl (Sm. 73°) (B. 26, 2841).
- 2) Stearinimidoäthyläther. HCl (Sm. 85° u. Zers.). — I, 1489.
- 3) Amid d. Arachinsäure. Sm. 108° (A. 97, 262; J. pr. [2] 48, 330; M. 17, 545). — I, 1249.
- C₂₀H₄₁O₂N** C 73,4 — H 12,5 — O 9,8 — N 4,3 — M. G. 327.
- 1) α -Amidoarachinsäure. Sm. 212—214° u. Zers. Na, Ca (M. 17, 539).
- 2) isom. Amidoarachinsäure. Sm. 59° (B. 11, 2031). — I, 1205.
- 3) Äthylester d. Heptadekylamidoameisensäure. Sm. 62° (B. 21, 2491). — I, 1255.
- C₂₀H₄₃O₄N₂** C 61,7 — H 11,0 — O 16,4 — N 10,8 — M. G. 389.
- 1) Triamidodracoalban (C. 1896 [2] 713).
- C₂₀H₄₁O₂Si** 1) Kieselsäuretetraisoamylester. Sd. 322—325° (A. 57, 344). — I, 347.
- C₂₀H₄₁O₂P** 1) Unterphosphorsäuretetraisoamylester (A. 232, 13). — I, 339.
- C₂₀H₄₁NCl** 1) Tetraisoamylammoniumchlorid. 2 + PtCl₄ (J. 1867, 491). — I, 1135.
- C₂₀H₄₁NJ** 1) Äthyltrihexylammoniumjodid (A. 101, 313; 102, 313). — I, 1136.
- 2) Tetraisoamylammoniumjodid (A. 79, 24; J. 1867, 491). — I, 1135.
- C₂₀H₄₁N₂Br** 1) Hexäthylentetraäthyltetraammoniumbromid (J. 1861, 521). — I, 1166.

- $C_{20}H_{11}JP$ 1) Tetraisoamylphosphoniumjodid (*B.* 6, 299). — I, 1565.
 $C_{20}H_{15}ON$ C 76,2 — H 14,3 — O 5,1 — N 4,4 — M. G. 315.
 1) Tetraisoamylammoniumhydrat. Salze siehe (*A.* 79, 24; *J.* 1867, 491). — I, 1135.
 $C_{20}H_{46}N_4Br_4$ 1) Pentaäthylpentaäthyltetrammoniumbromid (*J.* 1861, 521). — I, 1166.
 $C_{20}H_{46}N_4J_4$ 1) Pentaäthylpentaäthyltetrammoniumjodid (*J.* 1861, 522). — I, 1166.

C₂₀-Gruppe mit vier Elementen.

- $C_{20}H_6O_2Cl_2Br_2$ 1) Verbindung (aus Tetrabromfluoresceïn) (*A.* 183, 54). — II, 2064.
 $C_{20}H_6O_2Cl_2Br_2$ 1) Dichlortetrabromfluoresceïn. K_2 (*A.* 238, 358). — II, 2064.
 $C_{20}H_6O_2N_2Cl_2$ 1) Trichlordinitrodinaphthalin. Sm. 104—106° (*A.* 160, 72).
 $C_{20}H_6O_2NS$ 1) Nitrosoderivat d. 2-Oxynaphthalin-7-Sulfonsäure. $Na + 2H_2O$ (*B.* 20, 2908). — II, 890.
 $C_{20}H_6O_2Cl_2Br_2$ 1) Di[2,4-Dichlor-6-Bromphenylester] d. Benzol-1,2-Dicarbon-säure. Sm. 216—217° (*G.* 17, 501). — II, 1794.
 $C_{20}H_6O_2Cl_2J_2$ 1) Dichlortetraiodfluoresceïnsäure. Na, K (*A.* 238, 359). — II, 2064.
 $C_{20}H_6O_2N_2Br_2$ 1) Dibromdinitrofluoresceïn (*A.* 183, 62). — II, 2065.
 $C_{20}H_{10}O_2NCl$ 1) 1,4-Naphtochinonchlorimid. Sm. 85° (*B.* 13, 1910). — III, 371.
 $C_{20}H_{10}O_2N_2Cl_2$ 1) *p*-Dichlordinitro-2,2'-Dinaphthyläther. Sm. 76° (*B.* 26, 253). — II, 884.
 $C_{20}H_{10}O_2N_2Br_2$ 1) *p*-Dibrom-*p*-Dinitro-2,2'-Dinaphthyläther. Sm. 87° (*B.* 26, 253). — II, 884.
 $C_{20}H_{10}O_2N_2Br_2$ 1) $\alpha,2'$ -Lakton d. 5',5'-Dibrom-3',3'-Dinitro- $\alpha,4',4'$ -Trioxyltri-phenylmethan-2'-Carbonsäure (Dibromdinitrophenolphtaleïn). Sm. 235—236° (*G.* 26 [1] 266).
 $C_{20}H_{10}O_2N_2S_2$ 1) Di[4,6-Dinitro-2-Naphtyl]disulfid. Sm. 272—276° u. Zers. — II, 888.
 $C_{20}H_{11}O_2NS$ 1) 1-[1,3-Diketo-2,3-Dihydroindenzyl-2]- α -Naphtthiazol (*B.* 21, 2630). — III, 278.
 $C_{20}H_{11}O_2NBr_4$ 1) 1-Keto-3,3-Di[*p*-Dibrom-*p*-Oxyphenyl]-1,3-Dihydroisocindol (Tetrabromimidophenolphtaleïn). Sm. 310° u. Zers. (*G.* 24 [1] 77). — II, 1985.
 $C_{20}H_{11}O_2NBr_4$ 1) Tetrabromphenolphtaleïnoxim (*B.* 26, 2260). — II, 1986.
 $C_{20}H_{11}N_2Cl_2Br_2$ 1) 1-Chlor-4-Brom-2-[1-Chlor-4-Brom-2-Naphtyl]amidodiazonaphthalin. Sm. 205—210° (*Soc.* 67, 911). — IV, 1574.
 $C_{20}H_{11}O_2N_2Br_4$ 1) Tetrabromdiimidophenolphtaleïn. Sm. über 280° (*A.* 202, 114). — II, 1985.
 $C_{20}H_{12}O_2Cl_2S$ 1) Verbindung (aus Methylsulfonfluoresceïn) (*Am.* 17, 565). — III, 212.
 $C_{20}H_{12}O_2N_2S_2$ 1) Di[*p*-Nitro-1-Naphtyl]sulfid. Sm. 230—231° (*J. pr.* [2] 38, 143). — II, 868.
 $C_{20}H_{12}O_2N_2S_2$ 1) Di[4-Nitro-1-Naphtyl]disulfid. Sm. 186° (*B.* 23, 960). — II, 868.
 2) Di[5-Nitro-1-Naphtyl]disulfid. Sm. 167° (*B.* 20, 1535). — II, 868.
 3) Di[4-Nitro-2-Naphtyl]disulfid. Sm. 124° (*B.* 20, 1536). — II, 869.
 4) Di[5-Nitro-2-Naphtyl]disulfid. Sm. 180° (*B.* 20, 1535). — II, 868.
 5) Di[8-Nitro-2-Naphtyl]disulfid. Sm. 173° (*B.* 20, 1536). — II, 869.
 $C_{20}H_{12}O_2N_2S_2$ 1) *p*-Dinitro-1,1-Dinaphthylsulfoxyd. Sm. 230—231° (*B.* 17, 2604). — II, 868.
 $C_{20}H_{12}O_2N_2Cl_2$ 1) 3,6-Dichlor-1,4-Benzochinondi[Amidobenzol-2-Carbonsäure]. Zers. bei 320° (*Bf.* [3] 15, 1028).
 $C_{20}H_{12}O_2N_2S_2$ 1) 3-[1-Naphtyl]aso-2-Oxy-1,4-Naphtochinon-3'-Sulfonsäure. Na (*B.* 30, 2129). — IV, 1481.
 $C_{20}H_{12}O_2N_2Cl$ 1) Chlortrinitrobenzol + Phenanthren. Sm. 88° (*B.* 8, 378). — II, 267.
 $C_{20}H_{12}O_2N_2Br_2$ 1) Dibromdinitrodiimidophenolphtaleïn (*A.* 202, 116). — II, 1985.
 $C_{20}H_{12}O_2Cl_2S_4$ 1) Di[1-Chlor-2-Naphtyl]disulfid-7,7'-Disulfonsäure. $K_2 + \frac{1}{2}H_2O$ (*C.* 1895 [2] 121).
 $C_{20}H_{12}O_2Br_2S$ 1) Methylsulfondibromfluoresceïn + 2H₂O (*Am.* 17, 566). — III, 212.
 $C_{20}H_{12}ON_2Cl$ 1) 5-Chlor-6-Oxy-2,3-Diphenyl-1,4-Benzodiazin (Luteol). Sm. 246° (*C.* 1895 [1] 854).
 $C_{20}H_{12}ON_2Br_2$ 1) 2-Phenylindol + 3,5-Dibrom-4-Oxydiazobenzol. Sm. 198° u. Zers. (*B.* 15, 2492). — IV, 414.

- $C_{20}H_{11}ON_2S$ 1) 4-Thionylamido-1-[1-Naphtyl]azonaphtalin. Sm. 156—157° (B. 28, 2199). — IV, 1390.
- $C_{20}H_{11}ON_4Br_3$ 1) Tribromderivat d. Verbindung $C_{20}H_{10}ON_4$. Sm. 227° (B. 26, 1186). — IV, 1225.
- $C_{20}H_{11}O_2NS$ 1) Phenylamid d. 9,10-Anthrachinon-2-Sulfonsäure. Sm. 193° (B. 13, 692). — III, 415.
- $C_{20}H_{11}O_2N_2Cl$ 1) 1-Chlor-2,4-Dinitrobenzol + Phenanthren. Sm. 44° (B. 11, 604). — II, 267.
- $C_{20}H_{11}O_2Cl_2P$ 1) Di[1-Chlor-2-Naphtylester]d. Phosphorsäure. Sm. 251° (B. 30, 2379).
- $C_{20}H_{11}O_2NS$ 1) 4-[4-Sulfo-1-Naphtyl]amido-2-Oxy-1-Ketonaphtalin (B. 27, 27).
- $C_{20}H_{11}O_2NS$ 1) Verbindung (aus Resorcin u. Phtalimid). $Na + 7H_2O$ (M. 11, 425). — II, 1807.
- $C_{20}H_{11}O_2NS$ 1) Verbindung (aus 2-Oxynaphtalin-6-Sulfonsäure) + H_2O (B. 30, 188). — IV, 1427.
- $C_{20}H_{11}N_3ClBr_2$ 1) 2-Phenylindol + 2,4,6-Tribromdiazobenzol. Sm. 149—150°. HCl (B. 15, 2491). — IV, 414.
- $C_{20}H_{11}ONBr$ 1) Acetylamido- β -Bromchrysen (B. 24, 952). — II, 643.
- $C_{20}H_{11}ON_2Cl_2$ 1) β -Phenylhydrazon- α -Keto- α - β -Di[3-Chlorphenyl]äthan. Sm. 104 bis 105°. — IV, 785.
- $C_{20}H_{11}ON_2S$ 1) 4-Thionylamido-1-[1-Naphtyl]amidonaphtalin. Sm. 120° (B. 31, 2182).
- $C_{20}H_{11}ON_2Cl_2$ 1) Verbindung (aus Chloralbenzamid). Sm. 131° (J. 1879, 552). — II, 1194.
- $C_{20}H_{11}O_2N_2S$ 1) Phenylfluoräthylsulfon. Sm. oberh. 340° (B. 29, 787). — IV, 1293.
- $C_{20}H_{11}O_2N_2Br$ 1) Benzoesat d. 2-Brom-4-Benzoylamido-1-Oxybenzol. Sm. 192° (B. 27, 1931). — II, 1177.
- $C_{20}H_{11}O_2N_2Br_2$ 1) α , 2'-Lakton d. 5', 5'-Dibrom-3', 3'-Diamido- α , 4', 4'-Trioxy-triphenylmethan-2'-Carbonsäure (Dibromdiamidophenolphthalcin). 2HCl (G. 26 [1] 269).
- $C_{20}H_{11}O_2N_2S$ 1) 2-Oxy-1,1'-Azonaphtalin-4'-Sulfonsäure. Ba (B. 11, 2199; 13, 268; Soc. 51, 197). — IV, 1438.
- $C_{20}H_{11}O_2N_2S$ 1) Verbindung + H_2O (aus 4-Amido-1-Oxynaphtalin-2-Sulfonsäure) (B. 25, 429). — II, 875.
- $C_{20}H_{11}O_2N_2Cl$ 1) Stilben + 1-Chlor-2,4,6-Trinitrobenzol. Sm. 70—71° (B. 8, 378). — II, 248.
- $C_{20}H_{11}O_2N_2Br_2$ 1) 1,1'-Azoxynaphtalin-4,4'-Disulfonsäure? $Na_2 + 2H_2O$, $K_2 + H_2O$, $Ca + 2H_2O$, $Ba + H_2O$, $Pb + 2H_2O$ (Bl. 45, 184). — IV, 1341.
- 2) 2-Oxy-1,1'-Azonaphtalin-2',7'-Disulfonsäure. $Ba + 7H_2O$. — IV, 1439.
- $C_{20}H_{11}ON_2S$ 1) α -Phenyl- β -4-[α -Cyan- β -Furanyläthylen]phenylthioharnstoff. Sm. 159—160° (B. 23, 2856). — III, 713.
- $C_{20}H_{11}ON_2Cl$ 1) 2-Chlorphenylat d. 4-Benzoyl-1-Phenyl-1,2,3,5-Tetrazol. Sm. 220—225° (B. 30, 2998). — IV, 1242.
- $C_{20}H_{11}ON_2S$ 1) 2-Phenylimido-5-Phenylnitrosamido-3-Phenyl-2,3-Dihydro-1,3,4-Thiodiazol. Zers. bei 110° (B. 26, 2873). — IV, 687.
- $C_{20}H_{11}ON_2Cl_2$ 1) Diazoseleninchlorid. + 3AuCl₃ (Z. 1866, 511; A. 194, 279). — IV, 1552.
- $C_{20}H_{11}O_2NS$ 1) Phenylamid d. Anthracen-2-Sulfonsäure. Sm. 201° (B. 28, 2259).
- 2) 1-Naphtylamid d. Naphtalin-1-Sulfonsäure. Sm. 82° (Bl. 27, 360). — II, 613.
- 3) 1-Naphtylamid d. Naphtalin-2-Sulfonsäure. Sm. 177,5° (Bl. 27, 360). — II, 613.
- $C_{20}H_{11}O_2N_2Cl$ 1) Benzoesat d. 3'-Chlor-6-Oxy-3-Methylazobenzol. Sm. 90° (B. 25, 1330). — IV, 1420.
- 2) Benzoesat d. 4'-Chlor-6-Oxy-3-Methylazobenzol. Sm. 115° (B. 25, 1328). — IV, 1421.
- $C_{20}H_{11}O_2N_2Br$ 1) Benzoesat d. 2-Brom-4'-Oxy-4-Methylazobenzol. Sm. 137—139° (B. 31, 1783). — IV, 1414.
- $C_{20}H_{11}O_2N_4Cl$ 1) III-2-Chlorformasybenzol-II-3-Carbonsäure. Sm. 217° (B. 31, 1755).
- $C_{20}H_{11}O_2N_2S$ 1) 2-Phenylindol + Diazobenzol-4-Sulfonsäure. $Na + xH_2O$ (B. 15, 2495). — IV, 414.
- $C_{20}H_{11}O_2NS$ 1) Dibenzoylamid d. Benzolsulfonsäure. Sm. 105° (J. 1856, 505 bis 506). — II, 1174.

- $C_{20}H_{15}O_2N_2Cl$ 1) Diacetat d. 2-Chlor-4-Phenylazo-1,3-Dioxynaphtalin. Sm. 150° (A. 300, 195). — IV, 1450.
- $C_{20}H_{15}O_2N_3Cl_2$ 1) Phenyldi[2-Chlor-4-Nitrobenzyl]amin. Sm. 172° (B. 25, 88). — II, 521.
- $C_{20}H_{15}O_2NS$ 1) 2-[1,2-Phtalyl]methyl-6,8-Dimethylchinolin- β -Sulfonsäure (o-p-Dimethylchinophtalon- β -Sulfonsäure) (B. 28, 1512). — IV, 459.
- $C_{20}H_{15}O_4N_2S_2$ 1) Farbstoff (aus 1-Anidonaphtalin-7-Sulfonsäure) (B. 21, 3265). — IV, 1542.
- $C_{20}H_{16}ONCl$ 1) Methyläther d. 4-Chlorphenylimido-4-Oxydiphenylmethan. Sm. 104° (B. 24, 3519). — III, 194.
- 2) Benzyläther d. anti- α -Oximido-4-Chlordiphenylmethan. Sm. 74 bis 75° (B. 23, 3613). — III, 189.
- 3) Benzyläther d. syn- α -Oximido-4-Chlordiphenylmethan. Sm. 98 bis 99° (B. 23, 3613). — III, 189.
- $C_{20}H_{16}ONBr$ 1) β -[p-Bromphenylamido- α -Keto- $\alpha\beta$ -Diphenyläthan? (Bromdesyl-anilid). Sm. 167–168° (J. pr. [2] 34, 10). — III, 220.
- 2) Benzyläther d. syn- α -Oximido-3-Bromdiphenylmethan. Sm. 77° (A. 264, 173). — III, 190.
- 3) Benzyläther d. anti- α -Oximido-3-Bromdiphenylmethan. Sm. 73° (A. 264, 173). — III, 190.
- 4) Benzyläther d. anti- α -Oximido-4-Bromdiphenylmethan. Sm. 89 bis 90° (A. 264, 155). — III, 190.
- 5) Benzyläther d. syn- α -Oximido-4-Bromdiphenylmethan. Sm. 99 bis 100° (A. 264, 157). — III, 190.
- $C_{20}H_{16}ON_2Br_2$ 1) Anhydrid d. 5,8-Dibromchinolinmethoxyhydrat (B. 15, 191). — IV, 259.
- $C_{20}H_{16}ON_2S$ 1) s-Cinnamoyl-1-Naphtylthioharnstoff. Sm. 203–204° (Soc. 67, 1048).
- $C_{20}H_{16}O_2N_2S$ 1) β -Phenylhydrazid d. Anthracen-2-Sulfonsäure. Sm. 210° (B. 28, 2260). — IV, 734.
- $C_{20}H_{16}O_2N_2S_2$ 1) Di[Phenylamidoformiat] d. 1,3-Dimerkaptobenzol. Sm. 178–179° (Soc. 69, 100).
- 2) Di[Phenylamidoformiat] d. 1,4-Dimerkaptobenzol. Sm. 200–202° (Soc. 69, 101).
- $C_{20}H_{16}O_2N_3Cl$ 1) 2-[3-Nitrobenzyliden]amido-1-[4-Chlorphenylamido]methylbenzol. Sm. 86° (J. pr. [2] 52, 383). — IV, 627.
- $C_{20}H_{16}O_2N_3Br$ 1) 2-[4-Nitrobenzyliden]amido-1-[4-Bromphenylamido]methylbenzol. Sm. 144° (J. pr. [2] 52, 391). — IV, 638.
- $C_{20}H_{16}O_2N_4S$ 1) 6-Phenylamido-2-(3-Nitrophenyl)-3-Phenyl-2,3-Dihydro-1,3,4-Thiodiazol. Fl. HCl (B. 30, 854). — IV, 686.
- $C_{20}H_{16}O_2NP$ 1) Amid d. Di[2-Naphtyl]phosphorsäure. Sm. 215° (B. 30, 2378).
- $C_{20}H_{16}O_2N_2Cl_2$ 1) Verbindung (aus 2,4,6-Trichlor-1-Oxybenzol u. 4-Nitroso-1-Dimethylamidobenzol). Sm. 90–91° (Bl. [3] 13, 1069).
- $C_{20}H_{16}O_2N_2Br_2$ 1) Verbindung (aus 2,4,6-Tribrom-1-Oxybenzol u. 4-Nitroso-1-Dimethylamidobenzol). Sm. 89–90° (Bl. [3] 13, 1069).
- $C_{20}H_{16}O_2N_2J$ 1) 2-(4-Methoxy)jodphenylat d. 4-(4-Nitrophenyl)-1-Phenyl-1,2,3,5-Tetrazol. Sm. 166–168° (B. 31, 476). — IV, 1232.
- $C_{20}H_{16}O_4NBr$ 1) 1,2-Lakton d. p-Brom-3,4-Dioxy-1-[2-Naphtylamido]oxymethylbenzol-3,4-Dimethyläther-2-Carbonsäure (Bromopiansäure- β -Naphtylamid). Sm. 213° (B. 29, 2032).
- $C_{20}H_{16}O_2N_2Br_2$ 1) Isobutylbromisatoid. Sm. 210° (B. 15, 2097). — II, 1606.
- $C_{20}H_{16}O_2N_2Br_4$ 1) p-Tetrabrom-4,4-Di[Diacetylamido]biphenyl. Sm. bei 306° (Soc. 65, 55). — IV, 964.
- $C_{20}H_{16}O_2N_2S$ 1) $\alpha\beta$ -Di[2-Naphtylsulfon]hydrazin. Sm. 215° u. Zers. Na₂ (J. pr. [2] 58, 187).
- 2) Di[β -1,2-Phtalylamidoäthyl]sulfid. Sm. 128–129° (B. 24, 1112). — II, 1801.
- $C_{20}H_{16}O_2N_2S_2$ 1) Di[β -1,2-Phtalylamidoäthyl]disulfid. Sm. 138–139° (B. 24, 1122). — II, 1802.
- $C_{20}H_{16}O_2N_2S$ 1) Di[β -1,2-Phtalylamidoäthyl]sulfoxyd. Sm. 191° (B. 24, 3100). — II, 1801.
- $C_{20}H_{16}O_2N_2Br_2$ 1) Bis-Brom-m-Opindolon. Sm. noch nicht bei 325° (B. 31, 931).
- $C_{20}H_{16}O_2N_2S_2$ 1) Di[β -1,2-Phtalylamidoäthyl]sulfon. Sm. 255–256° (B. 24, 3102). — II, 1802.

- $C_{17}H_{16}O_2N_2S_2$ 1) 1,4-Di[Benzylidenamido]benzol-1²,4³-Disulfonsäure. Na_2 (B. 24, 793). — IV, 597.
- $C_{19}H_{16}O_2N_2Cl$ 1) N-2,4,6-Trinitrophenyldimethylsulfaninchlorid (B. 31, 1183). — IV, 1283.
- $C_{20}H_{16}O_2NCl$ 1) Chlorid d. Anhydroberberilsäure. Sm. 167° (Soc. 57, 1042). — III, 802.
- $C_{20}H_{16}O_{13}S_2P_2$ 1) Pyrophosphat d. 2-Oxynaphtalin-6-Sulfonsäure. Ba_2 (B. 14, 1482). — II, 890.
- $C_{21}H_{16}N_2Cl_2S_2$ 1) Di[Chlormethylat] d. Thiochinanthren. Sm. 284—285° u. Zers. $2 + PCl_5$ (J. pr. [2] 54, 343). — IV, 292.
- $C_{21}H_{16}N_2Cl_2Si$ 1) 2-Dinaphtylamid d. Dichlorkieselsäure (Soc. 51, 45). — II, 615.
- $C_{21}H_{16}N_2J_2S_2$ 1) Di[Jodmethylat] d. Thiochinanthren (J. pr. [2] 54, 343). — IV, 292.
- $C_{21}H_{17}ON_2Cl$ 1) 2-[2-Oxybenzyliden]amido-1-[4-Chlorphenylamido]methylbenzol. Sm. 124° (J. pr. [2] 52, 383). — IV, 627.
- $C_{21}H_{17}ON_2Br$ 1) 2-[2-Oxybenzyliden]amido-1-[4-Bromphenylamido]methylbenzol. Sm. 143—144° (J. pr. [2] 52, 380). — IV, 635.
- $C_{21}H_{17}ON_2J$ 1) Jodmethylat d. 6-Oxy- β -Bichinolylmethyläther (B. 20, 1920). — IV, 1071.
- $C_{21}H_{17}ON_2Br_2$ 1) Tetrabromrosanilin (A. 179, 203). — II, 1091.
- $C_{21}H_{17}ON_2S$ 1) Triphenylthiobiuret. Sm. 234° (A. 285, 172, 189)
2) α -Phenyl-4-Benzoylphenylamidothioharnstoff. Sm. 203° u. Zers. (Soc. 55, 615). — III, 186.
3) β -Benzoylphenylamido- α -Phenylthioharnstoff. Sm. 310° (B. 20, 1717). — IV, 687.
- $C_{21}H_{17}ON_2Cl$ 1) α -Phenyl- β -[4-Methylphenyl]azo- β -[3-Chlorphenyl]harnstoff. Sm. 104° (B. 25, 1365). — IV, 1570.
2) α -Phenyl- β -[4-Chlorphenyl]azo- β -[4-Methylphenyl]harnstoff. Sm. 122° (B. 25, 1363). — IV, 1570.
3) Methyläther d. 2-Chlor-2-[4-Oxyphenyl]-1,4-Diphenyl-2,2-Dihydro-1,2,3,5-Tetrasol (B. 29, 1851).
- $C_{21}H_{17}ON_2Br$ 1) α -4-Methylphenyl- β -Phenylazo- β -[4-Bromphenyl]harnstoff. Sm. 138° (B. 21, 2570). — IV, 1562.
2) α -Phenyl- β -[4-Methylphenyl]azo- β -[4-Bromphenyl]harnstoff. Sm. 124° (B. 21, 2568). — IV, 1571.
- $C_{21}H_{17}ON_2J$ 1) Methyläther d. 2-Jod-2-[4-Oxyphenyl]-1,4-Diphenyl-2,2-Dihydro-1,2,3,5-Tetrasol. Sm. 135—140° (B. 29, 1852). — IV, 1269.
- $C_{21}H_{17}O_2N_2Cl$ 1) α -Benzoyl- α -4-Chlorphenyl- β -[6-Oxy-3-Methylphenyl]hydrazin. Sm. 172° (B. 25, 1328). — IV, 1506.
- $C_{21}H_{17}O_2NS$ 1) Phenylbenzoylamid d. 1-Methylbenzol-4-Sulfonsäure. Sm. 149° (Am. 8, 242). — II, 1175.
2) Benzylbenzoylamid d. Benzolsulfonsäure. Sm. 70—71° (C. 1897 [2] 848).
- $C_{21}H_{17}O_2N_2Cl$ 1) Aethyläther d. 5-Chlor-3,6-Di[Phenylamido]-2-Oxy-1,4-Benzochinon. Sm. 232—233° (J. pr. [2] 43, 261). — III, 348.
2) Aethylester d. 4-Chlor-1,2,7-Trimethylphenasinfuran-3-Carbonsäure. Sm. 162° (A. 283, 264). — III, 732.
- $C_{21}H_{17}O_2N_2S$ 1) α -Phenylsulfon- β -[α -Benzoylamidobenzyliden]hydrazin (A. 296, 290).
- $C_{21}H_{17}O_2NBr_2$ 1) Hydrastphtalimidindibromid. Sm. 158° (B. 23, 2915). — II, 2054.
- $C_{21}H_{17}N_2ClBr$ 1) Chlorbenzylat d. 5-Brom-1-Benzyl-1,2,3-Benzotriazol. $2 + PCl_5$ (A. 249, 368). — IV, 1144.
- $C_{21}H_{18}ON_2Cl$ 1) 7-Chloräthylat d. 9-Acetylamido- α - β -Naphthophasazin (C. 1898 [2] 920). — IV, 1201.
- $C_{21}H_{18}O_2N_2S$ 1) α -Phenylsulfonimido- α -[4-Methylphenyl]amido- α -Phenylmethan. Sm. 145—146° (A. 214, 216). — IV, 847.
- $C_{21}H_{18}O_2N_2S$ 1) 4,4'-Di[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydropyrazolyl]sulfid. Zers. bei 183°. $HCl + C_6H_6O$, Acetat (B. 23, 850, 2477; Soc. 59, 332, 334). — IV, 514.
- $C_{21}H_{18}O_2N_2S_2$ 1) Methylphenylpyrasolondisulfid (Soc. 59, 337, 338). — IV, 691.
- $C_{21}H_{18}O_2ClP$ 1) Triphenylchlorphosphidoessigsäure. $2 + PCl_5$ (L. 27, 275).
- $C_{21}H_{18}O_2N_2Br_2$ 1) β -Dibrom-4,4'-Di[β -Ketobutyrylamido]biphenyl. Zers. bei 250° (M. 19, 696).
- $C_{21}H_{18}O_2N_2Br_3$ 1) Diäthylester d. α - β -Di[β -Tribromphenylamido]bernsteinsäure. Sm. 103—104° (B. 21, 1800). — II, 438.

- C₂₀H₁₈O₄N₂S** 1) Benzolsulfonat d. α -Oxy- β -Phenyl- α -Benzylharnstoff. Sm. 120° u. Zers. (*J. pr.* [2] 56, 80).
 2) 4'-Benzolsulfonat d. 2,4'-Dioxybenzol-2-Aethyläther. Sm. 84° (*B.* 31, 2118; *C.* 1897 [2] 549). — **IV**, 1407.
 3) 4'-Benzolsulfonat d. 3,4'-Dioxybenzol-3-Aethyläther. Sm. 77° (*B.* 31, 2119). — **IV**, 1407.
 4) 4-Benzolsulfonat d. 4,4'-Dioxyazobenzol-4-Aethyläther. Sm. 105° (*B.* 31, 2120; *C.* 1897 [2] 549). — **IV**, 1406.
 5) 4-Methylphenyl-2-Nitrobenzylamid d. Benzolsulfonsäure. Sm. 124° (*J. pr.* [2] 51, 208).
- C₂₀H₁₈O₄N₂S₂** 1) 1,4-Di[Phenylsulfon]-1,2,3,4-Tetrahydro-1,4-Benzdiazin (Dibenzolsulfonäthylen-o-Phenylendiamin). Sm. 180° (*A.* 237, 225). — **IV**, 561
 2) Verbindung (aus 1,3-Diphenylsulfonamidobenzol). Sm. 190—195° (*A.* 237, 229). — **IV**, 577.
- C₂₀H₁₈O₄N₂J** 1) Jodmethylat d. 3,5-Di[4-Nitrobenzyl]pyridin. Sm. 190—193° (*A.* 280, 56). — **IV**, 456.
- C₂₀H₁₈O₄Cl₂P₂** 1) 1,2-Phenyleneester d. 4-Methylphenylphosphinsäuremono-chlorid. *Sil.* oberh. 360° (*A.* 293, 265). — **IV**, 1669.
- C₂₀H₁₆O₆N₂Br₂** 1) Dihydrobis-Brom-m-Opindolon. Sm. noch nicht bei 325° (*B.* 31, 932).
- C₂₀H₁₆O₆N₂S₂** 1) 4,4'-Bi[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydropyrazol-1'-Sulfonsäure] (*B.* 25, 1950). — **IV**, 737.
- C₂₀H₁₆O₁₂N₂S₂** 1) Verbindung (aus 2,4-Dinitro-1-Oxynaphtalin-7-Sulfonsäure) (*B.* 14, 2030). — **II**, 874.
- C₂₀H₁₉ON₂Cl** 1) 7-Chloräthylat d. 5-Amido-10-Acetylamido- α - β -Naphtophenazin (*C.* 1898 [2] 920). — **IV**, 1296.
- C₂₀H₁₉O₇N₂S** 1) Dibenzylamid d. Benzolsulfonsäure. Sm. 68° (*A.* 273, 22). — **II**, 531.
- C₂₀H₁₉O₂N₂S** 1) Verbindung (aus Thionylamidobenzol u. Methylamidobenzol) (*A.* 274, 211). — **II**, 355.
- C₂₀H₁₉O₂NBr₂** 1) Cusparindibromid. Sm. 236° (*B.* 29 [2] 36). — **III**, 777.
- C₂₀H₁₉O₆N₂S₂** 1) α -[4-Methylphenyl]sulfon- γ -[2-Naphtyl]sulfon- β -Oximidopropan. Sm. 158° (*J. pr.* [2] 55, 409).
- C₂₀H₁₉O₇N₂P** 1) β -Nitrophenylamiddi[β -Nitro-4-Methylphenylamid] d. Phosphorsäure. Sm. 220° (*B.* 27, 2576).
- C₂₀H₁₉N₂ClS** 1) Verbindung (aus α -Diphenylthioharnstoff u. Benzylchlorid). Sm. 182—183° (*B.* 26 [2] 607). — **II**, 396.
- C₂₀H₁₉ONP** 1) 4-Dimethylamidotriphenylphosphinoxid. Sm. 183,5° (*A.* 260, 30). — **IV**, 1660.
- C₂₀H₂₀ON₂S** 1) α -Phenyl- β -[γ -Furyl- β -Phenylpropyl]thioharnstoff. Sm. 113° (*B.* 23, 2851). — **III**, 694.
- C₂₀H₂₀OCIP** 1) β -Oxyäthyltriphenylphosphoniumchlorid. Sm. 129—130°. 2 + PtCl₄ (*B.* 27, 275). — **IV**, 1661.
- C₂₀H₂₀OBrP** 1) β -Oxyäthyltriphenylphosphoniumbromid. Sm. 114° (*B.* 27, 276). — **IV**, 1661.
- C₂₀H₂₀OJP** 1) β -Oxyäthyltriphenylphosphoniumjodid. Sm. 185—186° (*B.* 27, 276). — **IV**, 1661.
- C₂₀H₂₀O₂NP** 1) 4-Methylphenylmonamid d. 4-Methylphenylphosphinsäuremono-phenylester. Sm. 48°; *Sil.* 280°₁₅ (*A.* 293, 269). — **IV**, 1669.
- C₂₀H₂₀O₂N₂Cl₂** 1) Chlorid d. 2,2'-Disisopropylazobenzol-5,5'-Dicarbonsäure. Sm. 135° (*Bl.* [3] 3, 206). — **IV**, 1466.
- C₂₀H₂₀O₂N₂S** 1) 1,1'-Disulfid d. Di-3,4,6-Trimethylbenzoxazol. Sm. 150—151° (*B.* 22, 3238). — **II**, 764.
 2) 4-Methylphenyl-2-Amidobenzylamid d. Benzolsulfonsäure. Sm. 132° (*J. pr.* [2] 51, 269). — **IV**, 627.
- C₂₀H₂₀O₂NJ** 1) Jodmethylat d. Cusparidin. Sm. 149° (*B.* 25 [2] 201). — **III**, 778.
- C₂₀H₂₀O₂NP** 1) Phenylamid d. Phosphorsäuredi[4-Methylphenylester]. Sm. 133° (*B.* 27, 2573).
- C₂₀H₂₀O₂N₂S** 1) Aethyläther d. 3,4-Di[Phenylsulfonamido]-1-Oxybenzol. Sm. 159—160°. — **II**, 723.
 2) Sulfid einer Base (aus Methylacetanilid)⁷/₈ (*Bl.* [3] 11, 1032).
- C₂₀H₂₀O₂NBr** 1) Brompaverin. Sm. 144—145°. HBr (*A.* 94, 239; *M.* 6, 673). — **IV**, 440.
- C₂₀H₂₀O₂N₂S₂** 1) 1,2-Di[Phenylsulfonamidomethyl]benzol. Sm. 127° (*B.* 26, 2213). — **IV**, 642.

- $C_{20}H_{20}O_4N_2S_2$ 2) 2,5-Diphenylsulfon-4-Amido-1-Dimethylamidobenzol. Sm. 223° (B. 27, 3260; 29, 2028).
- $C_{20}H_{20}O_6N_2S_2$ 1) Dibenzoylcystin. Sm. 180—181°. Ba + 5H₂O, Ag₂ (H. 12, 254; 16, 572). — II, 1192.
- 2) Di[γ-Benzoylamidoäthylsulfid]-2,2'-Dicarbonsäure (Diäthylsulfididiphtalamidsäure). Sm. 128—130° (B. 24, 2131). — II, 1796.
- $C_{20}H_{20}O_4N_2Se_2$ 1) Di[β-Benzoylamidoäthylselenid]-2,2'-Dicarbonsäure (Diäthyl-β-Diselenididiphtalamidsäure). Sm. 118—119° (B. 24, 2134). — II, 1796.
- $C_{20}H_{20}O_6N_2S$ 1) Di[β-Benzoylamidoäthylsulfon-2,2'-Dicarbonsäure (Aethylsulfondiphtalamidsäure). Ag₂ (B. 24, 3103). — II, 1796.
- $C_{20}H_{20}O_4N_2S_2$ 1) Alloxanbenzidindisulfat + H₂O (A. 248, 149). — IV, 961.
- $C_{20}H_{20}NSP$ 1) 4-Dimethylamidotriphenylphosphinsulfid. Sm. 183° (A. 260, 30). — IV, 1660.
- $C_{20}H_{21}O_4N_2Br$ 1) Verbindung (aus Bismethylphenylpyrazolon). Sm. 217° u. Zers. (B. 20, 2750). — IV, 1263.
- $C_{20}H_{21}ON_2Br$ 1) Chinendibromid. 2HBr + 2H₂O (B. 20, 2516). — III, 817.
- $C_{20}H_{21}ON_2P$ 1) Phenylamiddi[2-Methylphenylamid] d. Phosphorsäure. Sm. 201° (B. 27, 2576).
- 2) Phenylamiddi[4-Methylphenylamid] d. Phosphorsäure. Sm. 168° (B. 27, 2575).
- $C_{20}H_{21}ON_2S$ 1) 2-[2,4-Dimethylphenylacetyl-amido]-5-[2,4-Dimethylphenyl-amido]-1,3,4-Thiodiazol (B. 23, 369). — IV, 1297.
- $C_{20}H_{21}O_2N_2Cl_2$ 1) αβ-Di[Chloracetyl-2-Methylphenylamido]äthan. Sm. 211—212° (B. 23, 2032). — II, 461.
- $C_{20}H_{21}O_2N_2Br_2$ 1) αβ-Di[Phenyl-α-Brompropionylamido]äthan. Sm. 184° (B. 25, 3255). — II, 370.
- 2) αβ-Di[Bromacetyl-2-Methylphenylamido]äthan. Sm. 205° (B. 25, 3258). — II, 461.
- 3) αβ-Di[Bromacetyl-4-Methylphenylamido]äthan. Sm. 196° (B. 25, 321). — II, 491.
- $C_{20}H_{21}O_2N_2S_2$ 1) αα-Succinyldi[β-2-Methylphenylthioharnstoff]. Sm. 217—218° (Soc. 67, 569).
- 2) αα-Succinyldi[β-Methyl-β-Phenylpseudothioharnstoff]. Sm. 138 bis 139° (Soc. 67, 570).
- $C_{20}H_{21}O_2Br_2S$ 1) Dimethyläther d. Di[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl]-sulfid. Sm. 169° (B. 29, 2347).
- $C_{20}H_{21}O_2NJ$ 1) Jodmethylat d. Gallipidin. Sm. 142° (B. 25 [2] 201). — III, 778.
- $C_{20}H_{21}O_4NJ$ 1) Jodmethylat d. Bulbocapnin. Sm. 257° (235—240°) (A. 277, 14; C. 1896 [2] 793). — III, 877.
- $C_{20}H_{21}O_4N_2Br_2$ 1) Di[4-Aethoxyphenylamid] d. αβ-Dibrombernsteinsäure. Sm. 199° (G. 28 [2] 196).
- $C_{20}H_{21}O_6N_2Br_2$ 1) Dibromdiacetylcantharidinphenylhydrazonhydrat. Sm. 194° (B. 26, 140). — III, 624.
- $C_{20}H_{21}O_6N_2Hg_2$ 1) Diacetat d. Diquecksilberdi[4-Acetylamidophenyloxyhydrat]. Sm. 218—220° (G. 24 [2] 449). — IV, 1708.
- $C_{20}H_{21}O_6Cl_2S_2$ 1) ββ-Dichlor-αα-Di[1,2,4-Trimethylphenyl]äthen-β-Disulfonsäure. Mg + 6H₂O, Ba + 4¹/₂H₂O (J. pr. [2] 47, 49). — II, 255.
- $C_{20}H_{21}ON_2Cl$ 1) Chininchlorid + 2H₂O. Sm. 151° (B. 17, 1968). — III, 817.
- 2) Conchinchlorid. Sm. 131—132° (B. 18, 1229). — III, 825.
- $C_{20}H_{21}O_2N_2Br_4$ 1) Aethylidi[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl]amin. Sm. 165,5°. HBr (B. 29, 1114).
- $C_{20}H_{21}O_2N_2S$ 1) 5-Phenylazo-3-Methyl-1,2,3,4,7,8,9,10-Oktahydro-β-Naphtochinolin-5'-Sulfonsäure (B. 24, 2667). — IV, 1485.
- $C_{20}H_{21}O_4N_2Br_2$ 1) Verbindung (aus d. Methyläther d. αβ-Dibromäthyl 3 Brom-4-Oxyphenylketon) (B. 29, 350). — III, 142.
- $C_{20}H_{21}O_4N_2Cl$ 1) Aethylster d. 2-Chlor-1,2-Di[4-Aethoxyphenyl]-2,2-Dihydro-1,2,3,5-Tetrazol-4-Carbonsäure. Sm. 187° (B. 28, 1694). — IV, 1241.
- $C_{20}H_{21}O_2N_2Br_2$ 1) Chinindibromid. + C₆H₆, 2HBr + 2H₂O (B. 25, 1550). — III, 816.
- $C_{20}H_{21}O_2N_2S_2$ 1) Di[γ-Benzoylamidopropyl]disulfid. Sm. 122° (B. 27, 2172). — II, 1161.
- 2) Di[2-Propionylamidobenzyl]disulfid. Sm. 190—191° (B. 30, 1146).
- $C_{20}H_{21}O_3N_2Br$ 1) Aethobromcodein (B. 15, 1484). — III, 904.

- C₂₀H₂₄O₂N₂J**
- 1) Jodmethylat d. Oxyacanthin + 2H₂O. Sm. 248–250° (B. 28 [2] 614).
 - 2) Jodmethylat d. Methylthebenin. Sm. 210° (206–208°) (B. 27, 2961; 30, 1378).
 - 3) Jodmethylat d. Thebain (B. 17, 532). — III, 909.
- C₂₀H₂₄O₂N₂S**
- 1) Thio [4-Methylphenyl]urethan. Sm. 113° (B. 20, 668). — II, 821.
- C₂₀H₂₄O₂N₂S₂**
- 1) Disulfid d. β-Merkapto-αγ-Diketo-α-Phenylbutan + 2 Molec. Ammoniak (Bl. [3] 10, 836).
- C₂₀H₂₄O₂N₂S**
- 1) Chininsulfonsäure + H₂O. Sm. 209° u. Zers. (wasserfrei). (2HCl, PtCl₄ + 8H₂O) (A. 207, 141). — III, 816.
 - 2) Isochininsulfonsäure. (HCl, AuCl₃) (A. 207, 140). — III, 816.
- C₂₀H₂₅ON₂Cl**
- 1) Chlormethylat d. Cinchonin. (HCl, PtCl₄ + H₂O) (A. 90, 219). — III, 832.
 - 2) Chlormethylat d. Cinchoniein. Sm. 159° (Bl. [3] 13, 1007). — III, 845.
 - 3) Chlormethylat d. Cinchonidin + H₂O. Sm. 158° (B. 13, 2192). — III, 851.
 - 4) Chlormethylat d. Cinchonin + 2H₂O (B. 27 [2] 257).
- C₂₀H₂₅ON₂Br**
- 1) α-[2-Methylphenyl]amido-β-α-Bromisobutyryl-2-Methylphenyl-amidoäthan. Sm. 135–137° (B. 25, 3260). — II, 463.
 - 2) Brommethylat d. Cinchonin + H₂O. Sm. 209° (A. 90, 219; B. 13, 2292). — III, 832.
 - 3) Brommethylat d. Cinchonin + 3H₂O. Sm. 225° u. Zers. (B. 27, [2] 257).
- C₂₀H₂₅ON₂J**
- 1) Jodmethylat d. Cinchonin. Sm. 254° u. Zers. (A. 90, 219; B. 13, 2292). — III, 832.
 - 2) Jodmethylat d. β-Isocinchonin. Sm. 253° (J. 1888, 2287). — III, 847.
 - 3) Jodmethylat d. Cinchonidin. Sm. bei 252° (J. 1888, 2288). — III, 848.
 - 4) Jodmethylat d. Cinchoniein (Bl. [3] 13, 1007). — III, 845.
 - 5) Jodmethylat d. Cinchonidin. Sm. 248° u. Zers. (A. 90, 221; B. 13, 2192). — III, 851.
 - 6) Jodmethylat d. Cinchonin + 2H₂O. Sm. 251° u. Zers. (wasserfrei) (B. 27 [2] 257).
 - 7) Jodmethylat d. Cinchonin. Sm. bei 235° (J. 1888, 2287). — III, 848.
- C₂₀H₂₅ON₂J₂**
- 1) Dijodid d. Cinchoninjodmethylat. Sm. 161–162° (J. pr. [2] 3, 151). — III, 832.
- C₂₀H₂₅O₂N₂Cl**
- 1) Hydrochlorchinin. Sm. 186–187° (B. 20, 2517). — III, 816.
 - 2) Chlormethylat d. Cuprein. + (HCl, PtCl₄ + 2H₂O) (A. 230, 67). — III, 822.
- C₂₀H₂₅O₂N₂Br**
- 1) Hydrobromchinin. 2HBr (B. 20, 2518). — III, 816.
- C₂₀H₂₅O₂N₂J**
- 1) Hydrojodchinin. Sm. 155–160°. (2HCl, PtCl₄ + 2H₂O), 2HJ (M. 12, 328, 679; 13, 437). — III, 816.
 - 2) Hydrojodochinin. Sm. 205–206°. 2HCl + 5H₂O, (2HCl, PtCl₄ + H₂O), HNO₃, 2HNO₃, H₂SO₄ + 3H₂O (M. 13, 433). — III, 825.
 - 3) Jodmethylat d. α-Oxychinonin. Sm. 241–242° (J. 1889, 2019). — III, 840.
 - 4) Jodmethylat d. Cuprein (A. 230, 66). — III, 822.
- C₂₀H₂₅ON₂J**
- 1) Tetraäthylamidodiphenoxastimuljodid (A. 289, 122). — IV, 1178.
- C₂₀H₂₅O₂N₂J**
- 1) Dihydrojodochinin. Sm. 218–220°. HCl, HJ, Oxalat (M. 12, 669). — III, 824.
- C₂₀H₂₅O₂NCl**
- 1) Chlormethylat d. α-Methylmorphimethin. (2 + PtCl₄ + 8H₂O) (A. 222, 225). — III, 904.
 - 2) Chlormethylat d. β-Methylmorphimethin + 1/2 H₂O. (2 + PtCl₄ + H₂O) (A. 222, 227). — III, 904.
- C₂₀H₂₅O₂N₂J**
- 1) Jodmethylat d. α-Methylmorphimethin + 1/2 H₂O. Sm. 245° (A. 222, 224; B. 27, 1146). — III, 904.
 - 2) Jodmethylat d. β-Methylmorphimethin. Sm. 297° (A. 222, 227; B. 27, 1146). — III, 904.
 - 3) Jodmethylat d. Morphinäthyläther (A. ch. [5] 27, 278). — III, 908.

- $C_{20}H_{28}O_2NJ$ 1) Jodmethylat d. Dihydrothebain. Sm. 155—160°. + $3H_2O$ (Sm. 75—80°), + CH_4O (B. 32, 193).
2) Jodmethylat d. Isodihydrothebain. Sm. 210—215° (B. 32, 195).
- $C_{20}H_{28}O_2CIP$ 1) Jodäthylat d. Codein (A. 88, 340). — III, 904.
- $C_{20}H_{28}O_2NBR$ 1) Bromcodeinäthoxyhydrat (B. 15, 1484). — III, 904.
- $C_{20}H_{28}O_2N_2S_2$ 1) Di-p-Toluolsulfobistrimethylendiimid. Sm. 215° (B. 31, 3265).
- $C_{20}H_{28}O_2N_2S$ 1) Hydroconchininsulfonsäure + $5H_2O$ (A. 243, 150). — III, 825.
2) Hydrochininsulfonsäure + $5H_2O$. Sm. 239° (wasserfrei). (2HCl, $PtCl_4$ + $8H_2O$) (A. 241, 283). — III, 860.
- $C_{20}H_{28}N_2ClS$ 1) Tetraäthylthioninchlorid. 2 + $ZnCl_2$ + $2H_2O$ (B. 22, 2067; A. 251, 89). — II, 811.
- $C_{20}H_{27}ON_2Cl$ 1) Chlormethylat d. Cinchonamin. 2 + $PtCl_4$ (A. 225, 229). — III, 928.
- $C_{20}H_{27}ON_2J$ 1) Jodmethylat d. Cinchonamin + H_2O . Sm. 208—209° (A. 225, 228; A. ch. [6] 19, 113). — III, 928.
2) Jodmethylat d. Cinchotin (B. 14, 1266). — III, 858.
- $C_{20}H_{27}O_2NBR_2$ 1) Methylalkoholat d. Verb. $C_{20}H_{29}ONBR_2$ (aus Dibrompseudocumenolbromid). Sm. 191—192° (B. 29, 1127).
- $C_{20}H_{25}ON_2Hg$ 1) Oxyd d. Quecksilber-4-Diäthylamidophenylhydrat. Sm. 220° (G. 24 [2] 467). — IV, 1705.
- $C_{20}H_{25}O_2NJ$ 1) Jodmethylat d. Corytuberin (Soc. 63, 485). — III, 877.
- $C_{20}H_{25}ONCl$ 1) Verbindung (aus d. Kohlenw. $C_{20}H_{29}$ aus Campher). Sm. 150° u. Zers. (B. 27, 2350).
- $C_{20}H_{25}O_2N_2Hg_2$ 1) p-Diäthylsilberdiäthylamin. Sm. 200° u. Zers. Salze siehe (G. 23, [2] 534; 28 [2] 451). — IV, 1707.
- $C_{20}H_{25}O_2N_2Cl_2$ 1) Pinolbisanitrosochlorid. Sm. 116—120° (103°) (A. 253, 261; 306, 278). — III, 508.
2) l-Bisanitroso-4-Chlortetrahydro-l-Carvon. Sm. 142° (B. 28, 1595). — III, 505.
- $C_{20}H_{25}O_2N_2Br_2$ 1) l-Bisanitroso-4-Bromtetrahydro-l-Carvon. Sm. 131° u. Zers. (B. 28, 1594). — III, 505.
- $C_{20}H_{25}ON_2Cl$ 1) Verbindung (aus Acetylchlorid u. Kyanäthin). Sm. 142° (J. pr. [2] 53, 249). — IV, 1132.
- $C_{20}H_{25}N_2JP$ 1) Propyl-4-Methylphenyl-di[1-Piperidyl]phosphoniumjodid. Sm. 197° (B. 31, 1046). — IV, 1682.
- $C_{20}H_{24}O_2JP$ 1) Tetrahydroxyisoamylidenphosphoniumjodid. Sm. 119° (A. ch. [6] 2, 33). — I, 952.

C_{20} -Gruppe mit fünf Elementen.

- $C_{20}H_{16}O_2N_2Cl_2S_2$ 1) Di[7-Chlor-8-Nitro-1-Naphtyl]disulfid. Sm. 244°. — II, 869.
2) Di[5-Chlor-8-Nitro-2-Naphtyl]disulfid. Sm. 141°. — II, 888.
3) Di[7-Chlor-8-Nitro-2-Naphtyl]disulfid. Sm. 217° (B. 25, 2486). — II, 888.
- $C_{20}H_{16}O_2NSP$ 1) Monamid d. Thiophosphorsäure-di-2-Naphtylester. Sm. 215° (B. 31, 1110).
- $C_{20}H_{15}O_2N_2Br_2J$ 1) Verbindung (aus 5-Brom-8-Oxychinolinjodmethylat). Sm. 182° (J. pr. [2] 54, 10). — IV, 280.
- $C_{20}H_{15}O_2N_2Br_2P$ 1) Di[2-Brom-4-Methylphenylamid] d. Phenylphosphorsäure. Sm. 221° (B. 29, 726).
- $C_{20}H_{15}O_2NSP$ 1) Phenylmonamid d. Thiophosphorsäure-di-4-Methylphenylester. Sm. 106° (B. 31, 1108).
- $C_{20}H_{15}ON_2CIP$ 1) Di[2-Methylphenylamid]-4-Chlorphenylamid d. Phosphorsäure. Sm. 150° (B. 28, 620).
- $C_{20}H_{15}ON_2BRJ$ 1) Jodmethylat d. Monacetylbrommorphin. Sm. 215—220° (A. 297, 217).
- $C_{20}H_{15}O_2NBRJ$ 1) Jodäthylat d. Bromcodein (B. 15, 1484). — III, 904.
- $C_{20}H_{15}ONBR_2J$ 1) Jodmethylat d. Verb. $C_{20}H_{15}ONBR_2$ (aus Dibrompseudocumenolbromid). Sm. 177—178° (B. 29, 1127).

C₂₁-Gruppe mit einem Element.

- C₂₁H₁₄ C 94,7 — H 5,3 — M. G. 266.
2,2'-Binaphthylmethan (Piculenmethan). Sm. 306° (A. **284**, 70).
- C₂₁H₁₆ C 94,0 — H 6,0 — M. G. 268.
 1) α -Dinaphthylmethan. Sm. 109°; Sd. oberh. 360° (Pikrat Sm. 142—143°) (B. **7**, 1605). — II, 296.
 2) β -Dinaphthylmethan. Sm. 92° (B. **13**, 1728). — II, 296.
 3) isom. Dinaphthylmethan. Sm. 137° (J. pr. [2] **41**, 53). — II, 296.
 4) **Methylphenylanthracen**. Sm. 119° (B. **16**, 2367). — II, 297.
 5) γ -Benzylantracen. Sm. 119° (B. **23**, 1570). — II, 297.
 6) **Benzylphenanthren**. Sm. 155—156° (M. **2**, 445). — II, 297.
 7) **Phtalacen**. Sm. 173° (B. **17**, 1390). — II, 297.
- C₂₁H₁₈ C 93,3 — H 6,7 — M. G. 270.
 1) **9-Benzyl-9,10-Dihydroanthracen**. Sm. 110—111° (B. **23**, 2530). — II, 294.
 2) **Kohlenwasserstoff** (aus d. Keton C₂₁H₁₈O). Sm. 86—92°; Sd. 270°₁₀ (Soc. **57**, 687). — II, 294.
- C₂₁H₂₀ C 92,7 — H 7,3 — M. G. 272.
 1) $\alpha\alpha\beta$ -Triphenylpropan. Fest. Sd. 365° (B. **29**, 2839).
 2) $\alpha\beta\gamma$ -Triphenylpropan. Sd. über 340° u. Zers. (B. **18**, 2935; C. **1899** [2] 284). — II, 290.
 3) **2,4-Dimethyltriphenylmethan**. Sm. 61,5°; Sd. über 360° (B. **19**, 3061). — II, 290.
 4) **2,6-Dimethyltriphenylmethan**. Sm. 92° (B. **16**, 2360). — II, 290.
 5) **3,4-Dimethyltriphenylmethan**. Sm. 68,5°; Sd. über 360° (B. **19**, 3070). — II, 290.
 6) **4,4'-Dimethyltriphenylmethan**. Sm. 55—56° (52°) (B. **11**, 70; Bl. [3] **17**, 974). — II, 290.
 7) **p-Dimethyltriphenylmethan**. Fl. Sd. 300—360° (A. **242**, 332). — II, 290.
 8) **p-Dibenzyl-1-Methylbenzol**. Sd. 392—396° (B. **7**, 1154). — II, 289.
 9) **Kohlenwasserstoff** (aus Benzylchlorid) (Bl. **46**, 248). — II, 46.
- C₂₁H₂₂ C 90,0 — H 10,0 — M. G. 280.
 1) $\beta\beta$ -Di[1,2,4-Trimethylphenyl]propan. Sd. oberh. 300° (B. **24**, 2788). — II, 243.
- C₂₁H₂₄ C 85,1 — H 14,9 — M. G. 296.
 1) norm. **Heptacosan**. Sm. 40,4°; Sd. 215°₁₀ (129°) (B. **15**, 1719; **21**, 2261; **22**, 2135; **29**, 1323). — I, 107.
- C₂₁Cl₃₆ 1) **Verbindung** (aus Trichlormethylbenzol). Sm. 152—153° (J. **1877**, 420; B. **13**, 33). — II, 49.

C₂₁-Gruppe mit zwei Elementen.

- C₂₁HCl₂₅ 1) **Verbindung** (aus Trichlormethylbenzol). Sm. 102° (J. **1877**, 421). — II, 49.
- C₂₁H₁₀O₂ C 81,3 — H 3,2 — O 15,5 — M. G. 310.
 1) **Anhydrobenzoingelb** (B. **31**, 2978).
- C₂₁H₁₀O₆ C 75,4 — H 2,8 — O 26,8 — M. G. 358.
 1) **Anhydrid d. Fluorescein-3-Carbonsäure** (A. **290**, 236).
- C₂₁H₁₉O C 90,0 — H 4,3 — O 5,7 — M. G. 280.
 1) **Picylenketon** (Binaphthylketon). Sm. 185,5° (188°) (A. **284**, 66, 74; A. ch. [5] **28**, 192). — III, 265.
- C₂₁H₁₇O₂ C 85,1 — H 4,0 — O 10,8 — M. G. 296.
 1) **Diphenylindon**. Sm. 150—151° (B. **28**, 2787). — III, 263.
 2) α -Dinaphthylketonoxyd (α Dinaphthoxanthon). Sm. 240° (B. **13**, 702; **19**, 2266; **25**, 1641). — III, 262.
 3) β -Dinaphthylketonoxyd. Sm. 149° (J. pr. [2] **41**, 49). — III, 263.
 4) γ -Dinaphthylketonoxyd. Sm. 241° (B. **25**, 1642). — III, 263.
- C₂₁H₁₇O₃ C 80,8 — H 3,8 — O 15,4 — M. G. 312.
 1) **Formaldehydoxynaphthofluoron** (B. **31**, 147).

- $C_{21}H_{15}O_4$ C 76,8 — H 3,6 — O 19,5 — M. G. 328.
 1) Benzoesingelb. Zers. bei 250°. Pb (B. 31, 2976).
- $C_{21}H_{17}O_7$ C 67,0 — H 3,2 — O 29,8 — M. G. 376.
 1) Fluoresceïn-6-Carbonsäure. Sm. noch nicht bei 280° (A. 290, 237).
 2) Fluoresceïncarbonsäure. C_8, Ba_2 (B. 11, 1340). — II, 2088.
- $C_{21}H_{19}O_8$ 1) Verbindung (aus α -Oxy- α -Diphenyllessigsäure) = $(C_{21}H_{19}O_8)_x$. Sm. 256 bis 257° (B. 22, 1215). — II, 1696.
- $C_{21}H_{15}N$ C 90,3 — H 4,7 — N 5,0 — M. G. 279.
 1) β -Naphtoakridin. Sm. 216°. HJ, HNO_3 , Pikrat (J. pr. [2] 35, 317; Soc. 73, 542, 548). — IV, 476.
 2) Iso- β -Naphtoakridin. Sm. 225–226° (Soc. 73, 541).
- $C_{21}H_{14}O$ C 89,4 — H 4,9 — O 5,7 — M. G. 282.
 1) Picylencarbinol (Binaphtylenoxymethan). Sm. 230° (A. 284, 69).
 2) 1-Keto-2,3-Diphenylinden. Sm. 150–151° (B. 28, 2787; 29, 2839; 30, 1281).
 3) 9-Keto-10-Benzyliden-9,10-Dihydroanthracen. Sm. 127° (B. 18, 2153). — III, 245.
 4) 1,2-Dinaphtylketon. Sm. 135° (B. 6, 544, 1241, 1248). — III, 262.
 5) 2,2'-Dinaphtylketon (2 isom. Formen). α -Modif. Sm. 125,5°; β -Modif. Sm. 164–164,5° (B. 6, 545, 1242). — III, 262.
 6) isom. Dinaphtylketon. Sm. 140° (B. 6, 546). — III, 262.
 7) Phtalacenoxyd. Sm. 211–214° (B. 17, 1397). — II, 297.
 8) Anhydrid d. Di[2-Oxynaphtyl]methan. Sm. 199° (B. 26, 84). — II, 1006.
 9) isom. Anhydrid d. Di[2-Oxynaphtyl]methan. Sm. 165° (J. pr. [2] 41, 52). — II, 1006.
 10) Verbindung (aus 2-Oxynaphtalin). Sm. 300–305° (B. 15, 1123). — II, 875.
- $C_{21}H_{14}O_2$ C 84,6 — H 4,7 — O 10,7 — M. G. 298.
 1) Methyläther d. 2,2'-Dioxy-1,1'-Binaphtyl (Bl. [3] 19, 612).
 2) 2,2'-Diketodinaphtylmethan. Sm. 168–169° (B. 25, 3482). — II, 1006.
 3) Picensäure (2,2'-Binaphtyl-?-Carbonsäure). Sm. 201°. Ag (A. 284, 70) II, 1483.
- $C_{21}H_{14}O_3$ C 80,3 — H 4,4 — O 15,3 — M. G. 314.
 1) Monobenzoat d. 9,10-Dioxyphenanthren. Sm. 177–178° (A. 249, 143). — II, 1001.
 2) 1,1-Dinaphtylester d. Kohlensäure. Sm. 130° (B. 27, 3459; 28, 3050; Bl. [3] 13, 215).
 3) 2,2-Dinaphtylester d. Kohlensäure. Sm. 176–177° (178°) (B. 28, 3055; A. 301, 115).
- $C_{21}H_{14}O_4$ C 76,4 — H 4,2 — O 19,4 — M. G. 330.
 1) 2,3-Dibenzoylbenzol-1-Carbonsäure. Sm. 208° (A. 290, 233).
 2) 2,6-Dibenzoylbenzol-1-Carbonsäure. Sm. bei 100° (A. 290, 235).
 3) α -P-Dibenzoylbenzol-1-Carbonsäure. Sm. 80–82° (B. 7, 1154). — II, 1914.
 4) β -P-Dibenzoylbenzol-1-Carbonsäure. Sm. 210–212° (B. 7, 1154). — II, 1914.
 5) α ,2-Lakton d. α -Oxytriphenylmethan-2,4-Dicarbonsäure (Diphenylphtalidicarbonsäure). Sm. 228°. + C_2H_5O , Ca + $3H_2O$, Ag (B. 19, 3067). — II, 1988.
 6) α ,2-Lakton d. α -Oxytriphenylmethan-2,5-Dicarbonsäure. Sm. 244 bis 246°. Ag (B. 16, 2373). — II, 1988.
 7) Anhydrid d. α -Oxytriphenylmethan-3,4-Dicarbonsäure (B. 19, 3073). — II, 1988.
- $C_{21}H_{14}O_5$ C 72,8 — H 4,0 — O 23,1 — M. G. 346.
 1) Methyläther d. Fluoresceïn. Sm. 262° (B. 28, 397). — II, 2060.
- $C_{21}H_{14}O_7$ C 66,7 — H 3,7 — O 29,6 — M. G. 378.
 1) Aurindicarbonsäure. Ca_4 (B. 25, 943). — II, 2087.
 2) Säure (aus 4-Oxybenzol-1-Carbonsäure). Sm. 280°. Na (J. pr. [2] 28, 206). — II, 1528.
- $C_{21}H_{14}O_8$ C 64,0 — H 3,5 — O 32,5 — M. G. 394.
 1) Oxyaurindicarbonsäure. Zers. bei 140°. Ca (B. 25, 2671). — II, 2093.

- C₁₁H₁₄O₆** C 61,4 — H 3,4 — O 35,1 — M. G. 410.
 1) **Dioxyaurindicarbonsäure.** Ca (B. 25, 2672). — II, 2100.
 C 59,2 — H 3,3 — O 37,5 — M. G. 426.
- C₁₁H₁₄O₁₀** 1) **Trioxyaurindicarbonsäure.** Ca (B. 25, 2673). — II, 2103.
 2) **Verbindung (aus Katechin)** (Bl. 4, S). — III, 687.
 C 57,0 — H 3,2 — O 39,8 — M. G. 442.
- C₁₁H₁₄O₁₁** 1) **Tetraoxyaurindicarbonsäure.** Ca (B. 25, 2673). — II, 2107.
 2) **Verbindung (aus 1,4-Benzochinon)** (A. 218, 212). — III, 328.
 C 55,0 — H 3,1 — O 41,9 — M. G. 458.
- C₁₁H₁₄O₁₂** 1) **Pentaoxyaurindicarbonsäure.** Ca (B. 25, 2673). — II, 2108.
 2) **Triäthylester d. 2,4,6-Triacetoxylbenzol-1,3,5-Tricarbonsäure.**
 Sm. 75–76° (B. 21, 1768). — II, 2089.
 C 53,2 — H 2,9 — O 43,9 — M. G. 474.
- C₁₁H₁₄O₁₃** 1) **Tetracetylalloflavin.** Sm. 230° (B. 20, 2330). — II, 1926.
 C 85,7 — H 4,8 — N 9,5 — M. G. 294.
- C₁₁H₁₄N₂** 1) **Di[1-Naphtylimido]methan.** Sm. 93–94° (B. 19, 2405). — II, 624.
 2) **Di[2-Naphtylimido]methan.** Sm. 145–146° (B. 19, 2406). — II, 624.
 3) **6-Methyl-2,3-Biphenylen-1,4-Benzdiazin (Toluphenanthrazin).** Sm. 212–213° (A. 237, 341). — IV, 1087.
 4) **Chrysomethylpiazin.** Sm. 144–146° (Soc. 63, 1292). — IV, 1087.
- C₁₁H₁₄Br₂** 1) **Dibrom- α -Dinaphtylmethan.** Sm. 193° (B. 7, 1608). — II, 296.
 2) **Dibrom- β -Dinaphtylmethan.** Sm. 164° (B. 13, 1728). — II, 296.
- C₁₁H₁₄N** 1) **1-[1-Naphtylimido]methylnaphtalin.** Sm. 117° (B. 22, 2150). — III, 63.
 2) **2,3-Diphenylechinolin.** Sm. 90–91° (95–96°); Sd. 420° (310°_{oo}). (2HCl, PtCl₄), Pikrat (B. 23, 2075; J. pr. [2] 56, 304). — IV, 473.
 3) **P-Diphenylechinolin.** Sm. 112°. (2HCl, PtCl₄ + 2H₂O) (B. 20, 1772). — IV, 473.
 4) **2-[β -Phenyläthenyl]- α -Naphtochinolin.** Sm. 104°. (2HCl, PtCl₄ + 2H₂O), H₂Cr₂O₇, Pikrat (B. 23, 1233). — IV, 473.
 5) **3-[β -Phenyläthenyl]- β -Naphtochinolin.** Sm. 175°. (2HCl, PtCl₄ + 2H₂O), H₂Cr₂O₇, Pikrat (B. 23, 1239). — IV, 474.
 6) **Nitril d. Triphenylakrylsäure.** Sm. 162–163° (B. 28, 1798, 2785).
 C 81,6 — H 4,8 — N 13,6 — M. G. 309.
- C₁₁H₁₄N₃** 1) **Kyaphenin (2,4,6-Triphenyl-1,3,5-Triazin).** Sm. 233° (231°); Sd. oberh. 350° (A. 115, 23; 133, 147; 149, 310; 290, 182; B. 2, 307; 11, 6, 764; 22, 1611, 1760; 25, 2267; J. 1868, 715; Soc. 37, 563; J. pr. [2] 35, 83; [2] 51, 408; [2] 54, 132). — II, 1215.
- C₁₁H₁₅Br** 1) **Bromphtalacen.** Sm. 184–184,5° (B. 17, 1397). — II, 297.
 2) **Brombenzylanthracen.** Zers. bei 113–114° (B. 23, 1570). — II, 297.
- C₁₁H₁₆O** C 88,7 — H 5,6 — O 5,6 — M. G. 284.
 1) **γ -Keto- $\alpha\beta\gamma$ -Triphenylpropen (Benzylidencsorybenzoin).** Sm. 100° (B. 26, 442, 449). — III, 261.
 2) **10-Oxy-9-Benzylanthracen.** Sm. 183–184° (B. 23, 2529). — II, 905.
 3) **10-Oxy-3-Methyl-9-Phenylanthracen (Phenylmethylanthronol)** (Bl. [3] 17, 980).
 4) **10-Oxy-P-Methyl-9-Phenylanthracen.** Sm. 156–157° (B. 16, 2365). — II, 1095.
 5) **α -Keto- β -Phenyl- α -Fluorenyläthan (Benzylfluorenylketon).** Sm. 156° (B. 21, 1341). — III, 261.
 6) **Keton (aus $\alpha\beta$ -Dibenzoylstyrol).** Sm. 92–93° (Soc. 57, 685, 745). — III, 262.
 7) **Verbindung (aus Beuzamaron).** 2 Isomere. α -Modif. Sm. 101–102°; β -Modif. Sm. 89–90° (A. 275, 61, 62). — III, 314.
 C 84,0 — H 5,3 — O 10,7 — M. G. 300.
- C₁₁H₁₆O₂** 1) **Di[2-Oxynaphtyl]methan.** Sm. 194° u. Zers. (200°). Na, Pikrat (B. 25, 3214, 3478; 26, 84; 27, 2412). — II, 1006.
 2) **2,2-Dinaphtyläther d. Dioxymethan.** Sm. 133–134° (B. 13, 1954). — II, 877.
 3) **9-Oxy-10-Keto-9-Benzyl-9,10-Dihydroanthracen (Benzylloxanthranol).** Sm. 146° (B. 18, 2152). — III, 245.
 4) **9-Oxy-10-Keto-9-Phenyl-3-Methyl-9,10-Dihydroanthracen.** Sm. 213° (216°) (B. 19, 3065; Bl. [3] 17, 981). — III, 262.

- C₂₁H₁₆O₂**
- 9-Oxy-10-Keto-9-Phenyl-*p*-Methyl-9,10-Dihydroanthracen. Sm. 195° (B. 16, 2366). — III, 262.
 - α*-γ-Diketo-*αβγ*-Triphenylpropan (Phenyldibenzoylmethan). Sm. 119 bis 120°; Sd. 300—305°₈₀ (Soc. 69, 742). — III, 306.
 - Keton (aus Dibenzyltoluol). 2 Isomere. Sd. 300—305°₈₀₋₈₀ (B. 7, 1156). — III, 306.
 - Picencarbonsäure. Sm. 245° (A. 284, 79). — II, 1483.
 - Phthalacensäure. Sm. 245—247° (B. 17, 1399). — II, 1483.
 - Triphenylakrylsäure. Sm. 212—213° (B. 26, 1799, 2783; 29, 2842).
 - ααβ*-Triphenyläthen-*α*¹-Carbonsäure. Sm. 189° (185—186°) (B. 29, 2841; 30, 1283).
 - Lakton d. *α*-Oxy-*α*¹-Diphenyl-*α*²-[4-Methylphenyl]methan-*α*²-Carbonsäure. Sm. 147°; Sd. oberh. 360° (B. 19, 3062; Bl. [3] 17, 977). — II, 1724.
 - Lakton d. *α*-Oxy-*α*¹-Diphenyl-*α*²-[3-Methylphenyl]methan-*α*²-Carbonsäure. Sm. 179° (B. 16, 2361). — II, 1724.
 - Lakton d. *α*-Oxy-*α*¹-Diphenyl-*α*²-[4-Methylphenyl]methan-*α*²-Carbonsäure. Sm. 106° (B. 14, 1867; A. 299, 306). — II, 1724.
- C₂₁H₁₆O₃**
- 1) Methylester d. Hydrofluoransäure. Sm. 123—125° (B. 28, 432). — II, 1911.
 - 2) Methylester d. 2-[4-Phenylbenzoyl]benzol-1-Carbonsäure. Sm. 85 bis 90° (A. 257, 98). — II, 1726.
 - 3) Phenylester d. *α*-Oxy-*β*-Phenylakrylphenyläthersäure. Sm. 74°; Sd. 250—260°₈₀ (C. 1897 [1] 1120).
 - 4) Acetat d. *γ*-Keto-*γ*-[1-Oxy-2-Naphtyl]-*α*-Phenylpropen. Sm. 95—96° (B. 31, 706).
 - 5) Benzoesat d. *β*-Oxy-*α*-Keto-*αβ*-Diphenyläthan (B. d. Benzoin). Sm. 125° (A. 104, 117). — III, 223.
- C₂₁H₁₆O₄**
- C 75,9 — H 4,8 — O 19,3 — M. G. 332.
 - 1) Di[2,4-Dioxy-1-Naphtyl]methan. Sm. 164,5° (B. 31, 146).
 - 2) Di[2,7-Dioxynaphtyl]methan. Sm. 252° u. Zers. (B. 26, 85). — II, 1039.
 - 3) Resorcincinnamylein + H₂O. HCl (J. pr. [2] 48, 406). — II, 1123.
 - 4) 2-Benzoesat-1-Methyläther d. 1,2-Dioxydiphenylketon. Sm. 95,5 bis 96,5° (G. 26 [2] 434).
 - 5) Dibenzoesat d. Dioxymethylbenzol (A. 102, 370; J. 1857, 471). — II, 13.
 - 6) Dibenzoesat d. 3,4-Dioxy-1-Methylbenzol. Sm. 58° (C. 1998 [1] 1025).
 - 7) Dibenzoesat d. 3,5-Dioxy-1-Methylbenzol. Sm. 88° (40°) (A. ch. [4] 6, 197; J. pr. [2] 26, 65). — II, 1150.
 - 8) Triphenylmethan-2,4-Dicarbonsäure. Sm. 278°. Ca + 2H₂O, Ag₂ (B. 19, 3008). — II, 1912.
 - 9) Triphenylmethan-*p*-Dicarbonsäure. Sm. 278—280°. Ba + 5H₂O, Ag₂ (B. 16, 2375). — II, 1913.
 - 10) 2-Benzoxyphenyllessigsäure. Sm. 152°. Ag (B. 30, 127).
C 72,4 — H 4,6 — O 23,0 — M. G. 348.
- C₂₁H₁₆O₅**
- 1) *α*-Oxytriphenylmethan-3,4-Dicarbonsäure. Sm. 180°. Ca, Ba, Ag₂ (B. 19, 3071). — II, 1988.
 - 2) Diacetat d. *p*-Oxy-2-[2-Oxybenzoyl]naphtalin. Sm. 107—108° (A. 257, 91). — III, 256.
 - 3) Diacetat d. *p*-Oxy-2-[2-Oxybenzoyl]naphtalin. Sm. 135—137° (A. 257, 93). — III, 255.
 - 4) Monobenzoesat d. Cotoïn (M. d. 2,4,6-Trioxydiphenylketonmonomethyläther). Sm. 110—112° (A. 282, 193). — III, 203.
- C₂₁H₁₆O₆**
- 1) Diacetat d. 5,6-Dioxy-2-Keto-1-Cinnamyliden-1,2-Dihydrobenzofuran. Sm. 176° (B. 30, 2951).
 - 2) Monomethylester d. Acetylulvinsäure. Sm. 153—155° (156°) (B. 13, 1634; A. 219, 17; 282, 14; 284, 121). — II, 2030.
C 66,1 — H 4,4 — O 26,4 — M. G. 364.
- C₂₁H₁₆O₇**
- 1) Katchinanhydrid (A. 96, 356; 186, 337). — III, 686.
 - 2) Monobenzoesat d. Baptigenin. Sm. bei 148° (C. 1897 [2] 430).
 - 3) Diacetat d. Citrakonfluoresceïn (Soc. 63, 679). — II, 2026.

- C₂₁H₁₆O₂**
C₂₁H₁₆O₃
- 4) Acetylchrysoctetrarsäure. Sm. 163–164° (*J. pr.* [2] 57, 312).
 C 63,6 — H 4,0 — O 32,3 — M. G. 396.
 - 1) Triacetat d. 7,8-Dioxy-2-[2-Oxyphenyl]-1,4-Benzopyron. Sm. 160° (*B.* 29, 2433).
 - 2) Triacetat d. 7,8-Dioxy-2-[3-Oxyphenyl]-1,4-Benzopyron. Sm. 166 bis 167° (*B.* 29, 2433).
 - 3) Triacetat d. 7,8-Dioxy-2-[4-Oxyphenyl]-1,4-Benzopyron. Sm. 199 bis 201° (*B.* 29, 2434).
 - 4) Triacetat d. 7-Oxy-2-[3,4-Dioxyphenyl]-1,4-Benzopyron (Tr. d. Trioxyflavon). Sm. 168° (*B.* 30, 300).
 - 5) Triacetat d. 5,6,7-Trioxo-1-Methyl-9,10-Anthrachinon. Sm. 217 bis 218° (*A.* 240, 284). — III, 449.
 - 6) Triacetat d. 6,7,8-Trioxo-1-Methyl-9,10-Anthrachinon. Sm. 208 bis 210° (*A.* 240, 284). — III, 449.
 - 7) Triacetat d. 5,6,7-Trioxo-2-Methyl-9,10-Anthrachinon. Sm. 204° (*A.* 240, 284). — III, 453.
 - 8) Triacetat d. 6,7,8-Trioxo-2-Methyl-9,10-Anthrachinon. Sm. 188 bis 190° (*A.* 240, 284). — III, 449.
 - 9) Triacetat d. Emodin. Sm. 190° (*A.* 183, 163). — III, 454.
 - 10) Triacetat d. Galangin. Sm. 140–142° (*B.* 14, 2808). — III, 632.
 - 11) Triacetat d. Morindon. Sm. 222° (*Soc.* 65, 856). — III, 455.
 - 12) Verbindung (aus Katechin) (*A.* 186, 339). — III, 686.
 C 61,2 — H 3,9 — O 34,9 — M. G. 412.
- C₂₁H₁₆O₃**
- 1) Parallsäure + 1 u. 3H₂O (oder C₂₀H₁₄O₃ Psorom-säure). Sm. 262–265° (wasserfrei). K₂, Ba, Pb + H₂O, Ag, Ag₂ (*J. pr.* [2] 58, 517). — II, 2093, 2112.
 C 58,9 — H 3,7 — O 37,4 — M. G. 428.
- C₂₁H₁₆O₁₀**
- 1) Tetracetat d. Anhydropyrogalloketon. Sm. 237° (*A.* 209, 271). — III, 210.
 - 2) Monäthylester d. αγ-Diketo-αγ-Diphenylpropan-ββ,2,2'-Tetracarbonsäure. Sm. oberh. 180° (*B.* 20, 1012). — II, 2100.
 C 85,1 — H 5,4 — N 9,5 — M. G. 296.
- C₂₁H₁₆N₂**
- 1) 1,1'-Dinaphtylmethanamidin. Sm. 199° (*Am.* 13, 516). — II, 604.
 - 2) 1,3,4-Triphenylpyrazol. Sm. 185° (*A.* 289, 332; *Soc.* 71, 1148). — IV, 1027.
 - 3) 1,3,5-Triphenylpyrazol. Sm. 137–138° (*B.* 21, 1206; *J. pr.* [2] 58, 153). — IV, 1028.
 - 4) 1,4,5-Triphenylpyrazol. Sm. 212° (206°); Sd. oberh. 400° (*Soc.* 57, 708; *B.* 26, 1889). — IV, 1028.
 - 5) 2,4,5-Triphenylimidaesol (Lophin). Sm. 275°. HCl + 1/2 H₂O, (2HCl, PtCl₄), H₂, HNO₃ + H₂O, + AgNO₃, 2 + AgNO₃, 2 + 3 AgNO₃ (*A.* 54, 368; 93, 329; 97, 283; 112, 166; 151, 135; *B.* 10, 70; 13, 706; 14, 444; 16, 1268, 1493, 2410; 27, 311; *M.* 17, 302; *Bl.* 3, 17, 862). — III, 26, 314). — III, 27.
 - 7) 1-Phenylamido-3-Phenylisochinolin. Sm. 126° Pikrat (*B.* 25, 2709). — IV, 1026.
 - 8) α-[2-Chinoly]-β-[2-Methyl-6-Chinoly]äthen. Sm. 157,5° (*B.* 22, 289). — IV, 1081.
 - 9) α-[6-Chinoly]-β-[2-Methyl-6-Chinoly]äthen. Sm. oberh. 300° (*B.* 18, 3238). — IV, 372.
 - 10) α-[2-Chinoly]-β-[2-Methyl-7-Chinoly]äthen. Fl. HNO₃ + 1 1/2 H₂O (*B.* 23, 3652). — IV, 1081.
 - 11) 6-Methyl-2,3-Diphenyl-1,4-Benzodiazin. Sm. 111° (*A.* 237, 339; *B.* 26, 1348). — IV, 1081.
 - 12) Base (aus Benzaldehyd, p-Toluidin u. salz. p-Toluidin). Sm. 177–178°. (2HCl, PtCl₄ + 2H₂O) (*J. pr.* [2] 36, 267). — IV, 1081.
 C 77,8 — H 4,9 — N 17,3 — M. G. 324.
- C₂₁H₁₆N₄**
- 1) 6-Phenylamido-2,4-Diphenyl-1,3,5-Triazin. Sm. 155° (*B.* 26, 2227). — IV, 1294.
 C 89,1 — H 6,0 — N 4,9 — M. G. 283.
- C₂₁H₁₇N**
- 1) Methyl-2,2-Dinaphtylamin. Sm. 139–140° (123–124°) (*B.* 20, 2619; 23, 2460). — II, 604.
 - 2) 5-Methyl-2-Phenyl-1-[1-Naphtyl]pyrrol. Sm. 74° (*B.* 18, 2598). — IV, 333.

- C₂₁H₁₇N**
- 3) **5-Methyl-2-Phenyl-1-[2-Naphtyl]pyrrol.** Sm. 52° (*B.* 18, 2599). — *IV*, 333.
 - 4) **2,6-Di[β-Phenyläthenyl]pyridin.** Sm. 167,5° (HCl, HgCl₂), (2HCl, PtCl₄), (HCl, AuCl₃), Pikrat (*B.* 25, 2403). — *IV*, 469.
 - 5) **1-Methyl-2,3-Diphenylindol.** Sm. 139°. Pikrat (*B.* 26, 1345). — *IV*, 469.
 - 6) **5-Methyl-2,3-Diphenylindol.** Sm. 153°. Pikrat, + Aceton (*B.* 26, 1343; *M.* 14, 285; 15, 402; *Soc.* 65, 896). — *IV*, 470.
 - 7) **7-Methyl-2,3-Diphenylindol.** α-Modif. Sm. 102°; β-Modif. Sm. 128°; γ-Modif. Sm. 136° (*B.* 26, 1344; *Soc.* 65, 893). — *IV*, 469.
 - 8) **2-Phenyl-3-Benzylindol.** Sm. 100–101° (*A.* 248, 113). — *IV*, 469.
 - 9) **Nitril d. ααβ-Triphenyläthan-α-Carbonsäure.** Sm. 126° (*A.* 250, 143). — *II*, 1483.
- C₂₁H₁₇N₃**
- C 81,0 — H 5,4 — N 13,5 — M. G. 311.
- 1) **1,1'-Dinaphtylguanidin.** Sm. 200°. HCl, (2HCl, PtCl₄) (*A.* 98, 238; *B.* 21, 969). — *II*, 605.
 - 2) **2,4-Di[Phenylamido]chinolin.** Sm. 149° (*B.* 26, 2230). — *IV*, 1159.
 - 3) **1-Phenylhydrazido-3-Phenylisochinolin.** Sm. 185° (*B.* 25, 2709). — *IV*, 1189.
 - 4) **Nitril d. β-Phenylhydrason-αβ-Diphenylpropionsäure.** Sm. 169° (*J. pr.* [2] 55, 311). — *IV*, 698.
 - 5) **Nitril d. β-Diphenylhydrason-β-Phenylpropionsäure.** Sm. 148° (*J. pr.* [2] 58, 149).
- C₂₁H₁₇N₅**
- C 74,3 — H 5,0 — N 20,6 — M. G. 339.
- 1) **Cyanid d. α-Triphenylguanidin** (*B.* 3, 764; *II*, 973). — *II*, 350.
 - 2) **Cyanid d. uns. β-Triphenylguanidin + 1/2 H₂O.** Sm. 172,5°. HCl + 3H₂O (*A.* 66, 129; *B.* 3, 763; *IO*, 1593; *II*, 973). — *II*, 351.
 - 3) **6-Phenylhydrazido-2,4-Diphenyl-1,3,5-Triazin.** Sm. 140° (*B.* 26, 2226). — *IV*, 1294.
- C₂₁H₁₇Cl**
C₂₁H₁₅O
- C 88,1 — H 6,3 — O 5,6 — M. G. 286.
- 1) **10-Oxy-9-Benzyl-9,10-Dihydroanthracen.** Zers. bei 130–140° (*B.* 23, 2528). — *II*, 905.
 - 2) **ε-Keto-α-Diphenyl-αγ⁺δ-Nonatetraën.** Sm. 142° (*B.* 18, 2325). — *III*, 258.
 - 3) **α-Keto-αβγ-Triphenylpropan** (Benzyldeoxybenzoïn). Sm. 120° (*B.* 21, 1300; *A.* 250, 132). — *III*, 259.
 - 4) **Verbindung** (aus d. Verb. C₂₁H₁₈O aus Benzamaron). Sm. 118°; Sd. 210 bis 220°₁₅ (*A.* 275, 65). — *III*, 314.
- C₂₁H₁₅O₂**
- C 83,5 — H 5,9 — O 10,6 — M. G. 302.
- 1) **9,10-Dioxy-10-Benzyl-9,10-Dihydroanthracen.** Sm. 60–61° (*Bl.* [3] 6, 92). — *III*, 245.
 - 2) **Methyläther d. β-Keto-αβ-Diphenyl-α-[4-Oxyphenyl]äthan.** Sm. 90 bis 92°; Sd. 292–298°₂₃ (*Soc.* 57, 965). — *III*, 258.
 - 3) **Aethyläther d. γ-Keto-α-Phenyl-γ-[4-Oxy-2-Naphtyl]propen?** Sm. 85–86° (*B.* 25, 3537). — *III*, 258.
 - 4) **βββ-Triphenylpropionsäure.** Sm. 177°. Na + H₂O, K + H₂O, Ba + H₂O, Ag (*Soc.* 51, 226). — *II*, 1483.
 - 5) **ααβ-Triphenyläthan-α-Carbonsäure.** Sm. 162°. Ag (*A.* 250, 143). — *II*, 1482.
 - 6) **3-Methyltriphenylmethan-6-Carbonsäure.** Sm. 217°. Ba + 4H₂O, Ag (*B.* 16, 2364). — *II*, 1482.
 - 7) **4-Methyltriphenylmethan-2-Carbonsäure.** Sm. 203°. Ba + 3H₂O, Ag (*B.* 19, 3064). — *II*, 1482.
 - 8) **4'-Methyltriphenylmethan-2'-Carbonsäure.** Sm. 172°. Ba + 3 1/2(4)H₂O (*A.* 234, 242; *Bl.* [3] 17, 978).
 - 9) **Acetat d. α-Oxytriphenylmethan.** Sm. 99° (*A.* 227, 116). — *II*, 1083.
 - 10) **Verbindung** (aus Amarsäure). Sm. 168° (*A.* 275, 73). — *II*, 1725.
- C₂₁H₁₅O₃**
- C 79,3 — H 5,6 — O 15,1 — M. G. 318.
- 1) **αε-Diketo-γ-[2-Furanyl]αε-Diphenylpentan** (Furaldiacetophenon). Sm. 95° (*B.* 29, 2248). — *III*, 730.
 - 2) **Monobenzoat d. αβ-Dioxy-αβ-Diphenyläthan.** Sm. 160–161° (*A.* 182, 277). — *II*, 1145.
 - 3) **Monobenzoat d. Isohydrobenzoïn.** Sm. 130° (*A.* 182, 285). — *II*, 1145.

- C₂₁H₁₆O₃**
- 4) *α*-Oxy-*α'**α''*-Diphenyl-*α*³-[4-Methylphenyl]methan-*α*²-Carbonsäure. Na (B. 19, 3062). — II, 1724.
 - 5) *α*-Oxy-*α'**α''*-Diphenyl-*α*³-[3-Methylphenyl]methan-*α*⁶-Carbonsäure. Na (B. 16, 2361). — II, 1724.
 - 6) *α*-Oxy-*α'**α''*-Diphenyl-*α*³-[2-Methylphenyl]methan-*α*⁵-Carbonsäure. Sm. 250–255° u. Zers. Ca + x H₂O, Ba + x H₂O (B. 16, 2371). — II, 1724.
 - 7) Benzylester d. *α*-Oxydiphenylelessigsäure. Sm. 75–76° (B. 22, 1212). — II, 1696.
- C₂₁H₁₆O₃**
- C 72,0 — H 5,1 — O 22,9 — M. G. 350.
 - 1) *β*-Dibenzoyl-*βδδ*-Triketohheptan (Dibenzoyldiacetylaceton). Sm. 55° (B. 28, 1824).
 - 2) Methyläthylester d. Pulvinsäure. Sm. 138–139° (A. 282, 41). — II, 2030.
 - 3) isom. Methyläthylester d. Pulvinsäure. Sm. 150–151° (A. 282, 42). — II, 2030.
 - 4) norm. Propylester d. Pulvinsäure. Sm. 134° (A. 282, 42).
- C₂₁H₁₆O₃**
- C 68,8 — H 4,9 — O 26,2 — M. G. 366.
 - 1) Trimethyläther d. Dehydrobrasilinmonacetat. Sm. 174–176° (M. 16, 914). — III, 655.
 - 2) Äthylester d. Chrysoctetrarsäure. Sm. 146° (J. pr. [2] 57, 311).
- C₂₁H₁₆O₃**
- C 66,0 — H 4,7 — O 29,3 — M. G. 382.
 - 1) Verbindung (aus Dichlorbisdiketohydrinden). Na (B. 31, 1168).
- C₂₁H₁₆O₃**
- C 63,3 — H 4,5 — O 32,2 — M. G. 398.
 - 1) Katechinanhydrid (Katechugersäure). Ca, Ba, 2 + 3PbO (A. 186, 332; Fr. 12, 285; 13, 119). — III, 656.
 - 2) Verbindung + 1/2 H₂O (aus Fuscophlobaphen) (Z. 1870, 178, 179). — III, 689.
- C₂₁H₁₆O₃**
- C 60,9 — H 4,3 — O 34,8 — M. G. 414.
 - 1) Tetracetat d. 2,5,2',6'-Tetraoxydiphenylketon. Sm. 118–119° (M. 13, 414). — III, 205.
 - 2) Tetracetat d. 2,2',3',4'-Tetraoxydiphenylketon. Sm. 118° (A. 269, 309). — III, 204.
- C₂₁H₁₆N₂**
- C 84,6 — H 6,0 — N 9,4 — M. G. 298.
 - 1) 2,4-Di[Benzylidenamido]-1-Methylbenzol. Sm. 122–128° (A. 140, 98). — IV, 607.
 - 2) *α*-Diphenylmethylenhydrason-*α*-Phenyläthan. Sm. 105° (J. pr. [2] 44, 207). — III, 187.
 - 3) Amarin. Sm. 100° (u. 126°). Ag, + AgNO₃ + H₂O, HCl, (2HCl, PtCl₄), H₂, HNO₃, H₂SO₄ + 3 1/2 H₂O, H₂Cr₂O₇. Lit. bedeutend. — III, 22.
 - 4) Hydrobenzamid. Sm. 110° (A. 21, 130; 41, 89; 102, 369; 110, 78; 112, 151, 305; 241, 329; B. 14, 444, 1139; 19, 748; 29, 2146; M. 9, 695; Bl. [3] 17, 860). — III, 20.
 - 5) Benzoinamid (= Benzoinam) (Herz. J. 18, 354). — III, 223.
 - 6) 1-Phenylhydrason-2-Phenyl-2,3-Dihydroinden. Sm. 137–138° (136°) (B. 25, 2097, 2129). — IV, 778.
 - 7) 1,3,5-Triphenyl-4,5-Dihidropyrazol. Sm. 134–135° (136°) (B. 21, 1209; 28, 358). — IV, 1017.
 - 8) 2,4,5-Triphenyl-4,5-Dihydroimidazol (Isoamarin). Sm. 175° (B. 28, 3177). — IV, 979.
 - 9) 6-Methyl-2-Phenyl-1-[4-Methylphenyl]benzimidazol. Sm. 185° (B. 25, 1024). — IV, 612.
 - 10) 5 oder 6-Methyl-2-Phenyl-1-Benzylbenzimidazol (Tolubenzaldehyd). Sm. 195,5°. HCl + H₂O, (2HCl, PtCl₄) (B. 10, 1126; 11, 592; 19, 2026). — IV, 619.
 - 11) 1-Methyl-2,3-Diphenyl-1,2-Dihydro-1,4-Benzdiazin. Sm. 133° (B. 24, 2682). — IV, 1074.
 - 12) 7-Methyl-2,3-Diphenyl-1,2-Dihydro-1,4-Benzdiazin. Sm. 143° (B. 26, 192). — IV, 1075.
 - 13) Base (aus Cyanammonium u. Benzaldehyd). Sm. 198°. HCl + H₂O, (2HCl, PtCl₄), HNO₃ + H₂O, Ag (Soc. 75, 205).
- C₂₁H₁₆N₂**
- C 77,3 — H 5,5 — N 17,2 — M. G. 326.
 - 1) 1,2-Di[Phenylhydrason]-2,3-Dihydroinden. Sm. 228–229° u. Zers. (B. 29, 2665). — IV, 784.

- C₂₁H₁₈N₄** 2) 1,3-Di[Phenylhydrazon]-2,3-Dihydroindin. Sm. 171° (A. 252, 73).
— IV, 784.
- C₂₁H₁₈N₆** C 71,2 — H 5,1 — N 23,7 — M. G. 354.
1) 1,3,6-Triphenylmelamin. Sm. 185° (2HCl, PtCl₄) (B. 3, 267; 18, 3223; 20, 1071; 23, 1678). — II, 450.
2) 2,3,5-Triphenylmelamin. Sm. 217°. (2HCl, PtCl₄ + H₂O), (2HCl, 2AuCl₃) (B. 18, 3226). — II, 450.
3) 2,3,6-Triphenylmelamin. Sm. 221° (B. 21, 869). — II, 450.
4) 2,4,6-Triphenylmelamin. Sm. 228° (225°). (2HCl, PtCl₄) (J. pr. [2] 33, 294; B. 18, 3218; 21, 870). — II, 450.
5) Phenylhydrazon d. Cykloformazylmethylketon. Sm. 205–210° (A. 300, 251). — IV, 1230.
- C₂₁H₁₈Cl₂** 1) 2,6-Dichlorphenylidi[4-Methylphenyl]methan. Sm. 89° (A. 299, 355).
- C₂₁H₁₈J₂** 1) Phenylidi[6-Jod-3-Methylphenyl]methan. Sm. 167–168° (J. pr. [2] 35, 262). — II, 290.
- C₂₁H₁₈S₂** 1) Diphenyläther d. $\gamma\gamma$ -Dimerkapto- α -Phenylpropen. Sm. 80–81° (B. 18, 885). — III, 59.
- C₂₁H₁₆S₂** 1) α -Trithiobenzaldehyd oder (C₆H₄S)₂. Zers. bei 150° (A. 37, 348; 38, 320; B. 9, 1895; 12, 1056; 15, 861; 24, 1439; J. 1847/48, 590). — III, 18.
2) β -Trithiobenzaldehyd. Sm. 225–226° u. Zers. + Thiophen (B. 10, 1877; 15, 861; 22, 2605; 29, 146 Ann.). — III, 19.
3) γ -Trithiobenzaldehyd. Sm. 166–167° (B. 22, 2605). — III, 19.
- C₂₁H₁₉N₃** C 80,5 — H 6,1 — N 13,4 — M. G. 313.
1) α -Azocidibenzyl-p-Toluidin. Sm. 211° (B. 25, 3579). — IV, 1385.
2) 7-Methyl-3-Phenyl-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 220° (B. 23, 505). — IV, 1378.
- C₂₁H₁₉N₅** C 73,9 — H 5,6 — N 20,5 — M. G. 341.
1) 2,3-Di[Phenylhydrazon]-5-Methyl-2,3-Dihydroindol (Diphenylhydrazinmethylsatin). Sm. 255° u. Zers. (J. pr. [2] 33, 74). — II, 1652.
- C₂₁H₂₀O** C 87,4 — H 6,9 — O 5,6 — M. G. 288.
1) Äthyläther d. α -Oxytriphenylmethan. Sm. 83° (B. 7, 1208; 28, 2518; J. 1854, 462; A. ch. [6] 1, 502; A. 227, 114; C. 1897 [2] 408). — II, 1083.
2) 1-Keto-2,7-Dibenzyliden-R-Heptamethylen (Dibenzylidensuberon). Sm. 107–108° (B. 29, 1600; 30, 2263).
3) d-3-Keto-2,4-Dibenzyliden-1-Methylhexahydrobenzol. Sm. 126–128° (B. 29, 1597).
4) l-3-Keto-2,4-Dibenzyliden-1-Methylhexahydrobenzol. Sm. 121–122° (A. 295, 182).
C 82,9 — H 6,6 — O 10,5 — M. G. 304.
- C₂₁H₂₀O₂** C 78,8 — H 6,2 — O 15,0 — M. G. 320.
1) α -Oxy-Phenylidi[2-Oxy-1-Methylphenyl]methan. Sm. 220–225° (A. 257, 69). — II, 1115.
- C₂₁H₂₀O₃** C 75,0 — H 6,0 — O 19,0 — M. G. 336.
2) Dimethyläther d. 2-Keto-1,3-Di[4-Oxybenzyliden]-R-Pentamethylen. Sm. 122° (B. 29, 1838).
3) Diäthyläther d. β -Oxy-2-[2-Oxybenzyl]naphtalin. Sm. 138–141° (A. 257, 91). — III, 256.
4) Säure (aus Amarsäure). Ag (A. 275, 75). — II, 1725.
5) Äthylester d. 4-Keto-2,6-Diphenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 109° (A. 281, 58). — II, 1721.
- C₂₁H₂₀O₄** C 68,5 — H 5,4 — O 26,1 — M. G. 368.
1) Diäthyläther d. 5,6-Dioxy-2-Keto-1-Cinnamyliden-1,2-Dihydrobenzofuran. Sm. 123° (B. 30, 2952).
2) $\alpha\eta$ -Diphenyl- $\alpha\zeta$ -Butadien- $\beta\zeta$ -Dicarbonsäure (Dibenzalpinclinsäure). Sm. 192–193°. Ag₂ (Soc. 59, 850). — II, 1907.
- C₂₁H₂₀O₅** C 68,5 — H 5,4 — O 26,1 — M. G. 368.
1) Curcumin (oder C₁₄H₁₄O₄). Sm. 183° (B. 30, 192).
2) Pentacetyläther d. Dehydrohämatoxylin. Sm. 160–163° (M. 16, 911). — III, 665.
3) Monoacetat d. Brasilintrimethyläther. Sm. 150–155° (M. 19, 741).
4) Monoacetat d. Apigenindiäthyläther. Sm. 181–182° (Soc. 71, 815).

- C₇₁H₂₀O₅**
C₇₁H₂₀O₇
C₇₁H₂₀O₈
- 5) Benzoylflixaäure. Sm. 123° (B. 21, 2965). — II, 1967.
 C 65,6 — H 5,2 — O 29,2 — M. G. 384.
 - 1) Perlatin (J. pr. [2] 57, 412).
 C 63,0 — H 5,0 — O 32,0 — M. G. 400.
 - 2) Ruffin (A. 30, 198; 33, 226; 156, 7). — III, 601.
 - 3) Tetramethylätheracetat d. Quercetin. Sm. 167—169° (M. 5, 86; 9, 540). — III, 604.
 - 3) Acetat d. Morintetramethyläther. Sm. 167° (Soc. 69, 797). — III, 683.
 - 4) Triacetat d. Phloretin. Sm. 93,5—94,5° (B. 27, 2687; siehe auch B. 28, 1394).
 - 5) Narceonsäure. Sm. 208—209°. Ag (A. 277, 56; 286, 253). — II, 2082.
 - 6) Verbindung (aus Katechin) (Bl. 4, 8). — III, 687.
- C₇₁H₂₀O₉**
- 1) Frangulin + $\frac{1}{2}$ H₂O. Sm. 226° (A. 104, 77; 165, 230; B. 9, 1775; 21 [2] 842; Soc. 57, 44; 61, 1). — III, 455.
 - 2) Katechin + 5 H₂O (oder C₁₅H₁₀O₆). Sm. 217°. Lit. bedeutend. — III, 685.
- C₇₁H₂₀O₁₀**
- 3) Rubiadinglykosid. Sm. 270° u. Zers. Ba (Soc. 63, 969). — III, 607.
 C 58,3 — H 4,6 — O 37,0 — M. G. 432.
 - 1) Carignanetraubenfarbstoff (J. 1858, 476). — III, 673.
 - 2) Polygonin. Sm. 202—203° (Soc. 67, 1085). — III, 455.
 - 3) Verbindung (aus Katechin). Sm. unter 100° (Bl. 4, 8). — III, 686.
 - 4) Gerbstoff (aus d. Weichselkirschenbaumrinde) + $\frac{1}{2}$ H₂O (Z. 1870, 181). — III, 689.
- C₇₁H₂₀N₂**
- 5) Verbindung (Weintraubenfarbstoff) (Bl. 32, 104; [3] 7, 823; J. 1858, 476).
 C 84,0 — H 6,7 — N 9,3 — M. G. 300.
 - 1) α -Phenylimido- α -Methylbenzylamido- α -Phenylmethan. Sm. 67° (A. 273, 7; B. 30, 1787). — IV, 843.
 - 2) α -Benzylimido- α -Methylphenylamido- α -Phenylmethan. Sm. 90,5° (A. 273, 5; B. 30, 1787). — IV, 843.
 - 3) α -[4-Methylphenyl]imido- α -[4-Methylphenyl]amido- α -Phenylmethan. Sm. 131°. HCl, (2HCl, PtCl₄) (A. 184, 357; B. 19, 981). — IV, 844.
 - 4) 1,4-Di[4-Methylphenylimido]-2-Methyl-1,4-Dihydrobenzol. Sm. 145—146° (B. 26, 2781). — III, 357.
 - 5) β -Phenylhydrazon- α -Diphenylpropan. Sm. 120° (126—128°) (A. 248, 112; 284, 255). — IV, 777.
 - 6) 1,2,3-Triphenyltetrahydroimidazol (Benzylidenäthylenanilin). Sm. 137° (B. 20, 732). — III, 30.
 - 7) 5-Methyl-2,3-[Methylisopropylbiphenylen]-1,4-Diazin (Methylisopropylphenanthramethylpiazin). Sm. 143—144°. (2HCl, PtCl₄ + $\frac{1}{2}$ H₂O) (Soc. 63, 1291). — IV, 1065.
 - 8) 5-Methyl-2-Phenyl-1-[4-Methylphenyl]-2,3-Dihydrobenzimidazol. Sm. 156°. (2HCl, PtCl₄), (HCl, AuCl₃) (B. 23, 3800). — IV, 995.
 - 9) α -Base (aus Hydrobenzamid). Sm. 110°. (2HCl, PtCl₄ + 4 H₂O), Oxalat (A. 112, 170; 122, 321). — III, 21.
 - 10) β -Base (aus Hydrobenzamid). Sm. 200° (190°). (2HCl, PtCl₄) (A. 112, 170; 122, 322). — III, 21.
- C₇₁H₂₀N₄**
- C 76,8 — H 6,1 — N 17,1 — M. G. 328.
 - 1) $\alpha\beta$ -Di[Phenylhydrazon]- α -Phenylpropan. Sm. 104—105° (B. 22, 2129). — IV, 783.
 - 2) $\alpha\beta$ -Di[Phenylhydrazon]- α -[4-Methylphenyl]äthan. Sm. 145° (B. 22, 2561). — IV, 762.
 - 3) III-2,4-Dimethylformazylbenzol. Sm. 137° (B. 31, 1756).
 - 4) α -[4-Methylphenyl]azo- α -[4-Methylphenyl]hydrazon- α -Phenylmethan. Sm. 166° (B. 27, 1691). — IV, 1261.
 - 5) Diamidoamarin. 3HCl, (3HCl, PtCl₄) (B. 18, 1675). — III, 23.
 - 6) Hydrocyanrosanilin. HCl, (2HCl, PtCl₄), Pikrat (Z. 1866, 2). — II, 1091.
 - 7) Dibenzonyl-2,4-Diamido-1-Methylbenzol. (2HCl, PtCl₄) (B. 11, 1759). — IV, 1299.
 - 8) o-Tolusafranin. HCl, (2HCl, PtCl₄), HNO₃, Pikrat (B. 5, 526; 10, 874; 11, 1772; 13, 207). — IV, 1299.
 - C 70,8 — H 5,6 — N 23,6 — M. G. 356.
 - 1) $\alpha\beta\gamma$ -Tri[Phenylhydrazon]propan. Sm. 166° (B. 24, 3258). — IV, 762.
- C₇₁H₂₀N₆**

- C₂₁H₂₀N₆** 2) α -Phenylazo- $\alpha\beta$ -Di[Phenylhydrazon]propan. Sm. 105° u. Zers. (B. 25, 3542). — IV, 1229.
- C₂₁H₂₀S₂** 1) Dibenzyläther d. Dimerkaptomethylbenzol. Sm. 64° (B. 28, 1111). — III, 9.
- C₂₁H₂₀S₃** 1) Triphenyläther d. $\alpha\beta\beta$ -Trimerkaptopropan. Sm. 54–55° (B. 24, 170). — II, 792.
- C₂₁H₂₁O₆** 1) Harz (aus Polisanterholz) = (C₂₁H₂₁O₆)_x. Sm. 95° (B. 33, 435). — III, 561.
C 87,8 — H 7,3 — N 4,9 — M. G. 287.
- C₂₁H₂₁N** 1) α -Dimethylamidotriphenylmethan. Sm. 97° (2HCl, PtCl₄) (B. 17, 746). — II, 642.
- 2) β -Dimethylamidotriphenylmethan. Sm. 132°. HCl, (2HCl, PtCl₄), HNO₃, H₂SO₄ (A. 187, 211; 206, 114). — II, 641.
- 3) Tribenzylamin. Sm. 91,3°. HCl (2HCl, PtCl₄), HBr, HJ, HNO₃, H₂SO₄, + Al(SO₄)₃ + 12H₂O (J. 1856, 581; 1878, 476; A. 144, 307; 151, 306; 264, 195; B. 6, 678; 18, 2342; 19, 900, 1030; Soc. 63, 1314). — II, 521.
- 4) Dibenzyl[2-Methylphenyl]amin. Sm. 54,5–55°. HCl, (2HCl, PtCl₄) (A. Spl. 4, 80). — II, 521.
- 5) 3,5-Di[2-Methylbenzyl]pyridin. Sm. 40,5°. HCl, (2HCl, PtCl₄), Pikrat (A. 280, 83). — IV, 457.
- 6) 3,5-Di[3-Methylbenzyl]pyridin. Sm. 66–66,5°. HCl, (2HCl, PtCl₄), + 2½ H₂O, Pikrat (A. 280, 79). — IV, 457.
- 7) 3,5-Di[4-Methylbenzyl]pyridin. Sm. 108,5°. HCl, (2HCl, PtCl₄), Pikrat (A. 280, 74). — IV, 457.
- 8) 2,6-Di[β -Phenyläthyl]pyridin. Sm. 153°. (2HCl, PtCl₄ + H₂O), Pikrat (B. 25, 2404). — IV, 457.
C 80,0 — H 6,7 — N 13,3 — M. G. 315.
- C₂₁H₂₁N₃** 1) 5-Amido-1,4-Di[4-Methylphenylimido]-2-Methyl-1,4-Dihydrobenzol. Sm. 227°. HCl (A. 207, 102; Soc. 37, 546; B. 17, 2440; 26, 2774, 2780; J. r. 19, 141). — III, 359.
- 2) Phenylidi[2-Methylphenyl]guanidin. Sm. 97–98° (102°; 112°). HCl, (2HCl, PtCl₄), HNO₃ (B. 19, 2411, 2412; A. 286, 362). — II, 459.
- 3) un-Phenylidi[4-Methylphenyl]guanidin. HCl (B. 14, 1488). — II, 489.
- 4) 1-Benzyl-4-Methylphenylamido-4-Methyldiazobenzol. Sm. 114° (Soc. 53, 672). — IV, 1569.
- 5) 1,3,5-Triphenylhexahydro-1,3,5-Triazin (Anhydroformaldehydanilin). Sm. 143° (140–141°). (2HCl, PtCl₄) (B. 17, 657; 18, 3309; 25, 2765; 31, 3251; J. r. 17, 237; G. 14, 351; B. [3, 13, 412]. — II, 442.
- 6) 2-Phenyl-3-[2-Amidobenzyl]-1,2,3,4-Tetrahydro-1,3-Benzodiazin. Sm. 140° (J. pr. [2] 55, 369). — IV, 637.
- 7) Chrysoluidin (Z. 1867, 19). — IV, 1210.
- 8) Base (aus p-Ditolyltriamidatoluol). 3HCl + H₂O (J. r. 19, 143). — IV, 1129.
- 9) Verbindung (aus Dibenzylamin). HCl (Sm. 162–163°) (A. 151, 136). — II, 523.
C 73,4 — H 6,1 — N 20,4 — M. G. 343.
- C₂₁H₂₁N₅** 1) Bis-4-Diazomethylbenzol-4-Toluid. Zers. bei 88° (B. 27, 705, 1863, 2599; 29, 460).
C 63,1 — H 5,3 — N 31,6 — M. G. 399.
- C₂₁H₂₁N₇** 1) Anilylmelamin (B. 19, 2060). — IV, 743.
- C₂₁H₂₁P** 1) Tribenzylphosphin. — IV, 1665.
- C₂₁H₂₁As** 1) Tribenzylarsin. Sm. 104°. + HgCl₂ (A. 233, 62). — IV, 1690.
- 2) Tri[4-Methylphenyl]arsin. Sm. 145° (A. 201, 252; 208, 26). — IV, 1692.
- C₂₁H₂₁Bi** 1) Wismuthtri[2-Methylphenyl]. Sm. 128,5° (B. 30, 2846). — IV, 1698.
- 2) Wismuthtri[4-Methylphenyl]. Sm. 120° (A. 251, 331). — IV, 1699.
- C₂₁H₂₁Sb** 1) Antimontri[2-Methylphenyl]. Sm. 79–80°. + HgCl₂ (A. 242, 176). — IV, 1696.
- 2) Antimontri[3-Methylphenyl]. Sm. 67–68°. + HgCl₂ (A. 242, 184). — IV, 1696.
- 3) Antimontri[4-Methylphenyl]. Sm. 127–128°. + HgCl₂ (A. 242, 167). — IV, 1697.
- 4) Antimontri[o-p-Methylphenyl]. Sm. 112–113°. + HgCl₂ (A. 242, 177). — IV, 1697.
- C₂₁H₁₇O₃** C 78,3 — H 6,8 — O 14,9 — M. G. 322.
- 1) Diäthyläther d. ϵ -Keto- α -Phenyl- ϵ -(2,4-Dioxyphenyl)- $\alpha\gamma$ -Pentadiön (D. d. Cinnamylidenresacetophenon). Sm. 125° (B. 30, 2950 Ann.).

- C₂₁H₁₃O₃** 2) Verbindung (aus d. Isoamyloxanthranolchlorid). Sm. 73° (A. 212, 90). — III, 244.
- C₂₁H₁₇O₄** C 74,6 — H 6,5 — O 18,9 — M. G. 338.
- 1) β -Amylläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\beta$ -Diphenyl- α -Buten. (B. 27, 716). — III, 317.
- 2) Monäthylester d. α -Phenyl- β -Benzyl- α -Buten- $\gamma\delta$ -Dicarbonsäure. Sm. 127,5—129°. Ba (B. 28, 3194; A. 308, 175).
- 3) Diäthylester d. $\alpha\alpha$ -Diphenylpropen- $\beta\gamma$ -Dicarbonsäure (D. d. Diphenylitakonsäure). Sm. 44—45° (B. 30, 94).
C 71,2 — H 6,2 — O 22,6 — M. G. 354.
- C₂₁H₁₇O₅** 1) Colombosäure + H₂O (A. 69, 47). — III, 629.
- C₂₁H₂₃O₆** 2) Säure (aus d. Stearopten C₂₉H₅₀O₅) (J. 1854, 590). — III, 58.
C 68,1 — H 5,9 — O 26,0 — M. G. 370.
- 1) Triäthyläther d. Luteolin. Sm. 140—143° (131—132°) (Soc. 69, 800; M. 17, 424). — III, 585.
- 2) Monacetat d. Brasilintrimethyläther. Sm. 172—173° (Sm. 80—90° amorph) (B. 27, 525; M. 15, 140; 16, 913). — III, 653.
- 3) Diphenylglycerintriacetat. Fl. (B. 19, 65). — II, 662.
- 4) Colombosäure (C. 1896 [1] 375).
- 5) Triacetat d. Hydrolapachosäure. Sm. 139° (G. 19, 604). — II, 1028.
- C₂₁H₂₃O₇** 2) Säure (aus d. Stearopten C₂₉H₅₀O₅) (J. 1854, 590). — III, 58.
C 68,1 — H 5,9 — O 26,0 — M. G. 370.
- 1) Columbin. Sm. 182° (P. 19, 441; Berz. J. 11, 288; A. 69, 37; B. 12, 685). — III, 629.
- 2) Guajacinsäure. Sm. bei 200° (C. 1897 [1] 167).
C 62,7 — H 5,5 — O 31,8 — M. G. 402.
- C₂₁H₁₁O₈** 1) β -Sallyläure. Sm. 94—95°. Ag₅ (A. Spl. 7, 162). — III, 78.
- 2) Diacetat d. 3,4,2',4',6'-Pentaoxydiphenylketondimethylätheräthyläther. Sm. 118° (B. 25, 1137). — III, 208.
- C₂₁H₁₃O₉** C 60,3 — H 5,3 — O 34,4 — M. G. 418.
- 1) Chrysoxin (C. 1897 [1] 1059).
- 2) Triacetat d. α -Hexaoxybiphenyltrimethyläther (A. 169, 248). — II, 1041.
- C₂₁H₁₇O₁₀** C 58,1 — H 5,0 — O 36,9 — M. G. 434.
- C₂₁H₁₇O₁₂** 1) Hämatomminsäure. Sm. 146—147° (A. 288, 46; B. 30, 360). — II, 2083.
C 54,1 — H 4,7 — O 41,2 — M. G. 466.
- 1) Quercitrin + 2H₂O. Sm. 168° u. Zers. K (J. 1859, 522, 585; 1862, 499; 1868, 801; A. 37, 101; 90, 287; 112, 96; A. Spl. 1, 266; B. 12, 1178; Soc. 53, 264). — III, 602.
- C 83,4 — H 7,3 — N 9,3 — M. G. 302.
- C₂₁H₁₇N₃** 1) 2,5-Di[4-Methylphenylamido]-1-Methylbenzol. Sm. 112—113° (B. 26, 2781). — IV, 609.
- 2) 3,5-Di[Methylphenylamido]-1-Methylbenzol. Sm. 124° (J. pr. [2] 33, 546). — IV, 625.
- 3) 4-Amido-4'-Dimethylamidotriphenylmethan. Sm. 117—118°. 2 Pikrat (B. 30, 1140).
- 4) 2',2'-Diamido-3',3'-Dimethyltriphenylmethan? Sm. unterh. 100°. (2HCl, PtCl₄) (J. pr. [2] 36, 252). — IV, 1046.
- 5) 6',6'-Diamido-3',3'-Dimethyltriphenylmethan. Sm. 185—186°; Sd. 427—433° u. ger. Zers. + C₆H₆, 2HCl, (2HCl, PtCl₄), H₂SO₄, Pikrat (J. pr. [2] 36, 255). — IV, 1047.
- 6) 1-Phenylhydrazon-2-Benzyliden-3,5-Dimethyl-1,2,3,4-Tetrahydrobenzol. Sm. 180° (181°) (G. 23 [1] 574; A. 281, 119). — IV, 775.
- 7) 6-Methyl-2,3-[β -Methylisopropyl]biphenyl-1,4-Dihydro-1,4-Diazin. Sm. 83—85° (Soc. 63, 1291). — IV, 1048.
- C₂₁H₁₇N₄** C 76,4 — H 6,6 — N 17,0 — M. G. 330.
- C₂₁H₂₃N₅** 1) α -Phenylhydrazon- $\alpha\alpha$ -Di[4-Methylphenylamido]methan. Sm. 138°. (2HCl, PtCl₄) (B. 21, 2274). — IV, 1225.
C 79,5 — H 7,3 — N 13,2 — M. G. 317.
- 1) 3',5',5'-Triamido-2',2'-Dimethyltriphenylmethan. 3HCl, (6HCl, PtCl₄) (B. 21, 3211). — IV, 1198.
- 2) 2',2',4'-Triamido-3',3'-Dimethyltriphenylmethan? (B. 15, 679). — IV, 1198.
- 3) 4-Amido-2,5-Di[4-Methylphenylamido]-1-Methylbenzol. Sm. 165 bis 166° (A. 207, 107; B. 17, 2440; 26, 2777). — IV, 1128.

- C₂₁H₂₁N₃** 4) **2,2'-Diamidotribenzylamin.** Sm. 143° (B. 26, 2587). — IV, 628.
5) **4-Methylphenyldi(2-Amidobenzyl)amin.** Sm. 145°. 3HCl + 3H₂O, (6HCl, SnCl₄), 3H₂SO₄ + 4H₂O (B. 25, 3585). — IV, 628.
- C₂₁H₂₁O₂** 6) **2-Hexyl-4,6-Diphenyl-1,3,5-Triazin.** Sm. 44°; Sd. 265°₁₅ (2HCl, PtCl₄) (B. 22, 808). — IV, 1198.
C 81,7 — H 7,8 — O 10,4 — M. G. 308.
1) ***α*-Diketo-*α*-Diphenylnonan.** Sm. 44° (C. 1896 [2] 1091).
2) ***α*-Diketo-*α*-Di[2,4,6-Trimethylphenyl]propan.** Sm. 96–97° (Bl. [3] 9, 702). — III, 302.
3) ***α*-Di[4-Aethylbenzoyl]propan.** Sm. 88–89° (A. ch. [6] 22, 353). — III, 302.
4) **3,5-Diäthyl-2,6-Diphenyltetrahydro-1,4-Pyron.** Sd. oberh. 220° (B. 30, 2262).
C 74,1 — H 7,1 — O 18,8 — M. G. 340.
- C₂₁H₂₁O₄** 1) ***α*-Diphenylheptan-*β*-Dicarbonsäure (Dibenzylpimelinsäure).** Sm. 120°. Ba + 3H₂O (Soc. 59, 846; 61, 702). — II, 1895.
2) **Dimethylester d. *α*-Di[3-Methylphenyl]propan-*β*-*β*-Dicarbonsäure.** Sm. 122° (B. 23, 109). — II, 1894.
3) **Diäthylester d. *α*-Diphenylpropan-*β*-*β*-Dicarbonsäure (D. d. Dibenzylmalonsäure).** Sm. 13–14°; Sd. 250°₄₀ (256–257°₅₀) (Soc. 47, 821; A. 239, 97; B. 20, 439; R. 6, 88). — II, 1893.
4) **Dibenzylester d. *β*-Methylbutan-*α*,*δ*-Dicarbonsäure.** Sd. 300–320° (Bl. [3] 13, 825).
5) **Propionat d. Ostruthin.** Sm. 99–100°. — III, 639.
- C₂₁H₂₁O₅** C 70,8 — H 6,7 — O 22,5 — M. G. 356.
1) **Diäthylester d. 4-Keto-6-Methyl-2-*β*-Phenyläthenyl-1,2,3,4-Tetrahydrobenzol-1,3-Dicarbonsäure.** Sm. 127° (A. 281, 92). — II, 1974.
- C₂₁H₂₁O₆** C 67,8 — H 6,4 — O 25,8 — M. G. 372.
1) **Phillygenin (A. 118, 127).** — III, 600.
2) **Dimethyläther d. Pinoresinol.** Sm. 98° (M. 15, 514; 18, 486). — III, 563.
3) **Pentamethyläther d. Hämatoxylin.** Sm. 144–147° (M. 15, 143). — III, 664.
- C₂₁H₂₁O₇** C 65,0 — H 6,2 — O 28,8 — M. G. 388.
1) **Albopannin.** Sm. 147° (C. 1897 [1] 660).
2) **Columbin (C. 1898 [1] 375).**
3) **Dibenzylidenperseit.** Erweicht bei 219° (A. ch. [6] 19, 16). — III, 9.
- C₂₁H₂₁O₈** C 62,4 — H 5,9 — O 31,7 — M. G. 404.
1) **Verbindung (aus Esparto) (Soc. 38, 668).** — I, 1080.
- C₂₁H₂₁O₉** C 60,0 — H 5,7 — O 34,3 — M. G. 420.
1) **Glycyphyllin + 3(4¹/₂)H₂O.** Sm. 175–180° (Soc. 39, 237; 49, 857). — III, 591.
- C₂₁H₂₁O₁₀** C 57,8 — H 5,5 — O 36,7 — M. G. 436.
1) ***β*-Erythrin + H₂O.** Sm. 115–116°. Pb₃ (A. 134, 245; Bl. 2, 424). — II, 1752.
2) **Phloridsin + 2H₂O.** Sm. 108–109°. 2 + 3CaO + H₂O, 4 + 5BaO, + 3PbO (A. 15, 75, 258; 30, 192; 156, 1; 176, 116; B. 14, 303; 21, 988; Fr. 15, 28; Soc. 51, 636; C. 1898 [1] 347). — III, 600.
3) **Isophloridsin.** Sm. 105° (Z. 1868, 711). — III, 601.
- C₂₁H₂₁O₁₁** C 55,8 — H 5,9 — O 38,9 — M. G. 452.
1) **Datiscin + 2H₂O.** Sm. 180° (A. 98, 167; 277, 266). — III, 580.
2) **Teucin.** Sm. 223–230° (B. 12, 296; G. 13, 498). — III, 613.
3) **Tetracetylhelictin (A. 154, 22).** — III, 68.
- C₂₁H₂₁N₄** C 75,9 — H 7,2 — N 16,9 — M. G. 332.
1) **Tri[4-Amidobenzyl]amin.** Sm. 136° (B. 6, 1061). — IV, 639.
- C₂₁H₂₉O** C 85,7 — H 8,8 — O 5,4 — M. G. 294.
1) **4-Oktyldiphenylketon.** Sd. 104–110°₈₅ (B. 31, 939).
2) **Di[5-Methyl-2-Isopropylphenyl]keton?** Sd. 220°₁₀ (C. 1896 [2] 92).
- C₂₁H₂₉O₂** C 81,3 — H 8,4 — O 10,3 — M. G. 310.
1) **Cannabinol.** Sd. 285°₈₀ (Soc. 69, 544; 73, 20, 27). — III, 621.
- C₂₁H₂₉O₃** C 77,3 — H 8,0 — O 14,7 — M. G. 326.
1) **Di[3-Methyl-6-Isopropylphenylester] d. Kohlensäure.** Sm. 60° (48°) (J. pr. [2] 27, 505; B. 19, 2268). — II, 771.

- $C_{21}H_{10}O_4$ C 73,7 — H 7,6 — O 18,7 — M. G. 342.
- $C_{21}H_{10}O_5$ 1) Methyläther d. Bidurochinon. Sm. 126° (B. 29, 2182).
C 70,4 — H 7,3 — O 22,3 — M. G. 358.
- 1) Tetraäthyläther d. 2,5,6',6'-Tetraoxydiphenylketon. Sm. 93—95° (M. 13, 414). — III, 205.
- $C_{21}H_{10}O_6$ C 67,4 — H 6,9 — O 25,7 — M. G. 374.
- 1) Diäthylester d. β -Diketo- δ -[β -Phenyläthyl]heptan- γ -Dicarbonsäure. Sm. 160—161° (A. 281, 91). — II, 2021.
- 2) Verbindung (aus Acetessigsäureäthylester). Sm. 160—161° (G. 19, 213). — I, 593.
- 3) Verbindung (aus Tiglinaldehyd, Guajakol u. Dimethylpyrogallol) (C. 1897 [1] 168).
- $C_{21}H_{10}O_7$ C 64,6 — H 6,7 — O 28,7 — M. G. 390.
- 1) Flavopannin. Sm. 151° (C. 1897 [1] 660).
- $C_{21}H_{10}O_{11}$ C 55,5 — H 5,7 — O 38,8 — M. G. 454.
- 1) Naringin (Aurantin; Hesperidin) + 4H₂O. Sm. 171° (B. 9, 691; 18, 1313; 20, 294; J. 1879, 909). — III, 594.
- 2) Tetracetat d. Salicin. Sm. 130° (J. 1866, 676; A. 154, 9; C. 1897 [2] 1075). — III, 608.
- $C_{21}H_{10}N_2$ C 82,4 — H 8,5 — N 9,1 — M. G. 306.
- 1) Di[4-Isobutylphenylimido]methan. Sm. 189° (B. 17, 1242). — II, 557.
- 2) Strychnolin + 2H₂O. Sm. 175—178° (A. 301, 324).
- $C_{21}H_{12}N_2$ C 78,5 — H 8,4 — N 13,1 — M. G. 321.
- 1) 7-Methyl-3-Hexyl-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 165°. HCl, (2HCl, PtCl₄) (B. 24, 1010). — IV, 1152.
- $C_{21}H_{14}O_2$ C 80,8 — H 9,0 — O 10,2 — M. G. 312.
- 1) Diphenyläther d. α -Dioxynonan. Sm. 62° (C. 1899 [1] 26).
- 2) Di[3-Methyl-6-Isopropylphenyläther] d. Dioxymethan. Sm. 50°; Sd. oberh. 360° (A. 240, 203). — II, 770.
- $C_{21}H_{16}O_{14}$ C 51,0 — H 3,6 — O 45,4 — M. G. 494.
- 1) Kaffeegerbsäure, siehe C₁₅H₁₀O₈. Pb + 2PbO (C. 1897 [2] 351).
- $C_{21}H_{16}O_{13}$ C 38,9 — H 4,3 — O 56,8 — M. G. 648.
- 1) Glykosecitronensäure. Ca₄ + H₂O (A. ch. [3] 54, 81). — I, 840.
- $C_{21}H_{18}N_2$ C 81,8 — H 9,1 — N 9,1 — M. G. 308.
- 1) δ -Phenylhydrason- δ -[2-Methyl-5-Isopropylphenyl]- β -Methylbutan. Fl. (J. pr. [2] 46, 489). — IV, 773.
- 2) 3-Hexyl-1,3-Diphenyltetrahydroimidazol (Äthylenönanthylidendi-phenyldiamin). Sm. 79° (B. 20, 734). — II, 445.
- 3) Dihydrostrychnolin. Sm. 129°; Sd. 267—270°₁₆. HCl, HNO₃ (A. 301, 326).
- $C_{21}H_{18}N_4$ C 75,0 — H 8,3 — N 16,7 — M. G. 336.
- 1) ζ -Di[Phenylhydrason]- β -Methyloktan. Sm. 133—134° (G. 28 [2] 278; J. pr. [2] 58, 400).
- $C_{21}H_{19}N_3$ C 78,0 — H 9,0 — N 13,0 — M. G. 323.
- 1) Di[4-Isobutylphenyl]guanidin. Sm. 173°. (2HCl, PtCl₄) (B. 17, 1240). — II, 557.
- $C_{21}H_{20}O_2$ C 80,2 — H 9,6 — O 10,2 — M. G. 314.
- 1) Cordol. Fl. Pb (A. 63, 154; B. 15, 141). — III, 625.
- $C_{21}H_{20}O_3$ C 69,6 — H 8,3 — O 22,1 — M. G. 362.
- 1) Antiarigenin. Sm. bei 180° (C. 1896 [2] 591). — III, 570.
- $C_{21}H_{20}O_6$ C 66,7 — H 7,9 — O 25,4 — M. G. 378.
- 1) Argyräsetin (J. 1862, 490; 1867, 751). — III, 572.
- $C_{21}H_{20}O_9$ C 59,1 — H 7,0 — O 33,8 — M. G. 426.
- 1) Polystichinol. Sm. 156,7° (C. 1898 [2] 1104).
- $C_{21}H_{20}O_{14}$ C 49,8 — H 5,9 — O 44,3 — M. G. 506.
- 1) Heptacetat d. α -Glykoheptit. Sm. 113—115° (A. 270, 82).
- 2) Heptacetat d. Perseit. Sm. 119° (A. ch. [6] 19, 12). — I, 418.
- $C_{21}H_{22}O_2$ C 79,8 — H 10,1 — O 10,1 — M. G. 316.
- 1) Methylester d. Dextropimarensäure. Sm. 69° (B. 19, 2171). — II, 1437.
- 2) Äthylester d. Abietinsäure (Z. 1866, 33). — II, 1436.
- $C_{21}H_{22}O_3$ C 75,9 — H 9,6 — O 14,5 — M. G. 332.
- 1) Myristinbenzolcarbonsäureanhydrid. Sm. 38° (A. 91, 104). — II, 1158.
- 2) Methylester d. Camphanoncamphersäure. Sm. 94—95° (G. 27 [1] 189).

- $C_{21}H_{33}O_4$ C 72,4 — H 9,2 — O 18,4 — M. G. 348.
 1) β -Digitoxenin (*B.* 28 [2] 1058).
 2) Benzoyloxymyristinsäure. Sm. 68°. Ag (*B.* 14. 2482). — II, 1154.
 3) Säure (aus Campherylmalonsäurediäthylester). Sm. 224° (*A.* 257, 299). — II, 2041.
- $C_{21}H_{31}O_7$ C 63,6 — H 8,1 — O 28,3 — M. G. 396.
 1) Oxyheptinsäure. Sm. 185° (*A. ch.* [5] 20, 493).
- $C_{21}H_{32}O_8$ C 61,2 — H 7,8 — O 31,0 — M. G. 412.
 1) Tetraäthylester d. $\alpha\theta$ -Nonadien- $\delta\delta\gamma\gamma$ -Tetracarbonsäure (T. d. Diallyldicarboxylglutarsäure). Sm. 30–31°; Sd. 213–215°₉₀ (*A.* 256, 191). — I, 867.
- $C_{21}H_{31}O_{11}$ C 52,9 — H 6,7 — O 40,3 — M. G. 476.
 1) Hexaäthylester d. Propan- $\alpha\alpha\beta\beta\gamma\gamma$ -Hexacarbonsäure. Sd. 230–240°₁₇ (*B.* 29, 1277, 1278; *Soc.* 73, 1013).
- $C_{21}H_{30}O$ 1) Harz (aus *Doona zeylanica*) = ($C_{21}H_{30}O$)_n (*M.* 12, 102). — III, 555.
 $C_{21}H_{30}O_9$ 1) Digitalin = ($C_{21}H_{30}O_9$)_n (*J.* 1875, 776, 777). — III, 581.
 $C_{21}H_{34}O$ C 83,5 — H 11,2 — O 5,3 — M. G. 302.
 1) α -Methyläther d. Oxycampherpinakonan. Sm. 98° (*B.* 27, 2349; *A.* 292, 8).
 2) β -Methyläther d. Oxycampherpinakonan. Sm. 67° (*B.* 27, 2349; *A.* 292, 10).
- $C_{21}H_{34}O_2$ C 79,2 — H 10,7 — O 10,1 — M. G. 318.
 1) 4-Methylphenylester d. Myristinsäure. Sm. 39°; Sd. 239,5°₁₅ (*B.* 17, 1379). — II, 749.
- $C_{21}H_{34}O_3$ C 75,4 — H 10,2 — O 14,4 — M. G. 334.
 1) Carbonat d. d-Borneol. Sm. 215° (*Bl.* 37, 410). — III, 470.
 2) Carbonat d. l-Borneol. Sm. 220–227° (*Bl.* 41, 329). — III, 472.
- $C_{21}H_{34}O_7$ C 63,3 — H 8,5 — O 28,1 — M. G. 398.
 1) Tetraäthyläther d. Salicin. Fl. (*J.* 1866, 676; *A.* 154, 14). — III, 608.
- $C_{21}H_{34}N_2$ C 80,3 — H 10,8 — N 8,9 — M. G. 314.
 1) 2,4-Di[Oenanthylidenamido]-l-Methylbenzol. Fl. (*A.* 140, 97; 253, 319). — IV, 607.
- $C_{21}H_{36}O_7$ 1) Bryoretin = ($C_{21}H_{36}O_7$)_n (*J.* 1858, 522). — III, 573.
 $C_{21}H_{36}O_8$ C 78,8 — H 11,2 — O 10,0 — M. G. 320.
 1) Methylenäther d. d-Borneol. Sm. 167–168°; Sd. 150–160°₉₀ (*B.* 24, 3379). — III, 470.
 2) Methylenäther d. Isborneol. Sm. 167° (*J. pr.* [2] 49, 10).
- $C_{21}H_{36}O_4$ C 71,6 — H 10,2 — O 18,2 — M. G. 352.
 1) Äthylester d. Lichesterinsäure. Sm. 60° (*C.* 1898 [2] 964).
- $C_{21}H_{36}O_6$ C 65,6 — H 9,4 — O 25,0 — M. G. 384.
 1) Rangiformsäure + 2H₂O oder C₁₁H₁₆O₆. Sm. 84° (102° wasserfrei). K₂, Ca + 1½H₂O, Ba + 2H₂O, Pb + 2H₂O, Cu + 1½H₂O, Ag₂ (*G.* 12, 259; *J. pr.* [2] 57, 275). — I, 625.
- $C_{21}H_{36}O_8$ C 60,6 — H 8,6 — O 30,8 — M. G. 416.
 1) Norcaperatsäure + 2H₂O. Sm. 138° (wasserfrei). Ba₃ (*J. pr.* [2] 57, 430).
 2) Tetraäthylester d. Nonan- $\gamma\gamma\eta\eta$ -Tetracarbonsäure. Sd. 247°₉₀ (*Soc.* 59, 833). — I, 862.
 3) Tetraäthylester d. Nonan- $\delta\delta\gamma\gamma$ -Tetracarbonsäure. Sm. 42°; Sd. 207 bis 208°₁₂ (*A.* 256, 189). — I, 862.
 4) Tetraäthylester d. β -Methylheptan- $\eta\eta$ -Dicarbonsäure- $\gamma\gamma$ -Dimethylcarbolsäure. Sd. 195°₁₆ (*B.* 31, 2590).
 C 79,8 — H 11,4 — N 8,8 — M. G. 316.
 1) 2-Diisobutylamidomethyl-1-Piperidylmethylbenzol. Sd. 196–198°₉₀ (*B.* 31, 425).
 2) Dianhydrolupinin. Sd. 220°. (2HCl, PtCl₄) (*A.* 214, 372; *C.* 1897 [2] 361). — III, 892.
- $C_{21}H_{37}O_8$ 1) Hydrobryotin = ($C_{21}H_{37}O_8$)_n (*J.* 1858, 522). — III, 573.
 $C_{21}H_{38}O_4$ C 74,6 — H 11,2 — O 14,2 — M. G. 338.
 1) Carbonat d. Menthol. Sm. 105° (*A. ch.* [6] 7, 469; *J. pr.* [2] 56, 43; *C.* 1898 [2] 1190). — III, 467.
- $C_{21}H_{38}O_6$ C 65,3 — H 9,8 — O 24,9 — M. G. 386.
 1) Trisäureester d. Propan- $\alpha\beta\gamma$ -Tricarbonsäure (Tr. d. Tricarballylsäure). Sd. oberh. 360° (*J.* 1865, 395; *A.* 163, 273). — I, 808.

- C₂₁H₄₀O** C 81,8 — H 13,0 — O 5,2 — M. G. 308.
1) **Trionanthaldehyd** (aus Oenanthol). Sd. 315—320₂₀₀ (Soc. 43, 71). — I, 962.
- C₂₁H₄₀O₂** C 77,8 — H 12,3 — O 9,9 — M. G. 324.
1) **Lakton** (d. Oxyssäure C₂₁H₄₀O₂ im Carnaubawachs). Sm. 103,5° (A. 223, 311). — I, 580.
2) **Aethyl ester d. Döglingsäure** (J. 1847/48, 568). — I, 527.
- C₂₁H₄₀O₄** C 70,8 — H 11,2 — O 18,0 — M. G. 356.
1) **Nonadekan- α - α -Dicarbonsäure**. Sm. 109—110° (M. 17, 544).
2) **Diäthylester d. Rocellsäure** (A. 117, 340). — I, 690.
3) **Glycerinmonolein** (A. ch. [3] 41, 244). — I, 526.
- C₂₁H₄₁O₂** C 77,3 — H 12,9 — O 9,8 — M. G. 326.
1) **Medullinsäure**. Sm. 72,5° (J. 1860, 325; J. pr. [2] 49, 111).
2) **Methylester d. Arachinsäure**. Sm. 54—54,5° (A. 101, 98; J. pr. [2] 48, 488). — I, 447.
3) **Isoamylester d. Palmitinsäure**. Sm. 9° (J. 1853, 503). — I, 443.
4) **β -Methylbutylester d. Palmitinsäure**. Sm. 12—13° (Bl. [3] 15, 285).
5) **Cetylester d. Isovaleriansäure**. Sm. 25°; Sd. 280—290₂₀₀ (A. 131, 286). — I, 428.
- C₂₁H₄₁O₃** C 73,7 — H 12,3 — O 14,0 — M. G. 342.
1) **Säure** (aus Carnaubawachs). Pb (A. 223, 10). — I, 580.
2) **Methylester d. α -Oxyarachinsäure**. Sm. 62—64° (M. 17, 536).
- C₂₁H₄₁O₄** C 70,4 — H 11,7 — O 17,9 — M. G. 358.
1) **Glycerinmonostearin**. Sm. 61° (A. ch. [3] 41, 221; J. pr. [2] 28, 225). — I, 445.
- C₂₁H₄₁N₂** C 78,3 — H 13,0 — N 8,7 — M. G. 322.
1) **Trionanthylidendiamin**. Sd. über 400° (A. Spl. 3, 367). — I, 955.
- C₂₁H₄₁O** C 80,8 — H 14,1 — O 5,1 — M. G. 312.
1) **Cetyläther d. α -Oxy- β -Methylbutan**. Sm. 14°; Sd. bei 350° (Bl. [3] 16, 304).
2) **Isoamylestyläther**. Sm. 30° (A. 102, 220). — I, 300.
- C₂₁H₄₁O₂** C 76,8 — H 13,4 — O 9,8 — M. G. 328.
1) **Verbindung** (aus polym. Oenanthol). Sd. 297—300° (B. 16, 1039; Soc. 43, 80). — I, 955.

C₂₁-Gruppe mit drei Elementen.

- C₂₁H₃O₂Br₄** 1) **Tetrabromfluoresceincarbonsäure**. K₃ (B. 11, 1343). — II, 2089.
- C₂₁H₃O₂Br₃** 1) **Heptabromkatechurin?** (A. 128, 292). — III, 686.
- C₂₁H₁₀O₂Br₂** 1) **Dibrom- β -Dinaphtylenketonoxyd**. Sm. 181° (J. pr. [2] 41, 51). — III, 263.
- C₂₁H₁₀O₂Br** 1) **Methyläther d. Tetrabromfluorescein** (Methylerythrin) (A. 183, 53). — II, 2063.
- C₂₁H₁₀O₂N₂** C 65,3 — H 2,6 — O 24,9 — N 7,2 — M. G. 386.
1) **Dinitro- β -Dinaphtylenketonoxyd**. Sm. 275° (J. pr. [2] 41, 50). — III, 263.
- C₂₁H₁₀O₂Br₂** 1) **Dibromfluoresceincarbonsäure** (B. 11, 1343). — II, 2089.
- C₂₁H₁₀O₁₃Cl₄** 1) **Tetra[chloracetyl]galloflavin**. Sm. 210—212° (B. 20, 2330). — II, 1926.
- C₂₁H₁₀O₂Cl₂** 1) **Di[4-Chlor-1-Naphtylester] d. Kohlensäure**. Sm. 228° (B. 28, 3051).
- C₂₁H₁₀O₂Br₂** 1) **Di[4-Brom-1-Naphtylester] d. Kohlensäure**. Sm. 214° (B. 28, 3053).
2) **Di[1-Brom-2-Naphtylester] d. Kohlensäure**. Sm. 188—189° (B. 28, 3056).
- C₂₁H₁₀O₂J₂** 1) **Di[1-Jod-2-Naphtylester] d. Kohlensäure**. Sm. 188—189° (B. 28, 3057).
- C₂₁H₁₀O₂Br₂** 1) **Benzoingelbdibromid**. Sm. 221—222° u. Zers. (A. 115, 25; J. pr. [2] 48, 409). — II, 1124.
- C₂₁H₁₀O₂Br** 1) **Hexabromresorcinnamylein** (J. pr. [2] 48, 409). — II, 1124.
- C₂₁H₁₀O₂S** 1) **β -Dinaphtylenketonoxydauflonsäure**. Ba + H₂O (J. pr. [2] 41, 51). — III, 263.
- C₂₁H₁₀O₂N₂** C 56,7 — H 2,7 — O 21,6 — N 18,9 — M. G. 444.
1) **m-Trinitrokyphenin**. Sm. 250—260° u. Zers. (A. 115, 25; J. pr. [2] 51, 399). — II, 1216.
- C₂₁H₁₀O₂N₂** C 62,4 — H 3,0 — O 27,7 — N 6,9 — M. G. 404.
1) **Di[4-Nitro-1-Naphtylester] d. Kohlensäure**. Sm. 212° (B. 28, 3050).

- C₂₁H₁₇O₈N₄** C 56,2 — H 2,7 — O 28,6 — N 12,5 — M. G. 448.
 1) **Tetranitro- α -Dinaphtylmethan.** Zers. bei 260—270° (B. 7, 1607). — II, 296.
 2) **Tetranitro- β -Dinaphtylmethan.** Sm. 150—160° (B. 13, 1728). — II, 296.
- C₂₁H₁₇O₉N₄** C 51,2 — H 2,4 — O 29,3 — N 17,1 — M. G. 492.
 1) **Tetranitro- α ,1-Dinaphtylharnstoff.** Sm. oberh. 300° (Soc. 61, 467). — II, 608.
 2) **Tetranitro- α ,2-Dinaphtylharnstoff** (Soc. 61, 467). — II, 618.
 3) **Tri[4-Nitrophenyläther] d. Cyanursäure.** Sm. 94° (B. 20, 2236). — II, 683.
- C₂₁H₁₇N₃Cl₂** 1) **2,5-Dichlor-1-Di[2,5-Dichlorbenzylidenamid]methylbenzol** (2,5-Hexachlorhydrobenzamid). Sm. 167° (A. 299, 347).
- C₂₁H₁₃ON** C 85,4 — H 4,4 — O 5,4 — N 4,8 — M. G. 295.
 1) β -**Dinaphtakridon.** Sm. oberh. 300° (B. 28, 3098). — IV, 477.
 2) **1-Phenylphenanthrenoxazol.** Sm. 202° (Soc. 37, 668; 39, 225; 67, 46). — III, 446.
 3) **Oxim d. 2,2-Diketodinaphtylmethan** (B. 25, 3483). — II, 1007.
- C₂₁H₁₃OBr** 1) **9-Keto-10-[α -Brombenzyliden]-9,10-Dihydroanthracen.** Sm. 254° (B. 23, 1569). — III, 245.
 2) **Bromphthalacenoxyd.** Sm. bei 200° (B. 17, 1398). — II, 297.
- C₂₁H₁₃O₂N** C 77,1 — H 3,9 — O 14,7 — N 4,3 — M. G. 327.
 1) **Phenylamid d. 9,10-Anthrachinon-2-Carbonsäure.** Sm. 258—260° (B. 17, 890). — II, 1904.
 2) **4-Benzoylphenylimid d. Benzol-1,2-Dicarbonsäure.** Sm. 183° (A. 210, 267). — III, 184.
- C₂₁H₁₃O₃N** C 73,5 — H 3,8 — O 18,6 — N 4,1 — M. G. 343.
 1) **3-[3,4-Dioxyphenylmethyläther]- β -Naphtochinolin-1-Carbonsäure** (Piperonyl- β -Naphtochinoninsäure). Sm. 292° (B. 27, 2030). — IV, 472.
 2) **4-Benzoylphenylimid d. Benzol-1,2-Dicarbonsäure.** Sm. 256° (C. 1897 [1] 49).
- C₂₁H₁₃O₄N** C 67,2 — H 3,5 — O 25,6 — N 3,7 — M. G. 375.
 1) **1-[3-Nitrobenzoyl]-4-[4-Carboxylbenzoyl]benzol?** (m-Benzoyl-p-Benzoylbenzoesäure). Sm. 276°. Na + 3H₂O (A. 286, 320). — II, 1914.
 2) **1-[4-Nitrobenzoyl]-4-[4-Carboxylbenzoyl]benzol?** Sm. 306—308° (A. 286, 332). — II, 1914.
 3) **Diacetat d. Dioxyanthrachinolinchinon** (D. d. Alizarinblau). Sm. 224,5° (Soc. 35, 500). — IV, 462.
 4) **3,5-Dibenzoylpyridin-3',5'-Dicarbonsäure.** Sm. 270—271° (A. 280, 82). — IV, 175.
 5) **3,5-Dibenzoylpyridin-3',5'-Dicarbonsäure.** Sm. 308° u. Zers. Ca + H₂O, Cu, Ag, (A. 280, 66, 78). — IV, 175.
- C₂₁H₁₃O₆N₃** C 58,5 — H 3,0 — O 22,3 — N 16,2 — M. G. 431.
 1) **p-Trinitro-2,4,5-Triphenylimidazol + 2H₂O** (Triinitrolophin) (J. pr. [1] 35, 459). — III, 27.
- C₂₁H₁₃O₇N₃** C 60,1 — H 3,1 — O 26,7 — N 10,0 — M. G. 419.
 1) **Anthracenpikrat.** Sm. 138° (Bl. 7, 34). — II, 260.
 2) **Fluoranthepikrat.** Sm. 182—183° (A. 193, 146). — II, 279.
- C₂₁H₁₃O₈N₃** C 57,9 — H 3,0 — O 29,4 — N 9,7 — M. G. 435.
 1) **N-4-Nitrobenzoat d. 4-Nitrobenzoylbenzohydroxamsäure.** Sm. 187° (R. 15, 362).
- C₂₁H₁₃N₃Br** 1) **8-Brom-6-Methyl-2,3-Biphenylen-1,4-Benzodiazin.** Sm. 209—210° (B. 23, 1050). — IV, 1987.
- C₂₁H₁₃ON₂** C 81,3 — H 4,5 — O 5,2 — N 9,0 — M. G. 310.
 1) **Carbanilamidophenanthrol** (Phenylamidophenanthrenoxazol). Sm. 192 bis 193°. Pikrat (B. 22, 3242). — III, 442.
 2) **2-[2-Oxyphenyl]phenanthrenimidazol.** Sm. 270—276° u. Zers. (Soc. 41, 146). — III, 446.
 3) **2-[4-Oxyphenyl]phenanthrenimidazol.** Sm. oberh. 350° (Soc. 41, 146). — III, 447.
- C₂₁H₁₃ON₄** C 74,6 — H 4,1 — O 4,7 — N 16,6 — M. G. 335.
 1) **3-Benzoylamido-1,5,2,3-Diphenylen-2,3-Dihydro-1,2,4-Triazol.** Sm. 255—256° (B. 23, 153). — IV, 1292.
- C₂₁H₁₃OBr₂** 1) **10-Brom-9-Keto-10-[α -Brombenzyl]-9,10-Dihydroanthracen.** Sm. 148° (B. 23, 1569). — III, 245.

- $C_{21}H_{11}OS$ 1) α -Thiocarbonyl- γ -Keto- β -Phenyl- γ -Biphenylpropen. Sm. oberh. 320° (B. 21, 1340). — III, 263.
- $C_{21}H_{11}O_2N_3$ 1) C 77,3 — H 4,3 — O 9,6 — N 8,6 — M. G. 326.
- 1) 2,3-Diphenyl-1,4-Benzdiazin-6-Carbonsäure. Sm. 288°. Ba + 3H₂O (B. 23, 3627). — III, 286.
- $C_{21}H_{11}O_2N_4$ 1) C 71,2 — H 4,0 — O 9,0 — N 15,8 — M. G. 354.
- 1) Phenylimid d. 2-Phenylimido-2,3-Dihydrobenzimidazol-1,3-Dicarbonsäure. Sm. 266° (B. 24, 2504). — IV, 567.
- $C_{21}H_{11}O_2S$ 1) 2,2-Dinaphtylester d. Thiokohlsäure. Sm. 212° (B. 27, 3411).
- $C_{21}H_{11}O_3N_3$ 1) C 73,7 — H 4,1 — O 14,0 — N 8,2 — M. G. 342.
- 1) β -Phthalyl- α -Benzoyl- α -Phenylhydrazin. Sm. 193° (J. pr. [2] 35, 273). — IV, 710.
- 2) 1,4-Diketo-3-Benzoyl-2-Phenyl-1,2,3,4-Tetrahydro-2,3-Benzdiazin. Sm. 122° (J. pr. [2] 35, 288). — IV, 711.
- 3) Benzoesäure d. 5-Phenyl-3-[2-Oxyphenyl]-1,2,4-Oxiazol. Sm. 120° (B. 22, 2783). — II, 1503.
- 4) Benzoesäure d. 5-Phenyl-3-[3-Oxyphenyl]-1,2,4-Oxiazol. Sm. 146° (B. 24, 831). — II, 1519.
- 5) 4-Benzoesäure d. 5-Phenyl-3-[4-Oxyphenyl]-1,2,4-Oxiazol. Sm. 140° (B. 24, 837). — II, 1532.
- 6) 2-Oxy-1,1'-Azonaphthalin-3-Carbonsäure. Zers. bei 182° (B. 28, 3090). — IV, 1473.
- 7) 4-Oxy-1,1'-Azonaphthalin-3-Carbonsäure? Sm. 198° u. Zers. (B. 23, 1910). — IV, 1473.
- 8) Phenylamid d. 3-[1,2-Phthalyl]amidobenzol-1-Carbonsäure. Sm. 207 bis 209° (B. 16, 1322). — II, 1813.
- 9) Verbindung (aus d. Verb. $C_{21}H_{10}O_3N_3$). Sm. 230° (A. 242, 252). — IV, 719.
- $C_{21}H_{11}O_3Cl_2$ 1) Di[3,4-Dichlor-3,4-Dihydro-1-Naphtylester] d. Kohlsäure. Sm. 200° u. Zers. (B. 28, 3051).
- $C_{21}H_{11}O_4N_3$ C 70,4 — H 3,9 — O 17,9 — N 7,8 — M. G. 358.
- 1) Dinitrophenalacen. Sm. 270–280° u. Zers. (B. 17, 1398). — II, 297.
- 2) Di[β -Nitroso-2-Oxynaphtyl]methan. Sm. 106° u. Zers. (B. 25, 3482). — II, 1007.
- 3) Phenylphthalanilurethan. Sm. 160–165° (J. pr. [2] 41, 329). — II, 1809.
- 4) Phenylhydrazonpyrensäure + 2H₂O. Zers. bei 70–100°. Ba (A. 240, 176). — IV, 719.
- $C_{21}H_{11}O_4N_4$ C 65,3 — H 3,6 — O 16,6 — N 14,5 — M. G. 386.
- 1) β -Dinitro-2,4,5-Triphenylimidazol (Dinitrolophin). Sm. 100° (A. 112, 161). — III, 27.
- 2) Benzoesäure d. 3-Oxy-5-Phenyl-1-[3-Nitrophenyl]-1,2,4-Triazol. Sm. 168° (Soc. 73, 373). — IV, 1157.
- 3) Benzoesäure d. 3-Oxy-5-[3-Nitrophenyl]-1-Phenyl-1,2,4-Triazol. Sm. 148° (Soc. 71, 211). — IV, 1158.
- 4) Benzoesäure d. 3-Oxy-5-[4-Nitrophenyl]-1-Phenyl-1,2,4-Triazol. Sm. 153° (Soc. 71, 207). — IV, 1158.
- $C_{21}H_{11}O_6Br_6$ 1) Verbindung (aus Aurin) (M. 3, 470). — II, 1120.
- $C_{21}H_{11}O_7N_4$ C 58,1 — H 3,2 — O 25,8 — N 12,9 — M. G. 434.
- 1) Benzoesäure d. 3-Oxy-5-Phenyl-1-[3-Nitrophenyl]-1,2,4-Triazol. Sm. 168° (Soc. 73, 373). — IV, 1157.
- $C_{21}H_{11}O_8N_3$ C 59,7 — H 3,3 — O 30,3 — N 6,6 — M. G. 422.
- 1) Monomethyläther d. Dinitrophenolphthalain. Sm. 90–92° (G. 28 [1] 271).
- $C_{21}H_{11}O_{10}N_3$ 1) Säure (aus 2,4-Dinitrophenylacetessigsäureäthylester) (A. 220, 141). — II, 1659.
- $C_{21}H_{11}O_{10}Br_6$ 1) Hexabromfichtengerbsäure (B. 17, 1127). — III, 681.
- $C_{21}H_{11}N_3Cl_3$ 1) Diazohydrocyanosanilinchlorid (A. 194, 280). — IV, 1552.
- $C_{21}H_{15}ON$ C 84,8 — H 5,0 — O 5,4 — N 4,7 — M. G. 297.
- 1) 9-Keto-10-(α -Amidobenzyliden)-9,10-Dihydroanthracen. Sm. 150 bis 152° (B. 23, 2529). — III, 245.
- 2) Benzyläther d. Anhydro- β -Oximido- α -Keto- α - β -Diphenyläthan. Sm. 114° (B. 22, 2007). — III, 289.

- C₂₁H₁₅ON** 3) **Triphenyloxazol** (Azobenzil; Benzilam). Sm. 115° (A. 34, 190; 228, 350; B. 15, 2413; 16, 891, 2638; J. pr. [1] 35, 461; [2] 41, 331; Soc. 49, 829; 63, 474). — IV, 474.
4) **Oximidophtalacen**. Sm. 265—266° (B. 17, 1398). — II, 297.
5) **1-Naphtylamid d. Naphtalin-1-Carbonsäure**. Sm. 244° (B. 1, 42). — II, 1445.
6) **1-Naphtylamid d. Naphtalin-2-Carbonsäure**. Sm. 157° (A. 180, 325). — II, 1454.
- C₂₁H₁₅ON₂**, **C₂₁H₁₅ON₃** 1) **Verbindung** (+ AlCl₃ aus Benzonitril)? (B. 25, 2263). — II, 1212.
C 77,5 — H 4,6 — O 4,9 — N 12,9 — M. G. 325.
1) **β-Nitroso-1,3,5-Triphenylpyrazol**. Sm. 183° (B. 21, 1208). — IV, 1028.
2) **5-Phenylamido-7-Phenylimido-8-Keto-7,8-Dihydrochinolin**. Sm. 222°. Acetat, Pikrat (B. 21, 2986). — IV, 278.
3) **3-Furanyl-2-Phenyl-2,3-Dihydro-1,2,4-Naphtisotriazin**. Sm. 241° HCl, (2HCl, PtCl₄) (B. 24, 1007). — IV, 1394.
4) **Verbindung** (aus Benzenylamidin u. Salicylsäureäthylester). Sm. 246° (B. 23, 2937, 3824). — IV, 848.
- C₂₁H₁₅OCl** 1) **Verbindung** (aus Benzylloxanthranol). Sm. 95—102° (B. 23, 2527). — III, 245.
- C₂₁H₁₅O₂N** C 80,5 — H 4,8 — O 10,2 — N 4,5 — M. G. 313.
1) **2-[1,2-Phtalyl]amidodiphenylmethan**. Sm. 139° (B. 27, 2786). — II, 1806.
2) **Benzyläther d. 9-Oximido-10-Keto-9,10-Dihydroanthracen**. Sm. 82° (Soc. 69, 73). — III, 410.
3) **2-Phenylamido-1,3-Diketo-2-Phenyl-2,3-Dihydroinden**. Sm. 210 bis 211° (B. 26, 2580). — III, 302.
4) **Acetat d. 3-Oxy-5-Phenylakridin**. Sm. 173—174° (B. 18, 697). — IV, 468.
C 73,9 — H 4,4 — O 9,4 — N 12,3 — M. G. 341.
- C₂₁H₁₅O₂N₂** 1) **Oxalyltriphenylguanidin**. Sm. bei 230° (B. 3, 764; J. pr. [2] 32, 11). — II, 351.
2) **5-Phenyl-3-[3-Benzoylamidophenyl]-1,2,4-Oxiazol**. Sm. 213° (B. 18, 2474). — II, 1258.
3) **2-Benzoyl-3-Benzoylamidindazol**. Sm. 182° (A. 305, 349).
4) **2,3-Dibenzoyl-2,3-Dihydro-1,2,3-Benzotriazin**. Sm. 182° (B. 29, 627). — IV, 1149.
5) **3,4-Diphenyl-1,2,5-Triazol-1-(Phenyl-4'-Carbonsäure)**. Sm. 258° (B. 27, 1137). — III, 288.
6) **Benzoat d. 3-Oxy-1,5-Diphenyl-1,2,4-Triazol**. Sm. 134° (Soc. 67, 1066). — IV, 1157.
C 76,6 — H 4,6 — O 14,6 — N 4,2 — M. G. 329.
- C₂₁H₁₅O₂N** 1) **Tribenzoylamin** (Tribenzamid). Sm. 202° (207—208°) (B. 23, 3041; 25, 3121; 28, 435; Ann. 20, 73). — II, 1171.
2) **Benzoat d. β-Oximido-α-Keto-αβ-Diphenyläthan** (B. d. Benziloxim). Sm. 137° (A. 296, 284).
3) **Benzoat d. 5-Oxy-3-Methyl-1-Phenylbenzoxazol**. Sm. 133° (B. 30, 1104).
4) **3-[4-Methoxyphenyl]-β-Naphtochinolin-1-Carbonsäure**. Sm. 283° (B. 27, 2029). — IV, 472.
- C₂₁H₁₅O₂N₂** C 70,6 — H 4,2 — O 13,4 — N 11,8 — M. G. 357.
1) **Triphenylcyanurat**. Sm. 224° (B. 3, 275; 18, 765; 18 [2] 499; 19, 2083; 20, 2240; 28, 2472; A. 287, 310). — II, 375.
2) **Triphenylisocyanurat**. Sm. 274—275° (B. 3, 268; 18, 765, 3225; 28, 2472). — II, 376.
- C₂₁H₁₅O₄N** C 73,9 — H 4,3 — O 18,6 — N 3,1 — M. G. 345.
1) **4-[3-Nitrobenzoyl]-1-[4-Methylbenzoyl]benzol**. Sm. 210° (A. 286, 320). — III, 306.
2) **4-[4-Nitrobenzoyl]-1-[4-Methylbenzoyl]benzol**. Sm. 236° (A. 286, 332). — III, 306.
3) **Dibenzoyl d. 2-Oxybenzaldoxim**. Sm. 126° (B. 26, 2625). — III, 77.
4) **3-[4-Oxy-3-Methoxyphenyl]-β-Naphtochinolin-1-Carbonsäure** (Vanillyl-β-Naphtochinoninsäure). Sm. 288° (B. 27, 2029). — IV, 472.
5) **α-Benzoat d. Benzoylbenzhydroxamsäure** (α-Tribenzhydroxylamin). Sm. 100° (A. 175, 282; 178, 237; 186, 104; 281, 270). — II, 1208.

- C₂₁H₁₅O₂N** 6) β -Benzooat d. Benzoylbenzhydroxamsäure (β -Tribenzhydroxylamin). Sm. 141—142° (A. 161, 360; 175, 282; 178, 225; 186, 106; 281, 270). — II, 1208.
- 7) γ -Benzooat d. Benzoylbenzhydroxamsäure (γ -Tribenzhydroxylamin). Sm. 112° (A. 178, 240; 186, 33, 107; 281, 270). — II, 1208.
- C₂₁H₁₅O₂N** C 69,8 — H 4,1 — O 22,2 — N 3,9 — M. G. 361.
- 1) Diacetat d. 1,2-Dioxy-3,4-Naphtakridon. Sm. 280° (B. 27, 3075). — III, 395.
- 2) Benzooat d. *p*-Nitro- β -Oxy- α -Keto- α - β -Diphenyläthan (Nitrobenzoinbenzooat). Sm. 137° (A. 104, 119). — III, 223.
- 3) Dibenzooat d. 2-Nitroso-3,5-Dioxy-1-Methylbenzol. Sm. 157—158° (M. 18, 169).
- C₂₁H₁₅O₂N₅** C 58,2 — H 3,4 — O 22,2 — N 16,2 — M. G. 433.
- 1) Trinitroamarin. HCl (A. 79, 276). — III, 23.
- 2) *m*-Trinitrohydrobenzamid (A. 79, 272). — III, 21.
- C₂₁H₁₅O₂As** 1) Triphenylarsin-4',4'',4'''-Tricarbonsäure. Na₂ + H₂O, Ag₂ (A. 208, 30). — IV, 1693.
- 2) Arsenigbenzolcarbonsäureanhydrid (B. 22, 974). — II, 1157.
- C₂₁H₁₅O₂N₃** C 59,8 — H 3,6 — O 26,6 — N 10,0 — M. G. 421.
- 1) Methanthrempikrat. Sm. 117° (J. pr. [2] 9, 419). — II, 273.
- 2) Idrylhydrürpikrat. Sm. 186° (M. 1, 225). — II, 279.
- C₂₁H₁₅O₂N** C 61,6 — H 3,7 — O 31,3 — N 3,4 — M. G. 409.
- 1) Nitrodioxytriphenylmethandicarbonsäure. *o*-Nitroderivat Sm. 214 bis 216°; *m*-Nitroderivat Zers. bei 200°; *p*-Nitroderivat Zers. oberh. 200° (G. 21 [2] 348). — II, 2038.
- C₂₁H₁₅NS** 1) Thio- β -Dinaphtylmethylamin. Sm. 284—285° u. Zers. (B. 23, 2459). — II, 869.
- 2) 2,4,5-Triphenylthiazol. Sm. 86—87° (A. 259, 245). — IV, 474.
- C₂₁H₁₅N₂Br** 1) *p*-Brom-1,3,5-Triphenylpyrazol. Sm. 142° (B. 21, 1206). — IV, 1028.
- 2) 8-Brom-6-Methyl-2,3-Diphenyl-1,4-Benzdiazin. Sm. 153—154° (B. 23, 1050). — IV, 1081.
- C₂₁H₁₅N₂Br₂** 1) 4,4,5-Tribrom-1,3,5-Triphenyl-4,5-Dihydropyrazol. Sm. 179° (B. 21, 1210). — IV, 1017.
- C₂₁H₁₅N₂J** 1) Jodmethylat d. *s*- α - β -Dinaphtazin (B. 26, 185). — IV, 1084.
- 2) Jodmethylat d. isom. Dinaphtazin (B. 26, 184). — IV, 1084.
- C₂₁H₁₅N₂S₂** 1) Triphenylthiocyanurat. Sm. 97° (J. pr. [2] 33, 120). — II, 792.
- C₂₁H₁₅Br₂S₂** 1) α -Trithio-2-Brombenzaldehyd. Sm. 75° (B. 29, 153). — III, 19.
- 2) β -Trithio-2-Brombenzaldehyd. Sm. 155°. + C₆H₆ (B. 29, 154). — III, 19.
- 3) α -Trithio-4-Brombenzaldehyd. Sm. 174° (B. 29, 154). — III, 19.
- 4) β -Trithio-4-Brombenzaldehyd. Sm. 203°. + C₆H₆ (B. 29, 155). — III, 19.
- C₂₁H₁₆ON₂** C 80,8 — H 5,1 — O 5,1 — N 9,0 — M. G. 312.
- 1) *s*-1,1-Dinaphtylharnstoff. Sm. 270° u. Zers. (284—286°) (A. 64, 370; 108, 229; B. 12, 385; Soc. 71, 1201). — II, 608.
- 2) *s*-2,2-Dinaphtylharnstoff. Sm. 293° (289—290°) (B. 19, 2406; Soc. 71, 1203). — II, 618.
- 3) *uns*-2,2-Dinaphtylharnstoff. Sm. 192—193° (B. 23, 428). — II, 618.
- 4) 3-Phenylhydrazon-1-Keto-2-Phenyl-2,3-Dihydroinden. Sm. 170 bis 174° (B. 26, 2578). — IV, 786.
- 5) Phenylhydrazon d. 1-Benzoylbensfuran. Sm. 128—129° (G. 25 [2] 288). — IV, 788.
- 6) Benzilbensnylamidin. Sm. 232° (PINNER, Imidoäther 176). — IV, 849.
- 7) 2-[4-Oxyphenyl]-4,5-Diphenylimidazol (*p*-Oxylophin). Sm. 254 bis 255° (B. 15, 1269). — III, 27.
- 8) 2-Keto-1,4,5-Triphenyl-2,3-Dihydroimidazol. Sm. noch nicht bei 290° (A. 284, 34). — III, 223.
- 9) 1-Keto-2-Phenyl-4-Benzyl-1,2-Dihydro-2,3-Benzdiazin[?] Sm. 171 bis 172° (B. 26, 1376). — II, 1710.
- 10) Phenyläther d. 4-Oxy-1-Benzyl-2,3-Benzdiazin. Sm. 155° (B. 29, 1436). — IV, 1027.
- 11) Benzoylisobenzalazin. Sm. 150°; Sd. 300°_{sm} (J. pr. [2] 44, 178). — III, 287.

- $C_{21}H_{16}ON_4$ C 74,1 — H 4,7 — O 4,7 — N 16,5 — M. G. 340.
 1) **5-Keto-4-Phenylhydrazone-1,3-Diphenyl-4,5-Dihydropyrazol.** Sm. 169° (B. 20, 2547; 21, 2124; 27, 784). — IV, 1472, 1490.
- $C_{21}H_{16}ON_4$ C 68,5 — H 4,3 — O 4,3 — N 22,8 — M. G. 368.
 1) **5-Keto-3-Phenylazo-4-Phenylhydrazone-1-Phenyl-4,5-Dihydropyrazol.** Sm. 216—217° (B. 27, 152). — IV, 1488.
- $C_{21}H_{16}OBr_2$ 1) **β -Dibrom- α -Keto- α - β -Triphenylpropan.** Sm. 135° (B. 26, 450). — III, 259.
- $C_{21}H_{16}O_2N_2$ C 76,8 — H 4,9 — O 9,7 — N 8,5 — M. G. 328.
 1) **β -Phenylhydrazone- α - γ -Diketo- α - γ -Diphenylpropan.** Sm. 135° (B. 23, 3382). — IV, 788.
 2) **Phenylazodibenzoylmethan.** Sm. 153—154° (B. 21, 1703). — IV, 1480.
 3) **Dianiläskuletin.** (2HCl, PtCl₄) (B. 4, 473; 13, 1953). — III, 568.
 4) **3,4-Di[Benzylidenamido]benzol-1-Carbonsäure.** Sm. 253,5—254,5°. Ca, Ag (B. 11, 595, 1656). — IV, 619.
- $C_{21}H_{16}O_2N_4$ C 70,8 — H 4,5 — O 9,0 — N 15,7 — M. G. 356.
 1) **Carbabis-4,4'-[3-Methyl-1-Phenyl-5-Pyrazolon].** Sm. 235° (J. pr. [2] 54, 190, 193). — IV, 1274.
 2) **Verbindung** (aus 1,3,5-Triphenylmelamin). Sm. 272°. (2HCl, PtCl₄) (B. 18, 3225). — II, 451.
- $C_{21}H_{16}O_2N_4$ C 73,3 — H 4,6 — O 14,0 — N 8,1 — M. G. 344.
 1) **2-Phenylbenzoylmethylenhydrazidobenzol-1-Carbonsäure.** Sm. 212° (B. 27, 1139). — III, 288.
 2) **4-Phenylbenzoylmethylenhydrazidobenzol-1-Carbonsäure.** Sm. 212° u. Zers. (B. 27, 1133). — III, 288.
 3) **Phenylhydrazinderivat d. Benzhydroidcarbonsäure** (A. 242, 241). — IV, 719.
 4) **Nitril d. Diphenylketipinmethylläthersäure.** Sm. 229—231° (A. 282, 55). — II, 2632.
 5) **Phenylamidoformiat d. β -Oximido- α -Keto- α - β -Diphenyläthan** (P. d. α -Benziloxim). Sm. 144° (B. 22, 3111). — III, 289.
 6) **Phenylamidoformiat d. isom. β -Oximido- α -Keto- α - β -Diphenyläthan.** Sm. 143° (B. 22, 3110). — III, 290.
- $C_{21}H_{16}O_3N_4$ C 67,7 — H 4,3 — O 12,9 — N 15,1 — M. G. 372.
 1) **Benzylidenhydrazid d. 5-Nitro-2-Benzylidenamidobenzol-1-Carbonsäure.** Sm. 224—225° (J. pr. [2] 53, 223).
- $C_{21}H_{16}O_3Br_2$ 1) **Acetat d. α - β -Dibrom- γ -Keto- γ -[1-Oxy-2-Naphtyl]- α -Phenylpropan.** Sm. 186—187° (B. 31, 706).
- $C_{21}H_{16}O_3S$ 1) **Benzylanthracensulfonsäure.** Ba (B. 23, 1571). — II, 297.
- $C_{21}H_{16}O_4N_2$ C 70,0 — H 4,4 — O 17,8 — N 7,8 — M. G. 360.
 1) **α -Benzoyl- β -Phenylhydrazid d. Benzol-1,2-Dicarbonsäure.** Sm. 172° (J. pr. [2] 35, 289). — IV, 710.
 2) **Benzoesat d. 4-Benzoxylbenzenylamidoxim.** Sm. 185° (B. 24, 836). — II, 1532.
 3) **Dibenzoesat d. 2-Oxybenzenylamidoxim.** Sm. 127° (B. 22, 2782). — II, 1503.
 4) **Dibenzoesat d. 3-Oxybenzenylamidoxim.** Sm. 152,5° (B. 24, 829). — II, 1519.
 5) **Verbindung** (aus Phenylisocyanat u. 2-Benzoylamidobenzol-1-Carbonsäure). Sm. 165° (J. pr. [2] 55, 135).
- $C_{21}H_{16}O_4N_4$ C 64,9 — H 4,1 — O 16,5 — N 14,4 — M. G. 388.
 1) **Dinitroamarin.** Zers. bei 120°. HCl, (2HCl, PtCl₄ + 2H₂O), HNO₃ (B. 18, 1672). — III, 22.
 2) **2-[2-Nitrobenzyliden]amido-1-[2-Nitrobenzyliden]amidomethylbenzol.** Sm. 125—128° (J. pr. [2] 53, 424). — IV, 638.
 3) **Formazylnbenzol-II-3-III-2-Dicarbonsäure.** Sm. 225° (B. 31, 1755). — IV, 1261.
 4) **Formazylnbenzol-II-3-III-3-Dicarbonsäure.** Sm. 214° (B. 31, 1755). — IV, 1261.
 5) **Formazylnbenzol-II-3-III-4-Dicarbonsäure.** Sm. 218° (B. 31, 1755). — IV, 1261.
- $C_{21}H_{16}O_4Br_2$ 1) **1-Benzoesat-2-[5-Brom-2-Oxybenzyl]äther d. 5-Brom-2-Oxy-1-Oxymethylbenzol** (Benzoesat d. Dibromsaliretin). Sm. 75° (C. 1896 [2] 738).

- C₂₁H₁₆O₂N₂** C 67,0 — H 4,3 — O 21,3 — N 7,4 — M. G. 376.
 1) *ε*-Keto-*α*-Di[2-Nitrophenyl]-*α*γ^δ-Nonatetraen. Sm. 208,5° (B. 18, 2328). — III, 259.
- C₂₁H₁₆N₂S₂** 1) *s*-1,1-Dinaphthylthioharnstoff. Sm. 207,5° (203°) (A. 64, 371; B. 12, 1860; 21, 963). — II, 610.
 2) *s*-2,2-Dinaphthylthioharnstoff. Sm. 203° (193°) (B. 14, 61; 17, 3045; 21, 964). — II, 619.
 3) 2-Merkapto-1,4,5-Triphenylimidazol. Sm. noch nicht bei 290°. K (A. 284, 29). — III, 224.
- C₂₁H₁₆Br₂S₂** 1) Di[4-Bromphenyläther] d. γγ-Dimerkapto-*α*-Phenylpropen. Sm. 105—107° u. Zers. (B. 18, 885). — III, 59.
- C₂₁H₁₇ON** C 84,2 — H 5,7 — O 5,3 — N 4,7 — M. G. 299.
 1) γ-Oximido-*α*βγ-Triphenylpropen. Sm. 208—209° (B. 26, 443). — III, 262.
 2) β-[2-Methylphenyl]imido-*α*-Keto-*α*β-Diphenyläthan (Tolilbenzil). Sm. 104° (M. 9, 688; 16, 353). — III, 284.
 3) β-[4-Methylphenyl]imido-*α*-Keto-*α*β-Diphenyläthan. Sm. 116—117° (M. 9, 690). — III, 284.
 4) 10-Acetyl-5-Phenyl-5,10-Dihydroakridin. Sm. 128° (B. 18, 1815). — IV, 465.
 5) Amid d. Triphenylakrylsäure. Sm. 223° (B. 28, 1799, 2785).
 6) Diphenylamid d. β-Phenylakrylsäure. Sm. 152—153° (154°) (B. 20, 1554; C. 1899 [1] 730). — II, 1407.
- C₂₁H₁₇ON₂** C 77,0 — H 5,2 — O 4,9 — N 12,9 — M. G. 327.
 1) Methyläther d. 4-Carboxylphenylimido-4-Oxydiphenylmethan. Sm. 216° (B. 24, 3523). — III, 194.
 2) Nitroscamarin. Zers. bei 149—150° (B. 8, 933). — III, 22.
 3) 6-Benzoylamido-5-Methyl-2-Phenylbenzimidazol + H₂O. Sm. 195 bis 218°. HCl (B. 14, 2656). — IV, 1183.
 4) 3-[3-Benzoylamidophenyl]-3,4-Dihydro-1,3-Benzodiazin. Sm. 82° (J. pr. [2] 48, 566). — IV, 873.
 5) 2-Methylphenylamido-4-Keto-3-Phenyl-3,4-Dihydro-1,3-Benzodiazin. Sm. 123° (Am. 21, 162).
 C 71,0 — H 4,8 — O 4,5 — N 19,7 — M. G. 355.
- C₂₁H₁₇ON₂** 1) 1,3,4-Triphenylammelin. Sm. 265° (B. 18, 3230, 3231). — II, 451.
 2) 3,4,6-Triphenylammelin. Sm. 275° (B. 20, 1069). — II, 451.
 3) Verbindung (aus 1,3,5-Triphenylmelamin) (B. 18, 3225). — II, 451.
- C₂₁H₁₇OCl** 1) γ-Chlor-*α*-Keto-*α*βγ-Triphenylpropan. Sm. 180—182° (B. 26, 447). — III, 259.
 2) isom. γ-Chlor-*α*-Keto-*α*βγ-Triphenylpropan. Sm. 165—167° (B. 26, 449). — III, 259.
 3) *α*-Keto-β-(4-Chlorphenyl)-*α*γ-Diphenylpropan. Sm. 138° (B. 25, 2241). — III, 259.
- C₂₁H₁₇O₂N** C 80,0 — H 5,4 — O 20,2 — N 4,4 — M. G. 315.
 1) Benzilimid. Sm. 137—139° (J. pr. [1] 35, 461; B. 16, 891; A. 228, 348). — III, 283.
 2) Phenylbenzoylamidobenzoylmethan. Sm. 144—145° (B. 15, 2471). — III, 127.
 3) Benzyläther d. β-Oximido-*α*-Keto-*α*β-Diphenyläthan (B. d. *α*-Benziloxim). Sm. 94° (B. 22, 2000). — III, 289.
 4) Benzyläther d. isom. β-Oximido-*α*-Keto-*α*β-Diphenyläthan. Sm. 114° (B. 22, 2000). — III, 290.
 5) Benzyläther d. isom. β-Oximido-*α*-Keto-*α*β-Diphenyläthan. Sm. 137° (B. 22, 2008). — III, 290.
 6) Äthylester d. Chryslamidoameisensäure (Chryslurethan). Sm. 214° (B. 24, 950). — II, 643.
 7) Benzylimid d. Benzolcarbonsäure. Sm. 107—108° (B. 26, 2275). — II, 1171.
- C₂₁H₁₇O₂N₂** 1) Xanthorocellin = (C₂₁H₁₇O₂N₂)_n. Sm. 185° (A. 185, 17). — II, 1753.
 C 73,4 — H 5,0 — O 9,3 — N 12,2 — M. G. 343.
- C₂₁H₁₇O₂N₃** 1) *p*-Nitro-1,3,5-Triphenyl-4,5-Dihydropyrazol. Sm. 175—176° (B. 21, 1212). — IV, 1017.
 2) Methyläther d. 6-Phenylazo-5-Oxy-3-Methyl-1-Phenylbenzoxazol. Sm. 149—150° (M. 19, 506). — IV, 1448.

- C₂₁H₁₇O₂N₃** 3) Nitroamarin. HNO₃ (B. 18, 1677). — III, 22.
4) Aethylester d. α -Cyan- $\beta\beta'$ -Di[2-Cyanphenyl]isobuttersäure. Sm. 122–123° (B. 25, 3026). — II, 1470.
- C₂₁H₁₇O₂N**
C 76,1 — H 5,1 — O 14,5 — N 4,2 — M. G. 331.
1) ϵ -Keto- α -[2-Nitrophenyl]- α -Phenyl- $\alpha\gamma\zeta$; θ -Nonatetraën. Sm. 136,5° (B. 18, 2329). — III, 259.
2) ϵ -Keto- α -[4-Nitrophenyl]- α -Phenyl- $\alpha\gamma\zeta$; θ -Nonatetraën. Sm. 216–218° (A. 253, 355). — III, 259.
3) α -Keto- γ -[2-Nitrophenyl]- $\alpha\beta$ -Diphenylpropan. Sm. 100–102° (B. 23, 2071). — III, 259.
4) α -Keto- γ -[4-Nitrophenyl]- $\alpha\beta$ -Diphenylpropan. Sm. 110–112° (B. 23, 2071). — III, 259.
5) γ -Phenylimido- $\beta\beta$ -Dioxy- α -Keto- $\alpha\gamma$ -Diphenylpropan. Sm. 99–100° (B. 23, 3386). — III, 316.
6) 4-Benzoylamidophenyläther d. Oxymethylphenylketon. Sm. 166° (C. 1897 [1] 411).
7) Benzolat d. 4-Benzoylamido-2-Oxy-1-Methylbenzol. Sm. 194° (B. 26, 2264). — II, 1179.
8) Benzolat d. 5-Benzoylamido-2-Oxy-1-Methylbenzol. Sm. 194° (B. 27, 194, 1930). — II, 1179.
9) Benzolat d. 6-Benzoylamido-3-Oxy-1-Methylbenzol. Sm. 161° (B. 27, 195, 1930).
10) Benzolat d. 3-Benzoylamido-4-Oxy-1-Methylbenzol. Sm. 190–191° (B. 31, 2695).
11) Benzolat d. Benzoylbenzylhydroxylamin. Sm. 96–97° (B. 26, 2283, 2629, 2631). — II, 1209.
12) 2-Benzolat d. N-Benzyl-2-Oxybenzaloxim. Sm. 150° (B. 26, 2628). — III, 77.
13) 2-Benzolat d. 2-Oxybenzaloxim-1-Benzyläther. Sm. 47° (B. 26, 2626). — III, 77.
14) Anthracenbenzylnitrat. Sm. 138° (Sec. 61, 871). — II, 261.
15) Hydrocyanrosolsäure (A. 179, 199). — II, 1122.
16) Benzylphenylmethylester d. Phenylamidoameisensäure (Phenylcarbamid d. Benzoin). Sm. 163° (J. pr. [2] 32, 280). — III, 223.
17) Benzylamid d. 2-Benzoxylbenzol-1-Carbonsäure. Sm. 114° (B. 26, 2627). — II, 1500.
- C₂₁H₁₇O₃N₃**
C 70,2 — H 4,7 — O 13,4 — N 11,7 — M. G. 359.
1) β -[2-Nitrobenzyliden]hydrason- α -Oxy- $\alpha\beta$ -Diphenyläthan. Sm. 195° (J. pr. [2] 52, 130). — III, 225.
2) β -[3-Nitrobenzyliden]hydrason- α -Oxy- $\alpha\beta$ -Diphenyläthan. Sm. 192° (J. pr. [2] 52, 130). — III, 225.
3) 2-[β -Oximido- $\alpha\beta$ -Diphenyläthyliden]hydrasidobenzol-1-Carbonsäure. Sm. 226° (B. 27, 1139). — III, 290.
4) 4-[β -Oximido- $\alpha\beta$ -Diphenyläthyliden]hydrasidobenzol-1-Carbonsäure. Sm. 249–250° (B. 27, 1134). — III, 291.
5) Di[Phenylamid] d. Benzol-1-Carbonsäure-3-Amidoketocarbonsäure. Sm. 290–295° (A. 232, 137). — II, 1265.
- C₂₁H₁₇O₄N**
C 72,6 — H 4,9 — O 18,4 — N 4,0 — M. G. 347.
1) Chelerythrin. + C₂H₄O (Sm. 203°). HCl + 5 H₂O, (2HCl, PtCl₄), (HCl, AuCl₃), HJ (A. 29, 120; 31, 250; 43, 233; J. 1855, 566; Bl. [3] 15, 541; C. 1895 [2] 305). — III, 804.
2) Phenyl-3-Methoxyphenylmonamid d. Benzol-1,2-Dicarbonsäure. Sm. 95–98° (B. 31, 1332).
3) Phenyl-4-Methoxyphenylmonamid d. Benzol-1,2-Dicarbonsäure. Sm. 90–92°. Ag (B. 31, 1330).
- C₂₁H₁₇O₄N₃**
C 67,2 — H 4,5 — O 17,1 — N 11,2 — M. G. 375.
1) *p*-Nitro-2,4-Di[Benzoylamido]-1-Methylbenzol. Sm. 245° (B. 14, 2656). — IV, 606.
2) *p*-Nitro-3,4-Di[Benzoylamido]-1-Methylbenzol. Sm. 246° (B. 25, 1994). — IV, 617.
3) Verbindung (aus Phenylcarbonimid u. N-Benzyl-syn-3-Nitrobenzaloxim). Sm. 158–159° (B. 24, 2816). — III, 48.
4) Verbindung (aus d. 2-Methyläther d. 2-Oxybenzaloxim u. Phenylcarbonimid). Sm. 115° (B. 22, 3102). — III, 77.

- $C_{21}H_{17}O_4N_5$ C 62,5 — H 4,2 — O 15,9 — N 17,4 — M. G. 403.
 1) α -Phenylamidoformylamido- α -Phenylamidoformylimido- α -[3-Nitrophenyl]methan (3-Nitrobenzenyldiphenylidureid). Sm. 173° (B. 28, 484). — IV, 846.
- $C_{21}H_{17}O_5N_5$ C 64,5 — H 4,3 — O 20,5 — N 10,7 — M. G. 391.
 1) β -[2-Dinitro-4-Methylphenyl]amido- α -Keto- $\alpha\beta$ -Diphenyläthan. Sm. 195° (J. pr. [2] 34, 20). — III, 221.
 2) Di[2-Nitro- β -Methylphenyl]amid d. Benzolcarbonsäure (B. 15, 831). — II, 1165.
- $C_{21}H_{17}O_6Cl_3$ 1) Dibenzooat d. α -Arabinochloral. Sm. 138° (C. 1895 [1] 478).
 2) Dibenzooat d. β -Arabinochloral. Sm. 138° (C. 1895 [1] 478).
- $C_{21}H_{17}O_6Br_3$ 1) Tribromnarceonsäure. Sm. 231—232° (A. 286, 255). — II, 2082.
- $C_{21}H_{17}O_6As$ 1) Triphenyloxyarsoniumoxyhydrat-4',4',4''-Tricarbonsäure (Tribenzarsinsäure). $K_3, Ca_3 + xH_2O$ (A. 208, 28). — IV, 1693.
- $C_{21}H_{17}NBr_4$ 1) 2,6-Di[$\alpha\beta$ -Dibrom- β -Phenyläthyl]pyridin. Sm. 183° (B. 25, 2404). — IV, 457.
- $C_{21}H_{17}N_2Cl$ 1) Chlorhydrobenzamid? Sd. 186° (A. III, 146; B. [3] 19, 10). — III, 21.
 2) isom. Chlorhydrobenzamid? Sd. 183° (A. III, 158). — III, 21.
- $C_{21}H_{17}N_2Br_2$ 1) Lophinsuperbromid? (B. 13, 710). — III, 26.
- $C_{21}H_{17}N_2J$ 1) Jodmethylat d. α -[2-Chinolyl]- β -[7-Chinolyl]äthen + $1\frac{1}{2}H_2O$. Sm. 225—226° (B. 23, 3650). — IV, 1078.
- $C_{21}H_{17}N_2S$ 1) Triphenylthioammelin. Sm. 238°. Ag, HCl (B. 20, 1065; 21, 867; 23, 1673). — II, 398.
- $C_{21}H_{15}ON_2$ C 50,3 — H 5,7 — O 5,1 — N 8,9 — M. G. 314.
 1) α -Oximido- β -[2-Methylphenyl]imido- $\alpha\beta$ -Diphenyläthan. Sm. 178 bis 180° (M. 16, 354). — III, 284.
 2) α -Oximido- β -[4-Methylphenyl]imido- $\alpha\beta$ -Diphenyläthan. Sm. 199 bis 200° (B. 25, 2598). — III, 290.
 3) α -Benzylimido- α -Benzoylamidophenylmethan (Phenylbenzoylbenzamidin). Sm. 147° (A. 296, 287, 293). — IV, 848.
 4) β -Cinnamyl- $\alpha\alpha$ -Diphenylhydrasin. Sm. 205° (B. 25, 1553). — IV, 671.
 5) β -Benzylidenhydrason- α -Oxy- $\alpha\beta$ -Diphenyläthan. Sm. 133° (J. pr. [2] 52, 120). — III, 225.
 6) γ -Phenylhydrason- γ -Phenyl- α -[2-Oxyphenyl]propen. Sm. 136° (B. 29, 378). — IV, 778.
 7) β -Methylphenylhydrason- α -Keto- $\alpha\beta$ -Diphenyläthan. Sm. 55—56° (A. 253, 16). — IV, 785.
 8) α -Benzoylphenylhydrason- α -Phenyläthan. Sm. 124° (B. 20, 1718). — IV, 771.
 9) α -[4-Benzoylphenyl]hydrason- α -Phenyläthan. Sm. 140—141° (Soc. 55, 615). — III, 187.
 10) 1-Phenylhydrason-2-Oxy-2-Phenyl-2,3-Dihydroindolen? Sm. 160° (B. 25, 2069). — IV, 778.
 11) 2-Acetylamido-4,5-Diphenyl-4,5-Dihydrooxazol. Sm. 162—163°. 2 + (2HCl, PtCl₄ + 3H₂O) (B. 28, 1902).
 12) Methyloxyhydrat d. 2,3-Diphenyl-1,4-Benzdiazin. Zers. bei 70°. Nitrat + 3H₂O (B. 25, 1632). — IV, 1079.
 13) Phenylamid d. β -Phenylamido- β -Phenylakrylsäure. Sm. 133° (A. 245, 372). — II, 1644.
 14) Benzylidenamid d. α -Phenylamido- α -Phenyllessigsäure. Sm. 249° (B. 31, 2700).
 15) isom. Benzylidenamid d. α -Phenylamido- α -Phenyllessigsäure. Sm. 208° (B. 31, 2700).
- $C_{21}H_{15}ON_4$ C 73,7 — H 5,2 — O 4,7 — N 16,4 — M. G. 342.
 1) 6-Acetylamido-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benztriazin. Sm. 216° u. Zers. (B. 30, 2597). — IV, 1286.
 2) Acetyl-methylphenosafuranin. HCl (B. 30, 402). — IV, 1284.
- $C_{21}H_{15}ON_6$ C 78,1 — H 4,8 — O 4,3 — N 22,7 — M. G. 370.
 1) $\alpha\alpha$ -Diphenylazo- α -Acetylphenylhydrasonmethan (Acetylformazolylamino). Sm. 190° (B. 27, 149). — IV, 1492.
- $C_{21}H_{15}OJ_2$ 1) Benzaldehydoxyjodid. Sm. 128° (A. 112, 22). — III, 11.
 $C_{21}H_{15}O_2N_2$ C 76,4 — H 5,4 — O 9,7 — N 8,5 — M. G. 330.
 1) 4-Nitro-2-[4-Benzylidenamidobenzyl]-1-Methylbenzol. Sm. 194° (B. 26, 1854). — II, 637.

- C₂₁H₁₈O₂N₂** 2) 2-[2-Oxybenzyliden]amido-1-[2-Oxybenzyliden]amidomethylbenzol. Sm. 107–108° (*J. pr.* [2] 63, 426). — IV, 638.
- 3) 2,4-Di[2-Oxybenzylidenamido]-1-Methylbenzol. Sm. 109°. Cu (*A.* 150, 198; 253, 330). — IV, 607.
- 4) 4-Benzoylamido-1-Methylbenzoylamidobenzol. Sm. 164,5° (*B.* 29, 1482). — IV, 594.
- 5) 2,4-Di[Benzoylamido]-1-Methylbenzol. Sm. 224° (*B.* 14, 2656). — IV, 606.
- 6) 3,4-Di[Benzoylamido]-1-Methylbenzol. Sm. 203–264° (*A.* 208, 315; 254, 255; 273, 349; *B.* 24, 631). — IV, 617.
- 7) $\alpha\beta$ -Dibenzoyl- β -Methyl- α -Phenylhydrazin. Sm. 145° (*B.* 18, 1741). — IV, 670.
- 8) $\beta\beta$ -Dibenzoyl- α -[4-Methylphenyl]hydrazin. Sm. 188° (*B.* 8, 592). — IV, 809.
- 9) Benzoesat d. 6-Oxy-3,4'-Dimethylazobenzol. Sm. 95° (*B.* 17, 354). — IV, 1422.
- 10) 2-Phthalyl-8-Methyl-5,6-Dihydro-peri-Chinolinazol. Sm. noch nicht bei 310° (*B.* 24, 2073). — IV, 863.
- 11) β -Phenylhydrason- $\alpha\beta$ -Diphenylpropionsäure. Sm. 85–150° (?). Ag (*J. pr.* [2] 55, 317). — IV, 698.
- 12) Benzylidenamid d. Benzolcarbonsäure. Sm. 225° (*A.* 164, 76; *B.* 25, 211). — III, 35.
- 13) Di[Phenylamid] d. Phenylmethandicarbonsäure (D. d. Phenylmalonsäure). Sm. 201–202° (*B.* 29, 2603).
- 14) Dianilidoverb. d. α -Orcendialdehyd. Sm. 281° (*B.* 12, 1004). — III, 109.
- 15) Verbindung (aus N-Benzyl-syn-Benzaldoxim u. Phenylcarbouimid). Sm. 121° (*B.* 23, 2748). — III, 44.
- C₂₁H₁₈O₂N₄** C 70,4 — H 5,0 — O 8,9 — N 15,7 — M. G. 358.
- 1) α -Phenyl- β -[α -Phenylamidofornylimidobenzyl]harnstoff (Benzenyldiphenyldiureid). Sm. 172° (*B.* 22, 1608). — IV, 846.
- 2) Acetat d. 4-Phenylazo-2-[4-Methylphenyl]azo-1-Oxybenzol. Sm. 92° (*B.* 25, 1334). — IV, 1416.
- 3) Acetat d. 2-Phenylazo-4-[4-Methylphenyl]azo-1-Oxybenzol. Sm. 130° (*B.* 25, 1338). — IV, 1416.
- 4) Acetat d. 3,5-Di[Phenylazo]-2-Oxy-1-Methylbenzol. Sm. 120–121° (*B.* 17, 364). — IV, 1424.
- 5) Acetat d. 4,6-Di[Phenylazo]-3-Oxy-1-Methylbenzol. Sm. 156–157° (*B.* 17, 367). — IV, 1424.
- 6) Methenylbis-4,4-[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydropyrazol]. Sm. 180–181° (*J. pr.* [2] 55, 170; *A.* 238, 184; 255, 235; 297, 37). — IV, 1273.
- 7) 4-[2-Oxnaphtyl]azo-3-Keto-1,3-Dimethyl-2-Phenyl-2,3-Dihydropyrazol (Antipyrinazo- β -Naphтол) (*A.* 293, 57). — IV, 1489.
- 8) 6-Methyl-3-[2-Nitrophenyl]-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 230° (*B.* 30, 2603). — IV, 1184.
- 9) 6-Methyl-3-[3-Nitrophenyl]-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 228° (*B.* 30, 2603). — IV, 1184.
- 10) 6-Methyl-3-[4-Nitrophenyl]-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 264° (*B.* 30, 2603). — IV, 1184.
- 11) Di Phenylamid] d. Phenylhydrazonmethan- $\alpha\alpha$ -Dicarbonsäure. Sm. 163° u. Zers. (*A.* 270, 290). — IV, 720.
- 12) Verbindung (aus d. Diäthylester d. 3,5-Diketo-1-Methylhexahydrobenzol-2,6-Dicarbonsäure). Sm. 315° (*B.* 27, 2344). — IV, 725.
- C₂₁H₁₈O₂N₄** C 65,3 — H 4,7 — O 8,3 — N 21,7 — M. G. 386.
- 1) Phenylhydrason d. Formazyglyoxalsäure (*B.* 27, 152). — IV, 1228.
- C₂₁H₁₈O₂Br₂** 1) *P*-Dibrom-*P*-Dioxy-*P*-Dimethyltriphenylmethan. Sm. 130° (*A.* 257, 72). — II, 1004.
- C₂₁H₁₈O₂N₂** C 72,8 — H 5,2 — O 13,9 — N 8,1 — M. G. 346.
- 1) 4-Nitro-2-[4-Benzoylamidobenzyl]-1-Methylbenzol. Sm. 185° (*B.* 26, 1853). — II, 637.
- 2) β -*P*-Nitro-4-Methylphenyl]amido- α -Keto- $\alpha\beta$ -Diphenyläthan? Sm. 153° (*J. pr.* [2] 34, 18). — III, 220.
- 3) Benzoesat d. α -Oxy- β -Phenyl- α -Benzylharnstoff. Sm. 120° (*J. pr.* [2] 56, 78).

- C₁₁H₁₀O₄N₂** 4) Benzoat d. 4'-Nitroso-2,3'-Dimethyldiphenylhydroxylamin. Sm. 181—182° (B. 31, 1518).
- 5) 2-Oxybenzoat d. α -Phenylhydrazon- β -Oxy- α -Phenyläthan. Sm. 133° (C. 1898 [1] 765).
- 6) 4'-Benzoat d. 2,4'-Dioxyazobenzol-2-Aethyläther. Sm. 99° (B. 31, 2118; C. 1897 [2] 549). — IV, 1407.
- 7) 4'-Benzoat d. 4,4'-Dioxyazobenzol-4-Aethyläther. Sm. 127° (B. 31, 2120; C. 1897 [2] 549). — IV, 1406.
- 8) Hydrosalicylamid. Sm. 156° (145°). Fe + NH₃, Cu₂ + 2NH₃ (A. 35, 261; J. 1857, 317; B. 10, 1271; 27, 1801 Ann.). — III, 71.
- 9) Phenylamidformiat d. Benzoylbenzylhydroxylamin. Sm. 140° (J. pr. [2] 56, 79).
- 10) 2-Phenylamid d. Benzol-1-Carbonsäure-2-[Benzylamidoameisensäure (J. pr. [2] 49, 319).
- 11) 2-Nitrodi[4-Methylphenyl]amid d. Benzolcarbonsäure. Sm. 167° (B. 15, 831). — II, 1165.
- C₁₁H₁₀O₄N₄** C 67,4 — H 4,8 — O 12,8 — N 15,0 — M. G. 374.
- 1) Phenylhydrazinderivat d. Carbanilidoisatin. Sm. 193° (J. pr. [2] 32, 291). — II, 1604.
- C₁₁H₁₀O₄S₂** 1) β -Trithio-2-Oxybenzaldehyd. Sm. 210°. Na₂ (A. 277, 343). — III, 71.
- 2) β -Trithio-3-Oxybenzaldehyd. Sm. 212° (A. 277, 346). — III, 80.
- 3) β -Trithio-4-Oxybenzaldehyd. Sm. 215° u. Zers. + 3(2)C₂H₂O (B. 29, 140; A. 277, 349). — III, 83.
- C₁₁H₁₀O₄N₂** C 69,6 — H 5,0 — O 17,7 — N 7,7 — M. G. 362.
- 1) Cotoin-2-Methylazobenzol. Sm. 203—204° (Soc. 71, 1150). — IV, 1479.
- 2) Cotoin-4-Methylazobenzol. Sm. 207—208° (Soc. 71, 1150). — IV, 1479.
- 3) Diphenylester d. 4-Methyl-1,3-Phenylendi[amidoameisensäure]. Sm. 147,5° (Soc. 49, 257). — IV, 603.
- 4) Phenylamid d. Phenylmiddehydracetcarbonsäure. Sm. 156—157° (A. 273, 210). — II, 424.
- C₁₁H₁₀O₄N₄** C 64,6 — H 4,6 — O 16,4 — N 14,4 — M. G. 390.
- 1) α -Phenylhydrazondi[3-Nitro-4-Methylphenyl]methan. Sm. 169—170° (A. 271, 7). — IV, 777.
- 2) β -Di[5-Keto-1-Phenyl-4,5-Dihydropyrazolyl-4-]propionsäure (B. 28, 633). — IV, 1266.
- C₁₁H₁₀O₄N₂** C 66,7 — H 4,8 — O 21,1 — N 7,4 — M. G. 378.
- 1) Verbindung (aus Diphenylketon-2,2'-Dicarbonsäure). Sm. 155° (A. 242, 252). — IV, 719.
- C₁₁H₁₀O₄S** 1) o-Kresolsulfonphtalein (Am. 20, 265).
- C₁₁H₁₀O₄N₂** C 63,9 — H 4,6 — O 24,4 — N 7,1 — M. G. 394.
- 1) p-Dinitro-p-Dioxy-p-Dimethyltriphenylmethan. Sm. 127° (A. 257, 73). — II, 1004.
- C₁₁H₁₀O₄N₄** C 59,7 — H 4,3 — O 22,7 — N 13,3 — M. G. 422.
- 1) Tri[2-Nitrobenzyl]amin. Sm. 157° (B. 19, 1604). — II, 522.
- 2) Tri[4-Nitrobenzyl]amin. Sm. 163° (B. 6, 1058). — II, 522.
- 3) isom. Tri[p-Nitrobenzyl]amin. Sm. 159° (B. 19, 1030). — II, 522.
- C₁₁H₁₀O₄S₂** 1) β -Trithio-2,5-Dioxybenzaldehyd (β -Trithiogentisinaldehyd). Sm. 190° u. Zers. + 2C₂H₂O (B. 29, 148). — III, 99.
- C₁₁H₁₀O₄S** 1) Verbindung (aus Orcin u. Benzol-1-Carbonsäure-2-Sulfonsäure) (Am. 16, 528).
- C₁₁H₁₀O₁₀N₂** C 55,0 — H 3,9 — O 34,9 — N 6,1 — M. G. 458.
- 1) Diäthylester d. α -Diketo- α -Di[2-Nitrophenyl]propan- β -Dicarbonsäure (D. d. Dinitrobenzoylmalonsäure). Sm. 93° (B. 17, 2789). — II, 2029.
- C₁₁H₁₀NCl₃** 1) Tri[4-Chlorbenzyl]amin. Sm. 78,5° (88—89°). HCl + 2H₂O, (2HCl, PtCl₄) (A. 151, 139; Am. 2, 92). — II, 522.
- C₁₁H₁₀NBr₃** 1) Tri[2-Brombenzyl]amin. Sm. 121,5—122°. (2HCl, PtCl₄) (Am. 2, 319). — II, 522.
- 2) Tri[4-Brombenzyl]amin. Sm. 76—78° (92°). HBr (B. 10, 1211; Am. 3, 251). — II, 522.
- C₁₁H₁₀NJ** 1) Jodäthylat d. 3-Phenyl- β -Naphtochinolin. Sm. 232° (A. 249, 134). — IV, 467.
- C₁₁H₁₀NJ₂** 1) Tri[4-Jodbenzyl]amin. Sm. 114,5°. (2HCl, PtCl₄) (B. 11, 57; Am. 2, 250). — II, 522.

- $C_{21}H_{18}N_2Cl$ 1) Verbindung (aus Hydrobenzamid) (A. III, 144). — III, 21.
- $C_{21}H_{18}N_2S$ 1) 2-Thiocarbonyl-1-Benzyl-3-Phenyl-1,2,3,4-Tetrahydro-1,3-Benzodiazin. Sm. 93°. HCl, HNO₃ (B. 27, 3245). — IV, 635.
- $C_{21}H_{18}N_2Cl$ 1) 2-Chlormethylat d. 1,3,5-Triphenyl-1,2,4-Triazol. 2 + PtCl₄ (J. pr. [2] 54, 158). — IV, 1187.
- $C_{21}H_{18}N_2S$ 1) s-Di[2-Naphthylamido]thioharnstoff. Sm. 137–140° (B. 24, 4199). — IV, 929.
- $C_{21}H_{19}ON$
- C 73,7 — H 6,3 — O 5,3 — N 4,7 — M. G. 301.
- 1) α -Keto- γ -[4-Amidophenyl]- α,β -Diphenylpropan. Sm. 140–141°. HCl (B. 23, 2077). — III, 259.
- 2) γ -Phenylamido- α -Keto- α,γ -Diphenylpropan (Benzalacetophenonanilin). Sm. 175° (B. 31, 353).
- 3) β -Benzylidenamido- α -Oxy- α,β -Diphenyläthan (B. 28, 1866; 30, 1527, 2896). — III, 11.
- 4) Methyläther d. 4-Oxybenzylidenamidodiphenylmethan. Sm. 110 bis 111° (B. 26, 2170). — III, 85.
- 5) β -[2-Methylphenyl]amido- α -Keto- α,β -Diphenyläthan (o-Desyltoluid). Sm. 141° (M. 9, 693). — III, 220.
- 6) β -[4-Methylphenylamido- α -Keto- α,β -Diphenyläthan. Sm. 145°. HCl (M. 14, 288; B. 26, 1338; 29, 1737; J. pr. [2] 34, 16). — III, 220.
- 7) α -Oximido- α,β,γ -Triphenylpropan. Sm. 208° (B. 21, 1300) — III, 259.
- 8) Benzyläther d. anti- α -Oximido-4-Methyldiphenylmethan. Sm. 85° (B. 23, 2330). — III, 215.
- 9) Benzyläther d. syn- α -Oximido-4-Methyldiphenylmethan. Sm. 51° (B. 23, 2777). — III, 215.
- 10) 3-Acetylamidotriphenylmethan. Sm. 115° (B. 21, 190). — II, 641.
- 11) 4-Acetylamidotriphenylmethan. Sm. 176° (168–169°; 157°) (A. 241, 367; B. 23, 1624; 24, 728). — II, 641.
- 12) α -Acetylamidotriphenylmethan. Sm. 207–208° (B. 17, 744). — II, 642.
- 13) α -Benzoylamido- α,β -Diphenyläthan. Sm. 177–178° (B. 22, 1412). — II, 1169.
- 14) Diphenylamid d. 1,2-Dimethylbenzol-4-Carbonsäure. Sm. 134 bis 136° (B. 20, 2119). — II, 1375.
- 15) Diphenylamid d. 1,3-Dimethylbenzol-4-Carbonsäure. Sm. 141 bis 142° (B. 20, 2120). — II, 1376.
- 16) Di[p -Methylphenyl]amid d. Benzolcarbonsäure. Sm. 125° (B. 6, 446; J. 1880, 541). — II, 1165.
- 17) Benzyl-4-Methylphenylamid d. Benzolcarbonsäure. Sm. 87–88°; Sd. 275–285°₃₀ (Bl. [3] 6, 139). — II, 1166.
- $C_{21}H_{19}ON_2$
- C 76,6 — H 5,8 — O 4,8 — N 12,8 — M. G. 329.
- 1) α -Methyl- α -Phenyl- β -[α -Benzoylamidobenzyliden]hydrazin. Sm. 125° (A. 298, 291). — IV, 1137.
- 2) α,α -Diphenyl- β -[α -Acetylamidobenzyliden]hydrazin (Monoacetyldiphenylbenzylhydrazidin). Sm. 185° (J. pr. [2] 54, 173). — IV, 1137.
- 3) 6-Benzoylamido-3,4'-Dimethylazobenzol. Sm. 135° (B. 17, 80). — IV, 1378.
- 4) 2-Methyloxyhydrat d. 1,3,5-Triphenyl-1,2,4-Triazol. Sm. 181°. + C₂H₅, 2-Chlorid + PtCl₄ (J. pr. [2] 54, 157). — IV, 1187.
- 5) 6-Dimethylamido-2-[2-Oxyphenyl]-1-Phenylbenzimidazol. Sm. 239,5 bis 241° (A. 303, 361).
- 6) 6-Methyl-3-[3-Oxyphenyl]-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 265° (B. 30, 2603). — IV, 1184.
- 7) Phenylamid d. β -Benzyliden- α -Phenylhydrazidoessigsäure. Sm. 223° (A. 301, 60).
- $C_{21}H_{19}O_2N$
- C 79,5 — H 6,0 — O 10,1 — N 4,4 — M. G. 317.
- 1) 3-Nitrophenylidi[p -Methylphenyl]methan. Sm. 85° (B. 21, 189). — II, 290.
- 2) α -Oxy-3-Acetylamidotriphenylmethan. Sm. 164° (B. 21, 191). — II, 1084.
- 3) α -Oxy-4-Acetylamidotriphenylmethan. Sm. 176° (B. 23, 1624). — II, 1084.
- 4) 4-Benzyläther d. anti- α -Oximido-4-Oxydiphenylmethan. Sm. 59 bis 60,5° (A. 264, 158). — III, 194.

- C₂₁H₁₉O₂N** 5) **4-Benzyläther d. syn-*n*-Oximido-4-Oxydiphenylmethan.** Sm. 73—74° (A. 264, 159). — III, 194.
 6) **Dibenzyläther d. 2-Oxybenzaldoxim.** Sm. 34° (B. 26, 2625). — III, 77.
 7) **Methylester d. α -Phenylamidodiphenylsaisgäure.** Sm. 106—107° (B. 22, 1213). — II, 1465.
 8) **Benzocat d. β -Amido- α -Oxy- $\alpha\beta$ -Diphenyläthan.** Sm. 236—237° (B. 29, 1215).
 9) **Benzocat d. Dibenzylhydroxylamin.** Sm. 96—97° (A. 257, 221). — II, 1209.
- C₂₁H₁₉O₂N₂**
 C 73,1 — H 5,5 — O 9,2 — N 12,2 — M. G. 345.
 1) **α -[4-Methylphenyl]imido- α -[4-Methylphenyl]amido- α -[4-Nitrophenyl]methan.** Sm. bei 300° u. Zers. (B. 25, 1085). — IV, 845.
 2) **β -Phenacetylamido- $\alpha\beta$ -Diphenylharnstoff.** Sm. 144° (B. 27, 1518). — IV, 675.
 3) **Diphenyl-4-Methylphenylbiuret.** Sm. 214—216° (B. 21, 506). — II, 495.
 4) **5-Methyl-2-[2-Nitrophenyl]-1-[4-Methylphenyl]-2,3-Dihydrobenzimidazol.** Sm. 113° (B. 23, 3801). — IV, 595.
 5) **5-Phenyloxydhydrat d. 3-Acetylamido-2-Methyl-5,10-Naphtdiazin.** Chlorid, 2 Chlorid + PtCl₄, Nitrat + H₂O (B. 31, 969). — IV, 1182.
 6) **Diphenylamid d. Phenylamidomalonsäure.** Sm. 162° (246—247°) (A. 209, 231; B. 31, 554). — II, 436.
- C₂₁H₁₉O₂N₃**
 C 69,8 — H 5,2 — O 13,3 — N 11,6 — M. G. 361.
 1) **α -Phenyl- β -[4-Methylphenyl]- β -[2-Nitrobenzyl]harnstoff.** Sm. 119° (B. 27, 45). — II, 526.
- C₂₁H₁₉O₃N₂**
 C 64,7 — H 4,9 — O 12,3 — N 18,0 — M. G. 389.
 1) **Phenylbenzoylamidokaffein.** Sm. 225° (B. 27, 3091). — III, 960.
- C₂₁H₁₉O₄N**
 C 72,2 — H 5,4 — O 18,3 — N 4,0 — M. G. 349.
 1) **3-Nitro-*p*-Dioxy-*p*-Dimethyltriphenylmethan** (G. 21 [2] 344). — II, 1004.
 2) **Phloretinanilid** (A. 156, 9). — III, 230.
 3) **Fumarin.** Sm. 199° (2 HCl, PtCl₄), (HCl, AuCl₃), (HJ, HgJ₂) (J. 1852, 550; 1889, 2010; Z. 1866, 414; B. [3] 15, 541). — III, 883.
 4) **2,6-Dimethyl-1,4-Diphenyl-1,4-Dihydropyridin-1,4-Dicarbonensäure.** Sm. 165° (M. 17, 352). — IV, 371.
 5) **Methylester d. 3,4-Dioxy-1-[2-Naphtyl]imidomethylbenzoldimethyläther-2-Carbonensäure.** Sm. 131° (B. 29, 182).
 6) **Aethylester d. β -Cyan- $\alpha\gamma$ -Dibenzoylpropan- β -Carbonensäure.** Sm. 142° (B. 27 [2] 665).
 7) **3-Aethylester d. 2-Methyl-1,5-Diphenylpyrazol-1⁴,3-Dicarbonensäure.** Sm. 160° (B. 19, 3162). — IV, 358.
- C₂₁H₁₉O₄N₂**
 C 66,8 — H 5,0 — O 17,0 — N 11,1 — M. G. 377.
 1) **2-Methylphenylidi[2-Nitrobenzyl]amin.** Sm. 205° (B. 26, 2588). — II, 521.
 2) **4-Methylphenylidi[2-Nitrobenzyl]amin.** Sm. 160° (B. 25, 3581). — II, 521.
 3) **4-Methylphenylidi[4-Nitrobenzyl]amin.** Sm. 189° (B. 25, 3581). — II, 521.
 4) **2,2'-Dinitrotribenzylamin.** Sm. 82° (B. 26, 2587). — II, 522.
 5) **2-[α -Phenylhydrazon-3,4-Dimethoxybenzyl]pyridin-4-Carbonensäure.** Sm. 225° u. Zers. HCl (M. 10, 698). — IV, 178.
- C₂₁H₁₉O₄N₃**
 C 62,2 — H 4,7 — O 15,8 — N 17,2 — M. G. 405.
 1) **β -Phenylhydrazon- α -[β -Dinitro- β -Phenylamidophenyl]propan.** Sm. 140° (Am. 12, 180). — IV, 773.
- C₂₁H₁₉O₅Br**
C₂₁H₁₉O₅N 1) **4-Brombenzyläther d. Curcumin.** Sm. 76—78° (Am. 4, 77). — III, 660.
 C 69,1 — H 5,2 — O 21,9 — N 3,8 — M. G. 365.
 1) **Verbindung** (aus 3,5-Dioxy-1-Methylbenzol) (M. 11, 231). — II, 966.
 2) **Hydroxylaminverbindung** (aus Curcumin). Sm. 173° (B. 30, 194).
- C₂₁H₁₉O₅N₂**
 C 64,1 — H 4,8 — O 20,3 — N 10,7 — M. G. 393.
 1) **Methyläther d. 2-Oxyphenylidi[2-Nitrobenzyl]amin.** Sm. 117° (J. pr. [2] 54, 278).
- C₂₁H₁₉O₆N**
 C 66,1 — H 5,0 — O 25,2 — N 3,7 — M. G. 381.
 1) **3-Nitrophenylidi[3,5-Dioxy-1-Methylphenyl]methan.** Erweicht bei 241° (G. 21, 169). — II, 1039.

- C₂₁H₁₀O₆N** 2) Diacetat d. 7,8-Dioxy-2-[4-Dimethylamidophenyl]-1,4-Benspyron. Sm. 182° (B. 29, 2434).
3) Anhydronarceonsäure (Imid d. Narceonsäure). Sm. 177,5—178,5° (A. 266, 253). — II, 2082.
- C₂₁H₁₀O₆Br** 1) Monacetat d. Tribrombrasilintrimethyläther. Sm. 179—180° (B. 27, 527). — III, 654.
- C₂₁H₁₀O₇N** C 63,5 — H 4,8 — O 28,2 — N 3,5 — M. G. 397.
- C₂₁H₁₀O₈N** 1) Oxim (aus Narceonsäure). Sm. 201—202° (A. 266, 254). — II, 2082.
C 61,0 — H 4,6 — O 31,0 — N 3,4 — M. G. 413.
- 1) Methylester d. Anhydroberberilsäure. Sm. 178—179° (Soc. 57, 1037). — III, 802.
- C₂₁H₁₀O₈Br** 1) Bromnarceonsäure. Sm. 171—172° (A. 266, 254). — II, 2082.
- C₂₁H₁₀NS₂** 1) Thiobenzalidin. Sm. 125° (A. 38, 323). — III, 28.
- C₂₁H₁₀N₂Cl** 1) Dimethylcyaninchlorid + 5H₂O. Sm. bei 300° u. Zers. (HCl, PtCl₄) (R. 2, 318). — IV, 315.
- C₂₁H₁₀N₂Br** 1) Base (aus α -Benzylimido- α -Methylphenylamido- α -Phenylmethan). Sm. 102°. HBr (A. 273, 26). — IV, 843.
- C₂₁H₁₀N₂J** 1) Dimethylcyaninjodid. Sm. 291° (R. 2, 318). — IV, 314.
2) Jodmethylat d. 2-Phenyl-1-Benzylbenzimidazol (B. 11, 1654). — IV, 563.
- C₂₁H₂₀ON₂** C 79,7 — H 6,3 — O 5,1 — N 8,8 — M. G. 316.
- 1) 4'-[2-Oxybenzyliden]amido-2,3'-Dimethyldiphenylamin. Sm. 112° bis 110° (B. 26, 694). — IV, 584.
2) Äthyläther d. 4-Benzylidenamido-4'-Oxydiphenylamin. Sm. 109 bis 110° (B. 26, 694). — IV, 584.
3) Äthyltriphenylharnstoff. Sm. 80° (B. 9, 712; 14, 2155). — II, 361.
4) α -Phenyl- β -[α - β -Diphenyläthyl]harnstoff. Sm. 129° (B. 22, 1411). — II, 636.
5) α -Phenyl- β -Di[4-Methylphenyl]harnstoff. Sm. 135—136° (B. 25, 1821). — II, 495.
6) α -Phenyl- α - β -Dibenzylharnstoff. Sm. 102—103° (Soc. 59, 567). — II, 526.
7) α -Phenyl- β - β -Dibenzylharnstoff. Sm. 126—128° (145—146°) (B. 25, 1820; Soc. 63, 539). — II, 526.
8) α -Phenyl- β -Benzyl- β -[4-Methylphenyl]harnstoff. Sm. 111—113° (B. 25, 1823). — II, 526.
9) α -Phenyl- β -[α -Phenyl-4-Methylbenzyl]harnstoff. Sm. 206° (B. 24, 2802). — II, 637.
10) Methyläther d. α -Phenyl- α -Benzyl- β -[4-Oxybenzyliden]hydrazin. Sm. 135—136° (G. 27 [2] 238). — IV, 812.
11) β -Benzoyl- α -Di[2-Methylphenyl]hydrazin. Sm. 209° (B. 25, 1079). — IV, 802.
12) β -Benzoyl- α -Di[4-Methylphenyl]hydrazin. Sm. 186,5° (B. 13, 1547). — IV, 809.
13) α -Benzoyl- α - β -Dibenzylhydrazin. Sm. 87° (B. 28, 2346; J. pr. [2] 58, 378). — IV, 811.
14) 2-[2-Oxyphenyl]-1,3-Diphenyltetrahydroimidazol (Salicylaläthylbenzimidazol). Sm. 116° (B. 20, 733). — III, 73.
15) Äthyläther d. 6-Oxy-1,2-Diphenyl-2,3-Dihydroimidazol. Sm. 152° (B. 25, 1008). — III, 32.
16) 5-Methyl-2-[2-Oxyphenyl]-1-[4-Methylphenyl]-2,3-Dihydrobenzimidazol. Sm. 160° (B. 23, 3801). — IV, 995.
- C₂₁H₂₀ON** C 73,3 — H 5,8 — O 4,6 — N 16,3 — M. G. 344.
- 1) β -Acetyl- β -Phenylamidophenylimidomethyl- α -Phenylhydrazin. Sm. 157° (J. pr. [2] 58, 463).
2) α -Phenylazo- α - β -Di[4-Methylphenyl]harnstoff. Sm. 130° (B. 21, 2565). — IV, 1570.
3) α -Phenyl- β -[4-Methylphenyl]azo- β -Benzylharnstoff. Sm. 115—116° (B. 21, 1023). — IV, 1569.
4) 6-Phenylursido-3,4'-Dimethylazobenzol. Sm. 219° (B. 23, 501). — IV, 1378.
5) 2-Oxy- β -Di[2-Methylphenylazo]-1-Methylbenzol. Sm. 148,5° (B. 23, 3260). — IV, 1424.

- C₂₁H₂₀ON₄** 6) **2-Oxy-*p*-Di[4-Methylphenylazo]-1-Methylbenzol.** Sm. 164,5° (*B.* 23, 3261). — *IV*, 1424.
 7) **2-Oxy-*p*-Di[4-Methylphenylazo]-1-Methylbenzol.** Sm. 107° (*A.* 287, 189). — *IV*, 1424.
 8) **3-Oxy-*p*-Di[2-Methylphenylazo]-1-Methylbenzol.** Sm. 188° (*A.* 287, 187). — *IV*, 1424.
 9) **3-Oxy-*p*-Di[3-Methylphenylazo]-1-Methylbenzol.** Sm. 102—103° (*A.* 287, 188). — *IV*, 1424.
 10) **β -Phenylhydrasid d. α -Phenyl- β -Benzylidenhydrasidoessigsäure.** Sm. 196° (*B.* 29, 623; *A.* 301, 74).
- C₂₁H₂₀OBr₄** 1) **2,7-Dibrom-2,7-Di[α -Brombenzyl]-1-Keto-*R*-Heptamethylen.** Sm. 185° u. Zers. (*B.* 30, 2263).
- C₂₁H₂₀O₂N₂** 1) **2-Nitro-1-Dibenzylamidomethylbenzol** (2-Nitrotribenzylamii). Sm. 56° HCl (*J. pr.* [2] 51, 257).
 2) **α -Phenyl- β -[β -Oxy- α β -Diphenyläthyl]harnstoff.** Sm. 176° (*B.* 28, 1902).
 3) **Benzyläther d. α -Oxy- β -Phenyl- α -Benzylharnstoff.** Sm. 107° (*J. pr.* [2] 56, 77).
 4) **2-Acetyl-amido-1-[2-Naphtylacetyl-amido]methylbenzol.** Sm. 116° (*J. pr.* [2] 52, 413). — *IV*, 628.
 5) ***p*-Acetyl-1-[*p*-Acetyl-amido-2-Methylphenyl]naphtalin.** Sm. 261° u. Zers. (*B.* 26, 145). — *IV*, 1034.
 6) **1^s-Methyläther d. 2-[2-Oxybenzyliden]amido-1-[2-Oxyphenylamido]methylbenzol.** Sm. 79° (*J. pr.* [2] 52, 403). — *IV*, 629.
 7) **Dimethyläther d. α -Phenylhydrason-3,4-[*p*]-Dioxydiphenylmethan.** Sm. 174° (*J. pr.* [2] 53, 253). — *IV*, 776.
 8) **Phenylhydrason d. Lapachol.** Sm. 108—109° (*G.* 19, 613). — *IV*, 765.
 9) **Phenylhydrason d. Lapachon.** Sm. 188—189° (*G.* 19, 616). — *IV*, 795.
 10) **3,5[oder 5,6]-Di[4-Methylphenylamido]-2-Methyl-1,4-Benzochinon.** Sm. 178° (*A.* 262, 251). — *III*, 360.
 11) **3,6-Di[4-Methylphenylamido]-2-Methyl-1,4-Benzochinon.** Sm. 241° (*A.* 266, 259). — *III*, 360.
 12) **Aethyläther d. *p*-Phenylamido-*p*-Oxy-2-Methyl-1,4-Benzochinonphenylimid.** Sm. 115—116°. (2HCl, PtCl₄) (*B.* 16, 1561). — *III*, 361.
 13) **α β -Diacetyl- α -[2-Methylphenyl]- β -[1-Naphtyl]hydrazin.** Sm. 252° (*B.* 26, 145). — *IV*, 1504.
 14) **Phenylamidoformiat d. Dibenzylhydroxylamin.** Sm. 117° (*J. pr.* [2] 56, 78).
 15) **Amid d. α -Phenylamido- β -Oxy- α β -Diphenylpropionsäure.** Sm. 106° (*B.* 25, 2069). — *II*, 1698.
 16) **Verbindung** (aus Oenanthol u. 2-Amidobenzol-1-Carbonsäure). Sm. 243° (*B.* 28, 2822).
 C 70,0 — H 5,6 — O 8,9 — N 15,5 — M. G. 360.
- C₂₁H₂₀O₂N₄** 1) **4-Methyl-1,2-Phenylendi[β -Phenylharnstoff].** Sm. 208—209° (*J. pr.* [2] 41, 326). — *IV*, 614.
 2) **4-Methyl-1,3-Phenylendi[β -Phenylharnstoff].** Sm. oberh. 300° (261°) (*B.* 18, 1477; *C.* 1898 [1] 945). — *IV*, 603.
 3) **Di-[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydro-4-Pyrazolyl]methan + 1 $\frac{1}{2}$ H₂O** (*A.* 255, 249). — *IV*, 1264.
 4) **Di[β -Phenylhydrasid] d. Phenylmethandicarbonensäure.** Sm. 254° (*B.* 29, 2603). — *IV*, 711.
 5) **Di[Cinnamylidenhydrasid] d. Methandicarbonensäure.** Sm. 217° (*J. pr.* [2] 51, 189). — *III*, 62.
 6) **Verbindung** (aus d. Verb. C₂₃H₂₀O₂N₄). Sm. 115—118° (*A.* 218, 191). — *III*, 74.
 C 65,0 — H 5,2 — O 8,2 — N 21,6 — M. G. 388.
- C₂₁H₂₀O₂N₅** 1) **4-[4-Antipyril]hydrason-5-Keto-3-Methyl-1-Phenyl-4,5-Dihydro-pyrazol.** Zers. bei 200—205° (*A.* 293, 69). — *IV*, 1582.
- C₂₁H₂₀O₂S₂** 1) **Diphenyläther d. α -Phenylsulfon- β β -Dimerkaptopropan.** Sm. 103 bis 104° (*J. pr.* [2] 36, 406; *B.* 24, 257). — *II*, 790.
 2) **Diphenyläther d. α -Phenylsulfon- β γ -Dimerkaptopropan.** Sm. 75 bis 77° (*A.* 283, 204, 206).

- C₂₁H₃₀O₂N₂** C 72,4 — H 5,7 — O 13,8 — N 8,0 — M. G. 348.
 1) **Allylester d. α , β -Di[Phenylimido]- γ -Ketopentan- α -Carbonsäure.** Sm. 136^o (*B.* [3] 13, 483).
- C₂₁H₃₀O₄N₂** C 69,2 — H 5,5 — O 17,6 — N 7,7 — M. G. 364.
 1) **Alstonin** (Chlorogenin). Sm. unter 100^o (195^o wasserfrei). (2HCl, HgCl₂), (2HCl, PtCl₄ + 4H₂O), H₂Cr₂O₇ (*A.* 205, 363; *A. Spl.* 4, 45). — III, 776.
 2) **Aethylester d. 3,5-Diketo-4-Phenylhydrazon-1-Phenylhexahydrobenzol-2-Carbonsäure.** Sm. 163^o u. Zers. (*A.* 294, 283). — IV, 1475.
- C₂₁H₃₀O₄N** C 64,3 — H 5,1 — O 16,3 — N 14,3 — M. G. 392.
 1) **3,4-Di[2-Nitrobenzylamido]-1-Methylbenzol.** Sm. 129^o (*B.* 25, 3583). — IV, 612.
- C₂₁H₃₀O₈S** 1) **Benzylidendi[benzylsulfon].** Sm. 213^o (*B.* 25, 360; 28, 1111). — III, 9.
C₂₁H₃₀O₈S 1) **Phenyläther d. α , β -Diphenylsulfon- β -Merkaptopropan.** Sm. 156 bis 157^o (148—149^o) (*B.* 24, 234, 1516). — II, 791.
- C₂₁H₃₀O₈N₄** C 59,4 — H 4,7 — O 22,6 — N 13,2 — M. G. 424.
 1) **α -Dinitrostrychnin.** Sm. 236^o. HNO₃ (*B.* 14, 774). — III, 941.
 2) **β -Dinitrostrychnin.** Zers. bei 205^o. HCl (*B.* 41, 235). — III, 941.
- C₂₁H₃₀O₈S** 1) **α , β -Tri[Phenylsulfon]propan.** Sm. 226^o (*A.* 283, 197, 202, 204, 205; *B.* 23, 1413). — II, 783.
- C₂₁H₃₀O₁₁Br** 1) **Dibromquercitrin** (*B.* 12, 1184). — III, 603.
- C₂₁H₃₀N₂S** 1) **α -Phenyl- β -(α , β -Diphenyläthyl)thioharnstoff.** Sm. 170^o (*B.* 22, 1412). — II, 636.
 2) **α -Phenyl- α , β -Dibenzylthioharnstoff.** Sm. 102—103^o (*Soc.* 59, 567). — II, 529.
- C₂₁H₃₀N₃Cl** 1) **Chlorbenzylat d. 5-Methyl-1-Benzyl-1,2,3-Benzotriazol.** Sm. 192^o. 2 + PtCl₄ (*A.* 240, 131). — IV, 1146.
- C₂₁H₃₀N₃S** 1) **4-Methyl-1,2-Phenylendi[β -Phenylthioharnstoff]** (*A.* 221, 19). — IV, 615.
 2) **4-Methyl-1,3-Phenylendi[β -Phenylthioharnstoff].** Sm. 173^o (168^o) (*B.* 8, 670; 17, 3046; 18, 3253; 20, 228). — IV, 604.
 3) **2-Methyl-1,4-Phenylendi[β -Phenylthioharnstoff].** Sm. 181^o (*A.* 228, 206). — IV, 609.
- C₂₁H₃₁ON** C 53,2 — H 6,9 — O 5,3 — N 4,6 — M. G. 303.
 1) **β -[4-Methylphenyl]amido- α -Oxy- α , β -Diphenyläthan** (μ -Hydrobenzoin-toluid). Sm. 140^o (*J. pr.* [2] 34, 21). — III, 221.
 2) **Phenyläther d. Dibenzylhydroxylamin.** Fl. HCl, (2HCl, PtCl₄), Pikrat (*A.* 257, 226; 266, 315). — II, 536.
 3) **3-Cinnamyl-1,2,4-Trimethyl-1,2-Dihydrochinolin?** Sm. 152—153^o (*G.* 24 [2] 300). — IV, 243.
- C₂₁H₃₁ON₃** C 76,1 — H 6,3 — O 4,8 — N 12,7 — M. G. 331.
 1) **α -Phenyl- β -[4-Methylphenyl]- β -[2-Amidobenzyl]harnstoff.** Sm. 129^o. HCl, (2HCl, PtCl₄), Oxalat, Pikrat (*B.* 27, 46; *J. pr.* [2] 55, 244). — IV, 633.
 2) **2-[2-Oxyphenyl]-3-[2-Amidobenzyl]-1,2,3,4-Tetrahydro-1,3-Benzodiazin.** Sm. 166^o (*J. pr.* [2] 55, 369). — IV, 638.
 3) **2[4-Oxyphenyl]-3-[2-Amidobenzyl]-1,2,3,4-Tetrahydro-1,3-Benzodiazin.** Sm. 90^o (*J. pr.* [2] 55, 370). — IV, 639.
 4) **Benzoyloxyhydrat d. 5-Methyl-1-Benzyl-1,2,3-Benzotriazol.** Chlorid, 2Chlorid + PtCl₄ (*A.* 249, 131). — IV, 1146.
- C₂₁H₃₁ON₅** C 70,2 — H 5,8 — O 4,5 — N 19,5 — M. G. 359.
 1) **6-Dimethylamido-4-Oxy-3-Phenylazo-1-[2-Methylphenylazo]benzol.** Sm. 139—140^o (*B.* 31, 491). — IV, 1417.
 2) **6-Dimethylamido-4-Oxy-3-Phenylazo-1-[4-Methylphenylazo]benzol.** Sm. 149^o (*B.* 31, 492). — IV, 1417.
 3) **4-Dimethylamido-6-Oxy-3-Phenylazo-1-[2-Methylphenylazo]benzol.** Sm. 124^o (*B.* 31, 491). — IV, 1417.
 4) **4-Dimethylamido-6-Oxy-3-Phenylazo-1-[4-Methylphenylazo]benzol.** Sm. 143—144^o (*B.* 31, 493). — IV, 1417.
 5) **4-[4-Oxyphenylazo]-2-[4-Dimethylamidophenyl]-1-Methylbenzol.** Sm. 159—160^o (*A.* 234, 357). — IV, 1417.
- C₂₁H₃₁OP** 1) **Tribenzylphosphinoxid.** Sm. 213^o (216—216,5^o). Salze siehe (*B.* 13, 1666; 21, 405; 22, 2147; *Soc.* 55, 227). — IV, 1665.
- C₂₁H₃₁OAs** 1) **Tribenzylarsinoxid.** Sm. 219—220^o. HCl, HBr, HJ + H₂O, HNO₃, + J₂ (*A.* 233, 69). — IV, 1690.

- C₂₁H₂₁O₈B** 1) Antimontri[2-Methylphenyl]oxyd. Sm. bei 220° (A. 242, 183). — IV, 1696.
 2) Antimontri[3-Methylphenyl]oxyd. Sm. 185° (A. 242, 187). — IV, 1697.
 3) Antimontri[4-Methylphenyl]oxyd. Sm. bei 220° (A. 242, 174). — IV, 1697.
- C₂₁H₂₁O₂N** 1) Acetylapocinchen. Sm. 118—119° (B. 20, 2677). — III, 838.
 2) Äthylester d. 2-Methyl-5-Phenyl-1-[4-Methylphenyl]pyrrol-3-Carbonsäure. Sm. 115° (B. 18, 2597). — IV, 357.
 C 72,6 — H 6,1 — O 9,2 — N 12,1 — M. G. 347.
- C₂₁H₂₁O₂N₂** 1) 3'-Nitro-5',5'-Diamido-2',2'-Dimethyltriphenylmethan? Sm. 85 bis 86°. 2HCl, (2HCl, PtCl₄) (B. 21, 3209). — IV, 1047.
 2) 4'-Nitro-5',5'-Diamido-2',2'-Dimethyltriphenylmethan. Sm. 126 bis 127°. 2HCl, (2HCl, PtCl₄) (B. 20, 3304). — IV, 1048.
 3) 4'-Nitro-2',2'-Diamido-3',3'-Dimethyltriphenylmethan? (B. 15, 679). — IV, 1046.
 4) 3'-Nitro-6',6'-Diamido-3',3'-Dimethyltriphenylmethan? Sm. 125 bis 128° (B. 21, 3212). — IV, 1047.
 5) 4'-Nitro-6',6'-Diamido-3',3'-Dimethyltriphenylmethan. Sm. 170 bis 172°. + ½ H₂O, (2HCl, PtCl₄) (B. 20, 3302). — IV, 1048.
 6) 2-Methylphenylamid d. α-Phenylhydrazonphenylessigsäure + H₂O (A. 270, 319). — IV, 694.
- C₂₁H₂₁O₃P** 1) Diphenyläther d. Dioxy-2,4,5-Trimethylphenylphosphin. Sm. 59°; Sd. 283°₁₀ (A. 294, 34). — IV, 1678.
 C 75,2 — H 6,3 — O 14,3 — N 4,2 — M. G. 335.
- C₂₁H₂₁O₃N** 1) Methylcuparin + ½ H₂O. Sm. 190°. HCl + 2½ H₂O, HBr + 10H₂O (B. 20 [2] 36; C. 1895 [2] 826). — III, 778.
 2) Acetat d. Oxyapocinchen. Sm. 201—203° (B. 20, 2685). — III, 838.
 3) Äthylester d. 6-Phenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 144—145° (A. 294, 278).
 4) Monopiperidid d. Diphenylmaleinsäure. Piperidinsalz (Sm. 185—186°) (B. 26, 2480). — IV, 17.
- C₂₁H₂₁O₃P** 1) Methyläther d. 2,4,5-Trimethylphenylphosphinsäure. Sm. 62,5°; Sd. oberh. 360° (A. 294, 9). — IV, 1678.
 2) Di[4-Methylphenylester] d. 4-Methylphenylphosphinsäure. Sd. oberh. 360° (A. 293, 264). — IV, 1668.
 3) Phosphorigsäuretri-3-Methylphenylester. Sd. 240—243°₁₀ (B. 31, 1052).
 4) Phosphorigsäuretri-4-Methylphenylester. Sd. 250—255°₁₀ (B. 31, 1051).
- C₂₁H₂₁O₃As** 1) Trimethyläther d. Tri[4-Oxyphenyl]arsin. Sm. 156° (B. 20, 49). — IV, 1689.
 2) Tribenzylester d. Arsenigensäure. Fl. (B. 28, 622).
 3) Tri[4-Methylphenylester] d. Arsenigensäure. Sd. 290°₃₀ (B. 28, 621).
- C₂₁H₂₁O₃Bi** 1) Trimethyläther d. Wismuthtri[4-Oxyphenyl]. Sm. 190° (B. 30, 2848). — IV, 1698.
- C₂₁H₂₁O₃Sb** 1) Trimethyläther d. Antimontri[4-Oxyphenyl] (Trianisylstibin). Sm. 180,5—181°. + HgCl₂ (B. 30, 2835). — IV, 1695.
- C₂₁H₂₁O₄N** C 71,8 — H 6,0 — O 18,2 — N 4,0 — M. G. 351.
 1) Diäthylester d. α-Cyan-α-β-Diphenyläthan-α-β-Dicarbonsäure. Sm. 105° (B. 23, 114). — II, 1891.
- C₂₁H₂₁O₄N₂** C 66,5 — H 5,5 — O 16,9 — N 11,1 — M. G. 379.
 1) Xanthostyrychnol + 2H₂O (M. 6, 851; 7, 79). — III, 941.
 2) Nitrostyrychnin. Sm. 225° u. Zers. 2KOH, Ba(OH)₂, Ag₂, HCl, (2HCl, PtCl₄) (M. 6, 845). — III, 940.
 3) Dimethyläther d. 4-Nitro-3',3'-Diamido-1',1'-Dioxytriphenylmethan. Sm. 189° (B. 20, 1565). — II, 1003.
 4) Dimethyläther d. 4-Nitro-*p*-Diamido-*p*-Dioxytriphenylmethan. + C₆H₆ (Sm. 107—108°) (B. 15, 680). — II, 1003.
- C₂₁H₂₁O₄P** 1) Tri[2-Methylphenylester] d. Phosphorsäure (B. 16, 1767; A. 224, 173). — II, 737.
 2) Tri[4-Methylphenylester] d. Phosphorsäure. Sm. 77,5—78° (Z. 1870, 323; B. 15, 640; 16, 1766; 30, 2374; A. 224, 170). — II, 749.
 3) Tribenzylester d. Phosphorsäure. Sm. 64° (A. 262, 213). — II, 1051.

- C₂₁H₂₁O₆Sb** 1) Trimethyläther d. Tri[4-Oxyphenyl]antimonoxyd. Sm. 191° (B. 30, 2838). — IV, 1696.
- C₂₁H₂₁O₅N**
 C 68,6 — H 5,7 — O 21,8 — N 3,8 — M. G. 367.
 1) α -Homochelidonin. Sm. 182°. HCl + 2H₂O, (2HCl, PtCl₄ + 3H₂O), (HCl, AuCl₃). — III, 805.
 2) β -Homochelidonin, oder C₂₁H₂₁O₅N. Sm. 159°. HCl + H₂O, (2HCl, PtCl₄ + 4H₂O), (HCl, AuCl₃), HBr + 1½H₂O, HJ + H₂O, HNO₃ + 1½H₂O (M. 19, 199). — III, 805.
 3) γ -Homochelidonin. Sm. 169°. (2HCl, PtCl₄), (HCl, AuCl₃). — III, 806.
- C₂₁H₂₁O₆N**
 C 65,7 — H 5,5 — O 25,1 — N 3,7 — M. G. 353.
 1) Hydrastin. Sm. 132°. HCl, (HCl, SnCl₄), (2HCl, PtCl₄), (HCl, AuCl₃), HBr, HJ, H₂SO₄, 3 + 2Ca(H₂PO₄)₂, Pikrat (J. 1862, 381; 1863, 455; 1884, 1396; R. 5, 200; B. 19, 2798; 20, 94; Fr. 24, 60; 26, 645; 31, 594; C. 1897 [2] 1186). — II, 2050.
 2) Rhoeadin. Sm. 232° u. Zers. (2HCl, PtCl₄ + 2H₂O), HJ + 2H₂O (A. 140, 145; 149, 35). — III, 931.
 3) Rhoegenin. Sm. 223°. (2HCl, PtCl₄), HJ (A. 140, 149; 149, 35). — III, 931.
- C₂₁H₂₁O₆P**
C₂₁H₂₁O₆N
 C 63,1 — H 5,3 — O 28,1 — N 3,5 — M. G. 369.
 1) Methylnorisonarkotin. Sm. 209° u. Zers. + ½C₆H₆ (Sm. 149—151°). Na, HCl, (2HCl, PtCl₄) (B. 29, 2042; 30, 694). — III, 922.
 2) Dimethylnorarkotin (A. 159, 390; A. Spl. 7, 62, 67). — III, 915.
 3) Diäthylester d. α -Keto- α -(2-Nitrophenyl)- γ -Phenylpropan- β - β -Dicarbonsäure (D. d. 2-Nitrobenzoylbenzylmalonsäure). Sm. 94° (A. 239, 105; 251, 384). — II, 1978.
 4) Verbindung (aus 3,5-Dioxy-1-Methylbenzol) (B. 17, 1879). — II, 965.
 C 59,0 — H 4,9 — O 26,2 — N 9,8 — M. G. 427.
 1) Diäthylester d. Bis-*o*-Aldehydophenylkohlenensäuresemicarbazon. Sm. 111° (B. 31, 2806).
- C₂₁H₂₁O₆P** 1) Tri[2-Methoxyphenylester] d. Phosphorsäure. Sm. 98° (91°) (C. 1895 [1] 209; 1897 [2] 481).
- C₂₁H₂₁NBr₂** 1) Tribenzylamindibromid. Sm. 157—159° (A. 259, 306). — II, 522.
- C₂₁H₂₁N₂S** 1) α -Phenylamido- β - β -Dibenzylthioharnstoff. Sm. 139° (B. 30, 848). — IV, 681.
- C₂₁H₂₁Cl₂As** 1) Tri[4-Methylphenyl]arsindichlorid. Sm. 214° (A. 208, 27). — IV, 1692.
- C₂₁H₂₁Cl₂Bi** 1) Wismuthtri[2-Methylphenyl]dichlorid. Sm. 160° (B. 30, 2846). — IV, 1698.
 2) Wismuthtri[4-Methylphenyl]dichlorid. Sm. 147° (A. 251, 331). — IV, 1699.
- C₂₁H₂₁Cl₂Sb** 1) Antimontri[2-Methylphenyl]dichlorid. Sm. 178—179° (A. 242, 182). — IV, 1696.
 2) Antimontri[3-Methylphenyl]dichlorid. Sm. 137—138° (A. 242, 186). — IV, 1696.
 3) Antimontri[4-Methylphenyl]dichlorid. Sm. 156—157° (A. 242, 172). — IV, 1697.
- C₂₁H₂₁Br₃P** 1) γ -Brompropyltriphenylphosphoniumbromid. Sm. 226—228°. 2 + PtCl₄ (B. 27, 277). — IV, 1661.
- C₂₁H₂₁Br₂Bi** 1) Wismuthtri[2-Methylphenyl]dibromid. Sm. 125° (B. 30, 2847). — IV, 1698.
 2) Wismuthtri[4-Methylphenyl]dibromid. Sm. 111—112° (A. 251, 331). IV, 1699.
- C₂₁H₂₁Br₂Sb** 1) Antimontri[2-Methylphenyl]dibromid. Sm. 209—210° (A. 242, 183). — IV, 1696.
 2) Antimontri[3-Methylphenyl]dibromid. Sm. 113° (A. 242, 186). — IV, 1696.
 3) Antimontri[4-Methylphenyl]dibromid. Sm. 233—234° (A. 242, 172). — IV, 1697.
 4) Antimontri[*o*-*p*-Methylphenyl]dibromid. Sm. 185—186° (A. 242, 178). — IV, 1697.
- C₂₁H₂₁J₂As** 1) Tribenzylarsindijodid. Sm. 95° (A. 233, 72). — IV, 1690.
- C₂₁H₂₁J₂Sb** 1) Antimontri[2-Methylphenyl]dijodid. Sm. 174—175° u. Zers. (A. 242, 183). — IV, 1696.

- C₂₁H₁₇J₃Sb 2) Antimontri[3-Methylphenyl]dijodid. Sm. 138—139° u. Zers. (A. 242, 186). — IV, 1697.
- 3) Antimontri[4-Methylphenyl]dijodid. Sm. 182—183° (A. 242, 173). — IV, 1697.
- C₂₁H₁₇SP 1) Tribenzylphosphinsulfid. Sm. 205—206°. — IV, 1665.
- C₂₁H₁₇SA₃ 1) Tribenzylarsinsulfid. Sm. 212—214° (A. 233, 73). — IV, 1690.
- C₂₁H₁₇SSb 1) Antimontri[3-Methylphenyl]sulfid. Sm. 162—163° (A. 242, 188). — IV, 1697.
- C₂₁H₁₇PS₂ 1) Tetrabenzylphosphinselenid. Sm. 236,5°. — IV, 1666.
- C₂₁H₁₇ON₂ 1) C 79,2 — H 6,9 — O 5,0 — N 8,8 — M. G. 318.
- 1) Abrotin. (2HCl, PtCl₄), H₂SO₄ + 6H₂O (J. 1863, 1356). — III, 772.
- 2) Verbindung (aus Strychnin). Fl. (M. 7, 610). — III, 944.
- C₂₁H₁₇O₂N₂ 1) Strychnin. Sm. 268; Sd. 270°. Salze meist bek. Lit. bedeutend. — III, 934.
- 2) Verbindung (aus Benzolcarbonsäurealdehyd u. Aethylcyanid). Sm. 214° (J. pr. [2] 50, 4). — II, 1867.
- C₂₁H₁₇O₂N₄ 1) C 64,6 — H 5,6 — O 8,2 — N 21,5 — M. G. 390.
- 1) Di[Phenylhydrazid] d. Phenylhydrazidmethan-*αα*-Dicarbonsäure. Sm. 256—257° (B. 31, 553).
- 2) Di[Phenylhydrazid] d. 1-Methylphenylen-2,4-Diamidoameisensäure. Sm. 203° (C. 1898 [1] 945).
- C₂₁H₁₇O₃N₂ 1) C 72,0 — H 6,3 — O 13,7 — N 8,0 — M. G. 350.
- 1) Aethylester d. 5-Phenylhydrazon-3-Keto-1-Phenylhexahydrobenzol-2-Carbonsäure. Sm. 130° (B. 27, 2127, 2343; A. 294, 281). — IV, 711.
- C₂₁H₁₇O₃N₄ 1) C 66,7 — H 5,8 — O 12,7 — N 14,8 — M. G. 378.
- 1) Di[Phenylhydrazid] d. *δ*-Keto-*βε*-Heptadien-*βγ*-Dicarbonsäure. Sm. 206° (B. 31, 683).
- C₂₁H₁₇O₃N₂ 1) C 66,9 — H 5,8 — O 20,9 — N 7,3 — M. G. 382.
- 1) *p*-Dinitro-2-Acetyl-*p*-Benzyliden-5-Pseudobutyl-1,3-Dimethylbenzol. Sm. 140° (B. 31, 1346).
- C₂₁H₁₇O₅Cl₂ 1) Dichlorphillygenin (A. 118, 128). — III, 600.
- C₂₁H₁₇O₅Br₂ 1) Dibromphillygenin (A. 118, 128). — III, 600.
- C₂₁H₁₇O₇N₂ 1) C 60,9 — H 5,3 — O 27,0 — N 6,8 — M. G. 414.
- 1) Nitrocryptopin. Sm. 185°. HCl + 3H₂O, (2HCl, PtCl₄ + 10H₂O), HNO₃, Oxalat + 12H₂O, Dioxalat + 3H₂O (A. Spl. 8, 312). — III, 913.
- C₂₁H₁₇O₇N₄ 1) C 47,0 — H 5,0 — O 25,3 — N 12,7 — M. G. 442.
- 1) Dinitrostrychninsäure + H₂O (Dinitrostrychninhydrat). HNO₃ (A. 301, 332).
- 2) Dinitrostrychninsäure. HNO₃ (A. 301, 331).
- C₂₁H₁₇O₉N₂ 1) C 58,6 — H 5,1 — O 29,8 — N 6,5 — M. G. 430.
- 1) Diäthylester d. *αγ*-Di[2-Nitrophenyl]propan-*ββ*-Dicarbonsäure. Sm. 97° (B. 20, 436). — II, 1893.
- 2) Diäthylester d. *αγ*-Di[4-Nitrophenyl]propan-*ββ*-Dicarbonsäure. Sm. 170° (B. 20, 434). — II, 1893.
- 3) Diäthylester d. *α*-[2-Nitrophenyl]-*γ*-[4-Nitrophenyl]propan-*ββ*-Dicarbonsäure. Sm. 103,5° (B. 29, 636).
- C₂₁H₁₇O₉N₄ 1) C 53,2 — H 4,6 — O 30,4 — N 11,8 — M. G. 474.
- 1) Kakothelin + H₂O. (2HCl, PtCl₄), BaO + 7H₂O (A. 65, 111; 91, 78; J. 1847/48, 631; B. 14, 770). — III, 947.
- C₂₁H₁₇O₁₀N₂ 1) C 54,5 — H 4,8 — O 34,6 — N 6,1 — M. G. 462.
- 1) Dinitrophillygenin (A. 118, 128). — III, 600.
- C₂₁H₁₇O₁₁N₃ 1) Kakostrychnin? (2HCl, PtCl₄) (B. 14, 777). — III, 941.
- C₂₁H₁₇N₂J 1) Jodäthylat d. 3,5-Dibenzylpyridin. Sm. 127° (A. 280, 46). — IV, 456.
- C₂₁H₁₇N₂S 1) *s*-Isobutylphenyl-2-Naphtylthioharnstoff. Sm. 152° (B. 16, 2022). — II, 619.
- C₂₁H₁₇JP 1) Propyltriphenylphosphoniumjodid. Sm. 201,5° (A. 229, 312). — IV, 1661.
- 2) Isopropyltriphenylphosphoniumjodid + 2H₂O. Sm. 191° (wasserfrei) (A. 229, 313). — IV, 1661.
- C₂₁H₁₇ON 1) C 82,6 — H 7,5 — O 5,2 — N 4,6 — M. G. 305.
- 1) Aethyläther d. Apocinchen. Sm. 70—71° (B. 18, 2381). — III, 838.

- C₂₁H₂₃O₃N₅** C 75,7 — H 6,9 — O 4,8 — N 12,6 — M. G. 333.
 1) *p*-Triamido- α -Oxy-*p*-Dimethyltriphenylmethan (B. 15, 679). — II, 1094.
 2) *p*-Triamido- α -Oxy-*p*-Dimethyltriphenylmethan (A. ch. [6] 2, 348). — II, 1094.
 3) 6-Oxy-2,4-Di[4-Isopropylphenyl]-1,3,5-Triazin. Sm. 253° (B. 30, 2009). — IV, 1198.
- C₂₁H₂₃O₂N** C 78,5 — H 7,1 — O 10,0 — N 4,4 — M. G. 321.
 1) 2-Naphthylester d. Cyancampholsäure. Sm. 117° (A. ch. [7] 2, 392). — II, 877.
- C₂₁H₂₃O₇N₁** C 72,2 — H 6,6 — O 9,2 — N 12,0 — M. G. 349.
 1) Amidostrychnin. Sm. 275°; Sd. 280°. 2HCl, (2HCl PtCl₂) (M. 6, 848). — III, 941.
 2) Dimethyläther d. *p*-Triamido-*p*-Dioxytriphenylmethan. Sm. 182 bis 183° (B. 15, 681). — II, 1003.
- C₂₁H₂₃O₇Bi** 1) Wismuthtri[2-Methylphenyl]dioxyhydrat. Chlorid, Bromid, Nitrat (B. 30, 2847). — IV, 1698.
 2) Wismuthtri[4-Methylphenyl]dioxyhydrat. Chlorid, Bromid, Jodid (A. 251, 331). — IV, 1699.
- C₂₁H₂₃O₃N** C 74,8 — H 6,8 — O 14,2 — N 4,2 — M. G. 337.
 1) 6-[4-Aethoxyphenyl]amido-4-Keto-2-[4-Methoxyphenyl]-1,2,3,4-Tetrahydrobenzol. Sm. 226° (A. 294, 311).
- C₂₁H₂₃O₄N** C 71,4 — H 6,5 — O 18,1 — N 4,0 — M. G. 353.
 1) Artarin. Sm. 240° u. Zers. HCl + 4H₂O, (2HCl PtCl₂), H₂SO₄ + 2H₂O (G. 19, 315). — III, 780.
 2) Mekonidin. Sm. 58°. (2HCl, PtCl₂) (A. 153, 47). — III, 912.
 3) Methylhydroberberin + 2H₂O. Sm. 224–226°. Salze siehe III, 801.
 4) Diäthylester d. α -[2-Methylphenyl]imido- α -Phenyläthan- β - β -Dicarbonsäure. Sm. 95° (B. 19, 985). — II, 1850.
 5) Diäthylester d. α -[4-Methylphenyl]imido- α -Phenyläthan- β - β -Dicarbonsäure. Fl. (B. 19, 985). — II, 1850.
 6) Diäthylester d. 2,6-Dimethyl-4-[β -Phenyläthyl]pyridin-3,5-Dicarbonsäure. Sm. 39°. (2HCl, PtCl₂) (A. 231, 6). — IV, 404.
- C₂₁H₂₃O₄N₃** C 66,1 — H 6,0 — O 16,8 — N 11,0 — M. G. 381.
 1) Nitrostrychninsäure. HCl + H₂O (A. 264, 54). — III, 942.
 2) *c*-Nitrosostrychninsäure (A. 268, 267). — III, 943.
 3) *n*-Nitrosostrychninsäure. HCl (A. 264, 73). — III, 943.
- C₂₁H₂₃O₅N** C 68,3 — H 6,2 — O 21,7 — N 3,8 — M. G. 369.
 1) *s*-Homochelidonin, siehe C₂₁H₂₁O₅N. — III, 805.
 2) Cryptopin. Sm. 217° u. Zers. HCl + 6H₂O, (HCl, HgCl₂ + H₂O), (2HCl, PtCl₂ + 6H₂O), H₂CrO₄, Diazalat, Dinitrat + 4H₂O, Pikrat + H₂O, Mekonat (A. Spl. 8, 299; J. 1867, 523; 1887, 2185; A. 176, 200; 222, 221; B. 13, 1075; 25 [2] 748). — III, 913.
 3) Diacetylmorphin (Heroin). Sm. 169° (173°). HCl, (2HCl, PtCl₂), (HCl, AuCl₃) (Soc. 27, 1038; A. 222, 205; C. 1899 [1] 123, 705). — III, 899.
 4) α - β -Diäthylester d. α - β -Diphenyläthan- α - β -Tricarbonsäure- α -Monamid. Sm. 157° (B. 23, 116). — II, 2025.
- C₂₁H₂₃O₅N₃** C 63,5 — H 5,8 — O 20,1 — N 10,6 — M. G. 397.
 1) Diäthylester d. α -Phenylhydrazon- β -Benzoylamidoäthan- α - β -Dicarbonsäure. Sm. 133–134° (B. 24, 1260). — IV, 713.
- C₂₁H₂₃O₈Sb** 1) Trimethyläther d. Tri[4-Oxyphenyl]antimonhydroxyd. Chlorid, Bromid, Jodid, Nitrat (B. 30, 2836). — IV, 1695.
- C₂₁H₂₃O₆N** C 65,4 — H 6,0 — O 24,9 — N 3,6 — M. G. 385.
 1) Colchicin (Acetotrimethylcolchicinsäure) + $\frac{1}{2}$ H₂O. Sm. 172°. (HCl, AuCl₃), Ba, Cu + 5H₂O (J. 1856, 548; 1864, 451; M. 4, 162; 7, 585; 9, 6, 873; B. 14, 1412). — III, 874.
 2) Succinylmorphin + 4H₂O. (2HCl, PtCl₂) (Soc. 28, 692). — III, 900.
 3) Methyloxyhydrat d. Protopin. Jodid, Nitrat + 4H₂O (M. 19, 194).
- C₂₁H₂₃O₇N₃** C 58,7 — H 5,4 — O 26,1 — N 9,8 — M. G. 429.
 1) Bidesmethylnitrobrucinyhydrat + 2H₂O. HCl, HNO₃ + H₂O (A. 304, 45).
- C₂₁H₂₃O₈N** C 50,4 — H 5,5 — O 30,7 — N 3,4 — M. G. 417.
 1) Nitrophillygenin (A. 118, 128). — III, 600.
- C₂₁H₂₃O₈N₃** C 56,6 — H 5,2 — O 28,8 — N 9,4 — M. G. 445.
 1) Trinitrocannabinol. Sm. 160°. NH₃, Na + 4H₂O, K, Ag (Soc. 75, 23). — III, 621.

- C₂₁H₁₃N₅S** 1) α - β -Phenylthiouramidophenyl]amido- β -[α -Phenylhydrazido]äthan (Aethyltriphenylthiosemicarbazid). Sm. 164,5° (A. 254, 125). — IV, 679.
C 78,7 — H 7,5 — O 5,0 — N 8,7 — M. G. 320.
- C₂₁H₁₄ON₂** 1) Bensoylkotohydrodimethylphenanthrolin. Sm. 167—168° (B. 24, 1743). — IV, 889.
2) Paytamin (A. 154, 293; 211, 280; B. 10, 2161). — III, 782.
3) Paytin + H₂O. Sm. 156°. HCl, (2HCl, PtCl₄), HJ (A. 154, 289; 166, 272; 178, 252 Anm.; 211, 280). — III, 782.
4) Strychnidin. Sm. 252° (i. V.). Sd. 290—295₁₁. HCl, 2HCl + 1/2 H₂O (A. 301, 303).
5) Verbindung (aus Furfurolo u. Dimethylanilin). Sm. 83°. (2HCl, PtCl₄), Pikrat (A. 206, 141). — III, 723.
C 75,0 — H 7,1 — O 9,5 — N 8,3 — M. G. 336.
- C₂₁H₁₄O₂N₂** 1) α -1,4-Dibenzoyl-2,3,5-Trimethylhexahydro-1,4-Diazin. Sm. 190° u. Zers. (J. pr. [2] 55, 65). — IV, 484.
2) Phenylhydrazonsantonin. Sm. 220—221° u. Zers. (2HCl, PtCl₄) (G. 19, 383). — II, 1787.
3) Acetylapochinamin. (2HCl, PtCl₄ + 2H₂O) (A. 207, 294). — III, 857.
4) Acetylcinchonin. (2HCl, PtCl₄ + 2H₂O), (2HCl, 2AuCl₃ + H₂O) (A. 205, 321). — III, 834.
5) Acetylapocinchonin. (2HCl, PtCl₄ + 2H₂O) (A. 205, 338). — III, 845.
6) Acetyldiapocinchonin. (2HCl, PtCl₄ + 2H₂O), (2HCl, AuCl₃) + H₂O (A. 205, 339). — III, 845.
7) Acetylcinchonidin. Sm. 42°. (2HCl, PtCl₄ + 2H₂O), 2(HCl, AuCl₃) + H₂O (A. 205, 319). — III, 852.
8) Acetylapocinchonidin. (2HCl, PtCl₄ + 2H₂O), 2(HCl, AuCl₃) + H₂O (A. 205, 338). — III, 853.
9) Acetylhomocinchonidin. (2HCl, PtCl₄ + 2H₂O), (2HCl, 2AuCl₃ + H₂O) (A. 205, 320). — III, 854.
10) Di[Phenylamid] d. Heptan- α -Dicarbonsäure. Sm. 145° (Soc. 65, 992).
C 69,2 — H 6,5 — O 8,8 — N 15,4 — M. G. 364.
- C₂₁H₁₄O₂N₂** 1) Diamidostrychnin. Sm. 263° u. Zers. 2HCl (B. 41, 236). — III, 941.
C 71,6 — H 6,8 — O 13,6 — N 7,9 — M. G. 352.
- C₂₁H₁₄O₂N₂** 1) α -Acetyl- α -Phenyl- β -[6-Acetoxy-3-tert. Butylbenzyliden]hydrazin. Sm. 128° (Am. 16, 637). — IV, 761.
2) Phenylhydrazon d. α -Oxyantonin. Sm. 264—265° (G. 27 [2] 91). — IV, 797.
3) Strychninsäure + 4H₂O (M. 7, 83; A. 264, 50; 301, 330). — III, 942.
4) Isostrychninsäure + H₂O (Dihydrostrychnin) (A. 264, 69; 265, 236; 301, 331; B. 31, 98). — III, 942.
5) 6-Acetat d. 6-Oxy-3-tert. Butyl-1-Acetylphenylhydrazonmethylbenzol. Sm. 128° (Am. 16, 637).
C 68,5 — H 6,5 — O 17,4 — N 7,6 — M. G. 368.
- C₂₁H₁₄O₂N₂** 1) Diäthylester d. γ -Phenylhydrazon- α -Phenylpropan- $\beta\gamma$ -Dicarbonsäure. Sm. 64—66° (B. 31, 556).
C 63,6 — H 6,1 — O 16,2 — N 14,1 — M. G. 396.
- C₂₁H₁₄O₂N₄** 1) β -Tetra[Acetylamido]diphenylmethan (A. 218, 343). — IV, 1277.
C 65,6 — H 6,2 — O 20,8 — N 7,3 — M. G. 384.
- C₂₁H₁₄O₂N₂** 1) Acetylchitenin. (2HCl, PtCl₄) (M. 10, 41). — III, 820.
2) Diäthylester d. 2,6-Dimethyl-4-[3-Acetylamidophenyl]pyridin-3,5-Dicarbonsäure. Sm. 131° (G. 17, 464). — II, 387.
3) Amid d. Acetotrimethylcolchicinsäure. + 1/2 C₂H₆O (M. 9, 25). — III, 874.
C 63,0 — H 6,0 — O 24,0 — N 7,0 — M. G. 400.
- C₂₁H₁₄O₂N₂** 1) Phenylhydrazon d. Glyko-o-Cumarsäurealdehyd. Sm. 130—132° (B. 18, 1960). — IV, 761.
2) Tolazinderivat (aus o-Toluyldiamin u. 1,2-Diketo-R-Pentamethylen-3,4,5-Tricarbonsäuretriäthylester). Sm. 141—142° (A. 297, 110). — IV, 991.
C 58,9 — H 5,6 — O 22,4 — N 13,1 — M. G. 428.
- C₂₁H₁₄O₂N₄** 1) Oenanthyldenamid d. 3-Nitrobenzol-1-Carbonsäure. Sm. 170° (A. 157, 47). — II, 1234.
- C₂₁H₁₄O₂N₂** 1) s-Di[5-Carboxyl-2-(α)-Oxyisopropylphenyl]harnstoff (B. 17, 1307) — II, 1587.

- C₂₁H₁₉O₂N₂** 2) Carbonat d. 4-Oxyphenylamidoameisensäurepropylester. Sm. 155° (C. 1897 [1] 469).
- C₂₁H₁₇N₂S** 1) Di[4-Dimethylamidophenyl]thiänylmethan (Leukothiophengrün). Sm. 92–93°. (2HCl, PtCl₄), Pikrat (B. 20, 514). — III, 749.
2) s-Di[5,6,7,8-Tetrahydro-1-Naphtyl]thioharnstoff. Sm. 170° (B. 21, 1795). — II, 587.
3) s-Di[1,2,3,4-Tetrahydro-2-Naphtyl]thioharnstoff. Sm. 166,5° (B. 21, 858). — II, 588.
- C₂₁H₂₁O₂N** C 78,0 — H 7,7 — O 9,9 — N 4,3 — M. G. 323.
1) Bensoat d. 3-Diäthylamido-2-Oxy-1,2,3,4-Tetrahydronaphtalin. (2HCl, PtCl₄), Pikrat (A. 288, 122).
- C₂₁H₂₁O₂N₂** C 71,8 — H 7,1 — O 9,1 — N 12,0 — M. G. 351.
1) Porphyrin. Sm. 97°. (2HCl, PtCl₄ + 4H₂O) (A. Spl. 4, 42; A. 205, 366). — III, 777.
- C₂₁H₂₁O₂N** C 74,3 — H 7,4 — O 14,2 — N 4,1 — M. G. 339.
1) Propyläther d. Thebenin (Prothebenin). Sm. 172–173°. HCl, HJ (B. 32, 185).
2) Phenylamidopitzaohinsäure (Phenylamidoperezon). Sm. 138–139° (133°) (B. 18, 714, 941; A. 237, 103). — II, 1673.
- C₂₁H₂₁O₂N₂** C 68,7 — H 6,8 — O 13,1 — N 11,4 — M. G. 367.
1) Nitrosotetrahydrostrychnin. HCl (A. 301, 322).
C 71,0 — H 7,0 — O 18,0 — N 3,9 — M. G. 355.
- C₂₁H₂₁O₂N** 1) Corybulbin. Sm. 238–240°. HCl, (2HCl, PtCl₄ + 3H₂O), H₂SO₄ (Soc. 87, 25; C. 1896 [2] 794). — III, 877.
2) Butyrylmorphin. 2 Modif. HCl, (2HCl, PtCl₄) (Soc. 28, 16, 322). — III, 899.
3) Propionylecödin. HCl + 2H₂O, (2HCl, PtCl₄), HJ + H₂O, Oxalat + 3H₂O (A. 222, 212). — III, 905.
4) α-Acetylmethylmorphimethin (Acetylmethocödin). Sm. 66°. HCl + $\frac{1}{2}$ H₂O, (2HCl, PtCl₄ + 4H₂O), HNO₃ + 3H₂O, H₂SO₄ + 8H₂O (A. 222, 222; B. 27, 1146). — III, 905.
5) β-Acetylmethylmorphimethin (B. 27, 1146). — III, 905.
6) Diäthylester d. α-2-Methylphenylamido-α-Phenyläthan-ββ-Dicarbonensäure. Sm. 67,5° (B. 28, 1454). — II, 1850.
7) Diäthylester d. α-4-Methylphenylamido-α-Phenyläthan-ββ-Dicarbonensäure. Sm. 80–82° (B. 28, 1454). — II, 1850.
8) Diäthylester d. 2,6-Dimethyl-4-[β-Phenyläthenyl]-1,4-Dihydropyridin-3,5-Dicarbonensäure. Sm. 151–152° (148–149°) (A. 231, 3; G. 23 [1] 386). — IV, 387.
- C₂₁H₂₁O₂N** C 67,9 — H 6,7 — O 21,6 — N 3,8 — M. G. 371.
1) Methoxyhydrat d. Papaverin. Sm. 215°. Chlorid, Jodid, Bichromat, Sulfat + xH₂O, Pikrat (M. 6, 692; 9, 758; 10, 682; B. 18, 1577; J. pr. [2] 38, 496; [2] 56, 338; J. 1886, 1717). — IV, 440.
2) Hydroberberinmethoxyhydrat + 4H₂O. Sm. 162–164°. Salze siehe III, 801.
3) Trimethylcolchidimethinsäure + $\frac{1}{2}$ H₂O. Sm. 126° (M. 9, 876). — III, 874.
- C₂₁H₂₁O₂N₂** C 68,8 — H 6,8 — O 21,9 — N 11,5 — M. G. 399.
1) Verbindung (aus Kakothelin). Sm. 231–232°. (2HCl, PtCl₄) (B. 20, 453). — III, 948.
- C₂₁H₂₁O₁₁Cl** 1) Tetracetat d. m-Chlorsalicin. Sm. 142° (A. 154, 13; C. 1896 [2] 738; 1897 [2] 1075). — III, 609.
- C₂₁H₂₁O₁₁Br** 1) Tetracetat d. m-Bromsalicin. Sm. 148° (C. 1896 [2] 738; 1897 [2] 1075).
- C₂₁H₂₁O₁₁J** 1) Tetracetat d. m-Jodsalicin. Sm. 119° (C. 1896 [2] 738; 1897 [2] 1075).
- C₂₁H₂₁N₂Cl₄** 1) Verbindung (aus Cyananilin u. Phenylhydrazin). Sm. 200–212° u. Zers. (J. pr. [2] 35, 533). — IV, 743.
- C₂₁H₂₆ON₂** C 78,2 — H 8,1 — O 5,0 — N 8,7 — M. G. 322.
1) Desoxystrychnin + 3H₂O. Sm. 75° (172° wasserfrei). (2HCl, PtCl₄), HJ + H₂O, H₂CrO₄ (A. 288, 245; 301, 311). — III, 943.
2) Äthyleinchonin. Sm. 49–50°. (2HCl, PtCl₄ + 2H₂O) (B. 13, 2286). — III, 833.
3) Dimethyleinchonin. Fl. HCl, (HCl, ZnCl₂), (HCl, HgCl₂), (2HCl, PtCl₄ + 2H₂O), HBr, HJ, Pikrat (B. 13, 2293; A. 277, 280). — III, 832.

- C₂₁H₂₀ON₂** 4) **Aethylcinchonidin**. Sm. 90—91°. Salze siehe (B. 11, 1521; 14, 47, 1922; 16, 2746; Soc. 26, 1181; J. 1892, 1109; A. 269, 257; M. 15, 46). — III, 851.
- 5) **Phenylhydrazid d. Säure C₁₅H₂₀O₂** (aus Camphersäureanhydrid). Sm. 156° (C. 1895 [2] 1082).
C 72,0 — H 7,4 — O 4,6 — N 16,0 — M. G. 350.
- C₂₁H₂₆ON₄** 1) **s-Di[1-Amido-1,2,3,4-Tetrahydro-5-Naphtyl]harnstoff**. Zers. bei 135° (B. 22, 957). — IV, 862.
- C₂₁H₂₆O₂N₂** 1) **Di[Acetylamidodimethylphenyl]methan** (aus 2-Amido-1,3-Dimethylbenzol). Sm. noch nicht bei 280° (M. 19, 640).
- 2) **α-β-Di[Acetyl-2-Methylphenylamido]propan**. Sm. 101—102° (B. 25, 3276). — II, 461.
- 3) **α-β-Di[Acetyl-4-Methylphenylamido]propan**. Sm. 113,5—114° (B. 25, 3277). — II, 491.
- 4) **α-β-Dioximido-α-Diphenylnonan**. Fl. (C. 1896 [2] 1091).
- 5) **Tetrahydrostrychnin**. Sm. 202° (i. V.). + C₂H₄O, HCl, 2HJ + 2H₂O (A. 301, 315).
- 6) **Methylechinin**. Fl. Salze meist bek. (B. 14, 76, 79; 28, 1248; A. 91, 164; M. 12, 513; J. pr. [2] 3, 145; [2] 14, 261; [2] 15, 76). — III, 813.
- 7) **Methylechinin**. Fl. (A. 269, 234). — III, 825.
- 8) **Chinoäthylin**. Sm. 160°. H₂SO₄ + H₂O (Bl. [3] 7, 308). — III, 821.
- 9) **Aethyläther d. Apochinin**. Sm. 182°. (2HCl, PtCl₄ + 2H₂O) (M. 16, 43). — III, 818.
- 10) **Acetylcinchonamin**. Sm. 80—90° (A. 225, 226; A. ch. [6] 19, 118). — III, 929.
- 11) **Acetylcinchotin (Acetylhydrocinchonin)**. (2HCl, PtCl₄ + 1[2]H₂O) (A. 300, 53).
- 12) **Acetylhydrocinchonidin**. Sm. bei 42°. (2HCl, PtCl₄ + 2H₂O) (A. 214, 12). — III, 858.
- 13) **Hypoquebrachin**. Sm. bei 80°. (2HCl, PtCl₄ + 4H₂O) (A. 211, 263). — III, 781.
- 14) **Oenanthyldenamid d. Benzolcarbonsäure**. Sm. 128° (A. 157, 46). — II, 1191.
- 15) **Di[Phenylamid] d. Heptan-β'-Dicarbonsäure**. α-Modif. Sm. 154 bis 155°; β-Modif. Sm. 183—184° (Soc. 67, 147).
C 68,9 — H 7,1 — O 8,7 — N 15,3 — M. G. 366.
- C₂₁H₂₆O₁N₄** 1) **s-Phenyl-α-Phenylamidoformylimidoheptylharnstoff** (Heptyldi-phenyldiureid). Sm. 170° (B. 28, 476).
- C₂₁H₂₆O₂S** 1) **Di[5-Methyl-2-Isopropylphenylester] d. Thiokohlensäure**. Sm. 110° (B. 27, 3411).
- C₂₁H₂₆O₃N₂** 1) **Quebrachin**. Sm. 214—216° u. Zers. HCl, (2HCl, PtCl₄ + 5H₂O), H₂SO₄ + 8H₂O, Oxalat, Tartrat + 6H₂O, Citrat (A. 211, 265; B. 15, 2633; Fr. 22, 151). — III, 782.
- C₂₁H₂₆O₄N₂** C 68,1 — H 7,0 — O 17,3 — N 7,6 — M. G. 370.
- 1) **Aethylchitenidin + 3(4)H₂O**. Sm. 287°. (2HCl, PtCl₄ + 2H₂O), H₂SO₄ (A. 269, 239). — III, 827.
- 2) **Aethyläther d. Chitenin**. Sm. 198° (M. 14, 601). — III, 819.
- 3) **Diäthylester d. α-γ-Di[4-Amidophenyl]propan-β-β'-Dicarbonsäure**. Sm. 60°. 2HCl, (2HCl, PtCl₄), H₂SO₄, Oxalat (B. 20, 436). — II, 1893.
- 4) **Diäthylester d. α-γ-Trimethylendi[Phenylamidoamelsensäure]**. Sm. 56° (B. 20, 783). — II, 374.
- 5) **Diäthylester d. α-[β-Methyl-β-Phenylhydrazid]-α-Phenyläthan-β-β'-Dicarbonsäure**. HCl (B. 29, 813). — IV, 742.
- C₂₁H₂₆O₆N₂** C 58,1 — H 6,0 — O 29,5 — N 6,4 — M. G. 434.
- 1) **Verbindung (aus Pepton)** (B. 13, 2134). — IV, 1641.
- C₂₁H₂₆N₄S** 1) **s-Di[1-Amido-1,2,3,4-Tetrahydro-5-Naphtyl]thioharnstoff**. Sm. 120 bis 155° (B. 22, 956). — IV, 862.
- 2) **Allylsenfölauramin**. Sm. 160—161° (J. pr. [2] 50, 444). — IV, 1175.
- C₂₁H₂₇ON** C 81,6 — H 8,7 — O 5,2 — N 4,5 — M. G. 309.
- 1) **α-Oximido-4-Oktyldiphenylmethan**. Sm. 106—107° (B. 31, 939).
- 2) **4-norm. Oktylphenylamid d. Benzolcarbonsäure**. Sm. 117,6° (B. 18, 139). — II, 1167.

- C₂₁H₂₇ON** 3) 4-Isooktylphenylamid d. Benzolcarbonsäure. Sm. 106° (*B.* 18, 142). — II, 1167.
- C₂₁H₂₇O₂N** C 70,6 — H 7,5 — O 17,9 — N 3,9 — M. G. 357.
- 1) Laudanosin. Sm. 89°. (2HCl, PtCl₄ + 3H₂O), HJ + 1/2 H₂O, Dioxalat + 3H₂O (*A. Spl.* 8, 321; *A.* 176, 202; 282, 213). — III, 912.
- 2) 1-Benzoat d. 1-Oximido-3-Isobutyl-5-Methyl-1,2,3,4-Tetrahydrobenzol-4-Carbonsäure. Sm. 146–148° (*A.* 288, 336).
- C₂₁H₂₇O₂N** C 64,8 — H 6,9 — O 24,7 — N 3,6 — M. G. 389.
- 1) Diäthylester d. α-Phthylamidoheptan-δδ-Dicarbonsäure. Sm. 57° (*B.* 23, 3698). — II, 1813.
- C₂₁H₂₇O₂N** C 62,2 — H 6,7 — O 27,6 — N 3,5 — M. G. 405.
- 1) Moschatin (*A.* 155, 159). — III, 772.
- C₂₁H₂₇N₂J** 1) Jodmethylat d. Methyldeoxyinchonidin. Zers. bei 251° (*B.* 31, 2357).
- C₂₁H₂₈ON₂** C 77,8 — H 8,6 — O 4,9 — N 8,6 — M. G. 324.
- 1) s-Di[4-Isobutylphenyl]harnstoff. Sm. 283–284° (*B.* 17, 1240). — II, 558.
- 2) s-Di[4-Isopropylbenzyl]harnstoff. Sm. 118° (122°) (*B.* 10, 52; 22, 932). — II, 561.
- 3) s-Di[2-Isopropyl-4-Methylphenyl]harnstoff (*A.* 221, 172). — II, 559.
- 4) 4,4'-Di[Diäthylamido]diphenylketon. Sm. 95–96°. (2HCl, PtCl₄) (*B.* 9, 1914; 31, 1002). — III, 166.
- 5) Aethylinchonamin + H₂O. Sm. 75–78° (140° wasserfrei). (2HCl, PtCl₄ + 3H₂O) (*A.* 225, 233; *A. ch.* [6] 19, 116). — III, 928.
- C₂₁H₂₉O₂N₂** C 74,1 — H 8,2 — O 9,4 — N 8,2 — M. G. 340.
- 1) Desoxystrychninsäure + 2H₂O (*A.* 268, 253). — III, 944.
- C₂₁H₂₉O₂N₂** C 70,8 — H 7,8 — O 13,5 — N 7,8 — M. G. 356.
- 1) Di[3-Diäthylamidophenylester] d. Kohlensäure. Sm. 67°; Sd. 292°, 2HCl, (2HCl, PtCl₄), 2HJ (*B.* 29, 506).
- C₂₁H₂₉O₂N₂** C 65,6 — H 7,3 — O 12,5 — N 14,6 — M. G. 384.
- 1) Chininharnstoff. 2HCl + 5H₂O (*J. r.* 13, 32). — III, 813.
- C₂₁H₂₉O₂N₂** C 62,4 — H 6,9 — O 23,8 — N 6,9 — M. G. 404.
- 1) Pentoxystrychnin. (2HCl, PtCl₄) (*A.* 108, 350). — III, 941.
- C₂₁H₂₉O₂N₂** C 60,0 — H 6,6 — O 26,7 — N 6,6 — M. G. 420.
- 1) Pentoxystrychnin. (2HCl, PtCl₄) (*A.* 108, 350). — III, 941.
- C₂₁H₂₉O₂N₂** C 56,2 — H 6,2 — O 25,0 — N 12,5 — M. G. 448.
- 1) Di[Phenylhydrazon] d. Glykononose. Sm. 220–223° u. Zers. (*A.* 270, 106). — IV, 793.
- C₂₁H₂₉O₂S₆** 1) Triäthylester d. Thiorufinsäure. Sm. 105°. Na, Ca, Ba + 2H₂O (*B.* 10, 702; 28, 2882). — I, 900.
- C₂₁H₂₉N₂S** 1) s-Di[4-Isobutylphenyl]thioharnstoff. Sm. 192,5° (*B.* 17, 1235). — II, 558.
- 2) s-Di[4-Isopropylbenzyl]thioharnstoff. Sm. 128° (*B.* 10, 53). — II, 561.
- 3) s-Di[2-Isopropyl-4-Methylphenyl]thioharnstoff. Sm. 160° (*A.* 221, 173). — II, 559.
- 4) s-Di[*p*-Tetramethylphenyl]thioharnstoff. Sm. 278° (*B.* 17, 1916). — II, 563.
- C₂₁H₂₉ON₂** C 74,3 — H 8,6 — O 4,7 — N 12,4 — M. G. 339.
- 1) β-Isomylphenylamido-α-[2,4,5-Trimethylphenyl]harnstoff. Sm. 215°. — IV, 674.
- C₂₁H₂₉O₂N** C 77,1 — H 8,9 — O 9,8 — N 4,2 — M. G. 327.
- 1) 3-Amyl-2-Hexylechinolin-8-Carbonsäure. Sm. 69°. HCl (*B.* 28, 2818). — IV, 359.
- C₂₁H₂₉O₂N₂** C 65,8 — H 7,6 — O 8,3 — N 18,3 — M. G. 383.
- 1) Hydrocyanid d. Diäthylnitrosamidobenzol. Sm. 169–171° (*M.* 6, 514). — II, 333.
- C₂₁H₂₉O₂N₂** C 63,1 — H 7,3 — O 12,0 — N 17,5 — M. G. 399.
- 1) Verbindung (aus Butyrylcyanessigsäureäthylester u. Phenylhydrazin). Sm. 85° (*C.* 1895 [2] 83).
- 2) Verbindung (aus Isobutyrylcyanessigsäureäthylester u. Phenylhydrazin). Sm. 67° (*C.* 1895 [2] 83).
- C₂₁H₂₉O₂N** C 70,2 — H 8,1 — O 17,8 — N 3,9 — M. G. 359.
- 1) Isoamylester d. d-Benzoylcegonin. HCl (*B.* 23, 987). — III, 867.

- C₂₁H₁₉O₈N** C 59,6 — H 6,8 — O 30,3 — N 3,3 — M. G. 423.
1) Tetraäthylester d. β -Phenylamidopropan- α - γ -Tetracarbonsäure. Sm. 46–47° (B. 30, 1757).
- C₂₁H₁₇N₃J** 1) Jodpropylat d. 1,4-Dibenzylhexahydro-1,4-Diazin. Zers. bei 260° (C. 1898 [1] 381).
- C₂₁H₃₀ON₂** C 77,3 — H 9,2 — O 4,9 — N 8,6 — M. G. 326.
1) α -Oxydi[4-Diäthylamidophenyl]methan. Sm. 78° (B. 31, 1002).
- C₂₁H₃₀O₂N₂** C 73,7 — H 8,7 — O 9,3 — N 8,3 — M. G. 342.
1) Di[4-Diäthylamido-2-Oxyphenyl]methan. Sm. 168°. H₂SO₄ (J. pr. [2] 54, 226).
- C₂₁H₃₀O₄N₁₆** C 44,2 — H 5,3 — O 11,2 — N 39,3 — M. G. 570.
1) Cytosin + 4 H₂O. Pikrat (B. 27, 2219). — IV, 1623.
- C₂₁H₁₆O₂N₂** C 59,7 — H 7,1 — O 26,5 — N 6,6 — M. G. 422.
1) Di[Phenylhydrason] d. d-Mannononose. Sm. bei 217° u. Zers. (B. 23, 2237). — IV, 794.
- C₂₁H₃₀O₂N₂** C 57,5 — H 6,8 — O 29,2 — N 6,4 — M. G. 438.
1) Tetraäthylester d. β -Dicyanheptan- α - β - γ -Tetracarbonsäure. Sm. 69°; Sd. 215°₇₅ (Bl. [3] 17, 1037).
- C₂₁H₁₀O₁₂N₂** C 48,6 — H 5,7 — O 40,2 — N 5,4 — M. G. 518.
1) Phloridazin. NH₄, Pb, Ag₂ (A. 30, 210). — III, 601.
- C₂₁H₁₁N₃Cl** 1) Chlormethylat d. Dicamphanhexanazin. + AuCl₃ (G. 27 [1] 178).
- C₂₁H₁₁N₃J** 1) Jodmethylat d. Dicamphanhexanazin. Sm. 201–202° (G. 27 [1] 177).
- C₂₁H₁₇ON₂** C 76,8 — H 9,8 — O 4,8 — N 8,5 — M. G. 328.
1) Methyloxyhydrat d. Dicamphanhexanazin. Salze, siehe diese (G. 27 [1] 177).
- C₂₁H₁₃N₃J** 1) Jodmethylat d. Dicomphandihydropyridazin. Sm. 207–208° (G. 27 [1] 166).
- C₂₁H₁₆N₂S** 1) s-Dibornylthioharnstoff. Sm. 223–224° (A. 269, 350). — IV, 57.
2) s-l-Difenchylthioharnstoff. Sm. 210° (A. 269, 360). — IV, 58.
- C₂₁H₁₆N₂S₂** 1) Verbindung (aus Isopiperidin u. CS₂) (A. 260, 247). — IV, 533.
- C₂₁H₁₅ON₂** C 75,4 — H 11,4 — O 4,8 — N 8,4 — M. G. 334.
1) Anhydrolupinin. Fl. (2HCl, PtCl₄) (B. 14, 1882; 15, 634; A. 214, 364). — III, 892.
- C₂₁H₁₅N₂Cl₂** 1) Dichlorlupinid (C. 1897 [2] 361).
- C₂₁H₁₅N₂S** 1) Verbindung (aus l-Fenchylamin u. CS₂) (A. 269, 360). — IV, 58.
- C₂₁H₁₅N₂S₂** 1) Verbindung (aus CS₂ u. Bornylamin) (A. 269, 350). — IV, 57.
- C₂₁H₁₉O₄N** C 74,8 — H 11,6 — O 9,5 — N 4,1 — M. G. 337.
1) α -Cyanarachinsäure. Sm. 88° (M. 17, 542).
- C₂₁H₁₆O₂N₂** C 71,6 — H 11,4 — O 9,1 — N 7,9 — M. G. 352.
1) Lupinin. Sm. 67–68°; Sd. 255–257° (i. H-Strom). 2HCl, (2HCl, PtCl₄ + H₂O), (2HCl, AuCl₃), 2HBr, 2HNO₃, H₂SO₄ (J. 1872, 804; B. 14, 1150, 1321, 1880, 2701; 15, 631, 1951; A. 214, 361; C. 1896 [2] 668; 1897 [2] 361, 554, 767). — III, 891.
- C₂₁H₁₆O₂N₂** C 63,0 — H 10,0 — O 20,0 — N 7,0 — M. G. 400.
1) Oxylupinin. Sd. 215° u. Zers. (2HCl, PtCl₄) (B. 14, 1882; A. 214, 362). — III, 892.
- C₂₁H₄₁ON** C 78,0 — H 12,7 — O 4,9 — N 4,3 — M. G. 323.
1) Triönanthoxaldin. Fl. (A. Spl. 6, 24). — I, 955.
- C₂₁H₄₁O₂Br** 1) Methyl ester d. α -Bromarachinsäure. Sm. 33–35° (M. 17, 531).
- C₂₁H₄₁O₂N** C 71,0 — H 11,6 — O 13,5 — N 3,9 — M. G. 355.
1) Monamid d. Nonadekan- α -Dicarbonsäure. Sm. 126°. Ca (M. 17, 543).
- C₂₁H₄₁O₂Cl** 1) Glycerinstearochlorhydrin. Sm. 28° (A. ch. [3] 41, 225). — I, 445.
- C₂₁H₄₃O₂S₂** 1) Hexapropyltrimethyltrisulfon. Sm. 133° (A. 25, 245). — I, 1000.
- C₂₁H₄₃NS₂** 1) Oenanthialdin. HCl (A. Spl. 6, 33). — I, 955.
- C₂₁H₄₄ON₂** C 74,1 — H 12,9 — O 4,7 — N 8,2 — M. G. 340.
1) Tetraisoamylharnstoff. Sd. 240–241° (B. 12, 1332). — I, 1300.
- C₂₁H₄₄O₂N₄** C 65,6 — H 11,5 — O 8,3 — N 14,6 — M. G. 384.
1) α -Oenanthyldendi[γ , β -Dipropylharnstoff]. Sm. 113° (R. 8, 242). — I, 1314.

C₂₁-Gruppe mit vier Elementen.

- C₂₁H₁₁O₂Br₂S 1) Di[*p*-Brom-2-Naphtylester] d. Thiokohlensäure. Sm. 171° (*B.* 27, 3412).
- C₂₁H₁₁O₂NBr₂ 1) Hydrocyantetrabromrosolsäure (*A.* 179, 203). — II, 1122.
- C₂₁H₁₁ONCl 1) Chlorid d. Di[2-Naphtyl]amidoameisensäure. Sm. 151° (172 bis 173°) (*J. pr.* [2] 56, 12, *B.* 23, 428, S11, 2162). — II, 615.
- C₂₁H₁₁ON₂S 1) Thio- β -Dinaphtylharnstoff. Zers. bei 215° (*B.* 24, 2917). — II, 870.
- C₂₁H₁₁ON₂Cl 1) 7-Chlor-8-Phenylimido-6-Phenylamido-5-Keto-5,6-Dihydrochinolin. Sm. 180° u. Zers. (*A.* 264, 225; 290, 334). — IV, 278.
- C₂₁H₁₁O₂N₂S 1) Phtalypseudodiphenylthiocarbazon. Sm. 182° (*B.* 26, 2496). — IV, 711.
- C₂₁H₁₁O₂N₂Cl₂ 1) Trichlorhydroalicylamid (*A.* 30, 174). — III, 72.
- C₂₁H₁₁O₂N₂Br₂ 1) Tribromhydroalicylamid (*A.* 30, 175). — III, 72.
- C₂₁H₁₁O₂S₂As 1) Thiobenzoylarsen. Sm. 178–179° (*B.* 47, 896). — II, 1291.
- C₂₁H₁₁O₄Cl₃P 1) Tri-2-Dichlormethylphenylester d. Phosphorsäure. Sm. 78° (*Soc.* 53, 403). — II, 738.
- C₂₁H₁₁ON₂S 1) 2-Benzoylphenylamido-5-Phenylamido-1,3,4-Thiadiazol. Sm. 238° (*B.* 22, 1179). — IV, 1236.
- C₂₁H₁₁O₂NBr 1) Benzoesäure d. 4-Brom-5-Benzoylamido-2-Oxy-1-Methylbenzol. Sm. 200° (*B.* 27, 1931). — II, 1179.
- 2) Benzoesäure d. 4-Brom-6-Benzoylamido-2-Oxy-1-Methylbenzol. Sm. 229° (*B.* 27, 1931). — II, 1179.
- C₂₁H₁₁O₂N₂S 1) Monodiphenylthioureid d. Benzol-1,2-Dicarbonylsäure (Diphenylthiophthalursäure) (*Am.* 18, 337).
- C₂₁H₁₁O₂Br₂S 1) Dibrom-*o*-Kresolsulfonphthalein (*Am.* 20, 266).
- C₂₁H₁₁O₂N₂S₂ 1) Lophindisulfonsäure. Na + 2H₂O (*B.* 13, 706). — III, 27.
- C₂₁H₁₁ON₂S₂ 1) Thiocarbonyldithiooxanilid. Sm. 213° (*J. pr.* [2] 32, 3). — II 412.
- C₂₁H₁₁ON₂Br₂ 1) *p*-Tribrom- β -Acetyl- β -Phenylamidophenylimidomethyl- α -Phenylhydrazin. Sm. 227° (*J. pr.* [2] 58, 463).
- C₂₁H₁₁O₂N₂Cl 1) 4-[2-Chlorbenzoyl]amido-3-Benzoylamido-1-Methylbenzol. Sm. 178° (*B.* 13, 467). — IV, 617.
- 2) Verbindung (aus Benzoylchlorid u. 3-Phenylimido-3,4-Dihydro-2,4-Benzoxazin). Sm. 117° (*B.* 27, 2424). — IV, 874.
- C₂₁H₁₁O₂N₂Br 1) *p*-Brom-2,4-Di[Benzoylamido]-1-Methylbenzol. Sm. 214° (*B.* 14, 2658). — IV, 606.
- 2) 5-Brom-3,4-Di[Benzoylamido]-1-Methylbenzol. Sm. 244° (*B.* 23, 1050). — IV, 617.
- C₂₁H₁₁O₂N₂S 1) β -Phenylhydrazon- β -Phenyläthylimid d. Benzol-1-Carbonylsäure-2-Sulfonsäure. Sm. 168° (*B.* 29, 332). — IV, 771.
- C₂₁H₁₁N₂Br₂J 1) Jodmethylat d. $\alpha\beta$ -Dibrom- α -[2-Chinoly]- β -[7-Chinoly]äthan. Sm. 210° u. Zers. (*B.* 23, 3651). — IV, 1079.
- C₂₁H₁₁ON₂J₂ 1) Dijodmethylat d. Cinchonin + 1 $\frac{1}{2}$ H₂O. Sm. 223° u. Zers. (wasserfrei) (*B.* 27 [2] 257).
- C₂₁H₁₁ON₂Cl 1) 5-Chlorphenylat d. 3-Acetylamido-2-Methyl-5,10-Naphtdiazin. 2 + PtCl₄ (*B.* 31, 969). — IV, 1182.
- C₂₁H₁₁O₂N₂S 1) Verbindung (aus Hydroalicylamid) (*J.* 1857, 318). — III, 71.
- C₂₁H₁₁O₂Cl₂Bi 1) Trimethyläther d. Tri[*p*-Chlor-4-Oxyphenyl]wismuthdichlorid. Sm. 133° (*B.* 30, 2850). — IV, 1698.
- C₂₁H₁₁O₄N₂S 1) β -Phtalylamidoäthyl- γ -Phtalylamidopropylsulfid. Sm. 123–124° (*B.* 27, 2176). — II, 1803.
- C₂₁H₁₁O₂N₂S₂ 1) Methylenäther d. Benzol-1,2-Dicarbonylsäure- β -Merkaptoäthylimid. Sm. 133–134° (*B.* 25, 3055). — II, 1801.
- C₂₁H₁₁O₂N₂P 1) Tri[4-Nitrobenzyl]phosphinoxid. Sm. bei 100° (*Soc.* 55, 225). — IV, 1665.
- C₂₁H₁₁ON₂S 1) α -Phenylacetylamido- $\alpha\beta$ -Diphenylthioharnstoff. Sm. 125–126° (*B.* 27, 1518). — IV, 681.
- C₂₁H₁₁ON₂Br 1) α -[4-Methylphenyl]- β -[4-Methylphenyl]azo- β -[4-Bromphenyl]-harnstoff. Sm. 129° (*B.* 21, 2569). — IV, 1571.
- C₂₁H₁₁O₂N₂Cl₃ 1) α -Trichlorstrychnin (*J.* 1880, 397). — III, 940.
- 2) β -Trichlorstrychnin. HCl (*J. pr.* [2] 42, 412). — III, 940.

- $C_{21}H_{19}O_7N_2S$ 1) Phenylthioharnstoff d. 4-Nitro-2-[4-Amidobenzyl]-1-Methylbenzol. Sm. 167° (B. 26, 1853). — II, 637.
- $C_{21}H_{19}O_3N_3S$ 1) 6-Methyl-3-Phenyl-2-[4-Methylphenyl]-2,3-Dihydro-1,2,4-Benzotriazin-3-Sulfonsäure (B. 30, 2603). — IV, 1184.
- $C_{21}H_{19}O_4NS$ 1) α -4-Methylphenylsulfon- γ -[2-Naphthylsulfon- γ -Imidopropan. Sm. 129° (J. pr. [2] 55, 411).
- $C_{21}H_{20}ON_2S$ 1) α -Phenyl- β - β -Oxy- α - β -Diphenyläthylthioharnstoff. Sm. 171° (B. 28, 1902).
- $C_{21}H_{20}O_2N_2Cl_2$ 1) Dichlorstrychnin (J. 1880, 997). — III, 940.
- $C_{21}H_{20}O_2N_2Br_2$ 1) Dibromstrychnin. Zers. bei 250°. HCl (B. 18, 1237). — III, 940.
- $C_{21}H_{20}O_3N_2S$ 1) Di[2-Methylphenylamid] d. Benzol-1-Carbonsäure-2-Sulfonsäure. + 2C₆H₆O (Am. 17, 328).
- 2) Di[3-Methylphenylamid] d. Benzol-1-Carbonsäure-2-Sulfonsäure. Sm. 161,5—162,5° (Am. 17, 327).
- 3) isom.-Di[3-Methylphenylamid] d. Benzol-1-Carbonsäure-2-Sulfonsäure. Sm. noch nicht bei 250°. + C₆H₆O (Am. 17, 326).
- 4) Di[4-Methylphenylamid] d. Benzol-1-Carbonsäure-2-Sulfonsäure. Sm. noch nicht bei 250° (Am. 17, 324).
- $C_{21}H_{20}O_4NJ$ 1) Jodmethylat d. Berberin (G. 13, 345; C. 1895 [2] 13S). — III, 800.
- $C_{21}H_{20}O_4N_2S_2$ 1) β -Phenylhydrazon- α - γ -Diphenylsulfonpropan. Sm. 171° u. Zers. (J. pr. [2] 36, 421). — IV, 768.
- 2) 1,2-(α - γ -Trimethylen)diphenylsulfondiamidobenzol. Sm. 204 bis 205° (A. 287, 227). — IV, 560.
- $C_{21}H_{20}O_4N_2J$ 1) Jodäthylat d. 3,5-Di[4-Nitrobenzyl]pyridin. Sm. 167—173° u. Zers. (A. 280, 56). — IV, 456.
- $C_{21}H_{20}O_5N_2S$ 1) Anilinuronaphthonat (A. 239, 362). — III, 724.
- $C_{21}H_{20}O_5N_2S_2$ 1) Verbindung (aus d. Verb. C₁₄H₁₈O₅N₂S₂ aus 1-Methylbenzol-4-Sulfinsäure). Sm. 209,5° u. Zers. (J. pr. [2] 56, 224, 226).
- $C_{21}H_{20}O_5NCl$ 1) Chlor- α -Orcindichroin (B. 13, 811; 21, 2483). — II, 965.
- $C_{21}H_{20}O_5NBr$ 1) Brom- α -Orcindichroin (B. 21, 2484). — II, 966.
- $C_{21}H_{21}ONBr_2$ 1) Äthyläther d. Dibromapocinchen. Sm. 116—118° (B. 20, 2679). — III, 838.
- $C_{21}H_{21}O_7N_2Cl$ 1) Chlorstrychnin. 11₂SO₄ + 7H₂O (A. 69, 14; J. 1880, 996; C. r. 91, 990). — III, 939.
- $C_{21}H_{21}O_7N_2Br$ 1) α -Bromstrychnin. Sm. 222°. HCl, HBr, HNO₃, H₂SO₄ + 7H₂O (B. 18, 1236; Soc. 47, 140). — III, 940.
- 2) β -Bromstrychnin. (2HCl, PtCl₄) (M. 6, 855). — III, 940.
- $C_{21}H_{21}O_7N_2J_3$ 1) Jodid d. Chininjodmethylat (J. pr. [2] 3, 145). — III, 813.
- $C_{21}H_{21}O_8Cl_2Sb$ 1) Trimethyläther d. Tri[4-Oxyphenyl]antimondichlorid. Sm. 116 bis 117°. + C₆H₆ (B. 30, 2836). — IV, 1695.
- $C_{21}H_{21}O_8Br_2Sb$ 1) Trimethyläther d. Tri[4-Oxyphenyl]antimondibromid. Sm. 123°. + C₆H₆ (B. 30, 2837). — IV, 1695.
- $C_{21}H_{21}O_8Br_2Bi$ 1) Trimethyläther d. Tri[4-Oxyphenyl]wismuthdibromid. Sm. 103° (B. 30, 2849). — IV, 1698.
- $C_{21}H_{21}O_8J_2Sb$ 1) Trimethyläther d. Tri[4-Oxyphenyl]antimondijodid. Sm. 116° (B. 30, 2838). — IV, 1695.
- $C_{21}H_{21}O_4NS$ 1) Verbindung (aus 1-Methylbenzol-4-Sulfinsäure u. Benzaloxim). Sm. 124° (J. pr. [2] 56, 236).
- $C_{21}H_{21}O_6N_2S_3$ 1) Tribenzolsulfontrimethylen-triimid. Sm. 217° (B. 26, 2149). — II, 116.
- $C_{21}H_{21}O_7N_4P$ 1) *p*-Nitro-4-Methylphenylamid d. Orthophosphorsäure. Sm. 247° (B. 26, 571). — II, 490.
- $C_{21}H_{21}O_6NS_3$ 1) Tribenzylamintrisulfonsäure? (A. 144, 311). — II, 582.
- 2) Verbindung (aus 1-Methylbenzol-4-Sulfinsäure). Sm. 190° (A. 145, 19).
- $C_{21}H_{21}O_6S_3P$ 1) Tribenzylphosphinoxidtrisulfonsäure. Ba (Soc. 55, 226). — IV, 1665.
- $C_{21}H_{21}OJ_3Sb$ 1) Tri[4-Methylphenyl]jodantimoniumoxyhydrat. Sm. 218—219° (A. 242, 173). — IV, 1697.
- $C_{21}H_{22}O_3NCl$ 1) Chlormethylat d. Cusparin. Sm. 190°. 2 + PtCl₄, + AuCl₃ (B. 29 [2] 777; C. 1895 [2] 826). — III, 777.
- $C_{21}H_{22}O_2NJ$ 1) Jodmethylat d. Cusparin. Sm. 186° (B. 29 [2] 36; C. 1895 [2] 826). — III, 777.
- $C_{21}H_{22}O_2NP$ 1) 2-Methylphenylamid d. Phosphorsäuredi[4-Methylphenylester]. Sm. 161° (B. 27, 2578).

- $C_{21}H_{22}O_3NP$ 2) 4-Methylphenylamid d. Phosphorsäuredi[4-Methylphenylester].
Sm. 161° (B. 27, 2577).
- $C_{21}H_{22}O_3NBr$ 1) Diacetylbrommorphin. Sm. 208° (A. 297, 268).
- $C_{21}H_{22}O_3NJ$ 1) Jodmethylat d. Papaveralin + 3H₂O. Sm. 136° (M. 7, 489). —
IV, 442.
2) Jodmethylat d. Protopin (M. 19, 193).
- $C_{21}H_{22}O_3N_2S$ 1) Strychninsulfonsäure. Ba + 7H₂O (M. 6, 858; B. 18, 3429; G. 17,
109). — III, 941.
- $C_{21}H_{22}O_3N_2S_2$ 1) Verbindung (aus 1-Methylbenzol-4-Sulfinsäure u. salpetriger Säure).
Sm. 190° (A. 145, 19). — II, 110.
- $C_{21}H_{22}O_3NCl$ 1) Chlornitrophillygenin (A. 118, 128). — III, 600.
- $C_{21}H_{22}O_3NBr$ 1) Bromnitrophillygenin (A. 118, 128). — III, 600.
- $C_{21}H_{22}O_3N_2S_2$ 1) Strychnindisulfonsäure. Na₂ + 6H₂O, K₂, Ba (B. 18, 3430; G. 17,
113). — III, 942.
- $C_{21}H_{22}ON_2P$ 1) Di[Phenylamid] d. 2,4,5-Trimethylphenylphosphinsäure. Sm.
197° (A. 294, 10). — IV, 1678.
2) Di[4-Methylphenylamid] d. 4-Methylphenylphosphinsäure. Sm.
237° (A. 293, 269). — IV, 1669.
- $C_{21}H_{23}O_2NBr_2$ 1) 5-Benzoat d. 3,6-Dibrom-5-Oxy-2-Piperidylmethyl-1,4-Di-
methylbenzol. Sm. 136,5—137,5° (B. 28, 2908). — IV, 20.
- $C_{21}H_{23}O_2N_2P$ 1) Phenylamid d. Phosphortrihydrobrenstraubensäure. Sm. 158°
(B. 21, 2923) — II, 405.
- $C_{21}H_{23}O_2N_2S$ 1) Alloxan-Morphindisulfat (A. 248, 151). — III, 898.
- $C_{21}H_{23}NClP$ 1) Methyl-4-Dimethylamidotriphenylphosphoniumchlorid (A. 260,
31). — IV, 1660.
- $C_{21}H_{23}NJP$ 1) Methyl-4-Dimethylamidotriphenylphosphoniumjodid. Fl. (A.
260, 31). — IV, 1660.
- $C_{21}H_{21}ON_2Br_2$ 1) Bromderivat d. Verb. C₂₁H₂₄ON₂ (aus Furfurol) (A. 206, 144). —
III, 723.
- $C_{21}H_{24}ON_2S$ 1) Thiophengrün. Fl. H₂SO₄, Oxalat, Pikrat (B. 20, 516). — III, 753.
- $C_{21}H_{24}ON_2P$ 1) 2-Methylphenylamid d. Orthophosphorsäure. Sm. 225° (B. 26,
565). — II, 460.
2) 4-Methylphenylamid d. Orthophosphorsäure. Sm. 192° (B. 26,
569). — II, 490.
- $C_{21}H_{24}O_3NJ$ 1) Jodmethylat d. Galipein. Sm. 146° (B. 25 [2] 201). — III, 778.
- $C_{21}H_{24}O_3N_2S$ 1) Verbindung (aus Benzaldehyd u. p-Toluidinsulfat). Sm. 119—120°
(B. 24, 753). — III, 7.
- $C_{21}H_{24}O_3NCl$ 1) Chlormethylat d. Canadin. 2 + PtCl₄. — III, 804.
2) Chlormethylat d. Hydroberberin + 3H₂O. 2 + PtCl₄ + AuCl₃.
— III, 801.
3) Chlormethylat d. Papaverin. Sm. 75°. 2 + PtCl₄ (M. 9, 758; 10,
682). — IV, 440.
- $C_{21}H_{24}O_3NJ$ 1) Jodmethylat d. Canadin. Sm. 228—232° (B. 27 [2] 313). —
III, 804.
2) Jodmethylat d. Hydroberberin. Sm. 228—235° (G. 13, 343). —
III, 801.
3) Jodmethylat d. Papaverin + 4(7)H₂O. Sm. 55—60° (195° wasser-
frei) (B. 18, 1577; M. 6, 692; 9, 758; J. pr. [2] 38, 496; J. 1886,
1717). — IV, 440.
- $C_{21}H_{24}N_3SP$ 1) 2-Methylphenylamid d. Orthothiophosphorsäure. Sm. 134,5°
(B. 26, 569). — II, 460.
2) 4-Methylphenylamid d. Orthothiophosphorsäure. Sm. 185° (B.
26, 572). — II, 490.
- $C_{21}H_{25}ON_2P$ 1) Di[Phenylhydrazid] d. 2,4,5-Trimethylphenylphosphinsäure.
Sm. 208° (A. 294, 14). — IV, 1678.
- $C_{21}H_{25}O_2N_2Cl$ 1) Acetylhydrochloroepinechonin. (2HCl, PtCl₄ + 2H₂O) (A. 205, 354).
— III, 832.
2) Acetylhydrochloroepinechonidin. Sm. 150°. (2HCl, PtCl₄ + 2H₂O)
(A. 205, 353). — III, 853.
- $C_{21}H_{26}O_2NJ$ 1) Jodmethylat d. Methylthebeninmethyläther. Sm. 215° (B. 32, 181).
2) Jodäthylat d. Thebain (B. 17, 532). — III, 910.
- $C_{21}H_{26}O_2NCl$ 1) Chlormethylat d. Acetylcodein + 2H₂O. 2 + PtCl₄ (A. 222, 217).
— III, 905.

- C₂₁H₂₆O₄NJ** 1) Jodäthylat d. Acetylmorphin. α -Modif. + $\frac{1}{2}$ H₂O. β -Modif. amorph (Soc. 28, 315). — III, 899.
- 2) Jodmethylat d. Acetylcodein. Sm. 250–252° u. Zers. (A. 297, 219).
- C₂₁H₂₇ON₂Cl** 1) Chloräthylat d. Cinchonin + H₂O. (HCl, PtCl₄) (Soc. 26, 1183; J. pr. [2] 3, 152). — III, 833.
- 2) Chloräthylat d. Cinchonidin + 3 H₂O (B. 14, 1922). — III, 851.
- C₂₁H₂₇ON₂Br** 1) Bromäthylat d. Cinchonin. + Hg(CN)₂, + AgCN (Soc. 26, 1183; A. 269, 262). — III, 833.
- 2) Bromäthylat d. β -Isocinchonin + H₂O. Sm. 217° (J. 1888, 2287). — III, 847.
- 3) Bromäthylat d. Cinchonin. Sm. 153° (Bl. [3] 13, 1007). — III, 846.
- 4) Bromäthylat d. Cinchonidin + H₂O (B. 14, 1922; J. 1882, 1109). — III, 851.
- 5) Bromäthylat d. Cinchonin (J. 1889, 2287). — III, 848.
- C₂₁H₂₇ON₂J** 1) Jodmethylat d. Methylcinchonin. Sm. 201° u. Zers. (B. 13, 2293). — III, 832.
- 2) Jodmethylat d. Methylcinchonidin + 2 H₂O (B. 13, 2192). — III, 851.
- 3) α -Jodäthylat d. Cinchonin. Zers. bei 260°. HJ + H₂O, + Ag(CN)₂, + AgCN (B. 13, 2286; J. pr. [2] 3, 152; M. 15, 43; A. 269, 261). — III, 833.
- 4) β -Jodäthylat d. Cinchonin. Sm. 184° u. Zers. (M. 15, 41). — III, 833.
- 5) Jodäthylat d. β -Isocinchonin + H₂O. Sm. bei 232° (J. 1888, 2287). — III, 847.
- 6) Jodäthylat d. Cinchoninbin + H₂O. Sm. 245° (J. 1888, 2288). — III, 848.
- 7) Jodäthylat d. Cinchonin (Bl. [3] 13, 1007). — III, 846.
- 8) α -Jodäthylat d. Cinchonidin + H₂O. Sm. 261°. HJ + H₂O (B. 11, 1821; 14, 47, 1922; A. 269, 257; M. 15, 46). — III, 851.
- 9) β -Jodäthylat d. Cinchonidin. Sm. 175° u. Zers. (M. 15, 44). — III, 852.
- 10) Jodäthylat d. Cinchoninfin. Sm. 251° u. Zers. (B. 27 [2] 257).
- 11) Jodäthylat d. Cinchoninbin + $\frac{1}{2}$ H₂O (J. 1888, 2287). — III, 848.
- C₂₁H₂₇ON₂J₂** 1) Jodid d. Cinchoninjodäthylat. Sm. 141–142° (J. pr. [2] 3, 152). — III, 833.
- C₂₁H₂₇ON₂Cl₂** 1) 3,4-Dichlor-2-Dipiperidyl-5-Keto-1-[4-Methylphenyl]-2,5-Dihydropyrrrol (Dichlormalein-p-Toluildipiperidid). Sm. 107° (B. 28, 58; A. 295, 52).
- C₂₁H₂₇O₂N₂Cl** 1) Chlormethylat d. Chinin + H₂O. Sm. 181–182°. (HCl, PtCl₄) (B. 14, 77). — III, 813.
- C₂₁H₂₇O₂N₂Br** 1) Brommethylat d. Chinin + H₂O. Sm. 124–126° (B. 14, 76). — III, 813.
- 2) Bromäthylat d. α -Oxycinchonin. Sm. 243° (J. 1889, 2019). — III, 840.
- C₂₁H₂₇O₂N₂J** 1) Jodmethylat d. Chinin + H₂O. Sm. 233–236° u. Zers. HCl (2 + H₂SO₄ + J₂), (2 + H₂SO₄ + J₂), (2 + H₂SO₄ + J₂), (4 + 2H₂SO₄ + J₂), (4 + 2H₂SO₄ + J₂) (A. 91, 164; B. 14, 76; J. pr. [2] 3, 145; [2] 14, 261; [2] 15, 76). — III, 813.
- 2) Jodmethylat d. Conchinin + H₂O. Sm. 248° u. Zers. HCl (A. 90, 221). — III, 825.
- 3) Jodäthylat d. α -Oxycinchonin + H₂O. Sm. 251° (wasserfrei) (J. 1889, 2019). — III, 840.
- C₂₁H₂₇O₂N₂J₂** 1) Dijodid d. Conchininjodmethylat. Sm. 164–165° (J. pr. [2] 3, 153). — III, 825.
- C₂₁H₂₇ON₂Br₂** 1) Di[Brommethylat] d. Cinchonin (B. 13, 2293).
- 2) Di[Brommethylat] d. Cinchoninfin. Sm. 218° u. Zers. (B. 27 [2] 257).
- C₂₁H₂₇ON₂J₂** 1) Di[Jodmethylat] d. Cinchonin. Sm. 235° u. Zers. (B. 13, 2293). — III, 832.
- 2) Di[Jodmethylat] d. Cinchoninbin + $\frac{1}{2}$ H₂O. Sm. 223° (J. 1888, 2288). — III, 848.
- 3) Di[Jodmethylat] d. Cinchonidin + 2 H₂O (B. 13, 2192; J. 1882, 1109; A. 269, 256). — III, 851.

- C₂₁H₂₆ON₂J, 4) Jodäthylat d. Hydrojodcinchonin. Sm. 245° u. Zers. (*M.* 15, 40). — III, 833.
- 5) Jodäthylat d. Hydrojodcinchonidin. Sm. 243° (*M.* 15, 44). — III, 852.
- C₂₁H₂₉O₂N₂Cl, 1) Di[Chlormethylat] d. Cuprein. + PtCl₄ (*A.* 266, 243). — III, 822.
- C₂₁H₂₉O₂N₂J, 1) Di[Jodmethylat] d. Cuprein + 3(5)H₂O. Sm. 230° u. Zers. (*A.* 230, 69; 266, 243). — III, 822.
- 2) Di[Jodmethylat] d. α -Oxycecinchonin. Sm. 241° u. Zers. (*J.* 1889, 2019). — III, 840.
- C₂₁H₂₉O₂NJ, 1) Jodmethylat d. Aethocodein (*B.* 15, 1486). — III, 904.
- C₂₁H₂₉O₂NBr, 1) Aethobromocodeinmethyloxyhydrat (*B.* 15, 1484). — III, 904.
- C₂₁H₂₉O₂NJ, 1) Jodäthylat d. Laurotetanin (*C.* 1899 [1] 122).
- C₂₁H₂₉O₂N₂S, 1) α -Di[Phenylsulfonnitramido]nonan. Sm. 86–87° (*C.* 1897 [2] 849).
- C₂₁H₂₉ON₂Cl, 1) Chloräthylat d. Cinechonamin. 2 + PtCl₄ + 2H₂O (*A.* 225, 231). — III, 928.
- C₂₁H₂₉ON₂J, 1) Jodäthylat d. Cinechonamin. Sm. 196° (*A.* 225, 231; *A. ch.* [6] 19, 116). — III, 928.
- C₂₁H₂₉O₂N₂J, 1) Jodmethylat d. Hydrochinin. Sm. 218°. + C₁₂H₆O (*A.* 241, 275). — III, 860.
- C₂₁H₂₉O₂N₂Cl, 1) Chlormethylat (aus d. Verb. C₁₉H₂₄O₂N₂) (*B.* 20, 458). — III, 948.
- C₂₁H₂₉O₂N₂J, 1) Jodmethylat (aus d. Verb. C₁₉H₂₄O₂N₂) (*B.* 20, 458). — III, 948.
- C₂₁H₃₀O₂N₂S, 1) α -Di[Phenylsulfonamido]nonan. Sm. 74° (*C.* 1897 [2] 849).
- C₂₁H₃₂O₄NCl, 1) Chloräthylat d. 2,6-Dimethyl-4-Phenylhexahydropyridin-3,5-Dicarbonsäurediäthylester. 2 + PtCl₄ (*B.* 25, 2791). — IV, 215.
- C₂₁H₃₂O₄NJ, 1) Jodäthylat d. 2,6-Dimethyl-4-Phenylhexahydropyridin-3,5-Dicarbonsäurediäthylester (*B.* 25, 2791). — IV, 215.
- C₂₁H₃₄N₂JP, 1) Isobutyl-4-Methylphenyl-di[1-Piperidyl]phosphoniumjodid. Sm. 204° (*B.* 31, 1046). — IV, 1682.

C₂₁-Gruppe mit fünf Elementen.

- C₂₁H₁₂ONClS, 1) Chlorid d. Thio- β -Dinaphtylamidoameisensäure. Sm. 254–255° (*B.* 24, 2915). — II, 870.
- C₂₁H₁₅ON₂Br₂P, 1) β -Tribrom-4-Methylphenylamid d. Orthophosphorsäure. Sm. 180° u. Zers. (*B.* 26, 570). — II, 490.
- C₂₁H₁₇O₂N₂ClBr, 1) Anilid d. Bromgalloceyaninhydrochlorid (*Bl.* [3] 15, 408). — III, 677.
- C₂₁H₁₇O₂N₂ClS, 1) Verbindung (aus Gallussäureanilid u. Nitrosodimethylanilin) (*Bl.* [3] 11, 86). — III, 677.
- C₂₁H₂₁ON₂Br₂P, 1) Tri[β -Brom-2-Methylphenylamid] d. Phosphorsäure. Sm. 253° (*B.* 26, 566). — II, 460.
- 2) Tri[2-Brom-4-Methylphenylamid] d. Phosphorsäure. Sm. 268° (*B.* 29, 726).
- 3) Tri[β -Brom-4-Methylphenylamid] d. Phosphorsäure. Sm. 221° (*B.* 26, 571). — II, 490.
- C₂₁H₂₃O₂NClBr, 1) Chlormethylat d. Acetylbrocodein (*A.* 297, 219).
- C₂₁H₂₃O₂NBrJ, 1) Jodmethylat d. Aethobromocodein (*B.* 15, 1484). — III, 904.

C₂₂-Gruppe mit einem Element.

- C₂₂H₁₂, C 95,6 — H 4,4 — M. G. 276.
- 1) 2,2-Dinaphtylanthrylen. Sm. 270°. Pikrat (*B.* 11, 302). — II, 302.
- C₂₂H₁₄, C 95,0 — H 5,0 — M. G. 278.
- 1) Picen. Sm. 350° (364° cor.); Sd. 518–520° (*B.* 13, 1834; 14, 175; 26, 1751; *A.* 284, 52; *Bl.* [3] 6, 238; *J.* 1889, 744). — II, 299.
- 2) 1,1-Dinaphtyläthan. Sm. 225° (*B.* 11, 301). — II, 299.
- C₂₂H₁₆, C 94,3 — H 5,7 — M. G. 280.
- 1) α - β -Di[1-Naphtyl]äthan. Sm. 161°. Pikrat (*J. pr.* [2] 47, 56). — II, 299.
- C₂₂H₁₈, C 93,6 — H 6,4 — M. G. 282.
- 1) α -Di[1-Naphtyl]äthan. Sm. 136° (*J. pr.* [2] 47, 59). — II, 297.

- $C_{22}H_{18}$ 2) $\alpha\beta$ -Di[1-Naphtyl]äthan. Sm. 160° (*B.* 21, 54). — II, 298.
3) $\alpha\beta$ -Di[2-Naphtyl]äthan. Sm. 253° (*B.* 21, 55). — II, 298.
- $C_{22}H_{22}$ 4) 3-Methyl-9-[4-Methylphenyl]anthracen. Sm. 191° (*A.* 299, 291).
C 92,3 — H 7,7 — M. G. 286.
1) Tri[β -Methylphenyl]methan. Sm. 73°; Sd. 376—377,3° (*A. ch.* [6] 2, 353). — II, 290.
2) Tri[β -Methylphenyl]methan (*B.* 18, 347). — II, 290.
3) Di[1,3-Dimethylphenyl]benzol. Sd. 392—396° (*A.* 220, 234). — II, 290.
C 90,4 — H 9,6 — M. G. 292.
- $C_{22}H_{24}$ 1) Diamenylbenzol. Sd. 208—212° (*M.* 4, 623). — II, 172.
2) Kohlenwasserstoff (aus Picenchinon). Sm. 285° (*A.* 284, 43).
- $C_{22}H_{30}$ C 89,8 — H 10,2 — M. G. 294.
1) Kohlenwasserstoff (aus Benzylidenchlorid). Sd. oberh. 360° (*M.* 4, 618). — II, 243.
- $C_{22}H_{34}$ C 88,6 — H 11,4 — M. G. 298.
- $C_{22}H_{36}$ 1) Piceneikoshihydrür. Sd. oberh. 360° (*B.* 22, 780). — II, 299.
C 88,0 — H 12,0 — M. G. 300.
- $C_{22}H_{38}$ 1) Picenperhydrür. Sm. 175°; Sd. oberh. 360° (*B.* 22, 780). — II, 299.
C 87,4 — H 12,6 — M. G. 302.
- $C_{22}H_{40}$ 1) Hexadekylbenzol (Cetylbenzol). Sm. 27°; Sd. 230₁₅ (136—137°) (*B.* 19, 2983; 21, 3181; 29, 1326). — II, 39.
C 86,8 — H 13,2 — M. G. 304.
- $C_{22}H_{46}$ 1) Kohlenwasserstoff (aus Hendekaanaphten). Sd. oberh. 340° (*J. r.* 15, 335). — II, 16.
C 85,2 — H 14,8 — M. G. 310.
- 1) norm. Dokosan. Sm. 44,4°; Sd. 224,5°₁₅ (136,5°) (*B.* 15, 1718; 16, 391; 21, 2261; 29, 1323; *J.* 1886, 1823). — I, 107.

C_{22} -Gruppe mit zwei Elementen.

- $C_{22}H_2O_4$ C 80,0 — H 0,6 — O 19,4 — M. G. 330.
- $C_{22}H_{10}O_{13}$ 1) Verbindung (aus Graphit) (*A.* 114, 18). — II, 2021.
C 54,8 — H 2,0 — O 43,2 — M. G. 482.
- $C_{22}H_{12}O$ 1) Verbindung (aus d. Säure $C_{11}H_6O_2$) (*G.* 15, 468). — II, 2107.
C 90,4 — H 4,1 — O 5,5 — M. G. 292.
- $C_{22}H_{12}O_2$ 1) Verbindung (aus 2,2-Binaphtylenglykol). Sm. 198,5° (*A. ch.* [5] 28, 179). — II, 1104.
C 85,7 — H 3,9 — O 10,4 — M. G. 308.
- $C_{22}H_{12}O_3$ 1) Picenchinon (*B.* 13, 1836; *A.* 284, 64). — III, 463.
2) Dicarbonylbinaphtylen (*M.* 1, 254; *B.* 4, 725). — II, 1729.
- $C_{22}H_{12}O_4$ C 77,6 — H 3,5 — O 18,8 — M. G. 340.
1) Phtalalconcabonsäure. Sm. 280—281,5°. Na + H₂O, K + H₂O (*B.* 17, 1389). — II, 1915.
- $C_{22}H_{12}O_5$ C 74,2 — H 3,4 — O 22,4 — M. G. 356.
1) Anhydroverb. d. $\alpha\alpha$ -Di[3-Oxy-1,4-Naphtochinonyl-2-]äthan (*Soc.* 65, 83). — III, 464.
C 70,9 — H 3,2 — O 25,8 — M. G. 372.
- $C_{22}H_{12}O_6$ 1) Acetat d. α -Oxydixanthon. Sm. 213° (*B.* 25, 1656). — III, 306.
C 79,5 — H 3,6 — N 16,9 — M. G. 332.
- $C_{22}H_{12}N_4$ 1) Naphtodiphenazin. Sm. noch nicht bei 275° (*A.* 286, 80). — IV, 1058.
- $C_{22}H_{12}Cl_2$ 1) Dichlorid d. Alkohols $C_{22}H_{14}O_2$ (*B.* 15, 733).
- $C_{22}H_{12}Br_2$ 1) Dibrompicein. Sm. 294—296° (*B.* 13, 1837; 14, 176; *A.* 284, 62). — II, 299.
2) Dibromid d. Alkohols $C_{22}H_{14}O_2$ (*B.* 15, 733).
- $C_{22}H_{13}N_5$ C 76,1 — H 3,7 — N 20,2 — M. G. 347.
1) Verbindung (aus 3,4-Diamido-1-Phenyl-1,2,5-Triazol u. Phenanthrenchinon). Sm. 289° (*A.* 295, 145). — IV, 1314.
C 89,8 — H 4,8 — O 5,4 — M. G. 294.
- $C_{22}H_{14}O$ 1) Alkohol (aus 2-Oxynaphtalin). Zers. bei 260° (*B.* 16 [2] 967; *A. ch.* [5] 28, 188). — II, 1095.
- $C_{22}H_{14}O_2$ C 85,2 — H 4,5 — O 10,3 — M. G. 310.
1) 2,2-Binaphtylenglykol (*A. ch.* [5] 28, 151). — II, 1104.

- C₂₁H₁₄O₃** C 81,0 — H 4,3 — O 14,7 — M. G. 326.
- 1) 1,3-Diketo-2-Benzoyl-2-Phenyl-2,3-Dihydroinden. Sm. 168° (B. 28, 1390). — III, 322.
 - 2) Säure (aus Dicarboxylbinaphylen) (M. 1, 256). — II, 1730.
 - 3) Anhydrid d. Naphtalin-1-Carbonsäure. Sm. 145° (B. 1, 42). — II, 1445.
 - 4) Anhydrid d. Naphtalin-2-Carbonsäure. Sm. 133–134° (B. 9, 1515). — II, 1453.
 - 5) Anhydrid (aus Naphtalin-1-Carbonsäure u. Naphtalin-2-Carbonsäure). Sm. 126° (B. 9, 1515). — II, 1453.
 - 6) Di-2-Oxynaphtalin-1-Carbonsäurealdehyd. Sm. 241° (Am. 14, 298). — III, 96.
 - 7) Verbindung (aus $\beta\beta$ -Di[2-Oxynaphtyl]-*aaa*-Trichloräthan). Sm. 210° u. Zers. (J. r. 23, 220). — II, 1007.
- C₂₂H₁₄O₃** C 73,8 — H 3,9 — O 22,3 — M. G. 358.
- 1) Dibenzooat d. Verb. C₁₀H₈O₂. Sm. 165° (Am. 5, 350). — II, 919.
- C₂₂H₁₄O₃** C 70,6 — H 3,7 — O 25,7 — M. G. 374.
- 1) *aaa*-Di[3-Oxy-1,4-Naphtochinoly(2)]äthan. Sm. bei 190° (Soc. 65, 82). — III, 464.
 - 2) Gem. Anhydrid d. Benzolcarbonsäure u. Benzol-1,2-Dicarbonsäure. Sm. 123–124° (B. 28, 1577). — II, 1795.
 - 3) α ,2-Lakton d. α -Oxytriphenylmethan- $\alpha^2, \alpha^4, \alpha^4$ -Tricarbonsäure (A. 299, 296).
 - 4) Diacetat d. 6,11-Dioxy-5,12-Diketo-5,12-Dihydronaphtacen. Sm. 220–235° (B. 31, 1281).
C 65,0 — H 3,4 — O 31,5 — M. G. 406.
- C₂₂H₁₄O₃** C 62,6 — H 3,3 — O 34,1 — M. G. 422.
- 1) Disalicylsäurephtalid. Sm. 276°. Ba (A. 303, 283).
- C₂₂H₁₄O₇** C 60,3 — H 3,2 — O 36,5 — M. G. 498.
- 1) Oxyaurintricarbonsäure. Ca₃ (B. 25, 942). — II, 2100.
- C₂₂H₁₄O₁₀** C 58,1 — H 3,1 — O 38,8 — M. G. 454.
- 1) Dioxaurintricarbonsäure. Ca₂ (B. 25, 943). — II, 2107.
 - 2) isom. Dioxaurintricarbonsäure. Ca₂ (B. 25, 944). — II, 2107.
- C₂₂H₁₄O₁₂** C 56,2 — H 3,0 — O 40,8 — M. G. 470.
- 1) Tetracetyllagsäure (A. 170, 80; B. 12, 1241; M. 13, 51). — II, 2084.
 - 2) Trioxaurintricarbonsäure. Ca₃ (B. 25, 945). — II, 2108.
- C₂₂H₁₄O₁₃** C 54,3 — H 2,9 — O 42,8 — M. G. 486.
- 1) Tetraoxaurintricarbonsäure. Ca₄ (B. 25, 945). — II, 2108.
- C₂₂H₁₄O₁₆** C 51,0 — H 2,7 — O 46,3 — M. G. 518.
- 1) Hexaoxaurintricarbonsäure. Ca₆ (B. 25, 946). — II, 2109.
- C₂₂H₁₄N₂** C 86,3 — H 4,6 — N 9,1 — M. G. 306.
- 1) 2-Phenylphenanthrendiazin. Sm. 190° (B. 28, 3174). — IV, 1090.
- C₂₂H₁₄N₄** C 79,0 — H 4,2 — N 16,8 — M. G. 334.
- 1) 3,6-Di[2-Naphtyl]-1,2,4,5-Tetrazin. Sm. 246° (B. 30, 1885; A. 298, 45). — IV, 1305.
- C₂₂H₁₄Cl₂** C 72,2 — H 4,7 — N 13,1 — M. G. 321.
- 1) $\beta\beta$ -Dichlor-*aa*-Di[1-Naphtyl]äthan. Sm. 149–150° (B. 11, 299). — II, 298.
 - 2) isom. $\beta\beta$ -Dichlor-*aa*-Di[1-Naphtyl]äthan. Sm. 219°; Sd. oberh. 360° (B. 11, 300). — II, 299.
- C₂₂H₁₃N₃** C 82,2 — H 4,7 — N 13,1 — M. G. 321.
- 1) 2,5-Di[2-Naphtyl]-1,3,4-Triazol. Sm. 222°. + AgNO₃ (B. 30, 1884; A. 298, 42). — IV, 1217.
 - 2) Rosindulin. Sm. 198–199°. HCl + 3 $\frac{1}{2}$ H₂O, H₂CO₃ + 4H₂O (A. 256, 236; 286, 227; 290, 268; B. 24, 587; 29, 2760; 30, 2627). — IV, 1205.
 - 3) Isorosindulin. HCl, (2HCl, PtCl₄), HNO₃ (A. 290, 276). — IV, 1208.
 - 4) isom. Isorosindulin. HNO₃ (B. 21, 1601; 29, 2753). — IV, 1202.
 - 5) Nitril d. 1,3,5-Triphenylpyrazol-4-Carbonsäure. Sm. 189° (J. pr. [2] 58, 152).
- C₂₂H₁₃N₅** C 75,6 — H 4,3 — N 20,0 — M. G. 349.
- 1) 2,5,6-Triphenyl-1,2,3,4,7-Benzpentazol. Sm. 217° (A. 295, 145). — IV, 1314.
- C₂₂H₁₃Cl₁** C 72,2 — H 4,7 — N 13,1 — M. G. 321.
- 1) $\beta\beta\beta$ -Trichlor-*aaa*-Di[1-Naphtyl]äthan. Sm. 156° (B. 11, 298; J. pr. [2] 47, 55). — II, 298.

- $C_{21}H_{11}Cl_2$ 2) isom. $\beta\beta\beta$ -Trichlor- α -Di[1-Naphtyl]äthan (B. 11, 298; J. pr. [2] 47, 55). — II, 298.
- $C_{21}H_{10}O$ C 80,2 — H 5,4 — O 5,4 — M. G. 296.
- 1) 2,3,5-Triphenylfuran. Sm. 95—96° (Soc. 51, 430; 57, 645, 674; 71, 1141). — III, 695.
- 2) Anhydro- α -Di[2-Oxynaphtyl]äthan. Sm. 173° (A. 237, 270; J. pr. [2] 47, 79). — II, 1007.
- $C_{21}H_{10}O_2$ C 84,6 — H 5,1 — O 10,3 — M. G. 312.
- 1) Aethylenäther d. 2,2'-Dioxy-1,1'-Binaphtyl. Sm. 196—197° (Bl. [3] 19, 611).
- 2) 1,3-Diketo-2-Phenyl-2-Benzyl-2,3-Dihydroinden. Sm. 105—106° (B. 28, 1392). — III, 309.
- 3) $\alpha\delta$ -Diketo- $\alpha\beta\delta$ -Triphenyl- β -Buten ($\alpha\beta$ -Dibenzoylstyrol). Sm. 129° (Soc. 57, 673, 715; 71, 1140; B. 18, 188; A. 302, 196). — III, 308.
- 4) Isodibenzoylstyrol. Sm. 197—198° (Soc. 57, 706; 71, 1142). — III, 309.
- 5) Acetat d. 10-Oxy-9-Phenylanthracen. Sm. 165—166° (A. 202, 57). — II, 1094.
- 6) Lakton d. α -Oxy- $\alpha\gamma\gamma$ -Triphenylpropen- γ -Carbonsäure. Sm. 117 bis 118° (Soc. 57, 677, 716). — II, 1726.
- $C_{21}H_{10}O_3$ C 80,5 — H 4,9 — O 14,6 — M. G. 328.
- 1) Tribenzoylmethan. Sm. 223—226° (B. 16, 2135; Soc. 47, 253; A. 282, 178; 291, 92, 95; Am. 19, 886). — III, 321.
- 2) isom. ψ -Tribenzoylmethan. Sm. 210—220° (A. 291, 93). — III, 321.
- 3) Acetat d. 10-Oxy-9-Keto-10-Phenyl-9,10-Dihydroanthracen. Sm. 194—196° (A. 202, 61). — III, 260.
- 4) Bensoat d. γ -Keto- γ -Phenyl- α -[2-Oxyphenyl]propen. Sm. 102° (B. 29, 379). — III, 247.
- 5) Anhydrid d. p-Kresolphtaleinsäure. Sm. 246° (A. 212, 340). — II, 1987.
- $C_{21}H_{10}O_4$ C 76,8 — H 4,6 — O 18,6 — M. G. 344.
- 1) polym. Phenylcumalin, siehe $C_{11}H_8O_2$.
- 2) Hydrophthalconcarbonsäure. Sm. oberh. 280°. Ag (B. 17, 1395). — II, 1914.
- 3) Dioxyessigd[1-Naphtyläther]säure. Sm. 174°. Na (B. 27, 2798).
- 4) Dioxyessigd[2-Naphtyläther]säure. Sm. 134°. Na (B. 27, 2799).
- 5) Dibenzoylphenyllessigsäure? Sm. 200° u. Zers. Ag (Soc. 69, 741).
- 6) α ,2-Lakton d. α -Oxy- ψ -Acetyltriphenylmethan-2-Carbonsäure. Sm. 135—136° (B. 13, 1615). — II, 1910.
- 7) Aethylester d. Säure $C_{20}H_{11}O_4$ (aus 2-Oxynaphtalin). Sm. 123—124° (M. 10, 119). — II, 1914.
- 8) ψ -Acetat d. 10-Oxy-9-Keto-10-[ψ -Oxyphenyl]-9,10-Dihydroanthracen. Sm. 207° (B. 13, 1617). — III, 260.
- $C_{21}H_{10}O_5$ C 73,3 — H 4,4 — O 22,2 — M. G. 360.
- 1) Kresorcinphtalein (B. 15, 1069; A. 215, 95). — II, 2066.
- 2) α -Orcinphtalein. Zers. bei 230°. HCl (A. 183, 63; B. 29, 2631). — II, 2066.
- 3) β -Orcinphtalein + $\frac{1}{2}H_2O$ (A. 183, 67; B. 29, 2635).
- 4) γ -Orcinphtalein (B. 29, 2638).
- 5) Dimethyläther d. Fluorescein. Sm. 198° (B. 27, 2790). — II, 2061.
- 6) Aethyläther d. Fluorescein. Sm. 251° (B. 28, 47). — II, 2061.
- 7) Methyläther d. Methylätherfluorescein. Sm. 208° (B. 28, 396). — II, 2061.
- 8) Aethylester d. Fluorescein. Sm. 247° (B. 28, 46). — II, 2061.
- 9) 3,4-Methylenäther-1-Acetat d. γ -Keto- γ -[1-Oxy-2-Naphtyl]- α -[3,4-Dioxyphenyl]propen. Sm. 129—130° (B. 31, 708).
- 10) Dibensoat d. Methyl-2,5-Dioxyphenylketon. Sm. 113° (B. 31, 1216).
- 11) Dibenzoylbernsteinsäureanhydrid. Sm. 198—200° u. Zers. (A. 293, 119).
- 12) Farbstoff (aus Corallin) + H_2O (M. 16, 380).
- $C_{21}H_{10}O_7$ C 67,3 — H 4,1 — O 28,6 — M. G. 392.
- 1) α -Oxytriphenylmethan- $\alpha^2, \alpha^4, \alpha^1$ -Tricarbonsäure. Sm. 165° u. Zers. N_{80} , A_{27} (A. 299, 295).
- 2) Disimttweinsäureanhydrid. Sm. 147—148° u. Zers. (A. ch. [7] 3, 486). — II, 1107.

- C₁₇H₁₆O₆** C 64,7 — H 3,9 — O 31,4 — M. G. 408.
 1) P-Dioxytriphenylmethan-*p*-Tricarbonsäure (Disalicylsäure-*o*-Tolulylsäure). Zers. bei 145° (A. 303, 287).
- C₁₇H₁₆O₁₀** C 60,0 — H 3,6 — O 36,4 — M. G. 440.
 1) Tetracetylphlorotanninroth (A. 252, 90). — II, 1919.
 2) Tetracetat d. 1, 2, 5, 8-Tetraoxy-9, 10-Anthrachinon. Sm. 201° (A. 240, 302). — III, 438.
 3) Tetracetat d. 1, 3, 5, 7-Tetraoxy-9, 10-Anthrachinon. Sm. 253° (B. 19, 755). — III, 437.
 4) Tetracetat d. α -Oxyanthragallol. Sm. 207–209° (B. 19, 2339; A. 240, 272). — III, 437.
 5) Tetracetat d. β -Oxyanthragallol. Sm. 189° (B. 19, 2340; A. 240, 273). III, 437.
- C₁₇H₁₆N₂** C 85,7 — H 5,2 — N 9,1 — M. G. 308.
 1) 1,4-Di[Phenylimido]-1,4-Dihydronaphtalin. Sm. 187° (A. 256, 255). — IV, 922.
 2) Di[2-Naphtyliden]hydrasin (2-Naphtalazin). Sm. 162° (B. 30, 1886; A. 298, 47). — IV, 1088.
 3) 3,4,6-Triphenyl-1,2-Diazin. Sm. 171° (A. 259, 319). — IV, 1088.
 4) Azobenzoyl (Berz. J. 18, 353; A. 111, 138; 136, 175). — III, 37.
 5) Base (aus Formaldehyd u. β -Naphtylamin). Sm. 186–187°. HCl, HNO₃ (Soc. 73, 542, 553). — IV, 1088.
- C₁₇H₁₆N₄** C 78,5 — H 4,8 — N 16,7 — M. G. 336.
 1) α -Naphtalindiazobenzol. Sm. 143° (B. 21, 2146). — IV, 1401.
 2) 3,6-Di[2-Naphtyl]-1,2-Dihydro-1,2,4,5-Tetrazin. Sm. 246° (B. 30, 1884; A. 298, 43). — IV, 1304.
- C₁₇H₁₆Br₂** 1) *p*-Dibrom- $\alpha\alpha$ -Di[1-Naphtyl]äthan. Sm. 215° (J. pr. [2] 47, 59). — II, 298.
 2) $\alpha\beta$ -Dibrom- $\alpha\alpha$ -Di[1-Naphtyl]äthan. Sm. 211° (J. pr. [2] 47, 58). — II, 298.
- C₁₇H₁₇N** C 89,5 — H 5,8 — N 4,7 — M. G. 295.
 1) 1-Diphenylamidonaphtalin. Sm. 142°; Sd. 335–340°_{80–85} (B. 23, 2541). — II, 600.
 2) 1,2,5-Triphenylpyrrol. Sm. 231° (B. 20, 1491, 3062). — IV, 438.
 3) 2,3,5-Triphenylpyrrol. Sm. 140–141° (Soc. 57, 645; 71, 1146). — IV, 474.
 4) isom. Triphenylpyrrol. Sm. 140–142° (B. 21, 3062). — IV, 438.
 5) 3-Phenyl-2-Benzylchinolin. Fl. (2HCl, PtCl₄ + 2H₂O) (J. pr. [2] 57, 470).
 6) Chinolydiphenylmethan. Sm. 103–104°. (2HCl, PtCl₄) (B. 19, 749; A. 241, 364). — IV, 475.
 7) Nitril d. $\alpha\beta\gamma$ -Triphenylpropen- α -Carbonsäure. Sm. 212° (J. pr. [2] 54, 547).
- C₁₇H₁₇N₃** C 81,7 — H 5,3 — N 13,0 — M. G. 323.
 1) 2-Phenylamido-1-Phenylazonaphtalin. Sm. 141–142° (B. 17, 2671; 20, 1168). — IV, 1397.
 2) 4-Phenylamido-1-Phenylazonaphtalin. Sm. 151° (A. 256, 256). — IV, 1397.
 3) 2,5-Di[2-Naphtyl]-2,3-Dihydro-1,3,4-Triazol. Sm. 240° u. Zers. (B. 30, 1886; A. 298, 46). — IV, 1216.
 4) 6-Amido-2,4,5-Triphenyl-1,3-Diazin. Sm. 157°. HCl (J. pr. [2] 39, 253). — IV, 1216.
 5) *ms*-Aethylidnaphtocposafrafin. HCl, HNO₃ (B. 31, 2488).
 6) Verbindung (aus Tetraphenylcarbazon). HCl (A. 258, 241). — IV, 1191.
- C₁₇H₁₇N₅** C 75,2 — H 4,8 — N 19,9 — M. G. 351.
 1) 4-Amido-1,3-Di[Phenylazo]naphtalin. Sm. 189° (B. 21, 3241). — IV, 1401.
 2) α -Amidonaphtalindiazobenzol. Sm. 170° (B. 21, 2146). — IV, 1401.
 3) β -Amidonaphtalindiazobenzol. Sm. 164° (B. 21, 2146). — IV, 1401.
 4) 3,4-Di[Benzylidenamido]-1-Phenyl-1,2,5-Triazol. Sm. 162° (A. 295, 146). — IV, 1314.
- C₁₇H₁₇O** C 88,6 — H 6,0 — O 5,4 — M. G. 298.
 1) 10-Oxy-3-Methyl-9-[4-Methylphenyl]anthracen (Tolylmethyl-anthranol). Sm. 117° (A. 299, 290; Bl. [3] 17, 975).

- $C_{27}H_{18}O$
 $C_{27}H_{18}O_2$
- 2) Masopin. Sm. 155° (A. 46, 124). — III, 637.
 C 84,1 — H 5,7 — O 10,2 — M. G. 314.
 - 1) Dinaphyläther d. *p*-Dioxy-1,1'-Binaphtyl. Sm. 251° (B. 17, 2453). — II, 1004.
 - 2) Dimethyläther d. β -Dioxybinaphtyl. Sm. 190° (B. 17, 2454). — II, 1005.
 - 3) 2,2-Dinaphtyläther d. $\alpha\alpha$ -Dioxyäthan. Sm. 200—201° (A. 237, 27; B. 19, 3010). — II, 886.
 - 4) 1,1-Dinaphthyläther d. $\alpha\beta$ -Dioxyäthan. Sm. 125—126° (B. 13, 1956). — II, 857.
 - 5) 2,2-Dinaphthyläther d. $\alpha\beta$ -Dioxyäthan. Sm. 217° (B. 13, 1954). — II, 877.
 - 6) $\alpha\delta$ -Diketo- $\alpha\beta\delta$ -Triphenylbutan (Desylacetophenon). Sm. 126° (Soc. 57, 644; B. 26, 61). — III, 306.
 - 7) 10-Oxy-9-Keto-3-Methyl-9-[4-Methylphenyl]-9,10-Dihydroanthracen (Tolylmethyloxanthranol). Sm. 207° (A. 299, 290; B. [3] 17, 975).
 - 8) Lakton d. γ -Oxy- $\alpha\alpha\gamma$ -Triphenylbuttersäure. Sm. 153° (Soc. 57, 679). — II, 1725.
 - 9) Lakton d. α -Oxy- α' -Phenyl- α^1, α^2 -Di[4-Methylphenyl]methan- α' , 2-Carbonsäure (Ditolylphtalid). Sm. 116° (Bl. 35, 405; 42, 168; [3] 17, 967; B. 14, 1867; A. 299, 287). — II, 1725.
 - 10) Methyl ester d. Triphenylakrylsäure. Sm. 136° (B. 29, 2842).
 - 11) Methyl ester d. $\alpha\alpha\beta$ -Triphenyläthen- α' -Carbonsäure. Sm. 101—102° (B. 30, 1283).
 - 12) Acetat d. α -Oxytriphenyläthen. Sm. 104,5—105,5° (A. 296, 245).
 C 80,0 — H 5,4 — O 14,5 — M. G. 330.
- $C_{27}H_{18}O_2$
- 1) β -Oxy- $\alpha\delta$ -Diketo- $\alpha\beta\delta$ -Triphenylbutan. Sm. 102° (B. 18, 187). — III, 307.
 - 2) $\alpha\alpha$ -Diphenyl- β -Benzoylpropionsäure. Sm. 182—183°. Ag (Soc. 57, 680). — II, 1726.
 - 3) Anhydrid [4-Oxy-1-Methylphenyl]-Phenylmethan-2-Carbonsäure (*p*-Kresolphthalinsäureanhydrid). Sm. 210° (A. 212, 342). — II, 1912.
 - 4) Aethylester d. Hydrofluorensäure. Sm. 99—101° (B. 26, 432). — II, 1911.
 - 5) Acetat d. α -Oxy- β -Keto- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 145—146° (Bl. [3] 13, 860). — III, 258.
 - 6) Acetat d. β -Keto- $\alpha\beta$ -Diphenyl- α -[4-Oxyphenyl]äthan. Sm. 106—107°; Sd. 325—330°₄₀ (Soc. 57, 965). — III, 258.
- $C_{27}H_{18}O_4$
- 1) Dimethyläther d. Phenolphthalein. Sm. 97—99° (101—102°) (M. 17, 430; G. 26 [1] 223).
 - 2) Benzol-1,2-*p*-Di[Phenylmethylcarbonsäure]. Sm. 110° (A. 171, 124). — II, 1913.
 - 3) α ,2'-Lakton d. α -Oxy- α' -Phenyl- α^1, α^2 -Di[*p*-Oxy-4-Methylphenyl]-methan- α' , 2-Carbonsäure (A. 299, 294).
 - 4) α ,2'-Lakton d. $\alpha\alpha$ -Di[*p*-Oxy-2-Methylphenyl]- α -Phenylmethan-2'-Carbonsäure (*o*-Kresolphthalein). Sm. 213—214° (A. 202, 153). — II, 1987.
 - 5) Dibenzylester d. Benzol-1,2-Dicarbonsäure. Sm. 42—44° (B. 28, 1577; 30, 780). — II, 1794.
 - 6) Di[4-Methylphenylester] d. Benzol-1,2-Dicarbonsäure. Sm. 83—84° (B. 26, 209). — II, 1794.
 - 7) 4-Benzoat d. 3,4-Dioxy-*p*-Benzoyl-1-Methylbenzol-3-Methyläther. Sm. 95—96° (G. 28 [2] 284).
 - 8) Dibenzoat d. $\alpha\beta$ -Dioxy- α -Phenyläthan. Sm. 96—97° (A. 216, 295; B. 10, 1006). — II, 1144.
 - 9) Dibenzoat d. 2,5-Dioxy-1,4-Dimethylbenzol. Sm. 160° (B. 18, 2923). — II, 1150.
 - 10) Verbindung (aus Corallin) + H₂O (M. 16, 391).
 C 72,9 — H 5,0 — O 22,1 — M. G. 362.
- $C_{27}H_{18}O_5$
- 1) Orcinaurin. Na + Na₂ + 6H₂O, Ba + 3H₂O, Ag₂ (J. pr. [2] 25, 277; Bl. [3] 5, 465; B. 13, 546). — II, 1124.
 - 2) α -Orcinphthalin. Sm. 256° (A. 183, 72; B. 29, 2633). — II, 1913.

- C₂₂H₁₄O₅** 3) **Aethylester d. Acetylisophenanthroxylencetessigsäure.** Sm. 165 bis 170° (*Soc.* 59, 7). — II, 1909.
 4) **Aethylester d. Fluorescin.** Sm. 195—196° (*M.* 13, 425; *B.* 28, 45). — II, 2037.
 5) **Benzoat d. 2,3,4 [oder 3,4,5]-Trioxydiphenylketondimethyläther.** Sm. 111° (*G.* 27 [2] 21).
 6) **6-Benzoat d. Hydrocotoïn (6-B. d. 2,4,6-Trioxydiphenylketondimethyläther).** Sm. 113° (117—118°) (*A.* 282, 195; *M.* 18, 740). — III, 203.
 7) **Dibenzoat d. 1,3,5-Trioxybenzolmonoäthyläther.** Sm. 75—77° (*M.* 18, 748).
C₂₂H₁₄O₆ 8) **Leukoverbindung d. Farbstoffs C₂₂H₁₄O₆ (aus Corallin) (M. 18, 381).** C 69,8 — H 4,8 — O 25,4 — M. G. 378.
 1) **Dimethyläther d. Brenzkatechinphtaleïn (B. 22, 2199).** — II, 2065.
 2) **αβ-Di[1-Naphtyläther] d. Hexaoxyäthan.** Sm. 163° u. *Zers.* (*B.* 17, 1742). — II, 858.
 3) **αβ-Di[2-Naphtyläther] d. Hexaoxyäthan.** Sm. 167° u. *Zers.* (*B.* 17, 1742). — II, 878.
 4) **Diacetat d. Triresorcin.** Sm. 260—270° u. *Zers.* (*A.* 289, 65).
 5) **2,5-Dibenzoat d. 1,2,3,5-Tetraoxybenzol-1,3-Dimethyläther.** Sm. 245° (*B.* 11, 333). — II, 1031.
 6) **Diacetylpolyporsäure.** Sm. 205° (*A.* 187, 194). — II, 1907.
 7) **Monäthylester d. Acetylpulvinsäure.** Sm. 143—144° (*A.* 284, 116, 124).
 8) **Aethylester (aus d. Hydrochinonphtaleïn).** *Zers.* bei 110° (*B.* 6, 507). — II, 2066.
C₂₂H₁₄O₇ C 67,0 — H 4,5 — O 28,4 — M. G. 394.
 1) **Tetramethyläther d. Anhydrobis-4,5-Dioxydiketodihydroinden.** Sm. 205° u. *Zers.* (*B.* 31, 2093).
 2) **4-[3-Acetoxyphenyl]äther d. 4-Oxy-1,2-Diacetoxylnaphtalin.** Sm. 169—170° (*B.* 30, 2568).
 3) **Triacetat d. Resaceteïn.** Sm. 229° (*J. pr.* [2] 28, 59). — III, 137.
C₂₂H₁₄O₈ C 64,4 — H 4,4 — O 31,2 — M. G. 410.
 1) **Alonigrin (C. 1898 [2] 118).**
 2) **Triacetat d. Brasileïn.** Sm. 203—207°. + 2C₂H₄O₂ (*B.* 23, 1434; *M.* 19, 742). — III, 654.
 3) **Tetracetyltrioxyanthranol (aus Anthraflavinsäure).** Sm. 274° (*B.* 21, 1173). — III, 244.
 4) **Tetracetyltrioxyanthranol (aus Isoanthraflavinsäure).** Sm. 235—240° (*B.* 21, 1173). — III, 244.
 5) **Tetracetyltrioxyanthranol (aus Flavopurpurin).** Sm. 250—290° (*B.* 21, 1174). — III, 244.
 6) **Tetracetat d. Anthragallohydranthron.** Sm. 203—205° (*B.* 21, 444). — III, 433.
 7) **Tetracetat d. 2,3,9,10-Tetraoxyanthracen.** Sm. 217—219° (*B.* 22, 684). — II, 1119.
C₂₂H₁₄N₂ C 85,2 — H 5,8 — N 9,0 — M. G. 310.
 1) **1,4-Di[Phenylamido]naphtalin.** Sm. 144° (*A.* 256, 255). — IV, 922.
 2) **2,7-Di[Phenylamido]naphtalin.** Sm. 168° (163—164°) (*B.* 20, 1372; 23, 538). — IV, 925.
 3) **1,1-Dinaphtyläthanamidin (J. 1865, 415).** — II, 604.
 4) **2,2-Dinaphtyläthanamidin.** Sm. 168° (*J.* 1886, 868). — II, 604.
 5) **γ-Diphenylmethylenhydrazido-α-Phenylpropen (Diphenylmethylen-cinnamalazin).** Sm. 98° (*J. pr.* [2] 44, 204). — III, 187.
 6) **3,4,8-Triphenyl-1,2-Dihydro-1,2-Diazin.** Sm. 178—186° (186—188°) (*A.* 289, 316). — IV, 1082.
 7) **2,5,6-Triphenyl-2,3-Dihydro-1,4-Diazin.** Sm. 149° (*B.* 28, 3173). — IV, 641.
C₂₂H₁₅N₄ C 78,1 — H 5,3 — N 16,6 — M. G. 338.
 1) **1-Cyannaphtalin?** Sm. 198° u. *Zers.* 2HCl. — II, 624.
 2) **2-Cyannaphtalin?** Sm. 222° u. *Zers.* 2HCl, H₂SO₄, Dioxalat. — II, 624.
 3) **2,2-Dinaphtenylhydrazidin.** Sm. 249° u. *Zers.* 2HCl, 2HNO₃ (*B.* 30, 1882; *A.* 298, 40). — IV, 1304.
 4) **1-Phenyl-4-[α-Phenylhydrazonbenzyl]pyrazol.** Sm. 138—140° u. *Zers.* (*G.* 19, 140). — IV, 550.

- C₁₁H₁₀N** C 88,9 — H 6,4 — N 4,7 — M. G. 297.
 1) γ -Diphenylmethylimido- α -Phenylpropen. Sm. 128° (B. 26, 2170). — III, 61.
 2) Aethyl-2,2-Dinaphtylamin. Sm. 231° (B. 20, 2619). — II, 604.
 3) 3-[4-Isopropylphenyl]- β -Naphthochinolin. Sm. 150° (2 HCl, PtCl₄) (B. 27, 2030). — IV, 470.
 4) Nitril d. $\alpha\beta$ -Diphenyl- α -(4-Methylphenyl)propionsäure. Sm. 121° (A. 250, 150). — II, 1483.
- C₁₁H₁₀N₂** C 81,2 — H 5,9 — N 12,9 — M. G. 325.
 1) 1-Phenyl-3,5-Di[2-Methylphenyl]-1,2,4-Triazol. Sm. 86° (J. pr. [2] 54, 159). — IV, 1188.
 2) 1-Phenyl-3,5-Di[4-Methylphenyl]-1,2,4-Triazol. Sm. 115° HCl (J. pr. [2] 54, 160). — IV, 1188.
 3) Nitril d. β -Phenylhydrazon- $\alpha\gamma$ -Diphenylpropan- α -Carbonsäure. Sm. 119—120° (J. pr. [2] 55, 352). — IV, 698.
- C₁₁H₁₀O₂** C 83,6 — H 6,3 — O 10,1 — M. G. 316.
 1) Methyläther d. α -Keto- β -[4-Oxyphenyl]- $\alpha\gamma$ -Diphenylpropan. Sm. 99 bis 100° (B. 21, 2451). — III, 260.
 2) Aethyläther d. α -Oxy- β -Ketotriphenyläthan (B. 29, 2080; A. 296, 249).
 3) α -Phenyl- α^{α} -Di[4-Methylphenyl]methan- α' -2-Carbonsäure (Phenyl-ditolylmethancarbonsäure). Sm. 168° (A. 299, 289).
 4) Phenyl-di[p -Methylphenyl]methan- α -Carbonsäure. Sm. 78—83° (A. 189, 124). — II, 1483.
 5) Benzoesäure d. β -Oxy- $\alpha\gamma$ -Diphenylpropan. Sm. 50—51° (B. 25, 1273). — II, 1144.
 6) Verbindung (aus Phenylsessigsäurepropylester). Sd. 335°₆₀ (Soc. 37, 483). — II, 1310.
 7) Verbindung (aus Phenylsessigsäurebenzylester). Sd. 230°₆₀ (Soc. 37, 483). — II, 1310.
 8) Verbindung (aus d. Benzylester d. 1-Methylbenzol-2-Carbonsäure). Sd. 350° (B. 25 [2] 748). — II, 1329.
 C 79,5 — H 6,0 — O 14,5 — M. G. 332.
- C₁₁H₁₀O₃**
 1) Kresolaurin (J. pr. [2] 25, 275). — II, 1122.
 2) α -Oxy- α' -Phenyl- α^{α} -Di[4-Methylphenyl]methan- α' -2-Carbonsäure (B. [3] 17, 970).
 3) Monacetat d. p -Di[α -Oxybenzyl]benzol. Sm. 94—97° (B. 9, 311). — II, 1103.
- C₁₁H₁₀O₄** C 75,8 — H 5,7 — O 18,4 — M. G. 348.
 1) β -Benzoesäure d. $\alpha\beta\gamma$ -Trioxypropan- $\alpha\gamma$ -Diphenyläther. Sm. 66—67° (B. 19, 66). — II, 1146.
 2) Di[2-Oxy-1-Methylphenyl]-Phenylmethan-2-Carbonsäure (o-Kresol-phtalinsäure). Sm. 217—218° (A. 202, 168). — II, 1911.
 3) 4',4''-Dioxytriphenylmethandimethyläther-2''-Carbonsäure. Sm. 144 bis 146° (149—150°). Ba + 3H₂O (M. 17, 431; G. 26 [1] 228).
 4) Aethyläther d. 4',4''-Dioxytriphenylmethan-2''-Carbonsäure. Sm. 150—152° (156—158°) (M. 13, 424; B. 30, 175). — II, 1911.
 5) Aethyläther d. 3,5-Diketo-4-Benzyliden-1-Phenylhexahydrobenzol-2-Carbonsäure. Sm. 98° (A. 294, 282).
 6) Aethyläther d. Phenanthroxylencarbonsäureäthylester. Sm. 143 bis 144° (Soc. 59, 18). — II, 1908.
- C₁₁H₁₀O₅** C 72,5 — H 5,5 — O 22,0 — M. G. 364.
 1) $\alpha,4',4''$ -Dioxytriphenylmethan-2''-Carbonsäure. K (G. 26 [1] 227).
 2) Methyl-norm. Propylester d. Pulvinsäure. Sm. 95—96° (A. 282, 42). — II, 2030.
 3) isom. Methyl-norm. Propylester d. Pulvinsäure. Sm. 121—122° (A. 282, 42). — II, 2030.
- C₁₁H₁₀O₆** C 69,5 — H 5,2 — O 25,3 — M. G. 380.
 1) Danaidin (J. 1885, 1815). — III, 579.
 2) 2,5-Diäthyläther-3,6-Diphenyläther d. 2,3,5,6-Tetraoxy-1,4-Benzochinon. Sm. 128° (Am. 17, 649). — III, 355.
 3) Diacetat d. Nepodin. Sm. 198° u. Zers. (A. 291, 311). — III, 453.
 4) Säure (aus β -Phenylpropan- $\alpha\gamma$ -Dicarbonsäureanhydrid). Sm. 153°. Ag₂ (Am. 20, 515).

- $C_{22}H_{20}O_6$ 5) Diäthylester d. $\alpha\delta$ -Diketo- $\alpha\delta$ -Diphenyl- β -Buten- $\beta\gamma$ -Dicarbonsäure (D. d. Dibenzoylfumarsäure). Sm. 75° (B. 30, 1997).
- 6) Diäthylester d. Oxypulvinsäure. Sm. 100° (J. pr. [2] 57, 315).
- $C_{22}H_{20}O_7$ 7) Verbindung (aus Methylaurin) (A. 202, 211). — II, 1121.
- 1) Anhydrobenzoylpikrothin. Sm. 245° (A. 222, 349; B. 31, 2972). — III, 644.
- 2) Monacetat d. $\alpha\beta\beta$ -Tri[1,3-Dioxyphenyl]äthan (A. 243, 176). — II, 1045.
- 3) Acetat d. Dehydrohämatoxylin tetramethyläther. Sm. 190–192° (M. 18, 912). — III, 665.
- $C_{22}H_{20}O_8$ C 64,1 — H 4,8 — O 31,1 — M. G. 412.
- 1) Triacetat d. Brasilin. Sm. 105–106° (B. 18, 1139). — III, 653.
- 2) Triacetat d. Di[4,6-Dioxy-2-Methylphenyl]essigsäurelaktone. Sm. 189° (Soc. 73, 401; Am. 9, 135).
- $C_{22}H_{20}O_9$ C 61,7 — H 4,7 — O 33,6 — M. G. 428.
- 1) Triacetat d. Hesperitin. Sm. 127–129° (Soc. 73, 1034).
- $C_{22}H_{20}O_{10}$ C 59,5 — H 4,5 — O 36,0 — M. G. 444.
- 1) Diacetat d. Irgenin. Sm. 122° (B. 26, 2013). — III, 596.
- 2) Triacetat d. Verb. $C_{14}H_{14}O_6$. α -Derivat Zers. bei 200–210°; β -Derivat Sm. 227–229° (Soc. 65, 936, 937). — III, 454.
- 3) Pentaacetat d. Phloroglucid. Sm. 105–107° (M. 19, 380).
- $C_{22}H_{20}N_2$ C 84,6 — H 6,4 — N 9,0 — M. G. 312.
- 1) Methylamarin. Sm. 184°. Ag, HJ (B. 13, 1418; 18, 3077). — III, 23.
- 2) $\alpha\beta$ -Di[1-Naphtylamido]äthan. Sm. 127°. HBr, 2HBr, H_2SO_4 (B. 8, 23; 23, 2039; 25, 3265). — II, 601.
- 3) $\alpha\beta$ -Di[2-Naphtylamido]äthan. Sm. 149–150° (B. 23, 1985). — II, 604.
- 4) Dypnonphenylhydrazon. Sm. 176°. — IV, 778.
- 5) 1,4,5-Triphenyl-1,2,3,4-Tetrahydro-1,4-Diazin. Sm. 130–131° (G. 21 [2] 500; 23 [1] 12). — IV, 887.
- 6) 1,5,6-Triphenyl-1,2,3,6-Tetrahydro-1,4-Diazin. Sm. bei 150°. 2HCl + H_2O (B. 31, 1581). — IV, 994.
- 7) 1,6-Dimethyl-2,3-Diphenyl-1,2-Dihydro-1,4-Benzdiazin. Sm. 135° (B. 26, 198). — IV, 1076.
- 8) 2,4,2',4'-Tetramethyl-6,6'-Bichinolinyl. Sm. 232°. 2HCl, (2HCl, $PtCl_4$), (2HCl, Cl_2), H_2SO_4 , $H_2Cr_2O_7$ (B. 20, 2506). — IV, 1076.
- 9) Verbindung (aus Brommethylphenylketon) (G. 21 [2] 500). — III, 126.
- $C_{22}H_{20}N_6$ C 71,7 — H 5,4 — N 22,8 — M. G. 368.
- 1) α -Benzylidendibenzyltetrazyldiazin. Sm. 98° (A. 287, 260). — IV, 1328.
- 2) β -Benzylidendibenzyltetrazyldiazin. Sm. 132–133° (A. 287, 261). IV, 1328.
- $C_{22}H_{21}N_3$ C 80,7 — H 6,4 — N 12,8 — M. G. 327.
- 1) 5-[4-Methylphenyl]amido-6-Methyl-1-[4-Methylphenyl]benzimidazol. Sm. 119–120°. (2HCl, $PtCl_4$) (B. 26, 2778). — IV, 1150.
- 2) Trimethylchrysanilin. (2HCl, $PtCl_4$), HJ, 2HJ (B. 2, 379). — IV, 1211.
- $C_{22}H_{27}O$ C 87,4 — H 7,3 — O 5,3 — M. G. 302.
- 1) β -Oxy- $\alpha\alpha\alpha$ -Triphenyl- β -Methylpropan. Sd. bei 260° (J. pr. [2] 37, 368). — II, 1094.
- 2) Propyläther d. α -Oxytriphenylmethan. Sm. 50° (56°) (C. 1896 [1] 416; 1897 [2] 408).
- $C_{22}H_{27}O_4$ C 75,4 — H 6,3 — O 18,3 — M. G. 350.
- 1) Diäthylester d. Polyporsäure. Sm. 134° (A. 187, 193). — II, 1907.
- $C_{22}H_{27}O_5$ C 72,1 — H 6,0 — O 21,9 — M. G. 366.
- 1) Campferfluorescein (Soc. 63, 963). — II, 2055.
- 2) Anhydrid d. β -Benzoylisobuttersäure. Fl. (Bl. [3] 19, 395).
- 3) Dimethylester d. Säure $C_{20}H_{18}O_5$. Sm. 125° (Soc. 59, 20). — II, 1981.
- 4) Äthylester d. γ -Acetyl- $\alpha\epsilon$ -Diketo- $\alpha\epsilon$ -Diphenylpentan- γ -Carbonsäure (Ae. d. Diphenylacetessigsäure). Sm. 82–83° (B. 23, 3225). — II, 1981.
- $C_{22}H_{27}O_6$ C 69,1 — H 5,8 — O 25,1 — M. G. 382.
- 1) Dimethyläther d. Hydromethylumbelliferon. Sm. 243–244° (B. 17, 2135). — II, 1780.

- C₂₁H₁₃O₆** 2) Diäthylester d. α , δ -Dioxy- α , δ -Diphenylbutan- β , γ -Dicarbonsäure (α -D. d. Dibenzoylbernsteinsäure). Fl. Na₂ + 2C₂H₅O (Soc. 47, 265; A. 293, 79).
- C₂₁H₁₃O₇** 3) Diäthylester d. α , δ -Diketo- α , δ -Diphenylbutan- β , γ -Dicarbonsäure (β -D. d. Dibenzoylbernsteinsäure). Sm. 128—130°. Na₂ (Soc. 47, 264; B. 27, 1167; A. 282, 167; 293, 74, 107). — II, 2032.
- 4) Diäthylester d. isom. α , δ -Diketo- α , δ -Diphenylbutan- β , γ -Dicarbonsäure (γ -D. d. Dibenzoylbernsteinsäure). Sm. 75° (A. 293, 77, 107). C 66,3 — H 5,5 — O 28,1 — M. G. 398.
- C₂₁H₂₁O₇** 1) Diacetat d. Brasilindimethyläther. Sm. 90—91° (B. 27, 526). — III, 653.
- C₂₁H₂₁O₈** C 63,8 — H 5,3 — O 30,9 — M. G. 414.
- 1) α , γ -Diphenylhexan- β , β , ϵ , ϵ -Tetracarbonsäure. Sm. 166—167°. Ca + 2H₂O, Ag₂ (Soc. 65, 1019). — II, 2085.
- 2) Dimethylester d. Diphenylessigweinsäure. Fl. (A. ch. [7] 3, 475). — II, 1310.
- 3) Dimethylester d. Di[2-Methylbenzoyl]weinsäure. Sm. 56° (Soc. 69, 1312, 1589).
- 4) Dimethylester d. Di[3-Methylbenzoyl]weinsäure. Sm. 83° (Soc. 69, 1318, 1590).
- 5) Dimethylester d. Di[4-Methylbenzoyl]weinsäure. Sm. 86—87° (88,5°) (A. ch. [7] 3, 479; Soc. 69, 1315, 1590). — II, 1340.
- 6) Diäthylester d. Dibenzoylweinsäure. Sm. 56—58° (62,5°) (B. 15, 2243; J. 1892, 857; Bl. [3] 13, 202; Soc. 69, 1585). — II, 1155.
- 7) Tetracetat d. α , β -Di[2,4-Dioxyphenyl]äthan. Sm. 105—112° (J. pr. [2] 54, 417).
- 8) Tetracetat d. 1,3,1',3'-Tetraoxy-*p*-Aethylbiphenyl. Sm. 135—138° (M. 11, 418). — II, 1038.
- 9) Tetracetat d. *s*-Di[2,6-Dioxy-1-Methyl]-*p*-Biphenyl. Sm. 135° (M. 10, 176). — II, 956.
- 10) Monobenzoesat d. Pikrotin. Sm. 230° (236°) (B. 12, 685; 31, 2972). — III, 644.
- C₂₁H₂₁O₉** 11) Dibenzoesat d. Duleitdimethylenäther. Sm. 228—231° (A. 299, 319). C 61,4 — H 5,1 — O 33,5 — M. G. 430.
- C₂₁H₂₁O₁₀** 1) Acetaldehydphloroglucid (C. 1896 [2] 486). C 59,2 — H 4,9 — O 35,9 — M. G. 446.
- C₂₁H₂₁N₂** 1) Triacetat d. Aloin + $\frac{1}{2}$ H₂O. Sm. 92° (B. 23 [2] 207). — III, 618. C 84,1 — H 7,0 — N 8,9 — M. G. 314.
- 1) 4-[4-Isopropylbenzyliden]amido-1-Phenylamidobenzol. Sm. 132° (A. 265, 191). — IV, 597.
- 2) α -Phenylimido- α -[Aethyl-4-Methylphenyl]amido- α -Phenylmethan. Sm. 102°. HJ (B. 28, 871). — IV, 844.
- 3) α -[4-Methylphenyl]imido- α -Aethylphenylamido- α -Phenylmethan. Sm. 117°. HJ (B. 28, 872). — IV, 844.
- 4) β -Phenylhydrason- α , γ -Diphenylbutan (Phenylhydrason d. Methyl-dibenzylketon). Sm. 92—93° (A. 284, 268). — IV, 777.
- 5) α -Phenylhydrason- β -Phenyl- α -[2,6-Dimethylphenyl]methan. Sm. 96° (B. 24, 3542). — IV, 777.
- 6) 1-Methyl-2,3,5-Triphenyltetrahydropyrazol. Sm. 109—110° (B. 21, 1207). — IV, 995.
- 7) 1,2,4-Triphenylhexahydro-1,4-Diazin. Sm. 101—102°. (2HCl, PtCl₄) (G. 23 [1] 17). — IV, 860.
- 8) Verbindung (aus 4-Amido-1-Dimethylamidobenzol u. Desoxybenzofin). Sm. 138—139° (B. 25, 639). — IV, 598.
- 9) Verbindung (aus Benzyleyanid u. Benzylchlorid). Sm. 182° (B. 21, 1310). — II, 1467.
- C₂₁H₂₁N₃** C 77,2 — H 6,4 — N 16,4 — M. G. 342.
- 1) β , γ -Di-Phenylhydrason- α -Phenylbutan. Sm. 172—173° (B. 22, 2133). — IV, 783.
- 2) α , β -Di[Methylphenylhydrason]- α -Phenyläthan. Sm. 151° (B. 21, 2597). — IV, 761.
- 3) III-4-Isopropylformazylbenzol. Sm. 173—174° (B. 31, 1756).
- 4) α -Diäthylphenosafranin. (2HCl, PtCl₄) (B. 16, 470). — IV, 1283.
- 5) β -Diäthylphenosafranin. (2HCl, PtCl₄) (B. 16, 471). — IV, 1283.

- C₂₂H₂₂N₄** 6) Tetramethylphenylensafranin. HCl, (2HCl, PtCl₄), HNO₃ + H₂O (B. 16, 867). — IV, 1299.
- C₂₂H₃₁N₆** 1) α -Tribenzyltetraäthylhydrazin. Sm. 153° (A. 287, 264). — IV, 1328.
 2) β -Tribenzyltetraäthylhydrazin. Sm. 121° (A. 287, 264). — IV, 1328.
 3) $\alpha\gamma$ -Di[Phenylhydrazon]- β -[Methylphenylhydrazon]propan. Sm. 192 bis 193° (B. 27, 221). — IV, 762.
- C₂₂H₁₁S₃** 1) Tribenzyläther d. Trimerkaptomethan. Sm. 98°. + 3PtCl₄ (B. 11, 2265; 13, 238). — II, 1052.
- C₂₂H₂₃N₃** 1) Tri[2-Methylphenyl]guanidin. Sm. 130—131°. HCl, (2HCl, PtCl₄), HNO₃ (B. 6, 443; 12, 1857; A. 286, 364). — II, 460.
 2) Tri[4-Methylphenyl]guanidin. Sm. 123°. HCl + H₂O, (2HCl, PtCl₄), H₂SO₄, HNO₃ (Z. 1868, 610; B. 2, 459, 500; 19, 1768). — II, 489.
- C₂₂H₃₁O₂** 1) 1-Oxy-3-Keto-2-Amyl-1,5-Diphenyl-2,3-Dihydro-R-Penten. Sm. 150,5° (Soc. 51, 433). — III, 253.
 2) Verbindung (aus Camphersäure u. Benzol) (B. 27 [2] 670).
- C₂₂H₃₄O₃** 1) Benzyläther d. Desmotroposantonin. Sm. 182° (G. 25 [1] 475; 25 [2] 352). — II, 1790.
 2) Benzyläther d. Iso-Desmotroposantonin. Sm. 82° (G. 25 [1] 484; 25 [2] 354). — II, 1791.
- C₂₂H₃₄O₄** 1) Phenothymochinon. Fl. (C. 1898 [1] 887).
 2) Thymophenochinon. Sm. bei 127° (C. 1898 [1] 887).
 3) Bensoylhydrosantonid. Sm. 156,5—157° (J. 1878, 827). — II, 1770.
 4) Äthylester d. $\alpha\gamma$ -Diketo- $\alpha\gamma$ -Diphenylheptan- β -Carbonsäure (Ac. d. $\alpha\epsilon$ -Dibenzoylcaprinsäure). Fl. (Soc. 55, 348). — II, 1904.
 5) Diäthylester d. $\beta\delta$ -Diphenyl- α -Buten- $\alpha\gamma$ -Dicarbonsäure. Sd. 240 bis 241°₁₀ (Soc. 75, 250).
 6) Diäthylester d. α -Isootropasäure. Sm. 78—79° (B. 28, 139). — II, 1403.
 7) Diäthylester d. β -Isootropasäure. Fl. (B. 28, 142). — II, 1404.
 8) Diäthylester d. α -Truxillsäure. Sm. 146° (B. 21, 2347). — II, 1901.
 9) Diäthylester d. β -Truxillsäure. Sm. 47—48° (B. 25, 91; 26, 837). — II, 1902.
 10) Diäthylester d. γ -Truxillsäure. Sm. 98° (B. 22, 2260). — II, 1903.
 11) Verbindung (aus Orcin u. Benzaldehyd) (Am. 9, 133). — III, 11.
- C₂₂H₃₁O₅** 1) Sesamin. Sm. 123° (C. 1897 [2] 773).
 2) 1- β -Methylbutylester d. d- $\alpha\beta$ -Dibenzoxylpropionsäure. Sd. 255 bis 270°₁₀ (Soc. 71, 262).
 3) 1- β -Methylbutylester d. d- $\alpha\beta$ -Dibenzoxylpropionsäure. Fl. (Soc. 71, 266).
 4) 1- β -Methylbutylester d. i- $\alpha\beta$ -Dibenzoxylpropionsäure. Sm. 36—36,5°; Sd. 262—268°₁₀ (Soc. 71, 258).
- C₂₂H₃₁O₆** 1) Acetat d. Hämatoxylintetramethyläther. Sm. 178—180° (M. 15, 143; 16, 909). — III, 664.
 C 66,0 — H 6,0 — O 28,0 — M. G. 400.
- C₂₂H₃₁O₇** 1) Tetraäthyläther d. 1,2,3,5,6,7-Hexaoxy-9,10-Anthracinon. Sm. bei 180° (B. 10, 885). — III, 439.
 2) Barbatinsäure oder C₁₉H₁₉O₇. Sm. 186°. K + 1 $\frac{1}{2}$ H₂O, Ba + 3H₂O, Cu (A. 203, 302; B. 30, 358; J. pr. [2] 57, 237). — II, 2054.
 C 61,6 — H 5,6 — O 33,3 — M. G. 432.
- C₂₂H₃₁O₈** 1) Polystichumsäure (Polystichin). Sm. 123—123,2°. Anilinsalz (C. 1895 [1] 887; 1898 [2] 1103).
 2) Tetraäthylester d. Phtaloxydimalonsäure. Sm. 106° (A. 242, 61). — II, 2102.
- C₂₂H₃₄O₁₀** 1) Äthyläther d. Scoparin. Sm. 272° u. Zers. (M. 14, 216; 15, 328). — III, 648.
 C 58,9 — H 5,3 — O 35,7 — M. G. 448.
- C₂₂H₃₁N₁** 1) 1,2-Di[Methylphenylamidomethyl]benzol. Sm. 110° (B. 31, 429).
 C 83,6 — H 7,6 — N 8,8 — M. G. 316.

- C₂₁H₁₄N₂**
- 1,2-Di[2-Methylphenylamidomethyl]benzol. Sm. 148° (B. 31, 421).
 - 1,3-Di[Methyl-4-Methylphenylamido]benzol. Sd. bei 400° (J. pr. [2] 33, 223). — IV, 573.
 - 1,4-Di[Methyl-2-Methylphenylamido]benzol. Sd. 385—390° (i. H-Strom) (J. pr. [2] 34, 67). — IV, 586.
 - 1,4-Di[Methyl-4-Methylphenylamido]benzol. Sm. 153° (J. pr. [2] 33, 235). — IV, 586.
- C₂₂H₁₄N₄**
- 6) Leukobase (aus Malachitgrün). Sm. 155—156° (B. 28, 214).
C 76,7 — H 7,0 — N 16,3 — M. G. 344.
 - 1) 2,2-Di[4-Methylphenylamido]-5-Methyl-2,3-Dihydrobenzimidazol
(Carbotolylendi-4-Tolyltetramin). Sm. 196°. 3HCl (B. 19, 3059). — IV, 623.
- C₂₂H₁₄N₆**
- Base (aus Methylphenylpyridazon). Sm. 200° (A. 263, 49). — IV, 821.
C 71,0 — H 6,4 — N 22,6 — M. G. 372.
 - 1) 5,5'-Dipropyl-1,1'-Diphenyl-3,3'-Bi-1,2,4-Triazol. Sm. 193—194°. — IV, 1331.
 - 2) 5,5'-Diisopropyl-1,1'-Diphenyl-3,3'-Bi-1,2,4-Triazol. Sm. 192—193,5°. — IV, 1331.
 - 3) 5,5'-Diäthyl-1,1'-Di[4-Methylphenyl]-3,3'-Bi-1,2,4-Triazol. Sm. 202 bis 203° (B. 22, 3116). — IV, 1331.
C 87,1 — H 8,2 — N 4,6 — M. G. 303.
- C₂₂H₁₅N**
- 1) 3-Citronellal-β-Naphtochinolin. Sm. 53°. (2HCl, PtCl₄) (B. 27, 2025). — IV, 445.
- C₂₂H₁₈N₂**
- 1) 4',4'-Diamido-4'-Dimethylamido-2'-Methyltriphenylmethan (B. 24, 555). — IV, 1197.
 - 2) 4',5'-Diamido-4'-Dimethylamido-2'-Methyltriphenylmethan. Sm. 154° (B. 24, 3138). — IV, 1197.
 - 3) Tri[4-Amido-3-Methylphenyl]methan. Sm. 155—160° (B. 27, 1815).
 - 4) Tri[*p*-Amido-*p*-Methylphenyl]methan (A. ch. [5] 2, 352). — IV, 1198.
 - 5) 2-Heptyl-4,6-Diphenyl-1,3,5-Triazin. Sm. 28°; Sd. 274—275₁₅ (B. 23, 2384). — IV, 1199.
 - 6) 2-Methyl-4,6-Di[4-Isopropylphenyl]-1,3,5-Triazin. Sm. 68° (B. 30, 2009). — IV, 1199.
- C₂₂H₂₀O₂**
- 1) αβ-Dioxy-αβ-Diphenyl-αβ-Di-R-Tetramethylenyläthan. Sm. 153 bis 154° (Soc. 61, 66). — II, 1103.
 - 2) αα-Diketo-αα-Diphenyldekan (Dibenzoyloktan). Sm. 88—89° (A. ch. [6] 22, 363). — III, 302.
 - 3) αβ-Diketo-αβ-Di[2,4,5-Trimethylphenyl]butan. Sm. 120° (B. 20, 1378). — III, 302.
 - 4) Dithymoläthylenchinon. Sm. 215° (B. 7, 1199; Soc. 31, 263). — II, 999.
 - 5) Diisobutylcarbobenzonsäure. Sm. 148° (A. 184, 169). — II, 1477.
- C₂₂H₂₀O₄**
- 1) d-Benzyläthersantonige Säure. Fl. (G. 25 [2] 358).
 - 2) l-Benzyläthersantonige Säure (G. 25 [2] 359).
 - 3) Benzylätherdesmotroposantonige Säure. Sm. 120—121° (121—123°) (G. 25 [1] 536; 25 [2] 356).
 - 4) Acetat d. β-Oxy-α-Keto-αβ-Di[4-Isopropylphenyl]äthan. (A. d. Cuminoln). Sm. 75° (B. 14, 610). — II, 239.
 - 5) Verbindung (aus 4-Oxy-1-tert. Butylbenzol-3-Carbonsäurealdehyd). Sm. 158° (Am. 16, 642).
C 74,6 — H 7,3 — O 18,1 — M. G. 354.
- C₂₂H₂₀O₄**
- 1) Eugenol-Aethylenäther (Di[3-Methoxyl-1-Allylphenyl]äther d. Aethylen-glykol) (J. 1877, 581). — II, 974.
 - 2) Benzylidesmotroposantoninsäure. K. (G. 25 [2] 354).
 - 3) Benzylisodesmotroposantoninsäure. K. (G. 25 [2] 356).
 - 4) Diäthylester d. Hydropolyporsäure. Fl. (A. 195, 368). — II, 1907.
 - 5) Benzylester d. Santonsäure. Sm. 84,3° (B. 11, 2032). — II, 1789.
 - 6) Diäthylester d. αβ-Diphenylbutan-βγ-Dicarbonensäure (C. 1897 [2] 797).
 - 7) Isobutyryl d. Ostruthin. Sm. 81°. — III, 639.
- C₂₂H₂₀O₅**
- 1) Acetat d. Bidurochinon. Sm. 133—134°. + C₂H₅O (Sm. 128—132°), + C₆H₆ (Sm. 97—100°) (B. 29, 2183).

- $C_{27}H_{46}O_6$ C 68,4 — H 6,7 — O 24,9 — M. G. 386.
- $C_{27}H_{46}O_7$ 1) Aloresinotannol (C. 1898 [2] 118).
C 65,7 — H 6,5 — O 27,8 — M. G. 402.
2) Kosin (siehe auch $C_{27}H_{46}O_8$). Sm. 161° (C. 1897 [2] 1076).
3) Limonin. Sm. 275° (A. 40, 317; 51, 338; B. 12, 685). — III, 636.
4) Divaricansäure. Sm. 129°. Ba + 2H₂O (B. 30, 364; A. 300, 356; J. pr. [2] 57, 245).
- $C_{27}H_{46}O_8$ C 60,8 — H 6,0 — O 33,2 — M. G. 434.
1) Dihydropolystichumsäure (Polystichalbin). Sm. 150—150,5°. Anilinsalz, Phenylhydrazinsalz (C. 1895 [1] 887; 1898 [2] 1103).
- $C_{27}H_{46}O_{10}$ C 58,7 — H 5,8 — O 35,5 — M. G. 450.
1) β , β -Lakton d. β -Oxy- β -Phenylpropan- α γγγ-2-Pentacarbonsäure- α γγγ-Tetraäthylester (Tetraäthylester d. Phthalyl-dimalonsäure). Sm. 48,5°. Na₂ + 2H₂O, K, K₂ + 2H₂O (A. 242, 80). — II, 2101.
2) Tetraäthylester d. 1,4-Phthalyl-di[methandicarbonsäure]. Sm. 110° (B. 27, 2526). — II, 2099.
- $C_{27}H_{46}O_{11}$ C 56,6 — H 5,6 — O 37,8 — M. G. 466.
1) Tetraacetylpicoin. Sm. 170° (Bl. [3] 11, 947). — III, 601.
- $C_{27}H_{46}O_{12}$ C 54,8 — H 5,4 — O 39,8 — M. G. 482.
1) Hesperidin. Sm. 251° u. Zers. (B. 9, 26, 250, 690; 14, 946; Bl. 46, 502; 49, 23). — III, 593.
2) Isohesperidin + 2H₂O (Bl. 46, 501; 49, 21). — III, 594.
3) Pentacetylarginin (A. 154, 240). — III, 571.
4) Tetraäthylester d. 3,6-Diacetoxybenzol-1,2,4,5-Tetracarbonsäure. Sm. 120° (Am. 11, 13). — II, 2095.
- $C_{27}H_{46}O_{13}$ C 53,0 — H 5,2 — O 41,8 — M. G. 498.
1) Tetraacetylglykovanillinsäure. Sm. 181—182° (B. 8, 1141). — III, 578.
- $C_{27}H_{46}O_{15}$ C 38,3 — H 3,7 — O 58,0 — M. G. 690.
1) Glykosetetraweinsäure. Ca₂ + 2H₂O, (Mg₂, 2MgO + 5H₂O), Pb₂ (A. ch. [3] 54, 78). — I, 1049.
- $C_{27}H_{46}N_4$ C 76,3 — H 7,5 — N 16,2 — M. G. 346.
1) Verbindung (aus β -Dibromcampher u. Phenylhydrazin). Sm. 68,5° (G. 23 [1] 333). — IV, 796.
- $C_{27}H_{46}N_6$ C 70,6 — H 6,9 — N 22,5 — M. G. 374.
1) 5-Phenylazo-4,4'-Diamido-2,2'-Di[Dimethylamido]biphenyl. Sm. 220—221° (B. 30, 2944). — IV, 1403.
- $C_{27}H_{47}O$ C 85,7 — H 9,1 — O 5,2 — M. G. 308.
1) α -Keto- α - β -Diphenyldekan. Sm. 61°; Sd. 350—355° (B. 22, 348). — III, 239.
- $C_{27}H_{48}O_2$ C 81,5 — H 8,6 — O 9,9 — M. G. 324.
1) Dithymoläthylen. Sm. 170—171° (B. 7, 1198; Soc. 31, 263). — II, 999.
2) Verbindung (aus R-Tetramethylenphenylketon). Sd. 320°₆₀ (Soc. 61, 64). — II, 1071.
- $C_{27}H_{48}O_3$ C 77,6 — H 8,2 — O 14,1 — M. G. 340.
1) Phenolhemiampher. Fl. (Bl. [3] 4, 726). — III, 487.
- $C_{27}H_{48}O_4$ C 74,2 — H 7,8 — O 18,0 — M. G. 356.
1) Äthyläther d. Bidurochinon. Sm. 128—130° (B. 29, 2182).
2) Anhydrid d. Camphocarbonsäure. Sm. 195—196° (M. 2, 242; A. 281, 392). — I, 628.
3) polym. Aldehyd d. 4-Oxy-1-tert. Butylbenzol-3-Carbonsäure. Sm. 158° (Am. 16, 642). — III, 91.
- $C_{27}H_{48}O_5$ C 71,0 — H 7,5 — O 21,5 — M. G. 372.
1) Monacetat d. Dihydrobidurochinon. Sm. 153° (B. 29, 2184).
2) Diäthylester d. 1-Keto-5-Methyl-3-[4-Isopropylphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäure. Sm. 112° (A. 303, 242).
- $C_{27}H_{48}O_7$ C 65,3 — H 6,9 — O 27,7 — M. G. 404.
1) Albaspidin. Sm. 148—149° (C. 1896 [2] 1037).
2) Hesperinsäure. Ca (Bl. 46, 500). — II, 2049.
- $C_{27}H_{48}O_8$ C 62,8 — H 6,7 — O 30,5 — M. G. 420.
1) Dibenzylidenverbindung d. Oktit $C_8H_{16}O_8$ (aus Rosaceen). Sm. 230° (Bl. [3] 21, 89).
2) Tetraäthylester d. δ -Phenyl- α -Buten- α γγγ-Tetracarbonsäure (T. d. Benzylidencarboxylglutakonsäure). Sm. 78°; Sd. 240°₁₁₋₁₂ (A. 222, 260; B. 23, 3183; Soc. 59, 748; J. pr. [2] 54, 368). — II, 2077.

- $C_{22}H_{28}O_{12}$ C 54,5 — H 5,8 — O 69,7 — M. G. 484.
- 1) Tetraäthylester d. 2,5-Diacetoxy-*p*-Dihydrobenzol-1,3,4,6-Tetra-carbonsäure. Sm. 142° (*Am.* 11, 14). — II, 2094.
- $C_{22}H_{28}O_{15}$ C 49,6 — H 5,3 — O 45,1 — M. G. 532.
- 1) Verbindung (aus d. Rosekastanie) (*J.* 1863, 591). — III, 583.
- $C_{22}H_{28}N_2$ C 82,5 — H 8,7 — N 8,7 — M. G. 320.
- 1) $\alpha\beta$ -Di[4-Isopropylbensylidenamido]äthan. Sm. 63–64° (*B.* 20, 270). — III, 56.
- 2) Base (aus 1-Oxy-1,3,3-Trimethyl-1,1-Dihydropseudoindol). Sm. 129° (*M.* 17, 269). — IV, 225.
- $C_{22}H_{28}N_4$ C 75,8 — H 8,0 — N 16,1 — M. G. 348.
- 1) Campherosazon. Sm. 55° (*G.* 16, 137; 17, 97). — IV, 796.
- $C_{22}H_{28}N_6$ C 70,2 — H 7,4 — N 22,3 — M. G. 376.
- 1) α -Diäthylentriphenylhydrazin (*B.* 26, 1865). — IV, 660.
- 2) β -Diäthylentriphenylhydrazin. Sm. 167–168° (*B.* 26, 1866). — IV, 660.
- 3) 4,4'-Di[1-Piperidylazo]biphenyl. Sm. 177° (*A.* 235, 271). — IV, 1581.
- $C_{22}H_{28}Cl_2$ C 81,0 — H 9,2 — O 9,8 — M. G. 326.
- $C_{22}H_{30}O_2$ 1) Dithymoläthan. Sm. 185° (*B.* 7, 1197; 11, 287). — II, 997.
- 2) Di[3-Methyl-6-Isopropylphenyläther] d. $\alpha\beta$ -Dioxyäthan. Sm. 99° (*B.* 26, 32). — II, 770.
- 3) Benzoesäure d. Isocedrol. Sd. 221–223° (*B.* [3] 17, 487).
- $C_{22}H_{30}O_3$ C 77,2 — H 8,8 — O 14,0 — M. G. 342.
- 1) Anhydridigitoxigenin. Sm. 215–220° (*B.* 31, 2458).
- 2) Digitaligenin, oder $C_{22}H_{30}O_3$. Sm. 210–212° (*B.* 25 [2] 680; 31, 2460).
- 3) Lorbeerampfer (Laurin) (*Berz. J.* 5, 263; *A.* 41, 329; 88, 354). — III, 636.
- 4) Anhydrid d. Oxymethylenampfer. Sm. 188–189° (*A.* 281, 364). — III, 116.
- $C_{22}H_{30}O_4$ C 73,7 — H 8,4 — O 17,9 — M. G. 358.
- 1) Tetraäthyläther d. 1,3,1',3'-Tetraoxy-*p*-Äthylbiphenyl. Sm. 90 bis 92° (*M.* 11, 417). — II, 1038.
- 2) Verbindung (aus Campheroxalsäure). Sm. 190–191° (*Am.* 20, 324, 328; 21, 252).
- $C_{22}H_{30}O_5$ C 70,6 — H 8,0 — O 21,4 — M. G. 374.
- 1) Anhydrid d. Camphocarbonsäure. Sm. 265° u. *Zers.* (*M.* 2, 245). — I, 628.
- $C_{22}H_{30}O_6$ C 67,7 — H 7,7 — O 24,6 — M. G. 390.
- 1) Diäthylester d. $\beta\gamma$ -Diketo- δ -[4-Isopropylphenyl]heptan- $\gamma\delta$ -Dicarbon-säure (D. d. Cuminyldenbisacetessigsäure). Sm. 137° (*B.* 31, 2774; *A.* 303, 240).
- $C_{22}H_{30}O_7$ C 65,7 — H 7,4 — O 27,6 — M. G. 406.
- 1) Triäthylester d. Äthylmalonsäurebensylidenacetessigsäure. Sm. 154° (*B.* 27, 2342). — II, 2049.
- $C_{22}H_{30}O_8$ C 62,6 — H 7,1 — O 30,3 — M. G. 422.
- 1) 1,1'-Dimethyläther d. 2,4,6,2',4',6'-Hexaketo-1,1'-Dioxy-3,3,5,5,3',3',5',5'-Oktomethyl-Dodekahydrobiphenyl. Sm. 133° (*B.* 26, 2034). — II, 1031.
- 2) Tetraäthylester d. Benzoldi-1,2-[Äthyl- $\beta\beta$ -Dicarbon-säure] (T. d. α -Nylendimalonsäure). Fl. N_2 (*B.* 17, 452; *Soc.* 53, 16). — II, 2075.
- 3) Tetraäthylester d. Benzoldi-1,3-[Äthyl- $\beta\beta$ -Dicarbon-säure]. Fl. N_2 (*B.* 21, 31). — II, 2075.
- 4) Tetraäthylester d. Benzoldi-1,4-[Äthyl- $\beta\beta$ -Dicarbon-säure]. Sm. 51° N_2 (*B.* 21, 34). — II, 2076.
- $C_{22}H_{30}O_{15}$ C 49,4 — H 5,6 — O 44,9 — M. G. 534.
- 1) Inulinpentacetat (*A.* 160, 84). — I, 1096.
- $C_{22}H_{30}N_2$ C 82,0 — H 9,3 — N 8,7 — M. G. 322.
- 1) polym. Isoamyldenphenylamin. Sm. 97° u. *Zers.*; Sd. 227°. 2HCl, (2HCl, PtCl₄) (*B.* 12, 74; 25, 2041). — II, 444.
- 2) Disoamyliendiphenyldiamin (*A. Spl.* 3, 350; *B.* 12, 298). — II, 444.
- $C_{22}H_{30}N_4$ C 75,4 — H 8,6 — N 16,0 — M. G. 350.
- 1) $\delta\epsilon$ -Di[Phenylhydrazon]- $\beta\gamma$ -Dimethyloktan. Sm. 163° (*B.* 31, 1222).
- $C_{22}H_{30}Ilg$ 1) Quecksilberdi-pentamethylphenyl. Sm. 206° (*B.* 22, 1220). — IV, 1712.

- $C_{11}H_{11}N$ C 85,4 — H 10,0 — N 4,5 — M. G. 309.
1) Di[β -Isoamylphenyl]amin. Sd. 319—321°. (2HCl, PtCl₄) (B. 20, 1258). — II, 563.
- $C_{22}H_{32}O_2$ C 80,4 — H 9,8 — O 9,8 — M. G. 328.
1) Verbindung (aus d. Aethylester d. Säure C₁₀H₂₀O₂, aus Colophonium). Fl. (J. r. 20, 477). — II, 1674.
- $C_{22}H_{32}O_3$ C 76,7 — H 9,3 — O 14,0 — M. G. 344.
1) Anacardsäure. Sm. 26°. Mg + H₂O, Ca + H₂O, Ba + H₂O, Pb, Fe, + 3H₂O, Ag (A. 63, 141; B. 20, 1861). — II, 1686.
- $C_{22}H_{32}O_4$ C 73,3 — H 8,9 — O 17,8 — M. G. 360.
1) Digitoxigenin. Sm. 230° (C. 1898 [2] 791; B. 31, 2455). — III, 582.
- $C_{22}H_{32}O_6$ C 67,3 — H 8,1 — O 24,5 — M. G. 392.
1) Triacetat d. 1,2,3-Trioxo- β -Diisoamylbenzol. Sm. 145° (B. 25, 2656). — II, 1026.
- $C_{22}H_{32}O_7$ C 64,7 — H 7,8 — O 27,5 — M. G. 408.
1) Quercitweinsäure. C₂₀ + 2H₂O (BEAUMELOT, Chim. org. synth. 2, 220). — I, 795.
- $C_{22}H_{32}O_{11}$ C 54,1 — H 6,5 — O 39,3 — M. G. 440.
1) Hexaäthylester d. β -Buten- $\alpha\alpha\beta\gamma\delta\delta$ -Hexacarbonsäure. Sm. 175°; Sd. 210—212°₁₅ (M. 9, 452). — I, 872.
- $C_{22}H_{32}N_2$ C 81,5 — H 9,9 — N 8,6 — M. G. 324.
1) Base (aus Isoamylidenphenylamin). Sd. 300—315°. 2HCl (B. 25, 2044). — II, 444.
- $C_{22}H_{33}N$ C 75,0 — H 9,1 — N 15,9 — M. G. 352.
1) Diisoamylidiphenyltetrazon. Sm. 86,5° (A. 252, 286). — IV, 1308.
- $C_{27}H_{33}N$ C 84,9 — H 10,6 — N 4,5 — M. G. 311.
1) 2-Tridekylchinolin. Sm. 31—32°. (2HCl, PtCl₄) (B. 23, 2363). — IV, 344.
- $C_{27}H_{34}O_2$ C 80,0 — H 10,3 — O 9,7 — M. G. 330.
1) Aethylester d. Dextropimarsäure. Sm. 52° (B. 19, 2171). — II, 1437.
2) α -Acetat d. Oxycampherpinakonan. Sm. 74° (B. 27, 2349; A. 292, 16).
3) β -Acetat d. Oxycampherpinakonan. Sm. 109° (B. 27, 2349; A. 292, 17).
- $C_{27}H_{34}O_3$ C 76,3 — H 9,8 — O 13,9 — M. G. 346.
1) Caïnecetin (J. 1862, 488). — III, 573.
2) Acetat d. Vitin. Sm. 239° u. Zers. (M. 14, 728). — III, 650.
3) Aethylester d. Camphanoncamphersäure. Sm. 79° (G. 27 [1] 187).
4) Aethylester d. Säure C₂₀H₃₀O₃ (aus Colophonium). Fl. (J. r. 20, 477). — II, 1674.
- $C_{27}H_{34}O_4$ C 72,9 — H 9,4 — O 17,7 — M. G. 362.
1) Gurjunsäure. Sm. 220°. Ca, Ba, Ag₂ (J. 1862, 462). — II, 1860.
2) Metacopaiväsäure. Sm. 205—206°. Cu + H₂O, Ag₂ + H₂O (A. 148, 153). — II, 1860.
- $C_{27}H_{34}O_7$ C 64,4 — H 8,3 — O 27,3 — M. G. 410.
1) Verbindung (aus d. α -Monomethylester d. d-Camphersäure u. Phenylcarbonimid). Sm. 62° (B. 25 [2] 725). — I, 724.
2) Verbindung (aus d. β -Monomethylester d. d-Camphersäure u. Phenylcarbonimid). Sm. 78—79° (B. 25 [2] 725). — I, 724.
- $C_{27}H_{34}O_{10}$ C 57,6 — H 7,4 — O 34,9 — M. G. 458.
1) Dulcamarin. Pb + 3(5)H₂O (J. 1875, 828). — III, 582.
2) Tetraäthylester d. β -Diketo- β -Isopropylheptan- $\alpha\gamma\epsilon\eta$ -Tetracarbonsäure (T. d. Isobutylidenbisacetondicarbonsäure). Sm. 104° (A. 288, 357).
- $C_{27}H_{34}O_{12}$ C 53,9 — H 6,9 — O 39,2 — M. G. 490.
1) Diäthylester d. Tetrapropionylschleimsäure. Sm. 118—120° (M. 15, 200).
2) Hexaäthylester d. Butan- $\alpha\beta\gamma\gamma\delta\delta$ -Hexacarbonsäure. Sm. 56° (B. 18, 1046; 17, 2786). — I, 872.
- $C_{27}H_{36}O$ C 83,6 — H 11,4 — O 5,0 — M. G. 316.
1) Masopin. Sm. 155° (A. 46, 124). — III, 560.
2) Pentadekylphenylketon. Sm. 59°; Sd. 250,5—251°₁₅ (155°) (B. 19, 2982; 21, 2266; 29, 1327). — III, 157.
3) α -Aethyläther d. Oxycampherpinakonan. Sm. 58° (B. 27, 2348; A. 292, 12).
4) β -Aethyläther d. Oxycampherpinakonan. Sm. 73° (B. 27, 2349; A. 292, 13).

- C₇₇H₉₆O**
C₇₇H₉₆O₂
- 5) Verbindung (aus Dichloräthyläther). Sd. oberh. 300° (A. 178, 10).
C 79,5 — H 10,8 — O 9,6 — M. G. 332.
- 1) Acetat d. Cinchol. Sm. 124° (A. 228, 295). — II, 1069.
 - 2) Acetat d. Cupreol. Sm. 126° (A. 228, 293). — II, 1068.
 - 3) Acetat d. Quebrachol. Sm. 115° (unc.) (A. 211, 274). — II, 1068.
 - 4) Phenylester d. Palmitinsäure. Sm. 45°; Sd. 249,5°₄₅ (B. 17, 1380). — II, 662.
- C₇₇H₉₆O₂**
- 1) Caperatid. Sm. 47° (J. pr. [2] 57, 429).
C 59,5 — H 8,1 — O 32,3 — M. G. 444.
- C₇₇H₉₆O₃**
- 1) Mannitantetrabutyrat (A. ch. [3] 47, 321). — I, 424.
C 55,5 — H 7,6 — O 36,9 — M. G. 476.
- C₇₇H₉₆O₁₁**
- 1) Pinipikrin. Sm. 80° (J. 1853, 572; 1854, 658). — III, 601.
C 83,0 — H 11,9 — O 5,0 — M. G. 318.
- C₇₇H₉₆O**
- 1) Cholester (oder C₃₀H₅₄O?). Sm. 139° (B. 17, 871; 18, 1803; A. 234, 377) — II, 1069.
 - 2) Heptylalkohol (oder C₃₅H₇₄O). Sm. 172° (Soc. 53, 676; Bl. 42, 150). — II, 1069.
 - 3) 4-Oxy-1-Hexadekylbenzol. Sm. 77,5°; Sd. 260—261°₁₆ (B. 19, 2084). — II, 777.
 - 4) Cetylphenyläther. Sm. 41,8°; Sd. 200°₁₀ (B. 12, 182). — II, 654.
- C₇₇H₉₆O₂**
- 1) Diisoamyläther d. 3,5-Dioxy-*p*-Isoamyl-1-Methylbenzol (Z. 1867, 561). — II, 961.
C 75,4 — H 10,9 — O 13,7 — M. G. 350.
- C₇₇H₉₆O₃**
- 1) Acetat d. Alkohol C₃₀H₅₈O₂ (aus Dicumpoly). Sm. 54° (Bl. [3] 11, 618).
C 72,1 — H 10,4 — O 17,5 — M. G. 366.
- C₇₇H₉₆O₄**
- 1) Diäthylester d. Allocamphothetischen Säure. Sm. 67—68° (Soc. 67, 344).
C 61,4 — H 8,8 — O 29,8 — M. G. 430.
- C₇₇H₉₆O₅**
- 1) Caperatsäure. Sm. 132°. Ba, Ag, (B. 30, 365; J. pr. [2] 57, 427).
 - 2) Dipropylester d. norm. Dicaprylweinsäure. Sd. 242—243°₄₀ (B. 26 [2] 923; Bl. [3] 9, 683; [3] 11, 314).
 - 3) Dibutylester d. Divalerylweinsäure. Sd. 340—350° (Bl. [3] 11, 313).
 - 4) Diisobutylester d. Divalerylweinsäure. Fl. (Bl. [3] 11, 368).
- C₇₇H₉₆O₆**
- 1) Digitalein (J. 1851, 567; 1858, 528; 1872, 763; 1873, 816; 1875, 840; Fr. 23, 22). — III, 580.
C 83,3 — H 12,3 — N 4,4 — M. G. 317.
- C₇₇H₉₆N**
- 1) Cetylamidobenzol. Sm. 42°. (2HCl, PtCl₄) (A. 83, 29). — II, 336.
 - 2) isom. Cetylbenzol. Sm. 53°; Sd. 254—255°₁₄. (2HCl, PtCl₄) (B. 19, 2984). — II, 566.
- C₇₇H₉₆O₂**
- 1) Behenensäure. Sm. 57,5°. Mg, Ba, Ag (A. 143, 42; J. pr. [2] 42, 380; B. 25, 964, 2668; 26, 640, 1867; 27, 3397). — I, 536.
C 71,7 — H 10,9 — O 17,4 — M. G. 368.
- C₇₇H₉₆O₄**
- 1) μ -Diketobehensäure (Dioxybehensäure). Sm. 95°. Ag (A. 143, 46; B. 26, 644; 28, 276; 29, 810, 812). — I, 696.
 - 2) Diundekylensäure. Sm. 29—30°; Sd. 275°₁₅. Ca, Ba, Ag (B. 17, 2986; 19, 2226). — I, 523.
- C₇₇H₉₆O₅**
- 1) Monoacetat d. Verb. C₁₀H₂₀O₄ (aus Isobutyraldehyd). Sd. 240—242° (Soc. 43, 95). — I, 947.
C 66,0 — H 10,0 — O 24,0 — M. G. 400.
- C₇₇H₉₆O₆**
- 1) Diacetyloxystearinsäure (J. pr. [2] 40, 240). — I, 636.
C 78,1 — H 12,4 — O 9,5 — M. G. 338.
- C₇₇H₉₆O₇**
- 1) Brassidinsäure. Sm. 60° (65°; Sd. 282°₃₀ (180°). Na, Mg, Ba, Pb, Ag (A. 143, 54; B. 4, 444; 19, 3321; 25, 962; 29, 1325; J. 1853, 444; 1877, 728—729; J. pr. [2] 42, 369; [2] 50, 65, 68, 79, 81). — I, 528.
 - 2) Erucasäure. Sm. 33—34°; Sd. 281°₃₀ (179°). Na, Ba, Pb, Ag (A. 69, 4; 127, 182; 143, 40; B. 4, 442; 19, 3320; 22, 819; 29, 1325; J. pr. [2] 42, 368; [2] 50, 78, 81; J. 1853, 445; 1876, 579). — I, 527.
 - 3) Isoerucasäure. Sm. 54—56°. Na, Ca, Ba, Ag (J. pr. [2] 45, 301; [2] 49, 58; [2] 50, 66, 81).

- C₂₁H₄₁O₅** C 74,6 — H 11,9 — O 13,5 — M. G. 354.
 1) **Oxybehensäure** (Ketobehensäure). Sm. 83—84° (80°). Na, Ag (B. 25, 963, 2669; 28, 839, 1867, 27, 176; J. pr. [2] 48, 336; [2] 49, 200; [2] 50, 378). — I, 614.
 2) **Oxyerucasäure**. Ba (A. 143, 52). — I, 614.
 3) **Phellonsäure**. Sm. 96° (J. 1884, 1461). — III, 627.
 4) **Acetylarchinsäureanhydrid**. Sm. 60° (B. 11, 2031). — I, 464.
 5) **Aethylester d. β -Keto- γ -Oktylundekan- γ -Carbonsäure** (Aethylester d. Dioktylacetessigsäure). Sd. 340—342° (A. 204, 9). — I, 614.
 C 71,3 — H 11,3 — O 17,3 — M. G. 370.
- C₂₁H₄₁O₄**
 1) **Diäthylester d. Hexadekan- α - γ -Dicarbonsäure**. Sm. 43° (A. 261, 126). — I, 690.
 C 68,4 — H 10,9 — O 20,7 — M. G. 386.
- C₂₁H₄₁O₃**
 1) **Cetylid**. Sm. 62—65° (H. 3, 334).
 C 35,0 — H 5,6 — O 59,4 — M. G. 754.
- C₂₁H₄₁O₂**
 1) **Milchsuckerweinsäure**. Ca₂ + 4H₂O (A. ch. [3] 54, 82). — I, 1064.
 C 81,5 — H 13,6 — O 4,9 — M. G. 324.
 1) **γ -Ketodokosan** (Hexypentadekylketon). Sm. 56—57°; Sd. 231°₁₀ (B. 15, 1718; Soc. 63, 463). — I, 1006.
- C₂₁H₄₁O**
 C 77,6 — H 12,9 — O 9,4 — M. G. 340.
 1) **Behensäure**. Sm. 83° (80—82°). Na, Ba, Pb, Zn, Ag (A. 64, 271, 343, 346; J. pr. [2] 42, 379; [2] 49, 61, 111; [2] 50, 71). — I, 447.
 2) **Säure** (aus μ - ν -Diketobehensäure). Sm. 74—75° (B. 28, 278).
 3) **Aethylester d. Archinsäure**. Sm. 50°; Sd. 284—286°₁₀₀ (A. 89, 1; 97, 261; 101, 97; J. 1884, 1193; J. pr. [2] 48, 488). — I, 447.
 C 74,1 — H 12,4 — O 13,5 — M. G. 356.
- C₂₁H₄₁O**
 1) **α -Oxybehensäure**. Sm. 96—97° (G. 27 [2] 299).
 2) **α -Oxyarachinäthyläthersäure**. Sm. 53—56°. Na, Ba, Pb (M. 17, 537).
 3) **Aethylester d. α -Oxyarachinsäure**. Sm. 62—66° (M. 17, 535).
 C 70,9 — H 11,8 — O 17,2 — M. G. 372.
- C₂₁H₄₁O**
 1) **Dioxybehensäure** (aus Brassidinsäure). Sm. 98—99° (99—100°). Na, Ag (M. 10, 196; J. pr. [2] 50, 70, 80). — I, 636.
 2) **Dioxybehensäure** (aus Erucasäure). Sm. 132—133° (127°; 130°). Na, Ca, Ba, Zn, Cu, Ag (A. 143, 53; J. pr. [2] 39, 336; [2] 42, 382; [2] 50, 67; M. 9, 948). — I, 636.
 3) **Dioxybehensäure** (aus Isoerucasäure). Sm. 86—88°. Na, Ag (J. pr. [2] 49, 63; [2] 50, 67).
- C₂₁H₄₁O**
 C 68,0 — H 11,3 — O 20,6 — M. G. 388.
 1) **Isomylester d. Trioxyessigtrioisomyläthersäure**. Sd. 190°₁₄ (A. 264, 34). — I, 737.
 2) **Erythritmonostearat** (BERTHELOT, Chim. org. synth. 2, 224). — I, 446.

C₂₃-Gruppe mit drei Elementen.

- C₂₃H₁₀O₇Cl₂** 1) **Dichlordicarbonylbinaphtylen** (M. 1, 256). — II, 1730.
C₂₃H₁₀O₇Br₂ 1) **Dibromdicarbonylbinaphtylen** (M. 1, 257). — II, 1730.
C₂₃H₁₀O₇N₄ C 67,0 — H 2,5 — O 16,2 — N 14,2 — M. G. 394.
 1) **Indophan**. Na + H₂O, K + H₂O (A. 157, 342). — II, 863.
C₂₃H₁₀O₆N₂ C 66,3 — H 2,5 — O 24,1 — N 7,0 — M. G. 398.
 1) **2,6-Di[1,2-Phталylamido]-1,4-Benzochinon**. Sm. 277° (G. 16, 254). — III, 340.
C₂₃H₁₀O₆N₂ C 39,2 — H 1,5 — O 42,7 — N 16,6 — M. G. 674.
 1) **Lakton d. α -Oxy- α' -Phenyl- α'' -Di[2,3,5,6-Tetranitro-4-Methylphenyl]methan- α -2-Carbonsäure**. Sm. 289° (A. 299, 293).
C₂₃H₁₁O₅Br₂ 1) **Pentabromoreinphtalein** (A. 183, 70). — II, 2066.
C₂₃H₁₁O₅N₂ C 71,7 — H 3,3 — O 17,4 — N 7,6 — M. G. 368.
 1) **1,3-Di[1,2-Phталylamido]benzol**. Sm. 252° (B. 10, 1165). — IV, 578.
 2) **1,4-Di[1,2-Phталylamido]benzol**. Sm. 295° u. Zers. (B. 10, 1164). — IV, 595.
C₂₃H₁₂O₅Br₄ 1) **Tetrabrom- β -Orcinphtalein** (A. 183, 69; B. 29, 2637). — II, 2066.
 2) **Tetrabrom- γ -Orcinphtalein** (B. 29, 2639).

- C₂₇H₁₁O₂Br₃** 3) **Aethyläther d. Tetrabromfluorescein** (roth). K₂ + H₂O (A. 183, 46). — II, 2063.
- 4) **isom. Aethyläther d. Tetrabromfluorescein** (farblös) (A. 183, 50). — II, 2064.
- C₂₇H₁₁O₂Br₄** 1) **Hexabromorecinaurin?** (B. 13, 554). — II, 1125.
- C₂₇H₁₁O₂N₇** C 66,0 — H 3,0 — O 24,0 — N 7,0 — M. G. 400.
- 1) **2,6-Di[Phthylamido]-1,4-Dioxybenzol**. Sm. noch nicht bei 310° (G. 16, 254). — II, 1809.
- 2) **Dinitrat d. 2,2'-Binaphtylenglykol**. Sm. 190° u. Zers. (A. ch. [5] 28, 175). — II, 1105.
- C₂₇H₁₁O₂N₈** C 41,8 — H 1,9 — O 43,0 — N 13,3 — M. G. 632.
- 1) **Hexanitroreicinaurin + H₂O, HNO₃, Na, Ag** (B. 13, 560). — II, 1125.
- C₂₇H₁₁N₂S₂** 1) **Bi- α -Naphththiazol** (B. 20, 1804). — II, 870.
- 2) **Bi- β -Naphththiazol**. Zers. bei 300° (B. 20, 1801; 25, 1903). — II, 888.
- C₂₇H₁₁N₂S₄** 1) **Bi- α -Naphththiazol-1,1-Disulfid**. Sm. 180° (B. 24, 1409). — II, 871.
- 2) **Bi- β -Naphththiazoldisulfid**. Sm. 194° (B. 21, 2626; 24, 1408). — II, 889.
- C₂₇H₁₁OCl** 1) **Chlorhydrin d. 2,2'-Binaphtylenglykol**. HCl + 3H₂O, + C₆H₆O₂ (A. ch. [5] 28, 170). — II, 1104.
- C₂₇H₁₁OCl₂** 1) **Anhydro- $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[1-Oxynaphtyl]äthan**. Sm. 238–239° u. Zers. (J. pr. [2] 47, 68). — II, 1007.
- 2) **Anhydro- $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[2-Oxynaphtyl]äthan**. Sm. 241° (236°) u. Zers. (J. r. 23, 221; J. pr. [2] 47, 66). — II, 1007.
- C₂₇H₁₁OBr** 1) **Bromhydrin d. 2,2'-Binaphtylenglykol**. HBr + 3H₂O, + C₆H₆O₂ (A. ch. [5] 28, 161). — II, 1104.
- C₂₇H₁₁OBr₂** 1) **Dibromid d. 2,2'-Binaphtylenglykolbromhydrin**. Zers. bei 280° (A. ch. [5] 28, 165). — II, 1104.
- C₂₇H₁₁OJ₂** 1) **Jodid d. 2,2'-Binaphtylenjodhydrin** (A. ch. [5] 28, 172). — II, 1104.
- C₂₈H₁₁O₂N** C 81,7 — H 4,0 — O 9,9 — N 4,3 — M. G. 323.
- 1) **1,8-Anhydrid d. 8-[1-Naphtoyl]amidonaphtalin-1-Carbonsäure**. Sm. 150° (J. pr. [2] 38, 168). — II, 1450.
- 2) **1,8-Anhydrid d. 8-[2-Naphtoyl]amidonaphtalin-1-Carbonsäure**. Sm. 197–198° (J. pr. [2] 38, 169). — II, 1450.
- C₂₈H₁₁O₂N₂** C 71,9 — H 3,5 — O 13,1 — N 11,4 — M. G. 367.
- 1) **Nitrorosindon** (A. 286, 215). — IV, 1056.
- 2) **isom. Nitrorosindon** (B. 31, 3063).
- C₂₈H₁₁O₂N** C 74,3 — H 3,7 — O 18,0 — N 3,9 — M. G. 355.
- 1) **Nitrat d. 2,2'-Binaphtylenglykol**. + C₆H₆O₂ (A. ch. [5] 28, 176). — II, 1105.
- 2) **Acetat d. Dinaphtoresorufin** (A. d. Oxyketodinaphtoxazin). Sm. bei 200° (B. 28, 358). — IV, 476.
- C₂₈H₁₁O₂N₃** C 60,7 — H 3,9 — O 25,7 — N 9,6 — M. G. 435.
- 1) **Pyrenpikrat**. Sm. 222° (B. 10, 2143). — II, 284.
- C₂₇H₁₁ON₂** C 82,0 — H 4,3 — O 5,0 — N 8,7 — M. G. 322.
- 1) **3,5-Di[2-Naphtyl]-1,2,4-Oxiazol**. Sm. 175° (B. 20, 226). — II, 1455.
- 2) **Oxyphenylnaphtophenazin**. Sm. 229–231°. Na, Ag (A. 296, 23). — IV, 1090.
- 3) **Rosindon** (Rosindulon). Sm. 261–262° (259°) (B. 24, 586; 28, 349; 30, 2627; 31, 305, 2429; A. 266, 238; 262, 243). — IV, 1055.
- 4) **Isorosindon[9]**. Sm. 223–224°. HCl (B. 29, 2755). — IV, 1056.
- 5) **10,12-Anhydrid d. 10-Oxy- $\alpha\beta$ -Naphtophenazin-12-Phenyloxyhydrat** (Isorosindon-10). Sm. 267° (B. 31, 3104).
- C₂₇H₁₁O₂N₃** C 78,1 — H 4,1 — O 9,5 — N 8,3 — M. G. 338.
- 1) **2-Oxyrosindon [5]** (A. 286, 218). — IV, 1058.
- 2) **3-Oxyrosindon [5]** (A. 286, 217). — IV, 1058.
- 3) **9-Oxyrosindon [5]** (Naphthosafranöl) (A. 272, 322; B. 29, 2756; 31, 2482, 2484). — IV, 1058, 1059.
- 4) **2-Oxyisorosindon[9]**. HCl (A. 272, 319, 322; 286, 221; B. 31, 307). — IV, 1059.
- 5) **N-1-Naphtylsafranöl**. Na (B. 31, 1185).
- 6) **N-2-Naphtylsafranöl**. Na (B. 31, 1185).
- 7) **Verbindung** (aus ?-Nitro-1,8-Naphtochinon). Zers. unterh. 80° (B. 21, 1462). — III, 398.
- 8) **Verbindung** (aus 1,2-Naphtochinon-4 Sulfonsäure u. 2-Amido-1-Phenylamidobenzol). Sm. 212° (B. 31, 2436).

- $C_{27}H_{11}O_2N_4$ C 72,1 — H 3,8 — O 8,7 — N 15,3 — M. G. 366.
 1) 5,7-Anhydrid d. 10-Nitro-5-Amido- β -Naphthophenazin-7-Phenyl-oxhydrat. Zers. bei 242° (B. 31, 3079).
- $C_{27}H_{11}O_3S$ 1) Thiooxyperoxyd d. 1-Oxynaphthalin-2-Dithiocarbonsäure. Sm. 242 bis 245° (J. pr. [2] 54, 418).
- $C_{27}H_{11}O_5N_2$ C 74,6 — H 3,9 — O 13,6 — N 7,9 — M. G. 354.
 1) Rosindonsäure. Sm. 209°. Ag (A. 262, 244). — IV, 1056.
- $C_{27}H_{11}O_4N_3$ C 71,3 — H 3,8 — O 17,3 — N 7,6 — M. G. 370.
 1) *p*-Azonaphthalin-2,2'-Dicarbonsäure (B. 5, 1022). — IV, 1466.
 2) Dioximidophthalconcarbolsäure. Sm. 272—273° (B. 17, 1395). — II, 1915.
 3) Acetat d. Oxychinakridon. Sm. noch nicht bei 360° (B. 29, 80). — IV, 1087.
- $C_{27}H_{11}O_4Cl$ 1) Dibenzylester d. 3,4,5,6-Tetrachlorbenzol-1,2-Dicarbonsäure. Sm. 92—93° (B. 30, 784).
- $C_{27}H_{11}O_4Br$ 1) α ,2-Lakton d. *p*-Dibrom- α -Oxy-*p*-Acetoxytriphenylmethan-2-Carbonsäure. Sm. 170—172° (B. 13, 1616). — II, 1910.
- $C_{27}H_{11}O_4Br$ 1) α ,2'-Lakton d. *p*-Tetrabrom- α ,4',4''-Trioxytriphenylmethan-4'-Aethyläther-2'-Carbonsäure (Aethyläther d. laktoiden Tetrabromphenolphthalin). Sm. 237° (B. 30, 178).
 2) Aethylester d. chinoiden Tetrabromphenolphthalin. Sm. 210—215°. K (B. 30, 177).
- $C_{27}H_{11}O_4N_4$ C 63,8 — H 3,4 — O 19,3 — N 13,5 — M. G. 414.
 1) 2-[4-Nitrophenylamido-4-[4-Nitrophenyl]imido-1-Keto-1,4-Dihydronaphthalin. Sm. 143° (B. 21, 394). — III, 376.
 2) Verbindung (aus d. Nitril d. $\alpha\beta$ -Di[2-Nitrophenyl]propionsäure). Sm. 189,5° (B. 19, 2641). — II, 1318.
- $C_{27}H_{11}O_4Br$ 1) Tetrabromocinaurin. Na + 4H₂O (B. 13, 555). — II, 1125.
- $C_{27}H_{11}O_8S$ 1) Sulfat d. 2,2-Binaphtylenglykol. + H₂SO₄ + H₂O + C₆H₆O₂ (A. ch. [5] 28, 174). — II, 1105.
- $C_{27}H_{11}O_6N_2$ C 65,7 — H 3,5 — O 23,9 — N 6,9 — M. G. 402.
 1) Dimethylester d. Triphenidioxazincarbolsäure (B. 30, 995). — IV, 1083.
 2) *s*-Di[1-Nitro-2-Naphtylamid] d. Oxalsäure. Sm. oberh. 270° (Soc. 61, 466). — II, 620.
- $C_{27}H_{11}O_6N_4$ C 61,4 — H 3,3 — O 22,3 — N 13,0 — M. G. 430.
 1) 1,4-Dioxybenzol-2,3,5,6-Tetracarbonsäureanhydrodiphenylhydrazid (A. 268, 277). — IV, 733.
- $C_{27}H_{11}O_{11}N_2$ C 54,8 — H 2,9 — O 36,5 — N 5,8 — M. G. 482.
 1) α -Oxy- α -Phenyl- $\alpha\alpha$ -Di[*p*-Nitrophenyl]methan- $\alpha^2, \alpha^4, \alpha^4$ -Tricarbonsäure (A. 299, 299).
- $C_{27}H_{11}O_{15}N_2$ C 41,9 — H 12,2 — O 38,1 — N 17,8 — M. G. 630.
 1) Säure (aus Hexanitroocinaurin) (NH₄)₂, K₂, K₃, Ag (B. 13, 563). — II, 1125.
- $C_{27}H_{11}N_4Cl$ 1) 7-Chlorphenylat d. 5-Chlor- $\alpha\beta$ -Naphthophenazin. 2 + PtCl₄ + AuCl₃ (B. 30, 1828). — IV, 1052.
 2) 7-Chlorphenylat d. 9-Chlor- $\alpha\beta$ -Naphthophenazin + H₂O. 2 + PtCl₄ + AuCl₃ (B. 31, 303). — IV, 1052.
- $C_{27}H_{11}N_4S$ 1) Thiocarbonyl- β -Dinaphtylpseudothioharnstoff. Sm. 152° u. Zers. (B. 25, 1466). — II, 620.
- $C_{27}H_{15}ON$ C 85,4 — H 4,8 — O 5,2 — N 4,5 — M. G. 309.
 1) Acetyl- $\beta\beta$ -Dinaphtylenamin. Sm. 144° (B. 15, 2175). — IV, 473.
 2) Acetyl- $\beta\beta$ -Dinaphtylcarbasol. Sm. 143° (B. 19, 2243). — IV, 473.
 3) Verbindung (aus 2,2-Binaphtylenglykolbromhydrin). Zers. oberh. 200°. 2HCl, (2HCl, PtCl₄), 2HBr (A. ch. [5] 28, 184). — II, 1105.
- $C_{27}H_{15}ON_3$ C 78,3 — H 4,4 — O 4,7 — N 12,5 — M. G. 337.
 1) Oxyrosindulin. Sm. 270° u. Zers. (A. 272, 321). — IV, 1202.
 2) Amidorosindon (A. 266, 215). — IV, 1207.
 3) 4,7-Anhydrid d. 4-Oxyamido- $\alpha\beta$ -Naphthophenazin-7-Phenyl-oxhydrat. Zers. bei 233° (B. 31, 2433).
 4) 10,12-Anhydrid d. 9-Amido-10-Oxy- $\alpha\beta$ -Naphthophenazin-12-Phenyl-oxhydrat (9-Amidoisosindon-10). Sm. oberh. 300° (B. 31, 3103).
 5) Base (aus d. Chlorid C₂₇H₁₅N₃Cl). Sm. 215—217° (B. 23, 1322). — IV, 1397.

- C₂₂H₁₅ON₅** C 72,3 — H 4,1 — O 4,4 — N 19,2 — M. G. 365.
 1) **5-Phenyl-3-[1,5-Diphenyl-1,2,4-Triazolyl-3]-1,2,4-Oxiazol**. Sm. 205,5—206° (*B.* 22, 1754). — **IV**, 1164.
- C₂₂H₁₅OCl** 1) **4-Chlor-2,3,5-Triphenylfuran**. Sm. 115° (*Soc.* 51, 430). — **III**, 695.
 2) **Verbindung (aus 2-Oxynaphtalin)**. Sm. 174° (*A.* 243, 169). — **II**, 1029.
- C₂₂H₁₅O₂N** C 81,2 — H 4,6 — O 9,8 — N 4,3 — M. G. 325.
 1) **Oxy-2-Dinaphthylacetylamin**. Sm. 235° (*B.* 19, 2245). — **II**, 886.
 2) **Methyläther d. 1-[2-Oxyphenyl]phenanthrenoxazol**. Sm. 144—145,5° (*Soc.* 41, 146). — **III**, 447.
 3) **p-Oxy-p-Phenyl-1,4-Naphtochinonphenylimid**. Sm. 158—158,5° (*A.* 226, 40). — **III**, 460.
 4) **2,3-Diphenylchinolin-4-Carbonsäure**. Sm. 295° u. Zers. (191°). Na + 8H₂O, Ca + 9H₂O, Ag + H₂O, Pikrat (*J. pr.* [2] 38, 583; [2] 56, 299). — **IV**, 475.
 5) **2-[β-Phenyläthenyl]-α-Naphtochinolin-4-Carbonsäure**. Sm. 256° u. Zers. Ba + 2H₂O, Cu + H₂O, Ag (*B.* 23, 1231). — **IV**, 475.
 6) **3-[β-Phenyläthenyl]-β-Naphtochinolin-1-Carbonsäure**. Sm. 305° Ag (*B.* 23, 1238). — **IV**, 476.
 7) **Phenylimid d. αβ-Diphenyläthen-αβ-Dicarbonsäure**. Sm. 174 bis 175°; Sd. 293¹⁴ (*A.* 259, 65). — **II**, 1897.
- C₂₂H₁₅O₂N₂** C 74,8 — H 4,2 — O 9,1 — N 11,9 — M. G. 353.
 1) **4-[4-Azobenzol]imido-2-Oxy-1-Ketonaphtalin**. Sm. 250° u. Zers. (*B.* 27, 26).
- C₂₂H₁₅O₂Cl** 1) **ββ-Trichlor-αα-Di[1-Oxynaphtyl]äthan**. Zers. bei 200° (*J. r.* 23, 219). — **II**, 1007.
- C₂₂H₁₅O₂Br** 1) **Lakton d. β-Brom-α-Oxy-αγγ-Triphenylpropen-γ-Carbonsäure**. Sm. 109° (*Soc.* 57, 678). — **II**, 1726.
- C₂₂H₁₅O₂N** C 77,4 — H 4,4 — O 14,1 — N 4,1 — M. G. 341.
 1) **1,1-Dinaphthylhydroxamsäure**. Sm. 150° K (*B.* 20, 1358). — **II**, 1446.
 2) **1,2-Dinaphthylhydroxamsäure**. Sm. 160° (*B.* 20, 1360). — **II**, 1454.
 3) **2,2-Dinaphthylhydroxamsäure**. Sm. 171° (*B.* 20, 1360). — **II**, 1454.
 4) **2-Benzoyl-4-Methylphenylimid d. Benzol-1,2-Dicarbonsäure**. Sm. 202° (*B.* 17, 2680). — **III**, 216.
 5) **3-Benzoyl-4-Methylphenylimid d. Benzol-1,2-Dicarbonsäure**. Sm. 160° (*B.* 17, 2680). — **III**, 216.
 6) **Benzoylphenylmethylimid d. Benzol-1,2-Dicarbonsäure (Desylphtalimid)**. Sm. 157—158° (*B.* 23, 995). — **III**, 221.
- C₂₂H₁₅O₂N₂** C 71,5 — H 4,1 — O 13,0 — N 11,4 — M. G. 369.
 1) **3-Nitro-2-Phenylamido-4-Phenylimido-1-Keto-1,4-Dihydronaphtalin**. Sm. 249—250° (*B.* 21, 3389). — **III**, 379.
 2) **12-Phenyloxyhydrat d. 9-Nitro-αβ-Naphtophenazin**. Chlorid + FeCl₃, 2 Chlorid + PtCl₄, Nitrat (*B.* 31, 3099).
 3) **7-Phenyloxyhydrat d. 10-Nitro-αβ-Naphtophenazin**. Chlorid, Nitrat, Bichromat (*B.* 30, 2638). — **IV**, 1052.
- C₂₂H₁₅O₂N₃** C 66,5 — H 3,8 — O 12,1 — N 17,6 — M. G. 397.
 1) **4-[3-Nitrophenylazo]-1-[2-Oxy-1-Naphtylazo]benzol**. Sm. 217—218° (*Soc.* 45, 113). — **IV**, 1434.
- C₂₂H₁₅O₂Br** 1) **4-Bromtribenzoylmethan. α-Modif.** Sm. 186—189°; **β-Modif.** Sm. 206 bis 208° (*A.* 291, 96). — **III**, 321.
- C₂₂H₁₅O₂N** C 74,0 — H 4,2 — O 17,9 — N 3,9 — M. G. 357.
 1) **p-Nitro-αδ-Diketo-αβ-Triphenyl-β-Buten**. Sm. 155° (*Soc.* 57, 675). — **III**, 308.
- C₂₂H₁₅O₂N₂** C 63,9 — H 3,6 — O 15,5 — N 17,0 — M. G. 413.
 1) **3-Nitrobenzozazo-α-Naphtalinazoresorcin** (*Soc.* 45, 116). — **IV**, 1445.
- C₂₂H₁₅O₂J₂** 1) **Trijodoresinaurin**. Na (*B.* 13, 556). — **II**, 1125.
- C₂₂H₁₅O₂N** C 62,7 — H 3,6 — O 30,4 — N 3,3 — M. G. 421.
 1) **Triacetat d. Verb. C₁₆H₉O₂N**. Sm. 227° (*B.* 29, 1752).
- C₂₂H₁₅O₂N₂** C 58,8 — H 3,3 — O 28,5 — N 9,4 — M. G. 449.
 1) **Monäthyläther d. Dinitrofluoresceingelb** (*B.* 30, 333).
- C₂₂H₁₅N₂Cl** 1) **7-Chlorphenylat d. αβ-Naphtophenazin**. + FeCl₃, 2 + PtCl₄, + AuCl₃ (*B.* 29, 2317, 2968; *J. r.* 29, 559). — **IV**, 1051.
 2) **12-Chlorphenylat d. αβ-Naphtophenazin**. + FeCl₃, 2 + PtCl₄, + AuCl₃ (*B.* 29, 2318; 30, 2629). — **IV**, 1051.

- C₂₁H₁₈ON₂** C 81,5 — H 4,9 — O 4,9 — N 8,6 — M. G. 324.
- 1) **2-Phenylamido-4-Phenylimido-1-Keto-1,4-Dihydronaphtalin.** Sm. 187°. HCl, (2HCl, ZnCl₂), (2HCl, PtCl₄), HJ, H₂SO₄ (B. 8, 1024; 13, 124; 14, 1493, 1900; 15, 283, 481; 21, 679, 1039; 25, 3607; 27, 243; A. 256, 234). — III, 374.
 - 2) **2-Naphtyliden-2-[α-Oxynaphtyliden]hydrazin.** Sm. 230° (B. 30, 1885; A. 298, 45). — IV, 956.
 - 3) **5-Keto-4-Benzyliden-1,3-Dimethyl-4,5-Dihydropyrazol.** Sm. 147° (146°) (B. 20, 2548; 27, 784). — IV, 1040.
 - 4) **6-Oxy-2,4,5-Triphenyl-1,3-Diazin.** Sm. oberh. 340° (J. pr. [2] 39, 255). — IV, 1088.
 - 5) **ms-Aethylidinaphtoposafraon.** Sm. 247° (B. 31, 2488).
 - 6) **7-Phenyloxydhydrat d. αβ-Naphtophenazin.** Chlorid, Jodid, Nitrat, Bichromat (B. 29, 2317, 2968; J. r. 29, 559). — IV, 1051.
 - 7) **12-Phenyloxydhydrat d. αβ-Naphtophenazin.** Chlorid, Jodid, Nitrat, Bichromat (B. 29, 2318; 30, 2629). — IV, 1051.
 - 8) **Aethyläther d. Oxyphenanthrophenazin.** Sm. 210° (B. 25, 497). — IV, 1086.
 - 9) **Methyläther d. 2-[2-Oxyphenyl]phenanthrenimidazol.** Sm. 207 bis 208,5° (Soc. 41, 146). — III, 447.
 - 10) **N-Acetyldihydrophenanthrophenazin.** Sm. 252° (A. 292, 265). — IV, 1080.
 - 11) **Nitril d. β-Phenylamido-α-Benzoyl-β-Phenylakrylsäure.** Sm. 165° (J. pr. [2] 58, 156).
- C₂₁H₁₆ON₄** C 75,0 — H 4,5 — O 4,5 — N 15,9 — M. G. 352.
- 1) **2,4-Di[Phenylazo]-1-Oxynaphtalin.** Sm. 193° (190—191°) (B. 21, 3240; 24, 1594, 1604; 28, 1895). — IV, 1433.
 - 2) **4-2-Oxy-1-Naphtylazobenzol.** Sm. 195° (B. 13, 1838). — IV, 1433.
 - 3) **3-Keto-1,2-Benzyliden-4-Phenylazo-5-Phenyl-2,3-Dihydropyrazol.** Sm. 131° (J. pr. [2] 50, 229; [2] 52, 34). — IV, 1490.
 - 4) **Monocetylderivat d. Base C₂₀H₁₄N₄ (aus Aposafrauin u. αβ-Diamidoäthau)** (B. 30, 2492). — IV, 1279.
- C₂₂H₁₆O₂N₂** C 77,6 — H 4,7 — O 9,4 — N 8,2 — M. G. 340.
- 1) **2-[4-Nitrobenzyliden]amidodiphenylmethan.** Sm. 105° (B. 27, 2787).
 - 2) **2,4'-Di[Furalamido]biphenyl.** Sm. 137° (B. 22, 2013). — IV, 960.
 - 3) **4,4'-Di[Furalamido]biphenyl.** Sm. 231—232°. 2HCl, (2HCl, PtCl₄) (B. 30, 2014, 2302; A. 201, 361). — IV, 967.
 - 4) **1-Naphtoyl-1-Naphtenylamidoxim.** Sm. 228° (B. 20, 224). — II, 1446.
 - 5) **Monophenylhydrason d. 3-Oxy-2-Phenyl-1,4-Naphtochinon.** Sm. 200° u. Zers. (A. 296, 21). — IV, 795.
 - 6) **Di[2-Oxy-1-Naphtyliden]hydrazin.** Sm. noch nicht bei 290° (B. 32, 286).
 - 7) **Veratrylphenanthrazin.** Sm. 255° (Bh. [3] 17, 818).
 - 8) **Oxazoniumbase (aus Isorosindulin).** Sm. 164° u. Zers. Chlorid, 2 Chlorid + PtCl₄ (A. 290, 282). — IV, 1056.
 - 9) **isom. Oxazoniumbase (aus Isorosindulin).** Sm. 164° u. Zers. (A. 290, 284). — IV, 1057.
 - 10) **1,3,5-Triphenylpyrazol-4-Carbonsäure.** Sm. 238° (J. pr. [2] 58, 153).
 - 11) **1,4,5-Triphenylpyrazol-3-Carbonsäure.** Sm. 245° u. Zers. (B. 26, 1888). — IV, 1036.
 - 12) **Anhydrid d. p-Amidonaphtalin-2-Carbonsäure.** Sm. 174° (B. 5, 1020). — II, 1459.
 - 13) **Acetat d. 2-Oxy-1,2'-Azonaphtalin.** Sm. 117° (Soc. 65, 836). — IV, 1438.
 - 14) **1,1-Dinaphtylamid d. Oxalsäure.** Sm. 234° (A. 108, 228; B. 30, 771). — II, 611.
 - 15) **2,2-Dinaphtylamid d. Oxalsäure.** Sm. 276° (B. 25, 3267; 30, 771). — II, 620.
- C₂₂H₁₆O₂N₄** C 71,7 — H 4,3 — O 8,7 — N 15,2 — M. G. 368.
- 1) **2,4-Di[Phenylazo]-1,3-Dioxynaphtalin.** Sm. 225° u. Zers. (B. 22, 3166). — IV, 1450.
 - 2) **Benzolazoresorcinazonaphtalin.** Sm. 156° (B. 15, 28). — IV, 1445.
 - 3) **Dihydrodiphenyldioxyantetrazin.** Na₂ + 4H₂O (Pinner, Imidoäther 295). — IV, 1305.

- $C_{27}H_{16}O_7N_4$ 4) Phenylimid d. 2-Phenylimido-5-Methyl-2,3-Dihydrobenzimidazol-1,4-Dicarbonensäure. Sm. 234° (B. 24, 2517). — IV, 623.
- 5) Phenylimid d. 2-[4-Methylphenyl]imido-2,3-Dihydrobenzimidazol-1,3-Dicarbonensäure. Sm. 254° (B. 24, 2513). — IV, 567.
- $C_{27}H_{16}O_7N_4$ 1) β -Di[6-Cyan-3-Methylphenylazo]-1,3-Dioxyazobenzol. Sm. 287° u. Zers. (B. 26, 551). — IV, 1466.
- 2) 1,4-Di[3-Oxy-1-Phenyl-1,2,4-Triazolyl-5]-benzol. Sm. noch nicht bei 340°. $Ag_2 + \frac{3}{4}H_2O$ (Soc. 71, 217). — IV, 1331.
- $C_{27}H_{16}O_7Br_2$ 1) Verbindung (aus $\alpha\beta$ -Dibenzoyltyrol) = $(C_{27}H_{16}O_7Br_2)_2$? (B. 18, 189; Soc. 57, 711). — III, 308.
- $C_{27}H_{16}O_7N_2$ 1) Gelbes Hydrocyansalid. Sm. 165,5° (A. 136, 170; J. pr. [2] 58, 125). — III, 75.
- 2) Braunes Hydrocyansalid (A. 136, 172). — III, 75.
- $C_{27}H_{16}O_7N_2$ C 71,0 — H 4,3 — O 17,2 — N 7,5 — M. G. 372.
- 1) Diacetat d. α -Dioxy-2,3'-Bichinolyl. Sm. 169—170° (M. 7, 322). — IV, 1068.
- 2) Diacetat d. β -Dioxy-2,3'-Bichinolyl. Sm. 216° (M. 7, 325). — IV, 1068.
- 3) Diacetylderivat d. Base $C_{17}H_{17}O_7N_2$ (aus Triphenioxazin). Sm. 295° (B. 23, 187). — IV, 1078.
- 4) Nitril d. Diacetyl-s-Phenylketipinsäure. Sm. 177—179°. $+ C_2H_5O$ (A. 282, 52). — II, 2032.
- $C_{27}H_{16}O_8N_4$ C 66,0 — H 4,0 — O 16,0 — N 14,0 — M. G. 400.
- 1) Phenylhydrazinderivat (d. Säure $C_{11}H_{10}O_8$ aus Malonsäure). Sm. 180° u. Zers. (B. 19, 2031). — I, 649.
- $C_{27}H_{16}O_8Br_2$ 1) $\alpha,2'$ -Lakton d. α -Oxy-3',3'-Dibrom-4',4'-Dimethoxytriphenylmethan-2'-Carbonsäure (Dimethyläther d. Dibromphenolphthalein). Sm. 160—161° (G. 26 [1] 230; 27 [2] 68).
- 2) $\alpha,2'$ -Lakton d. $\alpha\alpha$ -Di[β -Brom-2-Oxyphenyl]- α -Phenylmethan-2'-Carbonsäure (Dibrom- α -Kresolphthalein). Sm. 255° (A. 202, 158). — II, 1987.
- $C_{27}H_{16}O_8Br_4$ 1) Aethyl ester d. β -Tetrabrom-4',4'-Dioxytriphenylmethan-2'-Carbonsäure. Sm. 163° (B. 30, 176).
- $C_{27}H_{16}O_8N_2$ C 68,0 — H 4,1 — O 20,6 — N 7,2 — M. G. 388.
- 1) Verbindung (aus Acetessigester u. Anthranilsäure). Sm. 335° u. Zers. $Na_2 + 6H_2O$ (B. 27, 1398). — II, 1252.
- $C_{27}H_{16}O_8Br_2$ 1) 3,4-Methylenäther-1-Acetat d. $\alpha\beta$ -Dibrom- γ -Keto- γ -[1-Oxy-2-Naphthyl]- $\alpha\alpha$ -[3,4-Dioxyphenyl]propan. Sm. 160° u. Zers. (B. 31, 708).
- $C_{27}H_{16}O_8N_2$ C 63,3 — H 4,0 — O 23,7 — N 6,9 — M. G. 404.
- 1) Lakton d. α -Oxy- α' -Phenyl- $\alpha''\alpha''$ -Di[β -Nitro-4-Methylphenyl]methan- $\alpha',2$ -Carbonsäure. Sm. 132° (A. 209, 292).
- 2) Dibenzolat d. 1,3-Phtalhydroxamsäure. Sm. 162°. K_2 (A. 281, 227). — II, 1827.
- 3) Dibenzolat d. 1,4-Phtalhydroxamsäure. Sm. 198°. K_2 (A. 281, 229). — II, 1833.
- $C_{27}H_{16}O_8Cl_2$ 1) Verbindung (aus d. Oxyd $C_{24}H_{20}O_8Cl_2$). Sm. 164° (Am. 17, 642). — III, 351.
- $C_{27}H_{16}O_8Cl_2$ 1) Verbindung (aus d. Dibenzolat d. 3,6-Dichlor-2,5-Dimethoxy-1,4-Benzochinondimethylhemiacetal). Sm. 205—206° (Am. 17, 645; 20, 404; B. 30, 527). — III, 350.
- $C_{27}H_{16}O_8N_2$ C 60,6 — H 3,7 — O 29,3 — N 6,4 — M. G. 436.
- 1) Dinitro- α -Kresolphthalein. Sm. 250° (A. 202, 163). — II, 1987.
- 2) Dimethyläther d. Dinitrophenolphthalein. Sm. 130—132° (G. 26 [1] 271).
- 3) Di[4-Nitrobenzylester] d. Benzol-1,2-Dicarbonensäure. Sm. 154—155° (B. 30, 782).
- $C_{27}H_{16}O_8Br_2$ 1) Triacetat d. Dibrombrasilein $+ \frac{3}{4}H_2O$ (B. 23, 1429). — III, 655.
- $C_{27}H_{16}O_{10}N_2$ C 56,4 — H 3,4 — O 34,2 — N 6,0 — M. G. 468.
- 1) Verbindung (aus Diamidophenolphthaleindimethyläther) (G. 26 [1] 274).
- $C_{27}H_{16}NJ$ 1) Jodmethylat d. Iso- β -Naphtoakridin. Zers. bei 262—264° (Soc. 73, 548).
- $C_{27}H_{16}N_2Cl$ 1) 12-Chlorphenylat d. 9-Amido- $\alpha\beta$ -Naphtophenazin. 2 + $PtCl_4$ (B. 31, 3101).

- C₂₂H₁₆N₂Cl** 2) 7-Chlorphenylat d. 10-Amido- $\alpha\beta$ -Naphtophenazin. 2 + PtCl₄ (B. 30, 2640). — IV, 1201.
3) 12-Chlorphenylat d. 10-Amido- $\alpha\beta$ -Naphtophenazin (Isorosindulinchlorid). 2 + PtCl₄ (B. 30, 2632). — IV, 1201.
- C₂₇H₁₆N₂Br** 1) 12-Bromphenylat d. 9-Amido- $\alpha\beta$ -Naphtophenazin (B. 31, 3100).
- C₂₇H₁₆N₂S** 1) 2,5-Di[1-Naphtylamido]-1,3,4-Thiodiazol. Sm. 136°. + C₆H₆O (Sm. 104°). (2HCl, PtCl₄). Pikrat, + AgNO₃ (B. 23, 359). — IV, 1237.
2) 2,5-Di[2-Naphtylamido]-1,3,4-Thiodiazol. Sm. 110–117°. (2HCl, PtCl₄). Pikrat, + AgNO₃ (B. 23, 362). — IV, 1237.
C 84,9 — H 5,5 — O 5,1 — N 4,5 — M. G. 311.
- C₂₂H₁₇ON** 1) $\alpha\beta$ -Dibenzoylstyrolimid. Sm. bei 180° (Soc. 57, 719; 71, 1140). — III, 308.
2) 3-[4-Methylphenyl]imido-1-Keto-2-Phenyl-2,3-Dihydroinden. Sm. 244° (B. 30, 3142).
3) 2,5-Diphenyl-1-[2-Oxyphenyl]pyrrol. Sm. 175–176° (B. 22, 3094). — IV, 438.
4) 2-Keto-1,4,5-Triphenyl-2,3-Dihydropyrrol. Sm. 189–190° (A. 269, 141). — IV, 443.
5) 2-Keto-3,3,5-Triphenyl-2,3-Dihydropyrrol. Sm. 221° (Soc. 57, 693). — IV, 474.
6) 1,1-Dinaphtylamid d. Essigsäure. Sm. 217° (B. 16, 20). — II, 607.
7) 1,2-Dinaphtylamid d. Essigsäure. Sm. 124–125° (B. 16, 19). — II, 616.
8) 2,2-Dinaphtylamid d. Essigsäure. Sm. 114–115° (B. 16, 20). — II, 616.
9) Verbindung (aus $\alpha\alpha$ -Diphenyl- β -Benzoylpropionsäure). Sm. 142–143° (Soc. 57, 684). — II, 1727.
C 77,9 — H 5,0 — O 4,7 — N 12,4 — M. G. 339.
- C₂₂H₁₇ON₃** 1) 4-[2-Oxy-1-Naphtyl]azo-1-Phenylamidobenzol. Sm. 164–165° (B. 31, 1516). — IV, 1431.
2) Acetylamido- β -Azonaphtalin. Sm. 218° (B. 18, 2422). — IV, 1391.
3) $\alpha\beta$ -Diphenyl- α -[2-Chinoly]harnstoff. Sm. 150° (B. 23, 276). — IV, 969.
4) 6-Acetylamido-2,3-Diphenyl-1,4-Benzdiazin. Sm. 252° (A. 292, 255). — IV, 1213.
5) 5-Phenylamido-6-Oxy-5,6-Dihydro- $\alpha\beta$ -Naphtophenazin. Sm. 204 bis 205° (B. 26, 621). — IV, 1053.
6) 7-Phenyloxyhydrat d. 10-Amido- $\alpha\beta$ -Naphtophenazin. Chlorid, Jodid, Nitrat + H₂O (B. 30, 2640). — IV, 1201.
7) Rosindulinhydrat. Sm. 185–187°. Carbonat (A. 290, 268). — IV, 1205.
8) Isorosindulinhydrat. Chlorid, 2 Chlorid + PtCl₄, Nitrat (A. 290, 275).
9) Base (aus Benzolazo- β -Phenylnaphtylamin). Chlorid, (2 Chlorid + PtCl₄), Nitrat, Sulfat, Bichromat, Pikrat (B. 20, 1174). — IV, 1397.
10) Verbindung (aus Benzenylamidin u. 2 Oxy-1-Methylbenzol-3-Carbonsäureäthylester). Sm. 214° (B. 23, 2939). — IV, 848.
11) Verbindung (aus Benzenylamidin u. 4-Oxy-1-Methylbenzol-3-Carbonsäureäthylester). Sm. 202° (B. 23, 2939). — IV, 848.
12) Verbindung (aus Benzenylamidin u. 3-Oxy-1-Methylbenzol-4-Carbonsäureäthylester). Sm. 235° (B. 23, 2939). — IV, 848.
C 80,7 — H 5,2 — O 9,8 — N 4,3 — M. G. 327.
- C₂₂H₁₇O₂N** 1) 2-Phenylamido-1,3-Diketo-5-Methyl-2-Phenyl-2,3-Dihydroinden. Sm. 169° (B. 29, 2380).
2) 2-Phenylamido-1,3-Diketo-2-[3-Methylphenyl]-2,3-Dihydroinden. Sm. 171° (B. 28, 1390). — III, 303.
3) 2-Diphenylamido-1,4-Naphtochinon. Sm. 164° (Soc. 37, 642). — III, 376.
4) Diacetylamidochrysen. Sm. 206–208° (B. 24, 951). — II, 643.
5) 4-Oxy-2-Keto-3,3,5-Triphenyl-2,3-Dihydropyrrol. Sm. 168° (Soc. 71, 1147).
6) 2,5-Dicinnamylpyrrol. Sm. 238–240° (B. 17, 2954). — IV, 102.
7) γ -Oximido- $\alpha\alpha\gamma$ -Triphenylbuttersäure. Sm. 150–152° u. Zers. (Soc. 57, 683). — II, 1726.
8) 2-Methyl-5-Phenyl-1-[1-Naphtyl]pyrrol-3-Carbonsäure. Sm. 244° (B. 18, 2598). — IV, 357.

- C₂₇H₁₇O₂N** 9) **2-Methyl-5-Phenyl-1-[2-Naphtyl]pyrrol-3-Carbonsäure.** Sm. 249° (B. 18, 2599). — IV, 357.
- 10) **Methylester d. 2,2-Dinaphtylamidoameisensäure.** Sm. 113—114° (B. 20, 2620). — II, 617.
- 11) **Aethylester d. 2-Phenyl- α -Naphtochinolin-4-Carbonsäure.** Sm. 103° (A. 249, 114). — IV, 471.
- 12) **Phenylimid d. $\alpha\beta$ -Diphenyläthan- $\alpha\beta$ -Dicarbonsäure.** Sm. 230—231° (A. 259, 93). — II, 1890.
- C₂₇H₁₇O₂N₂**
- 1) **2-Benzoyl-7-Benzoylamido-5-Methylindazol.** Sm. 186—187° (B. 29, 308). — IV, 1151.
- 2) **Oxim d. Oxazoniumbase C₂₇H₁₆O₂N₂** (aus Isorosindulin) (A. 290, 285). — IV, 1057.
- 3) **Benzoat d. 3-Oxy-1-Phenyl-5-[3-Methylphenyl]-1,2,4-Triazol.** Sm. 117° (Soc. 71, 214). — IV, 1161.
- 4) **Benzoat d. 3-Oxy-5-Phenyl-1-[4-Methylphenyl]-1,2,4-Triazol.** Sm. 132° (Soc. 73, 370). — IV, 1158.
- 5) **β -Phenylhydrazon- β -Phenyläthylimid d. Benzol-1,2-Dicarbonsäure (Phenacetylalimidphenylhydrazon).** Sm. bei 155° u. Zers. (B. 21, 2986). — IV, 771.
- C₂₇H₁₇O₂N₃**
- 1) **3,4-Di[2-Oxybenzylidenamido]-1-Phenyl-1,2,5-Triazol.** Sm. 210° (A. 295, 146). — IV, 1314.
- 2) **3,4-Di[Benzoylamido]-1-Phenyl-1,2,5-Triazol.** Sm. 242° (A. 295, 149). — IV, 1314.
- 3) **Benzoat d. 3-Amidooximidomethyl-1,5-Diphenyl-1,2,4-Triazol.** Sm. 179—179,5° u. Zers. (B. 22, 1754). — IV, 1164.
- C₂₇H₁₇O₃N**
- 1) **Phenylamidoformiat d. α -Oxy- γ -Keto- $\alpha\gamma$ -Diphenylpropen.** Sm. 151° (C. 1897 [2] 261).
- C₂₇H₁₇O₃N₂**
- 1) **Acetat d. 6-Phenylazo-5-Oxy-3-Methyl-1-Phenylbenzoxazol.** Sm. 182—183° (M. 19, 502). — IV, 1448.
- C₂₇H₁₇O₃N₃**
- 1) **7-[4-Amidophenyloxyhydrat] d. 10-Nitro-5-Amido- $\alpha\beta$ -Naphtophenazin** (B. 31, 3085).
- C₂₇H₁₇O₄N**
- 1) **1-Acetyl-2-Keto-3,3-Di[β -Oxyphenyl]-2,3-Dihydroindol (Acetylphenolisatin).** Sm. 185° (B. 18, 2642). — II, 1618.
- 2) **α -Benzoat d. 4-Methylbenzoylbenzhydroxamsäure.** Sm. 131,5° (A. 281, 277). — II, 1345.
- 3) **β -Benzoat d. 4-Methylbenzoylbenzhydroxamsäure.** Sm. 104° (A. 281, 277). — II, 1345.
- 4) **Benzoylphenylmethylmonamid d. Benzol-1,2-Dicarbonsäure (Desylphthalamidsäure).** Sm. 168°. HCl (B. 23, 995). — III, 221.
- C₂₇H₁₇O₅N**
- 1) **Benzoat d. Benzoyl-4-Methoxylbenzhydroxamsäure.** α -Modif. Sm. 137—137,5°; β -Modif. Sm. 109,5—110,5° (A. 186, 25). — II, 1534.
- 2) **Benzoat d. 4-Methoxylbenzoylbenzhydroxamsäure.** α -Modif. Sm. 110—110,5°; β -Modif. Sm. 109—110° (A. 186, 21). — II, 1534.
- 3) **4-Methoxylbenzoat d. Benzoylbenzhydroxamsäure.** α -Modif. Sm. 113—114°; β -Modif. Sm. 124—125°; γ -Modif. Sm. 110° (A. 186, 8). — II, 1534.
- C₂₇H₁₇O₆N**
- 1) **Aethylester d. Dibenzoylkomenaminsäure.** Sm. 101—102° (J. pr. [2] 29, 60). — IV, 158.
- C₂₇H₁₇O₇N₂**
- 1) **Aethylanthracenpikrat.** Sm. 120° (B. 14, 803). — II, 274.
- C₂₇H₁₇O₈N₂**
- 1) **β -Trinitro-1-[$\alpha\beta$ -Di(Benzoylamido)äthyl]benzol.** Sm. 117° (B. 28, 426). — I, 641.
- C₂₇H₁₇O₈Br₃**
- 1) **Triacetat d. Tribrombrasilin.** Sm. 147° (B. 22, 1552). — III, 654.
- C₂₇H₁₇O₁₁N**
- 1) **Nitrographitoinsäure** (B. 8, 547). — II, 2021.

- C₂₂H₁₇N₈** 1) Thio- β -Dinaphtyläthylamin. Sm. 212—213° (B. 23, 2462). — II, 869.
- C₂₂H₁₇N₄Cl** 1) 7-[4-Amidochlorphenylat] d. 5-Amido- α - β -Naphtophenazin + 2H₂O (B. 31, 3083).
- 2) 7-Chlorphenylat d. 5,9-Diamido- α - β -Naphtophenazin + H₂O (Naphtophenosafranin). 2 + PtCl, (B. 30, 1566). — IV, 1296.
- 3) 12-Chlorphenylat d. 5,9-Diamido- α - β -Naphtophenazin. 2 + PtCl, (B. 31, 3105).
- 4) 7-Chlorphenylat d. 5,10-Diamido- α - β -Naphtophenazin. 2 + PtCl, (B. 31, 3079).
- C₂₂H₁₈ON₂** C 81,0 — H 5,5 — O 4,9 — N 8,6 — M. G. 326.
- 1) Benshydramid (Berz. J. 18, 352; J. 1860, 487). — III, 37.
- 2) δ -Phenylhydrazon- α -Keto- α - δ -Diphenylbutan. Sm. 116° (A. 258, 237). — IV, 785.
- 3) 3-Phenylhydrazon-1-Keto-2-[3-Methylphenyl]-2,3-Dihydroinden. Sm. 167—168° (B. 28, 1388). — IV, 786.
- 4) 1-Phenylamido-2-Keto-4,5-Diphenyl-2,3-Dihydropyrol. Sm. 110° (A. 269, 136). — IV, 698.
- 5) 3-Keto-2,4-Diphenyl-5-Benzyl-2,3-Dihydropyrazol. Sm. 231—232° (A. 296, 12). — IV, 1033.
- 6) 5-Keto-1,4-Diphenyl-3-Benzyl-4,5-Dihydropyrazol. Sm. 228° (J. pr. [2] 55, 355). — IV, 1033.
- 7) Äethyläther d. 6-Oxy-2,3-Diphenyl-1,4-Benzdiazin. Sm. 150° (B. 25, 494; C. 1895 [1] 854). — IV, 1079.
- 8) Phenylamid d. γ -Phenylimido- α -Phenylpropen- γ -Carbonsäure. Sm. 225° (A. 242, 290). — IV, 445.
- 9) 1-Naphtylamid d. 1-Naphtylamidoessigsäure. Sm. 160° (B. 25, 2295). — II, 613.
- 10) 2-Naphtylamid d. 2-Naphtylamidoessigsäure. Sm. 173° (170°) (B. 14, 60; 31, 251). — II, 621.
- 11) Phenylhydrazonderivat (aus β -Benzoyl- α -Phenylpropionsäure). Sm. 123,5° (122—123°) (A. 284, 6; B. 23, 963). — IV, 698.
- C₂₂H₁₈ON₄** C 74,6 — H 5,1 — O 4,5 — N 15,8 — M. G. 354.
- 1) 5-Keto-4-(2-Methylphenyl)azo-1,3-Diphenyl-4,5-Dihydropyrazol. Sm. 226° (B. 27, 785). — IV, 1490.
- 2) 5-Keto-4-[4-Methylphenyl]azo-1,3-Diphenyl-4,5-Dihydropyrazol. Sm. 242° (B. 27, 785). — IV, 1490.
- 3) 5-[2-Amidophenyl]amido-6-Oxy-5,6-Dihydro- α - β -Naphtophenazin. Sm. 200° (B. 26, 621). — IV, 1054.
- C₂₂H₁₈O₂N₂** C 77,2 — H 5,3 — O 9,3 — N 8,2 — M. G. 342.
- 1) α - β -Phtalyldiamido- α - β -Diphenyläthan + $\frac{1}{2}$ H₂O. Sm. 213° u. Zers. (B. 22, 2300). — IV, 979.
- 2) 2,3-Dibenzoyl-1,2,3,4-Tetrahydro-2,3-Benzdiazin. Sm. 207—208° (B. 26, 2214). — IV, 852.
- 3) 5-Methyl-2-Phenyl-1-[4-Methylphenyl]benzimidazol-2'-Carbonsäure. Sm. 173° (B. 27, 2780). — IV, 618.
- 4) Acetat d. α -Oximido- β -Phenylimido- α - β -Diphenyläthan. Sm. 135 bis 136° (B. 25, 2597). — III, 290.
- 5) Verbindung (aus Phtalidmethylphenylketon). Sm. 118—123° (M. 19, 443).
- 6) Verbindung (aus Phtalidmethylphenylketon). Sm. 170—200° (M. 19, 445).
- C₂₂H₁₈O₂N₄** C 71,4 — H 4,9 — O 8,6 — N 15,1 — M. G. 370.
- 1) β -Phenylazo- β -Acetylphenylhydrazon- α -Keto- α -Phenyläthan (Acetylformazyphenylketon). Sm. 154° (B. 26, 2788). — IV, 1230.
- 2) 1,4-Di[2-Oxy-1-Naphtylazo]benzol. Sm. oberh. 275° (Soc. 47, 664). — IV, 1434.
- 3) α - β -Di[Phenylhydrazon]- α - β -Di[2-Furanyl]äthan (Furilosazon). Sm. 184° (A. 258, 226). — IV, 788.
- 4) Difuraldiphenylhydrotetrazon. Sm. 135—136° u. Zers. (G. 27 [2] 234). — IV, 1307.
- 5) Dehydrofuralphenylhydrazon. Sm. 155—156° (159—161°) (G. 27 [2] 234). — IV, 1307.
- 6) Diacetylphenosafranin. HCl, HJ (B. 16, 468; 29, 1872). — IV, 1284.
- 7) Di[Benzylidenhydrazid] d. Benzol-1,3-Dicarbonensäure. Sm. 241° (J. pr. [2] 54, 76).
- 8) Di[Benzylidenhydrazid] d. Benzol-1,4-Dicarbonensäure (J. pr. [2] 54, 83).

- $C_{22}H_{18}O_2N_4$ 9) Phenylhydrazon d. Verbindung $C_{10}H_8O_2N_2$. Sm. 168° (*G.* 22 [2] 190). — II, 978.
10) Acetylderivat d. Verbindung $C_{20}H_{16}ON_4$. Sm. 170° (*B.* 26, 1182). — IV, 1225.
- $C_{22}H_{18}O_2S$ 1) Dimethyläther d. Di[1-Oxynaphtyl]-*p*-Sulfid. Sm. 135° (*B.* 27, 2545). — II, 985.
2) Dimethyläther d. Di[2-Oxynaphtyl]-*p*-Sulfid (*B.* 27, 2545). — II, 986.
- $C_{22}H_{18}O_2Se$ 1) Dimethyläther d. Di[1-Oxynaphtyl]selenid. Sm. 138° (*B.* 30, 2823).
2) Dimethyläther d. Di[2-Oxynaphtyl]selenid. Sm. 162° (*B.* 30, 2823).
C 73,7 — H 5,0 — O 13,4 — N 7,8 — M. G. 358.
- $C_{21}H_{18}O_4N_2$ 1) Diäthyläther d. 8,8'-Dioxy-6,6'-Bichinoly-5,5'-Oxyd. Sm. 71,5°. 2HCl, (2HCl, PtCl₄ + H₂O), + 2SnCl₂ (*B.* 22 [2] 104, 297; *Bl.* 51, 169). — IV, 1078.
C 70,6 — H 4,8 — O 17,1 — N 7,5 — M. G. 374.
- $C_{22}H_{18}O_4N_2$ 1) Triacetylindileucin. Sm. 277–278° (*B.* 17, 980). — II, 1622.
2) Dibenzoesat d. 2-Oxy-3-Methylbenzylamidoxim. Sm. 164° (*B.* 24, 3670). — II, 1546.
3) Dibenzoesat d. 6-Oxy-3-Methylbenzylamidoxim. Sm. 143° (*B.* 24, 3664). — II, 1547.
4) Phenylhydrazinderivat d. Braislein + 3H₂O (*B.* 23, 1436). — III, 655.
5) Verbindung (aus Salicylaldehyd). Sm. 143° (*B.* 6, 341). — III, 75.
C 65,6 — H 4,5 — O 15,9 — N 13,9 — M. G. 402.
- $C_{22}H_{18}O_4N_4$ 1) Diacetat d. 2,4-Di[Phenylazo]-1,3-Dioxybenzol. Sm. 137–138° (*B.* 17, 881; 25, 1341). — IV, 1444.
2) Diacetat d. 4,6-Di[Phenylazo]-1,3-Dioxybenzol. Sm. 183–184° (*B.* 15, 2816). — IV, 1443.
3) Dibenzoesat d. α -Phenylamido- β -Amido- $\alpha\beta$ -Dioximidoäthan. Sm. 189° (*B.* 22, 2956). — II, 1210.
4) α -Phenylhydrazon- β -Diphenylhydrazonäthan- $\alpha\beta$ -Dicarbonsäure (Phenylzindioxyweinsäurediphenylhydrazon). Sm. bei 115° u. Zers. — IV, 730.
- $C_{21}H_{18}O_4Br_2$ 1) Dibrom-*o*-Kresolphtalinsäure. Sm. 236° (*A.* 202, 170). — II, 1912.
C 67,7 — H 4,6 — O 20,5 — N 7,2 — M. G. 390.
- $C_{22}H_{18}O_4N_2$ 1) 2-Nitrophenyläther d. β -Dibenzoylamido- α -Oxyäthan. Sm. 121 bis 122° (*J. pr.* [2] 24, 251). — II, 1160.
2) Methylencinchosinsäure. Sm. 249°, subl. Na₂ + 10H₂O, K₂ + 3H₂O, Ag (*A.* 270, 351). — IV, 346.
C 65,0 — H 4,4 — O 23,6 — N 6,9 — M. G. 406.
- $C_{21}H_{18}O_6N_2$ 1) Diäthylester d. Indigodicarbonsäure (*B.* 18, 951). — II, 1624.
2) Phenylmonamid d. 2-[3,4-Dimethoxybenzoyl]pyridin-3,4-Dicarbonsäure (Anilpapaverinsäure). Anilinsalz (*M.* 13, 700). — IV, 177.
- $C_{22}H_{18}O_6S$ 1) Verbindung (aus Orcin u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) (*Ann.* 16, 524).
- $C_{22}H_{18}O_7N_4$ C 58,6 — H 4,0 — O 24,9 — N 12,4 — M. G. 450.
1) 3-Nitrobenzoesat d. 4-[3-Nitrobenzoyl]amido-2-Dimethylamido-1-Oxybenzol. Sm. 197° (*B.* 27, 1932). — II, 1232.
C 55,2 — H 3,8 — O 23,4 — N 17,6 — M. G. 478.
- $C_{27}H_{18}O_8N_6$ 1) Dialloxanyl-2-Amidodi[4-Methylphenyl]amin. Zers. bei 300° (*B.* 28, 543). — IV, 616.
C 56,7 — H 3,8 — O 27,5 — N 12,0 — M. G. 466.
- $C_{25}H_{18}O_8N_4$ 1) Verbindung (aus d. Äthylester d. 3-Oxyindol-2-Carbonsäure). Sm. 173° u. Zers. (*B.* 15, 782). — II, 1440.
C 56,2 — H 3,8 — O 34,0 — N 5,9 — M. G. 470.
- $C_{22}H_{18}O_{10}N_2$ 1) Verbindung (aus Azoopiansäure) (*B.* 19, 353). — II, 1998.
C 51,4 — H 3,5 — O 34,2 — N 10,9 — M. G. 514.
- $C_{22}H_{18}O_{11}N_4$ 1) Verbindung (aus $\alpha\delta$ -Diketo- α -Phenylpentan). Sm. 210° (*G.* 22 [2] 328). — III, 272.
- $C_{22}H_{18}O_{11}Br_3$ 1) Verbindung (aus Sacculminsäure) (*B.* 16, 244; *G.* 12, 292). — I, 1109.
- $C_{22}H_{18}NCl$ 1) Chlormethylat d. 2,3-Diphenylchinolin. 2 + PtCl₄ (*J. pr.* [2] 56, 308).
- $C_{22}H_{18}NJ$ 1) Jodmethylat d. 2,3-Diphenylchinolin. Sm. 231° u. Zers. (*J. pr.* [2] 56, 307).
- $C_{21}H_{18}N_2Br_4$ 1) Oktobromdiäthyl-*p*-Tetroliditoly (*B.* 14, 936). — IV, 1035.

- C₂₂H₁₈N₂S** 1) **1-Naphtylamido-1-Naphtylimidomethylsulfid**. Sm. 136°. (2 HCl, PtCl₄), HJ (*B.* 21, 964). — II, 610.
 2) **2-Naphtylamido-2-Naphtylimidomethylsulfid**. Sm. 110°. (2 HCl, PtCl₄) (*B.* 21, 967). — II, 619.
- C₂₂H₁₈N₂Cl** 3) **Methyläther d. 2-Merkapto-1,4,5-Triphenylimidazol**. Sm. 177° (*A.* 284, 30). — III, 224.
- C₂₂H₁₉ON** 1) **7-(4-Amidochlorphenylat) d. 5,10-Diamido- α - β -Naphtophenasin** (*B.* 31, 3086).
 C 84,4 — H 6,1 — O 5,1 — N 4,5 — M. G. 313.
 1) **β -Dimethylamido-9-Oxy-10-Phenylantracen** (*B.* 27 [2] 664).
 2) **5-Keto-2,4,4-Triphenyltetrahydropyrrrol**. Sm. 201° (*Soc.* 57, 695). — IV, 470.
 3) **2-Keto-3,3-Di[β -Methylphenyl]-2,3-Dihydroindol** (Toluisatin). Sm. 200–201° (*B.* 18, 2638). — II, 1618.
 4) **Benzyläther d. 3-Oxy-1-Benzylindol** (*B.* d. Benzylloxindol). Sm. 166° (*H.* 23, 25).
 5) **1-Benzoyl-4-Phenyl-1,2,3,4-Tetrahydrochinolin**. Sm. 147° (*B.* 28, 1043). — IV, 400.
 6) **1-Benzoyl-6-Phenyl-1,2,3,4-Tetrahydrochinolin**. Sm. 137° (*A.* 230, 23). — IV, 401.
 7) **Aldehyd d. β -Phenylbenzylamido- α -Keto- α -Phenyläthan- β -Carbonsäure**? Sm. 130° (*B.* 21, 1137). — III, 95.
 C 77,4 — H 5,6 — O 4,7 — N 12,3 — M. G. 341.
- C₂₂H₁₉ON₂** 1) **5-Phenylacetylamido-2-Methyl-1-Phenylbenzimidazol**. Sm. 180° (*B.* 25, 2721). — IV, 1150.
 2) **6-Phenylacetylamido-2-Methyl-1-Phenylbenzimidazol**. Sm. 165° (*A.* 286, 179). — IV, 1150.
 3) **1-Keto-2-Phenyl-4-(4-Dimethylamidophenyl)-1,2-Dihydro-2,3-Benzdiazin**. Sm. 158° (*Bh.* [3] 19, 830; *C.* 1898 [1] 1296).
 4) **Nitril d. α -Benzylidenamido- β -Phenylamido- α -Oxy- β -Phenylpropionsäure**. Sm. 259° u. *Zers.* (*B.* 31, 2701).
 5) **Verbindung** (aus Benzolketocarbonsäurealdehyd). Sm. 192–193° (*B.* 22, 2559). — III, 92.
- C₂₂H₁₉OCl** 1) **α -Chlor- γ -Keto- $\alpha\beta\delta$ -Triphenylbutan**. Sm. 143° (*M.* 19, 420).
C₂₂H₁₉O₂N C 80,2 — H 5,8 — O 9,7 — N 4,2 — M. G. 329.
 1) **2-Dimethylamido-1,4-Dibenzoylbenzol**? Sm. 55°; Sd. oberh. 360° (*B.* 19, 1901). — III, 305.
 2) **β -Phenylacetylamido- α -Keto- $\alpha\beta$ -Diphenyläthan**. Sm. 153° (155°) (*J. pr.* [2] 34, 9; *B.* 26, 1338). — III, 220.
 3) **α -Phenylbenzoylamidoäthylphenylketon**. Sm. 103–104° (*Bh.* [3] 17, 73).
 4) **α [oder δ]-Oximido- δ [oder α]-Keto- $\alpha\beta\delta$ -Triphenylbutan**. Sm. 151° (*Soc.* 57, 650). — III, 307.
 5) **Lakton d. α -Oxy- β -Dimethylamidotriphenylmethan-2-Carbonsäure** (Dimethylamidodiphenylphtalid). Sm. 119°. HCl (*B.* 27 [2] 664).
 C 73,9 — H 5,3 — O 9,0 — N 11,8 — M. G. 357.
- C₂₂H₁₉O₂N₂** 1) **α -Cinnamylamido- $\alpha\beta$ -Diphenylharnstoff**. Sm. 218–219° (*B.* 27, 1519). — IV, 676.
 2) **β -Acetyl- α -2-Benzylidenamidobenzoyl]- α -Phenylhydrasin**. Sm. 175 bis 177° (*A.* 301, 90).
 3) **Acetat d. α -Oximido- β -Phenylhydrason- $\alpha\beta$ -Diphenyläthan**. Sm. 121 bis 122° (*B.* 26, 794). — IV, 785.
 C 76,6 — H 5,5 — O 13,9 — N 4,0 — M. G. 345.
- C₂₂H₁₉O₃N** 1) **2-Keto-3,3-Di[β -Methoxyphenyl]-2,3-Dihydroindol** (Anisolisatin). Sm. 65° (*B.* 18, 2642). — II, 1618.
 2) **Benzophenylmethylester d. 2-Methylphenylamidoameisensäure** (o-Tolylcarbamat d. Benzoin). Sm. 125° (*B.* 25, 1088). — III, 223.
 3) **Phenylmonamid d. $\alpha\beta$ -Diphenyläthan- $\alpha\beta$ -Dicarbonsäure**. Sm. 220° (*A.* 259, 93). — II, 1890.
- C₂₂H₁₉O₃N₂** 1) **Verbindung** (Base aus Harn) (*B.* 25 [2] 915).
 C 70,8 — H 5,1 — O 12,9 — N 11,2 — M. G. 373.
 1) **Verbindung** (aus d. Amid u. d. Äthylester d. α -Cyan- β -Phenylakrylsäure). Sm. 187° (168°) (*A. ch.* [6] 29, 452; *J. pr.* [2] 45, 510). — II, 1417.
 2) **Verbindung** (aus d. Acetat d. 6 Phenylazo-5-Oxy-3-Methyl-1-Phenylbenzoxazol). Sm. 184–185° (*M.* 19, 504). — IV, 1448.

- C₂₁H₁₉O₂N** C 73,1 — H 5,3 — O 17,7 — N 3,9 — M. G. 361.
- 1) Benzoat d. Benzoyl-4-Methoxybenzylharnstoff. Sm. 64° (*J. pr.* [2] 56, 83).
 - 2) Benzoat d. β -Lapachonoxim. Sm. 180—181° (*G.* 19, 615). — III, 401.
 - 3) 4-Aethoxyphenylamid d. 2-Benzoylbenzol-1-Carbonsäure. Sm. 136—137° (*G.* 28 [2] 201).
 - 4) Phenyl-3-Aethoxyphenylmonamid d. Benzol-1,2-Dicarbonsäure. Sm. 90°. Ag (*B.* 31, 1332).
 - 5) Phenyl-4-Aethoxyphenylmonamid d. Benzol-1,2-Dicarbonsäure. Sm. 80—82°. Ag (*B.* 31, 1330).
 - 6) Phenyl-3-Oxyphenylmonamid d. Benzol-1,2-Dicarbonsäuremonoäthylester. Sm. 155—157° (*B.* 31, 1332).
 - 7) Phenyl-4-Oxyphenylmonamid d. Benzol-1,2-Dicarbonsäuremonoäthylester. Sm. 166—168° (*B.* 31, 1330).
- C₂₁H₁₉O₂N₃** C 67,8 — H 4,9 — O 16,4 — N 10,8 — M. G. 389.
- 1) 2-Nitro-1,4-Di[Acetylphenylamido]benzol. Sm. 160° (*B.* 25, 2717). — IV, 589.
 - 2) 2-Nitro-1,4-Di[Benzoylamidomethyl]benzol. Sm. 210,5—211° (*B.* 28, 2994). — IV, 644.
 - 3) Triamid d. α -Oxytriphenylmethan- $\alpha^1, \alpha^2, \alpha^3$ -Tricarbonsäure. Sm. 309° (*A.* 299, 299).
- C₂₁H₁₉O₂P** 1) Äthylesterdi-1-Naphtylester d. Phosphorsäure. Sm. 31—32° (*B.* 27, 2563).
- C₂₁H₁₉O₂N₃** C 65,2 — H 4,7 — O 19,7 — N 10,4 — M. G. 405.
- 1) Dibenzoat d. Dioximidotropinon. Sm. 172° u. Zers. (*B.* 30, 2704).
- C₂₁H₁₉O₆N₃** C 62,6 — H 4,5 — O 22,8 — N 10,0 — M. G. 421.
- 1) Pyrocatechuglykophenyltriasin. Sm. 115° u. Zers. (*B.* 27, 1986). — IV, 1579.
 - 2) 6-Nitro-3,4-Dimethoxy-1-Diphenylhydrazonmethylbenzol-2-Carbonsäure. Sm. 217°. Ca + x H₂O (*B.* 21, 2520). — IV, 717.
 - 3) 2- α -Phenylhydrazon-3,4-Dimethoxybenzylpyridin-3,4-Dicarbonsäure. Sm. 190° (*M.* 6, 973; *Ph. Ch.* 5, 418). — IV, 177.
- C₂₁H₁₉O₂N** C 59,9 — H 4,3 — O 32,6 — N 3,2 — M. G. 441.
- 1) Acetylhydroberberilsäure. Sm. 139—140° (*Soc.* 57, 1041). — III, 802.
- C₂₁H₁₉O₂Cl₃** 1) Triacetat d. Trichlorbarbaloin (*C.* 1898 [2] 582).
- C₂₁H₁₉NBr₂** 1) $\alpha\beta$ -Dibrom- γ -[Diphenylmethyl]imido- α -Phenylpropan. Zers. bei 170 bis 180° (*B.* 26, 2170). — III, 54.
- C₂₁H₁₉N₂J** 1) Jodmethylat d. 1,3,5-Triphenylpyrazol. Sm. 176° u. Zers. (*B.* 21, 1207). — IV, 1028.
- C₂₁H₁₉N₂S** 1) 5-Phenylamido-2-[β -Phenyläthyl]-3-Phenyl-2,3-Dihydro-1,3,4-Thiodiazol. HCl (*B.* 30, 854). — IV, 686.
- C₂₂H₂₀ON₂** C 80,5 — H 6,1 — O 4,9 — N 8,5 — M. G. 328.
- 1) α -4-Dimethylamidophenylimido- β -Keto- $\alpha\beta$ -Diphenyläthan. Sm. 138 bis 139° (*B.* 25, 635). — IV, 598.
 - 2) α -4-Methylphenylbenzoylamido- α -Phenylimidoäthan. Sm. 96—97° (*B.* 28, 874).
 - 3) Desylacetophenonhydrazid. Sm. 168° (*A.* 289, 319). — III, 307.
 - 4) Amarinformaldehyd. Sm. 145° (*Bll.* [3] 17, 864).
 - 5) 2-2-Methylphenylamido-4,5-Diphenyl-4,5-Dihydrooxazol. Sm. 136 bis 138°. 2 + (2HCl, PtCl₄) (*B.* 28, 1903).
 - 6) Methyllapazin. Sm. bei 135° (*Soc.* 63, 1381). — IV, 622.
 - 7) Methyllapeurhodon (*Soc.* 63, 1383). — IV, 622.
 - 8) Tetrahydrophenanthromonoacetyldihydrochinoxalin. Sm. 163—165° (*A.* 295, 220). — IV, 482.
 - 9) Benzylidenamid d. α -[4-Methylphenyl]amido- α -Phenyllessigsäure. Sm. 197° (*B.* 29, 1734).
 - 10) isom. β -Benzylidenhydrazid d. α -[4-Methylphenyl]amido- α -Phenyllessigsäure. Sm. 261° (*B.* 29, 1734).
- C₂₂H₂₀ON₄** C 74,1 — H 5,6 — O 4,5 — N 15,7 — M. G. 356.
- 1) ?-Di[Phenylazo]-5-Oxy-1,2,3,4-Tetrahydronaphtalin. Sm. 156° (*B.* 31, 898). — IV, 1426.
- C₂₂H₂₀O₂N₂** C 76,7 — H 5,8 — O 9,3 — N 8,1 — M. G. 344.
- 1) 1,3-Di[Acetylphenylamido]benzol. Sm. 163° (*B.* 16, 2797). — IV, 572.
 - 2) 1,4-Di[Acetylphenylamido]benzol. Sm. 191,7° (*B.* 16, 2807). — IV, 585.

- C₂₁H₂₀O₂N₂** 3) **1,4-Di[Formyl-2-Methylphenylamido]benzol**. Sm. 165° (*J. pr.* [2] **34**, 67). — **IV**, 588.
- 4) **α β -Di[Benzoylamido]äthylbenzol (α β -Dibenzoylamidophenyläthan)**. Sm. 217° (83–84°) (*B.* **28**, 426; *G.* **24** [2] 431). — **IV**, 641.
- 5) **1,2-Di[Benzoylamidomethyl]benzol**. Sm. 184° (*B.* **28**, 2213). — **IV**, 642.
- 6) **1,4-Di[Benzoylamidomethyl]benzol**. Sm. 193–194° (*B.* **28**, 2993). — **IV**, 644.
- 7) **1,2-Di[4-Methylbenzoylamido]benzol**. Sm. 228° (*A.* **205**, 114; **210**, 330). — **IV**, 562.
- 8) **β -Benzoylamido- α -Phenylbenzoylamidoäthan**. Sm. 143,5° (147,5°) (*B.* **24**, 2193; **28**, 2935). — **II**, 1169.
- 9) **α -Benzoylamido- α -[2-Benzoylamidophenyl]äthan**. Sm. 156–157° (*B.* **28**, 1901). — **IV**, 640.
- 10) **2-Acetylamido-1-Benzoylphenylamidomethylbenzol**. Sm. 164–165° (*B.* **23**, 2194). — **IV**, 631.
- 11) **$\alpha\delta$ -Dioximido- $\alpha\beta\delta$ -Triphenylbutan**. Sm. 215° u. Zers. (*Soc.* **57**, 651). — **III**, 307.
- 12) **$\alpha\beta$ -Diacetyl- α -Phenyl- β -[4-Biphenyl]hydrazin**. Sm. 202–203° (*B.* **21**, 912). — **IV**, 1504.
- 13) **Dimethyläther d. 5,6-Dioxy-2-Phenyl-1-Benzylbenzimidazol**. HCl (*Bl.* [3] **17**, 819).
- 14) **Dimethyläther d. 1-[4-Oxybenzyl]-2-[4-Oxyphenyl]benzimidazol (Phenylaldehydin)**. Sm. 128,5–129°. HCl (*B.* **11**, 1660). — **IV**, 564.
- 15) **2-Oxy-1-Methyl-4-Isopropyl-5-Phenylphenazon**. Sm. 174–175° (*B.* **24**, 590). — **IV**, 1018.
- 16) **Lakton d. α -Oxy- α' -Phenyl- $\alpha''\alpha''$ -Di[p -Amido-4-Methylphenyl]methan- α' -2-Carbonsäure**. Sm. 192°. 2HCl, H₂SO₄ (*A.* **299**, 293).
- 17) **Acetat d. α -Phenyl- α -Benzyl- β -[4-Oxybenzyliden]hydrazin**. Sm. 141,5 bis 142° (*G.* **27** [2] 240). — **IV**, 812.
- 18) **Di[Methylphenylamid] d. Benzol-1,2-Dicarbonensäure**. Sm. 177–177,5° (*B.* **30**, 1443).
- 19) **Benzylidenamid d. α -[4-Methoxyphenyl]amido- α -Phenylessigsäure**. Sm. 193° (*B.* **31**, 2707).
- 20) **isom. Benzylidenamid d. α -[4-Methoxyphenyl]amido- α -Phenylessigsäure**. Sm. 222° (*B.* **31**, 2708).
- C₂₁H₂₀O₂N₁** C 71,0 — H 5,4 — O 8,6 — N 15,0 — M. G. 372.
- 1) **Acetat d. 2,4-Di[4-Methylphenylazo]-1-Oxybenzol**. Sm. 128° (*B.* **25**, 1334). — **IV**, 1416.
- 2) **Dimethyldichininohydrobenzol** (*B.* **17**, 2056). — **IV**, 724.
- C₂₁H₂₀O₂N₂** C 73,3 — H 5,6 — O 13,3 — N 7,8 — M. G. 360.
- 1) **3,5-Di[Phenylacetylamido]-1-Oxybenzol**. Sm. 149–150° (*G.* **20**, 347). — **II**, 724.
- 2) **Äthyläther d. 3,4-Di[Benzoylamido]-1-Oxybenzol**. Sm. 191–192°. — **II**, 1178.
- 3) **3-Methyläther-4-Benzoylmethyläther d. 3,4-Dioxy-1-Phenylhydrazonmethylbenzol (Acetophenonvanillinphenylhydrazon)**. Sm. 161° (*B.* **27**, 2464). — **IV**, 764.
- 4) **Benzoat d. 4-Benzoylamido-2-Dimethylamido-1-Oxybenzol**. Sm. 213–214° (*B.* **27**, 1932). — **II**, 1178.
- 5) **2-(2,4-Dimethylphenyl)amido-5-Benzoylamidobenzol-1-Carbonsäure**. Sm. 264–265° (*A.* **279**, 283). — **II**, 1274.
- 6) **α -Benzylidenamido- β -Phenylamido- α -Oxy- β -Phenylpropionsäure**. Sm. 194° (*B.* **31**, 2700).
- 7) **Äthylester d. β -Acetyl- $\alpha\gamma$ -Di[2-Cyanphenyl]propan- β -Carbonsäure**. Sm. 120° (*B.* **22**, 2018). — **II**, 1717.
- 8) **Äthylester d. 4-[2-Oxybenzyliden]amidobiphenyl-4'-Amidomelonsäure**. Sm. 170° (*A.* **258**, 373). — **IV**, 968.
- 9) **4-Methoxybenzylidenamid d. Benzolcarbonsäure**. Sm. 192° (*A.* **154**, 82). — **III**, 86.
- C₂₁H₂₀O₂N₁** C 68,0 — H 5,2 — O 12,4 — N 14,4 — M. G. 388.
- 1) **Diphenylamid d. Phenylnitrosoamidobernsteinsäure**. Sm. 190° u. Zers. (*A.* **252**, 188). — **II**, 437.

- C₇₇H₇₀O₆N₄** C 70,2 — H 5,3 — O 17,0 — N 7,5 — M. G. 376.
 1) Dimethyläther d. Diamidophenolphthalein (*B.* **26** [1] 272).
 2) Opianylhydrazobenzol. Sm. 186—188° (*B.* **21**, 2520). — **IV**, 1496.
 3) 3,4-Dimethoxy-1-Diphenylhydrazonmethylbenzol-2-Carbonsäure (Opianssäurediphenylhydrazon). Sm. 171—172° (*B.* **21**, 2519). — **IV**, 716.
 4) 1,2-Di[Phenylamidomethyl]benzol-1',2'-Dicarbonsäure. Sm. 259 bis 260° (*B.* **31**, 631).
 5) Diäthylester d. 2,5-Diphenyl-1,4-Diazin-3,6-Dicarbonsäure. Sm. 104° (*A.* **291**, 279).
 6) 1,3-Phenyleneester d. 2-Methylphenylamidoameisensäure. Sm. 153 bis 154° (*B.* **25**, 1088). — **II**, 918.
 7) 1,4-Phenyleneester d. 2-Methylphenylamidoameisensäure. Sm. 206,5° (*B.* **25**, 1088). — **II**, 941.
 8) Acetat d. 4-Acetylamido-3-Oxy-1-[*p*-Acetylamidophenyl]naphtalin. Sm. 252° (*Soc.* **55**, 123). — **II**, 903.
 9) Benzozat d. α -Oxy- β -Phenyl- α -[4-Methoxybenzyl]harnstoff. Sm. 134° (*J. pr.* [2] **56**, 83).
 10) Phenylamidoformiat d. Benzoyl-4-Methoxybenzylhydroxylamin. Sm. 92° (*J. pr.* [2] **56**, 84).
 11) Verbindung (aus Di[4-Methylphenylamido]bernsteinsäure). Zers. bei 222° (*B.* **26**, 1770). — **II**, 509.
- C₇₇H₇₀O₆N₆** C 61,1 — H 4,6 — O 14,8 — N 19,4 — M. G. 432.
 1) Dimethylester d. 3,3'-Dimethyl-4,4'-Biphenylendi[Hydrazoncyanessigsäure]. Sm. 270° u. Zers. (*Bl.* [3] **19**, 1034). — **IV**, 1277, 1457.
 2) Diäthylester d. 4,4'-Biphenylendi[Hydrazoncyanessigsäure]. Sm. 204—206° (*Bl.* [3] **19**, 1033). — **IV**, 1276, 1457.
 3) Diacetat d. α , β -Di[3,6-Dibrom-4-Oxy-2,5-Dimethylphenyl]äthan. Sm. 175° (*A.* **301**, 273).
 4) Diacetat d. α , β -Di[2,6-Dibrom-4-Oxy-3,5-Dimethylphenyl]äthan. Sm. 244° (*A.* **302**, 86).
 5) Diacetat d. Verbindung C₁₄H₁₄O₂Br₂. Sm. 217—218° (*A.* **302**, 92).
 C 67,3 — H 5,1 — O 20,4 — N 7,1 — M. G. 392.
 1) 3,4-Methylenäther-*p*-Dimethyläther d. Phenylhydrazon-3,4,2',4',6'-Pentaoxydiphenylmethan. Sm. 211° (*B.* **24**, 2985). — **III**, 209.
- C₇₇H₇₀O₆N₂** C 64,7 — H 4,9 — O 23,5 — N 6,9 — M. G. 408.
 1) Diacetat d. *p*-Diacetyldiamido-9,10-Dioxyphenanthren (*B.* **18**, 2169). — **II**, 1001.
- C₇₇H₇₀O₆S₂** 1) Benzozat d. α , γ -Di[Phenylsulfon]- β -Oxypropan. Sm. 149—150° (*B.* **23**, 758; *A.* **283**, 192). — **II**, 1146.
- C₇₇H₇₀O₇N₂** C 62,3 — H 4,7 — O 26,4 — N 6,6 — M. G. 424.
 1) Verbindung (aus Indoxanthinsäureäthylester (*B.* **15**, 776)). — **II**, 1440.
- C₇₇H₇₀O₈N₂** C 60,0 — H 4,5 — O 29,1 — N 6,4 — M. G. 440.
 1) Phenylhydrazonketongerbsäure (*M.* **10**, 654). — **IV**, 732.
- C₇₇H₇₀O₈Br₂** 1) Tetracetat d. α , β -Di[*p*-Brom-2,4-Dioxyphenyl]äthan. Sm. 215—220° (*J. pr.* [2] **54**, 417).
 C 55,9 — H 4,2 — O 33,9 — N 5,9 — M. G. 472.
 1) Diäthylester d. α , δ -Diketo- α , δ -Di[4-Nitrophenyl]butan- β , γ -Dicarbonsäure. Sm. 180° (*Soc.* **49**, 452). — **II**, 2033.
- C₇₁H₇₀O₁₀S₂** 1) Pentacetylanhydrid d. 1,2,3-Trioxylbenzol-*p*-Sulfonsäure (*A.* **178**, 185). — **II**, 1016.
- C₇₁H₇₀N₂S₂** 1) Piperidylthiuramidisulfid. Sm. 130° (*J. pr.* [2] **36**, 129). — **IV**, 13.
C₇₂H₇₀N₂Cl 1) 2-Chloräthylat d. 1,3,5-Triphenyl-1,2,4-Triazol. 2 + PtCl₄ (*J. pr.* [2] **54**, 157). — **IV**, 1187.
- C₇₂H₇₀N₂J** 1) 2-Jodäthylat d. 1,3,5-Triphenyl-1,2,4-Triazol. Sm. 145° (*J. pr.* [2] **54**, 156). — **IV**, 1187.
- C₇₁H₇₁ON** C 83,8 — H 6,7 — O 5,1 — N 4,4 — M. G. 315.
 1) γ -[4-Methylphenyl]amido- α -Keto- α , γ -Diphenylpropan. Sm. 166,5° (172°) (*B.* **28**, 964; **31**, 353). — **III**, 228.
 2) α -[4-Oxybenzyliden]amidodi[4-Methylphenyl]methan. Sm. 187—188° (*B.* **31**, 1773).
 3) Dibenzylidientropinon. Sm. 152°. HCl, H₂CrO₄ + $\frac{1}{2}$ H₂O (*B.* **30**, 734, 2717; **31**, 1588, 1599 Anm.). — **IV**, 465.
 1) Äthyläther d. 5-Phenylakridin-10-Methoxyhydrat. Sm. 111° (108°) (*A.* **224**, 20; *B.* **19**, 427; **25**, 1747; *J. pr.* [2] **45**, 199). — **IV**, 467.

- C₂₁H₂₁ON** 5) **Benzyl-2,4-Dimethylphenylamid** d. Benzolcarbonsäure. Sm. 85—86°; Sd. 240—245°₁₀ (B. [3] 7, 51). — II, 1166.
- C₂₁H₂₁ON₂** C 77,0 — H 6,1 — O 4,7 — N 12,2 — M. G. 343.
- 1) **Acetylrosanilin**. HCl (J. 1870, 768). — II, 1093.
- 2) **Verbindung** (aus d. 4-Dimethylamido-6'-[2-Oxybenzyliden]amido-3'-Methyl-diphenylamin). Sm. 234—235° (Soc. 65, 885). — IV, 620.
- C₂₁H₂₁ON₃** C 71,1 — H 5,7 — O 4,3 — N 18,9 — M. G. 371.
- 1) **Phenylamid** d. α - β -Di[Phenylhydrason]buttersäure. Sm. 173—175° (B. 27, 1171). — IV, 706.
- C₂₁H₂₁O₂N** C 79,8 — H 6,3 — O 9,7 — N 4,2 — M. G. 331.
- 1) **P-Dimethylamidotriphenylmethan-2-Carbonsäure**. Sm. 190° (B. 27 [2] 664).
- 2) **Aethylester** d. α -Phenylamido- α -Diphenyllessigsäure. Sm. 114 bis 115° (B. 22, 1213). — II, 1465.
- 3) **Verbindung** (aus Isolauronsäure, Brenztraubensäure u. β -Naphtylamin). Sm. 257—258° (C. 1897 [1] 763).
- C₂₁H₂₁O₂N₂** C 73,5 — H 5,8 — O 8,9 — N 11,7 — M. G. 359.
- 1) γ -Di[Phenylamido]- β -Methyl- α -[3-Nitrophenyl]propen. Sm. 170° (B. 19, 531). — III, 63.
- 2) **Phenylidi[4-Methylphenyl]biuret**. Sm. 140° (B. 21, 505). — II, 495.
- 3) α - β -Diphenyl- α -2-Acetylamidobenzyl]harnstoff. Sm. 145° (J. pr. [2] 55, 241). — IV, 633.
- 4) α -Phenylbenzylamido- α -Acetyl- β -Phenylharnstoff. Sm. 145° (B. 27, 1519). — IV, 812.
- 5) **P-Di[Acetylamido]triphenylamin**. Sm. 268—269° u. Zers. (B. 23, 2539). — IV, 585.
- 6) **5-Keto-4-Phenyl-3-Benzyl-4,5-Dihydroisoxazol** + Phenylhydrasin. Sm. 117—118° u. Zers. (A. 296, 8). — IV, 654.
- 7) **Diphenylamid** d. Phenylamidobernsteinsäure. Sm. 204—206° (179°) (A. 252, 168; G. 14, 474). — II, 437.
- 8) **Diphenyldiamid** d. Phenylimidodiessigsäure. Sm. 218° (B. 22, 1800). — II, 431.
- 9) **Phenylbenzylidiamid** d. 4-Methylphenylimidodiameisensäure (Phenylbenzyl-p-Tolylbiuret). Sm. 95—104° (B. 21, 505). — II, 526.
- C₂₁H₂₁O₂N** C 72,7 — H 5,8 — O 17,6 — N 3,9 — M. G. 363.
- 1) **2-Opianylmethyl-6,8-Dimethylchinolin**. Sm. 132°. (2HCl, PtCl₄) (B. 29, 189). — IV, 451.
- 2) **Diäthylester** d. 2,6-Diphenylpyrrol-3,4-Dicarbonensäure. Sm. 151 bis 152° (A. 293, 107; B. 30, 1968). — IV, 462.
- C₂₁H₂₁O₂N** C 69,6 — H 5,5 — O 21,1 — N 3,7 — M. G. 379.
- 1) **3-Nitrobenzylidensantonin**. Sm. 138° (G. 21 [2] 337). — II, 1787.
- 2) **Benzoat** d. Salicylsäurecolein (C. 1895 [1] 61).
- C₂₁H₂₁O₂N₂** C 64,9 — H 5,1 — O 19,7 — N 10,3 — M. G. 407.
- 1) **Methyläther** d. Gallocyanin + Anilin (B. 21, 1743). — III, 677.
- C₂₁H₂₁N₂Cl** 1) **Chlormethylat** d. 5 oder 6-Methyl-2-Phenyl-1-Benzylbenzimidazol. 2 + PtCl₄ (B. 11, 594). — IV, 619.
- C₂₁H₂₁N₂J** 1) **Jodmethylat** d. 5 oder 6-Methyl-2-Phenyl-1-Benzylbenzimidazol. Sm. 269° u. Zers. (B. 11, 594). — IV, 619.
- 2) **Jodäthylat** d. 2-Phenyl-1-Benzylbenzimidazol. Sm. 211—213° (B. 11, 1654). — IV, 563.
- 3) **Dimethylmethylocyanin** + H₂O. Sm. 275—277° (wasserfrei) (R. 3, 342). — IV, 319.
- C₂₁H₂₁N₃S₂** 1) **Dimethyltriphenyldithiobiuret**. Sm. 202,5° (B. 21, 108). — II, 400.
- C₂₁H₂₁N₃Cl₂** 1) α -Diazodiäthylphenosafraninchlorid (B. 16, 471). — IV, 1284.
- 2) β -Diazodiäthylphenosafraninchlorid (B. 16, 471). — IV, 1284.
- C₂₁H₂₁ON₂** C 80,0 — H 6,7 — O 4,8 — N 5,5 — M. G. 330.
- 1) **Tribenzylharnstoff**. Sm. 119—120° (B. 25, 1820). — II, 527.
- 2) **Tri[4-Methylphenyl]harnstoff**. Sm. 188—189° (B. 25, 1822). — II, 495.
- 3) α -Benzyl- α - β -Di[4-Methylphenyl]harnstoff. Sm. 115° (B. 25, 1823). — II, 527.
- 4) α -Benzyl- β - β -Di[4-Methylphenyl]harnstoff. Sm. 136—137° (B. 25, 1822). — II, 526.
- 5) α -[4-Methylphenyl]- α - β -Dibenzylharnstoff. Sm. 83—85° (B. 25, 1823). — II, 527.

- C₂₂H₂₁ON**, 6) α -[4-Methylphenyl]- β - β -Dibenzylharnstoff. Sm. 168—169° (B. 25, 1820). — II, 527.
- 7) Methyläther d. α -[4-Dimethylamidophenyl]imido-4-Oxydiphenylmethan. Sm. 116° (B. 26, 927). — IV, 598.
- 8) Methyläther d. 2-[4-Oxyphenyl]-1,3-Diphenyltetrahydroimidazol. Sm. 164° (B. 20, 733). — III, 85.
- 9) Äthyläther d. 2-Benzylidenamido-1-[4-Oxyphenylamido]methylbenzol. Sm. 137° (J. pr. [2] 52, 397). — IV, 634.
- 10) Äthyläther d. 2-Benzylidenamido-5-[4-Oxyphenyl]amido-1-Methylbenzol. Sm. 86—87° (A. 287, 167). — III, 32.
- 11) Verbindung (aus 4-Amido-1-Dimethylamidobenzol u. Benzofen). Sm. 126 bis 127° (B. 25, 639). — IV, 598.
- C₂₂H₂₁ON₄**
C 73,8 — H 6,1 — O 4,5 — N 15,6 — M. G. 358.
- 1) Äthyläther d. α - β -Di[Phenylhydrazon]- α -[4-Oxyphenyl]äthan. Sm. 155°. — IV, 764.
- 2) 3,5-Di[Phenylazo]-2-Oxy-4-Isopropyl-1-Methylbenzol. Sm. 126° (G. 15, 217). — IV, 1426.
- 3) 2,6-Di[Phenylazo]-3-Oxy-4-Isopropyl-1-Methylbenzol. Sm. 168° (G. 15, 55, 230). — IV, 1425.
- 4) Phenylhydrazid d. γ -Phenylhydrazon- γ -Phenylbuttersäure. Sm. 195° (A. 299, 51). — IV, 697.
- C₂₂H₂₁O₂N₂**
C 76,3 — H 6,3 — O 9,2 — N 8,1 — M. G. 346.
- 1) 5'-Äthyläther d. 2-[2-Oxybenzyliden]amido-5-[4-Oxyphenyl]amido-1-Methylbenzol. Sm. 124—125° (A. 287, 167). — III, 73.
- 2) 1'-Äthyläther d. 2-[2-Oxybenzyliden]amido-1-[4-Oxyphenyl]amido]methylbenzol. Sm. 94° (J. pr. [2] 52, 397). — IV, 635.
- 3) Isobutyläther d. 5-Phenylamido-2-Oxy-1,4-Benzochinonphenylimid. Sm. 138° (B. 18, 788). — III, 348.
- 4) Oxymethyldihydrolepeurhodon. Sm. 183,5—184,5° (Soc. 63, 1384). — IV, 622.
- C₂₂H₂₁O₂N₃**
C 70,6 — H 5,9 — O 8,5 — N 15,0 — M. G. 374.
- 1) β -Dioxy-1,4-Di[α -Phenylhydrazonäthyl]benzol (Resodiacetophenonphenylhydrazon). Sm. 231° (Bl. [3] 6, 153). — IV, 783.
- 2) α - β -Di[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydro-4-Pyrasolyl]äthan (Äthylendimethylorxichinazin). Sm. noch nicht bei 250° (Soc. 57, 222). — IV, 723.
- 3) 5,5'-Dimethyläther d. 4,4'-Bi[5-Oxy-1-Phenyl-3-Methylpyrazol]. Sm. 186—187° (B. 28, 714). — IV, 1262.
- 4) 3,3'-Diketo-1,5,1',5'-Tetramethyl-2,2'-Diphenyl-2,3,2',3'-Tetrahydro-4,4'-Bipyrazol (Bisantipyridin). Sm. 245°. 2HCl + 2H₂O, (2HCl, PtCl₄), Pikrat (B. 17, 2045; A. 238, 210). — IV, 1263.
- 5) 5,5'-Diketo-3,4,3',4'-Tetramethyl-1,1'-Diphenyl-4,5,4',5'-Tetrahydro-4,4'-Bipyrazol. Sm. 164° (B. 17, 2050; A. 238, 163, 174). — IV, 1265.
- 6) 5,5'-Diketo-3,3'-Dimethyl-1,1'-Di[4-Methylphenyl]-4,5,4',5'-Tetrahydro-4,4'-Bipyrazol (Soc. 59, 341). — IV, 807.
- 7) Di[Phenylhydrazid] d. α -Phenyläthan- β - β -Dicarbonsäure. Sm. 242 bis 243° (Soc. 61, 796). — IV, 711.
- 8) Di[Cinnamylidenhydrazid] d. Äthan- α - β -Dicarbonsäure. Sm. 239° (J. pr. [2] 51, 192). — III, 62.
- C₂₂H₂₁O₂S₂**
1) Diphenyläther d. α -[2-Methylphenyl]sulfon- β - γ -Dimerkaptopropan. Fl. (J. pr. [2] 56, 463).
- 2) Diphenyläther d. α -[4-Methylphenyl]sulfon- β - γ -Dimerkaptopropan. Fl. (J. pr. [2] 56, 459).
- C₂₂H₂₁O₂Se**
1) Diäthyläther d. Di[1-Oxynaphtyl]selenid. Sm. 149° (B. 30, 2824).
- C₂₂H₂₁O₃N₂**
C 72,9 — H 6,1 — O 13,3 — N 7,7 — M. G. 362.
- 1) 4-Methyläther- α -Benzyläther d. α -Oxy- β -Phenyl- α -[4-Oxybenzyl]harnstoff. Sm. 85° (J. pr. [2] 56, 82).
- 2) Äthyläther d. 4-Acetylamido-3-Oxy-1-[β -Acetylamidophenyl]naphthalin. Sm. oberh. 288° (Soc. 55, 604). — II, 903.
- C₂₂H₂₁O₃N₄**
C 67,7 — H 5,6 — O 12,3 — N 14,4 — M. G. 390.
- 1) β -Trioxo-1,4-Di[α -Phenylhydrazonäthyl]benzol (Gallodiacetophenonphenylhydrazon). Sm. 246° (Bl. [3] 6, 157). — IV, 783.

- $C_{17}H_{17}O_2N_2$ 2) Aethylester d. Phenylisinchinisinohydrobenzolcarbonsäure. Sm. 211–212° (B. 17, 2055). — IV, 723.
- 3) Amid d. 3-[2,4-Dimethylphenyl]imido-5-[2,4-Dimethylphenyl]-amido-2-Keto-6-Oxy-2,3-Dihydropyridin-4-Carbonsäure (B. 27, 3450). — IV, 1140.
- 4) Verbindung (aus Diacetylfumarsäurediäthylester). Sm. 138° (B. 30, 1994). — IV, 724.
- $C_{17}H_{17}O_2N_2$ C 69,8 — H 5,8 — O 16,9 — N 7,4 — M. G. 378.
- 1) 4,5-Di[2,4,6-Trimethylbenzoyl]-1,2,3,6-Dioxidiazin (Dimesityldinitrosacyl). Sm. 141° (B. 28, 3211). — III, 302.
- 2) Dibenzoyldiethylpyridinamid. Sm. 299° (J. pr. [2] 55, 92).
- $C_{17}H_{17}O_2N_2$ 1) Benzyläther d. Dibenzylsulfonmerkaptomethan. Sm. 214° (B. 25, 356). — II, 1053.
- $C_{17}H_{17}O_2N_2$ C 67,0 — H 5,6 — O 20,3 — N 7,1 — M. G. 394.
- 1) Anhydrid d. $\alpha\beta$ -Di[4-Methylphenylacetylamido]bernsteinsäure. Sm. 232° u. Zers. (B. 26, 1770). — II, 509.
- $C_{17}H_{17}O_2Br_2$ 1) Diacetat d. Di[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl]äther. Sm. 216° (B. 28, 2918).
- 2) Diacetat d. Di[2,6-Dibrom-4-Oxy-3,5-Dimethylbenzyl]äther. Sm. 228–229° (A. 302, 90).
- $C_{17}H_{17}O_2S_2$ 1) $\beta\gamma$ -Diphenylsulfon- α -[4-Methylphenyl]sulfonpropan. Sm. 88,5° (J. pr. [2] 56, 460).
- $C_{17}H_{17}O_2N_2$ C 62,0 — H 5,1 — O 26,3 — N 6,6 — M. G. 426.
- 1) Acetyldiphenylamid d. Diacetylsäure. Sm. 216° (B. 24, 2960). — II, 422.
- $C_{17}H_{17}O_2N_2$ C 59,7 — H 5,0 — O 29,0 — N 6,3 — M. G. 447.
- 1) Diäthylester d. α -Dinitro- α -Truxillsäure. Sm. 138° (B. 24, 2590). — II, 1901.
- $C_{17}H_{17}O_2N_2$ C 57,6 — H 4,8 — O 31,4 — N 6,1 — M. G. 458.
- 1) Nitroisoonarkotin. Sm. 205° u. Zers. (B. 29, 2042). — III, 922.
- $C_{17}H_{17}N_2J_2$ 1) Dijodäthylat d. 6,6'-Bichinolyl. Sm. 270° (B. 17, 1819). — IV, 1069.
- $C_{17}H_{17}N_2S_2$ 1) α -Phenyl- β -[β -Diphenyl-norm. Propyl]thioharnstoff. Sm. 129° (B. 23, 2862). — II, 637.
- 2) α -Phenyl- β -Diphenylmethylthioharnstoff. Sm. 171° (B. 31, 1774).
- 3) Dibenzylamidobenzylimidomerkaptomethan. Sm. 114,5–115,5° (Soc. 67, 557).
- 4) Dibenzylamido-4-Methylphenylimidomerkaptomethan. Sm. 145 bis 146° (Soc. 67, 558).
- $C_{17}H_{17}N_2S$ 1) 4,4'-Di[3,5-Dimethyl-1-Phenylpyrazolyl]sulfid. Sm. 141° (G. 24 [1] 355). — IV, 781.
- $C_{17}H_{17}N_2S_2$ 1) 4,4'-Di[3,5-Dimethyl-1-Phenylpyrazolyl]disulfid. Sm. 78–79° (G. 23 [2] 418). — IV, 781.
- $C_{17}H_{17}N_2S_3$ 1) 4,4'-Di[3,5-Dimethyl-1-Phenylpyrazolyl]trisulfid. Sm. 141° (G. 24 [1] 363). — IV, 781.
- $C_{17}H_{17}ON_2S$ C 76,5 — H 6,7 — O 4,6 — N 12,2 — M. G. 345.
- 1) 4-Dimethylamido-6'-[2-Oxybenzyliden]amido-3'-Methyldiphenylamin. Sm. 134° (Soc. 65, 883). — IV, 620.
- $C_{17}H_{17}ON_2S$ C 70,8 — H 6,1 — O 4,3 — N 18,8 — M. G. 373.
- 1) 6-Dimethylamido-4-Oxy-3-Phenylazo-1-[2,4-Dimethylphenylazo]benzol. Sm. 142° (B. 31, 493). — IV, 1417.
- 2) 4-Dimethylamido-6-Oxy-3-Phenylazo-1-[2,4-Dimethylphenylazo]benzol. Sm. 161° (B. 31, 494). — IV, 1417.
- $C_{17}H_{17}O_2N$ C 79,3 — H 6,9 — O 9,6 — N 4,2 — M. G. 333.
- 1) Verbindung + $\frac{1}{2}H_2O$ (aus Tropinon u. Benzaldehyd). Sm. 115° u. Zers. (B. 30, 2718).
- $C_{17}H_{17}O_2N_2$ C 73,1 — H 6,4 — O 8,9 — N 11,6 — M. G. 361.
- 1) 4'-Nitro-4'-Dimethylamido-4'-Amido-2'-Methyltriphenylmethan. Sm. 169° (B. 24, 553). — IV, 1045.
- 2) 4'-Nitro-4'-Dimethylamido-5'-Amido-2'-Methyltriphenylmethan. Sm. 202° (B. 24, 3136). — IV, 1045.
- $C_{17}H_{17}O_2N_2$ C 67,8 — H 5,9 — O 8,3 — N 18,0 — M. G. 389.
- 1) Dibenzylamidokaffein. Sm. 162° (B. 31, 1140).
- $C_{17}H_{17}O_2N$ C 75,6 — H 6,6 — O 13,7 — N 4,0 — M. G. 349.
- 1) Aethylcusparin. Sm. 190–191° (C. 1895 [2] 826; B. 29 [2] 36).

- $C_{22}H_{23}O_3N$ 2) Aethylester d. 6-[4-Methylphenyl]amido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 214° (A. 294, 278).
C 70,0 — H 6,1 — O 12,7 — N 11,1 — M. G. 377.
- $C_{22}H_{23}O_3N_3$ 1) Trimethyläther d. Tri[2-Oxyphenyl]guanidin. (2HCl, PtCl₄) (B. 21, 1862). — II, 705.
- $C_{22}H_{23}O_3N$ 1) Gnoskopin. Sm. bei 228°. HCl + 3H₂O (J. 1878, 873; B. 26 [2] 593). — III, 922.
- 2) Dehydrocoorydalin (oder C₂₂H₂₃O₃N) + CHCl₃ (Sm. 154°). HCl + 4H₂O, (2HCl, PtCl₄ + 6H₂O), (HCl, AuCl₃), HBr + 4H₂O, (HBr + Br₂), HJ + 2H₂O, HNO₃ + 2H₂O, H₂SO₄ + 3H₂O (C. 1896 [2] 792; 1898 [2] 115; Soc. 71, 658). — III, 876.
- 3) Diäthylester d. 2,5-Dimethyl-1-[1-Naphtyl]pyrrol-3,4-Dicarbon-säure. Sm. 91–92° (A. 236, 307). — IV, 92.
- 4) Diäthylester d. 2,5-Dimethyl-1-[2-Naphtyl]pyrrol-3,4-Dicarbon-säure. Sm. 124° (B. 18, 304; A. 236, 306). — IV, 92.
- $C_{22}H_{23}O_5N$ C 69,3 — H 6,0 — O 21,0 — N 3,7 — M. G. 381.
- 1) Monoxim d. γ -Acetyl- $\alpha\alpha$ -Diketo- $\alpha\alpha$ -Diphenylpentan- γ -Carbonsäure-äthylester. Sm. 61–63° (B. 22, 3228). — II, 1982.
- $C_{22}H_{23}O_5N$ C 66,5 — H 5,8 — O 24,2 — N 3,5 — M. G. 397.
- 1) Methylhydrastin. Sm. 156°. HCl + H₂O, (2HCl, PtCl₄ + 2H₂O), (HCl, AuCl₃), HNO₃, H₂SO₄ (B. 23, 406). — II, 2052.
- $C_{22}H_{23}O_7N$ C 63,9 — H 5,6 — O 27,1 — N 3,4 — M. G. 413.
- 1) Narkotin (Opianin). Sm. 176°. Salze meist bek. Lit. bedeutend. — III, 914.
- 2) Isonarkotin. Sm. 194°. HCl + 2H₂O, (2HCl, PtCl₄), (HCl, AuCl₃), HBr, HJ, HNO₃, Tartrat (B. 29, 184, 2040; 30, 1745; 31, 2099). — III, 922.
- $C_{22}H_{23}O_7N_3$ C 59,9 — H 5,2 — O 25,4 — N 9,5 — M. G. 441.
- 1) Methylnitrohydrastimid. Sm. 202–203°. + C₆H₆O. Sm. 95°. HCl, HNO₃, H₂SO₄ (A. 271, 400). — II, 2052.
- $C_{22}H_{23}O_8N$ C 61,5 — H 5,4 — O 29,8 — N 3,3 — M. G. 429.
- 1) Oxyarkotin. HCl + 2H₂O, (2HCl, PtCl₄). (Soc. 29, 461). — III, 922.
- $C_{22}H_{23}O_9N$ C 59,3 — H 5,2 — O 32,4 — N 3,1 — M. G. 445.
- 1) Dimethylester d. Berberilsäure. Sm. 173–174° (Soc. 57, 1048). — III, 801.
- $C_{22}H_{23}O_{10}Cl$ 1) Verbindung (aus Esparto) (Soc. 38, 668). — I, 1080.
- $C_{22}H_{23}N_3J$ 1) Jodisoamylat d. 2-Phenyl- β -Naphtimidazol (A. 208, 329). — IV, 1061.
- $C_{22}H_{24}ON_2$ C 79,5 — H 7,2 — O 4,8 — N 8,4 — M. G. 332.
- 1) Anhydrid d. 2-Methylechinolinmethyloxyhydrat (A. 242, 302). — IV, 308.
- $C_{22}H_{24}O_4N_2$ C 75,9 — H 6,9 — O 9,2 — N 8,0 — M. G. 348.
- 1) Dimethyläther d. 1,2-Di[2-Oxyphenylamidomethyl]benzol. Sm. 105° (B. 31, 1157).
- 2) Hydromethyllepidon. Sm. 268° (A. 236, 109; B. 19, 3301). — IV, 317.
- $C_{22}H_{24}O_5N_2$ C 65,3 — H 5,9 — O 7,9 — N 20,8 — M. G. 404.
- 1) Di[Phenylhydrazid] d. Phenylhydrazidobernsteinsäure. Sm. 199 bis 200° (B. 26, 121). — IV, 741.
- $C_{22}H_{25}O_4Br$ 1) Diäthyläther d. $\alpha\beta$ -Di[3,6-Dibrom-4-Oxy-2,5-Dimethylphenyl]-äthen. Sm. 171–172,5° (B. 28, 2909; 29, 2338).
- $C_{22}H_{25}O_4N_2$ C 72,5 — H 6,6 — O 13,2 — N 7,7 — M. G. 364.
- 1) Anhydrid d. 1-Methyl-1,2,3,4-Tetrahydrochinolin-4-Carbonsäure. Sd. 297–299°₄₁₃ (M. 5, 643). — IV, 214.
- 2) Aethylester d. $\alpha\delta$ -Di[4-Methylphenylimido- γ -Ketopentan- α -Carbon-säure. Sm. 186° (Bl. [3] 13, 480).
- $C_{22}H_{25}O_5N_2$ C 69,5 — H 6,3 — O 16,8 — N 7,4 — M. G. 380.
- 1) 4,4'-Di[Diacetylamido]-3,3'-Dimethylbiphenyl. Sm. 211° (B. 21, 747). — IV, 981.
- 2) Diisobutyrat d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. α -Benzildioxim). Sm. 121–122° (B. 21, 802). — III, 294.
- 3) Diisobutyrat d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. β -Benzildioxim). Sm. 88–89° (B. 21, 802). — III, 294.
- 4) Diisobutyrat d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. γ -Benzildioxim). Sm. 89–92° (B. 22, 715). — III, 294.

- $C_{27}H_{14}O_4N_2$ 5) Di[2,4,6-Trimethylbenzyliden]hydrazin- $\alpha\alpha'$ -Dicarbonsäure + H_2O . Sm. 200° (B. [3] 17, 371).
- $C_{27}H_{24}O_2N_2$ 1) Methylhydrastimid. Sm. 192°. HCl , $(2HCl, PtCl_4)$, HJ , HNO_3 + H_2O , H_2SO_4 (B. 23, 2899). — II, 2052.
- 2) Dioxim d. γ -Acetyl- $\alpha\alpha$ -Diketo- $\alpha\alpha$ -Diphenylpentan- γ -Carbonsäure-äthylester. Sm. 61–63° (B. 22, 3228). — II, 1982.
- $C_{27}H_{24}O_2N_6$ 1) Hexaamidoorcinaurin. $6HCl$ + H_2O (B. 13, 566). — II, 1125.
- $C_{27}H_{21}O_3Br_2$ 1) Diacetat d. Di[3-Brom-4-Oxy-2,5-Dimethylbenzyl]äther. Sm. 140° (A. 302, 124).
- $C_{27}H_{24}O_6N_2$ 1) Methylhydrastinoxim. Sm. 158°. HCl + $3H_2O$, HNO_3 + xH_2O , H_2SO_4 + C_2H_5O (A. 271, 391). — II, 2053.
- 2) Diäthyläther d. Succinylbenzhydroxamsäure (Benzäthylsuccinhydroxylamin). Sm. 60° (A. 281, 265). — II, 1199.
- 3) $\alpha\beta$ -Di[4-Methylphenylacetyl]amidobernsteinsäure + H_2O . Zers. 204°. Ca + H_2O , Ba + H_2O (B. 26, 1770). — II, 509.
- 4) Diacetat d. $\alpha\beta$ -Di[Acetyl-amido]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 216–219°. + C_2H_5O (Soc. 46, 679; B. 17, 2406, 2409). — II, 994; III, 287.
- 5) 2-Methylphenylamid d. Diacetylweinsäure. Sm. 221–222° u. Zers. (B. 23, 2050). — II, 468.
- 6) 4-Methylphenylamid d. Diacetylweinsäure. Sm. 202° (B. 23, 2050). — II, 503.
- $C_{27}H_{27}O_7N_2$ C 61,6 — H 5,6 — O 26,2 — N 6,5 — M. G. 428.
- 1) Dioxymethylhydrastimid. Sm. 151°. $(2HCl, PtCl_4)$ (A. 271, 406). — II, 2053.
- $C_{27}H_{24}O_7N_6$ C 54,6 — H 5,0 — O 23,1 — N 17,3 — M. G. 484.
- 1) Verbindung (aus d. Methyläther d. 4-[2-Oxyphenyl]hydrazon-5-Keto-3-Methyl-1,5-Dihydroisoxazol). Zers. bei 170° (B. 30, 1164). — IV, 814.
- $C_{27}H_{24}O_8N_2$ C 59,4 — H 5,4 — O 28,8 — N 6,3 — M. G. 444.
- 1) Diäthylester d. $\alpha\beta$ -Di[Phenylamidoformoxyl]äthan- $\alpha\beta$ -Dicarbonsäure. Sm. 164° (C. 1895 [2] 443).
- $C_{27}H_{21}O_{10}N_2$ C 46,1 — H 4,2 — O 44,8 — N 4,9 — M. G. 572.
- 1) Pentacetylidinitroarbutin (A. 154, 242). — III, 571.
- $C_{27}H_{24}NCl$ 1) Methyltribenzylammoniumchlorid. 2 + $PtCl_4$ (B. 13, 703; 19, 1028). — II, 523.
- $C_{27}H_{24}NJ$ 1) Methyltribenzylammoniumjodid. Sm. 184° (B. 19, 1027). — II, 523.
- 2) Jodmethylat d. 4-Dimethylamidotriphenylmethan. Sm. 184–185° (A. 206, 115, 157). — II, 641.
- 3) Jodmethylat d. 3,5-Di[2-Methylbenzyl]pyridin. Sm. 152–153° (A. 280, 86). — IV, 457.
- 4) Jodmethylat d. 3,5-Di[3-Methylbenzyl]pyridin. Sm. 105–107° (A. 280, 81). — IV, 457.
- 5) Jodmethylat d. 3,5-Di[4-Methylbenzyl]pyridin. Sm. 137° (A. 280, 76). — IV, 457.
- $C_{27}H_{21}N_2S_2$ 1) Dithioharnstoff (aus 1,5-Diamido-1,2,3,4-Tetrahydronaphtalin). Sm. 175° u. Zers. (B. 22, 958). — IV, 862.
- $C_{27}H_{21}ClAs$ 1) Methyltribenzylarsoniumchlorid. Sm. 201°. 2 + $PtCl_4$ (A. 233, 76). — IV, 1691.
- $C_{27}H_{24}JP$ 1) Isobutyltriphenylphosphoniumjodid. Sm. 176–177° (A. 229, 314). — IV, 1661.
- $C_{27}H_{21}JAs$ 1) Methyltribenzylarsoniumjodid. Sm. 143° (A. 233, 75). — IV, 1691.
- $C_{27}H_{21}ON$ C 82,8 — H 7,8 — O 5,0 — N 4,4 — M. G. 319.
- 1) Methyltribenzylammoniumhydrat. Chlorid, Jodid (B. 13, 703; 19, 1028). — II, 523.
- $C_{27}H_{20}ON_2$ C 76,1 — H 7,2 — O 4,6 — N 12,1 — M. G. 347.
- 1) α -Oxy- α -Tri[4-Amido-3-Methylphenyl]methan (B. 27, 1814).
- $C_{27}H_{20}OAs$ 1) Methyltribenzylarsoniumoxyhydrat. Chlorid, 2 Chlorid + $PtCl_4$, Jodid (A. 233, 75). — IV, 1691.
- $C_{27}H_{20}O_2N$ C 75,2 — H 7,1 — O 13,7 — N 4,0 — M. G. 351.
- 1) Benziltropoin (B. [3] 9, 1016). — III, 788.
- 2) Benzyläther d. Santoninoxim. Sm. 151–152° (B. 26, 413). — II, 1786.

- $C_{21}H_{25}O_4N$ C 71,9 — H 6,8 — O 17,4 — N 3,8 — M. G. 367.
- 1) **Aethylhydroberberin** + 4 H₂O. Sm. 233–235° u. Zers. HCl + 2½ H₂O, (2HCl, PtCl₄), (HCl, AuCl₃), HBr, HJ, HNO₃ + 2 H₂O. — III, 801.
- $C_{21}H_{25}O_3N_2$ C 64,2 — H 6,1 — O 19,5 — N 10,2 — M. G. 411.
- 1) **Trioxim d. γ -Acetyl- α - δ -Diketo- α - δ -Diphenylpentan- γ -Carbonsäure-äthylester**. Sm. 66–68° (B. 22, 3228). — II, 1982.
- $C_{21}H_{25}O_6N$ C 60,2 — H 6,3 — O 24,0 — N 3,5 — M. G. 399.
- 1) **Colchicin**. Sm. 143–147°. + 2 CHCl₃, (HCl, AuCl₃), (A. 7, 274; Fr. 18, 129; B. 42, 298; [3] 11, 155; J. 1856, 548, 550; 1864, 450; M. 4, 162; 7, 568; 9, 4, 868; B. 14, 1412). — III, 873.
- 2) **Methylcolchicin** (M. 9, 870). — III, 874.
- 3) **Succinylcolceïn** + 5 H₂O. HCl + H₂O, (2HCl, PtCl₄) (Ser. 28, 689). — III, 906.
- 4) **Aethylester d. Acetylmorphinkohlensäure**. Sm. bei 150°. HCl, (2HCl, PtCl₄ + H₂O) (C. 1899 [1] 705).
- $C_{21}H_{25}O_7N$ C 63,6 — H 6,0 — O 27,0 — N 3,4 — M. G. 415.
- 1) **Methylhydrasteïn** + 2 H₂O (Methylhydrastinhydrat). Sm. 151–152° (wasserfrei). HCl, (2HCl, PtCl₄) (B. 23, 408). — II, 2051.
- 2) **Hydrastinmethoxyhydrat** + H₂O. Sm. 242° (214–215°). Salze, siehe diese (B. 23, 405). — II, 2051.
- $C_{21}H_{25}O_8N$ C 61,2 — H 5,8 — O 29,7 — N 3,3 — M. G. 431.
- 1) **Isonarkotinsäure**. Ba (B. 29, 185).
- $C_{27}H_{35}O_5N_2$ C 75,4 — H 7,4 — O 9,1 — N 8,0 — M. G. 350.
- 1) **3,6-Diketo-2,5-Diäthyl-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin**. Sm. 218° (B. 25, 2924). — II, 472.
- 2) **isom. 3,6-Diketo-2,5-Diäthyl-1,4-Di[2-Methylphenyl]hexahydro-1,4-Diazin**. Sm. 178–180° (B. 25, 2924). — II, 472.
- 3) **3,6-Diketo-2,5-Diäthyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin**. Sm. 256° (B. 25, 2322, 2925). — II, 508.
- 4) **isom. 3,6-Diketo-2,5-Diäthyl-1,4-Di[4-Methylphenyl]hexahydro-1,4-Diazin**. Sm. 207–217° (204–210°) (B. 25, 2322, 2925). — II, 508.
- 5) **α -1,4-Dibenzoyl-2,5-Dimethyl-3-Aethylhexahydro-1,4-Diazin**. Sm. 169° (J. pr. [2] 55, 71). — IV, 485.
- 6) **α -1,4-Dibenzoyl-2,3,5,6-Tetramethylhexahydro-1,4-Diazin**. Sm. 242° (245°) (J. pr. [2] 55, 75; B. 26, 724). — IV, 485.
- 7) **β -1,4-Dibenzoyl-2,3,5,6-Tetramethylhexahydro-1,4-Diazin**. Sm. 175° (173°) (J. pr. [2] 55, 77; B. 26, 724). — IV, 485.
- 8) **Di[Phenylamid] d. d-Camphersäure**. Sm. 226° (B. 28, 531).
- 9) **Di[Phenylamid] d. l-Camphersäure**. Sm. 226° (B. 28, 531).
- 10) **Di[Phenylamid] d. i-Camphersäure**. Sm. 196–197° (B. 28 [2] 923).
- 11) **Di[Phenylamid] d. d-Isocamphersäure**. Sm. 201° (B. 28, 531).
- 12) **Di[Phenylamid] d. l-Isocamphersäure**. Sm. 201° (B. 28, 531).
- 13) **Di[Phenylamid] d. i-Isocamphersäure**. Sm. 184° (B. 28 [2] 923).
- $C_{17}H_{20}O_2Br$ 1) **Di[2,4-Dibrom-6-Isopropyl-3-Methylphenyläther] d. $\alpha\beta$ -Dioxyäthan**. Sm. 151–153° (G. 22 [2] 583). — II, 772.
- $C_{21}H_{25}O_2N_2$ C 72,1 — H 7,1 — O 13,1 — N 7,6 — M. G. 366.
- 1) **Gelseminin** (oder C₂₁H₂₅O₁₁N₂; C₂₁H₂₅O₉N₂). Sm. bei 120°. HCl, (HCl, PtCl₄), HNO₃, H₂SO₄ (B. 26, 1055, 1726; C. 1895 [1] 605; 1896 [1] 111). — III, 884.
- 2) **Methylstrychnin** (B. 23, 2732). — III, 937.
- 3) **Isomethylstrychnin** + 7 H₂O (A. 264, 81). — III, 938.
- 4) **Strychninmethoxyhydrat** + 4 H₂O. Salze siehe (J. 1859, 395; 1868, 757; J. pr. [2] 3, 157; B. 23, 2732; A. 264, 62). — III, 937.
- 5) **Methylisostrychninsäure** + 2½ H₂O. Zers. oberh. 240° (A. 268, 240). — III, 943.
- 6) **Acetylchinin**. Sm. 108°. (2HCl, PtCl₄ + 2 H₂O), (HCl, AuCl₃ + H₂O) (J. 1876, 813; A. 205, 317). — III, 875.
- 7) **Acetylconchinin**. (2HCl, PtCl₄ + 3 H₂O), (2HCl, AuCl₃ + 2 H₂O) (A. 205, 318). — III, 825.
- $C_{21}H_{25}O_3N_4$ C 67,0 — H 6,6 — O 12,2 — N 14,2 — M. G. 394.
- 1) **Verbindung** (aus Oxybenzol u. 4-Nitroso-1-Dimethylamidobenzol) (B. 12, 1824). — II, 330.

- C₂₇H₂₆O₂N₂** C 69,1 — H 6,8 — O 16,7 — N 7,3 — M. G. 382.
 1) Chairamin + H₂O. Sm. 233° (wasserfrei). HCl + H₂O, (2HCl, PtCl₄ + 2H₂O), H₂SO₄ + 8H₂O (A. 225, 243). — III, 929.
 2) Chairamin + H₂O. Sm. 126 — 128° (wasserfrei) (A. 225, 253). — III, 930.
 3) Conchairamin + H₂O. Sm. 108—110° (120° wasserfrei). + C₄H₆O (Sm. 82 bis 86°), HCl + 2H₂O, (2HCl, PtCl₄ + 5H₂O), HJ + H₂O, H₂SO₄ + 9H₂O, CHNS + H₂O (A. 225, 246). — III, 930.
 4) Conchairamidin + H₂O. Sm. 114—115° (wasserfrei). HCl + 3H₂O, (2HCl, PtCl₄ + 5H₂O), H₂SO₄ + 14H₂O (A. 225, 257). — III, 930.
 5) Di[γ-Benzoylamidopropyl]essigsäure. Sm. 149,5°. Ag (B. 26, 2143). — II, 1192.
 6) Dimethylester d. 2,2'-Diisopropylazobenzol-5,5'-Dicarbonsäure. Sm. 166° (J. r. 16, 167). — IV, 1466.
 7) Diäthylester d. δ-Phenylhydrazon-α-Phenylbutan-αβ-Dicarbonsäure. Sm. 149° (B. 18, 792). — IV, 718.
 8) polym. 4-Methylphenylamid d. Propionylameisensäure. Sm. 192° (A. 279, 107).
- C₂₇H₂₆O₂N₄** C 64,4 — H 6,3 — O 15,6 — N 13,6 — M. G. 410.
 1) αβ-Di[4-Acetylamidophenylacetylamido]äthan. Sm. oberh. 290° (Soc. 71, 424). — IV, 587.
 2) γγ-Diphenylhydrazonoktan-αδ-Dicarbonsäure. Sm. 111—112° (A. 294, 172). — IV, 722.
 3) Diäthylester d. βγ-Di[Phenylhydrazon]butan-αδ-Dicarbonsäure. Sm. 160—180° u. Zers. (A. 249, 199). — IV, 722.
- C₂₇H₂₆O₂N₂** C 63,7 — H 6,3 — O 23,2 — N 6,8 — M. G. 414.
 1) Methylhydrastamid. Sm. 180°. HCl + 2H₂O, Pikrat (B. 23, 2897). — II, 2052.
 2) Verbindung (aus β-Amidocrotonsäureäthylester u. Benzylidenmalonsäure-diäthylester). Sm. 179—180° (B. 31, 764).
- C₂₇H₂₆O₂N₁** C 59,7 — H 5,9 — O 21,7 — N 12,7 — M. G. 442.
 1) Aethylenphenylhydrazidbernsteinsäure. Sm. 203°. Pb (A. 254, 122). — IV, 703.
 2) Di[Nitrophenylamid] d. Sebacinsäure. Sm. 116° (J. 1887, 1839). — II, 416.
- C₂₇H₂₆O₂N₃** C 61,4 — H 6,0 — O 26,0 — N 6,5 — M. G. 430.
 1) Methylhydrastinoximhydrat. Sm. 202—203°. — II, 2053.
 2) Glykopherulaaldehydphenylhydrazon. Sm. 212° (B. 18, 3483). — IV, 764.
- C₂₇H₂₇ON₃** C 75,6 — H 7,7 — O 4,6 — N 12,0 — M. G. 349.
 1) Cyanäthylat d. Cinchonin. Sm. 160—165° u. Zers. (A. 269, 260). — III, 833.
- C₂₇H₂₇O₂N₃** C 67,2 — H 6,9 — O 8,1 — N 17,8 — M. G. 393.
 1) Verbindung (aus Amidobenzol u. 4-Nitroso-1-Dimethylamidobenzol) (B. 12, 1824). — II, 329.
- C₂₇H₂₇O₂Cl₃** C 74,8 — H 7,6 — O 13,6 — N 4,0 — M. G. 353.
C₂₇H₂₇O₂N C 74,8 — H 7,6 — O 13,6 — N 4,0 — M. G. 353.
 1) 2-Methylphenylamidopipitzahöinsäure (o-Tolidoperezon). Sm. 135 bis 136° (109—111°) (B. 18, 942; A. 237, 104). — II, 1673.
 2) 4-Methylphenylamidopipitzahöinsäure (p-Tolidoperezon). Sm. 136° (133—135°) (A. 237, 104; B. 18, 942). — II, 1674.
C₂₇H₂₇O₁N C 71,5 — H 7,3 — O 17,3 — N 3,8 — M. G. 369.
 1) d-Corydalin. Sm. 134,5°. HCl + 2H₂O, (2HCl, PtCl₄), (2HCl, AuCl₃), HBr, HJ, HNO₃, H₂SO₄ + 4H₂O, CHNS (Berz. J. 7, 220; J. 1859, 570; A. 64, 369; 137, 274; 277, 6; Soc. 61, 244, 605; 67, 17; 71, 658; C. 1896 [2] 792; 1897 [1] 133; 1898 [2] 114; M. 18, 385). — III, 875.
 2) i-Corydalin (Isocorydalin). Sm. 135°. HCl + 2H₂O, (2HCl, PtCl₄), (HCl, AuCl₃ + 4H₂O), HBr, HNO₃, H₂SO₄ + 2H₂O, CHNS (C. 1896 [2] 793; 1898 [2] 115). — III, 877.
 3) Butyrylcoein. HCl + 3H₂O, (2HCl, PtCl₄) (Soc. 28, 15). — III, 905.
C₂₇H₂₇O₂N C 68,8 — H 7,0 — O 20,8 — N 3,4 — M. G. 385.
 1) Acetylauandin. Sm. 98° (A. 282, 211). — III, 912.
 2) Hydroberberinäthoxyhydrat + 4H₂O. Sm. 163—165°. Salze, siehe diese (A. Spl. 2, 207). — III, 801.

- C₂₇H₂₁O₂N** 3) Aethyloxydhydrat d. Papaverin. Chlorid + 4H₂O, Bromid, Jodid, Nitrat + 3H₂O, Behromat, Pikrat (*B.* 18, 1577; *M.* 6, 695; 7, 516; 9, 752; 10, 688; *J. pr.* [2] 47, 525; [2] 56, 338). — **IV**, 441.
- C₂₇H₂₁O₂N₂**
 C 75,0 — H 7,9 — O 9,1 — N 7,9 — M. G. 352.
 1) Aethylchinin. Salze siehe (*A.* 91, 163; *B.* 14, 78; 16, 2747; *Soc.* 26, 1180; *J.* 1882, 1109; *M.* 15, 47; *J. pr.* [2] 3, 146). — **III**, 814.
 2) Aethylconchinin. Fl. (*A.* 129, 20; 269, 233; *Soc.* 26, 1183; *J. pr.* [2] 14, 364). — **III**, 825.
 3) Aspidosamin. Sm. 100°. (2HCl, PtCl₄ + 3H₂O) (*A.* 211, 261). — **III**, 781.
 4) Aspidospermatin. Sm. 162°. (2HCl, PtCl₄ + 4H₂O) (*A.* 211, 259). — **III**, 781.
 5) Chinopropylin. Sm. 164°. H₂SO₄ + 1½H₂O (*Bl.* [3] 7, 310). — **III**, 821.
 6) Chinoisopropylin. Sm. 154°. H₂SO₄ + H₂O (*Bl.* [3] 7, 311). — **III**, 821.
 7) αβ-Di[3-Oxy-1,2,3,4-Tetrahydro-2-Naphtylamido]äthan. Sm. 201°. Pikrat (*A.* 288, 128; *B.* 26, 1838). — **II**, 855.
 8) Diphenylamid d. Sebacinsäure. Sm. 198°; Sd. oberh. 360° (*J.* 1887, 1839). — **II**, 415.
 9) Di[4-Isopropylbenzylamid] d. Oxalsäure. Sm. 181–182° (*B.* 22, 932). — **II**, 561.
- C₂₈H₂₇O₂N₂**
 C 64,7 — H 6,9 — O 7,8 — N 20,6 — M. G. 408.
 1) αβ-Diamido-αβ-Di[Isobutyrylphenylhydraxon]äthan. Sm. 217° (*B.* 27, 1965). — **IV**, 742.
- C₂₇H₂₁O₂N₂**
 C 71,7 — H 7,6 — O 13,0 — N 7,6 — M. G. 368.
 1) Acetylhydrochinin. Sm. bei 40°. (2HCl, PtCl₄ + 2H₂O), H₂SO₄ + 9H₂O (*A.* 241, 278). — **III**, 860.
- C₂₇H₂₁O₂N₄**
 C 66,7 — H 7,1 — O 12,1 — N 14,1 — M. G. 396.
 1) Verbindung (aus Acetessigsäureäthylester u. d. 4-Dimethylamidophenylamid d. α-Phenylhydrazidoessigsäure). Sm. 185° (*A.* 301, 77).
- C₂₁H₂₁O₄N₂**
 C 68,7 — H 7,3 — O 16,7 — N 7,3 — M. G. 384.
 1) Eohitamin (Ditain) + 4H₂O. Sm. 206° u. Zers. HCl, (2HCl, PtCl₄ + 3H₂O), HBr + 2H₂O, HJ, H₂CO₃ + 1½H₂O, Oxalat (*A.* 203, 150; *B.* 11, 2006; 13, 1648, 1841). — **III**, 850.
 2) Diäthylester d. αβ-Di[4-Methylphenylamido]bernsteinsäure. Sm. 169° (*B.* 26, 1767). — **II**, 509.
- C₂₈H₂₇O₂N₂**
 C 66,0 — H 7,0 — O 20,0 — N 7,0 — M. G. 400.
 1) Oxyehitamin (*A.* 203, 162). — **III**, 881.
- C₂₂H₂₃O₂N₂**
 C 58,9 — H 6,2 — O 28,6 — N 6,2 — M. G. 448.
 1) Tetraäthylester d. 1,3-Phenylendi[β-Amidoäthen-α-Dicarbonsäure]. Sm. 110° (*B.* 28, 824). — **IV**, 577.
 2) Tetraäthylester d. 1,4-Phenylendi[β-Amidoäthen-α-Dicarbonsäure]. Sm. 164–165° (*B.* 30, 2026). — **IV**, 593.
- C₂₁H₂₁O₄N₆**
 C 52,4 — H 5,6 — O 25,4 — N 16,6 — M. G. 504.
 1) αβ-Di[3,5-Dinitro-1-Pseudobutylphenylamido]äthan. Sm. 174–175° (*J. pr.* [2] 48, 203). — **II**, 558.
- C₂₂H₂₁O₄Cl₂**
 1) Tetraäthylester d. Benzoldi-1,2-[β-Chloräthyl-ββ-Dicarbonsäure] (*T.* d. o-Xylylendichlordimalonsäure) (*B.* 17, 452; *Soc.* 53, 14). — **II**, 2075.
 2) Tetraäthylester d. Benzoldi-1,3-[β-Chloräthyl-ββ-Dicarbonsäure]. Fl. (*B.* 21, 30). — **II**, 2075.
 3) Tetraäthylester d. Benzoldi-1,4-[β-Chloräthyl-ββ-Dicarbonsäure]. Sm. 86–87° (*B.* 21, 33). — **II**, 2076.
- C₂₁H₂₁O₄Br₂**
 1) Tetraäthylester d. Benzoldi-1,4-[β-Bromäthyl-ββ-Dicarbonsäure]. Sm. 107–108° (*B.* 21, 35). — **II**, 2076.
- C₂₂H₂₁O₄N₂**
 C 55,0 — H 5,8 — O 33,3 — N 5,8 — M. G. 480.
 1) Tetraäthylester d. 3,6-Di[Acetylamido]benzol-1,2,4,5-Tetracarbonsäure. Sm. 149° (*A.* 237, 27). — **II**, 2074.
- C₂₇H₁₉ON**
 C 81,7 — H 9,0 — O 4,9 — N 4,3 — M. G. 323.
 1) α-Oximido-αβ-Diphenyldekan. Sm. 101° (*B.* 22, 348). — **III**, 239.
 2) p-Oktyl-2-Methylphenylamid d. Benzolcarbonsäure. Sm. 117° (*B.* 18, 147). — **II**, 1167.
 3) Di[4-Isobutylphenyl]amid d. Essigsäure. Sm. 75° (*B.* 20, 1257). — **II**, 558.
 4) Di 6-Isopropyl-3-Methylphenyl]amid d. Essigsäure. Sm. 78° (*B.* 20, 1261). — **II**, 560.

- $C_{77}H_{30}O_3N$ C 68,2 — H 7,5 — O 20,7 — N 3,6 — M. G. 387.
 1) Diäthylester d. 1-Oximido-5-Methyl-3-[4-Isopropylphenyl]-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäure. Sm. 188—189° u. Zers. (A. 303, 241, 242).
- $C_{77}H_{30}ON_2$ C 78,1 — H 8,9 — O 4,7 — N 8,3 — M. G. 338.
 1) Phenylhydrazon d. bim. Dimethylcyklohexanon. Sm. 202—204° (B. 32, 424).
- $C_{77}H_{30}O_2N_2$ C 74,6 — H 8,5 — O 9,0 — N 7,9 — M. G. 354.
 1) Aspidospermin. Sm. 205—206°. 3 + 4HCl, (2HCl, PtCl₄), H₂SO₄ (B. 11, 2189; 12, 1560; A. 211, 254; Fr. 22, 149). — III, 780.
- $C_{77}H_{30}O_2N_4$ C 69,1 — H 7,8 — O 8,4 — N 14,7 — M. G. 382.
 1) N-Di[4-Diäthylamidophenyl]glyoxim. Sm. 204° (B. 31, 295).
 2) Dinitrosoderivat d. Base C₁₄H₂₂N₄. Sm. 83—84° (B. 25, 2045). — II, 445.
- $C_{77}H_{30}O_2S$ 1) Di[4-Pentamethylphenyl]sulfon. Sm. 98,5° (B. 20, 900). — II, 828.
 $C_{77}H_{30}O_3N_2$ C 71,3 — H 8,1 — O 13,0 — N 7,6 — M. G. 370.
 1) Diisoamyläther d. 4,4'-Dioxyazoxybenzol. Sm. 98° (B. 23, 1744). — IV, 1343.
 2) Acetyltetrahydrochinin. Fl. (M. 16, 634). — III, 816.
 3) Äthylconchinnoxidhydrat. Fl. Salze siehe (A. 129, 20; 269, 233; Soc. 26, 1183; J. pr. [2] 14, 364). — III, 825.
- $C_{77}H_{30}O_3N_4$ C 63,8 — H 7,2 — O 15,4 — N 13,5 — M. G. 414.
 1) N-[4-Diäthylamido-3-Oxyphenyl]glyoxim. Sm. 168° (B. 31, 296).
- $C_{77}H_{30}O_3S$ 1) Diisoamyläther d. s-P-Dioxydiphenylsulfon. Sm. 98° (A. 172, 55). — II, 840.
- $C_{77}H_{30}O_4N_4$ C 59,2 — H 6,7 — O 21,5 — N 12,6 — M. G. 446.
 1) Dipropylester d. αβ-Di[Phenylhydrazido]-αβ-Dioxyäthan-αβ-Dicarbonsäure. Sm. 112° u. Zers. (B. 28, 66). — IV, 728.
- $C_{77}H_{30}N_2Cl$ 1) Pentamethylenauraminchlorid (J. pr. [2] 47, 412). — IV, 1174.
 $C_{77}H_{31}O_2N$ C 77,4 — H 9,1 — O 9,4 — N 4,1 — M. G. 341.
 1) Atisin (oder C₁₆H₇O₄N₂). HCl, (2HCl, PtCl₄), (HCl, AuCl₃), HBr, HJ, HNO₃ (Soc. 69, 1519). — III, 782.
 2) Imidodi[methylenecampher]. Sm. 220—221° (A. 281, 356). — III, 116.
 3) Caryophyllenester d. Phenylamidoameisensäure. Sm. 136—137° (A. 279, 392). — III, 513.
- $C_{77}H_{31}O_2N_5$ C 63,9 — H 7,5 — O 11,6 — N 16,9 — M. G. 413.
 1) Verbindung (aus Isovalerylcyanessigsäureäthylester u. Phenylhydrazin). Sm. 65° (C. 1895 [2] 83).
- $C_{77}H_{31}N_4Br$ 1) Bromisobutylat d. 1,4-Dibenzylhexahydro-1,4-Diazin. Sm. 195 bis 196° (C. 1898 [1] 381).
- $C_{77}H_{31}N_4J$ 1) Jodmethylat d. Dihydrostrychnolin. Sm. 265° (A. 301, 330).
 $C_{77}H_{31}ON_2$ C 77,6 — H 9,4 — O 4,7 — N 8,2 — M. G. 340.
 1) Caryophyllennitrobenzylamin. Sm. 125—128° (C. 1899 [1] 108).
 2) Humulonnitrobenzylamin. Sm. 136°. HCl (Soc. 67, 781). — III, 538.
- $C_{77}H_{37}O_2N_2$ C 74,1 — H 9,0 — O 9,0 — N 7,9 — M. G. 356.
 1) Äthylester d. 1-Phenylhydrazon-3-Hexyl-5-Methyl-1,2,3,4-Tetrahydrobenzol-2-Carbonsäure. Sm. 146—147° (A. 288, 342).
- $C_{77}H_{37}O_2N_4$ C 63,5 — H 7,7 — O 15,4 — N 13,4 — M. G. 416.
 1) Jaborin. + PtCl₄, + 2PtCl₄, (2HCl, PtCl₄) (A. 204, 79; B. 48, 224, 825). — III, 925.
- $C_{77}H_{33}O_2N$ C 73,5 — H 9,2 — O 13,4 — N 3,9 — M. G. 359.
 1) Atisinhydrat. (2HCl, PtCl₄), (HCl, AuCl₃) (Soc. 69, 1525). — III, 783.
- $C_{77}H_{33}O_2N_3$ C 67,5 — H 8,4 — O 20,5 — N 3,6 — M. G. 391.
 1) Staphisagrin. HCl, (HCl, AuCl₃), HNO₃, H₂SO₄, Acetat, + Hg₂ (A. 9, 104; J. 1864, 450; 1877, 897). — III, 880.
- $C_{77}H_{34}N_4Cl_2$ 1) Dichlormethylat d. 4,4'-Di[Diäthylamido]biphenyl. 2 + PtCl₄ (A. 115, 368). — IV, 963.
- $C_{77}H_{34}N_4J_2$ 1) Dijodmethylat d. 4,4'-Di[Diäthylamido]biphenyl (A. 115, 367). — IV, 963.
- $C_{77}H_{35}O_4N$ C 70,0 — H 9,3 — O 17,3 — N 3,7 — M. G. 377.
 1) 2,6-Dimethyl-4-Tridekylpyridin-3,5-Dicarbonsäure. HCl (B. 22, 1758). — IV, 171.

- $C_{17}H_{10}O_6N$ C 64,5 — H 8,6 — O 23,5 — N 3,4 — M. G. 409.
 1) Delphinin. $2HCl$, $(HCl, AuCl_3)$, (HJ, HgJ_2) , $2HNO_3$, H_2SO_4 (*Bert. J.* I, 97; 4, 191; *J.* 1864, 450; 1877, 895; 1880, 955; 1881, 977; *A.* 9, 101). — III, 879.
- $C_{17}H_{10}O_2N_2$ C 73,3 — H 10,0 — O 8,9 — N 7,8 — M. G. 360.
 1) *s*-1-Difenethylamid d. Oxalsäure. Sm. 188° (*A.* 269, 365). — IV, 58.
- $C_{17}H_{10}N_4J_2$ 1) 2,2'-Di[Jodmethylat] d. 2,4,2',4'-Tetra[Dimethylamido]biphenyl. Sm. 190° u. *Zers.* (*B.* 30, 2943). — IV, 1275.
- $C_{17}H_{17}ON$ C 79,8 — H 11,2 — O 4,8 — N 4,2 — M. G. 331.
 1) Phenylamid d. Palmitinsäure. Sm. 90,5°; *Sd.* 282—284°, (*B.* 24, 943; *J. pr.* [2] 52, 60; *Am.* 18, 701). — II, 370.
- $C_{17}H_{15}O_2N$ 2) Pentadekylamid d. Benzolcarbonsäure. Sm. 78° (*B.* 30, 901).
 C 76,1 — H 10,7 — O 9,2 — N 4,0 — M. G. 347.
 1) *p*-Nitro-1-Cetylbenzol. Sm. 35—36° (*B.* 19, 2984). — II, 107.
 2) α -Phenylamidopalmitinsäure. Sm. 141—142° (*B.* 24, 942). — II, 436.
- $C_{17}H_{15}O_2S$ 1) Cetylbenzolsulfonsäure. Na (*B.* 19, 2983). — II, 161.
 $C_{17}H_{15}O_4N_2$ C 67,0 — H 9,6 — O 16,2 — N 7,1 — M. G. 394.
 1) Gelsemin (oder $C_{17}H_{15}O_4N_2$; $C_{16}H_{13}O_4N_2$; $C_{14}H_{11}O_4N_2$). Sm. 45°. HCl , $(2HCl, PtCl_4)$, $(HCl, 2AuCl_3)$, HBr (*J.* 1870, 885; 1882, 1173; 1883, 1354; 1887, 2218; *B.* 9, 1185; 16, 797; 26, 1715; *Fr.* 22, 153; 28, 743). — III, 884.
- $C_{17}H_{15}O_6N_{20}$ C 36,4 — H 5,2 — O 19,8 — N 38,6 — M. G. 726.
 1) Divicin, siehe $C_{17}H_{15}O_6N_{20}$. — III, 951.
- $C_{17}H_{16}O_{12}S$ 1) Stärkeschwefelsäure (*A.* 55, 13).
- $C_{17}H_{16}ON_2$ C 75,9 — H 11,5 — O 4,6 — N 8,0 — M. G. 348.
 1) 6-Oxy-4-Methyl-2-Heptadekyl-1,3-Diazin. Sm. 83° (PINNER, Imidoäther 232). — IV, 832.
- $C_{17}H_{16}O_2N_3$ C 72,5 — H 11,0 — O 8,8 — N 7,7 — M. G. 364.
 1) Menthylamid d. Oxalsäure. Sm. 82—83° (*A.* 278, 314).
- $C_{17}H_{16}O_4Cl_2$ 1) Dichlorbrassidinsäure. Fl. (*B.* 25, 2668).
- $C_{17}H_{16}O_4Cl_4$ 1) Tetrachlorbehensäure. Sm. 41° (*B.* 25, 2668).
- $C_{17}H_{16}O_4Br_2$ 1) Dibromerucasäure. Sm. 46—47° (*A.* 143, 44). — I, 528.
- $C_{17}H_{16}O_4Br_4$ 1) Tetrabromerucasäure. Sm. 77—78° (*A.* 143, 45). — I, 489.
- $C_{17}H_{16}O_6J_2$ 1) Dijodbrassidinsäure (Behenoläuredijodid). Sm. 47° (*B.* 24, 4117). — I, 529.
- $C_{17}H_{16}O_6Br_2$ 1) Bromderivat d. Diundekylensäure (*B.* 19, 2225). — I, 528.
- $C_{17}H_{16}O_6Cl_2$ 1) Chlorerucasäure. Sm. 37,5—38° (*B.* 24, 4126). — I, 528.
 2) Chlorbrassidinsäure. Sm. 42° (*B.* 24, 4126). — I, 529.
- $C_{17}H_{16}O_6Br$ 1) Brombrassidinsäure. Sm. 34° (*B.* 25, 962, 4127). — I, 529.
 2) Bromerucasäure. Sm. 33—34° (*A.* 143, 50). — I, 528.
 3) isom. Bromerucasäure. Sm. 41,5° (*B.* 24, 4123). — I, 528.
- $C_{17}H_{16}O_6Br_3$ 1) Tribrombehensäure. Sm. 31—32° (*A.* 143, 50). — I, 489.
- $C_{17}H_{16}O_6N$ C 68,9 — H 10,7 — O 16,7 — N 3,7 — M. G. 383.
 1) α -Nonanoylamido- α -Ketododekan- μ -Carbonsäure (Pelargylamidobras-
 sylsäure). Sm. 116° (*B.* 29, 810).
 2) μ -Oximido- ν -Ketobehensäure. Sm. 83—88° (*B.* 28, 278; 29, 810).
- $C_{17}H_{16}O_6Cl_2$ 1) Dichlorid d. Brassidinsäure. Sm. 65° (*B.* 24, 4123). — I, 477.
 2) Dichlorid d. Erucasäure. Sm. 46° (*B.* 24, 4123). — I, 476.
- $C_{17}H_{16}O_6Br_2$ 1) Dibrombehensäure (aus Brassidinsäure). Sm. 54° (*A.* 143, 57; *J. pr.* [2] 49, 61). — I, 489.
 2) Dibrombehensäure (aus Erucasäure). Sm. 42—43°. Ba, Pb (*A.* 135, 227; 143, 40). — I, 489.
 3) Dibrombehensäure (aus Isoerucasäure). Sm. 44—46° (*J. pr.* [2] 49, 61; [2] 50, 66).
- $C_{17}H_{16}O_6N_2$ C 66,3 — H 10,5 — O 16,1 — N 7,0 — M. G. 398.
 1) μ - ν -Dioximidobehensäure. Sm. 144—145° (*B.* 28, 278).
- $C_{17}H_{16}ON$ C 78,3 — H 12,8 — O 4,7 — N 4,2 — M. G. 337.
 1) Amid d. Brassidinsäure. Sm. 90° (*B.* 19, 3326). — I, 1250.
 2) Amid d. Erucasäure. Sm. 84° (*B.* 19, 3326). — I, 1250.
- $C_{17}H_{16}O_7N$ C 74,8 — H 12,2 — O 9,1 — N 3,9 — M. G. 353.
 1) Oxim d. Oxybehensäure. Sm. 49—51° (*J. pr.* [2] 48, 339).
- $C_{17}H_{16}O_7Br$ 1) α -Brombehensäure. Sm. 70° (*G.* 27 [2] 296).
- $C_{17}H_{16}O_7J$ 1) Aethyl ester d. α -Bromarachidinsäure. Sm. 37—39° (*M.* 17, 531).
- $C_{17}H_{16}O_7J$ 1) Jodbehensäure (*J. pr.* [2] 39, 337). — I, 492.

- C₂₇H₄₉O₈N** C 71,5 — H 11,6 — O 13,0 — N 3,8 — M. G. 369.
 1) μ -Pelargonylamidododekancarbonsäure. Sm. 84—85° (B. 26, 841, 1869).
 2) Oxim d. Oxybrassidinsäure. Sm. 44—45° (B. 26, 841, 1867).
- C₂₇H₄₄O₁₀N₂** C 53,2 — H 8,9 — O 32,3 — N 5,6 — M. G. 496.
 1) Tetracetyl pseudomorphin + 8H₂O. Sm. 276°. 2HCl + 4H₂O, (2HCl, PtCl₄ + 6H₂O) (A. 223, 245; 294, 207). — III, 911.
- C₂₇H₄₈ON** C 77,9 — H 13,3 — O 4,7 — N 4,1 — M. G. 339.
 1) Stearinimidoisobutyläther. HCl (Sm. 77—78°) (B. 26, 2841).
 2) Oxim d. Hexylpentadekylketon. Sm. 35—36° (Soc. 63, 463).
 3) Amid d. Behensäure. Sm. 111° (J. pr. [2] 48, 330).
- C₂₇H₄₈NJ** 1) Cetyltriäthylammoniumjodid. Sm. 180—181° u. Zers. (B. 22, 815). — I, 1139.
- C₂₇H₄₈N₂J₄** 1) Pentaäthylenhexaäthyltetrammoniumjodid (J. 1861, 522). — I, 1166.
- C₂₇H₅₄N₄Cl₄** 1) Triäthylenoktaäthyltetrammoniumchlorid. + 2PtCl₄ (J. 1861, 520). — I, 1166.
- C₂₇H₅₄N₄Br₄** 1) Triäthylenoktaäthyltetrammoniumbromid (J. 1861, 520). — I, 1166.
- C₂₇H₅₄N₄J₄** 1) Triäthylenoktaäthyltetrammoniumjodid (J. 1861, 521). — I, 1166.
- C₂₇H₅₄O₄N₄** C 59,7 — H 12,1 — O 14,5 — N 12,7 — M. G. 442.
 1) Triäthylenoktaäthyltetrammoniumhydrat. Salze siehe (J. 1861, 520). — I, 1166.

C₃₂-Gruppe mit vier Elementen.

- C₃₂H₁₁O₈N₄Cl₄** 1) $\beta\beta$ -Dichlor- $\alpha\alpha$ -Di[*p*-Dinitronaphtyl]äthen. Sm. 213—214° (B. 11, 301). — II, 299.
 2) isom. $\beta\beta$ -Dichlor- $\alpha\alpha$ -Di[*p*-Dinitronaphtyl]äthen. Sm. 292—293° (B. 11, 301). — II, 299.
- C₃₂H₁₀O₈N₄S** 1) Verbindung (aus 2,4,2',4'-Tetraamidobiphenyl-5-Sulfonsäure) (B. 23, 3463). — IV, 1275.
- C₃₂H₁₁O₈N₄Cl₄** 1) $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[*p*-Dinitronaphtyl]äthan. Sm. 258° (B. 11, 300). — II, 298.
- C₃₂H₁₂O₈N₄S₂** 1) 2,2-Dithio- $\beta\beta$ -Binaphtoxazol (B. 21, 419). — II, 885.
- C₃₂H₁₁O₈N₄Br₄** 1) Diäthyläther d. *p*-Hexabrom-8,8'-Dioxy-6,6'-Bichinolinyl-5,5'-Oxyd. Sm. bei 130° u. Zers. (B. 22 [2] 297). — IV, 1078.
- C₃₂H₁₂O₈N₄Cl₄** 1) 3,7-Dichlor-2-Phenylamido-8-Phenylimido-6-Oxy-1,4,5-Triketo-1,4,5,8-Tetrahydronaphtalin (A. 286, 53).
- C₃₂H₁₂O₈N₄Cl** 1) Chlorpyrenpikrat. Sm. 177—178° (M. 4, 239). — II, 284.
- C₃₂H₁₂O₈N₄Cl₄** 1) Di[4-Nitrobenzylester] d. 3,4,5,6-Tetrachlorbenzol-1,2-Dicarbon-säure. Sm. 179—180° (B. 30, 785).
- C₃₂H₁₂ON₄Br** 1) Bromosindon (A. 262, 244). — IV, 1056.
- C₃₂H₁₂O₈N₄Cl₄** 1) Triacetat d. Verb. C₁₆H₇O₄N₂Cl₂. Sm. noch nicht bei 250° (A. 286, 54). — IV, 1059.
- C₃₂H₁₁ON₄Cl₂** 1) 2-[4-Chlorphenyl]amido-4-[4-Chlorphenyl]imido-1-Keto-1,4-Di-hydronaphtalin. Sm. 217—218° (B. 21, 681). — III, 375.
- C₃₂H₁₁ON₄Br₂** 1) 2-[4-Bromphenyl]amido-4-[4-Bromphenyl]imido-1-Keto-1,4-Di-hydronaphtalin. Sm. 235° (B. 21, 681). — III, 375.
- C₃₂H₁₁ON₄Br** 1) 2,4-Di[4-Bromphenylazo]-1-Oxynaphtalin. Sm. 233—235° (B. 26, 1896). — IV, 1433.
- C₃₂H₁₁O₈NBr** 1) 4-Bromphenylimid d. $\alpha\beta$ -Diphenyläthen- $\alpha\beta$ -Dicarbon-säure. Sm. 133° (B. 26, 2478). — II, 1897.
- C₃₂H₁₁O₈N₄Cl** 1) 12-Chlorphenylat d. 9-Nitro- $\alpha\beta$ -Naphtophenazin. + FeCl₃, 2 + PtCl₄ (B. 31, 3068).
 2) 7-Chlorphenylat d. 10-Nitro- $\alpha\beta$ -Naphtophenazin + 2H₂O. + FeCl₃, 2 + PtCl₄, + AuCl₃ (B. 30, 2638). — IV, 1052.
- C₃₂H₁₁O₈N₄S** 1) 5,7-Lakton d. 7-Phenyloxyhydrat- $\alpha\beta$ -Naphtophenazin-5-Sulfon-säure. Sm. 302—304° (B. 29, 2073; 31, 2429). — IV, 1053.
 2) 5,12-Lakton d. 12-Phenyloxyhydrat- $\alpha\beta$ -Naphtophenazin-5-Sul-fonsäure. Sm. oberh. 360° (B. 29, 2074; 31, 2429). — IV, 1053.
- C₃₂H₁₁N₄ClBr** 1) 7-Bromphenylat d. 9-Chlor- $\alpha\beta$ -Naphtophenazin (B. 31, 3063). — IV, 1052.
- C₃₂H₁₃ONS** 1) Acetylthio- β -Dinaphtylamin. Sm. 211° (B. 21, 2810). — II, 869.

- C₂₂H₁₅ON₂Cl** 1) *p*-Chlor-*p*-Phenylamido-4-Phenylimido-1-Keto-1,4-Dihydro-naphthalin. Sm. 157° (2HCl, PtCl₄) (B. 21, 1046). — III, 377.
2) 7-Phenyl oxyhydrat d. 5-Chlor- $\alpha\beta$ -Naphthophenazin. Chlorid (B. 30, 1828). — IV, 1052.
3) 7-Phenyl oxyhydrat d. 9-Chlor- $\alpha\beta$ -Naphthophenazin. Chlorid, Bromid, Nitrat (B. 31, 303). — IV, 1052.
- C₂₁H₁₅ON₂Br** 1) 8-Brom-*p*-Di[Phenylazo]-1-Oxynaphthalin. Sm. 222° u. Zers. (Soc. 63, 1058). — IV, 1433.
- C₂₂H₁₅O₂N₂Cl** 1) Acetat d. 5-Chlor-6-Oxy-2,3-Diphenyl-1,4-Benzdiazin. Sm. 185 bis 186° (C. 1895 [1] 855).
- C₂₂H₁₅O₂N₂Cl** 1) 7-[4-Nitrochlorphenylat] d. 5-Amido- $\alpha\beta$ -Naphthophenazin. Zers. bei 260° (B. 31, 3082).
2) 12-Chlorphenylat d. parachinoid. 9-Nitro-5-Amido- $\alpha\beta$ -Naphthophenazin + H₂O (B. 31, 3090).
3) 12-Chlorphenylat d. orthochinoid. 9-Nitro-5-Amido- $\alpha\beta$ -Naphthophenazin (B. 31, 3090).
4) 7-Chlorphenylat d. 10-Nitro-5-Amido- $\alpha\beta$ -Naphthophenazin (Nitrophenylrosindulinchlorid). 2 + PtCl₄ (B. 30, 2637; 31, 3079, 3090). — IV, 1204.
- C₂₂H₁₅O₂N₂Br₂** 1) Tribromderivat d. Verb. C₂₂H₁₅O₂N₂. Sm. 224—225° (B. 26, 1184). — IV, 1225.
- C₂₂H₁₅O₂N₂S** 1) 4,4'-Tetrasobiphenylnaphtionsäure (B. 19, 1699). — IV, 1543.
- C₂₂H₁₅O₂N₂Cl** 1) 7-[4-Amidochlorphenylat] d. 10-Nitro-5-Amido- $\alpha\beta$ -Naphthophenazin + 3H₂O (B. 31, 3084).
- C₂₂H₁₅O₂N₂S** 1) 4-[2-Oxy-1-Naphtyl]azobiphenylsulfonsäure. Na, Ba (Soc. 49, 383). — IV, 1439.
2) 4-[4-Oxy-1-Naphtyl]azobiphenylsulfonsäure. Na, Ba (Soc. 49, 383). — IV, 1439.
3) Verbindung (aus 1,4-Naphtochinon-2-Sulfonsäure). Zers. oberh. 220° (B. 25, 427). — III, 388.
- C₂₂H₁₅O₂N₂S** 1) 4-Phenylazo-1-[2-Oxy-1-Naphtyl]azobenzol-4'-Sulfonsäure. Na (B. 13, 1838). — IV, 1434.
- C₂₂H₁₅O₂N₂S₂** 1) 4-Phenylazo-1-[2-Oxy-1-Naphtylazo]benzol-*p*-Disulfonsäure. Na, (B. 13, 1839; Soc. 51, 194). — IV, 1434.
2) 4-Phenylazo-1-[3-Oxy-1-Naphtylazo]benzol-1',4'-Disulfonsäure? (Soc. 51, 195; B. 15, 1352). — IV, 1434.
- C₂₂H₁₅O₂N₂S₂** 1) Naphtalin-2,6-Disulfonsäuredisazophenol (B. 27, 3358). — IV, 1418.
- C₂₂H₁₅ONBr₂** 1) $\alpha\beta$ -Dibenzoylstryrolimidbromid. Sm. 199° u. Zers. (Soc. 57, 693) — III, 309.
- C₂₂H₁₇ON₂Cl** 1) Aethyläther d. 5-Chlor-6-Oxy-2,3-Diphenyl-1,4-Benzdiazin. Sm. 146—147° (C. 1895 [1] 854).
- C₂₂H₁₇O₂N₂S** 1) 2-Phenylamido-1-Phenylazonaphthalin-1'-Sulfonsäure (B. 20, 572). — IV, 1399.
- C₂₂H₁₇O₂NS** 1) 4-Dimethylamidophenylamid d. 9,10-Anthrachinon-2-Sulfonsäure. Sm. 171° (B. 13, 693). — III, 415.
- C₂₂H₁₇O₂N₂Cl** 1) Aethyläther d. Phenyl-1-Oxynaphtotartrazoniumchlorid. 2 + PtCl₄ + 2H₂O (B. 27, 2356). — IV, 1021.
- C₂₂H₁₇O₂N₂S** 1) 4-Acetylamido-1-Oxy-2,2'-Azonaphthalin-8'-Sulfonsäure. K (B. 29, 2950). — IV, 1438.
- C₂₂H₁₇ONBr** 1) *p*-Brom-2-Keto-3,3'-Di[*p*-Methylphenyl]-2,3-Dihydroindol (Bromtoluisatin). Sm. 235° (B. 18, 2641). — II, 1618.
- C₂₂H₁₇O₂N₂Cl₂** 1) Verbindung (aus 2-Benzylamido-1-Phenylamidomethylbenzol). Sm. 113° (B. 27, 3246). — IV, 629.
- C₂₂H₁₇O₂N₂S₂** 1) $\alpha\alpha$ -Phthalylidi[β -Phenylthioharnstoff]. Sm. 210—211° (Soc. 67, 574).
- C₂₂H₁₇O₂N₂Cl** 1) Monophenylamid d. Chlorphenylamidophenylimidobernsteinsäure? Sm. 170—172° (A. 279, 141).
- C₂₂H₁₉ON₂Br** 1) Brommethylapazin (Soc. 63, 1382). — IV, 622.
- C₂₂H₁₉O₂NS** 1) *p*-Dimethylamidophenylamid d. Anthracen-2-Sulfonsäure. Sm. 165° (B. 28, 2260).
- C₂₂H₁₉O₂N₂Br** 1) Bromopianylhydratbenzol. Sm. 211° (B. 25, 2000). — IV, 1497.
2) 6-Brom-3,4-Dimethyl-1-Diphenylhydrasonmethylbenzol-2-Carbonsäure (Bromopiansäurediphenylhydraton). Sm. 230°. Ca (B. 25, 2000). — IV, 716.
- C₂₂H₁₉O₂N₂S** 1) Furfuramidphenylsenföhl (B. 10, 1191). — III, 724.

- $C_{22}H_{20}ONBr$ 1) *p*-Brom- γ -[4-Methylphenyl]amido- α -Keto- α γ -Diphenylpropan. Sm. 100,5^d (B. 28, 964). — III, 228.
- $C_{22}H_{20}ON_2S$ 1) α -Phenacetylrimido- α -Phenylbensylamidomerkaptoethan (N-Phenacetylpaedophenylbenzylthioharnstoff). Sm. 127,5—128,5^d (Soc. 69, 868).
- $C_{22}H_{20}O_2N_2Br$ 1) Phenylamidoformiat d. 4,6-Dibrom-2-Oxy-5-Phenylamidomethyl-1,3-Dimethylbenzol. Sm. 183^d (A. 302, 82).
- $C_{22}H_{20}O_2N_2Cl$ 1) Diäthyläther d. 3,6-Dichlor-2,5-Di[2-Oxyphenyl]-1,4-Benzochinon. Sm. bei 200° (J. pr. [2] 24, 432). — III, 343.
- $C_{22}H_{20}O_2N_2S$ 1) Di[γ -1,2-Phtalylamidopropyl]sulfid. Sm. 118^d (B. 27, 2174). — II, 1803.
- $C_{22}H_{20}O_2N_2S_2$ 1) Di[α -1,2-Phtalylamidopropyl]- β -Disulfid. Sm. 159—161° (B. 24, 2029). — II, 1803.
- 2) Di[α -1,2-Phtalylamidopropyl]- γ -Disulfid. Sm. 90—91° (B. 27, 2172). — II, 1803.
- $C_{22}H_{20}O_2N_2Hg$ 1) Diacetat d. Quecksilberdichinolyldioxyhydrat + 2H₂O. Sm. 148° (J. 26 [1] 402).
- $C_{22}H_{20}O_2N_2S$ 1) Di[γ -1,2-Phtalylamidopropyl]sulfoxyd. Sm. 158—159° (B. 27, 2175). — II, 1803.
- $C_{22}H_{20}O_2N_2S$ 1) Di[γ -1,2-Phtalylamidopropyl]sulfon. Sm. 173° (B. 27, 2175). — II, 1803.
- $C_{22}H_{20}O_2N_2S$ 1) 2,5-Diphenylsulfon-1,4-Di[Acetylrimido]benzol (B. 29, 2028).
- $C_{22}H_{21}O_2N_2P$ 1) Di[Phenylhydrazid] d. 1-Naphtylphosphorsäure. Sm. 168—169° (B. 27, 2563). — IV, 662.
- 2) Di[Phenylhydrazid] d. 2-Naphtylphosphorsäure. Sm. 198° (B. 27, 2564). — IV, 662.
- $C_{22}H_{21}ON_2S$ 1) α -[2-Methylphenyl]- β -[β -Oxy- α - β -Diphenyläthyl]thioharnstoff. Sm. 156—157° (B. 28, 1903).
- $C_{22}H_{21}O_2N_2S_2$ 1) Verbindung (aus Di[Diacetyl]methyl]disulfid u. Benzidin). Zers. oberh. 150° (Bl. [3] 19, 694).
- $C_{22}H_{21}O_2ClP$ 1) Äthylester d. Triphenylchlorphosphidoessigsäure. Sm. 90°. 2 + PtCl₄ (B. 27, 273). — IV, 1661.
- $C_{22}H_{21}O_2BrP$ 1) Äthylester d. Triphenylbromphosphidoessigsäure. Sm. 147° (B. 27, 274). — IV, 1661.
- $C_{22}H_{21}O_2JP$ 1) Äthylester d. Triphenyljodphosphidoessigsäure. Sm. 165—166° (B. 27, 274). — IV, 1661.
- $C_{22}H_{21}O_2NCl$ 1) Chloräthylat d. Berberin + 4H₂O. — III, 800.
- $C_{22}H_{21}O_2NJ$ 1) Jodäthylat d. Berberin (A. 115, 139; C. 1895 [2] 138). — III, 800.
- $C_{22}H_{21}O_2NBr$ 1) Bromisonarkotin. Sm. 175° (B. 29, 2041). — III, 922.
- $C_{22}H_{21}O_2N_2S_2$ 1) 3,3'-Diketo-1,5,1',5'-Tetramethyl-2,2'-Diphenyl-2,3,2',3'-Tetrahydro-4,4'-Bipyrazol-*p*-Disulfonsäure (Bisantipyridindisulfonsäure) (B. 25, 1951). — IV, 1263.
- $C_{22}H_{21}ON_2J_2$ 1) Verbindung (aus d. Jodmethylat d. 2-Jodchinolin). Sm. 80—82° (A. 282, 377). — IV, 262.
- $C_{22}H_{21}O_2N_2Cl$ 1) Verbindung (aus 8-Oxychinolin). 2 + PtCl₄ + 2H₂O (M. 10, 671). — IV, 274.
- $C_{22}H_{21}O_2N_2Br$ 1) Verbindung (aus 8-Oxychinolinbromäthylat) + 3H₂O (J. pr. [2] 54, 7). — IV, 273.
- $C_{22}H_{21}O_2N_2J$ 1) Verbindung (aus 8-Oxychinolin). Sm. 202° (M. 10, 671). — IV, 274.
- $C_{22}H_{21}O_2N_2S_2$ 1) Di[α -Acetyl- β -Phenylrimido]propyl]disulfid. Sm. 168°. 2HCl (Bl. [3] 19, 693).
- $C_{22}H_{21}O_2NCl$ 1) Chloräthylat d. Cusparin. Sm. 156°. 2 + PtCl₄ (B. 29 [2] 778; C. 1895 [2] 826). — III, 778.
- $C_{22}H_{21}O_2NJ$ 1) Jodmethylat d. Methylcusparin. Sm. 185° (B. 29 [2] 36; C. 1895 [2] 826). — III, 778.
- 2) Jodäthylat d. Cusparin. Sm. 201° (B. 29 [2] 36; C. 1895 [2] 826). — III, 778.
- $C_{22}H_{21}O_2JP$ 1) Jodmethylat d. Phosphorigsäuretri-3-Methylphenylester (B. 31, 1052).
- $C_{22}H_{21}O_2N_2S_2$ 1) 1,4-Di[Äthylphenylsulfonamido]benzol. Sm. 179° (A. 265, 188). — IV, 594.
- $C_{22}H_{21}O_2NCl$ 1) Chloromethylat d. Homochelidonin (2 + PtCl₄ + 4H₂O). — III, 806.
- 2) Chloräthylat d. Chelidonin. 2 + PtCl₄. — III, 805.
- $C_{22}H_{21}O_2NBr$ 1) Bromäthylat d. Papaveraldin (M. 7, 489). — IV, 442.

- $C_{21}H_{21}O_2NJ$ 1) Jodmethylat d. Homochelidonin. — III, 806.
2) Jodäthylat d. Chelidonin. — III, 805.
- $C_{21}H_{21}O_2NCl$ 1) Chlormethylat d. Hydrastin. $2 + PtCl_4 + AuCl_3$. — II, 2051.
- $C_{21}H_{21}O_2NJ$ 1) Jodmethylat d. Hydrastin. Sm. 208° (B. 19, 2799). — II, 2051.
- $C_{21}H_{21}O_2N_2S_2$ 1) Di[γ -Benzoylamidopropylsulfid]-2,2'-Dicarbonsäure (Dipropylsulfid- γ -Diphtalamidsäure). Sm. 136° (B. 23, 89). — II, 1796.
- $C_{21}H_{21}O_2N_2Se_2$ 1) Di[γ -Benzoylamidopropylselenid]-2,2'-Dicarbonsäure (Dipropyl- γ -Diselenidphtalamidsäure). Sm. 84° (B. 24, 2135). — II, 1796.
- $C_{21}H_{21}O_2N_2S$ 1) Di[γ -Benzoylamidopropylsulfon-2,2'-Dicarbonsäure (Propylsulfondiphtalamidsäure). Sm. 181–186° (B. 27, 2176). — II, 1796.
- $C_{21}H_{21}O_2NCl$ 1) Jodmethylat d. Strychnin (J. 1859, 395). — III, 937.
- $C_{21}H_{21}O_2N_2Cl_3$ 1) Chloralchinin. Sm. 149° u. Zers. (G. 13, 270). — III, 813.
- $C_{21}H_{21}O_2N_2Br$ 1) Bromstrychninmethoxyhydrat + $4H_2O$. Zers. bei 265° (B. 18, 1236). — III, 940.
- $C_{21}H_{21}O_2NBrJ$ 1) Jodmethylat d. Diacetylbrommorphin + $1\frac{1}{2}H_2O$. Sm. bei 200° (A. 297, 216).
- $C_{21}H_{21}ON_2P$ 1) 4-Amidophenyl-di[4-Dimethylamidophenyl]phosphinoyd. Sm. 182–186° (A. 229, 332). — IV, 1660.
- $C_{21}H_{21}O_2N_2Br_3$ 1) $\alpha\beta$ -Di[α -Brombutyrylphenylamido]äthan. Sm. 98° (B. 25, 3256). — II, 370.
2) $\alpha\beta$ -Di[α -Bromisobutyrylphenylamido]äthan. Sm. 143° (B. 25, 3257). — II, 370.
3) $\alpha\beta$ -Di[α -Brompropionyl-2-Methylphenylamido]äthan. Sm. 181° (B. 25, 3258). — II, 462.
4) $\alpha\beta$ -Di[α -Brompropionyl-4-Methylphenylamido]äthan. Sm. 182° (B. 25, 3261). — II, 493.
- $C_{21}H_{21}O_2NCl$ 1) Chloräthylat d. Hydroberberin + $2\frac{1}{2}H_2O$. Sm. 225° (wasserfrei). $2 + PtCl_4 + AuCl_3$. — III, 801.
2) Chloräthylat d. Papaverin + $4H_2O$. $2 + PtCl_4$ (B. 18, 1577; M. 7, 516). — IV, 441.
- $C_{21}H_{21}O_2NBr$ 1) Bromäthylat d. Hydroberberin. Sm. 250–251°. — III, 801.
2) Bromäthylat d. Papaverin + $2H_2O$. Sm. 110–111° (wasserfrei) (B. 18, 1577; J. pr. [2] 47, 525; [2] 56, 334; M. 6, 695; 9, 339; 10, 688). — IV, 441.
- $C_{21}H_{21}O_2NJ$ 1) Jodäthylat d. Hydroberberin + H_2O . Sm. 225–226° (A. Spl. 2, 207). — III, 801.
2) Jodäthylat d. Papaverin. Sm. 216° (B. 18, 1577). — IV, 441.
- $C_{21}H_{21}O_2NCl$ 1) Chlormethylat d. Diacetylmorphin. $2 + PtCl_4 + H_2O$ (A. 222, 209). — III, 899.
- $C_{21}H_{21}ON_2J$ 1) Jodmethylat d. Strychnidin + $2H_2O$ (A. 301, 314).
- $C_{21}H_{21}O_2N_2J$ 1) Jodmethylstrychninsäure + H_2O . Na + H_2O (A. 264, 55). — III, 942.
2) Jodmethylstrychninsäure. Na (A. 264, 76). — III, 943.
- $C_{21}H_{21}O_2N_2S_2$ 1) Di[Benzoylmethylamidopropyl]disulfid. Fl. (B. 26, 1081). — II, 1293.
- $C_{21}H_{21}O_2N_2S$ 1) Phenylhydrazid d. Phenylhydrazoncamphersulfonsäure. HCl (Bl. [3] 19, 126).
- $C_{21}H_{21}O_2NJ$ 1) Jodmethylat d. Methylthebeninäthyläther. Sm. 215° (B. 32, 184).
- $C_{21}H_{21}O_2NCl$ 1) Chlorcorydalin. Sm. 188–191° (Soc. 67, 17).
2) Chlormethylat d. α -Acetylmethylmorphimethin + $2\frac{1}{2}H_2O$. $2 + PtCl_4 + 4H_2O$ (A. 222, 225). — III, 905.
3) Chlormethylat d. β -Acetylmethylmorphimethin. $2 + PtCl_4$ (A. 222, 229). — III, 905.
4) Chloräthylat d. Acetylcodein + $\frac{1}{2}H_2O$. $2 + PtCl_4$ (Soc. 28, 318). — III, 905.
- $C_{21}H_{21}O_2NJ$ 1) Jodmethylat d. Corybulbin (Soc. 67, 28). — III, 877.
2) Jodmethylat d. α -Acetylmethylmorphimethin. Sm. 207° (B. 27, 1146). — III, 905.
3) Jodmethylat d. β -Acetylmethylmorphimethin (B. 27, 1146). — III, 905.
4) Jodäthylat d. Acetylcodein + $\frac{1}{2}H_2O$ (Soc. 28, 318). — III, 905.
- $C_{21}H_{21}O_2Br_3S$ 1) Diisoamyläther d. Dibromdioxydiphenylsulfon. Sm. 100° (A. 172, 57). — II, 840.
- $C_{21}H_{21}O_2N_2S$ 1) Diisoamyläther d. s-Dinitrodioxydiphenylsulfon. Sm. 150–151° (A. 172, 57). — II, 840.

- $C_{27}H_{29}ON_2J$ 1) Jodmethylat d. Desoxystrychnin (*A.* 268, 251). — III, 944.
2) Jodmethylat d. Dimethyleinechonin. Sm. 175—177° (*A.* 277, 286). — III, 833.
- $C_{27}H_{29}O_2N_2Cl$ 1) Chloräthylat d. Chinin + $3H_2O$. (HCl, $PtCl_4$) (*Soc.* 26, 1180). — III, 814.
2) Chloräthylat d. Conchinin + H_2O . (HCl, $PtCl_4$) (*Soc.* 26, 1183). — III, 825.
- $C_{27}H_{29}O_2N_2Br$ 1) Bromäthylat d. Chinin + $2H_2O$ (*Soc.* 26, 1180). — III, 814.
2) Bromäthylat d. Conchinin + H_2O . Sm. 238° u. Zers. (*A.* 269, 233). — III, 825.
- $C_{27}H_{29}O_2N_2J$ 1) Jodmethylat d. Methylchinin + H_2O . Sm. 215—218° (*B.* 14, 80). — III, 814.
2) Jodmethylat d. Tetrahydrostrychnin + H_2O (*A.* 301, 321).
3) α -Jodäthylat d. Chinin. Sm. 210—211° u. Zers. (*A.* 91, 163; *B.* 14, 78; *Soc.* 26, 1180; *J.* 1882, 1109). — III, 814.
4) β -Jodäthylat d. Chinin + $3H_2O$. Sm. 93°. HJ + $3H_2O$ (*M.* 15, 47). — III, 814.
5) Jodäthylat d. Conchinin + H_2O . Sm. 248° u. Zers. (*A.* 129, 20; 269, 233; *Soc.* 26, 1183). — III, 825.
- $C_{27}H_{29}O_2N_2J_2$ 1) Jodid d. Chininjodäthylat (*J. pr.* [2] 3, 146). — III, 814.
- $C_{27}H_{29}O_2N_2J$ 1) Jodäthylat d. Cinchotenin. Zers. bei 212—213° (*M.* 15, 792). — III, 814.
- $C_{27}H_{29}ON_2Br_2$ 1) Brommethylatbromäthylat d. Cinchonin. Sm. 197° (*B.* 13, 2294). — III, 834.
- $C_{27}H_{30}ON_2J_2$ 1) Jodmethylatjodäthylat d. Cinchonidin. Sm. 255° u. Zers. + $2H_2O$ (Sm. 243—245°) (*J.* 1882, 1109; *A.* 269, 258). — III, 852.
- $C_{27}H_{30}ON_2P$ 1) Diphenylmonamid d. Dipiperidylphosphinsäure. Sm. 200° (*B.* 28, 616). — IV, 11.
- $C_{27}H_{30}O_2N_2Cl_2$ 1) Di[Chlormethylat] d. Chinin. + $PtCl_4$ + $2H_2O$, + $2AuCl_3$ (*A.* 266, 242). — III, 814.
- $C_{27}H_{30}O_2N_2J_2$ 1) Di[Jodmethylat] d. Chinin + $3H_2O$. Sm. 167—168° u. Zers. (*B.* 14, 77; *Bl.* [3] 7, 306; *A.* 266, 241). — III, 814.
2) Di[Jodmethylat] d. Conchinin + $1\frac{1}{2}H_2O$. Sm. 156° u. Zers. (*A.* 269, 235). — III, 825.
- $C_{27}H_{30}O_2NJ$ 1) Jodmethylat d. Diäthylmorphin (*B.* 15, 2181). — III, 899.
- $C_{27}H_{30}O_4N_2S_2$ 1) Diphenylsulfonoktohydronikotin. Sm. 143,5° (*B.* 26, 768, 1031). — IV, 486.
- $C_{27}H_{30}O_4N_2Hg_2$ 1) Diacetat d. Quecksilberammoniumbase $C_{18}H_{26}O_4N_2Hg_2$. Sm. 131,5° (*G.* 28 [2] 103). — IV, 1711.
- $C_{27}H_{31}O_2N_2Cl$ 1) Chlormethylat (aus d. Verbindung $C_{18}H_{24}O_2N_2$). 2 + $PtCl_4$ (*B.* 20, 458). — III, 948.
- $C_{27}H_{31}O_2N_2J$ 1) Jodmethylat (aus d. Verb. $C_{18}H_{24}O_2N_2$) (*B.* 20, 458). — III, 948.
- $C_{27}H_{31}O_2N_2P_2$ 1) Guanylsäure (*H.* 26, 137). — IV, 1624.
- $C_{27}H_{31}N_3ClHg$ 1) Dichlormethylat d. Quecksilberdi[4-Diäthylamidophenyl] (*G.* 28 [2] 451). — IV, 1707.
- $C_{27}H_{31}N_3JHg$ 1) Dijodmethylat d. Quecksilberdi[4-Diäthylamidophenyl]. Sm. 202,8° u. Zers. (*G.* 28 [2] 451). — IV, 1707.
- $C_{27}H_{31}N_3ClP$ 1) Benzyl-1-Tripiperidylphosphoniumchlorid (*B.* 28, 2211).

C_{22} -Gruppe mit fünf Elementen.

- $C_{22}H_{19}O_2NBrs$ 1) Phenylester d. α -Benzoylamido- α -Merkaptopropion-4-Bromphenyläthersäure. Sm. 143° (120°) (*H.* 20, 429, 440).
- $C_{22}H_{22}O_2N_2Br_2S_2$ 1) 1,4-Di[β -Bromäthylphenylsulfonamido]benzol. Sm. 192° (*A.* 272, 232). — IV, 594.
- $C_{22}H_{24}O_2N_2BrJ$ 1) Jodmethylat d. α -Bromstrychnin (*B.* 18, 1236). — III, 940.

C_{23} -Gruppe mit einem Element.

- $C_{23}H_{18}$ C 93,9 — H 6,1 — M. G. 294.
1) Diphenylinaphtylmethan (2 isom. Modif.). Sm. 134° u. Sm. 149° (*B.* 13, 358). — II, 299.

- $C_{21}H_{18}$ 2) 1,3,4-Triphenyl-R-Penten. Sm. 149° (A. 302, 238).
 $C_{21}H_{22}$ C 92,6 — H 7,4 — M. G. 206.
- 1) 1,2,4-Triphenyl-R-Pentamethylen. Sd. 285°₂₀ (A. 302, 239).
 $C_{21}H_{24}$ C 92,0 — H 8,0 — M. G. 300.
- 1) 2,4-Dibenzyl-1,3,5-Trimethylbenzol? Sm. 131°; Sd. 355°₁₂ (A. ch. [6] 8, 197). — II, 291.
 2) 2,5,2',5'-Tetramethyltriphenylmethan. Sm. 92,5°; Sd. über 360° (J. pr. [2] 35, 476). — II, 290.
 $C_{21}H_{24}$ C 89,6 — H 10,4 — M. G. 308.
- 1) Benzylpentaäthylbenzol. Sm. 88–89°; Sd. oberh. 360° (H. [3] 7, 654). — II, 243.
 $C_{21}H_{26}$ C 87,3 — H 12,7 — M. G. 316.
- 1) 2-Hexadekyl-1-Methylbenzol. Sm. 8–9°; Sd. 238,5–239°₁₅ (B. 21, 3181). — II, 40.
 2) 3-Methylhexadekyl-1-Methylbenzol. Sm. 11–12°; Sd. 236,5–237°₁₅ (B. 21, 3182). — II, 40.
 3) 4-Hexadekyl-1-Methylbenzol. Sm. 27,5°; Sd. 239,5–240°₁₅ (B. 21, 3182). — II, 40.
 $C_{23}H_{42}$ C 85,2 — H 14,8 — M. G. 324.
- 1) norm. Trikosan. Sm. 47,7°; Sd. 234°₁₈ (142,5°₆) (B. 15, 1713; 21, 2261; 29, 1323). — I, 107.

C₂₃-Gruppe mit zwei Elementen.

- $C_{23}H_{18}O_4$ C 78,4 — H 3,4 — O 18,2 — M. G. 352.
- $C_{23}H_{12}O_2$ 1) Picenchinoncarbonsäure. Sm. bei 360°. Ag (A. 284, 77). — II, 1916.
 C 69,0 — H 3,0 — O 28,0 — M. G. 400.
 1) Anhydrid d. Acetylfluorescein-3-Carbonsäure. Sm. oberh. 300° (A. 290, 237).
 $C_{23}H_{14}O_2$ C 85,7 — H 4,3 — O 9,9 — M. G. 322.
- 1) Picenarbonsäure. Sm. 245°. Ag (A. 284, 79).
 $C_{23}H_{14}O_4$ C 78,0 — H 3,9 — O 18,1 — M. G. 354.
- 1) Benzozat d. *p*-Oxy-*p*-Phenyl-1,4-Naphtochinon (A. 226, 34). — III, 461.
 $C_{23}H_{14}O_6$ C 71,5 — H 3,6 — O 24,9 — M. G. 386.
- 1) Lakton d. α -[2-Oxy-3,4-Dibenzoxylphenyläthen- β -Carbonsäure (Dibenzoat d. Daphnetin). Sm. 152° (B. 12, 113; 17, 935). — II, 1950.
 2) Dibenzoat d. Verbindung C₁₉H₁₀O₄. Sm. 205–206° (B. 27, 528). — III, 656.
 $C_{23}H_{11}N$ C 90,4 — H 4,9 — N 4,6 — M. G. 305.
- 1) Phenylbenz- β -Naphtoakridin. Sm. 198°. HCl, (2HCl, PtCl₄) (B. 17, 1505). — IV, 477.
 $C_{23}H_{16}O_2$ C 85,2 — H 4,9 — O 9,9 — M. G. 324.
- 1) 2-Diphenylmethyl-1,4-Naphtochinon. Sm. 185° (B. 31, 2351).
 2) 2-Phenyl-4-Benzoylmethylen-1,4-Cumaran (Phenacylidenflaven). Sm. 131° (B. 31, 712).
 3) Lakton d. γ -Oxy- α - β -Triphenyl- α - γ -Butadien- α -Carbonsäure (Benzaldiphenylmaleid). Sm. 175–176° (B. 24, 3229). — II, 1728.
 4) Acetat d. Picylencarbinol. Sm. 159° (A. 284, 70).
 $C_{23}H_{16}O_4$ C 81,2 — H 4,7 — O 14,1 — M. G. 340.
- 1) Oxybensaldiphenylmaleid. Sm. 205° (B. 24, 3856). — II, 1915.
 2) 1,3-Diketo-2-Benzoyl-2-[β -Methylphenyl]-2,3-Dihydroinden. Sm. 112–113° (B. 28, 1390). — III, 322.
 $C_{23}H_{16}O_4$ C 77,5 — H 4,5 — O 18,0 — M. G. 356.
- 1) Lakton d. β -Oxy- α -Benzoyl- α - β -Diphenyläthan- α -Ketocarbonsäure. Sm. 137° (B. 31, 2223).
 $C_{23}H_{16}O_6$ C 71,1 — H 4,1 — O 24,7 — M. G. 388.
- 1) Benzoylphyscion. Sm. 171° (A. 284, 182). — III, 641.
 2) Diäthylester d. Di-3-Oxy-1-Naphtylmethan-2,2'-Dicarbonsäure. Zers. bei 280° (B. 25, 3215). — II, 2038.
 3) Diacetat d. Verbindung C₁₉H₁₂O₄. Sm. 178–182° (B. 26, 1141). — II, 1044.

- C₂₁H₁₄O₄** C 65,7 — H 3,8 — O 30,5 — M. G. 420.
1) **Acetat d. Säure C₂₁H₁₂O₄** (aus 4-Oxybenzol-1-Carbonsäure). Sm. 230° (*J. pr.* [2] **28**, 208). — **II**, 1529.
- C₂₁H₁₆O₁₀** C 61,1 — H 3,5 — O 35,4 — M. G. 452.
1) **Podophylloquercetin**. Sm. 275—277° (*B. 15* [2] 378; **24** [2] 646). — **III**, 645.
- C₂₁H₁₆O₁₃** C 81,2 — H 4,7 — O 14,1 — M. G. 340.
1) **Verbindung** (aus Trioxyfluorondicarbonsäure). Sm. 140,5—141,5° (*B. 31*, 269).
- C₂₁H₁₆N₄** C 86,2 — H 5,0 — N 8,7 — M. G. 320.
1) **2,3-Diphenyl-*α*-Naphthimidazol**. Sm. 142—143°. HCl, (2HCl, PtCl₄), H₂SO₄ (*B. 25*, 2829). — **IV**, 1061.
- C₂₁H₁₆N₄** C 79,3 — H 4,6 — N 16,1 — M. G. 348.
1) **Verbindung** (aus d. Base C₁₆H₁₃N₄). Sm. 137—139° (*A. 255*, 354). — **IV**, 1172.
- C₂₁H₁₆Br₂**
C₂₁H₁₇N C 89,9 — H 5,5 — N 4,6 — M. G. 307.
1) ***α*-[1-Naphtyl]imidodiphenylmethan** (*A. 187*, 215). — **III**, 188.
2) **2,4,6-Triphenylpyridin**. Sm. 137,5° (*A. 302*, 240).
3) **Acetophenin**. Sm. 135°. HCl, (2HCl, PtCl₄) (*B. 6*, 639; *A. 238*, 27). — **III**, 130.
- C₂₁H₁₇N₃** C 82,4 — H 5,1 — N 12,5 — M. G. 335.
1) **5-Amido-2-Phenyl-1-[2-Naphtyl]benzimidazol**. Sm. 195°. + 1/2 H₂O (Sm. 166°) (*Bz.* [3] **17**, 871). — **IV**, 1181.
2) **5-Phenylamido-10-Methyl-*αβ*-Naphtophenazin**. Sm. 214°. (2HCl, PtCl₄) (*B. 23*, 3807). — **IV**, 1210.
3) **2,3-Diphenyl-2,3-Dihydro-1,2,4-Naphtrisiazin**. Sm. 193°. HCl (*Soc. 57*, 329; **59**, 681; *B. 23*, 506). — **IV**, 1394.
4) **Methylrosindulin**. Sm. 180—181°. (HCl + AuCl₃), Nitrat (*B. 30*, 1829; **31**, 2430). — **IV**, 1205.
- C₂₁H₁₇N₅** C 76,0 — H 4,7 — N 19,3 — M. G. 363.
1) **1,1-Dinaphtylguanidincyanid** (*A. 98*, 242). — **II**, 605.
- C₂₁H₁₈O** C 89,0 — H 5,8 — O 5,2 — M. G. 310.
1) **Anhydro-*ββ*-Di[1-Oxy-*ρ*-Naphtyl]propan**. Sm. 186° (*J. r.* **23**, 603). — **II**, 1008.
- C₂₁H₁₈O₂** C 84,7 — H 5,5 — O 9,8 — M. G. 326.
1) **1,3-Diketo-5-Methyl-2-Phenyl-2-Benzyl-2,3-Dihydroinden**. Sm. 120 bis 121° (*B. 29*, 2378).
2) **Aethyläther d. 9-Keto-10-[*α*-Oxybenzyliden]-9,10-Dihydroanthracen**. Sm. 171—173° u. Zers. (*B. 23*, 2529). — **III**, 245.
3) **Lakton d. *γ*-Oxy-*αβδ*-Triphenyl-*α*-Buten-*α*-Carbonsäure**. Sm. 127 bis 128° (*B. 24*, 3861). — **II**, 1727.
4) **Lakton d. *β*-Dehydroamarsäure**. Sm. 129—130° (*A. 275*, 78). — **II**, 1727.
- C₂₁H₁₈O₃** C 80,7 — H 5,3 — O 14,0 — M. G. 342.
1) **Acetat d. Benzylloxanthranol**. Sm. 281° (*B. 23*, 1568). — **III**, 245.
2) **Lakton d. *γγ*-Dioxy-*αβδ*-Triphenyl-*α*-Buten-*α*-Carbonsäure?** (Benzyl-oxydiphenylmaleilid). Sm. 183—185° (*B. 24*, 3857). — **II**, 1729.
3) **Anhydrid d. *αβγ*-Triphenylpropan-*αγ*-Dicarbonsäure**. Sm. 198° (*B. 31*, 3063).
4) **isom. Anhydrid d. *αβγ*-Triphenylpropan-*αγ*-Dicarbonsäure**. Sm. bei 180° (*B. 31*, 3063).
5) **Anhydrid d. *αβγ*-Triphenylpropan-*ββ'*-Dicarbonsäure**. Sm. 191° (*B. 20*, 2497). — **II**, 1913.
- C₂₁H₁₈O₄** C 77,1 — H 5,0 — O 17,9 — M. G. 358.
1) ***β*-Benzyläther d. *αβ*-Dioxy-*γδ*-Diketo-*αδ*-Diphenyl-*α*-Buten**. Sm. 182 bis 183° (*B. 27*, 716). — **III**, 317.
2) **Aethyl ester d. *β-ρ*-Dibenzoylbenzol-1-Carbonsäure**. Sm. 106,5—107° (*B. 7*, 1155). — **II**, 1914.
- C₂₁H₁₈O₅** C 73,8 — H 4,8 — O 21,4 — M. G. 374.
1) **3,4,3',4'-Dimethylenäther d. *ρ*-Keto-*α*-Di[3,4-Dioxyphenyl]-*αγ*;*ρ*-Nonatetraen**. Sm. 198—199° (*B. 28*, 1193). — **III**, 259.
2) **Aethyl ester d. 6-Benzoyl-3-Benzoylbenzol-1-Carbonsäure**. Sm. 87° (*A. 240*, 169).

- C₂₃H₁₆O₆** C 70,8 — H 4,6 — O 24,6 — M. G. 390.
 1) **meso- α - β -Dibenzoxyl- β -Phenylpropionsäure.** Sm. 187° u. Zers. (B. 16, 1280). — II, 1761.
 2) **Diacetat d. α -Aurinoxid** (M. 16, 374).
 3) **Diacetat d. β -Aurinoxid** (M. 16, 374).
- C₂₃H₁₆O₁₀** C 60,8 — H 4,0 — O 35,2 — M. G. 454.
 1) **Tetracetat d. Fisetin.** Sm. 200–201° (196–198°) (B. 19, 1742; C. 1896 [2] 741; Soc. 71, 1195). — III, 584.
 2) **Tetracetat d. Luteolin.** Sm. 223–226° (213–215°) (Soc. 69, 209; B. 29, 1013; M. 17, 422) — III, 585.
- C₂₃H₁₆O₁₃** C 80,7 — H 5,3 — O 14,0 — M. G. 342.
 3) **Verbindung** (aus Maclurin). Sm. 181–182° (B. 27, 1629). — III, 207.
- C₂₃H₁₆N₂** C 85,7 — H 5,6 — N 8,7 — M. G. 322.
 1) **Di[2-Methylamido- β -Naphtyl]methan.** Sm. 202–203°. Nitrit, Pikrat (J. pr. [2] 35, 319; Soc. 73, 542, 551). — IV, 1076.
 2) **4-Benzylidenamido-1-Phenylamidonaphtalin.** Sm. 109° (A. 286, 184). — IV, 922.
 3) **α -Imido- α -[Phenyl-2-Naphtyl]amido- α -Phenylmethan** (Benzenylphenyl-2-Naphtylamidin). Sm. 147° (B. 30, 1783). — IV, 845.
 4) **α -Phenylimido- α -Phenylamido-1-Naphtylmethan** (1-Naphtendiphenylamidin). Sm. 183,5° (B. 16, 642). — IV, 956.
 5) **2,6-Diphenyl-3-Benzyl-1,4-Diazin.** Sm. 95° (Soc. 63, 1372). — IV, 1088.
 6) **2,3-Diphenyl-1,2-Dihydro- α -Naphtimidazol.** Sm. 138° (B. 25, 2828). — IV, 920.
 7) **Nitril d. α β γ -Triphenylpropan- α γ -Dicarbonsäure.** Sm. 137–138° (B. 31, 3060).
- C₂₃H₁₆N₄** C 78,8 — H 5,1 — N 16,0 — M. G. 350.
 1) **3-Phenyl-2-[3-Amidophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin.** Sm. 190–191° (Soc. 59, 700). — IV, 1395.
- C₂₃H₁₆S** 1) **Thiénylphenylmethan** (2 [oder 3]-Triphenylmethylthiophen). Sm. 237°; Sd. 433–438° u. ger. Zers. (B. 23, 1537; 29, 1402). — III, 749.
- C₂₃H₁₆N** C 89,3 — H 6,1 — N 4,5 — M. G. 309.
 1) **2,5-Diphenyl-1-[2-Methylphenyl]pyrrol.** Sm. 114–115°; Sd. oberh. 300° (B. 22, 3089). — IV, 438.
 2) **2,5-Diphenyl-1-[4-Methylphenyl]pyrrol.** Sm. 201° (181°) (B. 22, 3090; 31, 2718). — IV, 438.
- C₂₃H₁₆N₃** C 81,9 — H 5,6 — N 12,5 — M. G. 337.
 1) **Diphenyl-1-Naphtylguanidin.** Sm. 155° (B. 3, 7). — II, 604.
 2) **2-[4-Methylphenyl]amido-1-Phenylazonaphtalin.** Sm. 156° (152°) (B. 23, 1327; 25, 2846). — IV, 1397.
 3) **4-[4-Methylphenyl]amido-1-Phenylazonaphtalin.** Sm. 144° (A. 256, 256). — IV, 1397.
 4) **2-Phenylamido-1,4-Methylphenyl]azonaphtalin.** Sm. 120° (B. 23, 1325). — IV, 1400.
- C₂₃H₂₀O** C 88,5 — H 6,4 — O 5,1 — M. G. 312.
 1) **2-Keto-1,3-Dicinnamyliden-R-Pentamethylen.** Sm. 215–218° u. Zers. (B. 29, 1838).
- C₂₃H₂₀O₂** C 84,2 — H 6,1 — O 9,7 — M. G. 328.
 1) **α -Diketo- α γ -Triphenylpentan.** Sm. 85° (B. 29, 1493). — III, 307.
 2) **2,4-Dibenzoxyl-1,3,5-Trimethylbenzol.** Sm. 117°; Sd. bei 300° (A. ch. [6] 6, 234; B. 28, 3208). — III, 307.
 3) **2,3,5-Triphenyltetrahydro-1,4-Pyron.** Sm. 153° (M. 18, 440; 19, 414).
 4) **Lakton d. Amarsäure.** Sm. 140,5° (J. 1877, 812; A. 275, 67). — II, 1725.
 5) **Benzoeat d. ρ -Oxyphenyl-1,2,3,4-Tetrahydronaphtalin.** Sm. 107–108° (B. 24, 181). — II, 1148.
- C₂₃H₂₀O₃** C 80,2 — H 5,8 — O 14,0 — M. G. 344.
 1) **α -Diketo- γ -[2-Oxyphenyl]- α ϵ -Diphenylpentan** (2-Oxybenzaldiacetophenon). Sm. 131° (B. 29, 242). — III, 307.
 2) **γ -Oxy- α β δ -Triphenyl- α -Buten- α -Carbonsäure.** Sm. 173–174°. Ag (B. 24, 3862). — II, 1727.
 3) **α -Dehydroamarsäure.** Sm. 173°. Ag (A. 275, 76). — II, 1727.
 4) **β -Dehydroamarsäure.** Sm. 238°. Ag (A. 275, 76). — II, 1727.

- $C_{22}H_{20}O_2$ 5) Benzoesäure d. β -Oxy- α -Keto- $\alpha\beta$ -Di[4-Methylphenyl]äthan. Sm. 119° (B. 22, 381). — III, 235.
C 76,7 — H 5,5 — O 17,8 — M. G. 360.
- $C_{23}H_{20}O_4$ 1) Homo-o-Kresylphtalein (B. [3] 21, 71).
2) Diacetat d. 4,4'-Dioxytriphenylmethan. Sm. 109—111° (B. 22, 1944). — II, 1003.
3) $\alpha\beta\gamma$ -Triphenylpropan- $\alpha\gamma$ -Dicarbonsäure. Sm. 236—237° u. Zers. + C_6H_4O , Ag_2 (B. 31, 3061).
4) Verbindung (aus Fuchsin) + H_2O (M. 16, 398).
C 73,4 — H 5,3 — O 21,3 — M. G. 376.
- $C_{23}H_{20}O_5$ 1) Trimethyläther d. 2,4-Dibenzoyl-1,3,5-Trioxybenzol. Sm. 179° (B. 27, 1499). — III, 305.
2) Diacetat d. $\alpha,4,4'$ -Trioxytriphenylmethan. Sm. 119° (A. 217, 227). — II, 1115.
3) Äthylester d. Propionylisophenanthroxylacetessigsäure. Sm. 134° (Soc. 59, 17). — II, 1909.
C 70,4 — H 5,1 — O 24,5 — M. G. 392.
- $C_{23}H_{20}O_6$ 1) Diäthylester d. 2,6-Diphenyl-1,4-Pyron-3,5-Dicarbonsäure. Sm. 140,5° u. Zers. (B. 23, 3738; A. 261, 189). — II, 2038.
- $C_{23}H_{20}O_8$ 1) Triacetat d. 5,6,7-Trioxy-1,2,4-Trimethyl-9,10-Anthracinon. Sm. 174° (A. 240, 291). — III, 457.
2) Triäthylester d. 9,10-Diketo-9,10-Dihydroanthracen-1,2,4-Tri-carbonsäure. Sm. 125° (J. pr. [2] 41, 128). — II, 2086.
3) Verbindung (aus Phloretin). Sm. 173° (B. 27, 1631, 2688). — III, 230.
C 60,5 — H 4,4 — O 35,1 — M. G. 456.
- $C_{23}H_{20}O_{10}$ 1) Caprinsäure (J. pr. [2] 57, 427).
2) Triacetat d. Quercetindimethyläther. Sm. 154—155° (Soc. 67, 498). — III, 604.
C 58,5 — H 4,2 — O 37,3 — M. G. 472.
- $C_{23}H_{20}O_{11}$ 1) Tetracetat d. Anhydro- $\alpha\alpha$ -Di[2,3,4(P)Trioxyphenyl]propionsäure. Zers. bei 200° (B. 16, 2408). — II, 2078.
C 85,5 — H 6,2 — N 8,6 — M. G. 324.
- $C_{23}H_{20}N_2$ 1) 2-Phenylhydrazon-4,6-Diphenyl-2,3-Dihydro-R-Penten. Sm. 170 bis 180° u. Zers. (Soc. 51, 423). — III, 251.
2) γ -Diphenylmethylenhydrazon- α -Phenyl- α -Buten. Sm. 126° (J. pr. [2] 44, 206). — III, 187.
3) 1-Aethyl-2,4,5-Triphenylimidazol (Aethyllophin). Sm. 234°. (2HCl, PtCl₄) (M. 17, 305).
4) 2,6-Diphenyl-4-Benzyl-1,4-Dihydro-1,4-Diazin. HCl + 3 H₂O, (2HCl, PtCl₄) (Soc. 63, 1365). — IV, 1030.
5) Verbindung (aus Benzylecyanid). Sm. 212—215° (J. pr. [2] 52, 114 Anm.).
C 78,4 — H 5,7 — N 15,9 — M. G. 352.
- $C_{23}H_{20}N_4$ 1) Arbin + 8 H₂O. Sm. 229°. 2HCl, (2HCl, PtCl₄), H₂SO₄, 2H₂SO₄. — III, 780.
2) Blausaures Hydrobenzamid. Sm. 55°. 2HCl (B. 13, 2119). — III, 36.
C 72,6 — H 5,3 — N 22,1 — M. G. 380.
- $C_{23}H_{20}N_6$ 1) m-Phenylendiamindisazo-p-Toluol- β -Naphtalin (B. 16, 2031). — IV, 1401.
- $C_{23}H_{20}S$ 1) Triphenylmethan + Thiophen (B. 26, 853).
C 75,2 — H 5,7 — N 19,1 — M. G. 367.
- $C_{23}H_{21}N_5$ 1) Cyanid d. Phenyl-di[2-Methylphenyl]guanidin. HCl + H₂O (B. 13, 994). — II, 460.
2) Cyanid d. Phenyl-di[4-Methylphenyl]guanidin + $\frac{1}{2}$ H₂O. Sm. 110 bis 115° (B. 11, 975). — II, 489.
C 87,9 — H 7,0 — O 5,1 — M. G. 314.
- $C_{23}H_{21}O$ 1) α -Keto- $\beta\gamma$ -Diphenyl- α -[2,4(P)-Dimethylphenyl]propan. Sd. 365—375° (B. 24, 3541). — III, 260.
2) α -Keto- $\beta\gamma$ -Diphenyl- α -[2,5-Dimethylphenyl]propan. Sm. 60,5°; Sd. 370—380° (B. 24, 3542). — III, 260.
3) α -Keto- $\beta\gamma$ -Diphenyl- α -[3,4-Dimethylphenyl]propan. Sm. 75° (B. 24, 3541). — III, 260.
4) α -Keto- γ -Phenyl- $\alpha\beta$ -Di[4-Methylphenyl]propan. Sm. 92—93° (B. 22, 383). — III, 260.

- $C_{23}H_{18}O_2$ C 83,6 — H 6,7 — O 9,7 — M. G. 330.
 1) 1,2-Dioxy-1,2,4-Triphenyl-R-Pentamethylen. Sm. 142° (A. 302, 237).
 2) Aethyl ester d. $\beta\beta\beta$ -Triphenylpropionsäure. Sm. 81° (Soc. 51, 228). — II, 1483.
 3) Phenylmestylcarbinolester d. Benzolcarbonsäure. Sm. 94° (A. ch. [6] 6, 217). — II, 1144.
 C₂₃H₂₂O₃ C 79,8 — H 6,3 — O 13,9 — M. G. 346.
 1) $\alpha\epsilon$ -Diketo- γ -[2-Furanyl]- $\alpha\epsilon$ -Di[4-Methylphenyl]pentan (Furaldimethyl p-Tolyketon). Sm. 112–113° (B. 29, 2249). — III, 730.
 2) Amarsäure + H₂O. Na + 2H₂O, K, Ca, Ba + 2H₂O, Ag (J. 1870, 586; 1877, 812; J. r. 9, 298; A. 275, 67). — II, 1725.
 C₂₃H₂₄O₄ C 76,2 — H 6,1 — O 17,7 — M. G. 362.
 1) Leukoderivat d. Verbindung C₂₃H₂₄O₄ (aus Fuchsin) (M. 16, 400).
 C₂₃H₂₂O₅ C 70,1 — H 5,6 — O 24,3 — M. G. 394.
 1) Ononetin (J. 1855, 715). — III, 599.
 C₂₃H₂₀O₅ C 64,8 — H 5,2 — O 30,0 — M. G. 426.
 1) Erlenroth. Pb₂ (J. 1870, 859). — III, 590.
 C₂₃H₂₂O₆ C 62,4 — H 5,0 — O 32,6 — M. G. 442.
 1) α ,2- ϵ ,2'-Dilakton d. $\alpha\epsilon$ -Dioxy- γ -Keto- $\alpha\epsilon$ -Di[3,4-Dimethoxyphenyl]pentan-2,2'-Dicarbonsäure (Dimekonindimethylketon). Sm. 151° (M. 12, 475; 14, 398). — II, 2103.
 2) Acetylrußin (A. 156, 7). — III, 601.
 3) Tetracetat d. Phloretin. Sm. 94° (A. 156, 2; B. 27, 2686; 28, 1395). — III, 230.
 C₂₃H₂₂O₁₀ C 60,3 — H 4,8 — O 34,9 — M. G. 458.
 1) Weintraubenfarbstoff (B. 32, 104). — III, 673.
 C₂₃H₂₁N₇ C 84,7 — H 6,7 — N 8,6 — M. G. 326.
 1) Aethylamarin. Sm. 163°. HJ (B. 18, 3079). — III, 23.
 2) Dimethylamarin. Sm. 146°. (2HCl, PtCl₄), HJ (B. 13, 1419; 15, 2326; 18, 3079). — III, 23.
 3) $\alpha\beta$ -Di[1-Naphtylamido]propan. HCl (B. 25, 3278). — II, 601.
 4) $\alpha\beta$ -Di[2-Naphtylamido]propan. HCl (B. 25, 3279). — II, 604.
 5) 6-Methyl-1-Aethyl-2,3-Diphenyl-1,2-Dihydro-1,4-Benzdiazin. Sm. 129° (B. 26, 203). — IV, 1076.
 C₂₃H₂₁N₄ C 78,0 — H 6,2 — N 15,8 — M. G. 354.
 1) 1,3-Di[Phenylhydrason]-2,2-Dimethyl-2,3-Dihydroinden. Sm. 184 bis 187° (A. 252, 86). — IV, 784.
 C₂₃H₂₃N C 88,2 — H 7,3 — N 4,5 — M. G. 313.
 1) Tribenzylpyridin. Sm. 278–280° (B. 25, 2428). — IV, 466.
 C₂₃H₂₃N₃ C 80,9 — H 6,7 — N 12,3 — M. G. 341.
 1) 5-[4-Methylphenyl]amido-2,6-Dimethyl-1-[4-Methylphenyl]benzimidazol. Sm. 162–163°. (2HCl, PtCl₄) (B. 26, 2779). — IV, 1152.
 2) Base (aus Hydrobenzamid). HCl + 2H₂O, (2HCl, PtCl₄) (A. 111, 155). — III, 21.
 C₂₃H₂₁O C 87,3 — H 7,6 — O 5,1 — M. G. 316.
 1) Isobutyläther d. α -Oxytriphenylmethan. Sm. 48° (C. 1896 [1] 416).
 C₂₃H₂₁O₂ C 79,3 — H 6,9 — O 13,8 — M. G. 348.
 1) $\alpha\alpha\beta$ -Tri[2-Oxy-1-Methylphenyl]äthan. Erweicht bei 55° (A. 257, 322). — II, 1029.
 2) $\alpha\alpha\beta$ -Tri[3-Oxy-1-Methylphenyl]äthan. Erweicht bei 90° (A. 257, 324). — II, 1029.
 3) $\alpha\alpha\beta$ -Tri[4-Oxy-1-Methylphenyl]äthan. Erweicht bei 100° (A. 257, 324). — II, 1029.
 4) Tri[2-Methylphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 87,5–89° (B. 24, 3683). — II, 737.
 5) Tri[3-Methylphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 99–100° (B. 24, 3682). — II, 744.
 6) Tri[4-Methylphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 135,5° (B. 24, 3681). — II, 749.
 C₂₃H₂₁O₄ C 75,8 — H 6,6 — O 17,6 — M. G. 364.
 1) Säure (aus Amarsäure). Sm. 127–135° u. Zers. Ag (A. 275, 72). — II, 1725.
 C₂₃H₂₁O₆ C 69,7 — H 6,1 — O 24,2 — M. G. 396.
 1) Dimethyläther d. Curcumin. Sm. 135° (B. 30, 193).

- C₂₃H₁₄O₄**
- 2) Diäthylester d. $\alpha\epsilon$ -Diketo- $\alpha\epsilon$ -Diphenylpentan- $\beta\delta$ -Dicarbonsäure. Sm. 86° (130,5°) (A. 281, 57; 302, 215). — II, 2034.
 - 3) Diäthylester d. isom. $\alpha\epsilon$ -Diketo- $\alpha\epsilon$ -Diphenylpentan- $\beta\delta$ -Dicarbonsäure. Fl. (A. 302, 216).
 - 4) Diäthylester d. $\alpha\epsilon$ -Diketo- $\alpha\epsilon$ -Diphenylpentan- $\gamma\gamma$ -Dicarbonsäure. Sm. 118–119° (B. 19, 3144). — II, 2035.
 - 5) Diäthylester d. $\beta\delta$ -Diketo- $\alpha\epsilon$ -Diphenylpentan- $\gamma\gamma$ -Dicarbonsäure (D. d. Diphenacetylmalonsäure). Fl. (B. 29, 1988).
 - 6) Diäthylester d. 2,6-Diphenyltetrahydro-1,4-Pyron-3,5-Dicarbonsäure. Sm. 115° (B. 29, 996).
- C₂₃H₁₄O₇**
- 1) Triäthyläthermonacetat d. Luteolin. Sm. 185–186° (183–185°) (Soc. 69, 801; M. 17, 423). — III, 583.
- C₂₃H₁₄O₈**
- 1) $\alpha\gamma$ -Diphenylheptan- $\beta\beta'$ -Tetracarbonsäure. Zers. bei 207°. Ag. (Soc. 59, 843). — II, 2085.
 - 2) Diacetat d. Pinocresinol. Sm. 164° (M. 15, 512; 18, 485). — III, 563.
 - 3) Verbindung (aus 3,5-Dioxy-1-Methylbenzol u. Chloralhydrat oder C₁₄H₈O₄) (Ann. 9, 135; Soc. 73, 399). — II, 962.
- C₂₃H₁₄O₉**
- 1) Pikropodophyllin. Sm. 227° (B. 15 [2] 377; 24 [2] 646). — III, 644.
 - 2) Podophylloxin + 2H₂O. Sm. 93–95° (B. 24 [2] 645). — III, 644.
- C₂₃H₁₄N₂**
- 1) α -Phenyl- α -Benzyl- β -[4-Isopropylbenzyliden]hydrazin. Sm. 89–90° (G. 27 [2] 237). — IV, 812.
- C₂₃H₁₄N₄**
- 1) $\alpha\alpha$ -Di[α -Methyl- β -Benzylidenhydrazido]- α -Phenylmethan (Tribenzal-methylhydrazin). Sm. 109° (B. 31, 62).
- C₂₃H₁₄S₃**
- 1) Tribenzyläther d. $\alpha\alpha\alpha$ -Trimerkaptoäthan. Sm. 46° (B. 25, 358). — II, 1053.
- C₂₃H₁₄N₃**
- 1) Phenylimidodi[4-Dimethylamidophenyl]methan (Phenylauramin). Sm. 170–171°. HCl, (2HCl, PtCl₄), Pikrat (B. 20, 2850, 3296). — IV, 1173.
 - 2) 3-Hexyl-2-Phenyl-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 176,5° HCl, (2HCl, PtCl₄) (B. 24, 1007). — IV, 1394.
- C₂₃H₁₅N₅**
- 1) 3,5-Di[α -Phenylhydrasonäthyl]-2,6-Dimethylpyridin. Fl. HCl, HNO₃ (B. 30, 2298). — IV, 800.
- C₂₃H₁₆O**
- 1) γ -Keto- $\alpha\epsilon$ -Di[4-Isopropylphenyl]- $\alpha\delta$ -Pentadien (Dicuminalacetone). Sm. 106–107° (A. 223, 148). — III, 253.
- C₂₃H₁₆O₂**
- 1) Diäthylester d. γ -Keto- $\alpha\epsilon$ -Diphenylpentan- $\beta\delta$ -Dicarbonsäure. Sm. 92° (A. 281, 185). — II, 1978.
- C₂₃H₁₆O₆**
- 1) Tetraäthyläther d. Fisetin. Sm. 106–107° (B. 19, 1745). — III, 584.
 - 2) Tetraäthyläther d. Luteolin. Sm. 146–149° (B. 30, 656).
- C₂₃H₁₆O₇**
- 1) Tetraäthyläther d. Quercetin. Sm. 120–122° (M. 5, 76; 9, 541). — III, 604.
- C₂₃H₁₆O₁₁**
- 1) Acetylphloridsin + 2H₂O (A. 156, 6). — III, 600.
 - 2) Säure (aus Dimekonindimethylketon) (M. 14, 398). — II, 2103.
- C₂₃H₁₆N₂**
- 1) $\alpha\alpha$ -Di[α -Äthylphenylamido]phenylmethan. (2HCl, PtCl₄) (A. Spl. 3, 363). — III, 30.
 - 2) 4',4'-Di[Dimethylamido]triphenylmethan (Leukomalachitgrün). Sm. 102° (93–94°). 2HCl, (2HCl, PtCl₄), Pikrat (B. 11, 1239; 12, 798, 1693; 13, 2228; 16, 150; 18, 539, 988; M. 9, 1148; A. 206, 122; 217, 255). — IV, 1042.
 - 3) isom. β -Di[Dimethylamido]triphenylmethan (A. 260, 15). — IV, 1042.
- C₂₃H₁₆N₄**
- 1) α -[2-Amidophenyl]imidodi[4-Dimethylamidophenyl]methan (2-Amidophenylauramin). Sm. 199–200°. Pikrat (J. pr. [2] 50, 424). — IV, 1173.

- $C_{25}H_{26}N_4$ 2) α -[4-Amidophenyl]imidodi[4-Dimethylamidophenyl]methan (4-Amidophenylauramin). Sm. 221—222°. HCl, (2HCl, PtCl₄), Pikrat (*J. pr.* [2] 50, 403). — IV, 1173.
- $C_{25}H_{26}N_4$ 3) n -Phenylhydrazondi[4-Dimethylamidophenyl]methan. Sm. 174 bis 175° (B. 20, 1111). — IV, 776.
- $C_{25}H_{26}N_4$ C 71,5 — H 6,7 — N 21,8 — M. G. 386.
- $C_{25}H_{27}N_3$ 1) Di[Cinnamylidenamido]pentamethylentetramin. Sm. 207° (A. 288, 236). — III, 60.
- $C_{25}H_{27}N_3$ C 80,0 — H 7,8 — N 12,2 — M. G. 345.
- 1) 2'-Amido-2',2'-Di[Dimethylamido]triphenylmethan. Sm. 134—135° (B. 17, 1891). — IV, 1193.
- 2) 2'-Amido-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 65°. 2HCl, (2HCl, PtCl₄), Pikrat (B. 22, 1885). — IV, 1193.
- 3) 3'-Amido-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 130° (B. 12, 803; 15, 683). — IV, 1193.
- 4) 4'-Amido-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 151—152° (B. 15, 2527; 16, 709; 24, 3140). — IV, 1194.
- 5) 2-Oktyl-4,6-Diphenyl-1,3,5-Triazin. Sm. 43°; Sd. 284—285°₁₅ (B. 23, 2385). — IV, 1199.
- $C_{25}H_{28}O_2$ C 78,4 — H 8,0 — O 13,6 — M. G. 352.
- 1) Acetat d. Cannabinol. Sm. 75° (Soc. 75, 25).
- $C_{25}H_{28}O_2$ C 75,0 — H 7,6 — O 17,4 — M. G. 368.
- 1) norm. Propylenäther d. Eugenol. Sm. 82,5° (*J.* 1877, 582). — II, 974.
- 2) isom. Propylenäther d. Eugenol. Sm. 56—58° (*J.* 1877, 582). — II, 974.
- 3) Verbindung (aus Campheroxalsäure). Sm. 242° (*Ann.* 21, 254).
- $C_{25}H_{28}O_2$ C 71,9 — H 7,3 — O 20,8 — M. G. 384.
- 1) Methyltriäthyläther d. Brasilin. Sm. 149° (B. 27, 525). — III, 653.
- $C_{25}H_{28}O_6$ C 69,0 — H 7,0 — O 24,0 — M. G. 400.
- 1) Diäthyläther d. Pinoresinol. Sm. 118° (*M.* 18, 487).
- $C_{25}H_{28}O_6$ C 63,9 — H 6,5 — O 29,6 — M. G. 432.
- 1) Flavapsidsäure. Sm. 157—159° (C. 1896 [2] 1037).
- $C_{25}H_{29}O_{21}$ 1) Tanacetumgerbsäure = (C₂₅H₂₉O₂₁)_n (*J.* 1882, 1176). — III, 591.
- $C_{25}H_{30}O_2$ C 81,6 — H 8,9 — O 9,5 — M. G. 338.
- 1) Aethyloktoäthenylisopropyllessigsäure. Fl. (A. 202, 325). — II, 1473.
- $C_{25}H_{30}O_4$ C 74,6 — H 8,1 — O 17,3 — M. G. 370.
- 1) Propyläther d. Bidurochinon. Sm. 116° (B. 29, 2183).
- $C_{25}H_{30}O_7$ C 66,0 — H 7,2 — O 26,8 — M. G. 418.
- 1) Kosin. Sm. 148° (B. 27 [2] 311).
- $C_{25}H_{30}N_2$ C 82,6 — H 9,0 — N 8,4 — M. G. 334.
- 1) Verbindung (aus d. Base C₂₅H₃₀N₂). HCl, HJ (Bl. 47, 46). — IV, 1018.
- $C_{25}H_{31}N_3$ C 79,1 — H 8,9 — N 12,0 — M. G. 349.
- 1) Verbindung (Nitril aus Isoamylidenphenylamin). Sm. 136° (B. 25, 2047). — II, 444.
- $C_{25}H_{31}O_7$ C 65,7 — H 7,6 — O 26,7 — M. G. 420.
- 1) Aspidin. Sm. 124,5° (C. 1896 [2] 1036).
- $C_{25}H_{31}N_2$ C 82,1 — H 9,5 — N 8,3 — M. G. 336.
- 1) Base (aus Dimethylamin u. Oenanthylchlorid). Sm. 72,5°; Sd. 278°₁₅. (2HCl, PtCl₄) (Bl. 47, 44). — IV, 996.
- $C_{25}H_{34}O_2$ C 77,1 — H 9,5 — O 13,4 — M. G. 358.
- 1) Methyl ester d. Anacardsäure. Fl. (B. 20, 1863). — II, 1686.
- $C_{25}H_{34}O_2$ C 70,8 — H 8,7 — O 20,5 — M. G. 390.
- 1) Verbindung (aus Tamacoeärb). HgCl (B. 26 [2] 687).
- $C_{25}H_{34}O_5$ C 60,8 — H 7,5 — O 31,7 — M. G. 454.
- 1) Trimethylester d. Anhydrociliansäure. Sm. 119° (B. 32, 686).
- $C_{25}H_{34}N_2$ C 81,7 — H 10,0 — N 8,3 — M. G. 338.
- 1) $\alpha\alpha$ -Di[β -Dimethylamidophenyl]heptan. Sm. 59,5°; Sd. 275°₁₅. (2HCl, PtCl₄) (Bl. 47, 43). — IV, 986.
- 2) $\beta\beta$ -Di[4-Diäthylamidophenyl]propan. Sm. 76°. 2HJ (A. 242, 334). — IV, 984.
- 3) Di[Diäthylamidomethylphenyl]methan (aus 2-Diäthylamido-1-Methylbenzol). Sd. 235—245°₃₀ (*M.* 19, 633).
- 4) Diisobutylamidodibenzylamidomethan (Bl. [3] 13, 158).

- $C_{23}H_{21}N_2$ 5) Diäthylönanthylidendiphenyldiamin. Sd. 215 220° i. ger. Zers. (A. Spl. 3, 363). — II, 445.
- $C_{23}H_{24}S$ 1) Verbindung (aus Asphalt). — III, 565.
- $C_{23}H_{36}O$ C 84,1 — H 11,0 — O 4,9 — M. G. 328.
- 1) Myroxin (C. 1897 [1] 421).
- $C_{23}H_{36}O_2$ C 80,2 — H 10,4 — O 9,3 — M. G. 344.
- 1) 2,4-Diönanthyl-1,3,5-Trimethylbenzol. Sd. 255°₁₂₋₂₀ (B. 30, 1286).
- $C_{23}H_{36}O_2$ C 63,1 — H 8,5 — O 26,4 — M. G. 421.
- 1) Prophetin (J. 1859, 566). — III, 602.
- $C_{23}H_{36}O_{10}$ C 58,5 — H 7,6 — O 33,9 — M. G. 472.
- 1) Tetraäthylester d. β -Diketo- δ -Isobutyloheptan- α - γ - η -Tetracarbonsäure (I. d. Isovalerylidendisacetonidicarbonylsäure). Sm. 118° (A. 288, 358).
- $C_{23}H_{38}O$ C 83,6 — H 11,5 — O 4,8 — M. G. 330.
- 1) Pentadekyl-4-Methylphenylketon. Sm. 60°; Sd. 262°₁₅ (160°₃) (B. 21, 2266; 29, 1327). — III, 157.
- 2) Propyläther d. Oxycampherpinakonon. Sm. 86° (B. 27, 2349; A. 292, 14).
- $C_{23}H_{38}O_2$ C 79,8 — H 11,0 — O 9,2 — M. G. 346.
- 1) Methyläther d. Pentadekyl-4-Oxyphenylketon. Sm. 70,5°; Sd. 279 bis 280°₁₅ (B. 21, 2269). — III, 157.
- 2) Propionat d. Cinchol. Sm. 110° (A. 228, 295). — II, 1069.
- 3) Propionat d. Cupreol. Sm. 111° (A. 228, 293). — II, 1068.
- 4) 4-Methylphenylester d. Palmitinsäure. Sm. 47°; Sd. 258°₁₅ (B. 17, 1379). — II, 749.
- 5) Cetyylester d. Benzolcarbonsäure. Sm. 30° (A. 102, 221). — II, 1141.
- $C_{23}H_{38}O_4$ C 73,0 — H 10,1 — O 16,9 — M. G. 378.
- 1) Fellinsäure. Sm. 169° (120°). Mg + 2 $\frac{1}{2}$ H₂O, Ba + 4 H₂O (H. 10, 187; II, 268; A9, 567; B. 27, 1344). — I, 733.
- $C_{23}H_{38}O_{23}$ C 41,4 — H 5,7 — O 52,8 — M. G. 666.
- $C_{23}H_{40}O$ C 83,1 — H 12,1 — O 4,8 — M. G. 332.
- 1) P-Oxy-4-Hexadekyl-1-Methylbenzol. Sm. 62°; Sd. 267–268°₁₅ (B. 21, 3183). — II, 777.
- $C_{23}H_{40}O_2$ C 79,3 — H 11,5 — O 9,2 — M. G. 348.
- 1) Methylcetyläther d. 1,2-Dioxybenzol. Sm. 54° (R. 12, 273). — II, 909.
- $C_{23}H_{40}O_5$ C 62,2 — H 9,0 — O 28,8 — M. G. 444.
- 1) Tetraäthylester d. Undekan- $\delta\delta\delta\delta$ -Tetracarbonsäure. Sm. 52–54°; Sd. 253–256°₂₀ (Soc. 59, 836). — I, 862.
- 2) Tetraäthylester d. $\beta\beta$ -Dimethylnonan- $\gamma\gamma\eta\eta$ -Tetracarbonsäure. Sd. 250–252°₂₀ (Soc. 59, 839). — I, 863.
- $C_{23}H_{46}N_2$ C 80,2 — H 11,6 — N 8,1 — M. G. 344.
- 1) Hymenodictin. 2HCl, (2HCl, PtCl₄), 2C₄H₈J (J. 1863, 1414; 1884, 1397). — III, 887.
- $C_{23}H_{41}N$ C 83,4 — H 12,4 — N 4,2 — M. G. 331.
- 1) P-Amido-4-Hexadekyl-1-Methylbenzol. Sm. 54°; Sd. 264–265°₁₅ (B. 21, 3183). — II, 566.
- $C_{23}H_{42}O_2$ C 78,9 — H 12,0 — O 9,1 — M. G. 350.
- 1) Methyl ester d. Behenolsäure. Sm. 22° (B. 25, 964). — I, 536.
- $C_{23}H_{42}N_2$ C 79,8 — H 12,1 — N 8,1 — M. G. 346.
- 1) Dimethyldianhydrolupinin. (2HCl, 2AuCl₃) (C. 1897 [2] 361).
- $C_{23}H_{44}O_2$ C 78,4 — H 12,5 — O 9,1 — M. G. 352.
- 1) Vityglykol (B. 25 [2] 286).
- $C_{23}H_{44}O_3$ C 75,0 — H 12,0 — O 13,0 — M. G. 368.
- 1) Methyl ester d. Oxybehenolsäure. Sm. 57–58° (J. pr. [2] 48, 340).
- $C_{23}H_{44}O_4$ C 71,9 — H 11,5 — O 16,6 — M. G. 384.
- 1) Elkosylmalonsäure. Sm. 119–120° (G. 27 [2] 302).
- 2) Diäthylester d. Heptadekan- $\alpha\alpha$ -Dicarbonylsäure (Diäthylester d. Cetylmalonsäure). Sd. 300–360° (A. 206, 357).
- 3) Diäthylester d. Heptadekan- $\omega\omega$ -Dicarbonylsäure (I. d. Dioktylmalonsäure). Sd. 338–340° (A. 204, 163). — I, 690.
- 4) Verbindung (Keton aus Isovaleriausäure). Sd. 200–210° (A. 202, 328).
- $C_{23}H_{44}O_{12}$ C 53,9 — H 8,6 — O 37,5 — M. G. 512.
- 1) Convallamarin (J. 1858, 518; 1852, 1130). — III, 578.

- C₂₃H₄₆O** C 81,7 — H 13,6 — O 4,7 — M. G. 338.
 1) μ -Ketotrikosan (Lauron). Sm. 66° (69°) (A. 84, 289; B. 15, 1712; Soc. 57, 981). — I, 1006.
- C₂₃H₄₆O₂** C 78,0 — H 13,0 — O 9,0 — M. G. 354.
 1) β -Methylbutylester d. Stearinsäure. Sm. 20—21° (Bl. [3] 15, 286).
 2) Isoamylester d. Stearinsäure. Sm. 25,5° (J. 1858, 301; A. 88, 293). — I, 445.
 3) Heptylester d. Palmitinsäure (B. 30, 1495).
- C₂₃H₄₆O₄** C 71,5 — H 11,9 — O 16,6 — M. G. 386.
 1) Glycerinmonarachin (A. ch. [3] 47, 355). — I, 447.
- C₂₃H₄₆O** C 81,2 — H 14,1 — O 4,7 — M. G. 340.
 1) μ -Oxytrikosan (Dilaurylalkohol). Sm. 75—76° (Soc. 37, 983). — I, 240.

C₂₃-Gruppe mit drei Elementen.

- C₂₃H₁₉ON₃** C 79,5 — H 3,7 — O 4,6 — N 12,1 — M. G. 347.
 1) 1,2-Naphtochinon-3,4-Akridonazin. Sm. 276° (B. 27, 3076). — III, 395.
- C₂₃H₁₄O₈N₂** C 75,4 — H 3,8 — O 13,1 — N 7,6 — M. G. 366.
 1) 1,1-Dinaphtylparabansäure. Sm. 246° (B. 21, 973). — II, 611.
- C₂₃H₁₄O₄N₂** C 72,3 — H 3,7 — O 16,7 — N 7,3 — M. G. 382.
 1) 2,4-Di[Phtalylamido]-1-Methylbenzol. Sm. 232—233° (B. 10, 1161). — IV, 606.
- C₂₃H₁₄O₆N₄** C 62,4 — H 3,2 — O 21,7 — N 12,7 — M. G. 442.
 1) Trinitroacetophenin (B. 6, 641). — III, 130.
- C₂₃H₁₄O₆N₆** C 58,7 — H 3,0 — O 20,4 — N 17,9 — M. G. 470.
 1) *p*-Trinitro-2,3-Diphenyl-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 249° (Soc. 59, 681). — IV, 1394.
 2) *p*-Trinitro-2,3-Diphenyl-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 295° (Soc. 59, 681). — IV, 1394.
- C₂₃H₁₂ON** C 86,0 — H 4,7 — O 5,0 — N 4,3 — M. G. 321.
 1) Benzoylphenylnaphtylcarbazol. Sm. 170° (B. 29, 270). — IV, 453.
 2) 1-[β -Phenyläthenyl]phenanthrenoxazol. Sm. 171—172° (Soc. 57, 11). — III, 446.
- C₂₃H₁₂O₂N₂** C 75,6 — H 4,1 — O 8,8 — N 11,5 — M. G. 365.
 1) 5-Nitro-2-Phenyl-1-[1-Naphtyl]benzimidazol. Sm. 171—173° (Bl. [3] 17, 869). — IV, 562.
 2) 5-Nitro-2-Phenyl-1-[2-Naphtyl]benzimidazol. Sm. 177—178° (Bl. [3] 17, 869). — IV, 562.
 3) 2-[2-Nitrophenyl]-3-Phenyl- α -Naphtimidazol. Sm. 242°. (2HCl, PtCl₄) (B. 25, 2830). — IV, 1062.
 4) 2-[3-Nitrophenyl]-3-Phenyl- α -Naphtimidazol. Sm. 209° (B. 25, 2831). — IV, 1062.
 5) 2-[4-Nitrophenyl]-3-Phenyl- α -Naphtimidazol. Sm. 238° (B. 25, 2831). — IV, 1062.
 6) Menaphtoximid? Sm. 245° (A. 98, 244). — II, 605.
 7) Betainverbindung + 2H₂O (aus 2-Phenylamido-1-Phenylazonaphtalin-1^a-Carbonsäure). HCl (B. 28, 340). — IV, 1462.
 8) Betainverbindung + 3H₂O (aus 2-Phenylamido-1-Phenylazonaphtalin-1^a-Carbonsäure). HCl (B. 28, 339). — IV, 1462.
 9) Betainverbindung + 3H₂O (aus 2-Phenylamido-1-Phenylazonaphtalin-1^a-Carbonsäure). HCl (B. 28, 339). — IV, 1462.
- C₂₃H₁₁O₂Br** 1) 6-Brom-2-Phenyl-4-Benzoylmethylen-1,4-Cumaran (Bromphenacylidenflaven). Sm. 169—170° (B. 31, 712).
 2) Laktone d. δ -Brom- γ -Oxy- $\alpha\beta\delta$ -Triphenyl- $\alpha\gamma$ -Butadien- α -Carbonsäure (Brombenzaldiphenylmalcid). Sm. 165° (B. 24, 3555). — II, 1728.
- C₂₃H₁₁O₂N** C 78,2 — H 4,2 — O 13,6 — N 4,0 — M. G. 353.
 1) 5-Benzoyl-2[oder 3]-Phenylamido-1,4-Naphtochinon. Sm. 199 bis 200° (A. 247, 184). — III, 255.
 2) 6-Benzoyl-2[oder 3]-Phenylamido-1,4-Naphtochinon. Sm. 209 bis 210° (A. 247, 187). — III, 255.

- $C_{23}H_{15}O_3N$ 3) Nitril d. β -Benzoxy- α -Benzoyl- β -Phenylakrylsäure (N. d. Tribenzoylessigsäure). Sm. 138° (*J. pr.* [2] 58, 155).
- $C_{23}H_{15}O_4N$ 1) Dibenzooat d. β -Dioxychinolin. Sm. 130–134° (*B.* 20, 1822). — IV, 288.
2) Lakton d. δ -Nitro- γ -Oxy- α - β -Triphenyl- α -Butadien- α -Carbonsäure (Nitrobenzaldiphenylmaleid). Sm. 175–177° (*B.* 24, 3859). — II, 1728.
 $C_{23}H_{15}O_4N_3$ 1) Benzoat d. 1-[3-Nitrophenyl]azo-2-Oxynaphtalin. Sm. 171° (*Soc.* 55, 116). — IV, 1430.
 $C_{23}H_{15}O_5N_5$ C 64,9 — H 3,5 — O 15,1 — N 16,5 — M. G. 425.
1) 2,3-Di[3-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 248 bis 249° u. Zers. + $C_2H_4O_2$ (*Soc.* 59, 693). — IV, 1395.
2) 2,3-Di[4-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 267 bis 270° u. Zers. + $C_2H_4O_2$ (*Soc.* 59, 694). — IV, 1396.
 $C_{23}H_{16}O_5N_7$ C 53,4 — H 2,9 — O 24,7 — N 19,0 — M. G. 517.
1) β -Tetranitro-2,3-Diphenyl-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 305° (*Soc.* 59, 681). — IV, 1391.
 $C_{23}H_{16}ON_2$ C 82,1 — H 4,8 — O 4,8 — N 8,3 — M. G. 336.
1) 2-[2-Oxyphenyl]-3-Phenyl- α -Naphtimidazol. Sm. 175–176°. HCl (*B.* 25, 2830). — IV, 1062.
2) 9-Methyl-7-Phenyl- α - β -Naphtophenazon[5] (Methylrosindon). Sm. 255° (*A.* 256, 243). — IV, 1064.
3) 7-Benzylrosindon[9] (ms-Benzylisorosindon). Sm. 210°. HCl, HBr, HJ (*B.* 31, 2480).
4) Benzylrosindon. Sm. 262–264° (*A.* 290, 297). — IV, 1057.
 $C_{23}H_{16}ON_4$ C 75,8 — H 4,4 — O 4,4 — N 15,4 — M. G. 364.
1) 2-Phenyl-3-[3-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 215° u. Zers. + $\frac{1}{2}C_2H_4O_2$ (*Soc.* 59, 700). — IV, 1394.
2) 2-Phenyl-3-[4-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 228–229° u. Zers. (*Soc.* 59, 700). — IV, 1394.
 $C_{23}H_{16}O_2N_2$ C 78,4 — H 4,5 — O 9,1 — N 7,9 — M. G. 352.
1) Acetylcarbanilamidophenanthrol. Sm. 163–164° (*B.* 22, 3244). — III, 442.
2) Methyläther d. 9-Oxyrosindon[5]. α -Modif. Sm. 264–265° (aus Benzol); β -Modif. Sm. 308° (*B.* 29, 2756; 31, 307, 2482, 2483). — IV, 1059.
3) Acetat d. 2-[4-Oxyphenyl]phenanthrenimidazol. Sm. 205–210° u. Zers. (*Soc.* 41, 146). — III, 447.
5) Benzoat d. 2-Oxy-1-Phenylazonaphtalin. Sm. 125° (*Soc.* 55, 115). — IV, 1429.
5) Benzoat d. 4-Oxy-1-Phenylazonaphtalin. Sm. 118–119° (*Soc.* 55, 606). — IV, 1428.
 $C_{23}H_{16}O_2N_4$ C 72,9 — H 4,2 — O 8,4 — N 14,7 — M. G. 380.
1) Homoterephalendiazoximidbenzenyl. Sm. 179,5° (*B.* 22, 2980). — II, 1844.
2) 3-Phenyl-2-[2-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 210–211° (*Soc.* 59, 683). — IV, 1395.
3) 3-Phenyl-2-[3-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 228° (*Soc.* 59, 699). — IV, 1395.
4) 3-Phenyl-2-[4-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 293° u. Zers. (*Soc.* 59, 685). — IV, 1396.
 $C_{23}H_{16}O_2Br_2$ 1) Lakton d. γ - δ -Dibrom- γ -Oxy- α - β -Triphenyl- α -Buten- α -Carbonsäure. Sm. 154° u. Zers. (*B.* 24, 3854). — II, 1727.
 $C_{23}H_{16}O_2N_2$ C 75,0 — H 4,3 — O 13,0 — N 7,6 — M. G. 368.
1) 5-Keto-2-[α -Nitrobenzyliden]-3,4-Diphenyl-2,5-Dihydropyrrrol (Nitrobenzaldiphenylmaleimidin). Zers. bei 260° (*B.* 24, 3872). — II, 1728.
2) 2-[2-Benzoylamidophenyl]amido-1,4-Naphtochinon. Sm. 235–239° (*B.* 28, 356). — IV, 565.
3) Benzoat d. 8-Acetylamido-5-Oxychinolin. Sm. 180° (*B.* 27, 1940). — IV, 912.
4) Benzoat d. 5-Benzoylamido-8-Oxychinolin. Sm. 205° (*B.* 27, 1939). — IV, 912.
 $C_{23}H_{16}O_2N_4$ C 69,7 — H 4,0 — O 12,1 — N 14,1 — M. G. 396.
1) 1-Oxy-2,4-Diphenylazonaphtalin-2³-Carbonsäure. Zers. bei 200° (*B.* 24, 1602). — IV, 1463.

- $C_{22}H_{16}O_4N_2$ C 71,9 — H 4,2 — O 16,6 — N_2 7,3% — M. G. 384.
 1) 3,5-Diketo-2,4-Dibenzoyl-1-Phenyltetrahydropyrazol. Sm. 111° (B. 25, 1511). — IV, 955.
- $C_{22}H_{16}O_4N_4$ C 67,0 — H 3,9 — O 15,5 — N 13,6 — M. G. 412.
 1) β -Naphтол-p-Azobenzol-p-Azosalicylsäure. Sm. oberh. 253° (Soc. 47, 667). — IV, 1470.
- $C_{22}H_{16}O_6N_4$ C 60,3 — H 3,8 — O 25,1 — N 6,7 — M. G. 416.
 1) Lakton d. γ -Dinitro- γ -Oxy- α - β -Triphenyl- α -Buten- α -Carbonsäure. Sm. 146° u. Zers. (B. 24, 3868). — II, 1727.
- $C_{21}H_{14}O_{10}Br_2$ Tetracetat d. Dibromluteolin. Sm. 218–220° (Soc. 69, 210). — III, 585.
- $C_{19}H_{16}N_4Cl$ 1) 3-Phenyl-2-[4-Chlorphenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 206° u. Zers. + C_2H_4O (Soc. 59, 691). — IV, 1394.
- $C_{19}H_{16}N_4Br$ 1) 3-Phenyl-2-[4-Bromphenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 211° u. Zers. (Soc. 59, 691). — IV, 1394.
- $C_{19}H_{16}N_4Cl$ 1) 1,1-Dinaphtylamidocyanurchlorid. Sm. 215° (B. 19, 243). — II, 624.
 2) 2,2-Dinaphtylamidocyanurchlorid. Sm. 278° (B. 19, 2057). — II, 624.
- $C_{18}H_{17}ON$ C 85,4 — H 5,3 — O 4,9 — N 4,3 — M. G. 323.
 1) 5-Keto-2-Benzyliden-3,4-Diphenyl-2,5-Dihydropyrrol (Benzaldiphenylmaleimidin). Sm. 241–242° (B. 24, 3859). — II, 1728.
 2) Phenyl-1-Naphtylamid d. Benzolcarbonsäure. Sm. 152° (A. 209, 154). — II, 1168.
 3) Phenyl-2-Naphtylamid d. Benzolcarbonsäure. Sm. 147–148° (136°) (A. 209, 158; B. 17, 1591). — II, 1168.
- $C_{18}H_{17}ON_3$ C 78,7 — H 4,8 — O 4,6 — N 11,9 — M. G. 351.
 1) 2-Benzoylamido-1-Phenylazonaphtalin. Sm. 162–163° (B. 18, 799). — IV, 1393.
 2) 4-Benzoylamido-1-Phenylazonaphtalin. Sm. 201° (B. 28, 2198). — IV, 1392.
 3) Verbindung (aus 3-Nitrobenzol-1-Carbonsäurealdehyd) (B. 18, 1999). — III, 17.
- $C_{18}H_{17}O_2N$ C 81,4 — H 5,0 — O 9,4 — N 4,1 — M. G. 339.
 1) 1-Phenylimido-5-Oxy-3-Keto-2,4-Diphenyl-2,3-Dihydro-R-Penten. Sm. 175–176° (A. 284, 259). — III, 320.
 2) P-Oxy-P-Phenyl-1,4-Naphtochinon-2-Methylphenylimid. Sm. 107 bis 108° (A. 226, 41). — III, 460.
 3) P-Oxy-P-Phenyl-1,4-Naphtochinon-4-Methylphenylimid. Sm. 154 bis 155° (A. 226, 41). — III, 460.
 4) Benzotat d. 7-Phenylamido-2-Oxynaphtalin. Sm. 137° (B. 26, 3088). — II, 1149.
 5) 1,2,5-Triphenylpyrrol-3-Carbonsäure. Sm. 273° (B. 21, 3062). — IV, 449.
 6) 3-Phenyl-2-Benzylchinolin-4-Carbonsäure. Sm. 293–295°. Ag (J. pr. [2] 57, 467).
 7) Phenyloster d. Phenyl-2-Naphtylamidomeisensäure. Sm. 149° (B. 24, 2919). — II, 617.
 8) 4-Methylphenylimid d. $\alpha\beta$ -Diphenyläthen- $\alpha\beta$ -Dicarbonsäure. Sm. 192° (B. 26, 2478). — II, 1897.
- $C_{18}H_{17}O_4N_3$ C 75,2 — H 4,6 — O 8,7 — N 11,4 — M. G. 367.
 1) 4-[3-Nitrobenzyliden]amido-1-Phenylamidonaphtalin. Sm. 169° (A. 286, 185). — IV, 923.
 2) 4-[4-Nitrobenzyliden]amido-1-Phenylamidonaphtalin. Sm. 168° (A. 286, 185). — IV, 923.
 3) 2-Oxyphenylbenzoylhydrazinamido- β -Naphtalin. Sm. 183° (B. 18, 3127). — IV, 1576.
 4) 4-Oxyphenylbenzoylhydrazinamido- β -Naphtalin. Sm. 244° (B. 18, 3130). — IV, 1576.
 5) 2-Phenylamido-1-Phenylazonaphtalin-1'-Carbonsäure. Sm. 215° (B. 28, 335). — IV, 1462.
 6) 2-Phenylamido-1-Phenylazonaphtalin-1'-Carbonsäure. Sm. 235°. Na (B. 28, 335). — IV, 1462.
 7) 2-Phenylamido-1-Phenylazonaphtalin-1'-Carbonsäure. Sm. 258°. Na (B. 28, 334). — IV, 1462.
 8) Acetylderivat d. Verb. $C_{11}H_{10}ON_3$. Sm. 140–141° (B. 23, 2938). — IV, 848.

- $C_{23}H_{17}O_2N_3$ 9) Benzoesäure d. 3-Oxy-1-Phenyl-5-[β -Phenyläthyl]-1,2,4-Triazol. Sm. 125° (Soc. 71, 216). — IV, 1167.
- $C_{23}H_{17}O_3N$ 10) Verbindung (aus 4-Oxyazobenzol). Sm. 149° (B. 23, 492). — IV, 1408.
C 77,8 — H 4,8 — O 13,5 — N 3,9 — M. G. 355.
- 1) 4-Oxy-5-Keto-3-Benzoyl-1,2-Diphenyl-2,5-Dihydropyrrrol. Zers. bei 250—252° (B. 31, 1308).
- 2) 2,5-Diphenyl-1-[2-Oxyphenyl]pyrrrol-3-Carbonsäure. Sm. 244—245° (B. 22, 3093). — IV, 450.
C 72,1 — H 4,4 — O 12,5 — N 11,0 — M. G. 383.
- $C_{23}H_{17}O_3N_3$ 1) 4-Nitro-2-Benzoylamido-1-[2-Naphtyl]amidobenzol. Sm. 217—218° (Bl. [3] 17, 867). — IV, 562.
- 2) 5,7-Di[Benzoylamido]-8-Oxychinolin. Sm. 263—264° (J. pr. [2] 53, 543). — IV, 1160.
- 3) Verbindung (aus d. Chlorid d. β -Trichloracetyl- α - β -Dichlorakrylsäure). Sm. 229° (B. 25, 2232). — II, 406.
C 71,3 — H 4,4 — O 20,7 — N 3,6 — M. G. 387.
- $C_{23}H_{17}O_5N$ 1) Laktone d. δ -Nitro- $\gamma\gamma$ -Dioxy- $\alpha\beta\delta$ -Triphenyl- α -Buten- α -Carbonsäure? (Oxynitrobenzylidiphenylmaleid). Sm. 123—125° (B. 24, 3866). — II, 1729.
- $C_{23}H_{17}ClS$ 1) 2-Chlor- p -Triphenylmethylthiophen. Sm. 204—205° (B. 29, 1404). — III, 749.
- $C_{23}H_{17}BrS$ 1) 2-Brom- p -Triphenylmethylthiophen. Sm. 191—192° (B. 29, 1402). — III, 749.
- $C_{23}H_{17}JS$ 1) 2-Jod- p -Triphenylmethylthiophen. Sm. 184—185° (B. 29, 1404). — III, 750.
- $C_{23}H_{18}ON_2$ C 81,6 — H 5,3 — O 4,7 — N 8,3 — M. G. 338.
- 1) $\alpha\beta$ -Diphenyl- α -[2-Naphtyl]harnstoff. Sm. 132—133° (B. 23, 426). — II, 617.
- 2) 3-Benzoylamido-1-[Benzoyl-2-Naphtyl]amidobenzol. Sm. 173° (B. 26, 979). — IV, 573.
- 3) 4-[2-Oxybenzyliden]amido-1-Phenylamidonaphtalin. Sm. 135° (A. 266, 185). — IV, 923.
- 4) p -Phenylamido-1-[4-Amidobenzoyl]naphtalin. Sm. 92° (2HCl, PtCl₄), Pikrat (B. 22, 1894). — III, 254
- 5) 2-[2-Oxy-1-Naphtyl]azodiphenylmethan (Diphenylmethan- o -azo- β -Naphtol). Sm. 134° (B. 27, 2788). — IV, 1439.
- 6) 2-[2-Oxyphenyl]-3-Phenyl-1,2-Dihydro- α -Naphtimidazol. Sm. 139° (B. 25, 2830). — IV, 920.
- 7) Phenylamid d. 3-Phenylamidonaphtalin-2-Carbonsäure. Sm. 168 bis 169,5° (B. 25, 2743). — II, 1459.
C 75,4 — H 4,9 — O 4,4 — N 15,3 — M. G. 366.
- $C_{23}H_{18}ON_4$ 1) s -Di[α -Imido-2-Naphtylmethyl]harnstoff. Sm. noch nicht bei 300° (B. 25, 1426). — IV, 956.
- 2) 4-Phenylazo-2-[4-Methylphenyl]azo-1-Oxynaphtalin. Sm. 165° (B. 25, 1339). — IV, 1437.
- 3) Methyläther d. 2,4-Di[Phenylazo]-1-Oxynaphtalin. Sm. 123° (B. 24, 1596). — IV, 1433.
- 4) α -[1-Naphtyl]azo- α -[1-Naphtyl]hydrazon- β -Ketopropan. Sm. 174,5 bis 175° (B. 25, 3547). — IV, 1230.
- 5) 2-Phenylureido-1-Phenylazonaphtalin. Sm. 205° (B. 23, 502). — IV, 1393.
- 6) α -Phenyl- β -Phenylazo- β -[2-Naphtyl]harnstoff. Sm. 123° (B. 21, 2566). — IV, 1574.
- $C_{23}H_{18}O_2N_2$ C 78,0 — H 5,1 — O 9,0 — N 7,9 — M. G. 354.
- 1) Benzimid. Sm. 167° (A. 34, 189; 54, 372; J. 1850, 488; Berz. J. 16, 246; J. r. 1, 213). — III, 36.
- 2) 4-Benzoylamido-3-Oxy-1-[p -Amidophenyl]naphtalin. Sm. 172—173° (Soc. 55, 125). — II, 903.
- 3) α -Phenylhydrazon- α -[2-Oxyphenyl]- α -[p -Oxy-2-Naphtyl]methan (A. 257, 92). — IV, 778.
- 4) Phenylhydrazon d. Oxalyldibenzylketon? Sm. 181—182° (A. 284, 261). — IV, 788.
- 5) Benzoesäure d. α -Phenyl- β -[4-Oxy-1-Naphtyl]hydrazin. Sm. 162° (B. 24, 2314). — IV, 1506.

- $C_{23}H_{18}O_2N_2$
- 1) **1-Nitroso-5-Keto-2-Benzyl-3,4-Diphenyl-2,5-Dihydropyrrrol.** Sm. 135—136° (*B.* 24, 3863). — II, 1727.
 - 7) **Acetat d. 2-[4-Oxyphenyl]-4,5-Diphenylimidazol** (A. d. p. Oxylophin). Sm. 221° (*B.* 15, 2169). — III, 27.
 - 8) **Methyloxyhydrat d. Isorosindon.** Chlorid, Jodid, Nitrat (*B.* 31, 306). — IV, 1056.
 - 9) **Aethylester d. 2,3-Diphenyl-1,4-Benzdiazin-6-Carbonsäure.** Sm. 151° (*B.* 23, 3628). — III, 286.
- $C_{23}H_{18}O_3N_4$
- 10) **Verbindung** (aus d. Benzot d. 2-Oxy-1-Phenylazonaphtalin). Sm. 172 bis 173° (*Soc.* 55, 115). — IV, 1429.
C 72,3 — H 4,7 — O 8,4 — N 14,6 — M. G. 382.
 - 1) **2- β -Naphtolazo-1-Phenylnitrosamidomethylbenzol.** Sm. 155° (*J. pr.* [2] 55, 374). — IV, 1436.
 - 2) **$\alpha\beta$ -Di[1-Naphtylhydrason]propionsäure.** Sm. 196° (*A.* 248, 86). — IV, 927.
 - 3) **$\alpha\beta$ -Di 2-Naphtylhydrason]propionsäure.** Sm. bei 222° u. Zers. (*A.* 248, 90). — IV, 929.
 - 4) **Phenylamid d. 1-Phenylpyrazol-4,5-Dicarbonsäure.** Sm. 205—206° (*A.* 295, 319). — IV, 544.
 - 5) **Phenylimid d. 2-[4-Methylphenyl]imido-5-Methyl-2,3-Dihydrobenzimidazol-1,3-Dicarbonsäure.** Sm. 232—233° (*B.* 24, 2521). — IV, 624.
 - 6) **Verbindung** (aus d. Amid d. β -Trichloracetyl- $\alpha\beta$ -Dichlorakrylsäure). Sm. 221° (*B.* 25, 2233). — II, 406.
C 74,6 — H 4,9 — O 12,9 — N 7,6 — M. G. 370.
- $C_{23}H_{15}O_3N_2$
- 1) **Monooxind d. 4-Oxy-5-Keto-3-Benzoyl-1,2-Diphenyl-2,5-Dihydropyrrrol.** Zers. bei 213—215° (*B.* 31, 1308).
 - 2) **Verbindung** (aus Thebaolchinon). Sm. 192° (*B.* 28, 943; 30, 1392). — IV, 1087.
- $C_{23}H_{15}O_3Br_4$
- 1) **Diäthyläther d. Tetrabromaurin.** Sm. 110—115° (*B.* 17, 1627). — II, 1120.
- $C_{23}H_{15}O_3S_2$
- 1) **2-Naphtyläther d. α -Merkapto- γ -2-Naphtylsulfon- β -Ketopropan.** Sm. 133° (*J. pr.* [2] 55, 414).
- $C_{23}H_{15}O_4N_7$
- 1) **α -Phenylhydrason- α -[3,4,5-Trioxyphenyl]- α -[4-Oxy-1-Naphtyl]methan.** Sm. 216° (*A.* 269, 314). — IV, 778.
 - 2) **2-Oxy-2-[α -Nitrobenzyl]-5-Keto-3,4-Diphenyl-2,5-Dihydropyrrrol + H₂O** (Oxynitrobenzylidiphenylmaleimidin) (*B.* 24, 3871). — II, 1729.
 - 3) **5,6-Methylenäther-7,8-Dimethyläther d. 5,6,7,8-Tetraoxy-2,3-Diphenyl-1,4-Benzdiazin.** Sm. 222° (*B.* 23, 2291). — III, 286.
- $C_{23}H_{15}O_5S_2$
- 1) **$\alpha\gamma$ -Di[2-Naphtylsulfon]- β -Ketopropan.** Sm. 200° (*J. pr.* [2] 55, 407).
- $C_{23}H_{15}O_5N_8$
- 1) **Diäthylester d. Carbonyldi[3-Nitrophenylhydrazoncyanessigsäure].** Sm. 141—142° (*J. pr.* [2] 51, 224). — IV, 1455.
C 50,2 — H 3,3 — O 26,2 — N 20,3 — M. G. 550.
- $C_{23}H_{15}O_{11}N_4$
- 1) **Diäthyläther d. Tetranitroaurin.** Sm. 105° (*B.* 17, 1626). — II, 1121.
- $C_{23}H_{15}N_4NJ$
- 1) **Jodäthylat d. Iso- β -Naphtoakridin.** Sm. 283—284° (*Soc.* 73, 548).
- $C_{23}H_{15}N_4S$
- 1) **2-[1-Naphtyl]imido-3-[1-Naphtyl]tetrahydrothiazol.** Sm. 139°. (2HCl, PtCl₄) (*B.* 21, 967). — II, 610.
 - 2) **2-[2-Naphtyl]imido-3-[2-Naphtyl]tetrahydrothiazol.** Sm. 172°. (2HCl, PtCl₄) (*B.* 21, 968). — II, 619.
- $C_{23}H_{15}N_4Cl$
- 1) **7-Chlorphenylat d. 5-Methylamido- $\alpha\beta$ -Naphtophenazin** (Methylrosinulinchlorid). + AuCl₃ (*B.* 31, 2430).
 - 2) **7-Chlorbenzylat d. 5-Amido- $\alpha\beta$ -Naphtophenazin** (*A.* 290, 295). — IV, 1204.
- $C_{23}H_{15}N_4S_2$
- 1) **Verbindung** (aus Trimethylenbromid u. s-Diäthylbioharnstoff) (*B.* 23, 2200). — I, 1325.
- $C_{23}H_{15}ON$
- 1) **2-Keto-1-Methyl-3,3,5-Triphenyl-2,3-Dihydropyrrrol.** α -Modif. Sm. 143°; β -Modif. Sm. 138° (*Soc.* 57, 697, 724). — IV, 475.
 - 2) **5-Keto-2-Benzyl-3,4-Diphenyl-2,5-Dihydropyrrrol** (Benzylidiphenylmaleimidin). Sm. 169—170° (*B.* 24, 3863). — II, 1727.

- $C_{23}H_{19}ON_5$ C 68,2 — H 5,4 — O 4,5 — N 11,9 — M. G. 353.
 1) 2- β -Naphtholazo-1-Phenylamidomethylbenzol. Sm. bei 176° (*J. pr.* [2] 55, 374). — **IV**, 1436.
 2) 2-Oxy-1-[4-Benzylamidophenyl]azonaphtalin. Sm. 124° (*Soc.* 55, 596). — **IV**, 1431.
 3) 4-Oxy-1-[4-Benzylamidophenyl]azonaphtalin (*Soc.* 55, 596). — **IV**, 1431.
 4) Base (aus 2-Phenylamido-1-p-Methylphenylazonaphtalin). Chlorid + $HgCl_2$, Chlorid + $SuCl_2$, 2 Chlorid + $PtCl_4$, Nitrat, Pikrat (*B.* 23, 1326). — **IV**, 1400.
 5) Base (aus Benzolazo- β -Tolyl-naphthylamin). Chlorid + $SuCl_2$, 2 Chlorid + $PtCl_4$, Nitrat, Pikrat (*B.* 23, 1328). — **IV**, 1397.
- $C_{21}H_{19}O_4N$ C 80,9 — H 5,6 — O 4,1 — N 9,4 — M. G. 341.
 1) 1,3-Diketo-4,4-Dibenzyl-1,2,3,4-Tetrahydroisochinolin. Sm. 174° (*B.* 20, 2496). — **II**, 1913.
 2) β -Phenylamido- $\alpha\alpha$ -Dibenzoylpropen. Sm. 166—167° (*A.* 291, 101). — **III**, 319.
 3) 3-[4-Isopropylphenyl]- β -Naphthochinolin-1-Carbonsäure (Cumyl- β -Naphthocinchoninsäure). Sm. 255° (*B.* 27, 2030). — **IV**, 472.
 4) Amid d. γ -Keto- $\alpha\beta\delta$ -Triphenyl- α -Buten- α -Carbonsäure. Sm. 203 bis 204° (*B.* 24, 3858). — **II**, 1728.
- $C_{21}H_{17}O_2N_3$ C 74,8 — H 5,1 — O 8,6 — N 11,4 — M. G. 369.
 1) β -Phthalylamido- α -Phenylhydrazon- α -(4-Methylphenyl)äthan. Sm. 154° (*B.* 31, 2132).
 2) Äthylester d. 3,4-Diphenyl-1,2,5-Triazol-1-[Phenyl-4'-Carbonsäure]. Sm. 99° (*B.* 27, 1136). — **III**, 288.
 3) Diäcetylhrysanilin. HCl , HNO_3 . (*B.* 17, 433). — **IV**, 1212.
 4) Naphthylamidoformiat d. 4-Oxy- s -Diphenylhydrazin. Sm. 155° (*B.* 23, 493). — **IV**, 1504.
- $C_{21}H_{19}O_3Br$ 1) $\alpha\alpha$ -Diketo- γ -[5-Brom-2-Oxyphenyl]- $\alpha\epsilon$ -Diphenylpentan. Sm. 158 bis 159° (*B.* 29, 243). — **III**, 307.
- $C_{21}H_{19}O_4N$ C 74,0 — H 5,1 — O 17,2 — N 3,7 — M. G. 373.
 1) Äthylester d. δ -Cyan- $\gamma\epsilon$ -Diketo- $\alpha\eta$ -Diphenyl- α - γ -Heptadien- δ -Carbonsäure (*B.* 21 [2] 645). — **II**, 1910.
 2) Äthylester d. 4,5-Diketo-2-Phenyl-1-[2-Naphtyl]tetrahydropyrrol-3-Carbonsäure. Sm. 142—143° (*B.* 30, 604). — **IV**, 369.
- $C_{21}H_{19}O_4N_3$ C 68,8 — H 4,7 — O 16,0 — N 10,5 — M. G. 401.
 1) 4-[β -Acetoxyimido- $\alpha\beta$ -Diphenyläthyliden]hydrazidobenzol-1-Carbonsäure. Sm. 176° (*B.* 27, 1135). — **III**, 291.
- $C_{21}H_{19}O_6N$ C 70,9 — H 4,9 — O 20,6 — N 3,6 — M. G. 389.
 1) O-Benzozat-N-4-Methylbenzozat d. 4-Methoxybenzhydroxamsäure. Sm. 162° (*C.* 1898 [2] 1080).
 2) isom. O-Benzozat-N-4-Methylbenzozat d. 4-Methoxybenzhydroxamsäure. Sm. 132° (*C.* 1898 [2] 1080).
 3) O-4-Methylbenzozat-N-4-Methoxybenzozat d. Benzhydroxamsäure. Sm. 120—121° (*C.* 1898 [2] 1080).
 4) isom. O-4-Methylbenzozat-N-4-Methoxybenzozat d. Benzhydroxamsäure. Sm. 127° (*C.* 1898 [2] 1080).
 5) O-4-Methoxybenzozat-N-Benzozat d. 4-Methylbenzhydroxamsäure. Sm. 142° (*C.* 1898 [2] 1080).
- $C_{20}H_{19}O_6N$ C 68,1 — H 4,7 — O 23,7 — N 3,4 — M. G. 405.
 1) Benzozat d. 4-Methoxybenzoyl-4-Methoxybenzhydroxamsäure. α -Modif. Sm. 152—153°; β -Modif. Sm. 148—149° (*A.* 186, 28). — **II**, 1535.
 2) 4-Methoxybenzozat d. 4-Methoxybenzoylbenzhydroxamsäure. α -Modif. Sm. 137,5—138,5°; β -Modif. Sm. 137,5—138,5° (*A.* 186, 30). — **II**, 1535.
 3) 4-Methoxybenzozat d. Benzoyl-4-Methoxybenzhydroxamsäure. Sm. 147,5° (*A.* 186, 28). — **II**, 1535.
 4) Methylimid d. Dicinnamylweinsäure. α -Modif. Sm. 70—72°; β -Modif. Sm. 95°; + C_4H_8 (Sm. 89—81°) (*B.* 30, 3041).
- $C_{21}H_{19}N_6Cl$ 1) 3,3,5-Trichlor-1,2,4-Triphenylhydrazon- R -Pentamethylen. Fl. (*B.* 21, 2437).
- $C_{21}H_{21}ON_2$ C 81,2 — H 5,9 — O 4,7 — N 8,2 — M. G. 340.
 1) 3-Oxy-1-Phenylhydrazon-3,4-Diphenyl-2,3-Dihydro- R -Penten. Sm. 197° u. Zers. (*Soc.* 51, 422). — **III**, 251.

- C₂₃H₂₀ON**, 2) **3-Keto-1-Methyl-2,4-Diphenyl-5-Benzyl-2,3-Dihydropyrazol** (A. 296, 131. — IV, 1033).
- 3) **Amid d. γ -Cyan- $\alpha\beta\gamma$ -Triphenylpropan- α -Carbonsäure** (B. 31, 3064).
C 77,5 — H 5,6 — O 9,0 — N 7,9 — M. G. 356.
- C₂₃H₂₀O₂N₂**, 1) **2,3-Dibenzoyl-1-Methyl-1,2,3,4-Tetrahydro-2,3-Benzodiazin**. Sm. 185° (B. 30, 3030). — IV, 554.
- 2) **Dimethyläther d. 6-Methyl-2,3-Di[4-Oxyphenyl]-1,4-Benzodiazin** (Toluensaldehydin). Sm. 152—153° (B. 11, 1660). — IV, 620.
- 3) **Anhydro- α -Benzyliden- α -Oxy- β -[4-Methylphenyl]amido- β -Phenylpropionsäure**. Sm. 215° (B. 29, 1740).
- 4) **Acetat d. α -Oxidido- β -[4-Methylphenyl]imido- $\alpha\beta$ -Diphenyläthan**. Sm. 120—121° (B. 25, 2598). — III, 290.
- C₂₃H₂₀O₂N₂**, C 72,3 — H 7,8 — O 12,6 — N 7,3 — M. G. 382.
- C₂₃H₂₀O₄N₄**, 1) **5-Benzoyl d. 4-Benzoylamido-5-Oxidomethyl-1,3-Dimethylbenzol**. Sm. 142—142,5° (J. pr. 2] 58, 342).
- C 66,3 — H 4,8 — O 15,4 — N 13,5 — M. G. 416.
- 1) **β -Phenylhydrazon- α -Phenylamido- β -Phenylimidopropan- $\alpha^{1,2}$ -Dicarbonsäure** (Phenylhydrazonpyrotraubendianthranilsäure). Sm. 250° u. Zers. (B. 30, 1191). — IV, 659.
- 2) **Diacetat d. Resorcindisazobenzoltoluol**. Sm. 175—176° (B. 15, 2822). — IV, 1444.
- 3) **Diacetat d. isom. Resorcindisazobenzoltoluol**. Sm. 195—196° (B. 15, 2822). — IV, 1444.
- 4) **Dibenzoyl d. 1-Amidooxidomethyl-4-[β -Amido- β -Oxidomethyl]benzol**. Sm. 184° (B. 22, 2880). — II, 1844.
- 5) **Dibenzoyl d. α -Amido- β -[4-Methylphenyl]- $\alpha\beta$ -Dioximidoäthan**. Sm. 193—194° (B. 24, 816). — II, 1210.
- C₂₃H₂₀O₄S₂**, 1) **$\alpha\beta$ -Di[2-Naphtylsulfon]propan**. Sm. 123° (J. pr. [2] 53, 493).
- 2) **isom. $\alpha\beta$ -Di[2-Naphtylsulfon]propan**. Sm. 157° (J. pr. [2] 53, 494).
- 3) **$\alpha\gamma$ -Di[2-Naphtylsulfon]propan**. Sm. 145° (J. pr. [2] 53, 493).
C 68,3 — H 4,9 — O 19,8 — N 6,9 — M. G. 404.
- C₂₃H₂₀O₃N₂**, 1) **Monoacetat d. Phenyl-3,4,5-Trioxo-2-[α -Phenylhydrazonäthyl]phenylketon**. Sm. 248—249° (J. r. 25, 117). — IV, 785.
- C₂₃H₂₀O₄S**, 1) **Dibenzoyl d. $\beta\gamma$ -Dioxypropylphenylsulfon**. Sm. 86—87° (A. 283, 190).
C 46,0 — H 3,3 — O 32,0 — N 18,7 — M. G. 600.
- C₂₃H₂₀O₁₂N₂**, 1) **β -Hexanitro-4',4'-Di[Dimethylamido]triphenylmethan**. Sm. 200° u. Zers. (A. 206, 128). — IV, 1044.
- C₂₃H₂₀N₂S**, 1) **2-Dibenzylamido-4-Phenylthiazol**. Sm. 106° (G. 23 [2] 439). — IV, 916.
- 2) **2-Amido-4-Phenyl- β -Dibenzylthiazol**. HJ (G. 24 [1] 69). — IV, 916.
- 3) **2-Benzylimido-3-Benzyl-4-Phenyl-2,3-Dihydrothiazol**. Sm. 66—67°. HBr (G. 23 [2] 441). — IV, 916.
- 4) **Äthyläther d. 2-Merkapto-1,4,5-Triphenylimidazol**. Sm. 154—155° (A. 284, 31). — III, 224.
- 5) **1-Naphtylamido-1-Naphtylimidomethyläthylsulfid**. Sm. 98°. (2HCl, PtCl₄), HJ (B. 21, 966). — II, 610.
- 6) **2-Naphtylamido-2-Naphtylimidomethyläthylsulfid**. Sm. 100°. (2HCl, PtCl₄) (B. 21, 968). — II, 619.
- C₂₃H₂₀N₂Cl₂**, 1) **Verbindung + 2H₂O** (aus Phenylhydrazin u. Trichlorketon-R-Pentamethylen) (B. 25, 858). — IV, 787.
- C₂₃H₂₁ON**, C 84,4 — H 6,4 — O 4,9 — N 4,3 — M. G. 327.
- 1) **5-Keto-1-Methyl-2,4,4-Triphenyltetrahydropyrrrol**. Sm. 153,5° (Soc. 57, 700). — IV, 470.
- C₂₃H₂₁ON₂**, C 77,7 — H 5,9 — O 4,5 — N 11,8 — M. G. 355.
- 1) **Nitril d. α -Benzyliden- α -Oxy- β -[4-Methylphenyl]amido- β -Phenylpropionsäure**. Sm. 262° u. Zers. (B. 29, 1738).
- C₂₃H₂₁O₂N**, C 80,4 — H 6,1 — O 9,3 — N 4,1 — M. G. 343.
- 1) **Diphenacylbensylamin**. Fl. HCl, (2HCl, PtCl₄), HBr (Soc. 63, 1364). — III, 127.
- 2) **Diphenacyl-p-Toluidin**. Sm. 255° (B. 23, 168). — III, 127.
- 3) **α -Phenylamido- β -Benzoyl- γ -Oxy- α -Phenyl- β -Buten**. Sm. 83—84° (B. 31, 1394).
- 4) **α -Phenylamido- β -Benzoyl- γ -Keto- α -Phenylbutan**. Sm. 172—173° (B. 31, 1394).

- C₂₁H₂₁O₇N** 5) β -[4-Methylphenyl]acetylamido- α -Keto- α - β -Diphenyläthan. Sm. 150° (B. 26, 1339). — III, 220.
- 6) *p*-Benzoylamido-2,4,5-Trimethylidiphenylketon. Sm. 227° (B. 17, 1806). — III, 236.
- 7) Amid d. β -Dehydroamarsäure. Sm. 232° (A. 275, 79). — II, 1727.
- 8) Methylamid d. $\alpha\alpha$ -Diphenyl- β -Benzoylpropionsäure. Sm. 156° (Soc. 57, 702). — II, 1726.
- C₂₂H₂₁O₆N₂** C 74,4 — H 5,7 — O 8,6 — N 11,3 — M. G. 371.
- 1) Diacetyltriphenylguanidin. Sm. 131° (B. 8, 384). — II, 351.
- 2) Nitril d. α -Benzylidenamido- β -[4-Methoxyphenyl]amido- α -Oxy- β -Phenylpropionsäure. Sm. 233° u. Zers. (B. 31, 2708).
- C₂₁H₂₁O₅N₃** C 71,3 — H 5,4 — O 12,4 — N 10,8 — M. G. 387.
- 1) Benzoyldi[Benzoylamidomethyl]amin. Sm. 266—267° (A. 288, 250).
- 2) Aethylester d. 4-[β -Oximido- α - β -Diphenyläthylidenhydrazidobenzol-1-Carbonsäure. Sm. 226° (B. 27, 1135). — III, 291.
- 3) Verbindung (aus d. Methylamid u. d. Aethylester d. α -Cyan- β -Phenylkrylsäure). (2 isom. Formen.) Sm. 157° u. 180° (J. pr. [2] 45, 512). — II, 1417.
- C₂₃H₂₁O₃Br₂** 1) Tri[5-Brom-3-Methylphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 151,5 bis 153° (B. 24, 3683). — II, 745.
- 2) Tri[3-Brom-4-Methylphenyläther] d. $\alpha\alpha\alpha$ -Trioxyäthan. Sm. 160 bis 161° (B. 24, 3682). — II, 751.
- C₂₃H₂₁O₄N** C 73,6 — H 5,6 — O 17,1 — N 3,6 — M. G. 375.
- 1) Pulvinpiperidinsäure. K + H₂O, Ca, Piperidinsalz (A. 282, 32). — IV, 21.
- C₂₃H₂₁O₆N₂** C 63,4 — H 4,8 — O 22,1 — N 9,7 — M. G. 435.
- 1) Protocatechuglykolyltriasin. Sm. 120° u. Zers. (B. 27, 1987). — IV, 1579.
- C₂₃H₂₁N₂S₂** 1) Methyl- α -Phenylidithiobenzyl- α -Phenylalduret. Sm. 127°. HCl (B. 28, 1109). — III, 35.
- C₂₃H₂₁N₂S** 1) Aethyltriphenylthioammelin. Sm. oberh. 100°. HBr (B. 20, 1069; 21, 871). — II, 399.
- C₂₃H₂₁ON₂** C 80,7 — H 6,4 — O 4,7 — N 8,2 — M. G. 342.
- 1) Amidodiphenacylbenzylamin. Sm. 80° u. Zers. (2 HCl, PtCl₄ + 3 H₂O) (Soc. 63, 1365). — III, 127.
- 2) α -Benzyliden- β -[4-Isopropylbenzoyl]- β -Phenylhydrazin. Sm. 126°. — IV, 751.
- 3) Diäthylen-4,4'-Diamidotriphenylearbinol (Phenylidiphenylpiperazin-carbinol) (B. 22, 1781). — II, 1086.
- 4) Benzoylderivat d. isom. Base C₁₈H₁₅N₂ (vom Sm. 85,5°). Sm. 156° (B. 27, 1302, 1561 Berichtigung).
- 5) Benzoylderivat d. Base C₁₈H₁₅N₂. Sm. 218° (B. 25, 2031; 27, 1302). — II, 443.
- C₂₃H₂₁ON₄** C 74,6 — H 5,9 — O 4,3 — N 15,1 — M. G. 370.
- 1) Phenylhydrazid d. α -Phenylhydrazon- α -Phenyl- $\alpha\gamma$ -Butadien- δ -Carbonsäure. Sm. 198° (194°) (A. 282, 198; B. 27, 844). — IV, 698.
- C₂₃H₂₁O₇N₂** C 77,1 — H 6,1 — O 8,9 — N 7,8 — M. G. 358.
- 1) 3,4-Di[Phenacetylamido]-1-Methylbenzol. Sm. 174—176° (B. 24, 633). — IV, 617.
- 2) 3,5-Di[Acetylphenylamido]-1-Methylbenzol. Sm. 160° (J. pr. [2] 33, 544). — IV, 625.
- 3) α -Benzoylamido- γ -Phenylbenzoylamidopropan. Sm. 96,5—97,5° (A. 19, 691). — II, 1170.
- 4) α -Benzoylamido- β -[2-Methylphenyl]benzoylamidoäthan. Sm. 164,5° (B. 24, 2195). — II, 1169.
- 5) α -Benzoylamido- β -[4-Methylphenyl]benzoylamidoäthan. Sm. 161° (B. 24, 2197). — II, 1169.
- 6) α -Dioximido- $\alpha\gamma\delta$ -Triphenylpentan. Sm. 163,5° (A. 302, 243).
- 7) Dibenzyläther d. $\alpha\beta$ -Dioximidopropylbenzol. Sm. 55—56° (A. 291, 294). — III, 269.
- 8) Aethylester d. β -Diphenylhydrazon- β -Phenylpropionsäure. Sm. 109 bis 110° (B. 30, 3009). — IV, 695.
- 9) Di[Phenylamid] d. 1-Methylbenzol-3-[Aethyl- $\beta\beta$ -Dicarbonsäure]. Sm. 188° (B. 23, 111). — II, 1856.

- $C_{22}H_{21}O_2N_2$ 16) Verbindung (aus *o*-Phenyleumalin u. 2 Molec. Anilin). Sm. 115—115°. + C_6H_6 (Sm. 142°) (*B.* 29, 1677; *G.* 26 2, 345).
- $C_{23}H_{21}O_2N_4$ C 71,5 — H 5,7 — O 8,3 — N 14,5 — M. G. 386.
 1) Phenylsazon d. Oxyphenyleumalin. Sm. 193° (*A.* 282, 202). — II, 1656.
 2) *a*-Phenyl- β -Acetylhydrazid d. β -Benzyliden-*a*-Phenylhydrazidoessigsäure. Sm. 184° (*A.* 301, 85).
- $C_{23}H_{21}O_2N_2$ C 73,8 — H 5,9 — O 12,8 — N 7,5 — M. G. 374.
 1) Methyläther d. 2- β -Benzoylamidoäthylbenzoylamido-1-Oxybenzol. Sm. 134—135° (*B.* 27, 990). — II, 1176.
 2) *a*-Benzylidenamido-*a*-Oxy- β -(4-Methylphenyl)amido- β -Phenylpropionsäure. Sm. 213° u. *Zers.* (*B.* 29, 1735).
- $C_{23}H_{21}O_2N_4$ C 68,6 — H 5,5 — O 11,9 — N 13,9 — M. G. 402.
 1) 4-Phenylamidoformyl-7- β -Phenylharnstoff-3-Methyl-3,4-Dihydro-1,4-Benzoxazin. Sm. 297° (*B.* 30, 1640). — IV, 854.
- $C_{23}H_{21}O_2N_2$ C 70,8 — H 5,6 — O 16,4 — N 7,2 — M. G. 390.
 1) *a*-Benzylidenamido- β -(4-Methoxyphenyl)amido-*a*-Oxy- β -Phenylpropionsäure + H_2O . Sm. 198° (*B.* 31, 2767).
 2) Diäthylester d. *o*,*o*'-Di[2-Cyanphenyl]propan- β , β -Dicarbonsäure. Sm. 86° (*B.* 22, 2019). — II, 1893.
- $C_{23}H_{21}O_4N_4$ C 66,0 — H 5,3 — O 15,3 — N 13,4 — M. G. 418.
 1) 4-[3-*p*-Dimethylamidophenylazophenyl]-2,6-Dimethylpyridin-3,5-Dicarbonsäure. *Zers.* bei 170° (*G.* 17, 470). — IV, 1487.
 2) Äthylester d. β , β -Di[5-Keto-1-Phenyl-4,5-Dihydroprazolyl-4- β -propionsäure. Sm. 173—174° (145°). (2 HCl, PtCl₄) (*B.* 28, 632). — IV, 1266.
- $C_{23}H_{21}O_2N_2$ C 69,8 — H 4,8 — O 28,2 — N 6,2 — M. G. 454.
 1) 2,4-Di[2,5-Dimethyl-1-Pyrryl]-1-Methylbenzol-2',2',4',4'-Tetracarbonsäure. *Zers.* bei 248° (*A.* 236, 313). — IV, 1021.
- $C_{23}H_{21}N_2S_2$ 1) Verbindung (aus Benzaldehyd u. Phenylthioessigsäureamid). + PtCl₄ (*A.* 192, 60). — III, 35.
- $C_{23}H_{21}ON_2$ C 77,3 — H 6,4 — O 4,5 — N 11,8 — M. G. 357.
 1) 4-Methylphenylamid d. 4-Methylphenylamido-4-Methylphenylimidoessigsäure. Sm. 182° (*B.* 28, 62).
- $C_{23}H_{21}O_2N$ C 80,0 — H 6,7 — O 9,3 — N 4,0 — M. G. 345.
 1) 3-Allo-Lemonyl- β -Naphtochinolin-1-Carbonsäure. Sm. 235° (*J. pr.* [2] 58, 88).
 2) 3-Citriodoralddehyd- β -Naphtochinolin-1-Carbonsäure. Sm. 204° (*J. pr.* [2] 58, 78).
 3) Citral- β -Naphtochinolin-1-Carbonsäure. + $\frac{1}{2}H_2O$. Sm. 197°. *Ag.* (*B.* 27, 354, 2026; 28, 2133; 31, 3327; *J. pr.* [2] 58, 83). — IV, 460.
- $C_{23}H_{21}O_1N_2$ 4) Amid d. Amarsäure. Sm. 145—152° (*A.* 275, 70). — II, 1725.
 C 74,0 — H 6,2 — O 8,6 — N 11,2 — M. G. 373.
 1) *a*-Phenyl- β -(4-Methylphenyl)- β -[2-Acetylamidobenzyl]harnstoff. Sm. 141° (*J. pr.* [2] 55, 246). — IV, 633.
- $C_{23}H_{21}O_2N$ 2) Tri[4-Methylphenyl]biuret. Sm. 155—156° (*B.* 21, 506). — II, 495.
 C 76,4 — H 6,4 — O 13,3 — N 3,9 — M. G. 361.
 1) Phenylpiperin (3,4-Methylenäther d. *s*-Keto-*s*-Piperidyl-*a*-[3,4-Dioxyphenyl]- β -Phenyl-*a*,*o*'-Pentadien). Sm. 134° (*B.* 28, 1196). — IV, 17.
 2) Äthylester d. *a*-2-Naphtylamido-*o*'-Oxy-*a*-Phenyl- β -Buten- β -Carbonsäure. Sm. 100—101° (*B.* 31, 1389).
 3) Äthylester d. *a*-2-Naphtylamido-*o*'-Keto-*a*-Phenylbutan- β -Carbonsäure. Sm. 74—75° (*B.* 31, 1389).
- $C_{23}H_{21}O_2N$ C 70,2 — H 5,8 — O 20,3 — N 3,6 — M. G. 393.
 1) Berberin + Aceton. — III, 800.
 2) Decarboximinanilid. Sm. 160—171° (*G.* 12, 247). — II, 2057.
- $C_{23}H_{21}O_2N$ C 67,5 — H 5,6 — O 23,5 — N 3,4 — M. G. 400.
 1) Corycevin. Sm. 214—215°. HCl, (2HCl, PtCl₄ + 3H₂O), HJ (*A.* 277, 15; *C.* 1896 [2] 793). — III, 877.
- $C_{23}H_{21}N_2Cl$ 1) Chloräthylat d. 5 oder 6-Methyl-2-Phenyl-1-Benzylbenzimidazol. 2 + PtCl₄ (*B.* 11, 594). — IV, 619.
- $C_{23}H_{21}N_2Br$ 1) Diäthylecyaninbromid. Sm. noch nicht bei 290° (*R.* 3, 340). — IV, 315.
- $C_{23}H_{21}N_2J$ 1) Diäthylecyaninjodid. Sm. 271—273° (*R.* 2, 321). — IV, 315.
 2) Diäthylisocyaninjodid. Sm. 150—152° u. *Zers.* (*R.* 3, 346). — IV, 308.

- $C_{23}H_{22}N_2J$ 3) Jodäthylat d. 5 oder 6-Methyl-2-Phenyl-1-Benzylbensimidazol + $11\frac{1}{2}H_2O$. Sm. 180–181°. + J_2 (B. 11, 593). — IV, 619.
- $C_{27}H_{23}N_2S_2$ 1) α -Methyläthyltriphenyldithiobiuret. Sm. 157,5° (B. 21, 108). — II, 400.
2) β -Methyläthyltriphenyldithiobiuret. Sm. 156,5° (B. 21, 109). — II, 400.
- $C_{33}H_{31}ON_4$ C 74,2 — H 6,4 — O 4,3 — N 15,1 — M. G. 372.
1) Äthyläther d. 2-Oxy- β -Di[2-Methylphenylazo]-1-Methylbenzol. Sm. 102° (B. 23, 3260). — IV, 1424.
2) Äthyläther d. 2-Oxy- β -Di[4-Methylphenylazo]-1-Methylbenzol. Sm. 107–108° (B. 23, 3262). — IV, 1424.
3) α -Phenyl- β -Phenylazo- β -[4-Isopropylbenzyl]harnstoff. Sm. 101° (B. 21, 929). — IV, 1573.
4) α -Phenyl- β -[4-Methylphenyl]azo- β -[2,4,5-Trimethylphenyl]harnstoff. Sm. 102° (B. 25, 1360). — IV, 1573.
5) 4-Dimethylamidophenylamid d. α -Phenyl- β -Benzylidenhydrazid-essigsäure. Sm. 184–185° (B. 30, 1101; A. 301, 77).
6) Verbindung (aus Acetophenonphenylhydrazon u. Formaldehyd). Sm. 185° (Soc. 69, 1286). — IV, 771.
- $C_{27}H_{24}O_2N_2$ C 76,7 — H 6,6 — O 8,9 — N 7,8 — M. G. 360.
1) 4-Äthyläther d. 5-[2-Oxybenzyliden]amido-2-[4-Methylphenyl]amido-4-Oxy-1-Methylbenzol. Sm. 157° (B. 27, 2708). — III, 74.
2) Diäthyläther d. α -Phenylhydrazondi[2-Oxyphenyl]methan. Sm. 114° (B. 19, 2611). — IV, 776.
3) Isobutyläther d. β -Phenylamido- β -Oxy-2-Methyl-1,4-Benzochinonphenylimid. Sm. 117° (B. 16, 1561). — III, 361.
4) Verbindung (aus Benzylidendiäcetylaceton). Sm. 177° (A. 281, 83). — IV, 788.
- $C_{23}H_{20}O_2N_4$ C 71,1 — H 6,2 — O 8,2 — N 14,4 — M. G. 388.
1) $\beta\beta$ -Di[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydropyrazolyl-4-]propan. Sm. 135° (A. 236, 181; B. 30, 484). — IV, 1265.
2) Di[3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazolyl-4-]methan + H_2O (Methylenbisantipyrin). Sm. 179° (177°) wasserfrei. 2HCl + H_2O , (2HCl, PtCl₄), (HCl, AuCl₃), H_2SO_4 , H_3PO_4 , Pikrat (A. 255, 246; B. 28, 1183; 29, 1826; Bl. [3] 15, 520; [3] 17, 1023; G. 26 [2] 407). — IV, 1264.
- $C_{23}H_{21}O_2N_6$ C 66,3 — H 5,8 — O 7,7 — N 20,2 — M. G. 416.
1) Verbindung (aus Akonsäure u. Phenylhydrazin). Sm. 178–179° (B. 27, 3441). — IV, 708.
- $C_{29}H_{24}O_4N_2$ C 70,4 — H 6,1 — O 16,3 — N 7,1 — M. G. 392.
1) Acetoxylstrychnin. (2HCl, PtCl₄) (Z. 1871, 435). — III, 939.
- $C_{23}H_{21}O_2N_4$ C 65,7 — H 5,7 — O 15,2 — N 13,3 — M. G. 420.
1) Anhydrodi[Acetylphenylhydrazid] d. Hydrochelidonsäure (A. 267, 97). — IV, 714.
2) Ketobisphenylacetylhydrazidanhydrid d. β -Acetylpropan- $\alpha\gamma$ -Dicarbonsäure. Sm. 243° (A. 295, 122). — IV, 715.
- $C_{23}H_{21}O_2N_2$ C 67,6 — H 5,9 — O 19,6 — N 6,9 — M. G. 408.
1) Verbindung (aus Phthalylessigsäure). Sm. 129° (B. 19, 2368). — II, 1873.
- $C_{23}H_{21}O_2S_2$ 1) $\alpha\alpha\alpha$ -Tribenzylsulfonäthan. Sm. 218° (B. 25, 358). — II, 1053.
- $C_{23}H_{21}O_2Br_2$ 1) Tetraäthyläther d. Dibromquercetin. Sm. 169–173° (M. 15, 685). — III, 605.
- $C_{23}H_{21}O_2N_4$ C 57,0 — H 5,0 — O 26,4 — N 11,6 — M. G. 484.
1) Dinitrobrucin. (2HCl, PtCl₄) (B. 14, 766). — III, 947.
- $C_{23}H_{21}O_2N_2$ C 56,6 — H 4,9 — O 32,8 — N 7,7 — M. G. 488.
1) Verbindung (aus Ouabain). Zers. bei 300°. NH_4 , K, Na, Ca + $2H_2O$ (Bl. [3] 19, 992; C. 1898 [2] 352).
- $C_{29}H_{27}N_2Cl_2$ 1) 2',5'-Dichlor-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 179° (A. 296, 72). — IV, 1043.
- $C_{29}H_{27}N_2S_2$ 1) Trimethylentriphenyldithioharnstoff. Sm. 144–145° (B. 23, 1172). — II, 397.
- $C_{23}H_{25}ON_3$ C 71,3 — H 6,5 — O 4,1 — N 18,1 — M. G. 387.
1) α -Phenylhydrazon-3-Nitrosodi[4-Dimethylamidophenyl]methan. Sm. 148° (B. 22, 338). — IV, 776.

- C₂₁H₂₅O₇N** C 79,5 — H 7,2 — O 9,2 — N 4,0 — M. G. 347.
 1) **3-Citronellal-β-Naphtochinolin-1-Carbonsäure** + H₂O. Sm. 225° (wasserfrei). *Ag* (B. 27, 354, 2024; 31, 2902). — **IV, 451.**
- C₂₁H₂₅O₇N₃** C 73,6 — H 6,7 — O 8,5 — N 11,2 — M. G. 375.
 1) **3'-Nitro-2³,2³-Diamido-3',5',3',5'-Tetramethyltriphenylmethan^P** Sm. 91—92°. 2HCl, (2HCl, PtCl₄) (B. 21, 3216). — **IV, 1048.**
 2) **4'-Nitro-2³,2³-Diamido-3',5',3',5'-Tetramethyltriphenylmethan^P** Sm. 89—90°. 2HCl, (2HCl, PtCl₄) (B. 21, 3215). — **IV, 1048.**
 3) **4-Nitrophenylidi[Amidodimethylphenyl]methan** (aus 2-Amido-1,3-Dimethylbenzol). Sm. 130° (M. 19, 641).
 4) **2'-Nitro-4³,4³-Di[Dimethylamido]triphenylmethan**. Sm. 159—160° (B. 15, 682; 17, 1889). — **IV, 1044.**
 5) **3'-Nitro-4³,4³-Di[Dimethylamido]triphenylmethan**. Sm. 152° (B. 12, 802). — **IV, 1044.**
 6) **4'-Nitro-4³,4³-Di[Dimethylamido]triphenylmethan**. Sm. 176—177° (B. 14, 2526). — **IV, 1044.**
 7) **5-Nitroso-4³,4³-Di[Dimethylamido]-2'-Oxytriphenylmethan^P** Sm. 217° (B. 31, 2352).
 8) **α-Oxy-4'-Nitroso-4³,4³-Di[Dimethylamido]triphenylmethan**. Sm. 142—143° (Bl. [3] 17, 657).
 9) **Verbindung** (aus 4'-Nitro-4³,4³-Tetramethyldiamidotriphenylmethan). Sm. 100—105° (Bl. [3] 17, 657).
- C₂₁H₂₅O₈N** C 76,0 — H 6,9 — O 13,2 — N 3,9 — M. G. 363.
 1) **Monopiperidid d. α-Truxillsäure**. Sm. 250° (B. 22, 2263). — **IV, 17.**
 2) **Monopiperidid d. β-Truxillsäure**. Sm. 224° (B. 22, 2264). — **IV, 17.**
 3) **Monopiperidid d. γ-Truxillsäure**. Sm. 261°. Piperidinsalz + 3H₂O (B. 22, 2262). — **IV, 17.**
 4) **Verbindung** (aus Amarsäure). Sm. 124° u. Zers. (A. 275, 71). — **II, 1725.**
- C₂₁H₂₅O₈N₃** C 70,6 — H 6,4 — O 12,3 — N 10,7 — M. G. 391.
 1) **Acetylarnidostrychnin + H₂O**. Sm. 205° (M. 7, 77). — **III, 941.**
 2) **α-Oxy-2-Nitro-4',4³-Di[Dimethylamido]triphenylmethan**. Sm. 163° (B. 17, 1890). — **II, 1086.**
 3) **α-Oxy-3-Nitro-4',4³-Di[Dimethylamido]triphenylmethan**. Pikrat (B. 12, 802; 13, 672). — **II, 1086.**
 4) **α-Oxy-4-Nitro-4',4³-Di[Dimethylamido]triphenylmethan**. Pikrat (B. 12, 800; 14, 2528). — **II, 1086.**
- C₂₁H₂₈O₈Sb** 1) **Monoacetat d. Antimontri[3-Methylphenyl]dioxyhydrat**. Sm. 142 bis 143° (A. 242, 187). — **IV, 1697.**
 2) **Monoacetat d. Antimontri[4-Methylphenyl]dioxyhydrat**. Sm. 168 bis 169° (A. 242, 175). — **IV, 1697.**
- C₂₁H₂₈O₈N** C 72,8 — H 6,6 — O 16,9 — N 3,7 — M. G. 379.
 1) **Lanthopin**. Sm. bei 200°. HCl + 6H₂O, (2HCl, PtCl₄ + 2H₂O) (A. 153, 57; A. Spl. 8, 271). — **III, 913.**
 2) **Aethylester d. 6-[4-Aethoxyphenyl]amido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure**. Sm. 168° (A. 204, 279).
- C₂₁H₂₅O₈Cl** 1) **Verbindung** (aus Methylaurin) (A. 202, 204). — **II, 1121₂.**
- C₂₁H₂₅O₈N** C 69,9 — H 6,3 — O 20,2 — N 3,5 — M. G. 395.
 1) **Methyläther d. Diacetylthebenin** (Diacetylmethabenin). Sm. 176° (B. 32, 180).
- C₂₁H₂₅O₈N** C 67,1 — H 6,1 — O 23,4 — N 3,4 — M. G. 411.
 1) **Aethylhydrastin**. Sm. 126—127°. (2HCl, PtCl₄), (HCl, AuCl₃), HNO₃ (B. 23, 411; R. 5, 299). — **II, 2054.**
- C₂₁H₂₅O₈N₃** C 62,9 — H 5,7 — O 21,9 — N 9,5 — M. G. 439.
 1) **Nitrobrucin** + 4H₂O. Zers. bei 240°. (2HCl, PtCl₄), HNO₃ (B. 19, 521). — **III, 947.**
- C₂₁H₂₅O₈N₅** C 59,1 — H 5,4 — O 20,5 — N 15,0 — M. G. 467.
 1) **1,3,5-Trinitrobenzol + Di[4-Dimethylamidophenyl]methan**. Sm. 114° (R. 7, 227). — **IV, 974.**
- C₂₁H₂₅O₈N** C 62,3 — H 5,6 — O 28,9 — N 3,2 — M. G. 443.
 1) **Verbindung** (aus Ouabain). Sm. 280° u. Zers. NH₃ (Bl. [3] 19, 992; C. 1898 [2] 352).
- C₂₁H₂₅N₃Cl** 1) **4'-Chlor-4',4³-Di[Dimethylamido]triphenylmethan**. Sm. 142—143°. (2HCl, PtCl₄) (B. 19, 743). — **IV, 1043.**
- C₂₁H₂₅N₃J** 1) **Diäthylisocyaninjodid** + ¹/₂H₂O (B. 16, 1851). — **IV, 308.**

- $C_{19}H_{20}N_5Cl$, 1) **4'-Amido-4',4'-Di[3-Chlor-4-Dimethylamido]triphenylmethan.** Sm. 181° (*B.* 20, 1565). — IV, 1194.
- $C_{19}H_{20}ON_2$, 1) **2-Tetramethylamido-2-Oxytriphenylmethan.** Sm. 127–128° (*B.* 14, 2522). — II, 904.
- 2) **2-Tetramethylamido-4-Oxytriphenylmethan.** Sm. 163° (*B.* 14, 2523). — II, 904.
- 3) **α -Oxy-4,4'-Di[Dimethylamido]triphenylmethan** (Malacitgrün). Sm. 132°. Salze siehe (*A.* 206, 130; 217, 250; *B.* 11, 950, 1238; 12, 769; 13, 2222; 14, 2521; 28, 211; *Ld.* [3] 9, 688). — II, 1084.
- 4) **2-Oxy-1-Di[Aethylphenylamido]methylbenzol** (Sallydräthylamid). *Fl.* (*A.* 150, 195). — III, 73.
- $C_{19}H_{20}O_2N_2$, C 76,2 — H 7,2 — O 8,8 — N 7,7 — M. G. 362.
- 1) **4',4'-Di[Dimethylamido]-2,2'-Dioxytriphenylmethan.** Sm. 176° (*J. pr.* [2] 54, 252).
- $C_{19}H_{20}O_2N$, C 73,9 — H 6,9 — O 12,7 — N 7,4 — M. G. 378.
- 1) **Styrenhinvinyloxyhydrat.** Salze siehe (*J.* 1861, 544). — III, 938.
- 2) **α ,1',1'-Trioxy-3',3'-Di[Dimethylamido]triphenylmethan** (Tetramethylrosanin). Chlorid, (2Chlorid + $PtCl_4$) (*B.* 22, 3002). — II, 1115.
- 3) **Isomylester d. α , δ -Di[Phenylimido]- γ -Ketopentan- α -Carbonsäure.** Sm. 126–127° (*Bd.* [3] 11, 481).
- $C_{19}H_{20}O_4N_2$, C 70,1 — H 6,6 — O 16,2 — N 7,1 — M. G. 394.
- 1) **Aricin.** Sm. 188° u. Zers. $HCl + 2H_2O$, (2HCl, $PtCl_4 + 5H_2O$), HJ, HNO_3 , H_2SO_4 , Rhodamid, Acetat, Dioxalat + $2H_2O$, Salicylat + $2H_2O$ (*A.* 185, 310; *Berz. J.* 9, 222; 13, 265; 24, 403). — III, 855.
- 2) **Brucin + $4H_2O$.** Sm. 105° (178° wasserfrei). Salze meist bek. Lit. bedeutend. — III, 944.
- 3) **Cusconin + $2H_2O$.** Sm. 110° (wasserfrei). (HCl, $HgCl_2 + 2H_2O$), (2HCl, $PtCl_4 + 5H_2O$), H_2SO_4 , Rhodamid (*A.* 185, 301). — III, 855.
- 4) **Concusconin + H_2O .** Sm. 144°. (2HCl, $PtCl_4 + 5H_2O$), H_2SO_4 , Oxalat (*B.* 16, 61; *A.* 225, 234). — III, 929.
- 5) **Diacetylapochinin.** (2HCl, $PtCl_4 + 2H_2O$) (*A.* 205, 336). — III, 818.
- 6) **Diacetylapoconchinin.** Sm. 60°. (2HCl, $PtCl_4 + 2H_2O$) (*A.* 205, 337). — III, 826.
- 7) **Diacetylcuprein.** Sm. 88° (*A.* 230, 63). — III, 822.
- $C_{21}H_{26}O_4N_4$, C 65,4 — H 6,2 — O 15,1 — N 13,3 — M. G. 422.
- 1) **Phenylhydrazon d. 4-Acetyl-5-Phenyl-4,5-Dihydropyrazol-3,4-Dicarbonsäurediäthylester.** α -Form Sm. 135–136°; β -Form Sm. 110 bis 111° (*B.* 28, 222). — IV, 893.
- $C_{21}H_{26}O_2N_2$, C 67,3 — H 6,3 — O 19,5 — N 6,8 — M. G. 410.
- 1) **Aethylhydrastimid.** Sm. 150–151° (*B.* 23, 2903). — II, 2054.
- $C_{21}H_{26}O_2N$, C 64,8 — H 6,1 — O 22,5 — N 6,6 — M. G. 426.
- 1) **Narceinimid.** HCl, HNO_3 , H_2SO_4 (*A.* 286, 251). — II, 2081.
- 2) **α , γ -Di[Benzoylamido]heptan- δ , δ -Dicarbonsäure.** Sm. 188–189°. *Ba* (*B.* 26, 2141). — II, 1192.
- $C_{21}H_{26}O_2N_2$, C 62,4 — H 5,9 — O 25,3 — N 6,3 — M. G. 442.
- 1) **Narceinoximanhydrid.** Sm. 171–173° (*A.* 277, 52). — II, 2081.
- $C_{21}H_{26}NJ$, 1) **Aethyltribenzylammoniumjodid.** Sm. 190° (*B.* 7, 82; 19, 1029). — II, 523.
- 2) **Jodäthylat d. 3,5-Di[2-Methylbenzyl]pyridin.** Sm. 148–149° (*A.* 280, 86). — IV, 457.
- 3) **Jodäthylat d. 3,5-Di[3-Methylbenzyl]pyridin.** Sm. 109–109,5° (*A.* 280, 82). — IV, 457.
- 4) **Jodäthylat d. 3,5-Di[4-Methylbenzyl]pyridin.** Sm. 148–150° (*A.* 280, 77). — IV, 458.
- $C_{21}H_{26}N_2Cl$, 1) **4'-Chlor-3'-Amido-4',4'-Di[Dimethylamido]triphenylmethan.** Sm. 167–167,5° (*A.* 294, 382). — IV, 1194.
- $C_{21}H_{26}N_2J$, 1) **Trimethylrosaniljodid.** — II, 1091.
- $C_{21}H_{26}ClP$, 1) **Aethyltribenzylphosphoniumchlorid + H_2O .** 2 + $PtCl_4$ (*See.* 53, 725). — IV, 1665.
- $C_{21}H_{26}JP$, 1) **Isomyltriphenylphosphoniumjodid.** Sm. 174° (*A.* 229, 315). — IV, 1661.
- $C_{21}H_{26}JAs$, 1) **Aethyltribenzylarsoniumjodid.** Sm. 148° (*A.* 233, 77). — IV, 1691.

- $C_{21}H_{21}ON_1$ C 75,5 — H 7,5 — O 6,4 — N 11,6 — M. G. 301.
 1) Trimethylpropanin. *Chem. Zeit. Journ. Acad. (B. 25, 290; N. Heide. d. 1. 1. 24; S. 51, 172. — II, 194.*
 2) *o*-Oxy-2,2,2'-Tetramethyltriamidoditriphenylmethan. Sm. 194—195; *B. 17, 192. — II, 195.*
 3) *o*-Oxy-4,4,4'-Tetramethyltriamidoditriphenylmethan. *J. 18, 294. — II, 195.*
 4) Oxim d. Malachitgrün. Sm. 195^a u. *Zers. F. 28, 211.*
- $C_{21}H_{21}O_2N$ C 75,1 — H 7,7 — O 8,2 — N 10 — M. G. 302.
 1) Diphenylamidoformiat d. Geraniol. Sm. 50—54 *Chem. J. pr. 2, 53, 45; 2, 56. — III, 477.*
- $C_{21}H_{21}O_2N$ C 72,4 — H 7,1 — O 10,8 — N 9,7 — M. G. 301.
 1) Propylidenpapaverinium. *Fl. J. pr. 2, 56, 324.*
- $C_{21}H_{21}O_2N_2$ C 67,5 — H 6,6 — O 15,6 — N 10,2 — M. G. 439.
 1) Amidobrucin. 3HCl (*B. 19, 729. — III, 547.*
 2) Nitrosodimethylstrychnin. 2HCl (*A. 264, 69. — III, 538.*
- $C_{21}H_{21}O_2N$ C 66,5 — H 6,7 — O 20,1 — N 9,5 — M. G. 307.
- $C_{21}H_{21}O_2N_2$ 1) Dipropionylmorphin. 2HCl, PtCl₄ (*A. 222, 296. — III, 539.*
 C 66,5 — H 6,5 — O 25,2 — N 9,4 — M. G. 432.
 1) Methylecolchin (*M. 9, 57. — III, 573.*
 2) Triacetat d. Dihydromorphin + H₂O. Sm. 155^a (158^a wasserfrei. *B. 3, 21, 292.*
- $C_{21}H_{21}O_2N_2$ C 62,6 — H 6,1 — O 21,5 — N 9,5 — M. G. 441.
 1) Nitrosobrucinsäure. HCl (*A. 304, 49.*
- $C_{21}H_{21}O_2N_2$ C 61,3 — H 6,3 — O 28,1 — N 9,3 — M. G. 429.
 1) Aethylhydrastein + 2H₂O. Sm. 195^a (199^a—207^a z. 2 Male. 2HCl, PtCl₄ + 4H₂O) (*B. 23, 412. — II, 2053.*
 2) Hydrastinäthoxyhydrat + 2 $\frac{1}{2}$ H₂O. Sm. 225—226^a. — II, 2051.
- $C_{21}H_{21}O_2N_2$ C 66,4 — H 5,9 — O 24,4 — N 9,2 — M. G. 457.
 1) Nitrobrucinhydrat (*A. 304, 49.*
- $C_{21}H_{21}O_2N$ C 62,9 — H 6,1 — O 28,5 — N 9,1 — M. G. 445.
 1) Narcein + 3H₂O. Sm. 179^a (145,2^a). Salze meist bek. Lit. bedeutend. — II, 2079.
 2) Pseudonarcein + 3H₂O. Sm. bei 195^a. HCl + 3H₂O, 2HCl, PtCl₄ (*A. 247, 169. — III, 515.*
 3) Narkotinmethoxyhydrat. Chlorid, Jodid (*A. 247, 168. — III, 515.*
 4) Isonarkotinmethoxyhydrat (*B. 30, 174.*
- $C_{21}H_{21}N_2Cl$ 1) Verbindung (aus *o*-Oxy-4,4'-Di[Dimethylamido]triphenylmethan) (*Bl. 3, 9, 688. — II, 1985.*
- $C_{21}H_{21}N_2Br$ 1) Verbindung (aus *o*-Oxy-4,4'-Di[Dimethylamido]triphenylmethan) (*Bl. 3, 9, 688. — II, 1985.*
- $C_{21}H_{21}ON_2$ C 70,3 — H 5,9 — O 4,6 — N 8,0 — M. G. 348.
 1) *s*-Di[1,2,3,4-Tetrahydro-2-Naphtylmethyl]harnstoff. Sm. 225,5 bis 226^a (*B. 22, 1914. — II, 599.*
- $C_{21}H_{21}O_2N_2$ C 75,8 — H 7,7 — O 5,8 — N 7,7 — M. G. 394.
 1) Di Phenylamid, d. Oxycamphocarbonsäure. Sm. 222—223^a (*C. 1895, 2, 217.*
- $C_{21}H_{21}O_2N_2$ C 70,4 — H 7,1 — O 8,2 — N 14,3 — M. G. 392.
 1) Anhydridiäthylphenylhydrazid, d. Hydrochelidonsäure. Sm. 229 bis 222^a (*A. 287, 169. — IV, 714.*
- $C_{21}H_{21}O_2N_2$ C 72,5 — H 7,4 — O 12,6 — N 7,4 — M. G. 350.
 1) Dimethylstrychnin + 6H₂O (*A. 264, 69. — III, 538.*
 2) Isodimethylstrychnin + 3H₂O (*A. 264, 82. — III, 538.*
 3) Aethylstrychnin + 4H₂O (Strychninäthoxyhydrat + 2H₂O). Sm. 200^a u. *Zers.* Salze siehe (*A. 92, 338; 304, 59; J. pr. 2, 3, 158; B. 16, 2748. — III, 538.*
 4) Propionylchinin. Sm. 125^a. 2HCl, PtCl₄ + 2H₂O, (HCl, AuCl₃ + 2H₂O) (*A. 205, 358. — III, 515.*
- $C_{21}H_{21}O_2N_2$ C 69,7 — H 7,1 — O 16,1 — N 7,1 — M. G. 396.
 1) Velloxin. Sm. 155^a. HCl + H₂O, 2HCl, PtCl₄, HBr + H₂O, HJ + H₂O, HNO₃ + H₂O, H₂SO₄ + H₂O (*A. 282, 249; B. 26, 1084. — III, 523.*
 2) Strychnin- β -Oxyäthoxyhydrat + 2 $\frac{1}{2}$ H₂O. Salze siehe (*A. 157, 7; B. 14, 232. — III, 539.*
 3) Aethylcarbonat d. Chinin (Euchinin). Sm. 95^a (*C. 1897 [1] 182.*

- $C_{22}H_{28}O_2N_2$ C 67,0 — H 6,8 — O 19,4 — N 6,8 — M. G. 412.
 1) Hydrobrucin (*Sar.* 39, 459). — III, 944.
 2) Brucinsäure + H_2O . Sm. 245° u. Zers. (*A.* 304, 38).
- $C_{21}H_{26}O_2N_2$ C 64,5 — H 6,5 — O 22,4 — N 6,5 — M. G. 428.
 1) Methylhydrastamylamid. Sm. 182°. HCl (*B.* 23, 2904). — II, 2053.
 2) Aethylhydrastamid. Sm. 140° (*B.* 23, 2902). — II, 2054.
- $C_{22}H_{26}O_2N_2$ C 62,1 — H 6,3 — O 25,2 — N 6,3 — M. G. 444.
 1) Narceinamid + H_2O . Sm. 178° (wasserfrei). HCl (*A.* 286, 250). — II, 2080.
- $C_{22}H_{26}O_2N_2$ C 60,0 — H 6,1 — O 27,8 — N 6,1 — M. G. 460.
 1) Narceinoxim + H_2O . Zers. bei 167° (*A.* 277, 52). — II, 2081.
- $C_{23}H_{28}N_2S$ 1) s-Di[1,2,3,4-Tetrahydro-2-Naphtylmethyl]thioharnstoff. Sm. 142,5 bis 143° (*B.* 22, 1914). — II, 590.
- $C_{23}H_{28}O_2N$ C 78,7 — H 8,2 — O 9,1 — N 4,0 — M. G. 351.
 1) Diphenylamidoformiat d. Citronellol. Fl. (*J. pr.* [2] 56, 14, 42).
- $C_{23}H_{27}O_2N_3$ C 72,8 — H 7,6 — O 8,4 — N 11,1 — M. G. 379.
 1) Cyanäthylat d. Chinin. Sm. 90° (*B.* 16, 2747). — III, 814.
- $C_{23}H_{27}O_2N_3$ C 67,8 — H 7,1 — O 7,9 — N 17,2 — M. G. 407.
 1) Verbindung (aus 4-Amido-1-Methylbenzol u. 4-Nitroso-1-Dimethylamido-benzol) (*B.* 12, 1824). — II, 329.
- $C_{23}H_{27}O_2N$ C 72,1 — H 7,6 — O 16,7 — N 3,6 — M. G. 383.
 1) d-Methylcoerydalin. Sm. 112°. HCl + 6 H_2O (*A.* 277, 8). — III, 876.
 2) l-Methylcoerydalin. Sm. 224° u. Zers. HCl + 3 H_2O , (2HCl, PtCl₄), (HCl, AuCl₃) (*C.* 1898 [2] 115).
- $C_{23}H_{27}O_2N$ C 69,2 — H 7,3 — O 20,0 — N 3,5 — M. G. 399.
 1) Propyloxyhydrat d. Papaverin. Chlorid, Sulfat + 2 H_2O (*J. pr.* [2] 56, 330, 339).
- $C_{23}H_{29}O_2N$ C 59,6 — H 6,3 — O 31,1 — N 3,0 — M. G. 463.
 1) Amidocuminsäures Helicin (*B.* 12, 2033). — III, 68.
- $C_{23}H_{29}O_11N$ C 57,7 — H 5,9 — O 35,6 — N 2,8 — M. G. 495.
 1) Benzylmonamid d. Tetracetylschleimsäureäthylester. Sm. 182 bis 184° (*M.* 14, 486). — II, 531.
- $C_{23}H_{29}ON_2$ C 72,8 — H 8,6 — O 4,6 — N 8,0 — M. G. 350.
 1) Diäthylidencinchonin. Sm. 85°. (2HCl, PtCl₄) (*A.* 269, 282). — III, 834.
- $C_{23}H_{30}O_2N_2$ C 75,4 — H 8,2 — O 8,7 — N 7,6 — M. G. 366.
 1) α -Di[Benzoylamido]nonan. Sm. 118,5° (*C.* 1897 [2] 849).
- $C_{23}H_{30}O_2N_2$ C 72,3 — H 7,8 — O 12,6 — N 7,3 — M. G. 382.
 1) Yohimbinanhydrid. HCl (*C.* 1899 [1] 529).
 2) Aethylester d. Phenylhydrazonsantonsäure. Sm. 115–116° (*G.* 22 [2] 195). — II, 788.
- $C_{23}H_{30}O_4N_2$ C 69,4 — H 7,5 — O 16,1 — N 7,0 — M. G. 398.
 1) Methyloxyhydrat d. Gelseminin. Sm. 203° (*C.* 1896 [1] 111).
- $C_{23}H_{30}O_2N_2$ C 66,6 — H 7,2 — O 19,3 — N 6,8 — M. G. 414.
 1) Conchairaminmethyloxyhydrat. Salze siehe (*A.* 225, 250). — III, 930.
- $C_{23}H_{31}O_2N$ C 71,7 — H 8,0 — O 16,6 — N 3,6 — M. G. 385.
 1) l-Benzoat d. 1-Oximido-3-Hexyl-5-Methyl-1,2,3,4-Tetrahydro-benzol-4-Carbonsäureäthylester. Sm. 157–159° (*A.* 288, 344).
- $C_{23}H_{31}N_2Cl$ 1) Chlorisoamylat d. 1-Isoamyl-2-Phenylbenzimidazol. HCl + 1 u. 3 H_2O , 2 + PtCl₄ (*A.* 210, 366). — IV, 1097.
- $C_{23}H_{31}N_2J$ 1) Jodisoamylat d. 1-Isoamyl-2-Phenylbenzimidazol. + J, (*A.* 210, 364). — IV, 1097.
- $C_{23}H_{31}ON_3$ C 78,4 — H 9,1 — O 4,5 — N 7,9 — M. G. 352.
 1) Isoamyloxyhydrat d. 1-Isoamyl-2-Phenylbenzimidazol. Sm. 80 bis 81° u. 91–92°. (Chlorid + HCl + 1 u. 3 H_2O , 2 Chlorid + PtCl₄, Jodid, Jodid + J₂, Nitrat (*A.* 210, 364). — IV, 1097.
- $C_{23}H_{31}O_4N_2$ C 69,0 — H 8,0 — O 16,0 — N 7,0 — M. G. 400.
 1) Yohimbin (oder $C_{23}H_{31}O_4N_2$ + $\frac{1}{2}H_2O$). Sm. 234° (*C.* 1897 [2] 978; 1899 [1] 529).
- $C_{23}H_{33}N_2S$ 1) s-Di[6-Isobutyl-2-Methylphenyl]thioharnstoff. Sm. 175° (*B.* 17, 2344). — II, 564.
 2) s-Di[4-Pseudobutyl-2-Methylphenyl]thioharnstoff. Sm. 184° (*B.* 17, 2335). — II, 564.
 3) s-Di[Pentamethylphenyl]thioharnstoff. Sm. 252° (*B.* 18, 1828). — II, 565.

- $C_{23}H_{33}N_4S_2$ 1) *α*-Di[Phenylthiureido]nonan. Sm. 104,5° (C. 1897 [2] 849).
 $C_{23}H_{33}O_4N_2$ C 57,6 — H 6,9 — O 26,7 — N 8,8 — M. G. 479.
- $C_{23}H_{33}O_2S_2$ 1) Cetyl ester d. 2,4,6-Trinitrobenzol-1-Carbonsäure. Sm. 121—122° (B. 29, 1399).
- $C_{23}H_{31}O_2S_2$ 1) Diamyläther d. *α*-[1-Naphtyl]sulfonyl-*β*-*γ*-Dimerkaptopropan. Fl. (J. pr. [2] 56, 465).
 2) Diamyläther d. *α*-[2-Naphtyl]sulfonyl-*β*-*γ*-Dimerkaptopropan. Fl. (J. pr. [2] 56, 465).
- $C_{23}H_{31}O_6S_2$ 1) *β*-*γ*-Diamylsulfonyl-*α*-[2-Naphtyl]sulfonylpropan. Sm. 136° (J. pr. [2] 56, 466).
- $C_{23}H_{30}O_7N_2$ C 73,8 — H 10,1 — O 8,6 — N 7,5 — M. G. 374.
- $C_{23}H_{30}O_6N_2$ 1) *s*-Palmitylphenylharnstoff. Sm. 90—91° (Sec. 69, 1596).
 C 59,2 — H 8,2 — O 20,6 — N 12,0 — M. G. 466.
- $C_{23}H_{29}ON$ 1) 2,4,6-Trinitro-1-Heptdekylamidobenzol. Sm. 86° (Sec. 59, 715). — II, 336.
 C 80,0 — H 11,3 — O 4,6 — N 4,1 — M. G. 345.
- $C_{23}H_{28}O_8S_2$ 1) *α*-Oximido-*α*-[4-Methylphenyl]hexadekan. Sm. 60° (J. pr. [2] 54, 402).
 C 65,9 — H 10,1 — O 14,0 — S 10,0 — M. G. 526.
- $C_{23}H_{28}O_6S_2$ 1) 1,4-Methylhexadekylbenzol-*p*-Sulfonsäure. Na (B. 21, 3183). — II, 161.
 C 76,2 — H 11,6 — O 4,4 — N 7,7 — M. G. 362.
- $C_{23}H_{27}ON_2$ 1) 6-Oxy-4,6-Dimethyl-2-Heptadekyl-1,3-Diazin. Sm. 98° (PINNER, Imidoäther 233). — IV, 533.
- $C_{23}H_{27}O_2Br$ 1) Methyl ester d. Tetrabrombehensäure. Sm. 29° (B. 25, 965). — I, 489.
 $C_{23}H_{27}O_2N$ C 75,6 — H 11,8 — O 8,8 — N 3,8 — M. G. 365.
- $C_{23}H_{27}O_2Br$ 1) *α*-Cyanbehensäure. Sm. 87—89°. Zers. bei 180° (G. 27 [2] 301).
- $C_{23}H_{27}O_2Br$ 1) Methyl ester d. Bromerucasäure. Sm. 18—19° (B. 24, 4123). — I, 528.
- $C_{23}H_{27}O_2Cl$ 1) Dichlorid d. Brassidinsäuremethyl ester. Sm. 42,5° (B. 24, 4123). — I, 477.
 2) Dichlorid d. Erucasäuremethyl ester. Sm. 30,5° (B. 24, 4123). — I, 477.
- $C_{23}H_{27}O_2S$ 1) Verbindung (aus Cardol) (C. 1896 [1] 112).
 $C_{23}H_{27}O_2N$ C 61,7 — H 10,1 — O 25,1 — N 3,1 — M. G. 447.
- $C_{23}H_{27}ON$ 1) Psychosin (J. pr. [2] 25, 25). — III, 574.
 C 78,2 — H 13,3 — O 4,5 — N 4,0 — M. G. 353.
- $C_{23}H_{26}ON_2$ 1) Lauronoxim. Sm. 39—40° (Sec. 57, 983). — I, 1031.
 C 75,0 — H 13,0 — O 4,3 — N 7,6 — M. G. 368.
- $C_{23}H_{26}ON_2$ 1) *s*-Diäscundekylharnstoff. Sm. 94—95° (G. 24 [2] 283).
- $C_{23}H_{26}N_2S$ 1) *s*-Diäscundekylthioharnstoff. Sm. 50—51°. 4 + PtCl₂ (G. 24 [2] 281).

C₂₃-Gruppe mit vier Elementen.

- $C_{23}H_{31}O_2N_2Br$ 1) 2-Naphtylester d. 3-Brom-4,6-Dinitro-5-Amido-2-Oxybenzol-1-Carbonsäure. Sm. 222° (B. 26, 1470). — II, 1514.
- $C_{23}H_{31}ON_2Br$ 1) *p*-Brom-2-[2-*β*-Oxynaphtylazophenyl]bensimidazol. Sm. 160 bis 170°. HCl (B. 31, 322). — IV, 1491.
- $C_{23}H_{30}ONCl$ 1) Phenyl-*p*-Chlor-2-Naphtylamid d. Benzolcarbonsäure. Sm. 152° (B. 17, 1591). — II, 1168.
- $C_{23}H_{31}ONBr$ 1) 5-Keto-2-[*α*-Brombenzyliden]-3,4-Diphenyl-2,5-Dihydropyrrrol (Brombenzaldiphenylmaleimidin). Sm. 213—214° (B. 24, 3869). — II, 1728.
- $C_{23}H_{30}ON_2S$ 1) 2-[1-Naphtyl]imido-4-Keto-3-[1-Naphtyl]tetrahydrothiazol. Sm. 176° (B. 21, 974). — II, 610.
 2) 2-[2-Naphtyl]imido-4-Keto-3-[2-Naphtyl]tetrahydrothiazol. Sm. 174° (B. 21, 974). — II, 620.
- $C_{23}H_{30}O_2N_2Cl_2$ 1) *γ*-Phenylhydrason-*αα*-Di[5-Chlor-2-Nitrophenyl]-*αδ*-Pentadien. Sm. 194—195° u. Zers. (A. 262, 144). — IV, 778.
- $C_{23}H_{31}ON_2Cl$ 1) Chlormethylat d. Isorosindon. 2 + PtCl₄, + AuCl₃ (B. 31, 307). — IV, 1056.
- $C_{23}H_{31}ON_2J$ 1) Jodmethylat d. Isorosindon. Zers. bei 170—180° (B. 31, 306). — IV, 1056.
- $C_{23}H_{31}ON_2Br$ 1) *α*-Phenyl-*β*-[2-Naphtyl]azo-*β*-[4-Bromphenyl]harnstoff. Sm. 139 bis 140° (B. 21, 2570). — IV, 1574.

- C₁₂H₁₁O₂NS** 1) Benzoyl-1-Naphtylamid d. Benzolsulfonsäure. Sm. 193—194° (*Am.* 19, 764).
2) Benzoyl-2-Naphtylamid d. Benzolsulfonsäure. Sm. 161—162° (*Am.* 19, 765).
- C₁₂H₁₁O₂N₂S** 1) 2-Phenylazo-1-Benzylidenamidonaphtalin-5-Sulfonsäure (*B.* 30, 53). — IV, 1399.
2) 2,3-Diphenyl-2,3-Dihydro-1,2,4-Naphtisotriazin-2'-Sulfonsäure. Zers. bei 250—260°. Ca + 4H₂O, Ba + 2H₂O (*Soc.* 59, 687). — IV, 1399.
- C₁₂H₁₁O₄N₂Cl** 1) Anhydro-4-Methylphenyl-1-Aethoxynaphtotartrasoniumchlorid (*B.* 27, 2357). — IV, 1021.
- C₁₂H₁₁ONBr** 1) p-Brom-2-Keto-1-Methyl-3,3,5-Triphenyl-2,3-Dihydropyrrrol. Sm. 153° (*Soc.* 57, 699, 728). — IV, 475.
- C₁₂H₁₁O₂NCl** 1) Diphenyläther d. 4-Chlor-5,5-Dioxy-2-Keto-3-Methyl-1-Phenyl-2,5-Dihydropyrrrol (Chlorcitracouanildiphenyläther). Sm. 125° (*A.* 295, 63).
- C₁₂H₁₁O₂N₂Br** 1) Farbstoff (aus Dibromgallanilid u. Nitrosodimethylanilin) (*Bf.* [3] 15, 408).
- C₁₂H₁₁O₂N₂S** 1) Verbindung (aus 1-Methylbenzol-4-Sulfonsäure-1-Naphtylamid). Sm. 201° (*B.* 27, 2372). — IV, 1392.
2) Verbindung (aus 1-Methylbenzol-4-Sulfonsäure-2-Naphtylamid). Sm. 187° (*B.* 27, 2373). — IV, 1393.
- C₁₂H₁₁O₂NS** 1) $\alpha\gamma$ -Di[2-Naphtylsulfon]- β -Oximidopropan. Sm. 116° (*J. pr.* [2] 55, 408).
- C₁₂H₁₁O₂N₂Cl** 1) Äthyläther d. 4-Methylphenyl-1-Oxynaphtotartrasoniumchlorid (*B.* 27, 2357). — IV, 1021.
- C₁₂H₁₁ON₂S** 1) 2-[2-Methylphenylbenzoylamido]-5-[2-Methylphenylamido]-1,3,4-Thiodiazol. Sm. 214° (*B.* 23, 367). — IV, 1236.
2) 2-[4-Methylphenylbenzoylamido]-5-[4-Methylphenylamido]-1,3,4-Thiodiazol. Sm. 186° (*B.* 23, 365). — IV, 1236.
- C₁₂H₁₀O₂N₂Cl₂** 1) 2',5'-Dichlor-4',4'-Di[Acetylamido]triphenylmethan. Sm. 212° (*A.* 299, 353). — IV, 1043.
- C₁₂H₁₀O₂NCl** 1) Chlorbenzylat d. Papaverolin + 2H₂O. Sm. 158° (*J. pr.* [2] 56, 343).
- C₁₂H₁₀O₂N₂Cl₂** 1) γ -Phenylhydrason- $\alpha\alpha$ -Dioxy- α -Di[5-Chlor-2-Nitrophenyl]pentan. Sm. 193,5° (*A.* 262, 142). — IV, 777.
- C₁₂H₁₁ONS₂** 1) Benzylester d. Dimerkaptomethylenamidothiolameisensäureäthersbenzyläthersäure. Sm. 92° (*B.* 28, 1938).
- C₁₂H₁₁ON₂Cl** 1) Verbindung (aus Acetylchlorid u. Amariu) (*J. pr.* [2] 27, 298). — III, 24.
- C₁₂H₁₁ON₂Cl₂** 1) Trichlorvinylstrychnin? (*J.* 1861, 544). — III, 938.
- C₁₂H₁₁ON₂Br** 1) δ -Brom- γ -Phenylhydrason- $\beta\delta$ -Di[Phenylamido]butan- β -Carbonsäure. Sm. 80° (*B.* 23, 551). — II, 439.
- C₁₂H₁₁O₂N₂S** 1) Benzaldehyd-1-Naphtylthionaminsaures Amidobenzol. Sm. 103° (*A.* 274, 254). — III, 7.
- C₁₂H₁₁O₂N₂S** 1) Farbstoff (aus 3,6-Di[Dimethylamido]-9-Phenylxanthen-9-Sulfonsäure) (*J. pr.* [2] 54, 255).
- C₁₂H₁₁O₂N₂S₂** 1) Isopropyläther d. Benzol-1,2-Dicarbonäure- β -Merkaptoäthylimid. Sm. 141—143° (*B.* 25, 3054). — II, 1801.
- C₁₂H₁₁O₂N₂Cl₂** 1) 2',2'-Dichlor-4'-Nitro-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 208°. Pikrat (*B.* 20, 1564). — IV, 1044.
- C₁₂H₁₁O₂N₂S** 1) 3,3'-Di[Äthylamido]phenolsaccharein (*Bf.* [3] 17, 699).
2) 3,3'-Di[Dimethylamido]phenolsaccharein (*Bf.* [3] 17, 699).
- C₁₂H₁₁O₂N₂Br₂** 1) Tribrombrucin (*B.* 18, 1238; 23 [2] 496). — III, 947.
- C₁₂H₁₁ON₂J** 1) Jodmethylat d. Dibenzylidotropinon. Sm. 264—265° u. Zers. (*B.* 30, 736). — IV, 466.
- C₁₂H₁₁ON₂Cl₂** 1) α -Oxy-2',5'-Dichlor-2',2'-Di[Methylamido]-1',1'-Dimethyltriphenylmethan (*A.* 296, 84).
2) α -Oxy-2',5'-Dichlor-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 163—169° (*A.* 296, 72, 81).
- C₁₂H₁₁O₂N₂Cl** 1) 4'-Chlor-3'-Nitro-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 133—134° (*A.* 294, 382). — IV, 1044.
- C₁₂H₁₁O₂N₂Br₂** 1) Di[4,5-Dibrom-3-Keto-1,5-Dimethyl-2-Phenyltetrahydropyrazolyl-4-]methan. Sm. 140° u. Zers. (*B.* 28, 1184). — IV, 1265.
- C₁₂H₁₁O₂N₂S** 1) s-Diantipyrylthioharnstoff. Sm. 245° u. Zers. (*A.* 293, 65). — IV, 1109.

- $C_{23}H_{21}O_2ClP$ 1) Acetylchlorid + Tribenzylphosphinoxid (Soc. 55, 227). — IV, 1665.
 $C_{23}H_{21}O_3N_2S$ 1) Dimethylanilinsulfonphtalein (Am. 20, 128).
 $C_{23}H_{21}O_2N_2Cl$ 1) Dichlorbrucin (B. 23 [2] 496). — III, 947.
 $C_{23}H_{21}O_2N_2Br$ 1) Dibrombrucin (B. 23 [2] 496). — III, 947.
 $C_{23}H_{21}O_2N_2S$ 1) 3,6-Di[Dimethylamido]-9-Phenylxanthen-9-Sulfonsäure. Na (J. pr. [2] 54, 254).
 $C_{23}H_{21}ON_2Cl$ 1) α -Oxy-4-Chlor-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 144–145° u. Zers. (B. 19, 744). — II, 1086.
 $C_{23}H_{21}O_2N_2Cl$ 1) Vinylchlorid d. Strychnin. 2 + PtCl₄ (J. 1861, 544). — III, 939.
 $C_{23}H_{21}O_2N_2Cl$ 1) Strychninacetylchlorid. 2 + PtCl₄ (J. 1874, 876). — III, 939.
 $C_{23}H_{21}O_2N_2Br$ 1) Brombrucin (J. 1847/48, 629). — III, 947.
 $C_{23}H_{21}O_2N_2NJ$ 1) Jodmethylat d. Verb. $C_{23}H_{21}O_2N$ (aus Tropinon). Sm. 186–187° u. Zers. (B. 30, 2719).
 $C_{23}H_{21}O_2N_2Br$ 1) Strychninbromäthylumbromid (J. 1861, 543). — III, 938.
 $C_{23}H_{21}O_2N_2S$ 1) Verbindung (aus Tetramethyldiamidobenzhydrol u. Benzolsulfinsäure). Sm. 194° (B. 30, 2804). — IV, 973.
 $C_{23}H_{21}O_3N_2S$ 1) 4,4'-Di[Dimethylamido]triphenylmethan-*p*-Sulfonsäure. Na, Mg + 4H₂O, Ca + 3H₂O (B. 13, 2226). — IV, 1196.
 $C_{23}H_{21}O_2N_2S$ 1) α -Oxy-4,4'-Di[Dimethylamido]triphenylmethan-*p*-Sulfonsäure. Na, Mg + 4H₂O, Ca + 3H₂O (A. 217, 258). — II, 1089.
 $C_{23}H_{21}O_2N_2S$ 1) 3,4-Di[Äthylphenylsulfonamido]-1-Methylbenzol. + $\frac{1}{2}$ C₂H₆O (Sm. 117°) (A. 265, 190). — IV, 617.
 $C_{23}H_{21}O_2NCl$ 1) Chloräthylat d. Hydrastin. 2 + PtCl₄ + AuCl₃. — II, 2051.
 $C_{23}H_{21}O_2N_2NJ$ 1) Jodmethylat d. Methylhydrastin. Zers. bei 250° (B. 23, 408). — II, 2052.
 2) Jodäthylat d. Hydrastin. Sm. 205–206° (J. 1894, 1397; 1889, 1910). — II, 2051.
 $C_{23}H_{21}O_2N_2S$ 1) *m*-Benzolsulfamido-*d*-Cocain. Sm. 69°. HCl (B. 27, 1883). — III, 868.
 $C_{23}H_{21}O_2NCl$ 1) Chlormethylat d. Narkotin. 2 + PtCl₄ (A. 247, 168). — III, 915.
 2) Chlormethylat d. Isonarkotin. 2 + PtCl₄ (B. 30, 1747).
 $C_{23}H_{21}O_2NJ$ 1) Jodmethylat d. Narkotin. Fl. (A. 247, 168). — III, 915.
 2) Jodmethylat d. Isonarkotin. Sm. 212° (B. 30, 1746).
 $C_{23}H_{21}O_2N_2J$ 1) Jodmethylat d. Methylnitrohydrastimid. Zers. bei 250° (A. 271, 404). — II, 2053.
 $C_{23}H_{21}O_2N_2Cl$ 1) Chloräthylat d. Strychnin. 2 + PtCl₄ (A. 92, 339). — III, 938.
 $C_{23}H_{21}O_2N_2J$ 1) Jodäthylat d. Strychnin (A. 92, 339). — III, 938.
 $C_{23}H_{21}O_2N_2Cl$ 1) β -Oxychloräthylat d. Strychnin + H₂O. 2 + PtCl₄ + AuCl₃ (A. 157, 8; K. 14, 232). — III, 939.
 $C_{23}H_{21}O_2N_2Br$ 1) Strychninbromäthylumbromid. Salze siehe (J. 1861, 543). — III, 938.
 $C_{23}H_{21}O_2N_2S$ 1) Di[4-Dimethylamidophenyl]-4'-Amidophenylmethan-2'-Sulfonsäure (B. 29, 2300). — IV, 1196.
 $C_{23}H_{21}O_2N_2Cl$ 1) Diacetylhydrochlorapocchinin. Sm. 184°. (2HCl, PtCl₄ + H₂O) (A. 205, 351). — III, 819.
 2) Diacetylhydrochlorapocchinin. Sm. 168°. (2HCl, PtCl₄ + 3H₂O) (A. 205, 352). — III, 826.
 $C_{23}H_{21}O_2N_2J$ 1) Jodmethylat d. Methylhydrastimid. Sm. 240–245° (B. 23, 2903). — II, 2052.
 $C_{23}H_{21}O_2N_2J$ 1) Jodmethylat d. Methylhydrastinoxim. Sm. 155–156° (A. 271, 394). — II, 2053.
 $C_{23}H_{21}O_2N_2J$ 1) Jodmethylat d. Dioxymethylhydrastimid. Sm. 190° (A. 271, 407). — II, 2053.
 $C_{23}H_{21}O_2N_2Br$ 1) $\alpha\gamma$ -Di[α -Brompropionyl-4-Methylphenylamido]propan. Sm. 127° (B. 31, 3248).
 $C_{23}H_{21}O_2N_2S$ 1) Benzaldehyd-2,4-Dimethylphenylthioaminsaures 4-Amido-1,3-Dimethylbenzol. Sm. 98° (A. 274, 234). — III, 7.
 $C_{23}H_{21}O_2NCl$ 1) Chlorpropylat d. Papaverin. Sm. 80° (J. pr. [2] 56, 334).
 $C_{23}H_{21}O_2NJ$ 1) Jodäthylat d. Diacetylmorphin + $\frac{1}{2}$ H₂O (Soc. 28, 315). — III, 899.
 $C_{23}H_{21}O_2N_2S$ 1) Piperidid d. Diphenylketon-3,3' oder 3,4'-Disulfonsäure. Sm. 168° (Soc. 73, 406).
 $C_{23}H_{21}O_2NCl$ 1) Chlormethylat d. Methylhydrastein. 2 + PtCl₄. — II, 2052.

- $C_{23}H_{29}O_2N_2J$ 1) Jodmethylat d. Methylhydrastein. — II, 2052.
- $C_{23}H_{29}O_2N_2J$ 1) Jodmethyl-Methylstrychninsäure + H_2O (A. 264, 58). — III, 942.
2) Jodmethyl-Methylisostrychninsäure + H_2O . Sm. 270—275° u. Zers. (A. 264, 76). — III, 943.
3) Jodmethylat d. Gelseminin + $2H_2O$. Sm. 286° u. Zers. (B. 26, 1058; C. 1896 [1] 111).
- $C_{23}H_{29}O_4N_2Cl$ 1) Chlormethylat d. Conchairamin + $2H_2O$. (2 + HCl, $PtCl_4$ + $14H_2O$) (A. 225, 251). — III, 903.
- $C_{23}H_{29}O_4N_2J$ 1) Jodmethylat d. Conchairamin + $1(3)H_2O$ (A. 225, 250). — III, 930.
- $C_{23}H_{29}O_4N_2P$ 1) Verbindung (aus 2,4-Diamido-1-Methylbenzol u. Phosphortriäthylhydrobrenztraubensäure). Sm. 178° u. Zers. (B. 21, 2924). — IV, 604.
- $C_{23}H_{30}O_2N_2J$ 1) Jodmethylat d. Methylthebeninpropyläther. Sm. 202° (B. 32, 187).
- $C_{23}H_{30}O_2NCl$ 1) Chlormethylat d. i-Corydalin. 2 + $PtCl_4$ + $AuCl_3$ (C. 1898 [2] 115).
- $C_{23}H_{30}O_2N_2J$ 1) Jodmethylat d. d-Corydalin (A. 277, 8). — III, 876.
2) Jodmethylat d. i-Corydalin. Sm. 185° (C. 1898 [2] 115).
3) Jodäthylat d. Butyrylmorphin (Soc. 28, 322). — III, 899.
- $C_{23}H_{30}O_4N_2S_2$ 1) Piperidid d. Diphenylmethan-4,4'-Disulfonsäure. Sm. 171—172° (Soc. 73, 409)
- $C_{23}H_{30}O_5N_2J$ 1) Jodmethylat d. Trimethylcolchidimethinsäuremethylester. Zers. bei 237° (M. 9, 876). — III, 874.
- $C_{23}H_{30}N_2J_2S$ 1) Jodmethylat d. Di[4-Dimethylamidophenyl]thiänylmethan. Sm. 210—212° (B. 20, 515). — III, 749.
- $C_{23}H_{31}ON_2Br$ 1) Bromisobutylat d. Cinchonin + H_2O . Sm. 176° (wasserfrei) (Bl. [3] 11, 987). — III, 834.
- $C_{23}H_{31}ON_2J$ 1) Jodäthylat d. Aethylcinchonin. Sm. 242° u. Zers. (B. 13, 2288). — III, 834.
2) Jodäthylat d. Dimethylcinchonin. Sm. 138° (A. 277, 286). — III, 833.
- $C_{23}H_{31}O_2N_2J$ 1) Jodäthylat d. Chiteninäthyläther. Sm. 210° (M. 14, 601). — III, 820.
- $C_{23}H_{31}ON_2Cl$ 1) Di[Chloräthylat] d. Cinchonin + $2H_2O$. Sm. 205° u. Zers. (wasserfrei). 2 + $PtCl_4$ + H_2O (A. 269, 266). — III, 833.
- $C_{23}H_{31}ON_2Br_2$ 1) Di[Bromäthylat] d. Cinchonin + $2H_2O$. Sm. bei 260° u. Zers. + $2H_2(CN)_2$ (J. pr. [2] 8, 297; A. 269, 269). — III, 833.
2) Di[Bromäthylat] d. Cinchoninbin. Sm. 215° (J. 1888, 2288). — III, 848.
- $C_{23}H_{31}ON_2J_2$ 1) Di[Jodäthylat] d. Cinchonin + H_2O . Sm. 264° u. Zers. (B. 13, 2288). — III, 833.
2) Di[Jodäthylat] d. Cinchoninbin. Sm. 251° (J. 1888, 2288). — III, 848.
3) Di[Jodäthylat] d. Cinchonidin. Sm. 255° u. Zers. (B. 11, 1824; J. 1882, 1109; A. 269, 259). — III, 852.
- $C_{23}H_{31}O_2N_2Br_2$ 1) Di[Bromäthylat] d. Cinchonin. Sm. 248° u. Zers. (B. 27 [2] 257).
2) Di[Bromäthylat] d. α -Oxycinchonin + H_2O . Sm. 210° (J. 1889, 2019). — III, 840.
- $C_{23}H_{31}O_2N_2J_2$ 1) Jodmethylat d. Chininjodäthylat + H_2O . Sm. 206—208° u. Zers. (B. 14, 78; J. 1882, 1109). — III, 814.
2) Jodäthylat d. Chininjodmethylat + H_2O . Sm. 157—160° u. Zers. (B. 14, 77). — III, 814.
3) Di[Jodäthylat] d. α -Oxycinchonin. Sm. 240° (J. 1889, 2019). — III, 840.
- $C_{23}H_{31}N_2ClP$ 1) Phenylbensylid[1-Piperidyl]phosphoniumchlorid. 2 + $PtCl_4$ (B. 31, 1045). — IV, 1682.
- $C_{23}H_{31}O_2N_2P$ 1) neutr. Chinglycerophosphat + $10H_2O$ (C. 1898 [1] 782).
- $C_{23}H_{31}ON_2Br_2$ 1) Di[Bromäthylat] d. Hydrocinchonin (J. pr. [2] 8, 306). — III, 836.
- $C_{23}H_{31}O_2N_2J_2$ 1) Di[Jodäthylat] d. Nichin + $2H_2O$. Sm. 137° u. Zers. (M. 14, 431). — III, 820.
- $C_{23}H_{31}ON_2S$ 1) s-Palmitylphenylthioharnstoff. Sm. 62—63° (Soc. 69, 1595).
- $C_{23}H_{31}O_2N_2J_2$ 1) Di[Jodmethylat] d. Lupinin (C. 1897 [2] 361).

C_{23} -Gruppe mit fünf Elementen.

- $C_{23}H_{30}O_2N_2ClBr$ 1) Strychninbromäthylumchlorid. 2 + $PtCl_4$ + $AuCl_3$ (J. 1861, 543). — III, 938.

C₂₄-Gruppe mit einem Element.

- C₂₄H₂ C 97,3 — H 2,7 — M. G. 296.
 1) Carbopetrocen. Sm. 268°. Pikrat (*A. ch.* [5] 17, 28). — II, 305.
- C₂₄H₄ C 95,4 — H 4,6 — M. G. 302.
 1) Di[1-Naphtyl]äthin. Sm. 171°. Pikrat (Sm. 180°) (*Bl.* [3] 7, 644). — II, 302.
- C₂₄H₁₀ C 94,1 — H 5,9 — M. G. 306.
 1) 1,2,3-Triphenylbenzol. Sm. 157° (*B.* 26, 69; *A.* 281, 72).
 2) 1,3,5-Triphenylbenzol. Sm. 169—170° (*B.* 7, 1123; 14, 2516; 23, 2534; 27 [2] 338, 339; *Bl.* 50, 637; *O.* 22 [2] 77; *J.* 1877, 393; *A.* 209, 3). — II, 300.
 3) 4,4'-Diphenylbiphenyl (Benzerythren). Sm. 317° (307—308°); Sd. 428°₁₅ (*A.* 203, 134; *Am.* 17, 620). — II, 300.
 4) Dibiphenyl? Sm. 187° (*M.* 3, 815).
- C₂₄H₂₀ C 90,6 — H 9,4 — M. G. 318.
 1) Dodekahydro-1,3,5-Triphenylbenzol (*B.* 23, 2534). — II, 278.
- C₂₄H₂₂ C 90,0 — H 10,0 — M. G. 320.
 1) Kohlenwasserstoff (aus Cholsäure). Sd. 215—325° (*Bl.* 33, 317). — II, 255.
- C₂₄H₂₄ C 89,3 — H 11,7 — M. G. 326.
 1) Eikosihydro-1,3,5-Triphenylbenzol. Fl. (*B.* 23, 2534). — II, 176.
- C₂₄H₂₆ C 87,3 — H 12,7 — M. G. 330.
 1) Oktadekylbenzol. Sm. 36°; Sd. 249°₁₅ (147°) (*B.* 19, 2984; 29, 1326). — II, 40.
 2) 4-Hexadekyl-1,3-Dimethylbenzol. Sm. 33,5°; Sd. 249,5—250°₁₅ (149°) (*B.* 21, 3184; 29, 1326). — II, 40.
 3) norm. Hexapropylbenzol. Sm. 118° (*B.* 26 [2] 693).
- C₂₄H₂₈ C 85,7 — H 14,3 — M. G. 336.
 1) Tricaprylen. Fl. (*J. r.* 26, 255).
- C₂₄H₃₀ C 85,2 — H 14,8 — M. G. 338.
 1) norm. Tetrakosan. Sm. 51,1°; Sd. 243°₁₅ (*B.* 15, 1718; 16, 391). — I, 107.
- C₂₄Cl₁₂ 1) Perchlor-1,3,5-Triphenylbenzol (*B.* 16, 2883). — II, 300.
- C₂₄Cu₁₇ 1) Kupferacetylid + H₂O (*B.* 30, 814).

C₂₄-Gruppe mit zwei Elementen.

- C₂₄H₁₀O₁₀ C 62,9 — H 2,2 — O 34,9 — M. G. 458.
 1) Humussäure (*J.* 1876, 878). — I, 1108.
- C₂₄H₁₇O₂ C 86,7 — H 3,6 — O 9,6 — M. G. 332.
 1) Biacenaphtylidendion. Sm. 295° (*A.* 276, 17; 290, 201). — III, 311.
- C₂₄H₁₇N₂ C 75,0 — H 3,1 — N 21,9 — M. G. 384.
 1) Benzotriphenazin (*B.* 21, 1228). — IV, 1332.
- C₂₄H₁₄O C 90,6 — H 4,4 — O 5,0 — M. G. 318.
 1) Biacenaphtylidenon. Sm. 262° (*A.* 290, 202). — III, 266.
- C₂₄H₁₄O₂ C 75,4 — H 3,7 — O 20,9 — M. G. 382.
 1) Naphtalfluorescein. Sm. 308° (*A.* 227, 136). — II, 2039.
- C₂₄H₁₄O₄ C 72,4 — H 3,5 — O 24,1 — M. G. 398.
 1) Dibenzot d. Oxyjuglon. Sm. 169—170° (*B.* 18, 472). — III, 387.
- C₂₄H₁₄O₇ C 69,6 — H 3,4 — O 27,0 — M. G. 414.
 1) Pyrogallolanhydrid (*A.* 202, 280). — II, 1012.
- C₂₄H₁₄O₁₇ C 44,0 — H 2,1 — O 53,8 — M. G. 654.
 1) Carminsäure. Anilinsalz, Chinolinsalz (*B.* 30, 1759).
- C₂₄H₁₄N₂ C 87,3 — H 4,2 — N 8,5 — M. G. 330.
 1) Phenanthrennaphtochinoxalin (Naphtophenantrazin). Sm. 273° (*B.* 18, 2426). — IV, 1094.
- C₂₄H₁₃N₂ C 83,5 — H 4,3 — N 12,2 — M. G. 345.
 1) β-Amidonaphtophenantrazin (*B.* 23, 2546). — IV, 1219.

- $C_{21}H_{14}O_4$ C 85,7 — H 4,7 — O 9,5 — M. G. 336.
1) Acetat d. Alkohol $C_{20}H_{14}O$ (aus 2-Oxynaphtalin). Zers. bei 280° (*A. ch.* [5] **28**, 189). — II, 1095.
- $C_{21}H_{16}O_3$ C 81,8 — H 4,5 — O 13,6 — M. G. 352.
1) Laktone d. α -Phenoxy- α -Phenyl- α -[2-Oxy-1-Naphtyl]essigsäure. Sm. 160° (*B.* **31**, 2825).
- $C_{21}H_{18}O_4$ C 78,3 — H 4,3 — O 17,4 — M. G. 368.
1) Dibenzoat d. 2,7-Dioxynaphtalin. Sm. 138—139° (*B.* **14**, 2209). — II, 1151.
2) $\alpha\gamma$ -Laktone d. γ -Oxy- $\gamma\gamma$ -Di[2-Oxynaphtyl]propen- α -Carbonsäure (α -Naphtolmaleinfluoresceinsäureanhydrid). Sm. 118—120° (*B.* **18**, 2867). — II, 1989.
3) α ,8-Laktone d. $\alpha\alpha$ -Di[β -Oxyphenyl]- α -Naphtylmethan-8-Carbonsäure (Phenolnaphtalein). Sm. 120° (u. oberh. 200°) (*B.* **28**, 992). — II, 1989.
4) Aethylester d. Phthalconcarbonsäure. Sm. 209—211° (*B.* **17**, 1389). — II, 1915.
5) Diphenylester d. Naphtalin-1,5-Dicarbonsäure. Sm. 198—199° (*G.* **26** [1] 99).
- $C_{21}H_{16}O_2$ C 69,2 — H 3,8 — O 26,9 — M. G. 416.
1) Diacetat d. Fluorescein. Sm. 200° (*A.* **183**, 13). — II, 2062.
2) Diacetat d. Hydroninonaphtalein. Sm. 210° (*B.* **6**, 508; **11**, 715). — II, 2066.
- $C_{21}H_{18}O_2$ C 66,7 — H 3,7 — O 29,6 — M. G. 432.
1) Diacetat d. Resorcinnoxaleinanhydrid (*B.* **14**, 2567). — II, 937.
- $C_{21}H_{18}N_2$ C 80,7 — H 4,8 — N 8,4 — M. G. 332.
1) 2,3-Diphenyl-1,4-Naphtisodiazin. Sm. 147° (*B.* **18**, 2426). — IV, 1091.
2) 2,8-Diphenylphenanthrolin. Fl. (2HCl, PtCl₄) (*A.* **281**, 19). — IV, 1092.
- $C_{21}H_{18}N_4$ C 80,0 — H 4,4 — N 15,6 — M. G. 360.
1) Phenylfluorindin. HCl (*B.* **29**, 367, 1248, 1250, 1608). — IV, 1300.
- $C_{21}H_{17}N$ C 90,3 — H 5,3 — N 4,4 — M. G. 319.
1) 2,3-Diphenyl- α -Naphtindol. Sm. 140—141°; Sd. 315—330°₁₀. + Aceton (*Soc.* **65**, 896). — IV, 477.
2) 2,3-Diphenyl- β -Naphtindol. Sm. 166—167°; Sd. 330—340°₁₅. + Aceton (*Soc.* **65**, 897). — IV, 477.
- $C_{21}H_{17}N_2$ C 83,0 — H 4,9 — N 12,1 — M. G. 347.
1) 3,5-Diphenyl-1-[2-Naphtyl]-1,2,4-Triazol. Sm. 144° (*J. pr.* [2] **54**, 165). — IV, 1187.
2) 2-Methyl-4,6-Di[2-Naphtyl]-1,3,5-Triazin. Sm. 195° (*B.* **25**, 1437, 1626). — IV, 1218.
3) Phenylpsofranin. Sm. 201°. (2HCl, PtCl₄) (*B.* **30**, 1831, 2625). — IV, 1177.
- $C_{21}H_{17}N_3$ C 76,8 — H 4,5 — N 18,7 — M. G. 375.
1) β -Di[2-Naphtylazo]pyrrol. Sm. 228° (*B.* **19**, 2255). — IV, 1483.
- $C_{21}H_{17}Br$ C 89,4 — H 5,6 — O 5,0 — M. G. 322.
1) β -Oxy-1,2,3-Triphenylbenzol. Sm. 226° (*B.* **26**, 68). — II, 905.
2) 1,1[oder 2,2]-Diphenyl-1,2-Dihydro- β -Naphtofuran. Sm. 141—142° (*A.* **279**, 333). — III, 734.
- $C_{21}H_{18}O_2$ C 85,2 — H 5,3 — O 9,5 — M. G. 338.
1) 6-Methyl-2-Phenyl-4-Benzoylmethylen-1,4-Cumaran (Methylphenacylidenflaven). Sm. 156—157° (*B.* **31**, 712).
2) Laktone d. γ -Oxy- δ -[3-Methylphenyl]- β -Diphenyl- $\alpha\gamma$ -Butadien- α -Carbonsäure (m-Xylyldiphenylmaleid). Sm. 134° (*B.* **26**, 2481). — II, 1729.
3) Laktone d. γ -Oxy- δ -[4-Methylphenyl]- $\alpha\beta$ -Diphenyl- $\alpha\gamma$ -Butadien- α -Carbonsäure. Sm. 165° (*B.* **24**, 3854). — II, 1729.
- $C_{21}H_{18}O_3$ C 81,4 — H 5,1 — O 13,5 — M. G. 354.
1) Acetat d. 4-Oxy-2,3,5-Triphenylfuran. Sm. 135° (*B.* **31**, 1248).
- $C_{21}H_{18}O_4$ C 77,8 — H 4,8 — O 17,3 — M. G. 370.
1) $\alpha\alpha$ - δ -Triphenyl- $\alpha\gamma$ -Butadien- $\beta\gamma$ -Dicarbonsäure (α -Benzyliden- γ -Diphenylitakonsäure). Zers. bei 207°. Ca + 3H₂O (*B.* **30**, 95).

- C₂₁H₁₇O₄**
- 2) Lakton d. β -Oxy- α -Benzoyl- α - γ -Diphenylpropan- α -Ketocarbonsäure. Sm. 137° (B. 31, 2222).
 - 3) 1,2-Phenylenester d. β -Phenylakrylsäure. Sm. 129° (B. 25, 3533). — II, 1406.
 - 4) Diacetat d. 2,2-Dioxy-1,1'-Binaphtyl. Sm. 109° (Bl. [3] 19, 612).
 - 5) Benzocat d. β -Oxy- α -Dibenzoylpropan. Sm. 87–88° (A. 277, 197; 291, 100). — III, 319.
C 74,6 — H 4,7 — O 20,7 — M. G. 386.
- C₂₁H₁₇O₅**
- 1) 4-[1-Naphtyl]äther d. 4-Oxy-1,2-Diacetoxylnaphtalin. Sm. 220° u. Zers. (B. 30, 2567).
 - 2) 2-1-Naphtyl äther d. 2-Oxy-1,4-Diacetoxylnaphtalin. Sm. noch nicht bei 300° (B. 30, 2596).
 - 3) Acetylfluorescein. H₂SO₄ (J. pr. [2] 23, 54, 544). — III, 137.
 - 4) Acetylderivat d. α -Orcinaphtalin. Sm. 219° (B. 29, 2634; A. 183, 73). — II, 1913.
 - 5) Verbindung (aus Corallinaphtalein) (B. 11, 1429). — II, 1121.
 - 6) Verbindung (aus 1,3-Dioxybenzol). Sm. 261° (B. 10, 1469; Bl. [3] 13, 906). — II, 917.
C 71,6 — H 4,5 — O 23,9 — M. G. 402.
- C₂₁H₁₇O₆**
- 1) 3,4-3',4'-Dimethylenäther d. α , δ -Diketo- δ -Phenyl- α , β -Di[3,4-Dioxyphenyl]butan (Phenacyldeoxyppiperonin). Sm. 156° (A. 289, 324; B. 26, 63). — III, 308.
 - 2) Monacetat d. α -Orcinaphtalein? (A. 183, 67; B. 29, 2632, 2636). — II, 2066.
 - 3) Diacetat d. Phenolphtalein. Sm. 143° (A. 202, 74). — II, 1983.
 - 4) Diacetat d. Phenolphtalidein. Sm. 109° (A. 202, 105) — III, 261.
 - 5) Diacetat d. β -Dibenzoyl-1,3-Dioxybenzol. Sm. 150° (A. 210, 260). — III, 305.
 - 6) α , β -Lakton d. α -Oxy- α -[2,4-Diacetoxyphenyl]- α -Diphenylmethan-2'-Carbonsäure (Benzolresorcinphtaleindiacetat). Sm. 137° (B. 14, 1861). — II, 1986.
 - 7) Äthylester d. chinoiden Fluoresceinacetat. Sm. 189–190° (M. 17, 434).
C 68,9 — H 4,3 — O 26,8 — M. G. 418.
- C₂₂H₁₇O₄**
- 1) Diacetat d. Fluorescein. Sm. 200–202° (M. 13, 423). — II, 2038.
 - 2) Diacetat d. Hydrochinonphtalin. Sm. 190–191° (B. 11, 716). — II, 2038.
C 66,4 — H 4,1 — O 29,5 — M. G. 434.
- C₂₂H₁₇O₅**
- 1) Dimethylester d. Disalicylsäurephtalid. Sm. 171° (A. 303, 285).
- C₂₂H₁₇O₆**
- 1) Oxymethylfurolophloroglucid (C. 1896 [2] 485).
- C₂₂H₁₇O₁₁**
- 1) Anhydrid d. Caprarsäure (B. 30, 1987; J. pr. [2] 57, 425).
 - 2) Verbindung + 4H₂O (aus Rufigallussäure). Zers. bei 230° (A. 141, 346; M. 1, 434). — III, 439.
- C₂₂H₁₇O₁₂**
- 1) Pentaacetat d. 1,2,3,5,7-Dioxyanthragallol. Sm. 229° (A. 240, 275). — III, 438.
 - 2) Pentaacetat d. 1,2,5,8,9-Pentaoxy-9,10-Anthrachinon (J. pr. [2] 43, 250). — III, 438.
C 86,2 — H 5,4 — N 8,4 — M. G. 334.
- C₂₂H₁₇N₂**
- 1) 4,4'-Diphenylazobenzol. Sm. 249–250° (B. 13, 1962). — IV, 1402.
 - 2) 2-Phenyl-N-Benzyl- α [oder β]-Naphthimidazol (α , β -Naphthobenzaldehydin). Sm. 117° (B. 29, 1502). — IV, 1062.
 - 3) 2-Phenyl-3-[4-Methylphenyl]- α -Naphthimidazol. Sm. 155° (B. 25, 2833). — IV, 1061.
 - 4) 2,4-Diphenyl-3,4-Dihydro-1,4-Naphtisodiazin. Sm. 164–165° (B. 24, 2680). — IV, 1064.
 - 5) 2,3-Diphenyl-1,2 oder 3,4-Dihydro-1,4-Naphtisodiazin. Sm. 172° (B. 26, 192). — IV, 1090.
C 79,5 — H 5,0 — N 15,5 — M. G. 362.
- C₂₂H₁₇N₃**
- 1) 7,8-Di[Phenylhydrason]acenaphten. Sm. 219° (A. 276, 11). — III, 404.
 - 2) 4,4'-Di[Phenylazo]biphenyl. Sm. 226° (B. 29, 103).
 - 3) Phenylsaffranin. HCl, H₂CO₃ + H₂O (B. 21, 2620). — IV, 1305.

- C₁₄H₁₁N**, 4) Phenylamidoaposafranin. Sm. 203–204° (189–190°). HCl (HCl, AuCl₃), HBr, HJ, HNO₃ (B. 23, 838; 26, 381; 28, 350, 1713; 29, 364, 1604; A. 262, 254; 272, 312; 286, 189; 290, 272; J. pr. [2] 46, 568). — IV, 1279.
- 5) Amidodiphenylindulin. Sm. 150° (A. 262, 256; 266, 255; 286, 195).
- 6) Phenylamidoindulin. Sm. 246°. HNO₃ (A. 272, 315). — IV, 1284.
- 7) Pseudomauvein. HCl, (2HCl, PtCl₄) (Soc. 35, 725). — IV, 1305.
- 8) Base (aus Phenazin u. Dihydrophenazin). 2HCl, (2HCl, PtCl₄), H₂SO₄ (A. 168, 13; 292, 200). — IV, 1000.
- C₁₄H₁₁N₂**
C 73,9 — H 4,6 — N 21,5 — M. G. 390.
- 1) 4,4'-Di[Phenylazo]azobenzol. Sm. 166–167° (B. 31, 996). — IV, 1372.
- C₁₄H₁₁S**
1) Biphenylsulfid. Sm. 171–172° (B. 13, 387). — II, 895.
- C₁₄H₁₁S₂**
1) Biphenyldisulfid. Sm. 148–150° (B. 13, 387). — II, 895.
- C₁₄H₁₁Hg**
1) Quecksilberdi-3-Biphenyl. Sm. 216° (B. 28, 592). — IV, 1713.
- C₁₄H₁₁N₂**
C 82,5 — H 5,4 — N 12,0 — M. G. 349.
- 1) Aethylrosindulin. Sm. 184° (A. 256, 237; B. 30, 1830). — IV, 1206.
- 2) Verbindung (aus 3-Nitrobenzozalosalicylsäure). Sm. 197° (A. 251, 193). — IV, 1469.
- C₁₄H₁₁N₂**
C 76,4 — H 5,0 — N 18,6 — M. G. 377.
- 1) 4-Amidophenylamidoaposafranin. Sm. 227° u. Zers. HCl (B. 29, 366). — IV, 1280.
- C₁₄H₂₀O**
C 88,9 — H 6,2 — O 4,9 — M. G. 324.
- 1) 4-Keto-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol. Sm. 138° (A. 281, 68). — III, 263.
- 2) isom. 4-Keto-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol. Sm. 186° (A. 281, 70, 90). — III, 263.
- C₁₄H₂₀O₂**
C 84,7 — H 5,9 — O 9,4 — M. G. 340.
- 1) l-Oxy-4-Keto-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol. Sm. 248° (B. 26, 66; Soc. 57, 783). — III, 263.
- 2) Dibenzosäure d. 2,3-Dioxy-1,2,3,4-Tetrahydronaphtalin. Sm. 89–90° (B. 26, 1834).
- 3) Verbindung (aus α-Oxy-β-Phenylpropionsäure). Sm. 102° (B. 13, 304). — III, 52.
- C₁₄H₂₀O₃**
C 80,9 — H 5,6 — O 13,5 — M. G. 356.
- 1) αβγ-Tribenzoylpropan. Sm. 137° (B. 24, 601). — III, 322.
- 2) Acetat d. 10-Oxy-9-Keto-3-Methyl-10-[4-Methylphenyl]-9,10-Dihydroanthracen. Sm. 87° (A. 299, 291).
- 3) Laktone d. γ-Oxy-αβδ-Triphenylbutan-β-Ketocarbonsäure. Sm. 67° (B. 31, 2222).
- 4) Verbindung (aus Phenyllessigsäurepropylester). Sm. 170° (Soc. 37, 483). — II, 1310.
- C₁₄H₂₀O₄**
C 77,4 — H 5,4 — O 17,2 — M. G. 372.
- 1) Rosol + H₂O (M. 16, 386).
- 2) Diacetat d. β-Oxy-αβ-Diphenyl-α-[4-Oxyphenyl]äthen. Sm. 186–187° (Soc. 57, 965). — III, 258.
- 3) Dibenzosäure d. 2,3-Dioxy-1,2,3,4-Tetrahydronaphtalin (A. 288, 98).
- 4) Aethyl ester d. Hydrophthalconcarbonsäure. Sm. 211–213° (B. 17, 1393). — II, 1914.
- C₁₄H₂₀O₅**
C 74,2 — H 5,1 — O 20,6 — M. G. 388.
- 1) Diäthyläther d. Fluorescein. Sm. 181–182° (B. 27, 2792; 28, 50). — II, 2061.
- 2) Aethyl ester d. Aethylätherfluorescein. Sm. 159° (A. 183, 17; B. 28, 47). — II, 2061.
- 3) Diacetat d. Methylaurin (A. 202, 209). — II, 1121.
- C₁₄H₂₀O₆**
C 71,3 — H 4,9 — O 23,8 — M. G. 404.
- 1) Formonetin (J. 1855, 716). — III, 599.
- 2) Acetat d. Orcinaurin (J. pr. [2] 25, 279). — II, 1125.
- 3) Diacetat d. Resorcinphenylacetate. Sm. 150° u. Zers. (J. pr. [2] 48, 399). — II, 1123.
- 4) Dibenzosäure d. 3,6-Dioxy-5-Isopropyl-2-Methyl-1,4-Benzochinon. Sm. 163° (B. 14, 95). — III, 369.
- 5) Tribenzosäure d. αβγ-Trioxopropan. Sm. 76–76,5° (BERTHELOT, Chim. org. synth. 2, 108; R. 1, 46, 143; J. pr. [2] 36, 353; B. 24, 779; 28, 1170; M. 10, 393; A. 301, 101). — II, 1142.

- $C_{24}H_{20}O_6$ 6) β -Diacetyltriphenylmethan-2-Carbonsäure. Sm. 146° (A. 202, 83). — II, 1911.
- 7) Methyl ester d. isom. $\alpha\beta$ -Dibenzoxy- β -Phenylpropionsäure. Sm. 113,5° (B. 12, 538). — II, 1761.
- $C_{24}H_{20}O_7$ C 68,6 — H 4,7 — O 26,7 — M. G. 420.
- 1) Triphenylester d. Citronensäure. Sm. 124,5° (J. pr. [2] 31, 470). — II, 667.
- 2) $\beta\gamma$ -Dibenzoat d. $\beta\gamma$ -Dioxypropylester d. 2-Oxybenzol-1-Carbonsäure. Fl. (B. 24, 779). — II, 1492.
- $C_{24}H_{20}O_8$ C 66,1 — H 4,6 — O 29,3 — M. G. 436.
- 1) $\beta\gamma$ -Di[2-Oxybenzoat] d. $\beta\gamma$ -Dioxypropylester d. Benzolcarbonsäure. Sm. 96° (B. 24, 779). — II, 1492.
- $C_{24}H_{20}O_9$ C 63,7 — H 4,4 — O 31,9 — M. G. 452.
- 1) 4-[2,3-Diacetoxyphenyl]äther d. 4-Oxy-1,2-Diacetoxylnaphtalin. Sm. 184–188° (B. 30, 2567).
- 2) 2-[2,3-Diacetoxyphenyl]äther d. 2-Oxy-1,4-Diacetoxylnaphtalin. Sm. 165–170° (B. 30, 2565).
- 3) Tri[2-Oxybenzoat] d. $\alpha\beta\gamma$ -Trioxypropan. Sm. 79° (B. 24, 780). — II, 1493.
- $C_{24}H_{20}O_{10}$ C 61,5 — H 4,3 — O 34,2 — M. G. 468.
- 1) Tetracetat d. 2,4,6,8-Tetraoxy-1,5-Dimethyl-9,10-Anthracinon. Sm. 234° (A. 240, 281). — III, 456.
- 2) Pentacetat d. Tetracyanthranol. Sm. 203° (B. 21, 1172). — III, 245.
- $C_{24}H_{20}O_{11}$ C 59,5 — H 4,1 — O 36,4 — M. G. 484.
- 1) Tetracetat d. Isorhamnetin. Sm. 195–196° (Soc. 73, 270).
- $C_{24}H_{20}O_{12}$ C 57,6 — H 4,0 — O 38,4 — M. G. 500.
- 1) Caprarsäure. Zers. bei 240–260°. Ba (B. 30, 1987; J. pr. [2] 57, 423).
- $C_{24}H_{20}O_{14}$ C 54,1 — H 3,7 — O 42,1 — M. G. 532.
- 1) Pentacetyl- α -Digallussäure. Sm. 137° (A. 170, 66). — II, 1925.
- 2) Pentacetyl- β -Digallussäure (B. 17, 1478). — II, 1925.
- 3) Pentacetyltannin (A. 170, 73; B. 17, 1504; O. 27 [1] 91). — II, 1926.
- $C_{24}H_{20}O_{15}$ C 52,6 — H 3,6 — O 43,8 — M. G. 548.
- 1) Pentacetylallagengerbsäure. — II, 2085.
- $C_{24}H_{20}N_2$ C 85,7 — H 5,0 — N 8,3 — M. G. 336.
- 1) 1,2[β]-Di[α -Cyan- β -Phenyläthyl]benzol. Fl. (B. 21, 1318). — II, 1914.
- 2) 2-Benzylidenamido-1-[1-Naphtylamido]methylbenzol. Sm. 107° (J. pr. [2] 52, 408). — IV, 628.
- 3) 2-Benzylidenamido-1-[2-Naphtylamido]methylbenzol. Sm. 122° (J. pr. [2] 52, 412). — IV, 629.
- 4) α -Phenylimido- α -[Methyl-2-Naphtyl]amido- α -Phenylmethan. Sm. 110°. HJ (B. 30, 1784). — IV, 845.
- 5) α -[2-Naphtyl]imido- α -Methylphenylamido- α -Phenylmethan. Sm. 84°. HJ (B. 30, 1784). — IV, 845.
- 6) β -Phenylimido- β -Phenylamido- α -[1-Naphtyl]äthan. Sm. 130,5° (B. 16, 642). — IV, 971.
- 7) Tetraphenylhydrazin. Sm. 147° u. Zers. (Soc. 67, 1091). — IV, 660.
- 8) s -Di[4-Biphenyl]hydrazin. Sm. 247° (B. 13, 1961). — IV, 1504.
- 9) Phenanthroisobutylphenazin (aus 2,3-Diamido-1-Isobutylbenzol). Sm. 144° (B. 21, 2951). — IV, 646.
- 10) Phenanthroisobutylphenazin (aus 3,4-Diamido-1-Isobutylbenzol). Sm. 146,5°. 2HCl (B. 20, 3256). — IV, 646.
- $C_{24}H_{20}N_4$ 11) Retenchinoxalin (Resazin). Sm. 164° (A. 229, 123). — IV, 1089.
- C 79,1 — H 5,5 — N 15,4 — M. G. 364.
- 1) Triphenyltetrazon. Sm. 123° u. Zers. (A. 190, 182). — IV, 1308.
- 2) Base (aus Formaldehyd u. 1,2-Diamidonaphtalin). Sm. 165°. 2HCl (B. 25, 2714). — IV, 991.
- $C_{24}H_{20}N_6$ C 73,5 — H 5,1 — N 21,4 — M. G. 392.
- 1) 4,4'-Di[Phenylamido]biphenyl (J. 1864, 436). — IV, 1575.
- $C_{24}H_{20}S$ 1) β -Triphenylmethyl-2-Methylthiophen. Sm. 181–182° (B. 29, 1403). — III, 750.
- $C_{24}H_{20}P_2$ 1) Tetraphenyldiphosphin. Sm. 67°; Sd. bei 400° (B. 21, 1509). — IV, 1658.
- $C_{24}H_{20}As_2$ 1) Phenylkakodyl. Sm. 135° (B. 15, 1954). — IV, 1687.
- $C_{24}H_{20}Pb$ 1) Bleitetraphenyl. Sm. 224–225° (B. 20, 717, 3331). — IV, 1715.

- C₁₁H₉Si** 1) Siliciumtetraphenyl. Sm. 233°; Sd. oberh. 530° (*B.* 18, 1541; 19, 1013). — IV, 1702.
- C₁₁H₉Sn** 1) Zinntetraphenyl. Sm. 225—226°; Sd. oberh. 420° (*B.* 22, 2917). — IV, 1715.
- C₁₁H₁₁N** C 89,2 — H 6,5 — N 4,3 — M. G. 323.
- 1) 2,5-Diphenyl-1-[2,4-Dimethylphenyl]pyrrol. Sm. 147—149° (*B.* 22, 3091). — IV, 438.
- C₁₁H₁₁N₃** C 82,0 — H 6,0 — N 12,0 — M. G. 351.
- 1) 1,2,4-Tri[Phenylamido]benzol. Sm. 252° (*M.* 11, 23). — IV, 1122.
- 2) 1,3,5-Tri[Phenylamido]benzol. Sm. 193°. HCl, (2HCl, PtCl₄) (*G.* 20, 337). — IV, 1125.
- 3) Phenyl-*p*-Methylphenyl-1-Naphtylguanidin. Sm. 60° (*B.* 3, 7). — II, 604.
- 4) Kyanbenzin. Sm. 170—171° (*Soc.* 37, 567). — II, 1314.
- 5) 4-Benzylazo-1-Benzylamidonaphtalin. HCl (*B.* 30, 877). — IV, 1401.
- 6) 6-Amido-5-Phenyl-2,4-Dibenzyl-1,3-Diazin (Kyanbenzylin). Sm. 106° (2HCl, PtCl₄) (*J. pr.* [2] 39, 256; [2] 53, 246). — IV, 1217.
- 7) Azinverbindung (aus Phenanthrenchinon u. 3,4,5-Triamido-1-Pseudo-butylbenzol). Sm. 219—220° (*J. pr.* [2] 48, 102). — IV, 1134.
- C₁₁H₁₁N₅** C 76,0 — H 5,5 — N 18,5 — M. G. 379.
- 1) Azobenzolazo-β-Aethylnaphtylamin. Sm. 141—142° (*B.* 17, 2670). — IV, 1401.
- 2) Toluoldiazotoluol-β-Naphtylamin. Sm. 201—203° (*B.* 20, 1180). — IV, 1402.
- 3) Verbindung (aus 4-Nitroso-1,3-Di[Phenylamido]benzol). Sm. 160° (*A.* 286, 177). — IV, 572.
- C₁₁H₁₁O** C 84,2 — H 6,4 — O 9,4 — M. G. 342.
- 1) Diäthyläther d. α-Dioxybinaphtyl. Sm. 211° (*B.* 17, 2453). — II, 1004.
- 2) Diäthyläther d. β-Dioxybinaphtyl. Sm. 90° (*B.* 17, 2455). — II, 1005.
- 3) 3,6-Dibenzoyl-1,2,4,5-Tetramethylbenzol. Sm. 269—270°; Sd. oberh. 380° (*A. ch.* [6] 1, 512). — III, 308.
- C₁₁H₁₁O₂** C 80,4 — H 6,1 — O 13,4 — M. G. 358.
- 1) α-Diketo-γ-[6-Oxy-3-Methylphenyl]-αε-Diphenylpentan. Sm. 151° (*B.* 31, 713 Anm.).
- C₁₁H₁₁O₃** C 77,0 — H 5,9 — O 17,1 — M. G. 374.
- 1) Leukorosol (*M.* 16, 387).
- 2) Benzol-1,2[*p*]-Di[α-Phenyläthyl-β-Carbonsäure] (ββ-Phenylen-ββ-Diphenyldipropionsäure). Sm. 235°. Ba + 7H₂O, Ag, (*B.* 26, 2124). — II, 1914.
- 3) Benzol-1,2[*p*]-Di[β-Phenyläthyl-α-Carbonsäure]. Sm. 251° (*B.* 21, 1319). — II, 1914.
- 4) δ-Keto-δ-[4-Methoxyphenyl]-αβ-Diphenylbutan-α-Carbonsäure. Sm. 201° (*A.* 281, 62). — II, 1913.
- 5) α,2'-Lakton d. α,4',4'-Trioxotriphenylmethan-4',4'-Diäthyläther-2'-Carbonsäure (Laktoider Diäthyläther d. Phenolphthalein). Sm. 122° (*B.* 28, 3258; 29, 138; 30, 175; *C.* 1895 [1] 599).
- 6) α,2'-Lakton d. α-Oxy-α-Di[*p*-Oxy-*p*-Aethylphenyl]-α-Phenylmethan-2'-Carbonsäure + H₂O. Zers. bei 130° (*B.* 17, 671). — II, 1987.
- 7) Diacetat d. αβ-Dioxy-αβ-Triphenyläthan. Sm. 214° (*C.* 1897 [2] 662).
- 8) Diacetat d. 4-Hydrodesylphenol. Sm. 156—157° (*Soc.* 57, 970). — II, 1112.
- 9) Diacetat d. *p*-Di[α-Oxybenzyl]benzol. Sm. 143—144° (*B.* 9, 311). — II, 1103.
- 10) Dibenzoat d. αα-Dioxy-α-[4-Isopropylphenyl]methan (Cumylendibenzoat). Sm. 88° (*A.* 109, 368). — III, 55.
- C₁₁H₁₁O₄** C 73,8 — H 5,6 — O 20,5 — M. G. 390.
- 1) Diäthyläther d. Fluorescin. Sm. 187° (*B.* 28, 51). — II, 2038.
- C₁₁H₁₁O₅** C 70,9 — H 5,4 — O 23,6 — M. G. 406.
- 1) Benzoeat d. Toluresitannol (*C.* 1895 [1] 353).
- C₁₁H₁₁O₇** C 68,3 — H 5,2 — O 26,5 — M. G. 422.
- 1) Verbindung (aus Rosol) (*M.* 16, 389).
- C₁₁H₁₁O₈** C 65,7 — H 5,0 — O 29,2 — M. G. 438.
- 1) Diacetat d. Hydromethylumbelliferon (oder C₁₁H₁₁O₄). Sm. 221—222° (*Am.* 5, 436). — II, 1780.

- C₇H₇O₉** C 63,4 — H 4,8 — O 31,7 — M. G. 454.
- C₁₁H₁₁O₁₀** 1) Tetracetat d. Brasillin. Sm. 140—151° (*B.* 9, 1886; 18, 1139). — III, 653.
C 61,3 — H 4,7 — O 34,0 — M. G. 470.
- C₁₄H₁₃O₁₁** 1) Pentacetat d. Coccinin (*B.* 16, 2169). — II, 2098.
2) Baphiasäure (*J.* 1876, 896). — III, 620.
C 57,4 — H 4,4 — O 38,2 — M. G. 502.
- 1) Hexacetat d. α -Hexaoxybiphenyl. Sm. 145° (*A.* 169, 242). — II, 1041.
2) Hexacetat d. β -Hexaoxybiphenyl. Sm. 170° (*B.* 12, 1246). — II, 1043.
3) Hexacetat d. γ -Hexaoxybiphenyl. Sm. 163—164° (*M.* 1, 673).
C 85,2 — H 6,5 — N 8,3 — M. G. 338.
- C₁₁H₁₁N₅** 1) 2,7-Di[4-Methylphenylamido]naphthalin. Sm. 236—237° (*B.* 20, 1373). — IV, 925.
2) 1-Benzylamido-2-[4-Methylphenyl]amidonaphthalin. Sm. 157°. HCl (*B.* 27, 2779). — IV, 918.
3) 1,4,1',4'-Tetramethyl-2,2'-Azonaphthalin. Sm. 253° (*B.* 28 [2] 619; *G.* 26 [1] 18). — IV, 1402.
4) 1,4-Di[1-Naphthyl]hexahydro-1,4-Diazin. Sm. 265° (*B.* 22, 1782). — II, 601.
5) 1,4-Di[2-Naphthyl]hexahydro-1,4-Diazin. Sm. 228° (*B.* 23, 1984). — II, 604.
6) 5-Isobutyl-2,3-Diphenyl-1,4-Benzdiazin. Sm. 96° (*B.* 21, 2592). — IV, 646.
7) 6-Isobutyl-2,3-Diphenyl-1,4-Benzdiazin. Sm. 144°. HCl (*B.* 20, 3257). — IV, 646.
- C₁₄H₁₁N₄** C 78,7 — H 6,0 — N 15,3 — M. G. 366.
1) β -Tetraamido-1,3,5-Triphenylbenzol. Sm. 137—138° (*B.* 23, 2535). — IV, 1304.
- C₁₄H₁₁N₆** C 73,1 — H 5,6 — N 21,3 — M. G. 394.
1) Verbindung (aus d. Verb. C₁₄H₁₁N₆). Sm. 104° (*B.* 21, 2498). — IV, 766.
- C₁₄H₁₁S₂** C 81,6 — H 6,5 — N 11,9 — M. G. 353.
- C₁₄H₁₁N₃** 1) 5-Amido- β -Pseudobutyl-2,3-Diphenyl-1,4-Benzdiazin^P Sm. 124 bis 125° (*J. pr.* [2] 48, 103). — IV, 1134.
C 75,6 — H 6,0 — N 18,4 — M. G. 381.
- C₁₄H₁₁N₃** 1) Cyanid d. Tri[2-Methylphenyl]guanidin. Sm. 141° (*B.* 12, 1857). — II, 460.
2) Cyanid d. Tri[4-Methylphenyl]guanidin. Sm. 181° (182°). HCl + 3H₂O, (2HCl, PrCl₄) (*B.* 11, 976; *Bl.* 41, 127). — II, 489.
C 87,8 — H 7,3 — O 4,9 — M. G. 328.
- C₁₄H₁₁O** C 81,6 — H 6,9 — O 9,3 — M. G. 344.
- C₁₄H₁₁O** 1) Dibenzylidenmenthenon. Sm. 129—130° (*A.* 305, 273).
C 83,7 — H 6,9 — O 9,3 — M. G. 344.
- C₁₄H₁₁O** 1) Benzocat d. α -Oxy-2,3,4,6-Tetramethyldiphenylmethan. Sm. 75° (*Bl.* 42, 173). — II, 1144.
2) Aethylester d. α -Phenyl- α' -Di[4-Methylphenyl]methan- α' -2-Carbonsäure. Sm. 197—198° (*A.* 299, 289).
3) Verbindung (aus Eucarvon u. Benzaldehyd). Sm. 193—194° (*A.* 305, 243).
C 70,6 — H 5,9 — O 23,5 — M. G. 408.
- C₁₄H₁₁O₄** 1) Homopterocarpin. Sm. 82—86° (*A. ch.* [6] 17, 115). — III, 672.
C 63,2 — H 5,2 — O 31,6 — M. G. 456.
- C₁₄H₁₁O₅** 1) Triäthylester d. 2,4,6-Trimethyl-1,3,5-Benstrifuran-1,3,5-Tricarbonsäure. Zers. bei 260° (*B.* 19, 2935). — III, 736.
C 84,7 — H 7,1 — N 8,2 — M. G. 340.
- C₁₄H₁₁N₂** 1) Propylamin. (*Ag.*, HBr) (*B.* 18, 3079). — III, 23.
2) 4,4'-Di[2,5-Dimethyl-1-Pyrryl]biphenyl. Zers. oberh. 130° (*B.* 19, 3158). — IV, 72.
3) Dibenzylidihydrobipyridyl (*B.* 14, 1504). — IV, 887.
- C₁₄H₁₁N₄** C 78,3 — H 6,5 — N 15,2 — M. G. 368.
- C₁₄H₁₁N₄** 1) 4,4'-Di[Dimethylamido]-1,1'-Azonaphthalin. Sm. 145°. 2 Pikrat (*M.* 16, 799). — IV, 1391.
C 72,7 — H 6,1 — N 21,2 — M. G. 396.
- C₁₄H₁₁N₆** 1) Tribenzylmelamin. 2HCl (*B.* 5, 695). — II, 532.
2) Tri[4-Methylphenyl]melamin. Sm. 283° (*J. pr.* [2] 33, 294). — II, 513.

- C₇H₇S₃**
- 1) Trithioacetophenon. Sm. 122° (B. 28, 898). — III, 129.
 - 2) α -Trithio-m-Toluylaldehyd. Sm. 144° (B. 29, 151). — III, 53.
 - 3) β -Trithio-m-Toluylaldehyd. Sm. 225°. + 3 C₆H₆ (B. 29, 151). — III, 53.
- C₁₁H₁₀O**
- 4) α -Trithio-p-Toluylaldehyd. Sm. 149–150° (B. 29, 152). — III, 53.
 - 5) β -Trithio-p-Toluylaldehyd. Sm. 180°. + 3 C₆H₆ (B. 29, 152). — III, 53.
- C₁₁H₁₀O**
- 1) Dibenzylmenthenon. Sm. 72–75° (A. 305, 274).
 - 2) 3-Oxy- β -Dibenzyl-4-Isopropyl-1-Methylbenzol. Sm. 76° (112°) (G. II, 350, 436). — II, 904.
- C₁₁H₁₀O₂**
- C 83,2 — H 7,5 — O 9,3 — M. G. 346.
 - 1) Verbindung (aus Carvenon u. Benzaldehyd). Sm. 170–171°. HCl (A. 305, 270).
- C₁₁H₁₀O₂**
- C 73,1 — H 6,6 — O 20,3 — M. G. 394.
 - 1) Otobit. Sm. 133° (A. 91, 370). — III, 639.
- C₁₁H₁₀O₂**
- C 70,2 — H 6,3 — O 23,4 — M. G. 410.
 - 1) Succinat d. 3,4-Dioxy-1-Allylbenzol-3-Methyläther (S. d. Eugenol). Sm. 89,5–90° (B. 30, 1795; C. 1897 [2] 276).
 - 2) Diäthylester d. Äthylidendi[Benzoylessigsäure]P Sm. 82° (A. 231, 68).
- C₁₁H₁₀O₂**
- 1) Diacetylphysodsäure. Sm. 158° (J. pr. [2] 57, 420).
 - 2) Diäthylester d. Diphenyllessigweinsäure. Fl. (A. ch. [7] 3, 476). — II, 1310.
 - 3) Diäthylester d. Di[2-Methylbenzoyl]weinsäure. Fl. (Soc. 69, 1311, 1589).
 - 4) Diäthylester d. Di[3-Methylbenzoyl]weinsäure. Fl. (Soc. 69, 1317, 1590).
 - 5) Diäthylester d. Di[4-Methylbenzoyl]weinsäure. Sm. 92–93° (A. ch. [7] 3, 479; Soc. 69, 1314, 1591). — II, 1340.
- C₁₁H₁₀O₁₀**
- C 60,8 — H 5,5 — O 33,7 — M. G. 474.
 - 1) Diäthylester d. Dibenzoylschleimsäure. Sm. 172° (M. 14, 487). — II, 1155.
- C₁₁H₁₀O₁₁**
- C 56,9 — H 5,1 — O 37,9 — M. G. 506.
 - 1) Triacetat d. Leucodrin. Sm. 188–189° (A. 290, 316). — III, 636.
- C₁₁H₁₀O₁₃**
- C 55,2 — H 5,0 — O 39,8 — M. G. 522.
 - 1) Caramelin (J. 1852, 651). — I, 1107.
 - 2) Iridin (B. 26, 2010, 2039). — III, 596.
- C₁₁H₁₀N₂**
- C 84,2 — H 7,6 — N 8,2 — M. G. 342.
 - 1) 1,3-Diphenyl-2-[4-Isopropylphenyl]tetrahydroimidazol (Cuminal-äthylennanilin). Sm. 124–125° (B. 20, 733). — III, 56.
- C₁₁H₁₀N₄**
- C 77,8 — H 7,0 — N 15,1 — M. G. 370.
 - 1) 1,4-Di[4-Dimethylamidobenzylidenamido]benzol (Rubifuscin). Sm. bei 270° (277–278°). 2 HCl + 5 H₂O (B. 16, 2729; 26, 1034; 28, 109, 326; 31, 2254). — IV, 596.
- C₁₁H₁₀N₆**
- C 72,4 — H 6,5 — N 21,1 — M. G. 398.
 - 1) Verbindung (aus Phenylhydrazin u. Chloraceton). Sm. 157–158° (B. 21, 2497). — IV, 766.
- C₁₁H₁₁N**
- C 87,6 — H 8,2 — N 4,2 — M. G. 329.
 - 1) Tri[β -Phenyläthyl]amin. Fl. HCl (J. 1879, 440). — II, 539.
 - 2) Tri[3-Methylbenzyl]amin. Fl. HCl, HNO₃ (A. 142, 303; 151, 129). — II, 545.
- C₁₁H₁₁N₃**
- C 80,6 — H 7,6 — N 11,8 — M. G. 357.
 - 1) α -[4-Methylphenyl]imidodi[4-Dimethylamidophenyl]methan. (2 HCl, PtCl₄) (B. 20, 2853). — IV, 1174.
 - 2) 1,3,5-Tri[4-Methylphenyl]hexahydro-1,3,5-Triazin (4-Methylphenylimidomethan). Sm. 127–128° (123°) (B. 18, 3302; 27, 1808; 31, 3253; A. 302, 352). — II, 509.
 - 3) isom. 4-Methylphenylimidomethan. Sm. 225–227° u. Zers. (207 bis 209°) (B. 18, 3302; 27, 1808; 31, 3253; A. 302, 352). — II, 509.
- C₁₁H₁₁N₅**
- C 65,3 — H 6,1 — N 28,6 — M. G. 441.
 - 1) Toluidylmelamin (B. 19, 2059). — IV, 606.
- C₁₁H₁₁Bi**
- 1) Wismuthtri[2,4-Dimethylphenyl]. Sm. 175° (A. 251, 333). — IV, 1699.
 - 2) Wismuthtri[2,5-Dimethylphenyl]. Sm. 194,5° (B. 30, 2847). — IV, 1699.

- $C_{24}H_{30}O_2$ C 82,7 — H 8,0 — O 9,2 — M. G. 348.
- $C_{21}H_{26}O_2$ 1) Verbindung (aus Tetrahydrocarvon u. Benzaldehyd). Sm. 175° (A. 305, 267).
C 75,8 — H 7,4 — O 16,8 — M. G. 380.
- 1) Aethylester d. d-7-Benzoxyl-5,8-Dimethyl-1,2,3,4-Tetrahydro-
naphthalin-2-Aethyl- α -Carbonsäure (Ae. d. d-Benzoylantoniogen Säure).
Sm. 78° (B. 16, 427). — II, 1671.
- 2) Aethylester d. i-7-Benzoxyl-5,8-Dimethyl-1,2,3,4-Tetrahydro-
naphthalin-2-Aethyl- α -Carbonsäure (Ae. d. Benzoylisosantoniogen Säure). Sm.
90–91° (B. 16, 428). — II, 1671.
- 3) Verbindung (aus Ouabalin) (Bl. [3] 19, 734, 902; C. 1898 [2] 352).
C 72,7 — H 7,1 — O 20,2 — M. G. 396.
- $C_{14}H_{20}O_2$ 1) Sagaresinotannol (B. 28 [2] 1056).
C 69,9 — H 6,8 — O 23,3 — M. G. 412.
- $C_{14}H_{20}O_6$ 1) Diacetat d. Disoeugenol. Sm. 150–151° (B. 24, 2874). — II, 960.
C 67,3 — H 6,5 — O 26,2 — M. G. 428.
- $C_{14}H_{20}O_7$ 1) Diacetylguajakonsäure. Sm. 61–63° (C. 1897 [1] 167).
C 64,8 — H 6,3 — O 28,8 — M. G. 444.
- $C_{14}H_{20}O_8$ 1) Aethylester d. Barbatsinsäure. Sm. 132° (J. pr. [2] 57, 239).
C 56,7 — H 5,5 — O 37,8 — M. G. 508.
- $C_{14}H_{20}O_{11}$ 1) Asebotin. Sm. 147,5° (R. 2, 99). — III, 572.
- $C_{11}H_{18}N_2$ C 83,7 — H 8,1 — N 8,1 — M. G. 344.
- 1) 1,2-Di[2,4-Dimethylphenylamidomethyl]benzol. Sm. 106° (B. 31, 422).
2) α -Phenyl- ω -Di[4-Dimethylamidophenyl]äthan. Sd. oberh. 360° u.
Zers. (A. 242, 337). — IV, 1045.
- $C_{12}H_{18}N_4$ C 77,4 — H 7,5 — N 15,0 — M. G. 372.
- 1) 2,2-Di[4-Dimethylamidophenyl]-5-Methyl-2,3-Dihydrobenzimi-
dasol (3,4-Toluylenauramin). (2HCl, PtCl₄), Pikrat (B. 20, 2853). —
IV, 1175.
- $C_{14}H_{20}N_2$ C 80,2 — H 8,1 — N 11,7 — M. G. 359.
- 1) 5'-Amido-4',4'-Di[Dimethylamido]-2'-Methyltriphenylmethan. Sm.
160° (B. 24, 3127). — IV, 1197.
- 2) 6'-Amido-4',4'-Di[Dimethylamido]-3'-Methyltriphenylmethan. Sm.
180° (B. 24, 3130). — IV, 1197.
- 3) 4'-Methylamido-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 115
bis 116° (B. 18, 2907). — IV, 1194.
- 4) 2-Nonyl-4,6-Diphenyl-1,3,5-Triazin. Sm. 38°; Sd. 292–294°₁₀ (B.
23, 2385). — IV, 1199.
- $C_{14}H_{20}O_2$ C 82,3 — H 8,6 — O 9,1 — M. G. 350.
- 1) $\alpha\delta$ -Diketo- $\alpha\delta$ -Di[2-Methyl-5-Isopropylphenyl]butan (Dicymyläthyl-
keton). Sd. bei 320° (B. 20, 1378). — III, 302.
- 2) Disoamylcarbobbenssäure (A. 184, 169). — II, 1477.
- $C_{14}H_{20}O_3$ C 78,7 — H 8,2 — O 13,1 — M. G. 366.
- 1) Aethylester d. d-Benzyläthersantoniogen Säure (G. 25 [2] 357).
- $C_{14}H_{20}O_4$ C 75,4 — H 7,8 — O 16,8 — M. G. 382.
- 1) Diacetat d. $\alpha\beta$ -Dioxy- $\alpha\beta$ -Di[4-Isopropylphenyl]äthan. Sm. 143–144°
(B. 10, 54). — II, 1103.
- 2) Diacetat d. 3,3'-Dioxy-4,4'-Dipropyl-1,1'-Dimethyl- β -Biphenyl. Sm.
113–114° (B. 23, 2763). — II, 997.
- $C_{14}H_{20}O_5$ C 72,4 — H 7,5 — O 20,1 — M. G. 398.
- 1) Verbindung + 1 $\frac{1}{2}$ H₂O (aus Strophantidin). Zers. bei 350–360° (B.
31, 539).
- $C_{14}H_{20}O_6$ C 69,5 — H 7,2 — O 23,2 — M. G. 414.
- 1) Leucidsäure. Sm. 147° (J. pr. [2] 58, 508).
- 2) Diacetylguajakharssäure. Sm. 108–110° (B. 30, 379; M. 18, 716).
- $C_{14}H_{20}O_7$ C 67,0 — H 7,0 — O 26,0 — M. G. 430.
- 1) Athamantin. Sm. 79°. 2HCl (A. 51, 315; 110, 359). — III, 619.
- $C_{14}H_{20}O_8$ C 64,6 — H 6,7 — O 28,7 — M. G. 446.
- 1) Phytolacetoxin. Sm. 170° (B. 24 [2] 648). — III, 642.
- $C_{14}H_{20}O_{11}$ C 58,3 — H 6,1 — O 35,6 — M. G. 494.
- 1) Polystichoflavin. Sm. 158–158,5° (C. 1898 [2] 1103).
- $C_{14}H_{20}O_{12}$ C 56,4 — H 5,9 — O 37,6 — M. G. 510.
- 1) Tetraacetat d. Coniferin. Sm. 125–126° (B. 8, 1140). — III, 577.
- 2) Hexaäthylester d. Benzolhexacarbonsäure. Sm. 72,5–73° (J. 1862,
281; A. 177, 273). — II, 2105.

- $C_{11}H_{20}O_{15}$ C 51,6 — H 5,4 — O 43,0 — M. G. 558.
 1) Caramelin (*J.* 1861, 79). — I, 1107.
 2) Scopolin + $2H_2O$ (oder $C_{15}H_{16}O_{16} + H_2O$). Sm. 218° (*R.* 3, 177). — III, 611.
- $C_{11}H_{20}O_{17}$ 3) Bafflorgelb. 4PbO (*A.* 58, 358). — III, 656.
 C 48,8 — H 5,1 — O 46,0 — M. G. 590.
- $C_{11}H_{20}O_{19}$ 1) Xyllysäure. Ca, Ba (*Z.* 1867, 669). — I, 1108.
 C 56,3 — H 6,2 — O 37,5 — M. G. 512.
- $C_{11}H_{20}O_{18}$ 1) Tetraäthylester d. 3,6-Dioxy-1,4-Benzochinondiäthyläther-2,5-Di[Methyldicarbonensäure]. Sm. 115° (*Am.* 17, 599).
 C 50,0 — H 5,6 — O 44,4 — M. G. 576.
- $C_{11}H_{20}O_{16}$ 1) Hexacetylarabin (*Z.* 1869, 265). — I, 1102.
 2) Hexacetylululin (*A.* 180, 85). — I, 1096.
- $C_{11}H_{20}O_2$ C 81,4 — H 9,6 — O 9,0 — M. G. 354.
 1) Diisocamyläther d. 4,4'-Dioxy-3,3'-Dimethylbiphenyl. Sm. 69° (*B.* 21, 1068). — II, 993.
 C 77,8 — H 9,2 — O 13,0 — M. G. 370.
- $C_{11}H_{20}O_3$ 1) Myroxocarpin. Sm. 115° (*A.* 77, 306). — III, 638.
 C 74,6 — H 8,8 — O 16,6 — M. G. 386.
- $C_{11}H_{20}O_4$ 1) Dehydrocholeinsäure (oder $C_{25}H_{34}O_4$). Sm. 182–183°. Ba + $1\frac{1}{2}(3)H_2O$ (*B.* 18, 3046; 20, 1044; 26, 149; *H.* 17, 612). — II, 1872.
 2) Diaethylmetacopaivaensäure. Sm. 74–75° (*M.* 2, 517). — III, 559.
 3) Diäthylguajakharssäure. Sm. 100–102° (*M.* 19, 104).
 C 71,6 — H 8,5 — O 19,9 — M. G. 402.
- $C_{11}H_{20}O_5$ 1) Asarotinannol (*C.* 1897 (1) 820).
 2) Periplogenin. Sm. 185° (*C.* 1897 [2] 130).
 3) Dehydrocholsäure + $\frac{1}{2}C_6H_6$. Sm. 239° (232°). Na, Ca, Ba, Pb + $\frac{1}{2}H_2O$, Cu + $\frac{1}{2}H_2O$, Ag (*B.* 14, 71; 18, 3048; 19, 2007; 26, 148; 32, 683; *H.* 16, 493; 19, 285, 288; 25, 310). — II, 1969.
 4) Isodehydrocholal. Sm. 242° (*B.* 25, 808; *H.* 16, 501). — II, 1970.
 C 64,0 — H 7,5 — O 28,4 — M. G. 450.
- $C_{11}H_{20}O_6$ 1) Biliansäure, siehe $C_{25}H_{34}O_6$. — II, 2076.
 2) Tetraäthylester d. α -Phenylhexan- $\beta\beta\beta\beta$ -Tetracarbonensäure (T. d. Äethylbenzylcarboxyglutarsäure). Sm. 210–230° (*B.* 23, 3184; 30, 961). — II, 2076.
 C 84,5 — H 5,7 — O 45,8 — M. G. 594.
- $C_{11}H_{20}O_{17}$ 1) Hexacetylgallisin (*B.* 17, 1008). — I, 1061.
 C 41,8 — H 4,9 — O 53,3 — M. G. 690.
- $C_{11}H_{20}O_{22}$ 1) Parapektinsäure. K₂, Pb₂ (*A.* 67, 286). — I, 1105.
 C 84,7 — H 10,6 — O 4,7 — M. G. 340.
- $C_{11}H_{20}O$ 1) Antiarharz. Sm. 173,5° (*C.* 1896 [2] 591).
 C 80,9 — H 10,1 — O 9,0 — M. G. 356.
- $C_{11}H_{20}O_2$ 1) Succinosilvinsäure. Sm. 95°. Ag (*C.* 1895 [1] 556).
 C 77,4 — H 9,7 — O 12,9 — M. G. 372.
- $C_{11}H_{20}O_3$ 1) Dysalysin (*A.* 50, 242; 67, 27; *J.* 1863, 653; *G.* 18, 88). — I, 783.
 C 74,2 — H 9,3 — O 16,5 — M. G. 388.
- $C_{11}H_{20}O_4$ 1) Dehydrocholeinsäure. Sm. 182–183°. Ca, Ba + $3H_2O$ (*B.* 18, 3046). — II, 1872.
 C 66,0 — H 8,3 — O 25,7 — M. G. 436.
- $C_{11}H_{20}O_5$ 1) Laserpitin. Sm. 114° (*A.* 135, 236; *J.* 1883, 1361). — III, 635.
 2) Cholansäure, siehe $C_{25}H_{34}O_5$.
- $C_{11}H_{20}O_6$ C 63,7 — H 7,9 — O 28,3 — M. G. 452.
 1) Cyclamiretin, siehe $C_{15}H_{22}O_6$. — III, 579.
- $C_{11}H_{20}O_{16}$ C 49,7 — H 6,2 — O 44,1 — M. G. 580.
 1) Glykodrupose (*A.* 138, 6). — III, 592.
- $C_{11}H_{20}N_4$ C 75,8 — H 9,5 — N 14,7 — M. G. 380.
 1) 4,4'-Di[Dipropylamido]azobenzol. Sm. 90°. 2 + 6J, Pikrat (*M.* 3, 711; 4, 286). — IV, 1962.
- $C_{11}H_{20}O_4$ C 73,8 — H 9,7 — O 16,4 — M. G. 390.
 1) d-Diborneolester d. Bernsteinsäure. Sm. 83,7° (*B.* 22 [2] 255). — III, 471.
 2) l-Diborneolester d. Bernsteinsäure. Sm. 83,7° (*B.* 22 [2] 255). — III, 472.

- $C_{27}H_{38}O_4$ 3) Diisoborneolester d. Bernsteinsäure. Sm. 82,3° (B. 22 [2] 255). — III, 473.
C 68,3 — H 9,0 — O 22,7 — M. G. 422.
- $C_{24}H_{38}O_6$ 1) Pertusarsäure. Sm. 103°. Ag (J. p^h. [2] 58, 502).
C 65,7 — H 8,7 — O 25,6 — M. G. 438.
- $C_{24}H_{38}O_7$ 1) Diäthylester d. Anhydrocampfersäure. Sm. 99–100° (Bl. [3] 15, 966).
C 63,4 — H 8,4 — O 28,2 — M. G. 454.
- $C_{24}H_{38}O_8$ 1) Dipropylester d. Diönanthylweinsäure. Fl. (Bl. [3] 13, 829).
C 45,7 — H 6,0 — O 48,3 — M. G. 630.
- $C_{24}H_{38}O_{10}$ 1) Amylum (B. 14, 2253).
C 43,5 — H 5,7 — O 50,8 — M. G. 662.
- $C_{24}H_{38}O_{11}$ 1) Oxycellulose (Bl. [3] 19, 791).
- $C_{24}H_{38}O_{12}$ 1) Harz (aus Doona zeylanica) = $(C_{24}H_{38}O_2)_n$ (M. 12, 102). — III, 555.
C 63,7 — H 11,6 — O 4,6 — M. G. 344.
- $C_{21}H_{40}O$ 1) Paraphytosterin + H_2O (oder $C_{28}H_{44}O + H_2O$). Sm. 149–150° (H. 15, 430). — II, 1075.
- $C_{24}H_{40}O_2$ 2) Heptadekylphenylketon. Sm. 59° (J. pr. [2] 54, 399).
3) Pentadekyl-2,4-Dimethylphenylketon. Sm. 37°; Sd. 268–269₁₅ (164°) (B. 21, 2269; 29, 1327). — III, 157.
C 80,0 — H 11,1 — O 8,9 — M. G. 360.
- $C_{24}H_{40}O_3$ 1) Caperinin. Sm. 262° (B. 30, 365; J. pr. [2] 57, 434).
2) Lävösosin + $4H_2O$. Na, K, Ca, Ba, Pb, Pb₂ (Bl. [3] 5, 724).
3) Stärke. Lit. bedeutend.
- $C_{24}H_{40}O_4$ 4) Äthyläther d. Pentadekyl-4-Oxyphenylketon. Sm. 69°; Sd. 288 bis 289₁₅ (B. 21, 2270). — III, 157.
5) Phylester d. Stearinsäure. Sm. 52°; Sd. 267₁₅ (B. 17, 1380). — II, 662.
- $C_{24}H_{40}O_5$ 6) Acetat d. Cholesterol. Sm. 124–126° (B. 18, 1807). — II, 1069.
C 76,6 — H 10,6 — O 12,8 — M. G. 376.
- $C_{24}H_{40}O_6$ 1) Dimethyläther d. Pentadekyl-3,5-Dioxyphenylketon. Sm. 63,5°; Sd. 289–290₁₅ (B. 21, 2270). — III, 157.
C 73,5 — H 10,2 — O 16,3 — M. G. 392.
- $C_{24}H_{40}O_7$ 1) Choleinsäure + $1\frac{1}{2}H_2O$ (Desoxycholsäure). Sm. 185–190° (160–170°; 149°). Na, Ba + $6H_2O$, Ag + $1\frac{1}{2}H_2O$ (B. 18, 3041; 19, 375, 1140; 20, 1046, 1970; 26, 146; 27, 1346; H. 17, 608; 19, 573; 21, 270). — I, 734.
2) β -Hyocholeinsäure + $\frac{1}{2}H_2O$. Na + $\frac{1}{2}H_2O$, Ba + $\frac{1}{2}H_2O$, Ag + H_2O (H. 13, 234). — I, 735.
- $C_{24}H_{40}O_8$ C 70,6 — H 9,8 — O 19,6 — M. G. 408.
1) Choleinsäure + $1(2\frac{1}{2})H_2O$. Sm. 194–195°. Na, K, Ca, Ba, Pb, Ag. Lit. bedeutend. — I, 781.
- $C_{24}H_{40}O_9$ C 67,9 — H 9,4 — O 22,6 — M. G. 424.
1) Säure (aus Cholesterin) (B. 5, 510). — III, 1075.
- $C_{24}H_{40}O_{10}$ C 61,0 — H 8,5 — O 30,5 — M. G. 472.
1) Adonin (B. 24, 2579; C. 1896 [2] 590). — III, 566.
- $C_{24}H_{40}O_{11}$ C 59,0 — H 8,2 — O 32,8 — M. G. 488.
1) Yucca-Saponin (oder $C_{48}H_{80}O_{11}$) (C. 1895 [1] 352).
C 55,4 — H 7,7 — O 36,9 — M. G. 520.
- $C_{24}H_{40}O_{12}$ 1) Aescinsäure. K (J. 1862, 490; 1867, 751). — II, 2104.
C 44,4 — H 6,2 — O 49,4 — M. G. 648.
- $C_{24}H_{40}N_2$ 1) Verbindung (aus Melitriose) (Bl. [3] 17, 959).
C 80,9 — H 11,2 — N 7,9 — M. G. 356.
- $C_{24}H_{42}O$ 1) Conessin (Wrightin). Sm. 121,5–122°. $2HCl + 2H_2O$, $(2HCl, 2HgCl_2)$, $(2HCl, PtCl_4 + \frac{1}{2}H_2O)$, $(2HCl, 2AuCl_3 + 2H_2O)$, $2HNO_3$, 2 Pikrat + $2H_2O$ (J. 1864, 456; 1865, 460; 1888, 2237; B. 19, 60, 78, 1683). — III, 875.
C 83,2 — H 12,1 — O 4,6 — M. G. 346.
2) Äthyläther d. 4-Oxy-1-Hexadekylbenzol. Sm. 84°; Sd. 277₁₅ (B. 19, 2985). — II, 777.
— II, 777.
- $C_{24}H_{42}O_2$ 3) Verbindung (aus Mesityloxyd). Sm. 110–120° (A. 180, S). — I, 1008.
C 76,2 — H 11,1 — O 12,7 — M. G. 378.
- $C_{24}H_{42}O_3$ 1) Ivain (A. 155, 150). — III, 634.
C 73,1 — H 10,7 — O 16,2 — M. G. 394.
- $C_{24}H_{42}O_4$ 1) Dimethyläther d. Bernsteinsäure. Sm. 62° (A. ch. [6] 7, 481). — III, 467.

- $C_{21}H_{12}O_6$ C 67,6 — H 9,8 — O 22,5 — M. G. 426.
1) Diacetat d. Verb. $C_{30}H_{38}O_4$ (aus Isobutyraldehyd). Sd. 248—252° (Soc. 43, 95). — I, 947.
- $C_{21}H_{14}O_6$ C 57,8 — H 16,5 — O 25,7 — M. G. 458.
1) Triacetoxylstearinsäure. Fl. (J. pr. [2] 30, 342). — I, 738.
2) Diisobutylester d. Dicaproylweinsäure. Fl. (Bl. [3] 11, 308).
- $C_{21}H_{14}O_{21}$ C 43,6 — H 6,4 — O 50,9 — M. G. 666.
1) β -Maltodextrin (Soc. 71, 517).
2) Trehalose (B. 26, 1331).
- $C_{21}H_{14}N_2$ C 80,4 — H 11,7 — N 7,8 — M. G. 358.
1) γ -Phenylhydrazonoktadekan. Fl. (Bl. [3] 15, 767). — IV, 769.
- $C_{21}H_{14}O_4$ C 72,7 — H 11,1 — O 16,1 — M. G. 396.
1) Verbindung (aus Isobutyraldehyd). Sd. 250—255° (Soc. 43, 95; M. 19, 374). — I, 947.
C 80,0 — H 11,7 — N 7,8 — M. G. 360.
1) 1,2-Di[Diisobutylamidomethyl]benzol. Sm. 56°; Sd. oberh. 200°₂₀ (B. 31, 428).
C 78,7 — H 12,6 — O 8,7 — M. G. 366.
1) Äthylester d. Brassidinsäure. Sm. 29—30°; Sd. oberh. 360° (B. 19, 3324). — I, 528.
2) Äthylester d. Erucasäure. Sd. oberh. 360° (B. 19, 3324). — I, 528.
C 75,4 — H 12,0 — O 12,6 — M. G. 382.
1) Äthylester d. Oxybehensäure (Ac. d. Ketobehensäure). Sm. 54° (J. pr. [2] 48, 338; B. 27, 176).
C 72,4 — H 11,5 — O 16,1 — M. G. 398.
1) Dokosan- $\lambda\mu$ -Dicarbonsäure (s-Didekylbernsteinsäure). Sm. 134° (A. 298, 180).
2) isom. Dokosan- $\lambda\mu$ -Dicarbonsäure (s-Didekylbernsteinsäure). Sm. 74° (A. 298, 180).
3) Äthylester d. Dioxybrassidinsäure. Sm. 54° (B. 26, 840).
C 45,1 — H 7,2 — O 47,6 — M. G. 638.
1) Verbindung (aus Quereit) (A. ch. [5] 15, 25). — I, 283.
C 81,8 — H 13,6 — O 4,5 — M. G. 352.
1) γ -Ketotetrakosan (Hexylseptdekylketon). Sd. 248°₁₉ (B. 15, 1718). — I, 1006.
2) Cerosin. Sm. 82° (A. 37, 170, 173; A. ch. [3] 13, 451). — I, 256.
C 78,3 — H 13,0 — O 8,7 — M. G. 368.
 $C_{21}H_{16}O_4$ 1) Carnaubasäure. Sm. 72,5°. Ca, Pb (A. 223, 306; B. 29, 619, 2899). — I, 448.
2) Cerosinsäure. Sm. 93,5° (A. ch. [3] 13, 451). — I, 256.
3) Gingkosäure. Sm. 35° (J. 1857, 529). — I, 448.
4) Lignocerosinsäure. Sm. 80,5°. Na, K, Pb, Cu, Ag (B. 13, 1713; 21, 880). — I, 448.
5) Paraffinsäure. Sm. 45—47° (Bl. 23, 111; siehe auch $C_{13}H_{26}O_5N$). — I, 448.
6) Säure (aus d. Verb. $C_8H_{14}O$). Sm. 62° (B. 11, 2114).
7) Äthylester d. Behensäure. Sm. 48—49° (A. 64, 344). — I, 448.
8) Oktylester d. Palmitinsäure. Sm. 8,5° (J. 1858, 301). — I, 448.
 $C_{21}H_{18}O_3$ C 75,0 — H 12,5 — O 12,5 — M. G. 384.
1) α -Oxybehenäthyläthersäure. Sm. bei 60° (G. 27 [2] 300).
2) Äthylester d. α -Oxybehenensäure. Sm. 70—71° (G. 27 [2] 300).
3) Äthylester d. α -Oxyarachinäthyläthersäure. Sm. 35—37° (M. 17, 537).
 $C_{21}H_{18}O_6$ C 66,7 — H 11,1 — O 22,2 — M. G. 432.
1) Diglycerinstearat. Sm. 30° (J. pr. [2] 28, 252). — I, 446.
 $C_{21}H_{18}O$ C 81,4 — H 14,1 — O 4,5 — M. G. 354.
1) Carnaubylalkohol. Sm. 68—69° (B. 29, 2898).
C 78,7 — H 13,7 — N 7,6 — M. G. 366.
 $C_{21}H_{30}N_2$ 1) Diisomylönanthylidenamin. Fl. (A. 140, 93). — I, 955.
 $C_{21}H_{31}N$ C 81,6 — H 14,4 — N 4,0 — M. G. 353.
1) norm. Trioktylamin. Sd. 365—367° (2HCl, PtCl₄) (B. 17, 632). — I, 1137.
2) sec. Trioktylamin. Sd. 370°. HCl (2HCl, PtCl₄) (B. 17, 637). — I, 1138.

C₂₁-Gruppe mit drei Elementen.

- C₂₁H₁₀O₂N₃ 1) Verbindung (aus 2-Amido-1-Oxybenzol) (*J. pr.* [2] 19, 321). — II, 713.
- C₂₁H₁₀O₂Br, 1) Tetrabromnaphtalfluoresceïn (Naphtaleosin). Sm. noch nicht bei 310°.
+ C₂H₂O (*A.* 227, 140). — II, 2039.
- C₂₁H₁₀O₂N₂ C 40,3 — H 1,4 — O 42,6 — N 15,7 — M. G. 714.
- C₂₁H₁₁ON, 1) Hexanitroazoresofurin (*B.* 17, 1865; 18, 587). — II, 934.
C 83,7 — H 3,5 — O 4,6 — N 8,1 — M. G. 344.
- C₂₁H₁₁O₂Br, 1) Verbindung (aus Acenaphtenchinon). Sm. noch nicht bei 300° (*A.* 276, 9).
— III, 404.
- C₂₁H₁₁O₂Cl₂ 1) Bisacenaphtylidendionbromid. Sm. 237° (*A.* 276, 19). — III, 311.
- C₂₁H₁₁O₂Cl, 1) Naphtalfluoresceïnchlorid. Sm. 283° (*A.* 227, 139). — II, 2039.
- C₂₁H₁₁O₂Cl₂ 1) Bischlorindonphloroglucin. Sm. 241° u. Zers. (*B.* 32, 266).
- C₂₁H₁₁O₂Br, 1) Hexabromderivat d. Verb. C₂₁H₁₁O₂ (*B.* 10, 1470). — II, 917.
- C₂₁H₁₁O₂Cl, 1) Diacetat d. Tetrachlorfluoresceïn (*A.* 238, 336). — II, 2062.
- C₂₁H₁₁O₂Br, 1) Diacetat d. Tetrabromfluoresceïn^p Sm. 278° (*A.* 183, 53). — II, 2064.
C 39,6 — H 1,6 — O 39,6 — N 19,2 — M. G. 728.
- C₂₁H₁₁O₂N₁₀ 1) *p*-Oktonitro-1,1-Dinaphtylamid d. Bernsteinsäure. Sm. 256° u. Zers.
(*B.* 10, 1713; *A.* 209, 384). — II, 612.
- C₂₁H₁₁OBr₃ 1) Brombisacenaphtylidendibromid. Sm. bei 280° u. Zers. (*A.* 290, 203). — III, 266.
- C₂₁H₁₁O₂N 1) Benzoesäure d. Oxyanthrachinolinchinon. Sm. 175° (*A.* 276, 26). —
IV, 461.
- C₂₁H₁₁O₂Br₁₁ 1) Triacetat d. Xanthogallolsäure (*B.* 20, 2038). — II, 1015.
- C₂₁H₁₁N₂Cl₁₀ 1) Verbindung (aus Dimethylanilin u. Chlorstickstoff). Sm. 117° (*B.* 30, 2648; 31, 246). — IV, 660.
C 83,3 — H 4,0 — O 4,6 — N 8,1 — M. G. 346.
- C₂₁H₁₁ON, 1) Oxynaphtophenanthrazin (*B.* 19, 2792). — IV, 1094.
C 79,6 — H 3,9 — O 8,8 — N 7,7 — M. G. 362.
- C₂₁H₁₁O₂N, 1) 1-Naphtylindigo (*B.* 26, 2547). — II, 1694.
2) 2-Naphtylindigo (*B.* 26, 2547; 31, 1817). — II, 1694.
- C₂₁H₁₁O₂Cl, 1) Phenolnaphtaleïnchlorid. Sm. 180° (*B.* 28, 993). — II, 1989.
- C₂₁H₁₁O₂Br, 1) Diacetat d. *p*-Tetrabrom-9,9-Dioxy-10-Oxyphenylanthracen. Sm. 256° (*A.* 202, 95). — II, 1116.
- C₂₁H₁₁O₂Br, 1) Diacetat d. Tetrabromphenolphtaleïn. Sm. 134° (*A.* 202, 80). —
II, 1984.
2) Diacetat d. Tetrabromphenolphtaleïde. Sm. 182–183° (*A.* 202, 108).
— III, 261.
- C₂₁H₁₁O₂Br, 1) Diacetat d. Dibromfluoresceïn. Sm. 208–210° (*A.* 183, 38). —
II, 2063.
- C₂₁H₁₁O₂N, C 62,9 — H 3,1 — O 27,9 — N 6,1 — M. G. 458.
- C₂₁H₁₁O₂N, 1) Äthylester d. Dinitrophtalaeoncarbonsäure. Sm. oberh. 280° (*B.* 17, 1389). — II, 1915.
- C₂₁H₁₁O₂N, C 59,2 — H 2,9 — O 26,3 — N 11,5 — M. G. 486.
- C₂₁H₁₁O₂N, 1) α -Tetranitro-1,3,5-Triphenylbenzol. Sm. oberh. 370° (*B.* 23, 2535).
— II, 300.
2) β -Tetranitro-1,3,5-Triphenylbenzol. Sm. 108° u. Zers. (*B.* 23, 2535).
— II, 300.
- C₂₁H₁₁O₂N₂ C 56,9 — H 2,8 — O 34,8 — N 5,5 — M. G. 506.
- C₂₁H₁₁O₂N, 1) Diacetat d. Dinitrofluoresceïn (*A.* 183, 30). — II, 2064.
C 43,0 — H 2,1 — O 38,1 — N 16,7 — M. G. 670.
- C₂₁H₁₁O₂N, 1) Hexanitroorcinaurincyaminsäure + H₂O. K₂ (*B.* 13, 567). — II, 1125.
C 79,8 — H 4,2 — O 4,4 — N 11,6 — M. G. 361.
- C₂₁H₁₁ON, 1) Verbindung (aus Aposafrafin u. 2-Amido-1-Oxybenzol) (*B.* 30, 2493). —
IV, 1177.
C 78,9 — H 4,1 — O 13,1 — N 3,8 — M. G. 365.
- C₂₁H₁₁O₂N, 1) 2-Methyl-4-Phenylchinolinphtalon. Sm. 270° (*B.* 18, 2407; 19, 2428).
— IV, 451.
C 73,3 — H 3,8 — O 12,2 — N 10,7 — M. G. 393.
- C₂₁H₁₁O₂N, 1) polym. Cyanid d. Benzolcarbonsäure = (C₆H₅ON)_n. Sm. 195° (*A.* 287, 303).

- $C_{24}H_{15}O_2N_3$ C 67,8 — H 3,5 — O 18,8 — N 9,9 — M. G. 425.
 1) Verbindung (aus Kyanbenzylin) + $\frac{1}{2}H_2O$. Sm. 210° (*J. pr.* [2] **53**, 250). — **IV**, 1217.
- $C_{24}H_{15}O_3N_3$ C 65,3 — H 3,4 — O 21,8 — N 9,5 — M. G. 441.
 1) **2,4,6-Trinitro-1,3,5-Triphenylbenzol** (*B.* 7, 1125). — **II**, 300.
 2) **2-Nitro-1,4-Di[Phthalylamidomethyl]benzol**. Sm. 253—255° (*B.* **28**, 2992). — **IV**, 644.
 3) **Tribenzoylcanurat** (*B.* **19**, 311). — **II**, 1173.
- $C_{24}H_{15}O_4N_3$ C 63,0 — H 3,3 — O 24,5 — N 9,2 — M. G. 457.
 1) **Chrysenpikrat** (*J.* **1864**, 532).
- $C_{27}H_{15}O_5N_3$ C 57,5 — H 3,0 — O 25,5 — N 14,0 — M. G. 501.
 1) Verbindung (aus Acetylamidobenzolazoxindon). Sm. 275—280° (*A.* **228**, 66). — **IV**, 1005.
- $C_{28}H_{15}O_6N_3$ C 58,9 — H 3,1 — O 29,4 — N 8,6 — M. G. 489.
 1) **Triphenyläther d. 2,4,6-Trinitro-1,3,5-Trioxybenzol**. Sm. 175° (*Am.* **13**, 189; **15**, 639). — **II**, 1022.
- $C_{22}H_{15}O_{10}N_{11}$ C 46,7 — H 2,4 — O 25,9 — N 25,0 — M. G. 617.
 1) **Pentanitrodisazobenzolphenylhydrazin**. Zers. bei 144° (*J. pr.* [2] **44**, 465). — **IV**, 1499.
- $C_{24}H_{15}N_4Cl$ 1) **Chlorphenylfluorindin** (*B.* **28**, 1544). — **IV**, 1300.
 $C_{27}H_{16}O_2N_7$ C 79,1 — H 4,4 — O 8,8 — N 7,7 — M. G. 364.
 1) **3-Phenyl- α -Naphthimidazol-2-[Phenyl-2-Carbonsäure]**. Sm. 260°, Ca, HCl, Pikrat (*B.* **27**, 2774). — **IV**, 920.
 2) **Acetat d. Oxyphenyl-naphthophenazin**. Sm. 262—262,5° (*A.* **206**, 25). — **IV**, 1090.
- $C_{24}H_{16}O_3S_2$ 1) **Dibenzol d. β -Dimerkaptonaphthalin**. Sm. 152—153° (*B.* **23**, 2371). — **II**, 1151.
- $C_{27}H_{16}O_4N_2$ C 75,8 — H 4,2 — O 12,6 — N 7,4 — M. G. 380.
 1) Verbindung (aus Diacetylweinsäureanhydrid u. β -Naphtylamin) (*Soc.* **71**, 1082).
- $C_{24}H_{16}O_5N_4$ C 70,6 — H 3,9 — O 11,8 — N 13,7 — M. G. 408.
 1) **5,7-Anhydrid d. 10-Nitro-5-Acetyl-amido- α - β -Naphthophenazin-7-Phenyloxyhydrat** (*B.* **31**, 3079).
- $C_{27}H_{16}O_6N_2$ C 72,7 — H 4,0 — O 16,2 — N 7,1 — M. G. 396.
 1) **1,2-Di[Phthalylamidomethyl]benzol**. Sm. 266° (*B.* **21**, 579; **26**, 2213). — **II**, 1807.
 2) **1,3-Di[Phthalylamidomethyl]benzol**. Sm. 237° (*B.* **21**, 2704). — **IV**, 643.
 3) **1,4-Di[Phthalylamidomethyl]benzol**. Sm. 279—280° (*B.* **28**, 2992). — **IV**, 644.
- $C_{24}H_{16}O_8N_4$ C 67,9 — H 3,8 — O 15,1 — N 13,2 — M. G. 424.
 1) **Isodinitroazodiphenyl?** Sm. 187° (*B.* **10**, 140). — **IV**, 1402.
- $C_{27}H_{16}O_9N_4$ C 65,4 — H 3,6 — O 18,2 — N 12,7 — M. G. 440.
 1) **4,4'-Di[4-Nitrophenyl]azoxybenzol**. Sm. 255° (*B.* **10**, 138). — **IV**, 1341.
 2) **Inatilin** (*J. pr.* [1] **35**, 124). — **II**, 1609.
 3) **1-Oxy-2,4-Diphenylazonaphthalin-2',4'-Dicarbonsäure**. Zers. bei 264° (*B.* **24**, 1605). — **IV**, 1464.
- $C_{24}H_{16}O_8Br_2$ 1) **Diäthyläther d. Tetrabromfluorescein** (*A.* **183**, 51). — **II**, 2064.
 2) **α ,2'-Lakton d. P-Tetrabrom- α ,4'-Dioxy-4'-Acetoxytriphenylmethan-4'-Aethyläther-2'-Carbonsäure**. Sm. 110—111° (*B.* **30**, 179).
- $C_{27}H_{16}O_8Br_2$ 1) **P-Tetrabrom-P-Diacetoxytriphenylmethan-2-Carbonsäure**. Sm. 165—166° (*A.* **202**, 87). — **II**, 1911.
- $C_{27}H_{16}O_8N_6$ C 55,8 — H 3,1 — O 24,8 — N 16,3 — M. G. 516.
 1) **4,4'-Di[2,4-Dinitrophenylamido]biphenyl**. Sm. oberh. 330° (*B.* **9**, 962). — **IV**, 963.
- $C_{24}H_{16}O_{10}N_6$ C 52,6 — H 2,9 — O 29,2 — N 15,3 — M. G. 548.
 1) **P-Tetranitro-1,1-Dinaphtylamid d. Bernsteinsäure**. Sm. 225° u. Zers. (*B.* **10**, 1713; *A.* **209**, 383). — **II**, 612.
- $C_{24}H_{16}N_6S$ 1) Verbindung (aus 2,5-Di-1-Naphtylamido-1,3,4-Thiodiazol). Sm. 203° (*B.* **23**, 361). — **IV**, 1237.
 2) Verbindung (aus 2,5-Di-2-Naphtylamido-1,3,4-Thiodiazol). Sm. 200° (*B.* **23**, 363). — **IV**, 1237.
- $C_{24}H_{17}ON$ C 86,0 — H 5,0 — O 4,8 — N 4,2 — M. G. 335.
 1) **β -(1-Naphtyl)imido- α -Keto- α - β -Diphenyläthan (α -Naphtilbenzil)**. Sm. 138—139° (*M.* **9**, 691). — **III**, 285.

- $C_{22}H_{11}ON$ 2) meso-Keto-N-Benzylidihydrophenonaphtakridin. Sm. 188—189° (B. 26, 2595). — IV, 464.
- $C_{23}H_{17}ON_3$ C 79,3 — H 4,7 — O 4,4 — N 11,6 — M. G. 363.
- 1) 1-Acetyl-2,6-Di[2-Naphtyl]-1,3,4-Triazol. Sm. 187° (B. 30, 1884; A. 298, 43). — IV, 1217.
- 2) Phenylamidobenzolindon (Phenylamidoaposafranon). Sm. 256° (A. 266, 253; B. 26, 383; 28, 2287; 29, 1605). — IV, 1179.
- 3) s-Phenylamidobenzolindon (Mauvindon) (A. 286, 208). — IV, 1179.
- 4) Acetylrosindulin. HCl, (2HCl, PtCl₄), H₂SO₄ (A. 290, 266). — IV, 1207.
- 5) Acetylrosindulin. HCl, (2HCl, PtCl₄) (J. r. 29, 556). — IV, 1202.
- $C_{24}H_{17}O_2N_3$ C 76,0 — H 4,5 — O 8,4 — N 11,1 — M. G. 379.
- 1) 2-[3-Nitrophenyl]-3-[4-Methylphenyl]- α -Naphtimidazol. Sm. 197° (B. 25, 2833). — IV, 1062.
- 2) Oxyphenylindulin (Phenylamidoaposafranin). HCl (A. 286, 200; B. 29, 369). — IV, 1179.
- $C_{25}H_{17}O_2N$ C 78,5 — H 4,6 — O 13,1 — N 3,8 — M. G. 367.
- 1) 5-Benzoyl-3-[4-Methylphenyl]amido-1,4-Naphtochinon. Sm. 196 bis 197° (A. 247, 185). — III, 255.
- 2) Benzoiat d. 1-Benzoylamido-2-Oxynaphtalin. Sm. 226,5° (Sec. 55, 121). — II, 1180.
- 3) Verbindung (aus Anilin u. d. 1-Phenylaphtalin-2,3-Dicarbonsäureanhydrid). Sm. 194° u. Zers. (Am. 20, 97).
- $C_{27}H_{17}O_4N$ C 75,2 — H 4,4 — O 16,7 — N 3,7 — M. G. 383.
- 1) Phenolnaphtaleinoxim. Sm. 220° (B. 28, 993). — II, 1989.
- 2) 1,2,5-Triphenylbenzol-2',5'-Dicarbonsäure. Sm. 295°. Ag (B. 20, 1487). — IV, 452.
- 3) Lakton d. δ -Nitro- γ -Oxy- δ -[3-Methylphenyl]- α - β -Diphenyl- α - γ -Butadien- α -Carbon säure (Nitro-m-Xylalidiphenylmaleid). Sm. 165° (B. 26, 2482). — II, 1729.
- 4) 1-Naphtylester d. 2-[Phenylamidoformyl]oxybenzol-1-Carbon säure. Sm. 244° (B. 26, 1466). — II, 1496.
- 5) 2-Naphtylester d. 2-Phenylamidoformyl]oxybenzol-1-Carbon säure. Sm. 268° (B. 26, 1466). — II, 1496.
- 6) Monophenylamid d. Pulvinsäure. Sm. 187—188°. NH₄, K + 2H₂O, Zn (A. 282, 26). — II, 2031.
- $C_{28}H_{17}O_4N_2$ C 70,1 — H 4,1 — O 15,6 — N 10,2 — M. G. 411.
- 1) 1,4-Di[Benzoylamido]-3-Phenylamido-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin (Hippuroflavinmonanilid). Sm. 189—192° (B. 26, 2323; A. 287, 82). — II, 1185.
- $C_{28}H_{17}O_4N_2$ C 65,6 — H 3,9 — O 14,6 — N 15,9 — M. G. 439.
- 1) Isatimid (J. pr. [1] 35, 122). — II, 1609.
- 2) 3-Methyl-2,3-Di[4-Nitrophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin (Sec. 59, 694). — IV, 1396.
- $C_{28}H_{17}O_4N_2$ C 59,6 — H 3,5 — O 16,6 — N 20,3 — M. G. 483.
- 1) 2,4-Diphenylazo-6-[3-Nitrophenylazo]-1,3,5-Trioxylbenzol. Sm. 290° u. Zers. (Sec. 71, 1156). — IV, 1451.
- $C_{28}H_{17}O_4N_2$ C 59,1 — H 3,5 — O 23,0 — N 14,4 — M. G. 487.
- 1) Säure (aus 3-Cyanamidobenzol-1-Carbon säure) (B. 15, 2119). — II, 1270.
- $C_{28}H_{17}O_4Br_2$ 1) Tetracetat d. Tribrombrasilin + H₂O (B. 23, 1429). — III, 655.
- $C_{28}H_{17}N_3Br$ 1) 4-Bromphenylat d. 2-Phenyl-1,4-Naphtisodiazin (B. 24, 1873). — IV, 1064.
- $C_{28}H_{17}N_3Cl_4$ 1) Chlorphenylaposafranin. 2 + PtCl₄ (B. 31, 302). — IV, 1177.
- $C_{28}H_{18}ON_2$ C 82,3 — H 5,1 — O 4,6 — N 8,0 — M. G. 350.
- 1) 1,2-Di[Benzoylamido]naphtalin. Sm. 291° (A. 254, 256). — IV, 919.
- 2) 4,4'-Diphenylazoxybenzol. Sm. 205° (B. 13, 1960). — IV, 1341.
- 3) 2-[2-Oxyphenyl]-3-[4-Methylphenyl]- α -Naphtimidazol. Sm. 217° (B. 25, 2834). — IV, 1062.
- 4) 4-Phenyloxyhydrat d. 2-Phenyl-1,4-Naphtisodiazin. Sm. 148°. Bromid (B. 24, 1873, 2682). — IV, 1064.
- 5) Verbindung (aus Oxalylidibenzylketon u. 3,4-Diamido-1-Methylbenzol). Sm. 290—291° (A. 284, 260). — IV, 621.
- $C_{28}H_{18}ON_2$ C 76,2 — H 4,8 — O 4,2 — N 14,8 — M. G. 378.
- 1) 4-[1-Naphtyl]amido-5-Keto-3-Methyl-1-[1-Naphtyl]-4,5-Dihydropyrazol. Sm. 220° (Sec. 59, 343). — IV, 930.

- C₁₁H₁₀ON₄** 2) **2-2-β-Oxynaphthylazo-4-Methylphenyl]bensimidazol**. HCl (*B. 31*, 323). — *IV*, 1491.
3) **5,7-Anhydrid d. 5-Amido-10-Acetylamido-αβ-Naphtophenazin-7-Phenyloxydhydrat** (*B. 31*, 3081).
- C₁₁H₁₀ON₆** C 70,9 — H 4,4 — O 3,9 — N 10,7 — M. G. 406.
1) **Hexaazoxybenzol**. Sm. 206° u. Zers. (*B. 20*, 362; *M. 7*, 129). — *IV*, 1336, 1350.
- C₁₁H₁₀OBr** 1) **p-Dibrom-4-Keto-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol**. Sm. 218° (*A. 281*, 73). — *III*, 263.
2) **isom. p-Dibrom-4-Keto-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol**. Sm. 175° (*A. 281*, 73). — *III*, 263.
- C₁₁H₁₀O₂N₂** C 78,7 — H 4,9 — O 8,7 — N 7,6 — M. G. 366.
1) **ββ-Dibenzoyl-α-[2-Naphtyl]hydrazin**. Sm. 162–163° (*A. 253*, 27). — *IV*, 930.
2) **Diphenyläther d. 2,2'-Dioxyazobenzol**. Sm. 168–169° (*B. 29*, 1448). — *IV*, 1405.
3) **Diphenyläther d. 4,4'-Dioxyazobenzol**. Sm. 149,5–150° (*B. 29*, 1446). — *IV*, 1406.
4) **2,3-Diketo-1,4-Di[1-Naphtyl]hexahydro-1,4-Diazin**. Sm. 281–283° (*B. 25*, 2948). — *II*, 611.
5) **2,3-Diketo-1,4-Di[2-Naphtyl]hexahydro-1,4-Diazin**. Sm. oberh. 360° (*B. 25*, 2949). — *II*, 620.
6) **2,5-Diketo-1,4-Di[1-Naphtyl]hexahydro-1,4-Diazin**. Sm. 274–275° (*B. 23*, 2006; *25*, 2295; *J. pr.* [2] *40*, 437). — *II*, 613.
7) **2,5-Diketo-1,4-Di[2-Naphtyl]hexahydro-1,4-Diazin**. Zers. oberh. 360° (*B. 23*, 2006). — *II*, 621.
8) **Aethyläther d. 9-Oxyrosindon[5]**. Sm. 269° (*B. 31*, 2484).
9) **1,1-Dinaphtylamid d. Fumarsäure** (*B. 24*, 2005). — *II*, 612.
10) **Verbindung (aus Diazobenzolnitrat)** (*A. 137*, 79, 81). — *IV*, 1515.
- C₁₁H₁₀O₂N₄** C 73,1 — H 4,6 — O 8,1 — N 14,2 — M. G. 394.
1) **4,4'-Di[4-Oxyphenylazo]biphenyl** (*B. 27*, 3360). — *IV*, 1418.
2) **Acetat d. 2,4-Di[Phenylazo]-1-Oxynaphtalin**. Sm. 159–160° (*B. 24*, 1595). — *IV*, 1433.
3) **Verbindung (aus Cinnamylphenylazimid)**. Sm. 248° (*Soc. 61*, 285). — *IV*, 671.
- C₁₁H₁₀O₂S** 1) **Biphenylsulfon**. Sm. 214–216° (*B. 13*, 387). — *II*, 895.
- C₁₁H₁₀O₂N₂** C 75,4 — H 4,7 — O 12,6 — N 7,3 — M. G. 382.
1) **3-Keto-1,4-Dibenzoyl-5-Methyl-2-Phenyl-2,3-Dihydropyrazol**. Sm. 157° (*A. 268*, 127). — *IV*, 550.
2) **Tribenzoylmelamin**. Sm. 275° u. Zers. (*J. pr.* [2] *13*, 282; [2] *42*, 102). — *II*, 1173.
3) **Azin (aus o-Toluyldiamin u. Acetylmethylnorpholchinon)**. Sm. 212° (*B. 31*, 53).
4) **Hydrobenzamidtrialdehyd** (*B. 18*, 575). — *III*, 93.
5) **Verbindung (aus Traubensäurem α-Naphtylamin)**. Sm. noch nicht bei 330° (*B. 29*, 2721).
- C₁₁H₁₀O₂N₆** C 65,8 — H 4,1 — O 10,9 — N 19,2 — M. G. 438.
1) **1,3,5-Tri[Phenylnitrosamido]benzol**. Sm. 264–265° (*G. 20*, 343). — *IV*, 1125.
2) **2,4,6-Triphenylazo-1,3,5-Trioxymbenzol**. Sm. oberh. 300° (*Soc. 71*, 1154). — *IV*, 1451.
- C₁₁H₁₀O₂N₂** C 72,4 — H 4,5 — O 16,1 — N 7,0 — M. G. 398.
1) **3,5-Diketo-2-Benzoyl-4-[α-Oxybenzyliden]-1-[4-Methylphenyl]-tetrahydropyrazol**. Sm. 133° (*B. 30*, 1022). — *IV*, 808.
2) **1-Phenylamido-2,5-Diphenylpyrrol-3,4-Dicarbonsäure + H₂O**. Sm. 154° (*A. 293*, 109). — *IV*, 1037.
3) **Aethyl ester d. Dioximidophthalconcarbonensäure**. Sm. 263–264° (*B. 17*, 1393). — *II*, 1916.
4) **Phenylmonohydrasid d. Pulvinsäure**. Sm. 201–202°. NH₄, Ca, Phenylhydrazinalz (*A. 282*, 36). — *IV*, 725.
- C₁₁H₁₀O₂N₄** C 67,6 — H 4,2 — O 15,0 — N 13,1 — M. G. 426.
1) **4,4'-Di[2-Nitrophenylamido]biphenyl**. Sm. 240° (*B. 22*, 904). — *IV*, 963.
2) **4,4'-Di[2,4-Dioxyphenylazo]biphenyl** (*B. 22*, 3015). — *IV*, 1446.

- $C_{14}H_{11}O_2Cl_2$ 1) Dibenzoesat d. Dichlornaphthydreglykol. Sm. 148—150° (*B.* 18, 208). — II, 185.
- $C_{17}H_{11}O_2Br_4$ 1) α , 2^o-Lakton d. *p*-Tetrabrom- α , 4', 4'-Trioxytriphenylmethan-4', 4'-Diäthyläther-2'-Carbonsäure (Diäthyläther d. laktoiden Phenolphthalein). Sm. 175° (*B.* 30, 179).
2) Aethylätheräthylester d. chinoiden Tetrabromphenolphthalein. Sm. 150—151° (*B.* 30, 178).
- $C_{14}H_{11}O_2S$ 1) Diacetat d. Di[2-Oxynaphtyl]-*p*-Sulfid. Sm. 147—148° (*B.* 27, 3001).
2) Diacetat d. Di[2-Oxynaphtyl]-*p*-Sulfid. Sm. 154° (*B.* 27, 2545). — II, 986.
3) Diacetat d. Di[2-Oxynaphtyl]-*p*-Sulfid. Sm. 193° (*B.* 27, 2997).
- $C_{14}H_{11}O_2S_2$ 1) Diacetat d. Di[2-Oxynaphtyl]-*p*-Disulfid. Sm. 140° (*B.* 23, 3367). — II, 986.
2) Diacetat d. Di[2-Oxynaphtyl]-*p*-Disulfid. Sm. 194° (*B.* 27, 2998).
- $C_{17}H_{11}O_2S_4$ 1) Diacetat d. Di[2-Oxynaphtyl]-*p*-Tetrasulfid. Sm. 164° (*B.* 27, 2997).
- $C_{17}H_{11}O_2N_4$ 1) Phthalylidiphenylasparagin (3 Modif.). α -Modif. + H_2O Sm. 112° (178 bis 180° wasserfrei); β -Modif. Sm. 203—204°, Ag; γ -Modif. + H_2O Sm. 193—194°, Ag (*G.* 16, 10). — II, 1811.
2) Verbindung (Säure aus 3-Amidobenzol-1-Carbonsäure). Sm. über 300° u. Zers. (*A.* 281, 6). — II, 1677.
3) Verbindung (Säure aus 4-Amidobenzol-1-Carbonsäure). Sm. über 300° u. Zers. (*A.* 281, 5). — II, 1677.
- $C_{17}H_{11}O_2S_2$ 1) Di[3-Phenylsulfonphenyl]äther. Sm. 69—70° (*B.* 20, 186). — II, 814.
- $C_{17}H_{11}O_2N_2$ 1) Diacetat d. H 4,2 — O 22,3 — N 6,5 — M. G. 430.
2) Hydrobensamid-4-Tricarbonsäure. Ag_2 (*B.* 19, 576). — III, 93.
3) Diäthylester d. Triphenidioxazindicarbonsäure. Sm. oberh. 300° (*B.* 30, 994). — IV, 1083.
3) Verbindung (aus d. Benzol-1,2-Dicarbonensäuremonaldehyd). Sm. 188° (*A.* 239, 88). — II, 1625.
4) Verbindung (aus Piperonal). Sm. 172° (*B.* 14, 792). — III, 103.
5) Verbindung (aus Piperonal). Sm. 213° (*B.* 14, 791). — III, 103.
- $C_{17}H_{11}O_2N_3$ 1) C 59,3 — H 3,7 — O 19,7 — N 17,3 — M. G. 486.
2) 2, 4, 6-Trinitro-1, 3, 5-Tri[Phenylamido]benzol. Sm. 238° (*Am.* 10, 290). — IV, 1125.
- $C_{17}H_{11}O_2Br_4$ 1) Hexabromhomopteroocarpin (*A. ch.* [6] 17, 117). — III, 673.
- $C_{17}H_{11}O_2S_2$ 1) 1, 3, 5-Triphenylbenzol-*p*-Disulfonsäure. Ba (*B.* 23, 2536). — II, 300.
- $C_{17}H_{11}O_2S_2$ 1) 3, 4-Methylenäther d. α -Trithio-3, 4-Dioxybenzaldehyd (Trithio-piperonal). Sm. 183° (*B.* 29, 146). — III, 103.
2) 3, 4-Methylenäther d. β -Trithio-3, 4-Dioxybenzaldehyd. Sm. 236° (*B.* 29, 147). — III, 103.
- $C_{17}H_{11}O_2S_4$ 1) Verbindung (aus Diphenylsulfondisulfonsäure). Sm. 192—193° (*B.* 19, 3127). — II, 815.
- $C_{17}H_{11}O_2N_2$ 1) C 64,6 — H 4,0 — O 25,1 — N 6,3 — M. G. 446.
2) Triacetat d. Trioxyphenylaposafranon. Sm. 220—225° (*B.* 31, 2439).
- $C_{17}H_{11}O_2S_2$ 1) Diphenylester d. Diphenylsulfon-*p*-Disulfonsäure. Sm. 131—132° (*J. pr.* [2] 47, 373). — II, 840.
- $C_{17}H_{11}O_2Br_2$ 1) Tetracetat d. Dibrombrasilein + H_2O (*B.* 23, 1429). — III, 655.
- $C_{17}H_{11}O_2Br_4$ 1) Tetracetat d. Tetrabrombrasilein. Sm. 220—222° (*B.* 18, 1141). — III, 654.
- $C_{17}H_{11}O_2S_2$ 1) Tribenzolsulfonat d. 1, 2, 3-Trioxybenzol. Sm. 140—142° (*B.* 24, 418). — II, 1012.
2) Tribenzolsulfonat d. 1, 3, 5-Trioxybenzol. Sm. 115—117° (*B.* 24, 418). — II, 1020.
- $C_{17}H_{11}O_4N_2$ 1) C 44,8 — H 2,8 — O 34,9 — N 17,4 — M. G. 642.
2) Lakton d. α -Oxy- α' -Hexanitrotetramethylamidodiphenyl]- α' -Phenylmethan- α'' -2-Carbonsäure. Tafeln. Zers. bei 230° (*A.* 206, 99). — II, 1723.
- $C_{17}H_{11}O_4S_2$ 1) Anhydrid d. 1, 3, 5-Trioxybenzolsulfonsäure (*A.* 178, 194). — II, 1022.
- $C_{17}H_{11}N_2Cl$ 1) Phenylaposafranchlorid. 2 + $PtCl_4$ (*B.* 30, 2925).
- $C_{17}H_{11}N_2S_2$ 1) Disulfid d. 4-Merkaptoazobenzol. Sm. 162° (*J. pr.* [2] 41, 210). — IV, 1411.

- C₂₂H₁₉ON** C 85,4 — H 5,6 — O 4,7 — N 4,2 — M. G. 337.
- 1) β -[2-Naphtylamido- α -Keto- α - β -Diphenyläthan. Sm. 131—132°. HCl (*J. pr.* [2] **34**, 22; *B.* **26**, 1339). — III, 221.
 - 2) 5-Keto-2-[3-Methylbenzyliden]-3,4-Diphenyl-2,5-Dihydropyrrrol (m-Xylaldiphenylmaleimidin). Sm. 224—225° (*B.* **26**, 2482). — II, 1729.
 - 3) 1-[4-Isopropylphenyl]phenanthrenoxazol. Sm. 186° (*Soc.* **39**, 225). — III, 446.
 - 4) 2-Methylphenyl-2-Naphtylamid d. Benzolcarbonsäure. Sm. 117—118° (*B.* **16**, 2083). — II, 1168.
 - 5) 4-Methylphenyl-2-Naphtylamid d. Benzolcarbonsäure. Sm. 139° (*B.* **16**, 2080). — II, 1168.
- C₂₂H₁₉ON₂** C 78,9 — H 5,2 — O 4,4 — N 11,5 — M. G. 365.
- 1) 2,5-Di[Phenylamido]-1,4-Benzochinonphenylimid. Sm. 202—203° (*B.* **18**, 787; **21**, 675, 910; **25**, 3574; **31**, 1459; *A.* **262**, 247; **273**, 118; *M.* **9**, 415). — III, 341.
 - 2) Dimethylamidophenylphenonaphtoxazin. Sm. bei 275°. HCl (*B.* **25**, 3000; *J.* **1881**, 571). — IV, 1209.
 - 3) Methyläther d. 2-[2-Oxyphenyl]-3-Phenyl-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 167° (*Soc.* **59**, 698). — IV, 1115.
 - 4) Verbindung (aus Phenylindulin). Sm. 218° u. Zers. (*A.* **266**, 250). — IV, 1280.
- C₂₁H₁₉ON₂** C 73,3 — H 4,8 — O 4,1 — N 17,8 — M. G. 363.
- 1) 4-Acetylamido-1,3-Di[Phenylazo]naphtalin. Sm. 265° (*B.* **21**, 3241). — IV, 1401.
 - 2) α -Acetylamidonaphtalindisazobenzol. Sm. 275° (*B.* **21**, 2146). — IV, 1401.
 - 3) β -Acetylamidonaphtalindisazobenzol. Sm. 206° (*B.* **21**, 2147). — IV, 1401.
 - 4) 3-[2- β -Naphtolasobenzyl]-3,4-Dihydro-1,2,3-Benstriazin. Sm. 185° u. Zers. (*J. pr.* [2] **55**, 368). — IV, 1492.
- C₂₁H₁₉O₂N** C 81,6 — H 5,4 — O 9,1 — N 3,9 — M. G. 353.
- 1) Benzoyanidin. Sm. 123—124° (*Soc.* **37**, 742). — II, 1157.
 - 2) 2,5-Diphenyl-1-[2-Methylphenyl]pyrrrol-3-Carbonsäure. Sm. 226 bis 227° (*B.* **22**, 3088). — IV, 449.
 - 3) 2,5-Diphenyl-1-[4-Methylphenyl]pyrrrol-3-Carbonsäure. Sm. 205 bis 206° (*B.* **22**, 3089). — IV, 449.
 - 4) Phenylimid d. β -Truxillsäure. Sm. 180° (*B.* **26**, 836). — II, 1902.
- C₂₁H₁₉O₂N₂** C 75,6 — H 5,0 — O 8,4 — N 11,0 — M. G. 381.
- 1) 2-Oxy-1-[2-Benzoylamidomethylphenyl]azonaphtalin. Sm. 215° (*J. pr.* [2] **51**, 283). — IV, 1437.
 - 2) Methyläther d. 2-Oxyphenylbenzoylhydrazinido- β -Naphtalin. Sm. 152—153° (*B.* **18**, 3131). — IV, 1576.
 - 3) Phenanthronitropseudobutylphenazin. Sm. 235—236° (*J. pr.* [2] **48**, 107). — IV, 647.
 - 4) 12-Phenyloxhydrat d. 5-Acetylamido- α - β -Naphtophenazin. Chlorid, 2 Chlorid + PtCl₄, Sulfat (*A.* **290**, 263). — IV, 1207.
 - 5) 12-Phenyloxhydrat d. 9-Acetylamido- α - β -Naphtophenazin. Chlorid, 2 Chlorid + PtCl₄, Bichromat (*B.* **31**, 3100).
 - 6) Base (aus Anilin u. Muscarinhydrochlorid). HCl (*B.* **25**, 3004). — IV, 1209.
 - 7) 2-[4-Methylphenyl]amido-1-Phenylazonaphtalin-1'-Carbonsäure. Sm. 221° (*B.* **28**, 336). — IV, 1462.
 - 8) 2-[4-Methylphenyl]amido-1-Phenylazonaphtalin-1'-Carbonsäure. Sm. 245°. Na (*B.* **28**, 336). — IV, 1462.
 - 9) 2-[4-Methylphenyl]amido-1-Phenylazonaphtalin-1'-Carbonsäure. Sm. 262°. Na (*B.* **28**, 335). — IV, 1462.
 - 10) 1-Benzolazo-2-Methyl-5-Phenylpyrrrol-3-Carbonsäure. Sm. 195° (*B.* **19**, 3162). — IV, 1486.
- C₂₁H₁₉O₃N** C 78,0 — H 5,1 — O 13,0 — N 3,8 — M. G. 369.
- 1) Acetylderivat d. 2-Diphenylamido-1,4-Naphtochinon. Sm. 172—173° (*Soc.* **37**, 642). — III, 376.
 - 2) 1-Benzoyl-2,4,5-Trimethylphenylimid d. Benzol-1,2-Dicarbonensäure. Sm. 181° (*B.* **17**, 1803). — III, 237.

- C₁₄H₁₃O₂N₅** C 67,7 — H 4,5 — O 11,3 — N 16,5 — M. G. 425.
 1) 4-Nitrobenzylazo-1,3-Xylolazo- β -Naphtol. Sm. 278° (Soe. 43, 434). — IV, 1437.
- C₁₅H₁₃O₂N₅** C 84,5 — H 5,6 — O 19,8 — N 20,5 — M. G. 441.
 1) 2,4-Dinitro-1,3,5-Tri Phenylamido benzol. 2 Modif. Sm. 179°. + CHCl₃ (Am. 11, 455; 18, 37; 18, 668). — IV, 1125.
 2) 7-[4-Acetylamidophenyl]oxydhydrat d. 10-Nitro-5-Amido- $\alpha\beta$ -Naphthophenazin. Sm. 250° u. Zers. (B. 31, 3066).
- C₁₇H₁₃O₂N** C 71,8 — H 4,7 — O 20,0 — N 3,5 — M. G. 401.
 1) 1-Keto-3,3-Di[β -Acetoxyphenyl]-1,3-Dihydroisindol (Diacetat d. Imidophenolphthalein). Sm. 254–256° (G. 24 [1] 76). — II, 1935.
- C₁₇H₁₁O₂N** C 69,1 — H 4,6 — O 23,0 — N 3,3 — M. G. 417.
 1) Verbindung (aus 3,4-Dioxy-1-[β -Amidoäthyl]benzylmethyläther-2-Carbonsäure). Sm. 148–150° (Soe. 57, 1059). — II, 1764.
- C₂₁H₁₉O₂Br** 1) Tetracetat d. Tribrombrasilin. Sm. 145–147° (B. 18, 1140). — III, 654.
 2) isom. Tetracetat d. Tribrombrasilin. Sm. 263° (B. 22, 1552). — III, 654.
- C₂₁H₁₁O₁₂N₁₁** C 36,3 — H 2,4 — O 24,2 — N 37,1 — M. G. 793.
 1) Trinitroderivat d. Verb. C₂₁H₁₁O₁₂N₁₁ (B. 27, 942).
- C₂₁H₁₉N₂Br** 1) Phenanthrobromisobutylphenazin (aus 5-Brom-3,4-Diamido-1-Isobutylbenzol). Sm. 153,5° (B. 21, 2955). — IV, 646.
- C₂₁H₁₉N₂J** 1) Jodphenylat d. Base C₂₁H₁₉N₂ (B. 28, 350).
- C₂₁H₂₀ON₂** C 81,8 — H 5,7 — O 4,5 — N 8,0 — M. G. 352.
 1) 6-Oxy-5-Phenyl-2,4-Dibenzyl-1,3-Diazin. Sm. 180° (J. pr. [2] 39, 258). — IV, 1089.
 2) 2-Keto-1,4-Di[1-Naphtyl]hexahydro-1,4-Diazin. Sm. 92° (B. 25, 2934). — II, 613.
 3) 2-Keto-1,4-Di[2-Naphtyl]hexahydro-1,4-Diazin. Sm. 222–224° (B. 25, 2935). — II, 621.
 4) 2-Keto-4-Methyl-1,3-Di[2-Naphtyl]tetrahydroimidazol (Propylen-2-Dinaphtylharnstoff). Sm. 157° (B. 25, 3280). — II, 618.
 5) 2-[2-Oxybenzyliden]amido-1-[1-Naphtylamido]methylbenzol. Sm. 162° (J. pr. [2] 52, 409). — IV, 628.
 6) 2-[Oxybenzyliden]amido-1-[2-Naphtylamido]methylbenzol. Sm. 117° (J. pr. [2] 52, 412). — IV, 629.
 7) 4-[4-Methylphenyl]imido- β -[4-Methylphenyl]amido-1-Keto-1,4-Dihydronaphtalin. Sm. 183°. HCl, Pikrat (B. 8, 1025; 13, 125; 17, 715; 21, 394; Soe. 45, 159). — III, 394.
 8) 2-Naphtylamid d. β -[2-Naphtyl]amidoeronsäure. Sm. 200° (B. 17, 543). — II, 622.
 9) Verbindung (aus Bis-2-Nitroso-1,4-Dimethylnaphtalin). Zers. bei 180° (G. 26 [1] 34).
 10) Verbindung (aus Zimmtaldehyd, Anilin u. Brenztraubensäure). Sm. 194° (B. 22, 3007). — IV, 459.
- C₂₁H₂₀ON₂** C 75,8 — H 5,3 — O 4,2 — N 14,7 — M. G. 380.
 1) 4,4'-Di[Phenylamido]azoxybenzol. Sm. 173° (B. 21, 2614). — IV, 1338.
 2) β -Di[4-Methylphenylazo]-1-Oxynaphtalin. Sm. 205–206° (B. 28, 1895). — IV, 1437.
 3) 5-[2-Methylphenyl]azo-2-[2-Oxy-1-Naphtyl]azo-1-Methylbenzol. Sm. 186° (B. 20, 1182). — IV, 1437.
 4) 3-[4-Methylphenyl]azo-4-[2-Oxy-1-Naphtyl]azo-1-Methylbenzol. Sm. 177° (B. 20, 1179). — IV, 1437.
 5) 3-[4-Methylphenyl]azo-4-[4-Oxy-1-Naphtyl]azo-1-Methylbenzol. Sm. 210° (B. 20, 1178). — IV, 1437.
 6) Äthyläther d. 2,4-Di[Phenylazo]-1-Oxynaphtalin. Sm. 121° (B. 24, 1595). — IV, 1433.
 7) α -Phenyl- β -[4-Methylphenyl]- β -[2-Naphtyl]azoharnstoff. Sm. 110° (B. 21, 2568). — IV, 1576.
 8) Diphenylhydrason d. 8-Aldehyd d. Naphtalin-1,8-Dicarbonsäure. Sm. 213° (A. 276, 16). — II, 1694.
- C₂₁H₂₀OAs** 1) Diphenylarsenoxyd. Sm. 91–92° (B. 15, 1954; A. 201, 229). — IV, 1687.

- $C_{14}H_{10}O_2N_2$ C 78,3 — H 5,4 — O 8,7 — N 7,6 — M. G. 368.
- 1) Methylenäther d. *s*-Phenylhydrazon-*s*-Phenyl- α -[3,4-Dioxyphenyl]- α - γ -Pentadien. Sm. 49–50° (B. 28, 1194). — IV, 778.
 - 2) 4,4'-Difuralamido-3,3'-Dimethylbiphenyl. Sm. 188–189° (192°) (B. 30, 2013, 2302; A. 268, 378). — IV, 982.
 - 3) *p*-Di[Acetylamido]binaphtyl. Sm. oberh. 200° (B. 18, 3256). — IV, 1073.
 - 4) *p*-Di[Acetylamido]-1,1-Binaphtyl. Sm. oberh. 300° (B. 19, 2551). — IV, 1073.
 - 5) Dimethyläther d. Di[2-Oxy-1-Naphtyliden]hydrasin. Sm. 265° (B. [3] 17, 310).
 - 6) Dimethyläther d. Di[4-Oxy-1-Naphtyliden]hydrasin. Sm. 185° (B. [3] 17, 307).
 - 7) Diäthyläther d. Dioxybiphenylenchinoxalin. Sm. 260° (B. 23, 1212). — III, 445.
 - 8) Chinolinresorcin. Sm. 102° (B. 16, 886). — IV, 253.
 - 9) Chinolinhydrochinon (B. 16, 886). — IV, 253.
 - 10) 1,1-Dinaphtylamid d. Bernsteinsäure. Sm. 285° u. Zers. (275°) (A. 209, 382; B. 10, 1713; C. 1896 [1] 109). — II, 612.
 - 11) 2,2-Dinaphtylamid d. Bernsteinsäure. Sm. 266° (264°) (B. 25, 3268; C. 1896 [1] 996). — II, 620.
 - 12) Phenylamidoimid d. β -Truxillsäure. Sm. 213° (B. 26, 837). — IV, 712.
 - 13) Phenylamidoimid d. γ -Truxillsäure. Sm. 249° (B. 27, 1412). — IV, 712.
- $C_{14}H_{10}O_2N_4$ C 72,7 — H 5,0 — O 8,1 — N 14,1 — M. G. 396.
- 1) α -1,2-Naphtylendiphenyldiharnstoff (B. 22, 1377). — IV, 919.
 - 2) 2- β -Naphtolazo-1-[2-Methylphenylnitrosamido]methylbenzol. Sm. 147–148° (J. pr. [2] 55, 375). — IV, 1436.
 - 3) 4-[2-Methylphenyl]azo-5-Phenyl-1-[2-Methylphenyl]pyrazol-3-Carbonsäure. Sm. 179° (B. 26, 1884). — IV, 1491.
- $C_{14}H_{10}O_3N_2$ C 75,0 — H 5,2 — O 12,5 — N 7,3 — M. G. 384.
- 1) Di[5-Phenylimidomethyl-2-Methyl-4-Furanyl]äther. Sm. 124° (B. 28 [2] 787).
 - 2) Anhydrid d. 1-Naphtylamidoessigsäure. Sm. 273° (B. 22, 1808; 25, 2293). — II, 613.
 - 3) 1-Naphtylmonamid d. 1-Naphtylimidodiessigsäure. Sm. 197–199° (B. 23, 2005). — II, 613.
 - 4) 1,1-Dinaphtylamid d. Aepfelsäure. Sm. 205° (B. 23, 2046). — II, 612.
 - 5) 2,2-Dinaphtylamid d. Aepfelsäure. Sm. 260–263° (B. 23, 2047). — II, 620.
- $C_{14}H_9O_3Br$ 1) Diäthyläther d. Tetrabromrosolsäure. Sm. 110–115° (B. 17, 1627). — II, 1122.
- $C_{14}H_9O_4N_2$ C 72,0 — H 5,0 — O 16,0 — N 7,0 — M. G. 400.
- 1) α - β -Di[Benzoylamido]- α - β -Di[2-Furyl]äthan. α -Derivat Sm. oberh. 300°; β -Derivat Sm. 246° (B. 17, 2410). — III, 693.
 - 2) 1-Naphtylamid d. Weinsäure. Sm. 214° (210°) (A. 279, 148; B. 27 [2] 514; C. 1896 [1] 109).
 - 3) 2-Naphtylamid d. Weinsäure. Sm. 280° (264–265°) (A. 279, 150; C. 1896 [1] 996).
- $C_{14}H_9O_4Cl_2$ 1) Dibenzoat d. 3,6-Dichlor-2,5-Dioxy-4-Isopropyl-1-Methylbenzol. Sm. 190–191° (B. 15, 638). — II, 1151.
- $C_{14}H_9O_4Br$ 1) Verbindung (aus 1,4-Di[Brommethyl]benzol). Sm. 80° (B. 18, 2073). — III, 93.
- $C_{14}H_9O_4Si$ 1) Tetraphenylkieselsäure. Sm. 47–48°; Sd. 417–420° (B. 16, 1252; 18, 1679; An. 14, 545). — II, 661.
- $C_{14}H_9O_5N_2$ C 69,5 — H 4,8 — O 19,2 — N 6,7 — M. G. 416.
- 1) Verbindung (aus 3-Amido-1-Methylbenzol-4-Carbonsäure). Sm. noch nicht 350° (B. 27, 1401). — II, 1352.
- $C_{14}H_9O_5N_4$ C 45,0 — H 3,1 — O 12,5 — N 39,4 — M. G. 640.
- 1) Verbindung (aus Aceton) (B. 27, 940).
- $C_{14}H_{10}O_6B$ 1) Tetraphenyldiborat. Fl. (A. Spl. 5, 206). — II, 658.
- $C_{14}H_{10}O_6N_2$ C 66,7 — H 4,6 — O 22,2 — N 6,5 — M. G. 432.
- 1) Tetracetylingigweiss. Sm. 258° u. Zers. (B. 24, 4134). — II, 1623.
 - 2) 1,4-Xylylendiptalaminsäure. Zers. bei 279°. Ag₂ (B. 28, 2992). — IV, 644.
 - 3) Diacetat d. Cotoinasobenzol. Sm. 155–156° (Soc. 71, 1150). — IV, 1479.

- 1. 2. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

- $C_{21}H_{21}O_2N$ C 81,1 — H 5,9 — O 9,0 — N 3,9 — M. G. 355.
 1) **3,5-Dicinnamyl-2,4-Dimethylpyrrol.** Sm. 215—216° (*G.* **23** [2] 302). — *IV*, 102.
 2) **1-Acetyl-5-Keto-2,4,4-Triphenyltetrahydropyrrol.** Sm. 105° (*Soc.* **57**, 695). — *IV*, 470.
 3) **1-Acetyl-2-Keto-3,3-Di[*p*-Methylphenyl]-2,3-Dihydroindol** (Acetyl-toluisatin) (*B.* **18**, 2639). — *II*, 1618.
 4) **4-Oximido-1-Oxy-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol.** Sm. 233—234° (*B.* **26**, 67). — *III*, 264.
 5) **Aethylester d. 2-Methyl-5-Phenyl-1-[2-Naphtyl]pyrrol-3-Carbonsäure.** Sm. 115° (*B.* **18**, 2596). — *IV*, 357.
- $C_{21}H_{21}O_2N_3$ C 75,2 — H 5,5 — O 8,4 — N 10,9 — M. G. 383.
 1) **Oxalyltri[2-Methylphenyl]guanidin.** Sm. 179° (*B.* **12**, 1858). — *II*, 467.
 2) **8-Nitro-6-Pseudobutyl-2,3-Diphenyl-1,4-Benzdiazin.** Sm. 195—196° (*J. pr.* [2] **48**, 107). — *IV*, 647.
- $C_{21}H_{21}O_3N$ C 77,6 — H 5,6 — O 12,0 — N 3,8 — M. G. 371.
 1) **Phenylmonamid d. β -Truxillsäure** (β -Truxillanilidsäure). Sm. 197° *Ba* (*B.* **26**, 837). — *II*, 1902.
 2) **Phenylmonamid d. γ -Truxillsäure.** Sm. 220° (*B.* **26**, 838). — *II*, 1903.
 C 72,2 — H 5,3 — O 12,0 — N 10,5 — M. G. 399.
- $C_{24}H_{21}O_3N_3$ 1) **1,3,5-Tribenzoylhexahydro-1,3,5-Triazin.** Sm. 220—221° (*A.* **288**, 248; *B.* **28**, 938).
 2) **Tri[2-Methylphenyl]cyanurat.** Sm. 152° (*B.* **20**, 2237). — *II*, 738.
 3) **Tri[3-Methylphenyl]cyanurat.** Sm. 225° (*B.* **20**, 2238). — *II*, 744.
 4) **Tri[4-Methylphenyl]cyanurat.** Sm. 207° (*B.* **20**, 2238). — *II*, 750.
 5) **Benzylcyanurat.** Sm. 157°; *Sd.* über 320° (*B.* **3**, 518; *5*, 93). — *II*, 525.
 6) **4-Methylphenylisocyanurat.** Sm. 265° (*B.* **21**, 412). — *II*, 494.
- $C_{24}H_{21}O_3N_2$ C 63,3 — H 4,6 — O 10,6 — N 21,5 — M. G. 455.
 1) **Verbindung** (aus Dihydrodichlorhydroxycitrasinamid) (*B.* **27**, 3452).
- $C_{24}H_{21}O_4N$ C 74,4 — H 5,4 — O 16,5 — N 3,6 — M. G. 387.
 1) **1-Benzoyl-2,4,5-Trimethylphenylmonamid d. Benzol-1,2-Dicarbon-säure + H₂O.** Sm. 195° (*B.* **17**, 2673). — *III*, 237.
- $C_{24}H_{21}O_4Cl$ 1) **Dibenzacet d. 6-Chlor-2,5-Dioxy-4-Isopropyl-1-Methylbenzol.** Sm. 116—118° (*B.* **15**, 658). — *II*, 1151.
- $C_{24}H_{21}O_5N$ C 71,4 — H 5,2 — O 19,8 — N 3,5 — M. G. 403.
 1) **Diacetat d. Verb. C₂₀H₁₇O₅N** (aus Phenolphthaleimoxim). Sm. 205—206° (*M.* **17**, 437).
- $C_{24}H_{21}O_5N_2$ 1) **Benzoylfurfurin?** Sm. 290° u. *Zers.* (*J. pr.* [2] **27**, 317). — *III*, 722.
- $C_{27}H_{21}O_6N$ C 68,7 — H 5,0 — O 22,9 — N 3,4 — M. G. 419.
 1) **Phenylamid d. Carbonsinsäure.** Sm. 170—171° (*G.* **12**, 247). — *II*, 2057.
- $C_{27}H_{21}O_6N_2$ C 64,4 — H 4,7 — O 21,5 — N 9,4 — M. G. 447.
 1) **Tribenzoat d. 1,3,5-Trioxylhexahydro-1,3,5-Triazin.** Sm. 168,5° (159°) (*B.* **29** [2] 659; *Soc.* **73**, 358).
- $C_{28}H_{21}O_7N_2$ C 62,2 — H 4,5 — O 24,2 — N 9,1 — M. G. 463.
 1) **Retenpikrat.** Sm. 123—124° (*J.* **1858**, 440; *A.* **185**, 80). — *II*, 276.
- $C_{28}H_{21}O_7Br$ 1) **Tetracetat d. Brombrasilin.** Sm. 203—204° (*B.* **17**, 685). — *III*, 653.
- $C_{28}H_{21}N_7Br$ 1) **8-Brom-6-Isobutyl-2,3-Diphenyl-1,4-Benzdiazin.** Sm. 172° (*B.* **21**, 2956). — *IV*, 646.
- $C_{28}H_{21}N_5S_3$ 1) **Tri[4-Methylphenyl]trithiocyanurat.** Sm. 114° (*J. pr.* [2] **33**, 120). — *II*, 497.
- $C_{28}H_{21}N_4Cl$ 1) **12-Chlorphenylat d. 9-Amido-10-Dimethylamido- $\alpha\beta$ -Naphtophenazin.** 2 + PtCl₄ (*B.* **31**, 3102, 3105).
 C 81,4 — H 6,2 — O 4,5 — N 7,9 — M. G. 354.
- $C_{28}H_{21}ON_2$ 1) **Nitril d. δ -[4-Methylphenyl]amido- γ -Oxy- $\alpha\delta$ -Diphenyl- α -Buten- δ -Carbonsäure.** Sm. 175° u. *Zers.* (*B.* **31**, 2719).
 2) **4-Methylphenylamid d. γ -[4-Methylphenyl]imido- α -Phenylpropen- γ -Carbonsäure.** Sm. 204—205° (*A.* **242**, 295). — *IV*, 448.
 C 75,4 — H 5,7 — O 4,2 — N 14,7 — M. G. 382.
- $C_{28}H_{21}ON_4$ 1) **12-Phenyloxyhydrat d. 9-Amido-10-Dimethylamido- $\alpha\beta$ -Naphtophenazin.** 2 Chlorid + PtCl₄, Nitrat, Bichromat (*B.* **31**, 3102).
 C 77,8 — H 5,9 — O 8,6 — N 7,6 — M. G. 370.
- $C_{28}H_{21}O_2N_2$ 1) **Bis-2-Nitroso-1,4-Dimethylnaphtalin.** Sm. 174—175° (*G.* **26** [1] 32).

- $C_{24}H_{17}O_2N_2$ 2) 4,4'-Diäthylphtalylidamidobiphenyl. Sm. 250° u. Zers. (A. 258, 363). — IV, 967.
- 3) 4-Benzoylamido-3-Methyl-6-Isopropyl-1-Phenylbenzoxazol. Sm. 174–175° (G. 20, 142; 25 [2] 402). — II, 1148.
- 4) 1,3-Dibenzoyl-2,4-Dimethyl-1,2,3,4-Tetrahydro-1,3-Benzidiazin. Sm. 155° (B. 26, 1385). — IV, 863.
- 5) α -1,4-Diacetyl-2,3-Diphenyl-1,2,3,4-Tetrahydro-1,4-Benzidiazin. Sm. 170° (B. 27, 2184). — IV, 1065.
- 6) β -1,4-Diacetyl-2,3-Diphenyl-1,2,3,4-Tetrahydro-1,4-Benzidiazin. Sm. 192.5° (B. 27, 2185). — IV, 1065.
- 7) Diäthyläther d. 5,8-Dioxy-2,3-Diphenyl-1,4-Benzidiazin. Sm. 163° (B. 23, 1212). — III, 285.
- $C_{24}H_{17}O_2S$ 1) Diäthyläther d. Di[1-Oxynaphtyl]-*p*-Sulfid. Sm. 153° (B. 27, 2545). — II, 985.
- 2) Diäthyläther d. Di[2-Oxynaphtyl]-*p*-Sulfid. Sm. 195° (189°) (B. 23, 3356; 27, 2546). — II, 986.
- $C_{24}H_{17}O_2S_2$ 1) Diäthyläther d. Di[2-Oxynaphtyl]-*p*-Disulfid. Sm. 158.5° (B. 23, 3367). — II, 986.
- $C_{24}H_{17}O_2Se$ 1) Diäthyläther d. Di[2-Oxynaphtyl]selenid. Sm. 176° (B. 30, 2824).
- $C_{24}H_{17}O_2N_2$ C 74,6 — H 5,7 — O 12,4 — N 7,2 — M. G. 386.
- 1) Di[5-Phenylhydrazonmethyl-2-Methyl-4-Furanyl]äther. Sm. 139° (B. 28 [2] 787).
- $C_{24}H_{17}O_2N_4$ C 69,6 — H 5,3 — O 11,6 — N 13,5 — M. G. 414.
- 1) Paracotoinphenylhydrazid. Sm. 200–201° (G. 23 [2] 200). — III, 640.
- $C_{24}H_{17}O_2N_2$ C 71,6 — H 5,5 — O 15,9 — N 7,0 — M. G. 402.
- 1) Paracotoinanilid. Sm. 162° (G. 23 [2] 201). — III, 640.
- 2) Phenylhydrazon d. Mekoninmethylphenylketon. Sm. 143–144° (M. 13, 667). — II, 2022.
- 3) Di[Phenylamidiformiat] d. 2,3-Dioxy-1,2,3,4-Tetrahydronaphtalin. Sm. 148–150° (A. 288, 99).
- $C_{24}H_{17}O_2N_4$ C 67,0 — H 5,1 — O 14,9 — N 13,0 — M. G. 430.
- 1) Diacetat d. 4,4'-Bi[5-Oxy-3-Methyl-1-Phenylpyrazol]. Sm. 132 bis 134° (B. 29, 1659). — IV, 1263.
- 2) Diäthylester d. *p*-Diphenylazobenzol-1,4-Dicarbonensäure. Sm. 126° (B. 24, 2693). — IV, 1475.
- $C_{24}H_{17}O_2S_2$ 1) Verbindung (aus Rubbadin). Zers. über 200° (B. 25, 1883). — II, 658.
- $C_{24}H_{17}O_2N_2$ C 68,9 — H 5,3 — O 19,1 — N 6,7 — M. G. 418.
- 1) Äthylidencinchoxinsäure. Sm. 206°. $Na_2 + xH_2O$, Ag, (A. 270, 356). — IV, 347.
- $C_{24}H_{17}O_2N_2$ C 66,3 — H 5,1 — O 22,1 — N 6,5 — M. G. 434.
- 1) $\beta\gamma$ -Diphenylurethan d. 3,4-Dioxy-1- $[\beta\gamma$ -Dioxypropyl]benzol-3,4-Methylenäther. Sm. 127° (B. 24, 2882). — II, 1117.
- 2) Diäthylester d. 3,6-Di-Phenylamido-1,4-Diketo-1,4-Dihydrobenzol-2,5-Dicarbonensäure. Sm. 246° (B. 20, 1312). — II, 2009.
- $C_{24}H_{17}O_2N_4$ C 62,3 — H 4,8 — O 20,8 — N 12,1 — M. G. 462.
- 1) Diäthylester d. 4,4'-Bi[5-Keto-1-Phenyl-4,5-Dihydropyrazol]-3,3'-Dicarbonensäure. Zers. bei 272° (Soc. 69, 1396). — IV, 707.
- $C_{24}H_{17}O_2N_2$ C 43,8 — H 3,3 — O 14,6 — N 38,3 — M. G. 658.
- 1) Verbindung (aus Aceton) (B. 27, 940).
- $C_{24}H_{17}O_2N_2$ C 64,0 — H 4,9 — O 24,9 — N 6,2 — M. G. 450.
- 1) Methylenchininoxinsäure. Sm. 282°. Ag_2 (A. 276, 270). — IV, 362.
- 2) Phenylhydrazonderivat d. 2-Acetyl-1,4-Diketo-hexahydrobenzol-3,6-Dicarbonensäure (oder $C_{24}H_{17}O_2N_2$). Sm. 207–207,5° (B. 25, 334). — IV, 727.
- $C_{24}H_{17}O_2N_4$ C 60,2 — H 4,6 — O 23,4 — N 11,7 — M. G. 478.
- $C_{24}H_{17}O_2Cl_2$ 1) Dibenzoat d. 3,6-Dichlor-2,5-Dimethoxy-1,4-Benzochinondimethylhemiacetal. Sm. 193° (Am. 17, 643). — III, 350.
- $C_{24}H_{17}O_2Br_2$ 1) Verbindung (aus Xanthogallol). Sm. 113° (A. 245, 339). — II, 1014.
- $C_{24}H_{17}O_2N_2$ C 54,3 — H 4,2 — O 36,2 — N 5,3 — M. G. 530.
- 1) Azopianhydroacetat. Sm. 210° (J. pr. [2] 55, 182).
- 2) Azomekoninissäure. Sm. 257° u. Zers. (B. 20, 880). — IV, 1475.
- $C_{24}H_{17}O_2N_2Br_2$ 1) Tetraacetat d. Hexabromkolatannin (C. 1898 [1] 579).
- $C_{24}H_{17}N_2S$ 1) 1-Naphtylamido-1-Naphtylimidomethylpropylsulfid. Sm. 95° (2HCl, PtCl₄) (B. 21, 966). — II, 610.

- $C_{21}H_{21}N_2S$ 2) **2-Naphtylamido-2-Naphtylimidomethylpropylsulfid**. Sm. 65–66° (2HCl, PtCl₄) (B. 21, 968). — II, 619.
- $C_{21}H_{21}N_2S_2$ 1) **Thiosulfanilin** = (2,2'-Diamidodiphenyldisulfid). Sm. bei 100° (B. 4, 392; 27, 2808). — II, 805.
- $C_{21}H_{21}ON$ 1) C 84,5 — H 6,7 — O 4,7 — N 4,1 — M. G. 341.
- $C_{21}H_{21}O_2N$ 1) **2-Keto-1-Aethyl-3,3-Di[β -Methylphenyl]-2,3-Dihydroindol** (Aethyltoluisatin). Sm. 108° (B. 18, 2640). — II, 1678.
- $C_{21}H_{21}O_2N$ 1) C 80,7 — H 6,4 — O 9,0 — N 3,9 — M. G. 357.
- 1) **Aethylamid d. α -Diphenyl- β -Benzoylpropionsäure**. Sm. 128–130° (Soc. 57, 702). — II, 1726.
- $C_{21}H_{21}O_2N_2$ 1) C 74,8 — H 6,0 — O 8,3 — N 10,9 — M. G. 385.
- 1) **Diäthyläther d. 1-Amido-4-Oxy-2-[4-Oxy-2-Naphtyl]azonaphtalin**. Sm. 175°. HCl (B. 25, 3065). — IV, 1426.
- $C_{21}H_{21}O_2N_2$ 1) C 69,7 — H 5,6 — O 7,7 — N 17,0 — M. G. 413.
- 1) **Phenylimid d. α -Phenylhydrasonpropionsäure**. Sm. 169° (B. 21, 2925). — IV, 689.
- $C_{21}H_{21}O_2N$ 1) C 77,2 — H 6,2 — O 12,9 — N 3,7 — M. G. 373.
- 1) **Dibenzoylpseudoephedrin**. Sm. 119–120° (B. 22, 1826). — III, 881.
- 2) **Benzosä d. 6-Benzoylamido-3-Oxy-4-Isopropyl-1-Methylbenzol**. Sm. 166–167° (G. 25 [2] 389).
- 3) **Aethyl ester d. β -Phenylamido- α -Benzoyl- β -Phenylpropionsäure**. Sm. 101° (B. 31, 607).
- 4) **Aethyl ester d. γ -Phenylamido- α -Oxy- α - γ -Diphenylpropen- β -Carbon säure**. Sm. 122° (B. 31, 608).
- $C_{21}H_{21}O_2N_2$ 1) C 71,8 — H 5,7 — O 12,0 — N 10,5 — M. G. 401.
- 1) **Triphenylamid d. Tricarballysäure**. Sm. 252° (B. 22, 2922). — II, 422.
- $C_{21}H_{21}O_2N$ 1) C 74,0 — H 5,9 — O 16,4 — N 3,6 — M. G. 389.
- 1) **Benzoylmorphin**. HCl (Soc. 28, 24; A. 294, 215). — III, 900.
- 2) **Diäthyläther d. 4-Dibenzoylamido-1,3-Dioxybenzol**. Sm. 171° (B. 20, 1128). — II, 1180.
- 3) **Diäthylester d. α -[1-Naphtyl]imido- α -Phenyläthan- β - β -Dicarbon säure**. Sm. 145,5° (B. 19, 987). — II, 1850.
- 4) **Diäthylester d. α -[2-Naphtyl]imido- α -Phenyläthan- β - β -Dicarbon säure**. Sm. 140,5° (B. 19, 986). — II, 1850.
- 5) **Verbindung** (aus 3,5-Diketo-1-Phenylhexahydrobenzol). Sm. 129–131° u. Zers. (J. pr. [2] 43, 392; A. 294, 308). — III, 279.
- $C_{21}H_{21}O_4N_2$ 1) C 69,1 — H 5,5 — O 15,3 — N 10,1 — M. G. 417.
- 1) **5-Nitro-3,4-Di[Benzoylamido]-1-Pseudobutylbenzol**. Sm. 245–246° (J. pr. [2] 48, 109). — IV, 646.
- 2) **Triphenylamid d. Citronensäure** (Citranilid) (A. 82, 86; 98, 90). — II, 423.
- $C_{21}H_{21}O_6N_2$ 1) C 64,1 — H 5,1 — O 21,4 — N 9,4 — M. G. 449.
- 1) **Tri[Phenylamidoformiat] d. α - β -Trioxypropan**. Sm. 160–180° (B. 18, 969). — II, 372.
- $C_{21}H_{21}O_6Br$ 1) **Bromhomopterosarpin** (A. ch. [6] 17, 117). — III, 673.
- $C_{21}H_{21}ON_2$ 1) C 80,9 — H 6,7 — O 4,5 — N 7,9 — M. G. 356.
- 1) **4-Benzoylamido-3-Methyl-6-Isopropyl-1-Phenylbenzoxazol**. Sm. 152° (G. 21, 253). — II, 1148.
- 2) **β -[4-Isopropylbenzyliden]hydrason- α -Oxy- α - β -Diphenyläthan** (Cuminalbenzoinazin). Sm. 117° (J. pr. [2] 52, 225). — III, 225.
- 3) **2 [oder 3] -Dimethylamido-9-[4-Dimethylamidophenyl]-10-Oxyanthracen**. + $\frac{1}{2}C_6H_6$ (Bl. [3] 15, 755).
- 4) **Leukophtalgrün**. Sm. 235–236° (A. 206, 108). — II, 1723.
- 5) **4-Isopropylbenzylidenamid d. α -Phenylamido- α -Phenyllessigsäure**. Sm. 226° (B. 31, 2702).
- 6) **isom. 4-Isopropylbenzylidenamid d. α -Phenylamido- α -Phenyllessigsäure**. Sm. 198° (B. 31, 2704).
- $C_{21}H_{21}ON_4$ 1) C 75,0 — H 6,2 — O 4,2 — N 14,6 — M. G. 384.
- 1) **Acetyl- α -Diäthylphenosafranin**. (2HCl, PtCl₄) (B. 16, 471). — IV, 1284.
- $C_{21}H_{21}O_2N_2$ 1) C 77,4 — H 6,4 — O 8,6 — N 7,5 — M. G. 372.
- 1) **1,3-Di[Acetyl-4-Methylphenylamido]benzol**. Sm. 176° (J. pr. [2] 33, 221). — IV, 573.

- $C_{14}H_{11}O_2N$ 1) 1,4-Diäcetyl-2-Methylphenylamido-benzol. Sm. 180° (*J. pr.* [2] 34. 98). — IV, 529.
- 2) 1,4-Diäcetyl-4-Methylphenylamido-benzol. Sm. 172—173° (*J. pr.* [2] 33. 233). — IV, 529.
- 3) 2-Benzylacetylamido-1-Phenylacetylamidomethylbenzol. Sm. 173° (*B. 27*, 3242). — IV, 628.
- 4) 3-Dimethylamido-9-Oxy-10-Keto-9-4-Dimethylamidophenyl]-9,10-Dihydroanthracen. Sm. 217° (*C.* 1897 [2] 591).
- 5) Phenylhydrazon d. 3-Methyläther-4-Benzoylmethyläther d. 3,4-Dioxy-1-Allylbenzol (Ph. d. Eugenolacetophenon). Sm. 82° (*B. 27*, 2451). — IV, 772.
- 6) Phenylhydrazon d. 3-Methyläther-4-Benzoylmethyläther-3,4-Dioxy-1-Propenylbenzol (Ph. d. Isocugenolacetophenon). Sm. 115,5° (*B. 27*, 2462). — IV, 772.
- 7) Phtalgrün, siehe auch $C_{17}H_{11}O_2N_1$. HCl · HCl · ZnCl₂ (*A.* 206. 107; *C.* 1897 [2] 548). — II, 1723.
- 8) Lakton d. α -Oxy- α' -Tetramethylamidodiphenyl]- α' -Phenylmethan- α' -2-Carbonsäure Tetramethylamidodiphenylphtalid. Sm. 150° bis 191°. HCl · 2HCl · (2HCl · PtCl₄)₂ Pikrat (*A.* 206. 921). — II, 1722.
- 9) Diäethylphenylamid d. Benzol-1,2-Dicarbonsäure (Äthylamiphtalein). Sm. 140,5—141,5° (*A.* 227. 187). — II, 1595.
- 10) 4-Isopropylbenzylidenamid d. Benzolcarbonsäure (Cumylendibenzamid). Sm. 224° (*B.* 8. 1199). — III, 56.
- $C_{17}H_{13}O_2N_1$ C 67,3 — H 5,6 — O 7,5 — N 19,6 — M. G. 428.
- 1) Di- β -Phenylhydrazonäthylamid d. Benzol-1,4-Dicarbonsäure. Sm. 195° u. Zers. (*B. 27*, 3164). — IV, 747.
- $C_{18}H_{13}O_2N_1$ C 74,2 — H 6,2 — O 12,4 — N 7,2 — M. G. 388.
- 1) Anilin + H₂O. Sm. 101° (106° wasserfrei). HCl + H₂O. (2HCl, PtCl₄) (*A.* 88. 127; *B.* [3] 19. 174). — III, 84.
- 2) Anishydramid. Sm. 126° (125—127°) (*A.* 56. 396; 88. 128; *B.* [3] 19. 173). — III, 84.
- 3) 3,5-Di-4-Methylphenylacetylamido-1-Oxybenzol. Sm. 128—129° (*G.* 20. 321). — II, 724.
- 4) Diäthylbenzidinphthalsäure. Ba (*A.* 258. 365). — IV, 967.
- $C_{18}H_{17}O_2N_1$ C 69,2 — H 5,8 — O 11,5 — N 13,5 — M. G. 416.
- 1) Tri- p -Acetylamidophenylamin. Sm. noch nicht bei 240° (*B.* 18. 2157). — IV, 1295.
- $C_{18}H_{19}O_2N_1$ C 64,9 — H 5,4 — O 10,5 — N 18,9 — M. G. 444.
- 1) 1,3,5-Tri-2-Oxybenzylidenamido]hexahydro-1,3,5-Triazin. Sm. 139 bis 140° (*A.* 288. 239). — III, 72.
- $C_{18}H_{17}O_2S_3$ 1) Trimethyläther d. α -Trithio-2-Oxybenzaldehyd. Sm. 157° (*B.* 24. 1446). — III, 71.
- 2) Trimethyläther d. β -Trithio-2-Oxybenzaldehyd. Sm. 224° (*B.* 24. 1446). — III, 71.
- 3) Trimethyläther d. β -Trithio-3-Oxybenzaldehyd. + C₆H₆ (Sm. 147°) (*A.* 277. 348). — III, 80.
- 4) Trimethyläther d. α -Trithio-4-Oxybenzaldehyd. Sm. 127° (*B.* 24. 1442). — III, 80.
- 5) Trimethyläther d. β -Trithio-4-Oxybenzaldehyd. Sm. 183°. + C₆H₆ (*B.* 24. 1441). — III, 84.
- $C_{18}H_{17}O_2N_1$ C 67,7 — H 5,6 — O 14,8 — N 12,9 — M. G. 432.
- 1) Di[3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazolyl-4-]essigsäure (Diantipyrinessäure). Sm. 238° u. Zers. Ba, 2HCl + 2H₂O, (2HCl, PtCl₄), H₂SO₄ (*A.* 255. 241). — IV, 1266.
- 2) Diäthylester d. 2,5-Di[Phenylazo]-1,4-Dihydrobenzol-1,4-Dicarbonsäure. Sm. 155° (*B.* 24. 2693). — IV, 1474.
- 3) Diäthylester d. 2,5-Di[Phenylazo]-1,4-Dihydrobenzol-3,6-Dicarbonsäure. Sm. 180° (*B.* 24. 2695). — IV, 1474.
- 4) Monoacetat d. p -Trioxy-1,4-Di[α -Phenylhydrazonäthyl]benzol. Sm. 265° (*B.* [3] 8. 156). — IV, 783.
- $C_{18}H_{17}O_2N_1$ C 62,6 — H 5,2 — O 13,9 — N 18,3 — M. G. 460.
- 1) Diäthylester d. 3,3'-Dimethyl-4,4'-Biphenylendi[Hydrazoncyanessigsäure]. Sm. 224—225° (*B.* [3] 19. 1034). — IV, 1277, 1457.

- $C_{24}H_{24}O_4S$ 1) Aethylester d. α -Phenylsulfon- $\beta\beta$ -Diphenylisobuttersäure. Sm. 118° (Am. 7, 89). — II, 1471.
C 62,1 — H 5,2 — O 20,7 — N 12,0 — M. G. 464.
- $C_{21}H_{21}O_2N_4$ 1) Diacetat d. 1,2-Diacetyl-3,6-Di[α -Oxybenzyl]-1,2,4,5-Tetrazin. Sm. 203° (B. 30, 1890; A. 298, 26). — IV, 1290.
C 58,5 — H 4,9 — O 19,5 — N 17,1 — M. G. 492.
- $C_{24}H_{24}O_8N_6$ 1) Diäthylester d. 3,3'-Dimethoxy-4,4'-Biphenylendi[Hydrazoncyanessigsäure]. Sm. 283–285° (B. [3] 19, 1034). — IV, 1457.
- $C_{21}H_{21}O_8S_2$ 1) Trithio-3-Methoxy-4-Oxybenzaldehyd (Trithiovanillin). Sm. 235 bis 237° u. Zers. + 2C₂H₆ (B. 29, 144). — III, 102.
C 61,6 — H 5,1 — O 27,3 — N 6,0 — M. G. 468.
- $C_{21}H_{21}O_8N_2$ 1) Di[Acetylphenylamid] d. Diacetylweinsäure. (+ 2C₂H₄O Sm. 137°) (B. 24, 2960). — II, 422.
C 55,8 — H 4,6 — O 34,1 — N 5,4 — M. G. 516.
- $C_{21}H_{21}O_{11}N_2$ 1) Verbindung (aus Amidopiansäure). Sm. 232–233° u. Zers. (B. 20, 877). — II, 1945.
- $C_{24}H_{24}N_4Si$ 1) Silicotetraphenylamid. Sm. 137–138° (Soc. 55, 475). — II, 957.
C 77,6 — H 6,7 — O 4,3 — N 11,3 — M. G. 371.
- $C_{24}H_{22}ON_3$ 1) α -Benzoylimidodi[4-Dimethylamidophenyl]methan (Benzoylauramin). Sm. 179° (J. pr. [2] 50, 431). — IV, 1175.
2) 2-Keto-3,3-Di[β -Dimethylamidophenyl]-2,3-Dihydroindol (Dimethyl-anilinisatin). Sm. 234° (B. 18, 2642). — II, 1618.
3) Aethylphenylmesatin (A. 144, 55). — II, 1608.
4) Verbindung (aus m-Amidoditolylamin u. Diamidoduro). HNO₃ + $\frac{1}{2}$ H₂O (B. 28, 1356).
C 76,8 — H 6,7 — O 12,8 — N 3,7 — M. G. 375.
- $C_{24}H_{20}O_3N_2$ 1) Benzyläther d. Morphin. HCl (C. 1899 [1] 705).
- $C_{24}H_{20}O_3N_2$ 1) Verbindung (aus Pikroocellin). Sm. 154° (A. 185, 24). — II, 1753.
C 73,6 — H 6,4 — O 16,4 — N 3,6 — M. G. 391.
- $C_{24}H_{20}O_2N$ 1) Monäthylester d. 2,6-Dimethyl-4-Phenyl-1-[4-Methylphenyl]-1,4-Dihydropyridin-3,5-Dicarbonensäure. Sm. 160° u. Zers. (M. 17, 354). — IV, 371.
C 70,8 — H 6,1 — O 19,7 — N 3,4 — M. G. 407.
- $C_{24}H_{20}O_2N$ 1) Benzoylscopolamin. (2HCl, PtCl₄), (HCl, AuCl₃) (B. 27 [2] 883). — III, 796.
C 68,1 — H 5,9 — O 22,7 — N 3,3 — M. G. 423.
- $C_{24}H_{20}O_2N$ 1) Allylhydrastin. Sm. 116° (B. 23, 2910). — II, 2054.
2) Triacetylderivat d. Thebenin. Sm. 160–161° (B. 30, 1376).
3) Triacetylmorphotebain. Sm. 193–194° (B. 32, 190).
4) Methyl ester d. Dibenzoyldioxyanhydroecgonin. Sm. 99–100°. HCl, HNO₃ (B. 25, 1397). — III, 872.
C 63,3 — H 5,5 — O 28,4 — N 3,1 — M. G. 455.
- $C_{24}H_{20}O_2N$ 1) Usninanilid. Sm. 170–171° (B. 15, 2241).
C 49,4 — H 4,3 — O 43,9 — N 2,4 — M. G. 583.
- $C_{24}H_{20}O_{16}N$ 1) Verbindung (aus 2,5-Dioxybenzol-1,4-Dicarbonsäurediäthylester). Sm. 148° (B. 19, 2393). — II, 2003.
- $C_{24}H_{21}N_2P$ 1) Phenyl-di[1,2,3,4-Tetrahydro-1-Chinoly]phosphin. Sm. 150° (B. 31, 1045). — IV, 1682.
- $C_{24}H_{21}N_3S_2$ 1) α -Methylpropyltriphenyldithiobiuret. Sm. 110° (B. 21, 109). — II, 400.
2) β -Methylpropyltriphenyldithiobiuret. Sm. 111° (B. 21, 109). — II, 400.
3) Diäthyltriphenyldithiobiuret. Sm. 158° (B. 21, 108). — II, 400.
C 80,4 — H 7,2 — O 4,5 — N 7,8 — M. G. 358.
- $C_{24}H_{20}ON_2$ 1) Trimethylhydroamarin. Sm. 158°. HCl, (2HCl, PtCl₄ + 2H₂O) (B. 15, 2328). — III, 26.
2) Leukomalachitgrünaldehyd. Sm. 143°. (2HCl, PtCl₄) + NaHSO₄ (A. 231, 381). — III, 65.
C 74,6 — H 6,7 — O 4,1 — N 14,5 — M. G. 386.
- $C_{24}H_{20}ON_2$ 1) α -Phenyl- β -[4-Methylphenyl]azo- β -[4-Isopropylbenzyl]harnstoff. Sm. 124° (B. 22, 930). — IV, 1573.
2) α -[4-Methylphenyl]- β -[4-Methylphenyl]azo- β -[2,4,5-Trimethylphenyl]harnstoff. Sm. oberh. 230° (B. 25, 1361). — IV, 1573.
C 77,0 — H 6,9 — O 8,5 — N 7,5 — M. G. 374.
- $C_{24}H_{20}O_2N_2$ 1) 4,4'-Di[Dimethylamido]triphenylmethan-2'-Carbonsäure. Sm. 200°. (2HCl, PtCl₄), Pikrat (A. 202, 101; B. 28 [2] 994; C. 1896 [1] 105). — II, 1481.

- $C_{11}H_{13}O_2N$ 1. Phenylamid d. Phenylamidoacetylformensaure. Sm. 133°
An. 21, 270.
- $C_{11}H_{13}O_2N$ 1. Resorcinolamidoacetylformensaure. B. 17, 240. — IV, 1445.
2. Acetylphenylammoniumchlorid. Sm. 133° wasserfrei. HCl + H₂O.
2101. Ph. G. Mikro. S. 23, 1874. — IV, 1271.
- $C_{11}H_{13}O_2N$ 1. 3-F-Diketo-5,5-Dimethyl-1,1-Diäthyl-2,2-Diphenyl-2,3,2,3-Tetrahydro-4,4-Bipyrazol. Sm. 24—25° (L. 17, 245). — IV, 1262.
- $C_{11}H_{13}O_2N$ 1. 5,5-Diketo-1,1-Dimethyl-4,4-Diäthyl-1,1-Diphenyl-4,5,4,5-Tetrahydro-4,4-Bipyrazol. Sm. 26° (L. 23, 173). — IV, 126.
- $C_{11}H_{13}O_2N$ 1. Verbindung aus Lactonbenzoylphenylhydrant. Sm. 26° (L. 23, 107).
C 73,5 — H 5,7 — O 12,3 — N 7,5 — M. G. 206.
- $C_{11}H_{13}O_2N$ 1. Verbindung aus 1-Amino-2-Oxy-1,4-Dimethylbenzol. B. 20, 260. — II, 740.
- $C_{11}H_{13}O_2N$ 1. 2,3-Diketo-1,4-Di-2,4,6-Trinitrophenyl-5-Carbonsäure. Sm. 175—176°
(L. 23, 311).
- $C_{11}H_{13}O_2N$ 1. m-Benzoylamido-d-Cocain. Fl. HCl Sm. 214—217° (L. 27, 188).
— III, 162.
- $C_{11}H_{13}O_2N$ 2. Allylhydrantimid. Sm. 134° HCl, H₂SO₄. B. 23, 2512. — II, 2054.
C 64,2 — H 5,5 — O 17,5 — N 12,4 — M. G. 150.
- $C_{11}H_{13}O_2N$ 1. Verbindung aus Ketonsäureäthylester d. Phenylhydrant. (L. 26, 42).
— I, 542.
- $C_{11}H_{13}O_2N$ 1. 2,5-Diketo-1,4-Di-2-Isopropylphenyl-5-Carbonsäure, hexahydro-1,4-Diazin. J. pr. 2, 40, 440. — II, 1277.
C 61,5 — H 5,6 — O 20,5 — N 12,4 — M. G. 160.
- $C_{11}H_{13}O_2N$ 1. Diäthylester d. Dibutanonsäurephenylhydrant. Sm. 157—158°
(L. 26, 325). — IV, 1271.
- $C_{11}H_{13}O_2N$ 1. *o*-Tri-2-Methylphenylsulfonpropan. Fl. J. pr. 2, 54, 329.
- $C_{11}H_{13}O_2N$ 1. *o*-Tri-4-Methylphenylsulfonpropan. Sm. 16—14° (L. 23, 203).
C 55,5 — H 4,5 — O 20,5 — N 15,5 — M. G. 158.
- $C_{11}H_{13}O_2N$ 1. Hexaamidotetrahydroazoresorfin. 6HCl. S. 19, 580.
C 51,5 — H 5,2 — O 25,7 — N 11,2 — M. G. 140.
- $C_{11}H_{13}O_2N$ 1. Diacetat d. 3,5,3',5'-Tetraacetylamido-4,4-Dioxybiphenyl. Sm.
bei 79° (L. 21, 352). — II, 949.
- $C_{11}H_{13}O_2N$ 1. Verbindung aus 1,4-Dioxybenzol + H₂S. (L. 69, 267). — II, 939.
- $C_{11}H_{13}O_2N$ 1. Diodomethylat d. 2,4,2',4'-Tetramethyl-6,6'-Bichinolin. Sm. 270°
u. Zers. (L. 20, 278). — IV, 1977.
- $C_{11}H_{13}O_2N$ 1. Phylisenzilauramin (s. Auramin-Phenylisobarnstoff). Sm. 194—195°
(J. pr. 2, 50, 435). — IV, 1175.
- $C_{11}H_{13}O_2N$ 1. C 74,0 — H 6,9 — O 8,2 — N 10,5 — M. G. 156.
2. 4-Nitro-4',4'-Di-Dimethylamido-2'-Methyltriphenylmethan. Sm.
199° (L. 24, 596). — IV, 1945.
- $C_{11}H_{13}O_2N$ 1. Cyanäthylat d. Strychnin. Sm. 165° (L. 16, 2748). — III, 938.
C 76,4 — H 7,2 — O 12,7 — N 3,7 — M. G. 377.
- $C_{11}H_{13}O_2N$ 1. Äthylester d. 6-Äthyl-4-Methylphenylamido-4-Keto-2-Phenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. bei 70° (L. 294, 278).
- $C_{11}H_{13}O_2N$ 2. Monopiperidid d. *o*-Truxillsäuremonomethylester. Sm. 151° (L. 22, 236). — IV, 17.
- $C_{11}H_{13}O_2N$ 3. Monopiperidid d. *γ*-Truxillsäuremonomethylester. Sm. 201° (L. 22, 236). — IV, 17.
- $C_{11}H_{13}O_2N$ 1. Triäthyläther d. Tri[4-Oxyphenyl]arsin. Sm. 88—89° (L. 20, 52).
— IV, 1629.
- $C_{11}H_{13}O_2N$ 1. Triäthyläther d. Wismuthtri[4-Oxyphenyl]. Sm. 73° (L. 30, 2850).
— IV, 1698.
- $C_{11}H_{13}O_2N$ 1. Triäthyläther d. Antimontri[4-Oxyphenyl]. Sm. 82—83°. + HCl.
(L. 30, 2811). — IV, 1696.
- $C_{11}H_{13}O_2N$ 1. C 73,2 — H 6,9 — O 16,3 — N 3,6 — M. G. 393.
1. Benzoylatriopin. (2HCl, PtCl₄), (HCl, AuCl₃) (L. 27 [2] 883). — III, 785.
- $C_{11}H_{13}O_2N$ 2. Benzoylthioacyamin. (2HCl, PtCl₄), (HCl, AuCl₃) (L. 27 [2] 883). — III, 795.

- C₂₄H₂₇O₄P** 1) Tri[2,3-Dimethylphenylester] d. Phosphorsäure. Fl. (B. 18, 1703). — II, 758.
2) Tri[2,4-Dimethylphenylester] d. Phosphorsäure. Fl. (B. 18, 1703). — II, 758.
- C₂₄H₂₇O₅N** C 70,4 — H 6,6 — O 19,6 — N 3,3 — M. G. 409.
1) Aethyläther d. Diacetylthebenin (Diacetylthebenin). Sm. 163° (B. 32, 183).
2) Aethylster d. 6-[4-Aethoxyphenyl]amido-4-Keto-2-[4-Methoxyphenyl]-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 217° (A. 294, 296).
- C₂₄H₂₇O₇N** C 65,3 — H 6,1 — O 25,4 — N 3,2 — M. G. 441.
1) Allylhydrastein + 1½ H₂O. Sm. 136° (B. 23, 2911). — II, 2054.
- C₂₄H₂₇O₇P** 1) Tri[2-Aethoxyphenylester] d. Phosphorsäure. Sm. 131–132° (C. 1899 [1] 706).
- C₂₄H₂₇O₁₅N₃** C 51,0 — H 4,8 — O 36,8 — N 7,4 — M. G. 565.
1) Trinitroathamantin (A. 110, 361). — III, 620.
2) Verbindung (aus 2,5-Diacetyl-1,4-Diketohexahydrobenzol-3,6-Dicarbon-säure?). Sm. 280–285° u. Zers. (B. 25, 331). — II, 2071.
- C₂₄H₂₇NS₂** 1) Verbindung (aus d. Amid. d. Phenylthioessigsäure). Sm. 107,5–108° (A. 184, 302). — III, 1328.
- C₂₄H₂₇Cl₂Bi** 1) Wismuthtri[2,4-Dimethylphenyl]dichlorid. Sm. 161° (A. 251, 334). — IV, 1699.
2) Wismuthtri[2,5-Dimethylphenyl]dichlorid. Sm. 167,5° (B. 30, 2847). — IV, 1699.
- C₂₄H₂₇Br₂Bi** 1) Wismuthtri[2,4-Dimethylphenyl]dibromid. Sm. 117° (A. 251, 334). — IV, 1699.
2) Wismuthtri[2,5-Dimethylphenyl]dibromid. Sm. 130° (B. 30, 2847). — IV, 1699.
- C₂₄H₂₉ON₂** C 80,0 — H 7,8 — O 4,4 — N 7,8 — M. G. 360.
1) P-Tetramethyldiamido-5-Oxy-2-Methyltriphenylmethan. Sm. 150° (B. 24, 3130). — II, 904.
2) P-Tetramethyldiamido-6-Oxy-3-Methyltriphenylmethan. Sm. 129 bis 130° (B. 24, 3131). — II, 904.
3) 2-Oxy-1-[2-Oktylphenyl]azonaphtalin. Sm. 142° (B. 31, 940). — IV, 1438.
4) 4-Oxy-1-[2-Oktylphenyl]azonaphtalin (B. 31, 939). — IV, 1438.
5) Anhydrid d. 2-Methylchinolinäthoxyhydrat (A. 242, 305). — IV, 308.
- C₂₄H₂₉O₂N₂** C 76,6 — H 7,4 — O 8,5 — N 7,4 — M. G. 376.
1) Monomethyläther d. P-Tetramethyldiamido-P-Dioxytriphenyl-methan. Sm. 135–136° (B. 17, 1895). — II, 1003.
2) 1,1'-Dibenzoyl-4,4'-Bipiperidyl (B. 31, 2279).
- C₂₄H₂₉O₂N₄** C 71,3 — H 6,9 — O 7,9 — N 13,9 — M. G. 404.
1) Campholenamidindifureid. Sm. 176°. — IV, 533.
- C₂₄H₂₉O₂S₂** 1) Verbindung (aus Campher). — III, 487.
- C₂₄H₂₉O₂N₂** C 70,6 — H 6,8 — O 15,7 — N 6,8 — M. G. 408.
1) Diäthylderivat d. 4,4-Di[β-Ketobutyrylamido]biphenyl. Sm. oberh. 300° u. Zers. (M. 19, 697).
2) Strychninnoxyceton (J. 1874, 875). — III, 939.
3) Phyllocyaninsäure. Cu (B. 27 [2] 32).
4) Acetat d. Gelseminin. HCl (Sm. 290°) (C. 1896 [1] 111).
5) Diacetat d. αβ-Dioximido-αβ-Di[4(P)-Isopropylphenyl]äthan. Sm. 127° (B. 23, 2065). — III, 301.
6) 2,4,5-Trimethylphenylimid-2,4,5-Trimethylphenylamid d. Citro-nensäure. Sm. 173° (B. 21, 660). — II, 553.
- C₂₄H₂₉O₄N₄** C 66,1 — H 6,4 — O 14,7 — N 12,5 — M. G. 436.
1) Di[4-Nitrobenzyl]dipiperidein. Sm. 120,5° (B. 22, 1332). — IV, 532.
2) Diäthylester d. 2,5-Di[Phenylhydrazido]-1,4-Dihydrobenzol-1,4-Dicarbon-säure. Sm. 165° u. Zers. (B. 24, 2690). — IV, 724.
3) Diäthylester d. 3,6-Di[Phenylhydrazido]-1,4-Dihydrobenzol-2,5-Dicarbon-säure. Sm. 208° (B. 24, 2690). — IV, 724.
- C₂₄H₂₉O₆N₂** C 65,5 — H 6,3 — O 21,8 — N 6,3 — M. G. 440.
1) Hydrodicotarnin. Sm. 211°. (2HCl, PtCl₄, 2HBr, 2HJ (B. 30, 1747).

- $C_{24}H_{19}O_8N_2$ 2) Diacetat d. $\alpha\beta$ -Di[Oxyacetyl-2-Methylphenylamido]äthan. Sm. 188 bis 189° (B. 23, 2033; A. 279, 60).
- 3) Sebacinäurediphenylamid-3,3'-Dicarbonsäure (Sebacyldibenzam-säure). Sm. 275°. Ba + 2H₂O (G. 15, 550). — II, 1266.
- 4) Allylhydrastamid. Sm. 156° (B. 23, 2912). — II, 2054.
C 57,6 — H 5,6 — O 25,6 — N 11,2 — M. G. 500.
- $C_{21}H_{17}O_8N_4$ 1) Verbindung (aus Dioxibenzochinondicarbonäurediäthylester u. Phenyl-hydrazin). Sm. 134° (B. 22, 1290). — IV, 732.
- $C_{21}H_{17}O_8N_2$ 1) C 59,0 — H 5,7 — O 29,5 — N 5,7 — M. G. 488.
- 1) Aethylester d. Dioxisopropylidicarboxydidiphenylallopansäure. Sm. oberh. 300° u. Zers. (B. 17, 1306). — II, 1587.
- 2) Diäthylester d. Asoopiensäure. Sm. 101° (B. 20, 879). — IV, 1475.
- $C_{24}H_{19}NJ$ 1) Isopropyltribenzylammoniumjodid. Sm. 170° (B. 19, 1029). — II, 523.
- $C_{14}H_{11}N_2Cl_2$ 1) Dichlorbenzylat d. Nikotin (B. 25, 1433). — IV, 857.
- $C_{24}H_{19}N_2Cl$ 1) Methylphenylauraminchlorid (J. pr. [2] 47, 406). — IV, 1173.
- $C_{24}H_{19}N_2J$ 1) Tetramethylrosanilinjodid (B. 2, 443). — II, 1091.
- $C_{24}H_{19}N_2S_2$ 1) Di[Phenylthioharnstoff] d. Base $C_{16}H_{13}N_2$. Sm. 183° (B. 31, 2272).
- $C_4H_9N_3JA$ 1) Propyltribenzylarsoniumjodid. Sm. 145—146° (A. 233, 77). — IV, 1691.
- 2) Propyltribenzylarsoniumjodid. Sm. 143° (A. 233, 77). — IV, 1691.
C 83,0 — H 8,3 — O 4,6 — N 4,0 — M. G. 347.
- $C_{21}H_{19}ON$ 1) 1-Benzoyl- β -Triäthyl-1,2-Dihydrochinolin. Sm. 125—126° (B. 29, 2482). — IV, 230.
- $C_{21}H_{19}ON_3$ 1) C 76,8 — H 7,7 — O 4,3 — N 11,2 — M. G. 375.
- 1) Tetramethylrosanilin. Jodid (B. 2, 443). — II, 1091.
- 2) α -Oxy-4',4'',4'''-Pentamethyltriamidotriphenylmethan. Sm. 130°. HJ, Pikrat (B. 2, 443; 6, 357; 11, 2097; 12, 1275; 16, 2006; 19, 108). — II, 1087.
- $C_{21}H_{19}O_4N_3$ C 68,1 — H 6,8 — O 15,1 — N 9,9 — M. G. 423.
- 1) Aethylester d. Nitrosomethylisostrychninsäure (A. 268, 243). — III, 943.
- $C_{21}H_{19}O_8b$ 1) Triäthyläther d. Tri[4-Oxyphenyl]antimondihydroxyd. Chlorid, Bromid, Jodid, Nitrat (B. 30, 2842). — IV, 1696.
- $C_{21}H_{19}O_2N$ C 65,0 — H 6,6 — O 25,3 — N 3,1 — M. G. 443.
- 1) Aethylester d. Methylhydrastein. Sm. 95—96°. (2HCl, PtCl₄), HNO₃. — II, 2052.
- $C_{21}H_{19}O_7Cl$ 1) Chlorathamantin (A. 110, 362). — III, 620.
- $C_{21}H_{19}O_6N$ C 62,7 — H 6,3 — O 27,9 — N 3,0 — M. G. 459.
- 1) Pseudohomonarcein + 3H₂O. Sm. 173° u. Zers. (wasserfrei). (2HCl, PtCl₄ + 2H₂O) (A. 247, 173). — III, 915.
- 2) Narceinmethylester. HCl, (2HCl, PtCl₄), HJ (A. 277, 48). — II, 2080.
- 3) Hydroxyäthylat d. Isonarkotin (B. 30, 1746).
- $C_{21}H_{19}O_6Cl$ 1) Diacetat d. Chlorhexaoxybiphenyltetraäthyläther. Sm. 94—96° (B. 31, 817).
- $C_{21}H_{19}O_4N_{11}$ C 25,2 — H 2,5 — O 58,8 — N 13,5 — M. G. 1143.
- 1) Undekanitrocellulose (C. r. 95, 132).
- $C_{21}H_{30}O_7N_2$ C 76,2 — H 7,9 — O 8,5 — N 7,4 — M. G. 378.
- 1) Dibenzoyloxidhydrat d. Nikotin. Chlorid, Pikrat (B. 25, 1433). — IV, 857.
- 2) Verbindung (aus 1,3,3-Trimethyl-2-Aethyliden-2,3-Dihydroindol). Sm. 124° (G. 28 [2] 64).
- $C_{21}H_{29}O_3N_2$ C 73,1 — H 7,6 — O 12,2 — N 7,1 — M. G. 394.
- 1) Verbindung (aus Methylstrychnin). Sm. 158° (A. 264, 64). — III, 937.
- $C_{21}H_{29}O_3N_4$ C 68,2 — H 7,1 — O 11,4 — N 13,3 — M. G. 422.
- 1) Verbindung (aus Oxybenzol u. Hexamethylenamin). Zers. bei 115—124° (A. 272, 280). — II, 651.
- $C_{21}H_{29}O_3N_3$ C 64,0 — H 6,7 — O 10,7 — N 18,6 — M. G. 450.
- 1) Phloroglucin + 3 Molec. Phenylhydrazin. Sm. 78—83° (B. 22, 2190). — IV, 654.
- $C_{21}H_{30}O_4N_2$ C 70,2 — H 7,3 — O 15,6 — N 6,8 — M. G. 410.
- 1) Diäthylester d. 2,2'-Disopropylazobenzol-5,5'-Dicarbonsäure. Sm. 104—108° (J. r. 16, 167). — IV, 1466.

- C₁₄H₃₀O₄N₄** C 65,7 — H 6,8 — O 14,6 — N 12,8 — M. G. 438.
 1) Dimethylester d. γ -Diphenylhydrazonoktan- α - β -Dicarbonsäure. Sm. 105° (A. 294, 173). — IV, 722.
 2) Diäthylester d. Diphenylzindiacetbernsteinsäure (B. 17, 2058). — IV, 722.
- C₁₇H₃₀O₂N₂** C 67,6 — H 7,0 — O 18,8 — N 6,6 — M. G. 426.
 1) Methylbrucin + 4H₂O. Sm. 276° u. Zers. (A. 304, 42).
 2) Brucinmethyloxyhydrat. Sm. 250–251°. Salze siehe (J. 1859, 398 B. 14, 772; 17, 2267; 18, 779; J. pr. [2] 3, 162). — III, 946.
 3) α -Concusconinmethyloxyhydrat + 5H₂O. Sm. 202°. Salze siehe (A. 225, 241). — III, 929.
 4) β -Concusconinmethyloxyhydrat + 2H₂O. Salze siehe (A. 225, 243). — III, 929.
 5) Di[2,4,5-Trimethylphenylamid] d. Citronensäure. Sm. 194°. Na (B. 21, 661). — II, 552.
- C₁₇H₃₀O₆N₂** C 65,2 — H 6,8 — O 21,7 — N 6,3 — M. G. 442.
 1) Methylhydrastäthylamid. Sm. 162° (B. 23, 2906). — II, 2053.
- C₁₇H₃₀O₈S** 1) Diacetat d. s-Di[3-Oxy-4-Isopropyl-1-Methylphenyl]- β -Sulfon. Sm. 107–108° (G. 19, 348). — II, 971.
- C₁₈H₃₀O₄N₄** C 57,4 — H 6,0 — O 25,5 — N 11,1 — M. G. 502.
 1) Anhydrodi[Phenylhydrazon] d. Milchzucker. Sm. 223–224° u. Zers. (B. 20, 829). — IV, 794.
- C₂₁H₃₀N₅P** 1) Tri[4-Dimethylamidophenyl]phosphin. Sm. 273° (B. 9, 845; 21, 1503; A. 260, 32). — IV, 1659.
- C₂₁H₃₀N₅As** 1) Tri[4-Dimethylamidophenyl]arsin. Sm. 240° (A. 270, 145). — IV, 1686.
- C₂₁H₃₀N₄S** 1) 4,4'-Biphenylendi[Piperidylthioharnstoff]. Sm. 214–215° (B. 27, 1561). — IV, 965.
- C₂₁H₃₀O₄N** C 67,1 — H 7,2 — O 22,4 — N 3,3 — M. G. 429.
 1) 1-Benzotat d. 1-Oximido-3-Isobutyl-5-Methyl-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäurediäthylester. Sm. 157–158° (A. 288, 333).
- C₂₁H₃₁N₇Si** C 55,4 — H 6,1 — O 27,7 — N 10,8 — M. G. 520.
 1) Siliciumtri[4-Dimethylamidophenyl]. Sm. 152° (C. 1896 [1] 843).
- C₂₁H₃₁ON₇** C 79,1 — H 8,8 — O 4,4 — N 7,7 — M. G. 364.
 1) Isoamyleinchonidin. (2HCl, PtCl₄), HBr (B. 14, 1923). — III, 852.
- C₂₁H₃₁O₇N₃** C 75,8 — H 8,4 — O 8,4 — N 7,3 — M. G. 380.
 1) Chinoisoamylin. Sm. 166,5–167°. H₂SO₄ + 2H₂O (Bl. [3] 7, 311). — III, 821.
- C₂₁H₃₁O₂Cl** 1) Dichlorisodehydrocholal. Sm. 257° (B. 25, 808; H. 16, 500). — II, 1970.
- C₂₁H₃₁O₄N₂** C 69,9 — H 7,8 — O 15,5 — N 6,8 — M. G. 412.
 1) Phtalyltropein. Sm. 70°. (2HCl, PtCl₄) (A. 217, 102; B. 13, 108, 1085). — III, 788.
 2) Diäthylester d. $\alpha\beta$ -Di[Aethylphenylamido]äthan-3,3'-Dicarbonsäure. Sm. 98–100° (A. 226, 247). — II, 1259.
- C₂₁H₃₁O₆N₄** C 55,4 — H 6,1 — O 27,7 — N 10,8 — M. G. 520.
 1) Di[Phenylhydrazon] d. Isomaltose. Sm. 158° (B. 23, 3688; 23, 3025). — IV, 793.
 2) Di[Phenylhydrazon] d. Maltose. Sm. bei 206° (B. 17, 583). — IV, 793.
 3) Di[Phenylhydrazon] d. Milchzucker. Sm. 200° u. Zers. (B. 17, 583; 20, 828). — IV, 794.
 4) Di[Phenylhydrazon] d. Turanose. Sm. 215–220° u. Zers. (B. 27, 2485). — IV, 794.
- C₂₁H₃₁ON** C 82,1 — H 9,4 — O 4,5 — N 4,0 — M. G. 351.
 1) Di[β -Isoamylphenyl]amid d. Essigsäure. Sm. 81° (B. 20, 1259). — II, 563.
- C₂₁H₃₁O₄Cl** 1) Monochlorid d. Dehydrocholsäure. Sm. 241°. Na, Ag (H. 16, 502). — II, 1969.
- C₂₁H₃₁O₄Br** 1) Bromdehydrocholsäure. Sm. 171–173° u. Zers. (H. 19, 286). — II, 1970.
- C₂₁H₃₁O₁₁N₅** C 48,1 — H 5,7 — O 32,1 — N 14,0 — M. G. 598.
 1) Verbindung (aus Akrolein u. Phenylhydrazin). Sm. 223° (J. pr. [2] 50, 549). — IV, 748.
- C₂₁H₃₁N₄S** 1) 4,4'-Biphenylendi[Isoamylthioharnstoff]. Sm. noch nicht bei 300° (B. 27, 1559). — IV, 965.
- C₂₁H₃₀O₂N₂** C 75,0 — H 9,4 — O 8,3 — N 7,3 — M. G. 384.
 1) Di[2-Propylpiperidi] d. Benzol-1,2-Dicarbonsäure (Phtalylconiin) (A. 227, 202). — IV, 34.

- $C_{74}H_{36}O_8N_2$ C 60,0 — H 7,5 — O 26,7 — N 5,8 — M. G. 480.
1) Oximidobiliansäure. Na (B. 20, 1984). — II, 2077.
- $C_{74}H_{37}O_8N_2$ C 64,4 — H 8,3 — O 17,9 — N 9,4 — M. G. 447.
1) Verbindung (aus Dehydrocholsäure). Zers. bei 270° (B. 19, 2007). — II, 1969.
- $C_{74}H_{37}O_9N$ C 59,6 — H 7,7 — O 29,8 — N 2,9 — M. G. 483.
1) Pyroaconin. HCl + H₂O. (HCl, AuCl₃) (Soc. 65, 179). — III, 774.
- $C_{74}H_{38}ON_2$ C 77,8 — H 10,2 — O 4,3 — N 7,6 — M. G. 370.
1) Phenylhydrazid d. Stearolsäure. Sm. 81,5—82° (B. 25, 2670). — IV, 667.
- $C_{74}H_{38}O_9N$ C 68,6 — H 9,0 — O 19,0 — N 3,3 — M. G. 420.
1) Omicholin (H. 51, 159). — III, 667.
- $C_{74}H_{39}O_9N$ C 77,2 — H 10,4 — O 8,6 — N 3,7 — M. G. 373.
1) Phenylacetylamid d. Palmitinsäure. Sm. 60—61° (Am. 18, 700).
- $C_{74}H_{39}O_{10}N$ C 57,5 — H 7,8 — O 21,9 — N 2,8 — M. G. 501.
1) Aconin (oder C₃₂H₄₁O₉N; C₃₂H₄₁O₁₁N). Sm. bei 140°. HCl + 2H₂O, (HCl, AuCl₃), (HJ, HgJ₂), 7 + H₂SO₄ (Soc. 61, 393, 400; 63, 448; B. 27, 730). — III, 774.
- $C_{74}H_{40}ON_2$ C 77,4 — H 10,7 — O 4,3 — N 7,5 — M. G. 372.
1) Phenylhydrazid d. Oelsäure. Sm. 72—73° (B. 26, 122). — IV, 667.
2) Phenylhydrazid d. Elaïdinsäure. Sm. 98—99° (B. 26, 122). — IV, 667.
- $C_{74}H_{40}O_9N_2$ C 74,2 — H 10,3 — O 8,2 — N 7,2 — M. G. 388.
1) s-Palmyl-2-Methylphenylharnstoff. Sm. 98° (Soc. 69, 1596).
2) s-Palmyl-4-Methylphenylharnstoff. Sm. 89—90° (Soc. 69, 1597).
3) Phenylhydrazid d. Ricinolsäure. Sm. 62—63° (B. 27, 3474). — IV, 692.
4) Phenylhydrazid d. Ricinelaïdinsäure. Sm. 110—110,5° (M. 15, 313; B. 27, 3474). — IV, 693.
5) Phenylhydrazid d. Ricinsäure. Sm. 110—110,5° (B. 27, 3474). — IV, 693.
- $C_{74}H_{40}O_9N_2$ C 71,3 — H 9,9 — O 11,9 — N 6,9 — M. G. 404.
1) Phenylhydrazid d. 9-Keto- α -Oxyheptadekan- α -Carbonsäure (Ph. d. Oxykolestearinsäure) (B. 27, 3124). — IV, 704.
- $C_{74}H_{40}O_9J$ 1) Jodcholsäure. 4 + HJ (B. 20, 686). — I, 753.
- $C_{74}H_{40}O_9J_2$ 1) Braune Jodcholsäure (B. 28, 386).
- $C_{74}H_{40}O_{10}N_2$ C 50,3 — H 7,0 — O 28,0 — N 14,7 — M. G. 572.
1) Hemialbumin (H. 23, 161). — IV, 1586.
- $C_{74}H_{40}O_{10}N_2$ C 44,2 — H 6,1 — O 36,8 — N 12,9 — M. G. 652.
1) Säure (aus Eiweiss) (H. 23, 161). — IV, 1586.
- $C_{74}H_{41}ON$ C 80,2 — H 11,4 — O 4,5 — N 3,9 — M. G. 359.
1) α -Oximido- α -Phenylloktadekan. Sm. 53° (J. pr. [2] 54, 399).
2) Phenylamid d. Stearinsäure. Sm. 93,6° (A. 91, 152; J. pr. [2] 54, 400; Am. 18, 699). — II, 370.
3) Septekylamid d. Benzolcarbonsäure. Sm. 91° (B. 21, 2489). — II, 1161.
4) p-Cetylphenylamid d. Essigsäure. Sm. 104—104,5°; Sd. 205°₁₅ (B. 21, 3181). — II, 566.
- $C_{74}H_{41}O_9N$ C 76,8 — H 10,9 — O 8,5 — N 3,7 — M. G. 375.
1) α -Phenylamidostearinsäure. Sm. 84,5°; Sd. 273—275°₁₅ (B. 24, 2395). — II, 436.
- $C_{74}H_{41}O_9N$ C 60,8 — H 10,1 — O 15,7 — N 3,4 — M. G. 407.
1) Amid d. Cholsäure + 3H₂O. Sm. 125—130° (130—140° wasserfrei) (J. pr. [2] 19, 308; B. 6, 1186; 20, 1976). — I, 1398.
- $C_{74}H_{41}ON_2$ C 77,0 — H 11,2 — O 4,3 — N 7,5 — M. G. 374.
1) s-Phenylheptadekylharnstoff. Sm. 99° (B. 21, 2492). — II, 378.
2) Phenylhydrazid d. Stearinsäure. Sm. 105—107° (M. 14, 37). — IV, 667.
- $C_{74}H_{41}O_8S$ 1) 1-Oktadekylbenzol-p-Sulfonsäure. Na (B. 19, 2985). — II, 161.
- $C_{74}H_{41}O_9N$ 1) Lycoctonin (C. 1895 [1] 1184).
- $C_{74}H_{41}O_{10}N_2$ C 47,5 — H 6,9 — O 31,7 — N 13,8 — M. G. 606.
1) Hemiproteinidin + H₂O (H. 23, 161). — IV, 1586.
- $C_{74}H_{41}N_2S$ 1) s-Septekylphenylthioharnstoff. Sm. 79° (B. 21, 2491). — II, 392.
- $C_{74}H_{41}N_4J_4$ 1) Tetra[Jodmethylat] d. 2,4,2',4'-Tetra[Dimethylamido]biphenyl. Sm. 205° n. Zers. (H. 30, 2943).
- $C_{74}H_{41}O_9P$ 1) Tetracetat d. Säure C₇₄H₄₁O₉P (A. ch. [6] 23, 343). — I, 1504.

- C_7, H_{11}, ON_2 C 76,6 — H 11,7 — O 4,3 — N 7,4 — M. G. 376.
 1) 8-Oxy-4-Methyl-5-Aethyl-2-Heptadekyl-1,3-Diazin. Sm. 92° (PINNEU, Imidoäther 233). — IV, 833.
- C_7, H_7, ON C 78,9 — H 12,9 — O 4,4 — N 3,8 — M. G. 365.
 1) Lauronoxim. Sm. 39–40° (SOC. 57, 983).
- C_7, H_7, OCl 1) Chlorid d. Lignocerinensäure. Sm. 48–50° (B. 13, 1720). — I, 460.
- C_7, H_7, O, Br 1) Aethyl ester d. α -Brombehensäure. Sm. 49–51° (G. 27 [2] 299).
- C_7, H_7, O_2, N C 72,5 — H 11,8 — O 12,1 — N 3,5 — M. G. 397.
 1) Oxim d. Oxybrassinensäureäthylester. Sm. 28–29° (B. 26, 841, 1868).
 2) Aethyl ester d. μ -Pelargonylamidododekancarbonsäure. Sm. 54° (B. 26, 842, 1868).
- C_7, H_{10}, O_2, S 1) Glykoseschwefelsäure. 41bO (A. 30, 79). — I, 1048.
- C_7, H_{11}, O, B 1) Borsäure-sec. Trioktylester (J. pr. [2] 18, 390). — I, 345.
- C_7, H_{11}, Cl_2, As_2 1) Hexabutylarsoniumdichlorid. + $PtCl_4$ (B. 31, 597).
- C_7, H_{11}, J, As_2 1) Hexabutylarsoniumdijodid. Sm. 145° u. Zers. + $2HgJ_2$ (B. 31, 597).
- C_7, H_8, N, J_4 1) Triäthylennonäthyltetrammoniumjodid (J. 1861, 521). — I, 1166.

C_{10} -Gruppe mit vier Elementen.

- C_{10}, H_{11}, O, NCl 1) Anhydrobisdiketohydrinden-4-Chloranilid (B. 30, 3144).
- C_{10}, H_{11}, O, N, S 1) Naphthophenanthrasinsulfonsäure. Na (B. 19, 1720). — IV, 1094.
 2) isom. Naphthophenanthrasinsulfonsäure (aus 1,2-Diamidonaphtalin-6-Sulfonsäure). Na (B. 21, 3485). — IV, 920.
- $C_{10}, H_{11}, O, N_2, Cl_2$ 1) Azoresorufyl. 2HCl (B. 17, 1858). — II, 933.
- $C_{10}, H_{11}, O, Br, N_{10}$ 1) Oktobromderivat d. Verb. $C_{10}, H_{11}, O_8, N_{10}$ (B. 27, 943).
- $C_{10}, H_{11}, O, N_{11}, Cl$ 1) Nitrosotetranitrodisasobenzol-4-Chlorphenylhydrazin. Sm. 120 bis 122° u. Zers. (J. pr. [2] 43, 495). — IV, 1373.
- $C_{10}, H_{11}, O, N_2, Br_2$ 1) $\alpha, 2^1$ -Lakton d. 5', 5'-Dibrom-3', 3'-Dinitro- α -Oxy-4', 4'-Diacetoxyltriphenylmethan-2'-Carbonsäure (Diacetat d. Dibromdinitrophenolphthalin). Sm. 145° (G. 26 [1] 268).
- $C_{10}, H_{10}, ON_2, S_2$ 1) 2-Oxynaphtylazoderivat (d. 4-Amidophenyläther d. 5-Merkapto-2-Thiocarbonyl-3-Phenyl-2,3-Dihydro-1,3,4-Thiodiazol). Sm. 218° (B. 29, 2141). — IV, 683.
 2) p-Oxyamidotetraphentritthiasin (C. 1898 [2] 1151).
- $C_{10}, H_{10}, O_2, N, Cl_2$ 1) p-Dichlor-1,4-Benzochinondi[2-Amidosimmtsäure] (Bl. [3] 15, 1030).
- $C_{10}, H_{10}, O, N_2, Si$ 1) Siliciumtetra[p-Nitrophenyl]. Sm. 93–105° (B. 19, 1017). — IV, 1702.
- $C_{10}, H_{11}, O, N_2, Br$ 1) Benzot d. 4-Oxy-1-[2-Brom-4-Methylphenyl]azonaphtalin. Sm. 150° (B. 31, 1784). — IV, 1436.
- C_{10}, H_{11}, O, NS 1) Diacetylverbindung d. Verb. C_{10}, H_{11}, O_2, NS (M. 11, 425). — II, 1807.
- C_{10}, H_{10}, ON_2, Cl 1) 3-Chlor-2,5-Di[Phenylamido]-1,4-Benzochinonphenylimid. Sm. 195° (J. pr. [2] 28, 428). — III, 342.
 2) 7-Chlorphenylat d. 5-Acetylamido- $\alpha\beta$ -Naphthophenazin. Zers. bei 290°. 2 + $PtCl_4$ (A. 290, 263). — IV, 1207.
 3) 12-Chlorphenylat d. 5-Acetylamido- $\alpha\beta$ -Naphthophenazin. Zers. bei 260°. 2 + $PtCl_4$ (A. 290, 263). — IV, 1207.
 4) 12-Chlorphenylat d. 9-Acetylamido- $\alpha\beta$ -Naphthophenazin. 2 + $PtCl_4$ (B. 31, 3099).
- C_{10}, H_{10}, ON_2, S 1) 2-[1-Naphtylacetylamido]-5-[1-Naphtylamido]-1,3,4-Thiodiazol. Sm. 263° (B. 23, 361). — IV, 1237.
 2) 2-[2-Naphtylacetylamido]-5-[2-Naphtylamido]-1,3,4-Thiodiazol. Sm. 203° (B. 23, 363). — IV, 1237.
- $C_{10}, H_{10}, ON_2, Br_2$ 1) Verbindung + $2H_2O$ (aus Tribromtetraketohexamethylenhydrat u. Phenylhydrazin) (B. 25, 855). — IV, 788.
- $C_{10}, H_{11}, O, N_2, Cl$ 1) 7-[4-Acetylamidochlorphenylat]d. 10-Nitro-5-Amido- $\alpha\beta$ -Naphthophenazin (B. 31, 3085).
- $C_{10}, H_{11}, O, N_2, Br$ 1) 6-Brom-2,4-Dinitro-1,3,5-Tri[Phenylamido]benzol. Sm. 175 bis 178° (Am. 12, 294). — IV, 1125.
- $C_{10}, H_{10}, O, N_2, S$ 1) Di-p-Nitro-p-Phenylamidophenylsulfon (B. 7, 437). — II, 840.
- $C_{10}, H_{10}, O_2, N_2, S_2$ 1) Trimethyläther d. β -Trithio-3,5-Dinitro-4-Oxybenzaldehyd. Sm. 188° (B. 29, 158). — III, 84.

- $C_{14}H_{10}ON_2Br$ 1) *p*-Brom-6-Oxy-5-Phenyl-2,4-Dibenzyl-1,3-Diazin. Sm. 120° (*J. pr.* [2] 53, 247). — IV, 1089.
- $C_{14}H_{10}ON_2J$ 1) Jodäthylat d. Isorosindon (*B.* 31, 2484).
- $C_{14}H_{10}ON_2Cl$ 1) 7-Chlorphenylat d. 5-Amido-9-Acetylamido- $\alpha\beta$ -Naphthophenazin. 2 + $PtCl_4$ (*B.* 30, 1567). — IV, 1296.
2) 7-Chlorphenylat d. 5-Amido-10-Acetylamido- $\alpha\beta$ -Naphthophenazin (*B.* 31, 3080).
- $C_{14}H_{10}O_2N_2J$ 1) Jodmethylat d. 9-Oxyrosindon[5]methyläther. Zers. bei 100° (*B.* 31, 308). — IV, 1059.
- $C_{14}H_{10}O_2N_2S$ 1) 5,12-Anhydrid d. 10-Dimethylamido- $\alpha\beta$ -Naphthophenazin-12-Phenoxyhydrat (*B.* 31, 2435).
- $C_{14}H_{10}ONBr$ 1) *p*-Brom-2-Keto-1-Aethyl-3,3,5-Triphenyl-2,3-Dihydropyrrrol. Sm. 142° (*Soc.* 57, 705, 736). — IV, 475.
- $C_{14}H_{10}OCl_2As_2$ 1) Diphenylarsenoxychlorid. Sm. 117° (*A.* 201, 230). — IV, 1688.
- $C_{14}H_{10}O_2NBr$ 1) *p*-Brom-1-Acetyl-2-Keto-3,3-Di[*p*-Methylphenyl]-2,3-Dihydroindol (Acetylbromtoluisatin). Sm. 156° (*B.* 18, 1618).
- $C_{14}H_{10}O_2N_2S_2$ 1) Di[5-Acetylamido-1-Naphtyl]disulfid. Sm. 274° (*B.* 23, 1123). — II, 869.
2) Di[5-Acetylamido-2-Naphtyl]disulfid. Sm. 276° u. Zers. (*B.* 24, 335). — II, 889.
- $C_{14}H_{10}O_2NP$ 1) Diphenylmonamid d. Phosphorsäurediphenylester. Sm. 180° (*B.* 28, 614).
- $C_{14}H_{10}O_2N_2S_2$ 1) 4,4'-Di[Phenylsulfonamido]biphenyl. Sm. 232° (*A.* 272, 231). — IV, 966.
2) Phenylamid d. Biphenyl-2,2'-Disulfonsäure. Sm. 157° (*A.* 261, 330). — II, 226.
- $C_{14}H_{10}O_2Br_2S_2$ 1) Bromid d. Phenylester d. Benzolthionsulfonsäure. *Fl.* (*A.* 145, 319; 149, 110). — II, 818.
- $C_{14}H_{10}O_2N_2S$ 1) Diäthyläther d. Di[*p*-Nitro-2-Oxynaphtyl]-*p*-Sulfid. Sm. 235° (*B.* 23, 3362). — II, 986.
2) Diäthyläther d. isom. Di[*p*-Nitro-2-Oxynaphtyl]-*p*-Sulfid. Sm. 202° (*B.* 23, 3363). — II, 986.
- $C_{14}H_{10}O_2N_2S_2$ 1) Diphenyldiamid d. Diphenylsulfondisulfonsäure. Sm. 212° (*B.* 19, 3127). — II, 815.
- $C_{14}H_{10}O_2N_2S_2$ 1) Aethyläther d. Naphtalin-2,6-Disulfonsäurediazophenol. Na_2 (Diamingoldgelb) (*B.* 27, 3358). — IV, 1418.
- $C_{14}H_{10}N_2Cl_2Hg_2$ 1) Chlorid d. Quecksilberammoniumbase $C_{14}H_{10}O_2N_2Hg_2$. Zers. oberh. 240° (*G.* 28 [2] 131). — IV, 1707.
- $C_{14}H_{11}O_2NCl_2$ 1) Diphenyläther d. 4,4-Dichlor-5,5-Dioxy-2-Keto-3,3-Dimethyl-1-Phenyltetrahydropyrrrol (uns-Dimethyldichlorsuccinildiphenyläther). Sm. 156–157°. + C_6H_6 (*A.* 295, 71).
- $C_{14}H_{11}O_2N_2S_2$ 1) Phenylamid d. 1-Phenylamidobenzol-2,4-Disulfonsäure. Sm. 221–222° (*B.* 24, 3807). — II, 576.
- $C_{14}H_{11}O_2N_2S_2$ 1) Triphenylamid d. Benzoltrisulfonsäure. Sm. 237° (*Am.* 9, 346). — II, 425.
- $C_{14}H_{11}O_2N_2S_2$ 1) Trimethyläther d. β -Trithio-3-Nitro-4-Oxybenzaldehyd. Sm. 108° (*B.* 29, 158). — III, 84.
- $C_{14}H_{11}ON_2P$ 1) Di[Phenylamid]-Diphenylmonamid d. Phosphorsäure. Sm. 232° (*B.* 28, 615).
- $C_{14}H_{11}O_2N_2Br_2$ 1) Lakton d. α -Oxy- α' -[Dibromtetramethyldiamidodiphenyl]- α' -Phenylmethan- α' -2-Carbonsäure. HCl, 2HCl, (2HCl, $PtCl_4$) (*B.* 10, 1623). — II, 1723.
- $C_{14}H_{11}O_2N_2Hg_2$ 1) Quecksilberdi[4-Phenylamidophenyl]quecksilberdiammoniumhydrat. Zers. oberh. 200°. Chlorid, Acetat (*G.* 28 [2] 130). — IV, 1707.
- $C_{14}H_{11}O_2N_2S_2$ 1) $\alpha\alpha$ -Phtalyldi[β -Benzylthioharnstoff]. Sm. 163° (*Soc.* 67, 574).
2) $\alpha\alpha$ -Phtalyldi[β -Methyl- β -Phenylthioharnstoff]. Sm. 188–189° (*Soc.* 67, 574).
3) $\alpha\alpha$ -Phtalyldi[β -2-Methylphenylthioharnstoff]. Sm. 177–178° (*Soc.* 67, 574).
- $C_{14}H_{11}O_2N_2S$ 1) Phenyl-*p*-[4-Dimethylamidophenyl]amido-*p*-Oxynaphtylsulfon. HCl (*B.* 28, 1317). — IV, 587.
- $C_{14}H_{11}O_2N_2S_2$ 1) Phenylamid d. 2-Oxynaphtalinäthyläther-1,6-Disulfonsäure. Sm. 127° (*C.* 1895 [1] 1064).

- $C_{21}H_{23}O_3Cl_3Br_{11}$ 1) Hexamethyläther d. Trichlorxanthogallo. Sm. 86° (A. 245, 337). — II, 1014.
- $C_{21}H_{23}ON_3Cl$ 1) 9-Chlor-3-Dimethylamido-10-Keto-9-[4-Dimethylamidophenyl]-9,10-Dihydroanthracen. 2 + $ZnCl_2$ (C. 1897 [2] 591).
- $C_{21}H_{23}O_2NBr_2$ 1) Benzoat d. Verb. $C_{17}H_{19}ONBr_2$. Sm. 156—158° (B. 28, 2911).
- $C_{21}H_{23}N_3ClP$ 1) Phenyltri[Phenylamido]phosphoniumchlorid. Sm. 250°. 2 + $PtCl_4$ (B. 28, 2216). — IV, 1661.
- $C_{21}H_{23}N_3BrP$ 1) Phenyltri[Phenylamido]phosphoniumbromid. Sm. 235° (B. 28, 2217). — IV, 1661.
- $C_{21}H_{23}N_3JP$ 1) Phenyltri[Phenylamido]phosphoniumjodid. Sm. 165° (B. 28, 2217). — IV, 1661.
- $C_{21}H_{21}ON_2Br_2$ 1) Phenylurethan d. Verb. $C_{17}H_{19}ONBr_2$. Sm. 186—189° (B. 28, 2912).
- $C_{21}H_{21}ON_2P$ 1) Phenyltri[Phenylamido]phosphoniumoxyhydrat. Sm. 216°. Salze, siehe diese (B. 28, 2217). — IV, 1661.
- $C_{21}H_{21}O_2N_3As$ 1) Tri[*p*-Acetylamidophenyl]arsin. Sm. 230° (B. 19, 1035). — IV, 1689.
- $C_{21}H_{21}O_2N_3P$ 1) Tri[4-Acetylamidophenyl]phosphinoxid + H_2O . Sm. 186—187° wasserfrei (A. 229, 330). — IV, 1660.
- $C_{21}H_{21}O_4N_4Br_4$ 1) Di[4,5-Dibrom-3-Keto-1,5-Dimethyl-2-Phenyltetrahydropyrazolyl-4-]essigsäure. Sm. 149—151° u. Zers. (A. 255, 244). — IV, 1266.
- $C_{21}H_{21}O_4N_3P$ 1) Phosphat d. anti-Methylbenzhydroxamsäure. Sm. 83° (B. 29, 1155).
- 2) Phenylamid d. Phosphorsäuretri[Oxyessigsäure]. Sm. 196° (B. 279, 57).
- $C_{21}H_{21}N_4ClP$ 1) Chlorphostetraanilid (Am. 19, 357).
- $C_{21}H_{21}ON_3P$ 1) Phenyltri[1,2,3,4-Tetrahydro-1-Chinolyl]phosphinoxid. Sm. 216° (B. 31, 1045). — IV, 1682.
- $C_{21}H_{21}ON_3P$ 1) Verbindung (aus d. Tri[Phenylamid] d. Phosphorsäure u. Amido-benzol). Sm. 180° (B. 29, 722).
- $C_{21}H_{20}O_2NJ$ 1) Jodmethylat d. Corycavin + $1\frac{1}{2}H_2O$. Zers. bei 218° (A. 277, 17). — III, 877.
- 2) Jodallylat d. Hydrastin. Sm. 193° (B. 23, 2910). — II, 2051.
- $C_{21}H_{20}ON_2Cl$ 1) Methylchlorid d. Dimethyldihydroamarin. Sm. 168°. 2 + $PtCl_4$ + H_2O (B. 15, 2328). — III, 25.
- $C_{21}H_{20}O_2N_2Cl$ 1) Strychninchloracetone. 2 + $PtCl_4$ + $2H_2O$, HSO_4 + $1\frac{1}{2}H_2O$ (J. 1874, 875). — III, 939.
- $C_{21}H_{20}O_2Cl_2Sb$ 1) Triäthyläther d. Tri[4-Oxyphenyl]antimondchlorid. Sm. 84° (B. 30, 2842). — IV, 1696.
- $C_{21}H_{20}O_2Br_2Sb$ 1) Triäthyläther d. Tri[4-Oxyphenyl]antimondbromid. Sm. 110 bis 111° (B. 30, 2842). — IV, 1696.
- $C_{21}H_{20}O_2J_2Sb$ 1) Triäthyläther d. Tri[4-Oxyphenyl]antimondjodid. Sm. 121 bis 122° (B. 30, 2842). — IV, 1696.
- $C_{21}H_{20}O_2N_2S$ 1) *s-d*-Cocainphenylthioharnstoff. Sm. 190—193° (B. 27, 1885). — III, 868.
- $C_{21}H_{20}ON_2Br$ 1) *p*-Brom- α -Oxy-4',4',4'-Pentamethyltriamidotriphenylmethan. 3HBr (B. 10, 1845; 11, 698). — II, 1058.
- $C_{21}H_{20}O_2N_2S$ 1) Äthyläther d. 3,4-Di[Aethylphenylsulfonamido]-1-Oxybenzol. Sm. 121°. — II, 723.
- $C_{21}H_{20}O_2NCl$ 1) Chloräthylat d. Narkotin. 2 + $PtCl_4$ (A. 247, 173). — III, 915.
- 2) Chloräthylat d. Isonarkotin. 2 + $PtCl_4$ (B. 30, 1746).
- $C_{21}H_{20}O_2NJ$ 1) Jodäthylat d. Narkotin. Fl. (See. 29, 167; A. 247, 173). — III, 915.
- 2) Jodäthylat d. Isonarkotin. Sm. 183° (B. 30, 1746).
- $C_{21}H_{20}O_2N_2Cl$ 1) Chlorformylat d. Brucin + $5H_2O$. 2 + $PtCl_4$, + $AuCl_3$ (J. 1859, 398). — III, 946.
- 2) α -Chlormethylat d. Concusconin. (2 + $PtCl_4$ + $4H_2O$) (A. 225, 240). — III, 929.
- 3) β -Chlormethylat d. Concusconin (2 + $PtCl_4$ + $5H_2O$) (A. 225, 242). — III, 929.
- $C_{21}H_{20}O_2N_2Br$ 1) Brommethylat d. Brucin + $2\frac{1}{2}H_2O$ (J. 1859, 398). — III, 946.
- $C_{21}H_{20}O_2N_2J$ 1) α -Jodmethylat d. Brucin. Sm. 290° u. Zers. + $8H_2O$, + J_2 (J. 1859, 398; B. 14, 772; 17, 2267; 18, 779; J. pr. [2] 3, 162). — III, 946.

- $C_{21}H_{29}O_2N_3J$ 2) β -Jodmethylat d. Brucin. Sm. 260° u. Zers. (*M.* 15, 116). — III, 946.
3) α -Jodmethylat d. Concuseonin (*A.* 225, 239). — III, 929.
4) β -Jodmethylat d. Concuseonin (*A.* 225, 242). — III, 929.
- $C_{21}H_{29}O_2N_3J$ 1) Jodmethylat d. Narceinimid. Sm. 244—245° (*A.* 286, 252). — II, 2081.
- $C_{24}H_{30}ON_3P$ 1) Orthophosphorsäureäthyltriphenylamid. Sm. 149° (*B.* 26, 574). — II, 357.
2) Tri[4-Dimethylamidophenyl]phosphinoxid. Sm. 149—152° (*A.* 229, 333). — IV, 1660.
- $C_{24}H_{30}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[α -Bromisovalerylphenylamido]äthan. Sm. 147° (*B.* 31, 3246).
2) $\alpha\beta$ -Di[α -Brombutyryl-2-Methylphenylamido]äthan. Sm. 190° (*B.* 25, 3260). — II, 463.
3) $\alpha\beta$ -Di[α -Brombutyryl-4-Methylphenylamido]äthan. Sm. 125° (*B.* 25, 3262). — II, 493.
4) $\alpha\beta$ -Di[α -Bromisobutyryl-2-Methylphenylamido]äthan. Sm. 172 bis 173° (*B.* 25, 3260). — II, 463.
5) $\alpha\beta$ -Di[α -Bromisobutyryl-4-Methylphenylamido]äthan. Sm. 175° (*B.* 25, 3262). — II, 494.
- $C_{24}H_{30}O_2N_2S$ 1) 4-Methoxybenzaldehyd-2,4-Dimethylphenylthionaminsäures-4-Amido-1,3-Dimethylbenzol. Sm. 111° (*A.* 274, 235). — III, 82.
- $C_{24}H_{31}ON_3S$ 1) Hexamethyltriamidophenylsulfhydroxyd + 7H₂O. Sm. 80—90° (200° wasserfrei). Salze siehe (*B.* 24, 758). — II, 805.
- $C_{24}H_{31}ON_3Si$ 1) Tri[4-Dimethylamidophenyl]silicol. Sm. 188—189° (*C.* 1896 [1] 843).
- $C_{24}H_{31}O_2N_2Cl$ 1) Methyl ester d. Chlormethyl-Methylisostrychninsäure + 2H₂O (*A.* 264, 80). — III, 943.
- $C_{24}H_{31}O_2N_2J$ 1) Methyl ester d. Jodmethyl-Methylstrychninsäure (*A.* 264, 60). — III, 942.
2) Methyl ester d. Jodmethyl-Methylisostrychninsäure + 2H₂O (*A.* 264, 78). — III, 943.
- $C_{24}H_{31}O_2N_2J$ 1) Jodmethylat d. Gelsemin (oder C₂₃H₂₉O₂N₂J). Sm. 285° u. Zers. (*B.* 26, 1058). — III, 884.
2) Jodmethylat d. Vellosin. Sm. 264° (*A.* 282, 255). — III, 923.
- $C_{24}H_{31}O_2N_2J$ 1) Jodmethylat d. Brucinsäure + H₂O. Sm. 218° u. Zers. (*A.* 304, 41).
- $C_{24}H_{32}O_2N_2J$ 1) Jodmethylat d. Methylcorydalin. Sm. 195—196° (*A.* 277, 9). — III, 876.
2) Jodäthylat d. Corydalin (*A.* 137, 283). — III, 876.
3) Jodäthylat d. Butyrylcodein + $\frac{1}{2}$ H₂O (*Soc.* 28, 321). — III, 905.
- $C_{24}H_{32}O_2N_2S_2$ 1) Verbindung (aus Similbin). Hg (*B.* 30, 2328).
- $C_{24}H_{32}ON_2J$ 1) Jodmethylat d. Diäthylidencinchonin. Sm. oberh. 105° (*A.* 269, 290). — III, 834.
- $C_{24}H_{32}O_2N_2J_2$ 1) Di[Jodäthylat] d. Chinin. Sm. 140° (*M.* 2, 611; 15, 49). — III, 814.
2) Di[Jodäthylat] d. Conchinin + H₂O. Sm. 205° u. Zers.; + 3H₂O (*Sm.* 134°) (*A.* 269, 236; *M.* 15, 51). — III, 825.
- $C_{24}H_{34}O_2N_2J_2$ 1) Di[Jodäthylat] d. Cinchotenin. Zerr. bei 154° (*M.* 15, 792). — III, 841.
- $C_{27}H_{34}N_2JP$ 1) Benzyl-4-Methylphenyl-di[1-Piperidyl]phosphoniumjodid. Sm. 125° (*B.* 31, 1046). — IV, 1682.
- $C_{27}H_{40}ON_2S$ 1) *s*-Palmityl-2-Methylphenylthioharnstoff. Sm. 65,5—66,5° (*Soc.* 69, 1596).
2) *s*-Palmityl-4-Methylphenylthioharnstoff. Sm. 75—76° (*Soc.* 69, 1597).
3) α -Palmitylimido- α -Methylphenylamido- α -Merkaptomethan (Palmitylpseudomethylphenylthioharnstoff). Sm. 59—60° (*Soc.* 69, 1597).
- $C_{27}H_{32}O_2N_2Fe$ 1) Iridoferrocyanwasserstoffpropyläther. 2HCl (*B.* 21, 934). — I, 1489.

C₂₇-Gruppe mit fünf Elementen.

- $C_{27}H_{37}O_{13}N_4S_4P$ 1) Säure (aus Chlorphostetraanilid). Ba₃, Pb₃ (*Am.* 19, 362).

C₂₈-Gruppe mit einem Element.

- C₂₈H₂₀** C 93,8 — H 6,2 — M. G. 320.
 1) **Tetraphenylmethan.** Sm. 267,5° (272°) (*B.* 30, 2045; *C.* 1898 [2] 1131).
 2) **Di[*p*-Biphenyl]methan.** Sm. 162°; Sd. 360° (*B.* 7, 1188; *A. ch.* [6] 19, 254). — II, 300.
- C₂₈H₂₂** C 93,2 — H 6,8 — M. G. 322.
 1) **Triphenylmethan + Benzol.** Sm. 76° (*A.* 235, 209; *B.* 5, 907). — II, 287.
 2) **Kohlenwasserstoff** (aus α -Dypnopinakolin). Sm. 95,5° (*B.* 25 [2] 427). — II, 299.
- C₂₈H₂₄** C 92,6 — H 7,4 — M. G. 324.
 1) **Kohlenwasserstoff** (aus α -Dypnopinakolin). Sm. 145° (*B.* 25 [2] 427). — II, 298.
- C₂₈H₂₆** C 91,5 — H 8,5 — M. G. 328.
 1) **Tri[2,6-Dimethylphenyl]methan.** Sm. 188° (*J. pr.* [2] 35, 484). — II, 291.
 2) **1',3',1'-Trimethyl-4'-Isopropyltriphenylmethan^p** Sd. oberh. 360° (*J. pr.* [2] 35, 498). — II, 291.
 3) **Kohlenwasserstoff** (aus Paraldehyd). Sd. 350–360° (*B.* 7, 1194). — II, 291.
- C₂₈H₂₄** C 87,2 — H 12,8 — M. G. 344.
 1) **2-Hexadekyl-1,3,5-Trimethylbenzol.** Sm. bei 40°; Sd. 258–258,5°, (154–155°) (*B.* 21, 3184; 29, 1326). — II, 40.
- C₂₈H₃₄** C 85,2 — H 14,8 — M. G. 352.
 1) **Pentakosan.** Sm. 53,5–54° (*C.* 1896 [1] 642).

C₂₆-Gruppe mit zwei Elementen.

- C₂₆H₁₄O₆** C 76,1 — H 3,6 — O 20,3 — M. G. 394.
 1) **Verbindung** (aus 2,3-Dichlor-1-Ketoinden u. Natriummalonsäurediäthylester). Sm. 194° (*A.* 247, 151). — III, 168.
- C₂₆H₁₆O₆** C 72,8 — H 3,9 — O 23,3 — M. G. 412.
 1) **Diacetat d. Benzoingelb.** Sm. 237° (*B.* 31, 2976).
- C₂₆H₁₆O₉** C 65,2 — H 3,5 — O 31,3 — M. G. 460.
 1) **Diacetylfluoresceincarbonsäure** (*B.* 11, 1342). — II, 2089.
- C₂₆H₁₆N₂** C 87,2 — H 4,6 — N 8,1 — M. G. 344.
 1) **Chrysoluzin.** Sm. 176° (*B.* 20, 2443; 23, 2438). — IV, 1094.
- C₂₆H₁₈O** C 89,8 — H 5,4 — O 4,8 — M. G. 334.
 1) **4,4'-Dibiphenylketon** (4,4'-Diphenylbenzophenon). Sm. 220° (226°) (*B.* 7, 1189; *A. ch.* [6] 15, 258). — III, 264.
- C₂₆H₁₈O₂** C 85,7 — H 5,1 — O 9,1 — M. G. 350.
 1) **9,9-Di[*p*-Oxyphenyl]fluoren.** Sm. oberh. 300° (*A.* 247, 285). — II, 1008.
- C₂₆H₁₈O₃** C 82,0 — H 4,9 — O 13,1 — M. G. 366.
 1) **α ,2-Lakton d. α -Oxy- α -Phenyl- α -[2-Oxy-1-Naphtyl]essigbenzyläthersäure.** Sm. 181° (*B.* 31, 2825).
- C₂₆H₁₈O₅** C 75,4 — H 4,5 — O 20,1 — M. G. 398.
 1) **Anhydroverb. d. $\delta\delta$ -Di[3-Oxy-1,4-Naphtochinonyl-2]- β -Methylbutan.** Sm. oberh. 200° u. Zers. (*Soc.* 65, 84). — III, 464.
- C₂₆H₁₈O₇** C 69,8 — H 4,2 — O 26,0 — M. G. 430.
 1) **Triacetat d. Verb. C₁₆H₁₂O₄** (*B.* 26, 1143). — II, 1044.
- C₂₆H₁₈O₈** C 67,3 — H 4,0 — O 28,7 — M. G. 446.
 1) **Triacetat d. Verb. C₁₆H₁₂O₆**, Sm. 177° (*B.* 26, 1145). — II, 1044.
- C₂₆H₁₈N₂** C 86,7 — H 5,2 — N 8,1 — M. G. 346.
 1) **Methylen carbazol.** Sm. noch nicht bei 280° (*B.* 25, 2766). — IV, 393.
 2) **3-Phenylamido-5-Phenylakridin.** Sm. 196–197° (*B.* 24, 2045). — IV, 1072.

- C₂₅H₁₈N₄** C 80,2 — H 4,8 — N 15,0 — M. G. 374.
1) **Methylphenylfluorindin**. HCl, (2HCl, PtCl₄) (*B.* 28, 1545; 29, 1247). — *IV*, 1302.
- C₂₅H₁₈N₆** C 74,6 — H 4,5 — N 20,9 — M. G. 402.
1) **Phenylhydrazon d. Leukonditoluylenchinoxalin** (*B.* 19, 777). — *IV*, 1302.
- C₂₅H₁₉N₃** C 83,1 — H 5,3 — N 11,6 — M. G. 361.
1) **Phenyl-4-Methylphenylindulin**. Sm. 227—228° (*A.* 286, 194).
- C₂₅H₂₀O** C 89,3 — H 5,9 — O 4,8 — M. G. 336.
1) **α -Oxydi- β -Biphenylmethan**. Sm. 151° (*B.* 7, 1189; *Bt.* 47, 688). — *II*, 1095.
2) **Phenyläther d. α -Oxytriphenylmethan**. Sm. 95° (*C.* 1896 [1] 416). C 85,2 — H 5,7 — O 9,1 — M. G. 352.
1) **2-[4-Methylphenyl]-4-[4-Methylbenzoyl]methylen-1,4-Cumaran** (Dimethylphenacylidenflaven). Sm. 145° (*B.* 31, 713).
2) **Benzoat d. α -Phenyl- α -[2-Oxynaphtyl]äthan**. Sm. 138° (*B.* 24, 3000). — *II*, 1149.
- C₂₅H₂₀O₄** C 78,1 — H 5,2 — O 16,6 — M. G. 384.
1) **Diacetat d. Di[2-Oxynaphtyl]methan**. Sm. 211° (214°) (*B.* 25, 3214, 3480; 26, 84). — *II*, 1006.
2) **1-Methyl-3,4-Phenyleneester d. β -Phenylakrylsäure**. Sm. 145° (*B.* 25, 3533). — *II*, 1406.
- C₂₅H₂₀O₅** C 75,0 — H 5,0 — O 20,0 — M. G. 400.
1) **α -Benzoat- β -Aethyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten**. Sm. 147° (*B.* 27, 713). — *III*, 317.
2) **Aethyl ester d. Tribenzoylessigsäure**. Sm. 98° (*A.* 282, 158). — *II*, 1989.
- C₂₅H₂₀O₆** C 72,1 — H 4,8 — O 23,1 — M. G. 416.
1) **Dicotoïn**. Sm. 73—74° (77°) (*A.* 199, 29; 282, 195; *B.* 27, 1185; 28, 1553). — *III*, 202.
2) **$\alpha\epsilon$ -Diketo- $\alpha\gamma\epsilon$ -Triphenylpentan- $\beta\delta$ -Dicarbonsäure** (Benzaldibenzoylessigsäure). Sm. 130° (*B.* 18, 2374; *A.* 281, 55). — *II*, 2038.
C 69,4 — H 4,6 — O 25,9 — M. G. 432.
- C₂₅H₂₁O₇** 1) **Pseudodicotoïn**. Sm. 74—76° (*A.* 282, 199; *B.* 27, 1185).
C 64,6 — H 4,3 — O 31,0 — M. G. 464.
- C₂₅H₂₀O₉** 1) **Tetracetat d. 3,4,5-Trioxyphehyl-4-Oxy-1-Naphtylketon**. Sm. 129° (*A.* 269, 314). — *III*, 256.
- C₂₅H₂₀O₁₇** C 58,6 — H 3,9 — O 37,5 — M. G. 512.
1) **Pentaacetat d. Quercetin**. Sm. 189—191° (*M.* 5, 88; 6, 890; *A.* 196, 319; *B.* 17, 1682; *See.* 67, 31). — *III*, 605.
2) **Pentaacetat d. Farbatoffs C₁₅H₁₀O₇**. Sm. 188—190° (*C.* 1898 [1] 1306).
C 86,2 — H 5,7 — N 8,0 — M. G. 348.
- C₂₅H₂₀N₂** 1) **4-[α -Phenylhydrazonbenzyl]biphenyl**. Sm. 144° (*M.* 12, 508). — *IV*, 778.
2) **α -Phenylazotriphenylmethan**. Sm. 111° (*Bt.* 30, 2045; *C.* 1898 [2] 1131). — *IV*, 1404.
3) **Dimethylrosindol**. Sm. bei 270°. HCl (*B.* 20, 815). — *IV*, 1091.
C 79,8 — H 5,3 — N 14,9 — M. G. 376.
- C₂₅H₂₀N₄** 1) **4-Phenylformazybenzol** (Formazyldiphenyl). Sm. 174° (*B.* 31, 480; *A.* 300, 253). — *IV*, 1403.
2) **4-Methylphenylamidoaposafranin**. Sm. 219—220°. HCl (*B.* 28, 1716; 29, 365). — *IV*, 1280.
C 74,2 — H 4,9 — N 20,8 — M. G. 404.
- C₂₅H₂₀N₆** 1) **Verbindung** (aus 4-Amidoazobenzol u. Orthoameisenäther). Sm. 191 bis 193° (*J. pr.* [2] 53, 476). — *IV*, 1357.
- C₂₅H₂₁S₂** 1) **Diphenyläther d. $\alpha\alpha$ -Dimerkaptodiphenylmethan**. Sm. 139° (*B.* 18, 888). — *III*, 180.
- C₂₅H₂₁N** C 89,6 — H 6,2 — N 4,2 — M. G. 335.
1) **α -Phenylamidotriphenylmethan**. Sm. 146° (144,5°) (*B.* 17, 703, 746). — *II*, 642.
- C₂₅H₂₁N₃** C 82,6 — H 5,8 — N 11,6 — M. G. 363.
1) **Tetraphenylguanidin**. Sm. 130—131°. HCl + 5 H₂O. (2HCl, PtCl₄), HNO₃ (*B.* 7, 843). — *II*, 351.

- C₂₆H₂₂O** C 88,8 — H 6,5 — O 4,7 — M. G. 338.
 1) **4-Keto-6-Methyl-1,2,3-Triphenyl-1,2,3,4-Tetrahydrobenzol?** Sm. 140° (*M.* 19, 418).
- C₂₅H₂₂O₄** C 77,7 — H 5,7 — O 16,6 — M. G. 386.
 1) **Methylrosol + H₂O** (*M.* 16, 396).
 2) **Acetat d. α -Diketo- γ -[2-Oxyphenyl]- α -Diphenylpentan.** Sm. 83 bis 84° (*B.* 29, 243). — III, 307.
 3) **Diacetat d. 9,10-Dioxy-10-Benzyl-9,10-Dihydroanthracen.** Sm. 126° (*Bf.* [3] 6, 92). — III, 245.
- C₂₅H₂₁O₂** C 74,6 — H 5,5 — O 19,9 — M. G. 402.
 1) **Dibenzooat d. Isobutyl-2,5-Dioxyphenylketon.** Sm. 105° (*B.* 24, 1345). — III, 153.
- C₂₅H₂₁O₃** C 71,8 — H 5,3 — O 22,9 — M. G. 418.
 1) **Triacetat d. δ -Trioxytriphenylmethan.** Sm. 138–139° (*A.* 202, 197 *B.* 11, 1117; *M.* 15, 80). — II, 1028.
 2) **Aethylester d. meso- α - β -Dibenzoxyl- β -Phenylpropionsäure.** Sm. 85° (*B.* 30, 1605).
 3) **Aethylester d. isom. α - β -Dibenzoxyl- β -Phenylpropionsäure.** Sm. 109° (*B.* 11, 1221; 12, 539; 16, 1288). — II, 1761.
- C₂₅H₂₁O₂** C 69,1 — H 5,1 — O 25,8 — M. G. 434.
 1) **4-Triacetat d. α -Oxytri[4-Oxyphenyl]methan** (Triacetat d. Aurin). Sm. 171–172° (*B.* 11, 1122; *M.* 15, 74; 17, 191; *A.* 196, 84; 202, 191). — II, 1120.
 2) **isom. Triacetat d. Aurin.** Sm. 145–147° (*M.* 17, 194).
 3) **Tribenzooat d. Erythrit.** Sm. 108–110° (*A.* 301, 102).
 4) **Verbindung** (aus Leukorosol) (*M.* 16, 390).
 C 62,2 — H 4,6 — O 33,2 — M. G. 482.
- C₂₅H₂₁O₁₀** 1) **Huminsubstanz** (aus Lävulose) (*C.* 1895 [2] 593).
 C 54,9 — H 4,0 — O 41,0 — M. G. 546.
- C₂₅H₂₁O₁₄** 1) **Pentacylquercinsäure** (*A.* 238, 369). — III, 589.
 C 85,7 — H 6,3 — N 8,0 — M. G. 350.
- C₂₅H₂₂N₂** 1) **α -Phenylhydrazidotriphenylmethan.** Sm. bei 135° (*B.* 30, 2044). — IV, 1044.
 2) **2,4-Di[Cinnamylidenamido]-1-Methylbenzol** (*A.* 239, 384; 253, 332). — IV, 607.
 3) **4,5-Dicinnamyl-2-Phenyl-4,5-Dihydroimidazol** (Benzylidencinnenyldiamin). Sm. 207°. (2HCl, PtCl₄ + 2H₂O) (*Soc.* 49, 469). — III, 286.
 4) **α -Phenyl- α -Di[3-Methyl-2-Indolyl]methan** (Benzylidendiskatol). Sm. 140–142° (*A.* 239, 241). — IV, 222.
 5) **α -Phenyl- α -Di[1-Methyl-3-Indolyl]methan.** Sm. 197° (*A.* 242, 377; *B.* 19, 2988). — IV, 219, 1088.
 6) **α -Phenyl- α -Di[2-Methyl-3-Indolyl]methan.** Sm. 246–247° (*A.* 242, 373). — IV, 1089.
 7) **1-Aethyl-2,3-Diphenyl-1,2-Dihydro- α -Naphtimidazol.** Sm. 108° (*B.* 26, 191). — IV, 920.
 8) **1-Benzyl-3-[4-Methylphenyl]-1,2-Dihydro- α -Naphtimidazol.** Sm. 125° (*B.* 27, 2779). — IV, 918.
- C₂₅H₂₁S** 1) **p -Triphenylmethyl-2-Aethylthiophen.** Sm. 111° (*B.* 29, 1403). — III, 750.
- C₂₅H₂₃N₃** C 82,2 — H 6,3 — N 11,5 — M. G. 365.
 1) **α -[3-Amidophenyl]- α -Di[2-Methyl-3-Indolyl]methan** (*A.* 242, 375). — IV, 1089.
- C₂₅H₂₄O₂** C 84,3 — H 6,7 — O 9,0 — M. G. 356.
 1) **α -Diketo- γ -Phenyl- α -Di[4-Methylphenyl]pentan** (Benzaldi-Methyl- p -Tolylketon). Sm. 115–116° (*B.* 29, 2247).
- C₂₅H₂₄O₃** 2) **Lakton d. Dimethylamarsäure.** Sm. 137° (*J.* 1877, 814). — II, 1725.
 C 80,6 — H 6,4 — O 12,9 — M. G. 372.
- C₂₅H₂₄O₄** 1) **α -Diketo- γ -[2-Oxyphenyl]- α -Di[4-Methylphenyl]pentan.** Sm. 131 bis 132° (*B.* 29, 243). — III, 308.
 2) **Aethyläther d. α -Diketo- γ -[2-Oxyphenyl]- α -Diphenylpentan.** Sm. 95° (*B.* 29, 1490 Anm.). — III, 307.
 3) **Verbindung** (aus Benzylchlorid). Sd. 310–320° (*Soc.* 37, 722). — II, 46.
- C₂₅H₂₄O₄** C 77,3 — H 6,2 — O 16,5 — M. G. 388.
 1) **Methylleukorosol** (*M.* 16, 397).

- C₂₀H₇O**, 2) Diäthylätherdi[2-Naphtyläther] d. Tetraoxymethan (Orthokohlensäurediäthyl-2-Dinaphtyläther). *Sd.* 298—301° (*B.* 13, 701). — **II**, 878.
- 3) Diacetat d. *p*-Dioxy-*p*-Dimethyltriphenylmethan. *Sm.* 94° (*A.* 257, 71). — **II**, 1004.
- 4) Bensoat d. Ostruthin. *Sm.* 93°. — **III**, 639.
C 71,4 — H 5,7 — O 22,9 — *M. G.* 420.
- C₂₂H₇O₆**, 1) Bensoat d. Peruresinotannol (*B.* 27 [2] 312).
C 68,8 — H 5,5 — O 25,7 — *M. G.* 436.
- C₂₃H₇O₇**, 1) Verbindung (aus Methylrosol) (*M.* 16, 398).
C 66,4 — H 5,3 — O 28,3 — *M. G.* 452.
- C₂₃H₇O₈**, 1) Diacetat d. Curcumin. *Sm.* 170—171° (*B.* 30, 193).
C 60,0 — H 4,8 — O 35,2 — *M. G.* 500.
- C₂₅H₇O₁₁**, 1) Diacetat d. Katechin. *Sm.* 129—131° (*B.* 13, 695). — **III**, 686.
C 58,1 — H 4,6 — O 37,2 — *M. G.* 516.
- C₂₅H₉O₁₂**, 1) Pentaacetylvitexin. *Sm.* 251—256° (*Sec.* 73, 1022).
C 80,2 — H 6,9 — O 12,8 — *M. G.* 374.
- C₂₅H₁₀O₅**, 1) Dimethylamarsäure. *Sm.* 182°. Ba + 2H₂O, Ag (*J.* 1877, 814; *A.* 275, 69). — **IV**, 1725.
C 63,8 — H 5,5 — O 30,6 — *M. G.* 470.
- C₂₅H₂₀O₉**, 1) Eupittonsäure. *Sm.* 200° u. Zers. Na, Ba (*B.* 9, 334; **11**, 1457, 2085; **13**, 1377, 2216). — **II**, 2092.
C 61,7 — H 5,4 — O 32,9 — *M. G.* 486.
- C₂₅H₁₄O₁₀**, 1) Triäthylester d. Dibenzoylidesoxalsäure (*J. pr.* [2] 20, 155). — **II**, 1155.
2) Verbindung (aus 1,4-Dioxybenzol u. Ameisensäure). *Sm.* 60° u. Zers. (*B.* 19, 1003). — **II**, 941.
C 54,5 — H 4,7 — O 40,7 — *M. G.* 550.
- C₂₅H₁₆O₁₄**, 1) Pentaacetat d. Aeskulin. *Sm.* 130° (*A.* 161, 73; *B.* 13, 1952). — **III**, 567.
C 84,7 — H 7,3 — N 7,9 — *M. G.* 354.
- C₂₆H₁₆N₂**, 1) Diäthylamarin. *Sm.* 110—115°. HCl, HJ (*A.* 110, 83). — **III**, 23.
2) Diäthyllophin + H₂O. (HCl, AuCl₃), HJ, HNO₃ (*A.* 122, 327). — **III**, 27.
- 3) Phenylidi[1,2,3,4-Tetrahydrochinolyl]methan. *Sm.* 152—153° (*B.* 19, 1243). — **IV**, 1077.
C 81,3 — H 7,3 — N 11,4 — *M. G.* 369.
- C₂₆H₁₇N₃**, 1) Valerylidenrosanilin (*Z.* 1867, 176). — **II**, 1093.
2) Triäthylehrysanilin. (2 HCl, PtCl₄), 2HJ + 1 $\frac{1}{2}$ H₂O (*B.* 2, 380). — **IV**, 1211.
C 87,2 — H 8,1 — O 4,6 — *M. G.* 344.
- C₂₆H₂₀O**, 1) Methyläther d. 3-Oxy-*p*-Dibenzyl-4-Isopropyl-1-Methylbenzol. *Sm.* 89—90° (*G.* 11, 434). — **II**, 905.
C 76,5 — H 7,1 — O 16,3 — *M. G.* 392.
- C₂₆H₂₀O₄**, 1) Benzyl-Geraniolester d. Benzol-1,2-Dicarbonensäure (Benzylester d. Rhodinolphalensäure). *Fl.* (*J. pr.* [2] 56, 24).
C 70,8 — H 6,6 — O 22,6 — *M. G.* 424.
- C₂₆H₂₀O₆**, 1) Triäthylester d. $\beta\delta$ -Diphenyl- $\alpha\gamma\gamma$ -Tricarbonensäure. *Sd.* 260 bis 265°₁₃ (*Sec.* 75, 249).
C 65,8 — H 6,1 — O 28,1 — *M. G.* 456.
- C₂₇H₂₀O₈**, 1) Tetraäthylätheracetat d. Quercetin. *Sm.* 151—153° (*M.* 9, 542). — **III**, 605.
C 59,5 — H 5,5 — O 34,9 — *M. G.* 504.
- C₂₇H₂₂O₁₁**, 1) Nataloin. *Zers.* bei 160° (*Bt.* 17, 328; **18**, 182). — **III**, 618.
C 56,0 — H 5,2 — O 38,8 — *M. G.* 536.
- C₂₈H₂₀O₁₃**, 1) Cyclopin + H₂O (*J.* 1881, 1019). — **III**, 629.
C 78,1 — H 7,3 — N 14,6 — *M. G.* 384.
- C₂₈H₂₀N₄**, 1) Phenylhydrason d. Cinchotoxin. *Sm.* 148° (*B.* 28, 1067). — **IV**, 798.
C 68,2 — H 6,4 — N 25,4 — *M. G.* 440.
- C₂₈H₂₂N₆**, 1) Carbo-*m*-Amidotetraimidobenzol. *Fl.* 8 HCl (*B.* 10, 1719). — **IV**, 578.
2) Carbo-*p*-Amidotetraimidobenzol. *Sm.* 138° (*B.* 10, 1718). — **IV**, 594.
C 87,4 — H 8,4 — N 4,1 — *M. G.* 343.
- C₂₉H₂₂N**, 1) 3,5-Di[4-Isopropylbenzyl]pyridin. *Sm.* 76—77°. HCl, (2 HCl, PtCl₄), (2 HCl, HgCl₂), (2 HCl, CaCl₂), Acetat + Cu-Acetat, Pikrat (*A.* 280, 61). — **IV**, 458.

- C₂₅H₁₇N₃** C 80,8 — H 7,8 — N 11,3 — M. G. 371.
 1) **Triäthylmavauvlin** (*Z.* **1867**, 237). — **III**, 678.
 2) **Phenylid[4-Propylphenyl]guanidin** (*B.* **17**, 1226). — **II**, 549.
- C₂₆H₃₀O₄** C 76,1 — H 7,6 — O 16,2 — M. G. 394.
 1) **Dibensylester d. Hydrocamphocarbonsäure**. Sd. 260—290₁₀. — **II**, 1052.
- C₂₅H₃₀O₁₂** C 57,5 — H 5,7 — O 36,8 — M. G. 522.
 1) **Pikrotin**, siehe C₁₅H₁₀O₇. — **III**, 643.
- C₂₅H₃₀O₁₆** C 51,2 — H 5,1 — O 43,7 — M. G. 586.
 1) **Oxycyclopin** (*J.* **1881**, 1019). — **III**, 629.
- C₂₅H₃₁N₃** C 83,8 — H 8,3 — N 7,8 — M. G. 358.
 1) **Robinin** + 5 $\frac{1}{2}$ H₂O? Sm. 195° (*A. Spl.* **1**, 257). — **III**, 606.
- C₂₅H₃₁N₃** C 80,4 — H 8,3 — N 11,3 — M. G. 373.
 1) **2',2'-Di[Dimethylamido]-4',4'-Dimethyltriphenylmethan**. Sm. 123° (109°). (2HCl, PtCl₄ + 21 $\frac{1}{2}$ H₂O) (*B.* **13**, 809; **24**, 557). — **IV**, 1046.
 2) **Tri[4-Dimethylamidophenyl]methan**. Sm. 173°. (6HCl, 3PtCl₄) (*B.* **6**, 361; **12**, 799; **14**, 1952; **16**, 707, 2007; **17**, 99; **18**, 769; **20**, 2421; **31**, 1774). — **IV**, 1195.
 2) **isom. Tri[4-Dimethylamidophenyl]methan**. Sm. 250° (*B.* **11**, 2097). — **IV**, 1195.
 3) **4'-Amido-4², 4²-Di[Dimethylamido]-2',6'-Dimethyltriphenylmethan**. Sm. 158° (*B.* **24**, 3134). — **IV**, 1198.
 4) **3'-Amido-2², 2²-Di[Dimethylamido]-4², 4²-Dimethyltriphenylmethan**. Sm. 131° (*B.* **24**, 560). — **IV**, 1198.
 5) **4'-Amido-2², 2²-Di[Dimethylamido]-4², 4²-Dimethyltriphenylmethan**. Sm. 139° (*B.* **20**, 1564). — **IV**, 1198.
- C₂₆H₃₁O₁₀** C 61,0 — H 6,5 — O 32,5 — M. G. 492.
 1) **Teträthylester d. β , γ -Diketo- δ -Phenylheptan- α γ ϵ η -Tetracarbonsäure**. Sm. 146° (130°) (*A.* **288**, 347; *B.* **31**, 1392).
- C₂₅H₃₂O₁₄** C 54,0 — H 5,7 — O 40,3 — M. G. 556.
 1) **Diarbutin**. Fl. (*A.* **154**, 245). — **III**, 572.
- C₂₅H₃₃N₄** C 77,3 — H 8,2 — N 14,4 — M. G. 388.
 1) **Asellin**. (2HCl, PtCl₄) (*Bl.* **3**, 226). — **III**, 888.
- C₂₅H₃₄O₂** C 82,0 — H 9,3 — O 8,7 — M. G. 396.
 1) **Sycocerylester d. Benzolcarbonsäure** (*J.* **1861**, 641). — **II**, 1144.
- C₂₅H₃₄O₄** C 75,4 — H 8,5 — O 16,1 — M. G. 398.
 1) **Bensoat d. Ammositannol** (*B.* **29** [2] 37).
- C₂₅H₃₄O₁₄** C 53,8 — H 6,1 — O 40,1 — M. G. 558.
 1) **Loganin**. Sm. 215° (*J.* **1884**, 1409). — **III**, 596.
- C₂₅H₃₄N₂** C 82,9 — H 9,4 — N 7,7 — M. G. 362.
 1) **Diallylonanthylidendiphenyldiamin**. Fl. (*A. Spl.* **3**, 365). — **II**, 446.
- C₂₅H₃₆O₄** C 75,0 — H 9,0 — O 16,0 — M. G. 400.
 1) **Lupulinsäure**. Sm. 92—93°. Cu (*J.* **1863**, 598; *Bl.* **45**, 489; *B.* **31**, 2022). — **II**, 2110.
- C₂₅H₃₆O₅** C 72,1 — H 8,6 — O 19,2 — M. G. 416.
 1) **Methylester d. Dehydrocholsäure** (*B.* **14**, 74). — **II**, 1969.
- C₂₅H₃₆O₈** C 64,6 — H 7,8 — O 27,6 — M. G. 464.
 1) **Biliansäure** + 2H₂O. Sm. 264° (wasserefrei). K, Ca₃ + 5H₂O, Ba + 2H₂O, Ba₃ + 17H₂O, Pb, Pb₃, Ag₃, Ag₅ (*Bl.* **25**, 379, 429; *B.* **15**, 2366; **19**, 480; **20**, 1982; **32**, 683; *H.* **25**, 304). — **II**, 2076.
 2) **Isobiliansäure** + H₂O (oder C₂₄H₃₄O₈). Sm. 234—237° u. Zers. K, Ba + 6H₂O, Ag₃ (*B.* **19**, 1530; **20**, 1986; **32**, 684). — **II**, 2077.
- C₂₅H₃₆O₉** C 62,5 — H 7,5 — O 30,0 — M. G. 480.
 1) **Biliansäure**, siehe C₂₅H₃₆O₈. — **II**, 2076.
- C₂₅H₃₆O₁₀** C 60,5 — H 7,3 — O 32,2 — M. G. 496.
 1) **Pseudooholoidsäure** + 4 $\frac{1}{2}$ H₂O (oder C₁₈H₂₄O₃). Ba + 10H₂O, Pb₃, Ag₃, Ag₄ (*Bl.* **38**, 135).
- C₂₅H₃₆O₄** C 74,6 — H 9,4 — O 15,9 — M. G. 402.
 1) β -Copal-Essen. Zers. oberh. 140° (*C.* **1896** [2] 796).
 2) **Dehydrocholsäure**, siehe C₂₇H₄₄O₄.
- C₂₅H₃₈O₇** C 66,7 — H 8,4 — O 4,9 — M. G. 450.
 1) **Cholansäure** + $\frac{1}{4}$ H₂O (oder C₂₄H₃₈O₇). Sm. 285° u. Zers. K₃ + 4H₂O, Ba + 4H₂O, Ba₃ + 12H₂O, Pb₃ + H₂O, Ag₃ (*A.* **194**, 231; *B.* **6**, 1282; **11**, 2288; **13**, 1053; **14**, 1492; **15**, 713; **18**, 3045; **19**, 474; *Bl.* **35**, 432; **38**, 133; *H.* **25**, 311). — **II**, 2016.

- C₂₅H₃₀O₂** 2) Isocholensäure. Sm. 247–248°. K, K₂, Ba, BaH, Ba₂ + 6H₂O, Pb₂ + 4H₂O, Cu₂ + 2CuO + 6H₂O, Ag₂ (B. 15, 713; 19, 1529). — II, 2077.
- C₂₅H₃₀O₁₄** C 53,4 — H 6,8 — O 39,8 — M. G. 562.
- 1) Heptaäthylester d. Butan- $\alpha\beta\gamma\gamma\delta$ -Heptacarbonsäure. Sd. 280 bis 285¹⁵ (B. 21, 2116). — I, 873.
- C₂₅H₂₈N₂** C 82,0 — H 10,4 — N 7,6 — M. G. 366.
- 1) Diisocamylamidodibenzylamidomethan (Bl. [3] 13, 158).
- C₂₅H₄₁O₄** C 80,8 — H 10,7 — O 8,6 — M. G. 372.
- 1) Echikautschin (A. 178, 58). — III, 629.
- C₂₅H₄₂O₃** C 77,3 — H 10,3 — O 12,4 — M. G. 388.
- 1) Stearinbenzolcarbonsäureanhydrid. Sm. 70° (A. 91, 104). — II, 1158.
- 2) Verbindung (aus Braunkohle) (J. 1852, 648). — I, 689.
- C₂₅H₄₀O₄** C 74,3 — H 9,9 — O 15,8 — M. G. 404.
- 1) α -Hyochoisäure. Na, Ba, Ag (A. 70, 192; H. 13, 232). — I, 736.
- 2) Cholestensäure (oder C₂₆H₄₂O₂?). Sm. 60–70°. Cu, Ag (J. r. 9, 82). — II, 1074.
- C₂₅H₄₀O₅** C 71,4 — H 9,5 — O 19,1 — M. G. 420.
- 1) Oxycholestensäure. Pb, Cu, Ag (J. r. 9, 82). — II, 1074.
- C₂₅H₄₀O₆** C 68,8 — H 9,2 — O 22,0 — M. G. 436.
- 1) Dioxycholestensäure. K, Ca, Pb, Cu, Ag (J. r. 9, 82). — II, 1074.
- C₂₅H₄₀O₁₀** C 60,0 — H 8,0 — O 32,0 — M. G. 500.
- 1) Glykosid (aus Adonis aestivalis) (C. 1896 [2] 590).
- 2) Tetraäthylester d. β ,-Diketo- δ -Hexylheptan- $\alpha\gamma\epsilon\eta$ -Tetracarbonsäure (T. d. Oenanthylidenbisacetonidcarbonylsäure). Sm. 125° (A. 288, 359).
- C₂₅H₄₀S₂** 1) Verbindung (aus Asphalt). — III, 564.
- C₂₅H₄₂O** C 83,8 — H 11,7 — O 4,5 — M. G. 358.
- 1) Heptadekyl-4-Methylphenylketon. Sm. 67°; Sd. 278¹⁵ (174°) (B. 21, 2268; 29, 1327). — III, 157.
- 2) Pentadekyl-2,4,6-Trimethylphenylketon. Sm. 35°; Sd. 280¹⁵ (J. pr. [2] 54, 402).
- C₂₅H₄₂O₂** C 80,2 — H 11,2 — O 8,6 — M. G. 374.
- 1) 4-Methylphenylester d. Stearinsäure. Sm. 54°; Sd. 276¹⁵ (B. 17, 1380). — II, 749.
- C₂₅H₄₂O₃** C 76,9 — H 10,8 — O 12,3 — M. G. 390.
- 1) Trioxcholesterin (J. r. 10, 358). — II, 1074.
- C₂₅H₄₂O₄** C 73,9 — H 10,3 — O 15,8 — M. G. 406.
- 1) Choleinsäure, siehe C₂₄H₄₀O₄. — I, 735.
- C₂₅H₄₂O₅** C 71,1 — H 9,9 — O 19,0 — M. G. 422.
- 1) Cholsäure + H₂O (B. 20, 3274) siehe auch C₂₄H₄₀O₅.
- 2) Methyl ester d. Cholsäure. Sm. 147° (J. pr. [2] 89, 272; H. 10, 193). — I, 782.
- C₂₅H₄₄O** C 83,3 — H 12,2 — O 4,4 — M. G. 360.
- 1) Ricylalkohol (oder C₂₇H₅₆O). Sm. 175°; Sd. oberh. 350° (Bl. 42, 150; Soc. 53, 676). — II, 1069.
- 2) Alkohol (aus Sesamid). Sm. 137,5° (C. 1897 [2] 773).
- 3) Äthyläther d. P-Oxy-4-Hexadekyl-1-Methylbenzol. Sm. 26,5–27° (B. 21, 3183). — II, 777.
- C₂₅H₄₄O₂** C 63,6 — H 9,3 — O 27,1 — M. G. 472.
- 1) Tetraäthylester d. $\beta\kappa$ -Dimethylundekan- $\delta\delta\delta\delta$ -Tetracarbonsäure. Sd. 257–263²⁰ (Soc. 59, 841). — I, 863.
- C₂₅H₄₄N₂** C 80,6 — H 11,8 — N 7,5 — M. G. 372.
- 1) δ -Phenylhydrasonnonadekan. Fl. (Bl. [3] 15, 767). — IV, 769.
- C₂₅H₄₄O₁₂** C 55,8 — H 8,5 — O 35,7 — M. G. 538.
- 1) Purginsäure. Ba (C. 1897 [1] 419).
- C₂₅H₄₅O** C 82,4 — H 13,2 — O 4,4 — M. G. 364.
- 1) Ambrain. Sm. 36° (A. 6, 25). — II, 1076.
- C₂₅H₄₅O₃** C 75,7 — H 12,1 — O 12,1 — M. G. 396.
- 1) Valerylarachinsäureanhydrid. Sm. 68° (B. 11, 2031). — I, 464.
- C₂₅H₄₄O₄** C 72,8 — H 11,7 — O 15,5 — M. G. 412.
- 1) Säure (aus d. Glykol C₂₅H₅₀O₂). Sm. 102,5°. Pb (A. 223, 300). — I, 691.
- C₂₅H₄₆N** C 82,6 — H 13,5 — N 3,9 — M. G. 363.
- 1) Nitril d. Cerotinsäure. Sm. 58° (C. 1896 [1] 642).

- C₂₅H₃₀O₇** C 78,5 — H 13,1 — O 8,4 — M. G. 382.
 1) Cerotinsäure. Sm. 77,9°. Mg, Ba, Pb, Ag (A. 235, 145; C. 1896 [1] 642). — I, 448.
 2) Hyenasäure. Sm. 77—78°. Ca, Pb (A. 129, 168). — I, 448.
 3) Methylester d. Lignocerinsäure. Sm. 56,5—57° (B. 13, 1717). — I, 448.
 4) Isomylester d. Arachinsäure. Sm. 44,8—45°; Sd. 295—298°₁₀₀ (A. 101, 99; J. 1884, 1193). — I, 447.
 5) Dilaurylcarbinolester d. Essigsäure. Sm. 34—35° (Soc. 57, 985). — I, 411.
- C₂₅H₃₀O₅** C 75,4 — H 12,6 — O 12,0 — M. G. 398.
 1) α-Oxycerotinsäure. Sm. 86,5° (C. 1896 [1] 642).
- C₂₅H₃₂O** C 81,5 — H 14,1 — O 4,3 — M. G. 368.
 1) prim. Alkohol (aus Bienenwache) (A. 235, 142). — I, 240.
- C₂₅H₃₂O₂** C 78,1 — H 13,5 — O 8,3 — M. G. 384.
 1) Glykol (aus Carnaubawache). Sm. 103,5—103,8° (J. 1869, 784; A. 223, 299). — I, 267.

C₂₅-Gruppe mit drei Elementen.

- C₂₅H₁₁O₈N₆** C 57,0 — H 2,7 — O 24,3 — N 16,0 — M. G. 526.
 1) Tetranitromethylen-carbasol (B. 25, 2767). — IV, 393.
- C₂₅H₁₁ON** C 87,0 — H 4,3 — O 4,6 — N 4,1 — M. G. 345.
 1) Benzonylamido-chrysol. Sm. 259—265° (Soc. 41, 157). — III, 462.
- C₂₅H₁₇O₄N** C 76,3 — H 3,8 — O 16,3 — N 3,5 — M. G. 393.
 1) Anhydrobisdiketohydrinden-3-Amidobenzoesäure (B. 30, 3144).
 2) Lakton d. Benzoyldiphenylketipinsäuremononitril. Sm. 168 bis 168,5° (A. 282, 58). — II, 2032.
- C₂₅H₁₄O₂N₇** C 76,5 — H 4,1 — O 12,2 — N 7,1 — M. G. 392.
 1) Benzoylphenylamidoimid d. Naphtalin-1,8-Dicarbonensäure. Sm. 235° (B. 28, 364). — IV, 712.
- C₂₅H₁₆O₄N₄** C 68,8 — H 3,7 — O 14,7 — N 12,8 — M. G. 436.
 1) 4,5-Diphenylazo-1,7-Dioxyxanthon. Sm. 249—250° u. Zers. (Soc. 73, 672). — IV, 1479.
- C₂₅H₁₆O₆N₄** C 60,0 — H 3,2 — O 25,6 — N 11,2 — M. G. 500.
 1) Tetra[4-Nitrophenyl]methan. Sm. 275° (C. 1898 [2] 1131).
- C₂₅H₁₄O₁₀N₆** C 53,6 — H 2,8 — O 28,6 — N 15,0 — M. G. 560.
 1) Di[4-Nitrophenylazo]maklurin (Soc. 67, 934). — IV, 1479.
- C₂₅H₁₆O₁₂Br₄** 1) Pentaacetat d. Tetrabrommorin. Sm. 192—193° (Soc. 69, 795). — III, 684.
 C 86,5 — H 4,9 — O 4,6 — N 4,0 — M. G. 347.
- C₂₅H₁₇ON** 1) Benzoylamido-chrysen. Sm. 248° (B. 24, 950). — II, 1169.
 C 80,0 — H 4,5 — O 4,3 — N 11,2 — M. G. 375.
- C₂₅H₁₇ON₅** 1) Benzoylaphraframin. + C₆H₆ (B. 28, 2285). — IV, 1177.
 C 82,6 — H 4,7 — O 8,8 — N 3,9 — M. G. 363.
- C₂₅H₁₇O₇N** 1) Anhydrobisdiketohydrinden-4-Toluid (B. 30, 3143).
 C 76,7 — H 4,3 — O 8,2 — N 10,7 — M. G. 391.
- C₂₅H₁₇O₇N₃** 1) 2-Oxybenzylidenamidobenzolindon (2-Oxybenzylidensaframinon) (B. 30, 400). — IV, 1179.
 2) Benzoesäure d. 3-Oxy-5-Phenyl-1-[2-Naphtyl]-1,2,4-Triazol. Sm. 141 bis 142° (Soc. 73, 371). — IV, 1158.
 3) Verbindung (aus 2'-Chlor-4-Oxyazobenzol-3-Carbonsäure) (Soc. 69, 1260). — IV, 1469.
- C₂₅H₁₇O₁₂Br₃** 1) Pentaacetat d. Tribromquercetin. Sm. 251—253° (M. 6, 870). — III, 605.
 C 82,9 — H 5,0 — O 4,4 — N 7,7 — M. G. 362.
- C₂₅H₁₈ON₇** 1) 2-Keto-4,5-Diphenyl-1-[2-Naphtyl]-2,3-Dihydroimidazol. Zers. bei 280° (A. 284, 35). — III, 224.
 2) 2-Naphtylamid d. 3-Methyl-β-Naphtochinolin-1-Carbonsäure. Sm. 230—232° (B. 31, 3325).
 C 76,9 — H 4,6 — O 4,1 — N 14,4 — M. G. 390.
- C₂₅H₁₈ON₄** 1) 5-Keto-4-[1-Naphtyl]azo-1,3-Diphenyl-4,5-Dihydropyrazol. Sm. 196° (B. 27, 785). — IV, 1490.

- C₂₅H₁₆O₂N₂** 2) **5-Keto-4-[2-Naphtyl]azo-1,3-Diphenyl-4,5-Dihydropyrazol**. Sm. 225° (*B.* 27, 785). — **IV**, 1490.
C 73,9 — H 4,4 — O 7,9 — N 13,8 — M. G. 406.
- C₂₅H₁₆O₂N₄** 1) **6-Phenylamido-2-[2-Nitrophenyl]-1-Phenylbenzimidazol**. Sm. 210° (*A.* 286, 181).
2) **Benzoat d. 4-Oxy-1,3-Di[Diphenylazo]benzol**. Sm. 138—139° (*B.* 17, 369). — **IV**, 1416.
3) **Benzoat d. 5-Oxy-1,3-Di[Phenylazo]benzol**. Sm. 148—150° (*B.* 22, 2194). — **IV**, 1416.
C 71,1 — H 4,2 — O 11,4 — N 13,3 — M. G. 422.
- 1) **Phenylester d. ?-Diphenylazo-4-Oxybenzol-3-Carbonsäure**. Sm. 148° (*A.* 283, 220). — **IV**, 1470.
C₂₅H₁₆O₄N₂ C 73,2 — H 4,4 — O 15,6 — N 6,8 — M. G. 410.
1) **3,5-Di[Phthalamidomethyl]-1-Methylbenzol**. Sm. 244° (*B.* 25, 3016). — **IV**, 645.
C₂₅H₁₆O₄N₄ C 68,5 — H 4,1 — O 14,6 — N 12,8 — M. G. 438.
1) **1-Acetoxy-2,4-Diphenylazonaphthalin-2'-Carbonsäure**. Zers. bei 229—230° (*B.* 24, 1602). — **IV**, 1464.
C₂₇H₁₈O₂N₄ C 66,1 — H 4,0 — O 17,6 — N 12,3 — M. G. 454.
1) **3,3'-Dinitro-4,4'-Di[Phenylamido]diphenylketon**. Sm. 219° (*B.* 24, 3775). — **III**, 183.
C₂₈H₁₈O₄N₄ C 63,8 — H 3,8 — O 20,4 — N 11,9 — M. G. 470.
1) **Di[Phenylazo]maklurin**. Sm. 266—267° u. Zers. (*Nov.* 67, 933; 71, 187). — **IV**, 1479.
- C₂₅H₁₆O₁₁Br₄** 1) **Tetracetat d. Tetrabrommorinmonoäthyläther**. Sm. 116—120° (*M.* 18, 710).
- C₂₅H₁₈O₁₂Br₂** 1) **Pentaacetat d. Dibromquercetin** (*B.* 17, 1683; *M.* 6, 867). — **III**, 605.
C₂₅H₁₈N₂S 1) **2-Merkapto-4,5-Diphenyl-1-[2-Naphtyl]imidazol** (*A.* 284, 32). — **III**, 225.
2) **s-Phenylchrysilthioharnstoff**. Sm. 186° (*B.* 24, 957). — **II**, 643.
C₂₅H₁₈N₂S 1) **Verbindung** (aus s-Di[4-Phenylamidophenyl]thioharnstoff). Sm. 117° (*A.* 255, 192). — **IV**, 591.
C₂₅H₁₈ON C 85,9 — H 5,4 — O 4,6 — N 4,0 — M. G. 349.
1) **Verbindung** (aus 2,3-Dimethylchinolin). Sm. 173° (*B.* 22, 268). — **IV**, 327.
2) **Verbindung** (aus d. Verb. C₂₅H₁₈ON aus 2,3-Dimethylchinolin). Sm. 240° (*B.* 22, 269). — **IV**, 327.
C₂₅H₁₈ON₂ C 79,6 — H 5,0 — O 4,2 — N 11,1 — M. G. 377.
1) **6-Phenylamido-2-[2-Oxyphenyl]-1-Phenylbenzimidazol**. Sm. 190° (*A.* 286, 181). — **IV**, 1124.
C₂₅H₁₈O₂N₃ C 76,3 — H 4,8 — O 8,1 — N 10,7 — M. G. 393.
1) **α-[2-Nitrophenyl]azotriphenylmethan**. Sm. 116° (*C.* 1898 [2] 1131). — **IV**, 1404.
2) **α-[3-Nitrophenyl]azotriphenylmethan**. Sm. 111—112° (*C.* 1898 [2] 1131). — **IV**, 1404.
3) **α-[4-Nitrophenyl]azotriphenylmethan**. Sm. 118,5° (*C.* 1898 [2] 1131). — **IV**, 1404.
C₂₅H₁₈O₂N₅ C 71,2 — H 4,5 — O 7,6 — N 16,6 — M. G. 421.
1) **6-[2,4-Dioxyphenyl]azo-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benzotriazin** (*B.* 30, 2598). — **IV**, 1492.
2) **Phenylamidoformiat d. 4-Oxy-1,3-Di[Phenylazo]benzol**. Sm. 133 bis 135° (*B.* 23, 497). — **IV**, 1416.
C₂₅H₁₈O₂Br 1) **6-Brom-2-[4-Methylphenyl]-4-[4-Methylbenzoyl]methylen-1,4-Cumaran** (Bromdimethylphenacylidenaflaven). Sm. 176—177° (*B.* 31, 714).
C₂₅H₁₈O₃N C 78,7 — H 5,0 — O 12,6 — N 3,7 — M. G. 381.
1) **4-Oxy-5-Keto-3-Cinnamoyl-1,2-Diphenyl-2,5-Dihydropyrrrol**. Sm. 230—231° (*B.* 31, 1310).
C₂₅H₁₈O₄N C 75,6 — H 4,8 — O 16,1 — N 3,5 — M. G. 397.
1) **2,5-Diphenyl-1-[4-Methylphenyl]pyrrrol-2',5'-Dicarbonsäure**. Sm. 253° (*B.* 20, 1489). — **IV**, 452.
C₂₅H₁₈O₄N₃ C 70,6 — H 4,5 — O 15,0 — N 9,9 — M. G. 425.
1) **1,4-Dibenzoylamido-3-[2-Methylphenylamido]-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin** (Hippuroflavin o-Toluid). Sm. 208—209° (*A.* 287, 87).

- C₂₀H₁₉O₂N₂** 2) 1,4-Dibenzoyl-3-[4-Methylphenylamido]-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin (Hippuroflavin-p-Toluid). Sm. 246° (A. 287, 89).
3) 3,5-Di[Phenylamid]d. 6-Oxy-2-Keto-1-Phenyl-1,2-Dihydropyridin-3,6-Dicarbonsäure. Sm. 265° (A. 285, 120).
- C₂₀H₁₉O₆N** 1) Lakton d. δ -Nitro- γ -Acetoxy- γ -Oxy- α - β -Triphenyl- α -Buten- α -Carbonsäure. Sm. 166° (B. 24, 3868). — II, 1729.
- C₂₀H₁₉O₆P** 1) Triphenylester d. Phenylphosphorsäure-2-Carbonsäure (Salol-O-Phosphorsäurediphenylester). Sm. 76–77° (B. 31, 2177).
- C₂₀H₁₉N₂Cl** 1) α -Diphenylhydrason-4-Chlordiphenylmethan. Sm. 130° (B. 26, 34). — IV, 775.
2) α -[3-Chlorphenyl]asotriphenylmethan. Sm. 109° (C. 1898 [2] 1131). — IV, 1404.
3) α -[4-Chlorphenyl]asotriphenylmethan. Sm. 107° (C. 1898 [2] 1131). — IV, 1404.
- C₂₀H₁₉N₂Br** 1) α -[3-Bromphenyl]asotriphenylmethan. Sm. 110° (C. 1898 [2] 1132). — IV, 1404.
- C₂₀H₂₀ON₂** 1) C 82,4 — H 5,5 — O 4,4 — N 7,7 — M. G. 364.
Tetraphenylharnstoff. Sm. 183° (B. 9, 710; 12, 1166). — II, 381.
2) α -Phenylnitrosamidotriphenylmethan. Sm. 156° u. Zers. (B. 17, 704). — II, 642.
- C₂₀H₂₀ON₄** 1) C 76,5 — H 5,1 — O 4,1 — N 14,3 — M. G. 392.
Methyläther d. 4-Oxyphenylamidoaposafranin. HCl (B. 30, 2490). — IV, 1280.
- C₂₀H₂₀ON₆** 1) C 71,4 — H 4,8 — O 3,8 — N 20,0 — M. G. 420.
4,4'-Carbamidoazobenzol. Sm. 270° u. Zers. (B. 17, 1404). — IV, 1357.
- C₂₀H₂₀O₂N₄** 1) C 72,8 — H 4,9 — O 7,8 — N 13,7 — M. G. 408.
Acetat d. 4-Phenylazo-2-[4-Methylphenyl]azo-1-Oxynaphtalin. Sm. 150° (B. 25, 1339). — IV, 1437.
- C₂₀H₂₀O₂N₂** 1) C 72,8 — H 4,8 — O 15,5 — N 6,8 — M. G. 412.
Verbindung (aus d. Acetat d. Thebaolchinn). Sm. 201–203° (B. 28, 943; 30, 1392). — IV, 1087.
- C₂₀H₂₀O₂N₄** 1) C 58,1 — H 3,9 — O 21,7 — N 16,3 — M. G. 516.
Nitrosoderivat d. Carbo-p-Amidotetraimidobenzol (B. 10, 1719). — IV, 594.
2) Verbindung (aus Carbo-3-Amidotetraimidobenzol) (B. 10, 1719). — II, 715.
- C₂₀H₂₀O₂N₆** 1) C 53,6 — H 3,6 — O 22,8 — N 20,0 — M. G. 560.
Carbo-m-Nitrotetraimidobenzol. Sm. 286°. Na₂ (B. 10, 1719). — II, 352.
2) Carbo-p-Nitrotetraimidobenzol. Sm. oberh. 300°. Na₂ (B. 10, 1718). — II, 352.
- C₂₀H₂₀N₂S** 1) s-P-Diacenaphtylthioharnstoff. Sm. 192° (B. 21, 1458). — II, 634.
2) Tetraphenylthioharnstoff. Sm. 194,5–195,5° (B. 15, 1530, 1652; 21, 340). — II, 397.
- C₂₀H₂₀N₆S** 1) s-Di[4-Biphenyl]thioharnstoff. Sm. 228° (B. 13, 1963). — II, 634.
2) 4,4'-Thiocarbamidoazobenzol. Sm. 199° (B. 17, 1405). — IV, 1357.
- C₂₀H₂₁ON** 1) C 85,5 — H 6,0 — O 4,5 — N 4,0 — M. G. 351.
 γ -(2-Naphthyl)amido- α -Keto- α - β -Diphenylpropan. Sm. 200° (B. 31, 353).
2) 2-Keto-1-Allyl-3,3,5-Triphenyl-2,3-Dihydropyrrrol. Sm. 110–112° (Soc. 57, 707, 743). — IV, 475.
3) 5-Keto-1-Aethyl-2-Benzyliden-3,4-Diphenyl-2,5-Dihydropyrrrol. Sm. 144–146° (B. 24, 3860). — II, 1728.
- C₂₀H₂₁ON₂** 1) C 79,1 — H 5,5 — O 4,2 — N 11,1 — M. G. 379.
1-[2-Oxybenzyliden]amido-2,4-Di[Phenylamido]benzol (A. 286, 180).
2) β -Di[Phenylamido]-2-Methyl-1,4-Benzochinonphenylimid. Sm. 172 bis 173° (167°). (2HCl, PtCl₄) (B. 16, 1560; 20, 678). — III, 360.
C 81,7 — H 5,7 — O 5,7 — N 3,8 — M. G. 367.
- C₂₀H₂₁O₂N** 1) 2,5-Diphenyl-1-[2,4-Dimethylphenyl]pyrrrol-3-Carbonsäure. Sm. 253–254° (B. 22, 3090). — IV, 449.
2) Aethylester d. 1,2,5-Triphenylpyrrrol-3-Carbonsäure. Sm. 169 bis 170° (B. 21, 3061). — IV, 449.

- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 395$
 α -Triphenylmethyl- β -1-Nitrophenylhydrazin. Sm. 149° (A. 1896)
 2) α -Triphenylmethyl- β -1-Nitrophenylhydrazin. Sm. 149° (A. 1896)
 3) α -Triphenylmethyl- β -4-Nitrophenylhydrazin. Sm. 179° (A. 1896)
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 421$
 Acetylacetyl d. 2-Cyan-1,3-Di-Phenylhydrazon- β -1,3-Dihydroinden-
 2-Carbonsäure. Sm. 180-181° (A. 977) (A. 984) - IV, 711
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 384$
 Acetylacetyl d. 2,5-Diphenyl-1,2-Oxyphenylpyrryl-3-Carbonsäure. Sm. 180-181° (A. 211) (A. 216) - IV, 477
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 411$
 4-Dibenzylamido- β -3-Keto-1,5-Dimethyl-3-Phenyl- β -1,3-Dihydro-
 pyrryl-3-Carbonsäure. Sm. 177° (A. 263) (A. 264) - IV, 219
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 427$
 Acetylacetyl d. 4,5-Diketo- β -Phenyl-1-Phenylamophenyltetrahydro-
 pyrryl-3-Carbonsäure. Sm. 177° (A. 301) (A. 302) - IV, 337
- $C_{15}H_{11}O_2Br$ 1) Acetat d. α -Diketo- β -3-Brom-2-Oxyphenyl- α -Diphenylpenta-
 n. Sm. 177° (A. 29) (A. 34) - III, 3
- $C_{15}H_{11}O_2N$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 417$
 α -Phenylamidoformiat d. α -Oxy- β -Acetyl- β -Diketo- α -Diphenyl-
 α -Buten. Sm. 176-177° (A. 27) (A. 31) - III, 37
- $C_{15}H_{11}N_2Cl$ 1) α -Triphenylmethyl- β -3-Chlorphenylhydrazin. Sm. 170° (A. 1896)
 2) α -Triphenylmethyl- β -4-Chlorphenylhydrazin. Sm. 149° (A. 1896)
- $C_{15}H_{11}N_2Br$ 1) α -Triphenylmethyl- β -3-Bromphenylhydrazin. Sm. 149° (A. 1896)
 2) α -Triphenylmethyl- β -4-Bromphenylhydrazin. Sm. 149° (A. 1896)
- $C_{15}H_{11}ON_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 399$
 2-Oxy- β -Methyl-5-Phenyl-2,4-Dibenzyl-1,3-Diazin. Sm. 135° (J. pr.
 B. 53) (A. 245) - IV, 252
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 382$
 3,4-Di-Cinnamylamido-1-Methylbenzol. Sm. 205-206° (A. 23)
 1879. - IV, 577.
 2) Diacetylamarin. Sm. 205° (J. pr. B. 27) (A. 28) - III, 24.
 3) Di-1-Naphthylamid d. Propan- α -Diacarbonsäure. Sm. 243-244°
 (J. pr. B. 27) (A. 269) (A. 270) - IV, 176.
- $C_{15}H_{11}O_2S$ 1) Diphenyläther d. α -2-Naphthylsulfon- β -Dimerkaptopropan. Sm.
 179° (J. pr. B. 55) (A. 464).
 2) Diphenyläther d. α -2-Naphthylsulfon- β -Dimerkaptopropan (J. pr.
 B. 55) (A. 464).
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 388$
 Benzylester d. α -Di-Phenylamido- β -Ketopentan- α -Carbonsäure.
 Sm. 173-174° (A. 13) (A. 483).
- $C_{15}H_{11}O_2N_2$ 1) $C_{15}H_{11} - H_{11} - O_{11} - N_{11} - M. G. 446$
 3,5-Di-Benzoylamidomethyl-1-Methylbenzol-3,5-Dicarbonsäure
 Mesityleniphtalamidsäure. Sm. 187°. Ag. (A. 25) (A. 301) - IV, 645.
 2) Triacetat d. α -Phenylhydrazon-2,3,4 oder 3,4,5-Trioxidiphenyl-
 methan. Sm. 177° (A. 269) (A. 270) - IV, 176.
- $C_{15}H_{11}O_2Cl_2$ 1) Diacetat d. Dichlorcatechin. Sm. 187° (A. 13) (A. 485) - III, 686.
- $C_{15}H_{11}N_2Cl$ 1) 7-Chlor-4-Methylphenylat d. 9-Dimethylamido- α - β -Naphthophena-
 zin. 2,4- $POCl_2$ (A. 21) (A. 724) - IV, 1263.
- $C_{15}H_{11}N_2S$ 1) α -Di-4-Phenylamidophenylthioharnstoff. Sm. 187° (A. 255) (A. 192).
 - IV, 591
- $C_{15}H_{11}ClP$ 1) Triphenylbenzylphosphoniumchlorid + H_2O . Sm. 27-28° (wasserfrei)
 (A. 229) (A. 320) - IV, 1652.
- $C_{15}H_{11}BrP$ 1) Triphenylbenzylphosphoniumbromid. Sm. 274-275° (A. 229) (A. 321).
 - IV, 1653.
- $C_{15}H_{11}JP$ 1) Triphenylbenzylphosphoniumjodid. Sm. 253° (A. 229) (A. 321).
 - IV, 1653.

- $C_{25}H_{22}S_2P$ 1) 2 Molec. Diphenylphosphin + 1 Molec. Schwefelkohlenstoff. Sm. 157° (*B.* 21, 1510). — IV, 1656.
C 85,0 — H 6,5 — O 4,5 — N 4,0 — M. G. 353.
- $C_{25}H_{22}ON$ 1) 4-Oximido-6-Methyl-1,2,3-Triphenyl-1,2,3,4-Tetrahydrobenzol. Sm. 204° (*M.* 19, 420).
2) 2-Keto-1-Propyl-3,3,5-Triphenyl-2,3-Dihydropyrrol. Sm. 104 bis 105° (u. 95–98°) (*Soc.* 57, 706, 741). — IV, 475.
3) 5-Keto-1-Aethyl-2-Benzyl-3,4-Diphenyl-2,5-Dihydropyrrol (Benzylidiphenylmaleinämthylimidin). Sm. 125° (*B.* 24, 3865). — II, 1727.
C 73,4 — H 5,6 — O 3,9 — N 17,1 — M. G. 409.
- $C_{25}H_{22}ON_5$ 1) 4-[2-Methylphenyl]azo-6-[1-Naphtyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 132° (*B.* 31, 2779). — IV, 1418.
2) 4-[2-Methylphenyl]azo-6-[2-Naphtyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 187° (*B.* 31, 2780). — IV, 1418.
3) 4-[4-Methylphenyl]azo-6-[1-Naphtyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 154–155° (*B.* 31, 2781). — IV, 1418.
4) 4-[4-Methylphenyl]azo-6-[2-Naphtyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 180° (*B.* 31, 2781). — IV, 1418.
5) 4-[1-Naphtyl]azo-6-[2-Methylphenyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 185–186° (*B.* 31, 2779). — IV, 1418.
6) 4-[1-Naphtyl]azo-6-[4-Methylphenyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 182° (*B.* 31, 2780). — IV, 1418.
7) 4-[2-Naphtyl]azo-6-[2-Methylphenyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 182° (*B.* 31, 2780). — IV, 1418.
8) 4-[2-Naphtyl]azo-6-[4-Methylphenyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 153° (*B.* 31, 2781). — IV, 1418.
9) 2-[4-Dimethylamidophenylazo]-4-[2-Oxy-1-Naphtylazo]-1-Methylbenzol. Sm. bei 244° (*A.* 234, 358). — IV, 1437.
- $C_{25}H_{22}OP$ 1) Triphenylbenzylphosphoniumoxyhydrat. Chlorid, Bromid, Jodid, Rhodanid, Nitrat, Bichromat, Pikrat (*A.* 229, 320). — IV, 1662.
C 81,3 — H 6,2 — O 8,7 — N 3,8 — M. G. 369.
- $C_{25}H_{21}O_2N$ 1) Aethylamid d. γ -Keto- $\alpha\beta$ -Triphenyl- α -Buten- α -Carbonsäure. Sm. 172–173° (*B.* 24, 3860). — II, 1728.
C 77,9 — H 6,0 — O 12,5 — N 3,6 — M. G. 385.
- $C_{25}H_{22}O_2N$ 1) 4-Methylphenylmonamid d. γ -Truxillsäure. Sm. 268° (*B.* 27, 1411). — II, 1903.
- $C_{25}H_{22}O_3Br$ 1) $\alpha\epsilon$ -Diketo- γ -[5-Brom-2-Oxyphenyl]- $\alpha\epsilon$ -Di[4-Methylphenyl]pentan. Sm. 158° (*B.* 31, 714 Ann.).
C 74,8 — H 5,7 — O 15,9 — N 3,5 — M. G. 401.
- $C_{25}H_{22}O_4N$ 1) 1,6-Dibenzoat d. 6-Oxy-3-tert. Butyl-1-Oximidomethylbenzol. Sm. 160° (*Am.* 18, 639).
C 71,9 — H 5,5 — O 19,2 — N 3,4 — M. G. 417.
- $C_{25}H_{22}O_5N$ 1) Di[β -Benzoxyäthyl]amid d. Benzolecarbonsäure (Dibenzoat d. Benzoyldiäthanolamin). Fl. (*B.* 30, 917).
- $C_{25}H_{22}O_{11}Br$ 1) Diacetat d. Bromkatechin. Sm. 120° (*B.* 13, 696). — III, 686.
 $C_{25}H_{21}ON_2$ C 81,5 — H 6,5 — O 4,3 — N 7,6 — M. G. 308.
1) Verbindung (aus Cuminol, Anilin u. Brenztraubensäure). Sm. 216° (*A.* 249, 102). — IV, 451.
 $C_{25}H_{21}O_4N_2$ C 72,1 — H 5,8 — O 15,4 — N 6,7 — M. G. 416.
1) Benzoylcinchotenin. Sm. 85°. HCl + H₂O (*M.* 15, 798). — III, 841.
2) isom. Benzoylcinchotenin + 3H₂O. Sm. 175–178°. 2HCl (*M.* 16, 167). — III, 841.
 $C_{25}H_{24}O_4N_4$ C 67,6 — H 5,4 — O 14,4 — N 12,6 — M. G. 444.
1) β -Phenylhydrason- α -[3-Methylphenyl]amido- α -[3-Methylphenyl]imidopropan- $\alpha^{\prime\prime}$ -Dicarbonsäure. Sm. 206° u. Zers. (*B.* 30, 1192). — IV, 690.
- $C_{25}H_{21}O_{14}Br_2$ 1) Pentacetat d. Dibromäskulin. Sm. 203–206° (*B.* 13, 1594). — III, 667.
 $C_{25}H_{21}N_3Cl$ 1) Chlormethylat d. 6-Amido-5-Phenyl-2,4-Dibenzyl-1,3-Diazin. 2 + PCl₄ (*J. pr.* [2] 53, 248). — IV, 1217.
- $C_{25}H_{24}N_3J$ 1) Jodmethylat d. 6-Amido-5-Phenyl-2,4-Dibenzyl-1,3-Diazin (*J. pr.* [2] 53, 248). — IV, 1217.
- $C_{25}H_{22}ON_4$ C 78,3 — H 6,5 — O 4,2 — N 11,0 — M. G. 383.
1) Nitrid d. α -[4-Isopropylbenzyliden]amido- β -Phenylamido- α -Oxy- β -Phenylpropionsäure. Sm. 256° (*B.* 31, 2703).

- C₂₅H₂₅O₇N
C 80,8 — H 6,7 — O 8,6 — N 3,8 — M. G. 371.
1) Aethylamid d. γ -Oxy- $\alpha\beta$ -Triphenyl- α -Buten- α -Carbonsäure. Sm. 194—196° (B. 24, 3864). — II, 1727.
- C₂₅H₂₅O₃N₃
C 72,3 — H 6,0 — O 11,6 — N 10,1 — M. G. 415.
1) Tri[4-Acetylamidophenyl]methan. Sm. 177° (B. 16, 1302). — IV, 1196.
- C₂₅H₂₅O₄N
C 74,4 — H 6,2 — O 15,9 — N 3,5 — M. G. 403.
1) Benzoylcocain. HCl + H₂O, (2HCl, PtCl₄) (Soc. 28, 15, 321). — III, 906.
2) Benzoat d. Bebeerin (B. d. Bebirin). Sm. 139—140° (B. 29, 2057). — III, 798.
- C₂₅H₂₅O₄N₃
C 69,6 — H 5,8 — O 14,8 — N 9,7 — M. G. 431.
1) 3'-Nitro-5',5'-Di[Acetylamido]-2',2'-Dimethyltriphenylmethan. Sm. 103—104° (B. 21, 3210). — IV, 1047.
2) 4'-Nitro-5',5'-Di[Acetylamido]-2',2'-Dimethyltriphenylmethan. Sm. 136° (B. 21, 3208). — IV, 1048.
- C₂₅H₂₅O₇N
C 66,5 — H 5,5 — O 24,8 — N 3,1 — M. G. 451.
1) Triacetylbulbocapnin (C. 1896 [2] 793). — III, 877.
- C₂₅H₂₅N₃J
1) Jodäthylat d. 1-Aethyl-2,4,5-Triphenylimidasol (J. d. Aethylpholin). Sm. 234° u. Zers. (M. 17, 304; A. 122, 326).
- C₂₅H₂₅N₃S₂
1) Dibenzylderivat d. Phenylidithiodi-Methylketuret. Sm. 128° (A. 275, 36). — II, 401.
- C₂₅H₂₆ON₂
C 81,1 — H 7,0 — O 4,3 — N 7,6 — M. G. 370.
1) Benzoylderivat d. Base C₁₅H₁₅N₂ (aus Anilin n. Propionsäurealdehyd). Sm. 144—145° (B. 25, 2034). — II, 444.
- C₂₅H₂₆O₂N₂
C 77,8 — H 6,7 — O 8,3 — N 7,2 — M. G. 386.
1) 6',6'-Di[Acetylamido]-3',3'-Dimethyltriphenylmethan. Sm. 217 bis 218° (J. pr. [2] 36, 261). — IV, 1047.
2) 5-Aethyläther d. 7-Phenylamido-8-[2-Oxybenzyliden]amido-5-Oxy-1,2,3,4-Tetrahydronaphthalin. Sm. 130—131° (B. 31, 903).
- C₂₅H₂₆O₂N₂
C 74,6 — H 6,5 — O 11,9 — N 7,0 — M. G. 402.
1) α -[4-Isopropylbenzyliden]amido- β -Phenylamido- α -Oxy- β -Phenylpropionsäure. Sm. 208° (B. 31, 2703).
- C₂₅H₂₆O₃N₄
C 69,8 — H 6,0 — O 11,2 — N 13,0 — M. G. 430.
1) Phenylmonohydrazid d. α -Phenylhydrazon- α -Phenylpentan- γ γ -Dicarbonsäure. Sm. 132° (B. 21, 3456). — IV, 719.
- C₂₅H₂₆O₄N₂
C 71,8 — H 6,2 — O 15,3 — N 6,7 — M. G. 418.
1) Diacetylstrychnin (Soc. 29, 655; M. 6, 859). — III, 939.
- C₂₅H₂₆O₃N₂
C 69,1 — H 6,0 — O 18,4 — N 6,4 — M. G. 434.
1) Dioxylbenzylcinchotenin. Sm. 278° u. Zers. 2HCl + H₂O, (2HCl, HgCl₂), (2HCl, PtCl₄), HNO₃ + 2H₂O, H₂SO₄ + xH₂O (A. 269, 243). — III, 842.
2) Dioxylbenzylcinchotenidin. Sm. 248°. (2HCl, PtCl₄) (A. 269, 247). — III, 852.
3) Helicinidlanilid (A. 154, 33). — III, 69.
- C₂₅H₂₆O₂Br₂
1) Tetraäthylätheracetat d. Dibromquercetin. Sm. 154—157° (M. 16, 317). — III, 605.
- C₂₅H₂₆O₉J₄
1) Jodverbindung d. Eupittensäure (B. 12, 2220). — II, 2092.
- C₂₅H₂₇ON₃
C 72,6 — H 6,5 — O 3,9 — N 16,9 — M. G. 413.
1) Phenylhydrazon d. Nitrosocinchotoxin. Sm. 149° (B. 28, 1070). — IV, 798.
- C₂₅H₂₇O₂N₃
C 74,8 — H 6,7 — O 8,0 — N 10,5 — M. G. 401.
1) Dibenylamid d. Benzylamidobernsteinsäure. Sm. 149—150° (C. 1896 [1] 244).
2) Di[2-Methylphenylamid] d. 2-Methylphenylimidodiessigsäure. Sm. 149—150° (B. 23, 1995). — II, 470.
3) Di[4-Methylphenylamid] d. 4-Methylphenylimidodiessigsäure. Sm. 213—215° (B. 25, 2285). — II, 507.
4) isom. Di[4-Methylphenylamid] d. 4-Methylphenylimidodiessigsäure. Sm. 250° u. Zers. (B. 8, 1163). — II, 507.
5) 4-Methylphenylamid d. 4-Methylphenylamidoacetyl-4-Methylphenylamidoessigsäure. Sm. 142—145° (B. 25, 2288). — II, 505.

- C₂₁H₁₇O₄N** C 74,1 — H 6,7 — O 15,8 — N 3,4 — M. G. 405.
 1) Diäthylester d. **2,8-Dimethyl-1,4-Diphenyl-1,4-Dihydropyridin-3,6-Dicarbonensäure**. Sm. 159—160° (*M.* 17, 350; *B.* 31, 604 Anm.). — IV, 371.
- C₂₃H₂₇O₆N** C 68,6 — H 6,2 — O 22,0 — N 3,2 — M. G. 437.
 1) Diäthylester d. *ε*-**1,2-Phталylamido-α-Phenylpentan-ββ-Dicarbonensäure**. Sm. 108—110° (*B.* 23, 3695). — II, 1813.
- C₂₂H₁₇N₃J** 1) Aethyljodid d. Aethylamarin. Sm. 267° (*B.* 18, 3080).
- C₂₀H₁₇N₃P** 1) **4-Methylphenyl-di-1,2,3,4-Tetrahydro-1-Chinoly]phosphin**. Sm. 140° (*B.* 31, 1047). — IV, 1683.
- C₂₅H₂₇N₃S₂** 1) *α*-Aethylpropyltriphenyldithiobiuret. Sm. 165,8° (*B.* 21, 109). — II, 400.
 2) *β*-Aethylpropyltriphenyldithiobiuret. Sm. 165° (*B.* 21, 109). — II, 400.
 3) *α*-Aethylpropyltriphenylpseudodithiobiuret. Sm. 68,2° (*B.* 26, 1687). — II, 401.
 4) *β*-Aethylpropyltriphenylpseudodithiobiuret (*B.* 26, 1688). — II, 401.
- C₂₃H₂₁ON₂** C 80,6 — H 7,5 — O 4,3 — N 7,5 — M. G. 372.
 1) Diäthylhydrobenzamid (*A.* 110, 79). — III, 20.
- C₂₂H₂₁O₂N₂** C 77,3 — H 7,2 — O 8,2 — N 7,2 — M. G. 388.
 1) Acetat d. *ψ*-**Tetramethyldiamido-2-Oxytriphenylmethan**. Sm. 144° (*B.* 14, 2523). — II, 904.
 2) Acetat d. *ψ*-**Tetramethyldiamido-4-Oxytriphenylmethan**. Sm. 146° (*B.* 14, 2523). — II, 904.
 3) Methyl ester d. *ψ*-**Di[Dimethylamido]triphenylmethan-2-Carbonensäure**. (2HCl, ZnCl₂) (*B.* 27 [2] 665).
- C₂₃H₂₄O₄N₂** C 59,5 — H 5,6 — O 12,7 — N 22,2 — M. G. 504.
 1) Tribenzylidentetraureid. Sm. bei 240° (*A.* 151, 193). — III, 33.
- C₂₃H₂₄O₄N₂** C 68,8 — H 6,4 — O 18,3 — N 6,4 — M. G. 436.
 1) Methylhydrastallyimid. (2HCl, PtCl₄) (*B.* 23, 2907). — II, 2053.
 2) Verbindung (aus Phталylessigsäure). Sm. 103° (*B.* 19, 2371). — II, 1873.
- C₂₂H₂₀O₂N₂** C 64,1 — H 6,0 — O 23,9 — N 6,0 — M. G. 468.
 1) Triacetylchitenin. (2HCl, PtCl₄ + 3H₂O) (*M.* 14, 600). — III, 820.
- C₂₁H₁₈N₂J₂** 1) Dijodäthylat d. Hydrobenzamid (*A.* 110, 79). — III, 20.
- C₂₀H₂₁ON₃** C 77,5 — H 7,5 — O 4,1 — N 10,9 — M. G. 387.
 1) **2'-Acetylamido-2',2'-Di[Dimethylamido]triphenylmethan**. Sm. 186° (*B.* 17, 1892). — IV, 1193.
 2) **4'-Acetylamido-4',4'-Di[Dimethylamido]triphenylmethan**. Sm. 108° (*B.* 18, 708). — IV, 1196.
- C₂₅H₂₇O₂N₃** C 74,4 — H 7,2 — O 7,9 — N 10,4 — M. G. 403.
 1) **2'-Nitro-2',2'-Di[Dimethylamido]-4',4'-Dimethyltriphenylmethan**. Sm. 146° (*B.* 24, 560). — IV, 1047.
 2) **3'-Nitro-2',2'-Di[Dimethylamido]-4',4'-Dimethyltriphenylmethan**. Sm. 170° (*B.* 24, 560). — IV, 1047.
 3) **4-Nitro-2',2'-Di[Dimethylamido]-4',4'-Dimethyltriphenylmethan**. Sm. 224°. 2 Pikrat (*B.* 20, 1563; 24, 558). — IV, 1047.
- C₂₃H₂₉O₂N₃** C 69,0 — H 6,7 — O 14,7 — N 9,6 — M. G. 435.
 1) Morphinviolett (*Bl.* [3] 5, 858). — III, 900.
- C₂₂H₂₇O₂N₃** C 62,1 — H 6,0 — O 23,2 — N 8,7 — M. G. 483.
 1) Diäthylester d. *ζ*-**Phenylhydrazon-β-Keto-δ-[3-Nitrophenyl]heptan-γ-ε-Dicarbonensäure**. Sm. 161° (*A.* 303, 233).
 2) Diäthylester d. *ζ*-**Phenylhydrazon-β-Keto-δ-[4-Nitrophenyl]heptan-γ-ε-Dicarbonensäure**. Sm. 214—215° (*A.* 303, 237).
- C₂₁H₂₉O₁₁P₃** 1) Verbindung (aus 4-Isopropylphenylphosphinsäure). Sm. oberh. 250° (*A.* 294, 52).
- C₂₃H₃₀ON₂** C 80,2 — H 8,0 — O 4,3 — N 7,5 — M. G. 374.
 1) Aethyläther d. *α*-**Oxy-4,4'-Di[Dimethylamido]triphenylmethan**. Sm. 162° (*A.* 206, 132). — II, 1085.
 2) Aethyläther d. **2-Oxy-1-Di[Aethylphenylamido]methylbenzol**. Fl. (*A.* 150, 195). — III, 73.
- C₂₁H₃₀ON₄** C 74,6 — H 7,5 — O 4,0 — N 13,9 — M. G. 402.
 1) **5'-Nitroso-2',4',4'-Tri[Dimethylamido]triphenylmethan?** Sm. 212° (*B.* 31, 2352).

- C₂₅H₂₀O₂N₂** C 73,9 — H 7,4 — O 11,8 — N 6,9 — M. G. 406.
 1) **Isoamylester d. $\alpha\delta$ -Di[4-Methylphenylimido]- γ -Ketopentan- α -Carbonsäure.** Sm. 140° (Bl. [3] 13, 482).
- C₂₅H₂₀O₂N₁** C 66,7 — H 6,7 — O 14,2 — N 12,4 — M. G. 450.
- C₂₅H₂₀O₂N₂** C 68,5 — H 6,8 — O 18,3 — N 6,4 — M. G. 438.
 1) **β -Oxyäthylbrucin.** HCl, (2HCl, PtCl₄), HBr, HJ, HNO₃, H₂SO₄ + 3H₂O, H₂Cr₂O₇ + H₂O, CHN, CHNS + H₂O (R. 14, 228). — III, 946.
 2) **Brucinvinyloxyhydrat.** Salze siehe (A. 118, 211). — III, 947.
- C₂₅H₂₀O₂N₂** C 60,7 — H 6,1 — O 16,2 — N 17,0 — M. G. 494.
 1) **Verbindung** (aus Aceton, Benzaldehyd u. Harustoff). Sm. 182—183° u. Zers. (G. 23 [1] 405). — III, 38.
- C₂₅H₂₀O₂N₂** C 66,1 — H 6,6 — O 21,1 — N 6,2 — M. G. 454.
 1) **Methylhydrastallylamid.** Sm. 158° (B. 23, 2907). — II, 2053.
- C₂₅H₂₀N₂Cl** 1) **α -Chlor-4',4',4'-Tri[Dimethylamido]triphenylmethan.** 2 + 3 PtCl₄ (B. 18, 768; 19, 1271; 28, 1698, 1704). — II, 1088.
- C₂₅H₂₀N₂J** 1) **α -Jod-4',4',4'-Tri[Dimethylamido]triphenylmethan** (Bl. [3] 15, 1300). — IV, 1195.
- C₂₅H₂₁ON₂** C 77,1 — H 8,0 — O 4,1 — N 10,8 — M. G. 389.
 1) **Pentamethylrosanilin.** 2HCl, (2HCl, PtCl₄), 2HJ + H₂O. Pikrat (B. 2, 444; 6, 965; 12, 2351; 16, 707, 2910; Soc. 51, 175). — II, 1091.
 2) **α -Oxy-4',4',4'-Tri[Dimethylamido]triphenylmethan** (Methylviolett). Sm. 159°. Chlorid, Jodid, Pikrat (B. 6, 363; 13, 212, 2100; 16, 2005; 18, 767, 1271; 19, 109, 1271; 28, 1704; Bl. [3] 9, 123). — II, 1088.
 3) **Methyläther d. P-Tetramethyldiamido-4-Amido-5-Oxytriphenylmethan.** Sm. 158—159° (B. 24, 3142). — II, 904.
- C₂₅H₂₁O₂N** C 70,6 — H 7,3 — O 18,8 — N 3,3 — M. G. 425.
 1) **Dibutylmorphin.** HCl, (2HCl, PtCl₄) (Soc. 28, 18, 322). — III, 899.
- C₂₅H₂₁O₂N₂** C 61,9 — H 6,4 — O 23,1 — N 8,6 — M. G. 485.
 1) **Verbindung** (aus Eupittonsäure) (B. 11, 1460; 12, 2222). — II, 2092.
- C₂₅H₂₁O₂N** C 63,4 — H 6,6 — O 27,1 — N 2,9 — M. G. 473.
 1) **Narceinäthylester.** HCl, (2HCl, PtCl₄), HBr, HJ (A. 277, 50). — II, 2080.
- C₂₅H₂₁ON₂** C 79,8 — H 8,5 — O 4,2 — N 7,4 — M. G. 376.
 1) **Base** (aus Cantharsäure u. Dimethylanilin). (2HCl, PtCl₄) (B. 19, 1088). — III, 624.
- C₂₅H₂₁ON₆** C 69,4 — H 7,4 — O 3,7 — N 19,4 — M. G. 432.
 1) **Di[3-Piperidylazo-4-Methylphenyl]keton** (A. 271, 8). — IV, 1579.
- C₂₅H₂₁O₄N** 1) **Benzoylcapsaicin.** Sm. 74° (C. 1899 [1] 294).
- C₂₅H₂₁O₂N₂** C 68,2 — H 7,3 — O 18,2 — N 6,3 — M. G. 440.
 1) **Brucinäthylhydrat.** Salze siehe (J. 1856, 546; J. pr. [2] 3, 163). — III, 946.
- C₂₅H₂₁N₂J₂** 1) **Dijodmethylat d. 4',4'-Di[Dimethylamido]triphenylmethan.** Sm. 231° (218—222°) u. Zers. (A. 206, 127, 151; 217, 256). — IV, 1042.
- C₂₅H₂₁O₂N** C 70,3 — H 7,7 — O 18,7 — N 3,3 — M. G. 427.
 1) **Aethyläther d. Papaverinpropyloxyhydrat.** Sm. 137° (J. pr. [2] 56, 332).
- C₂₅H₂₁N₂Cl₄** 1) **Verbindung** (aus α -Oxytri[4-Dimethylamidophenyl]methan) (Bl. [3] 9, 123). — II, 1088.
- C₂₅H₂₁N₂Br₄** 1) **Verbindung** (aus α -Oxytri[4-Dimethylamidophenyl]methan) (Bl. [3] 9, 123). — II, 1088.
- C₂₅H₂₁ON₂** C 79,4 — H 9,0 — O 4,2 — N 7,4 — M. G. 378.
 1) **Triäthylencinchonin.** (2HCl, PtCl₄) (A. 269, 287). — III, 834.
- C₂₅H₂₁O₂N₂** C 67,9 — H 7,7 — O 18,1 — N 6,3 — M. G. 442.
 1) **Acetat d. Yohimbin.** Sm. 133° (C. 1899 [1] 528).
- C₂₅H₂₁O₂N₂** 1) **Verbindung** (aus d. Aethyläther d. 4-Acetylamido-1-Oxynaphtalin). Sm. 218—219° (B. 25, 3061). — II, 865.
- C₂₅H₂₁O₁₁N₄** C 53,0 — H 6,0 — O 31,1 — N 9,9 — M. G. 566.
 1) **Verbindung** (aus d. Benzuramidöpfelsäurediäthylester). Sm. 157—158° (G. 23 [1] 398). — II, 1954.
- C₂₅H₂₁O₂N₂** C 68,3 — H 8,4 — O 7,3 — N 15,9 — M. G. 439.
 1) **Verbindung** (aus 4-Nitroso-1-Dipropylamidobenzol). Sm. 140° (M. 7, 102). — II, 335.

- $C_{25}H_{37}O_6N_3$ C 63,1 — H 7,8 — O 20,2 — N 8,8 — M. G. 475.
 1) **Trinitrocholesterylen**. Zers. bei 180° (*J. r.* **10**, 360). — **II**, 1074.
- $C_{25}H_{37}O_{11}Cl$ 1) **Heptaäthylester d. α -Chlorbutan- $\alpha\alpha\beta\beta\gamma\gamma\delta$ -Heptacarbonsäure**. Fl. (*B.* **21**, 2116). — **I**, 873.
- $C_{25}H_{28}N_4J_2$ 1) **Jodmethylat d. Base $C_{25}H_{32}N_2$** . (*Bl.* **47**, 46). — **IV**, 997.
 $C_{25}H_{19}O_5N$ C 62,4 — H 8,1 — O 26,6 — N 2,9 — M. G. 481.
- 1) **Pseudococain**. + Aceton (Sm. 86—87^o), HCl, (HCl, AuCl₃), HBr, HNO₃ (*B.* **29**, 856; *Soc.* **33**, 160; **71**, 357). — **III**, 775.
- $C_{25}H_{19}O_{13}N$ C 39,8 — H 5,2 — O 53,1 — N 1,8 — M. G. 753.
 1) **Verbindung** (aus Espartoharz) (*Soc.* **41**, 94). — **I**, 1080.
- $C_{25}H_{41}O_3N$ C 77,5 — H 10,6 — O 8,3 — N 3,6 — M. G. 387.
 1) **Phenylformylamid d. Stearinsäure**. Sm. 61^o (*Am.* **18**, 699).
- $C_{25}H_{19}O_7N_2$ C 74,6 — H 10,4 — O 8,0 — N 7,0 — M. G. 402.
 1) **s-Stearylphenylharnstoff**. Sm. 92^o. — **II**, 382.
- $C_{25}H_{19}O_9N_6$ C 52,6 — H 7,4 — O 25,3 — N 14,7 — M. G. 570.
 1) **Mykoprotein** (*J. pr.* [2] **20**, 454; [2] **23**, 302, 419; *J.* **1879**, 1006). — **IV**, 1634.
- $C_{25}H_{43}ON$ C 80,4 — H 11,5 — O 4,3 — N 3,8 — M. G. 373.
 1) **α -Oximido- α [4-Methylphenyl]oktadekan**. Sm. 64^o (*J. pr.* [2] **54**, 401).
- $C_{25}H_{44}O_6N_2$ C 68,8 — H 10,1 — O 14,7 — N 6,4 — M. G. 436.
 1) **Diacetylupinin**. Fl. (2HCl, PtCl₄), (2HCl, 2AuCl₃) (*A.* **224**, 314; *C.* **1897** [2] 361). — **III**, 892.
- $C_{25}H_{44}O_4N_6$ C 57,7 — H 8,5 — O 12,3 — N 21,5 — M. G. 520.
 1) **Benzylidendiönanthotetraureid** (*A.* **151**, 195). — **III**, 33.
- $C_{25}H_{46}O_9Br_2$ 1) **Dibromcerotinsäure**. Sm. 30^o (*C.* **1896** [1] 642).
 $C_{25}H_{46}OCl$ 1) **Chlorid d. Cerotinsäure**. Sm. 47^o (*C.* **1896** [1] 642).
 $C_{25}H_{46}O_3Br$ 1) **α -Bromcerotinsäure**. Sm. 66,5^o (*C.* **1896** [1] 642).
 $C_{25}H_{41}ON$ C 78,7 — H 13,4 — O 4,2 — N 3,7 — M. G. 381.
 1) **Amid d. Cerotinsäure**. Sm. 109^o (*C.* **1896** [1] 642).
- $C_{25}H_{51}O_2N$ C 75,6 — H 12,8 — O 8,1 — N 3,5 — M. G. 397.
 1) **α -Amidocerotinsäure**. Sm. 215^o u. Zers. (*C.* **1896** [1] 642).
- $C_{25}H_{59}O_4N_8$ C 56,8 — H 9,8 — O 12,1 — N 21,2 — M. G. 528.
 1) **Oenanthotetraureid**. Sm. 155^o (*A.* **151**, 190). — **I**, 1314.

C_{25} -Gruppe mit vier Elementen.

- $C_{25}H_{15}O_4N_2Cl$ 1) **Benzoat d. Chloroxyphenylphenazon**. Sm. 234—235^o (*B.* **24**, 590). — **IV**, 1004.
- $C_{25}H_{16}ON_2S_2$ 1) **Di[Thiodiphenyl]harnstoff**. Sm. 223—225^o (231^o) (*B.* **18**, 1848; **24**, 2911). — **II**, 807.
- $C_{25}H_{18}ON_2S$ 1) **$\alpha\beta$ -Diphenyl- α -Thiodiphenylharnstoff**. Sm. 165^o (*B.* **24**, 2913). — **II**, 806.
- $C_{25}H_{16}O_3N_2S_2$ 1) **Di[4-Sulfophenylazo]maklurin**. Na₂ (*Soc.* **67**, 935).
 $C_{27}H_{19}O_4NS$ 1) **Triacetylresorcinsaccharin**. Sm. 286^o (*Bl.* [3] **17**, 695).
 $C_{25}H_{20}ON_2S$ 1) **2-Thiocarbonyl-3-[2- β -Naphtholazobenzyl]1,2,3,4-Tetrahydro-1,3-Benzodiazin**. Sm. 225^o (*J. pr.* [2] **55**, 364). — **IV**, 1492.
- $C_{25}H_{20}O_7N_2S$ 1) **α -Phenylhydrazon-4-Phenylsulfondiphenylmethan**. Sm. 184^o (*Am.* **20**, 312).
- $C_{25}H_{20}O_5N_2S_2$ 1) **$\alpha\beta$ -Diphenyl- $\alpha\beta$ -Di[Phenylsulfon]harnstoff**. Sm. 198^o (*J. pr.* [2] **51**, 350).
 2) **Phenylamid d. Diphenylketon-3,3' oder 3,4'-Disulfonsäure**. Sm. 177—178^o (*Soc.* **73**, 406).
- $C_{25}H_{20}N_4Cl_2S$ 1) **s-Di[4-p-Chlorphenylamidophenyl]thioharnstoff**. Sm. 176^o (*A.* **303**, 316).
- $C_{25}H_{21}O_4NS$ 1) **2-[β -Phenyläthyl]chinolin-4-[2-Aethoxyphenyl-P-Sulfonsäure]**. Na (*B.* **27**, 3039). — **IV**, 435.
 2) **2-[β -Phenyläthyl]chinolin-4-[4-Aethoxyphenyl-P-Sulfonsäure]**. Na (*B.* **27**, 912).
- $C_{25}H_{21}O_4N_2P$ 1) **Di[Phenylamid] d. Phenylphosphorsäure-2-Carbonsäurephenylester**. Sm. 174—175^o (*B.* **31**, 2178).
- $C_{25}H_{21}O_5N_2S_2$ 1) **Tri[Phenylamid] d. Benzol-1-Carbonsäure-3,5-Disulfonsäure**. Sm. 222^o (*M.* **14**, 693). — **II**, 1301.

- $C_{15}H_{21}O_{11}NS$, 1) α -Phenylamidotriphenylmethan-*p*-Tetrasulfonsäure. Ba_2 , Cu , (B. 17, 704). — II, 642.
- $C_{15}H_{21}OClIP$ 1) Chlorbenzylat d. Diphenylphenoxyphosphin. Sm. 232—236° u. Zers. (B. 18, 2115). — IV, 1657.
- $C_{25}H_{37}O_2N_3P$ 1) Tri[Phenylamid] d. Phenylphosphinsäure-4-Carbonsäure. Sm. 242° (A. 293, 281). — IV, 1673.
- $C_{15}H_{21}O_2ClP$ 1) Chlorbenzylat d. Phosphorsäure-triphenylester. Fl. (B. 31, 1051).
- $C_{15}H_{21}O_2NBr$ 1) Dibenzol d. 5-Brom-4-Oxy-3-Oximidomethyl-1-tert. Butylbenzol. Sm. 189° (Am. 16, 644). — III, 91.
- $C_{21}H_{27}O_2N_2S$, 1) α -Phenylsulfon- γ -(2-Naphtylsulfon- β -Phenylhydrazonpropan. Sm. 175° (J. pr. [2] 55, 413). — IV, 768.
2) Phenylamid d. Diphenylmethan-4,4'-Disulfonsäure. Sm. 178° (Soc. 73, 409).
- $C_{25}H_{35}O_2N_2P$ 1) Di[Phenylhydrazid] d. Phenylphosphorsäure-2-Carbonsäurephenylester. Sm. 170° (B. 31, 2178).
- $C_{25}H_{37}ON_2S$ 1) 2-[2,4-Dimethylphenylbenzoylamido]-5-[2,4-Dimethylphenylamido]-1,3,4-Thiadiazol. Sm. 211—212° (B. 23, 369). — IV, 1237.
- $C_{15}H_{21}O_2N_2S$ 1) *s*-Phenylthienylthioharnstoff. Sm. 83° u. Zers. (B. 30, 1377).
- $C_{25}H_{37}O_2N_3Cl$ 1) Mono-4-Methylphenylamid d. Chlor-[4-Methylphenylamido]-[4-Methylphenylimido]bernsteinsäure. Sm. 186° (A. 279, 146).
- $C_{15}H_{21}N_3ClP$ 1) Tri[Phenylamido]-4-Methylphenylphosphoniumchlorid. Sm. 245° (B. 28, 2213). — IV, 1672.
- $C_{25}H_{35}N_3BrP$ 1) Tri[Phenylamido]-4-Methylphenylphosphoniumbromid. Sm. 238° (B. 28, 2215). — IV, 1672.
- $C_{25}H_{37}N_3JP$ 1) Tri[Phenylamido]-4-Methylphenylphosphoniumjodid. Sm. 235° (B. 28, 2215). — IV, 1672.
- $C_{25}H_{35}ON_2P$ 1) Tri[Phenylamido]-4-Methylphenylphosphoniumhydrat. Sm. 240° Salze, siehe diese (B. 28, 2214). — IV, 1672.
- $C_{25}H_{37}O_2N_2S$ 1) Alloxanstrychnindisulfid + H_2O (A. 248, 150). — III, 937.
- $C_{25}H_{37}ON_2P$ 1) 4-Methylphenylidyl[1,2,3,4-Tetrahydro-1-Chinolyl]phosphinoxid. Sm. 181° (B. 31, 1047).
- $C_{25}H_{37}O_2N_2Cl$ 1) Verbindung (aus 3-Dimethylamido-1-Oxybenzol), 2 + $PtCl_4$ (B. 29, 511).
- $C_{25}H_{37}O_2NJ$ 1) Jodisoamylat d. Berberin (C. 1895 [2] 138). — III, 800.
- $C_{25}H_{37}O_2N_2S$, 1) Pentamethylen-1,2-Xylylendiphenylsulfondiamin. Sm. 132° (B. 31, 1704).
- $C_{25}H_{37}N_2JP$ 1) Methylphenylidyl[1,2,3,4-Tetrahydro-1-Chinolyl]phosphoniumjodid. Sm. 136° (B. 31, 1045). — IV, 1682.
- $C_{25}H_{35}O_2N_2Cl$ 1) Chlorvinylat d. Brucin. 2 + $PtCl_4$ (R. 14, 231; A. 118, 211). — III, 947.
- $C_{25}H_{35}O_2N_2Br$, 1) Brucinbromäthylumbromid + $3H_2O$ (A. 118, 209; R. 14, 230). — III, 947.
- $C_{25}H_{35}O_6NJ$ 1) Jodäthylat d. Aethylhydrastin. Zers. bei 241° (B. 23, 412). — II, 2054.
- $C_{25}H_{37}O_2N_2J$, 1) Dijodmethylat d. 3'-Nitro-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 225° u. Zers. (B. 13, 672). — IV, 1043.
2) Dijodmethylat d. 4'-Nitro-4',4'-Di[Dimethylamido]triphenylmethan + H_2O . Sm. 220° u. Zers. (B. 14, 2526). — IV, 1044.
- $C_{25}H_{37}O_2N_2Cl$ 1) Chloräthylat d. Brucin. 2 + $PtCl_4$ (J. 1856, 546). — III, 946.
- $C_{25}H_{37}O_2N_2J$ 1) Jodäthylat d. Brucin + $\frac{1}{2}H_2O$. + J_2 , + J_4 + H_2O (J. 1856, 546; J. pr. [2] 3, 163). — III, 946.
- $C_{25}H_{35}O_2N_2Br$ 1) Brucinbromäthyloxyhydrat. Salze siehe (A. 118, 209; R. 14, 230). — III, 947.
- $C_{25}H_{37}N_2JS$, 1) Verbindung (aus Benzthiazol) (B. 20, 2264). — II, 797.
- $C_{25}H_{35}ON_2J$, 1) Jodmethylat d. α -Oxy-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 171—172° u. Zers. (B. 13, 2225; 15, 236; A. 217, 254). — II, 1058.
- $C_{25}H_{35}O_2N_2Br$, 1) $\alpha\gamma$ -Di[α -Bromisobutryl-4-Methylphenylamido]propan. Sm. 113° (B. 31, 3245).
- $C_{25}H_{35}O_2N_2S$ 1) Benzaldehyd-2,4,5-Trimethylphenylthionaminsäures-5-Amido-1,2,4-Trimethylbenzol. Sm. 108° (A. 274, 238). — III, 7.
2) Benzaldehyd-2,4,6-Trimethylphenylthionaminsäures-2-Amido-1,3,5-Trimethylbenzol. Sm. 88° (A. 274, 240). — III, 7.
- $C_{25}H_{35}O_2NJ$ 1) Jodmethylat d. Narceinmethylester. Sm. 193—194° (A. 277, 41). — II, 2080.

- $C_{25}H_{35}ON_2Cl$ 1) Chloräthylat d. Diäthylidencinchonin. (HCl, PtCl₄) (A. 269, 287). — III, 834.
 $C_{25}H_{35}O_2N_2Cl_2$ 1) Di[Chloräthylat] d. Lupinin. + PtCl₄ + H₂O, + 2 AuCl₃ (B. 14, 1321). — III, 892.
 $C_{25}H_{35}O_2N_2J_2$ 1) Di[Jodäthylat] d. Lupinin (B. 14, 1321). — III, 892.

C₂₅-Gruppe mit fünf Elementen.

- $C_{25}H_{31}O_7N_2ClP$ 1) Verbindung (aus d. Di[4-Methylphenylamid] d. Weinsäure). Sm. 220—221° (A. 279, 147).

C₂₆-Gruppe mit einem Element.

- $C_{26}H_{14}$ C 95,7 — H 4,3 — M. G. 326.
 $C_{26}H_{16}$ 1) Kohlenwasserstoff (aus Fluoren). Sm. 270° (B. 8, 1049). — II, 303.
 C 95,1 — H 4,9 — M. G. 328.
 2) Dibiphenyläthan (Tetraphenyläthylen). Sm. 189—190°; Sd. über 360°. Pikrat (B. 8, 1049; 25, 3146; 29, 2157; J. 1877, 383; A. 290, 240; 291, 1). — II, 303.
 $C_{26}H_{18}$ C 94,6 — H 5,4 — M. G. 330.
 1) θ -Diphenylmethylenfluoren (Biphenyldiphenyläthan). Sm. 229,5°. Pikrat (Sm. 198°) (B. 29, 73, 739, 2157).
 2) Dibiphenyläthan. Sm. 241—242° (246°) (B. 8, 1049; A. 290, 243; 291, 6). — II, 303.
 $C_{26}H_{20}$ C 94,0 — H 6,0 — M. G. 332.
 1) θ ,10-Diphenyl- θ ,10-Dihydroanthracen. Sm. 164,2°; Sd. 437° (Aw. 13, 557). — II, 302.
 2) θ -Diphenylmethylenfluoren (Biphenyldiphenyläthan). Sm. 217—218°. + 2 C₆H₆ (B. 29, 75).
 3) θ -Phenyl- θ -Benzylfluoren? Sm. 233—234° (A. 296, 257).
 4) Tetraphenyläthan. Sm. 221°; Sd. 415—425° (A. 194, 311; 295, 222; 296, 229; 298, 237; B. 3, 752; 5, 277; 7, 1128; 9, 562; 14, 1526; 21, 780; 29, 1790; J. r. 12, 426). — II, 302.
 $C_{26}H_{22}$ C 93,4 — H 6,6 — M. G. 334.
 1) $\alpha\alpha\beta\beta$ -Tetraphenyläthan. Sm. 209°; Sd. 358—362° (379—383°). + C₆H₆. Lit. bedeutend. — II, 300.
 2) $\alpha\alpha\alpha\beta$ -Triphenyläthan? Sm. 140° (Bl. [3] 1, 778). — II, 301.
 3) Dibenzylbiphenyl. Sm. 113° (B. 14, 2032). — II, 301.
 $C_{26}H_{26}$ C 89,6 — H 10,4 — M. G. 348.
 1) Kohlenwasserstoff (aus Oenocarpol). 2 + H₂O (Sm. 75°) (B. 25 [2] 216). — III, 638.
 $C_{26}H_{28}$ C 89,1 — H 10,9 — M. G. 350.
 1) Carotin. Sm. 167,8° (Bert. J. 12, 277; A. 62, 380; 117, 200; 271, 229; Bl. 46, 487). — II, 243; III, 625.
 $C_{26}H_{30}$ C 88,1 — H 11,9 — M. G. 354.
 1) Cholesterin, siehe C₂₇H₄₈. — II, 176.
 $C_{26}H_{34}$ C 87,7 — H 12,3 — M. G. 356.
 1) Kohlenwasserstoff (aus Cholesterin) (B. 18, 1809). — II, 1072.
 2) Kohlenwasserstoff (aus japan. Vogelleim) (Soc. 53, 277). — II, 173.
 $C_{26}H_{36}$ C 87,2 — H 12,8 — M. G. 358.
 1) Cholesten (Hydrocholesterin). Sm. 89—90° (J. r. 8, 237; M. 15, 86). — II, 173.
 $C_{26}H_{40}$ C 85,2 — H 14,8 — M. G. 366.
 1) Hexakosan. Sm. 44° (A. 224, 236; B. 18, 391). — I, 107.

C₂₆-Gruppe mit zwei Elementen.

- $C_{26}H_{11}O_{15}$ C 55,1 — H 2,5 — O 42,4 — M. G. 566.
 1) Verbindung (aus Maklurin) (A. 143, 309). — III, 208.
 $C_{26}H_{15}O$ C 90,7 — H 4,6 — O 4,6 — M. G. 344.
 1) Dibiphenyläthanoxyd. Sm. 258° (A. 291, 5).

- $C_{26}H_{16}O_2$ C 86,7 — H 4,4 — O 8,9 — M. G. 360.
1) Dioxyanthrylen (Tetraphenyläthylendioxyd). Sm. 315° (B. 28, 2310). — III, 197.
- $C_{26}H_{16}O_3$ C 83,0 — H 4,2 — O 12,8 — M. G. 376.
1) Dihydrodiphenylenoxyanthrachinon. Sm. 266° (B. 23, 321). — III, 464.
- $C_{26}H_{16}O_4$ C 73,6 — H 3,8 — O 22,6 — M. G. 414.
1) Acetat d. Naphthalfluorescein + H_2O . Sm. 191° (wasserfrei) (A. 227, 138). — II, 2039.
- $C_{26}H_{16}O_5$ C 70,9 — H 3,6 — O 25,4 — M. G. 440.
1) Verbindung (aus Pyrogallol u. Benzaldehyd) (B. 5, 26). — III, 11.
- $C_{26}H_{16}O_6$ C 66,1 — H 3,4 — O 30,5 — M. G. 472.
1) Triacetat d. Cörulein (A. 209, 273). — II, 2088.
- $C_{26}H_{16}O_{11}$ C 61,9 — H 3,2 — O 34,9 — M. G. 504.
1) Verbindung (aus Laccainsäure) (B. 29, 1298). — II, 2082.
- $C_{26}H_{15}N_4$ C 81,3 — H 4,1 — N 14,6 — M. G. 384.
1) Verbindung (aus $\alpha\beta$ -Dinaphtylaminindisazobenzol). Sm. 287° (B. 22, 3347). — IV, 1401.
2) Verbindung (aus 2,3-Diamido 5,10-Naphtdiazin) (B. 23, 842). — IV, 1281.
- $C_{26}H_{15}Cl_2$ $\alpha\beta$ -Dichloridibiphenylenäthan. Sm. 234° (A. 290, 243).
- $C_{26}H_{15}Br_2$ 1) $\alpha\beta$ -Dibromdibiphenylenäthan ($\alpha\beta$ -Dibromtetraphenyläthan). Sm. 235° u. Zers. (A. 290, 242).
- $C_{26}H_{15}Br_4$ 1) Tetra(4-Bromphenyl)äthen. Sm. 248–249° (253–255° cor.) (A. 296, 231).
- $C_{26}H_{17}N$ C 90,9 — H 4,9 — N 4,1 — M. G. 343.
1) Phenyl- $\beta\beta$ -Dinaphtylenamin. Sm. 144°. Pikrat (B. 15, 2176). — IV, 473.
- $C_{26}H_{17}N_3$ C 84,1 — H 4,6 — N 11,3 — M. G. 371.
1) Phenylamido-s- $\alpha\beta$ -Naphtazin. Sm. 280° (A. 272, 348). — IV, 1215.
2) s- $\alpha\beta$ -Naphtindulin. Sm. 248–250° (A. 272, 322; B. 31, 2487). — IV, 1214.
- $C_{26}H_{15}O$ C 90,2 — H 5,2 — O 4,6 — M. G. 346.
1) Fluorenäther (aus 7-Oxyfluoren). Sm. 270° (A. ch. [5] 7, 507). — II, 1082.
2) 9-Benzoyl-9-Phenylfluoren (Diphenylmethylenbenzophenon?). Sm. 172° (B. [3] 1, 779; A. 298, 258). — III, 266.
3) 10-Keto-9,9-Diphenyl-9,10-Dihydroanthracen. Sm. 192°. + $\frac{1}{2}$ Nitrobenzol (A. 202, 65; C. 1895 [2] 363; B. [3] 17, 876). — III, 260.
4) Verbindung (aus d. Aldehyd d. 1-Phenylbenzol-2-Carbonsäure). Sm. 111° (M. 19, 590).
- $C_{26}H_{15}O_2$ C 86,2 — H 5,0 — O 8,8 — M. G. 362.
1) Dibenzoylbiphenyl. Sm. 218° (B. 14, 2031). — III, 309.
- $C_{26}H_{15}O_3$ C 82,5 — H 4,8 — O 12,7 — M. G. 378.
1) Verbindung (aus Xanthrydrol). Sm. bei 200° (J. pr. [2] 28, 290; B. 26, 1278). — II, 1114.
- $C_{26}H_{15}O_4$ C 79,1 — H 4,6 — O 16,2 — M. G. 394.
1) Anhydrotetra[p -Oxyphenyl]äthen + $\frac{1}{2}H_2O$? (B. 5, 279). — II, 1040.
2) 9,9-Di[p -Oxyphenyl]fluoren- p -Carbonsäure. Sm. 165°. Ag (A. 247, 286). — II, 1916.
3) Diacetat d. 2,2-Binaphtylenglykol. Sm. 192,5° (A. ch. [5] 28, 178). — II, 1105.
4) Dibenzooat d. γ -Dioxybiphenyl (Z. 1871, 261). — II, 1151.
5) Verbindung (aus Resorcin u. Benzylchlorid). Sm. noch nicht bei 320° (B. 31, 310).
- $C_{26}H_{15}O_6$ C 73,3 — H 4,2 — O 32,5 — M. G. 426.
1) 9,9-Di[p -Dioxyphenyl]fluoren- p -Carbonsäure (A. 247, 288). — II, 2039.
- $C_{26}H_{15}O_7$ C 70,6 — H 4,1 — O 25,3 — M. G. 442.
1) Norrhizocarpsäure. Sm. 92°. $K_2 + 5H_2O$ (J. pr. [2] 58, 513).
2) Benzoylchrysoctetrarsäure. Sm. 156° (J. pr. [2] 57, 312).
3) Verbindung (aus Euxanthon) (A. 290, 162).
- $C_{26}H_{15}O_9$ C 65,8 — H 3,8 — O 30,4 — M. G. 474.
1) Triacetat d. Resorcinoxaleinanhydrid (B. 14, 2566). — II, 937.
- $C_{26}H_{15}O_{12}$ C 59,8 — H 3,4 — O 36,8 — M. G. 522.
1) Filixroth (A. 143, 277). — III, 550.

- $C_{26}H_{15}O_{11}$ C 56,3 — H 3,2 — O 40,5 — M. G. 554.
- $C_{26}H_{15}N_2$ 1) Morindin + H_2O (*J.* 1847 **48**, 748; *Z.* 1866, 342; *Soe.* 51, 52). — III, 455.
C 87,1 — H 5,0 — N 7,8 — M. G. 358.
1) Diphenylphenhomazin. Sm. 190° (*B.* 20, 1273). — III, 182.
2) N-Phenyldihydrophenanthrophenazin. Sm. 230° (*A.* 292, 268). — IV, 1080.
3) Verbindung (aus 2,2'-Diamidobiphenyl u. Benzil). Sm. 238° (*B.* 25, 3288). — IV, 1094.
- $C_{26}H_{15}N_4$ C 80,8 — H 4,7 — N 14,5 — M. G. 386.
1) Naphtyloth. HCl, (2 HCl, PtCl₄) (*B.* 26, 2235; *A.* 286, 227). — IV, 1302.
- $C_{26}H_{16}Br_2$ 1) 9,10-Dibrom-9,10-Diphenyl-9,10-Dihydroanthracen. Sm. 127° u. Zers. (*Am.* 13, 558). — II, 302.
- $C_{26}H_{16}N$ 90,5 — H 5,5 — N 4,0 — M. G. 345.
1) 2,5-Diphenyl-1-[1-Naphtyl]pyrrol. Sm. 148—149° (*B.* 22, 3092). — IV, 438.
2) 2,5-Diphenyl-1-[2-Naphtyl]pyrrol. Sm. 207—208° (*B.* 22, 3093). — IV, 438.
- $C_{26}H_{16}N_2$ C 83,6 — H 5,1 — N 11,2 — M. G. 373.
1) 2-Phenylamido-1,1'-Azonaphtalin. Sm. 140° (*B.* 23, 1330). — IV, 1400.
2) 2-Phenylamido-1,2'-Azonaphtalin. Sm. 154—155° (*B.* 23, 1332). — IV, 1401.
3) 2-[1-Naphtyl]amido-1-Phenylazonaphtalin. Sm. 167° (*B.* 22, 3340). — IV, 1398.
4) 2-[2-Naphtyl]amido-1-Phenylazonaphtalin. Sm. 139° (*B.* 23, 1333). — IV, 1398.
5) 4-[1-Naphtyl]amido-1-Phenylazonaphtalin. Sm. 128° (*A.* 256, 257). — IV, 1397.
6) 4-[2-Naphtyl]amido-1-Phenylazonaphtalin. Sm. 137° (*B.* 22, 3345; 23, 1329). — IV, 1398.
- $C_{26}H_{20}O$ C 89,7 — H 5,7 — O 4,6 — M. G. 348.
1) α -Benzpinakolin. Sm. 204—205° (*B.* 5, 277; 11, 68, 1396; 17, 911; 20, 1790, 2160). — III, 264.
2) β -Benzpinakolin. Sm. 181° (178—179°) (*A.* 133, 29; *B.* 10, 1475; 11, 66; 17, 911; 20, 1790, 2160; *J. r.* 12, 429). — III, 265.
3) Tetraphenyl-Aethylenoxyd, siehe $C_{26}H_{20}O$ Benzhydroläther.
4) 4-Benzoyltriphenylmethan. Sm. 164° (*Bl.* [3] 15, 950).
- $C_{26}H_{20}O_2$ C 85,7 — H 5,5 — O 8,8 — M. G. 364.
1) α -Oxy-4-Benzoyltriphenylmethan. Sm. 158° (*Bl.* [3] 15, 951).
2) Acetat d. β -Oxy-1,2,3-Triphenylbenzol + 2 H_2O . Sm. 189° (*B.* 26, 68). — II, 905.
3) Verbindung (aus Phenol u. Benzaldehyd) (*Am.* 9, 130). — III, 10.
- $C_{26}H_{20}O_3$ C 82,1 — H 5,3 — O 12,6 — M. G. 380.
1) β -Keto- $\alpha\beta$ -Diphenyl- $\alpha\alpha$ -Di[β -Oxyphenyl]äthan (*Bl.* [3] 7, 609). — III, 265.
- $C_{26}H_{20}O_4$ C 78,8 — H 5,1 — O 16,1 — M. G. 396.
1) Tetra[β -Oxyphenyl]äthen (*B.* 5, 278). — II, 1039.
2) α -Verbindung (aus Resorcin u. Benzaldehyd). + 3 H_2O ? (*Am.* 5, 340). — III, 10.
3) β -Verbindung (aus d. α -Verb. $C_{26}H_{20}O_4$) + 4 H_2O . Sm. oberh. 330° u. Zers. (*Am.* 5, 344). — III, 10.
4) Verbindung (aus 1,4-Benzochinon u. 2 Molec. 2-Oxynaphtalin). Sm. 82° Na₂ (*Am.* 18, 19). — III, 344.
- $C_{26}H_{20}O_5$ C 75,7 — H 4,8 — O 19,4 — M. G. 412.
1) α -Keto- $\alpha\beta\epsilon$ -Triphenyl- $\beta\delta$ -Hexadien- $\gamma\delta$ -Dicarbonsäure (α -Desylen- γ -Methylphenylitakonsäure). Sm. 227—230° u. Zers. K₂, Piperidinsalz (*B.* 30, 96).
- $C_{26}H_{20}O_6$ C 72,9 — H 4,6 — O 22,5 — M. G. 428.
1) Auron (*M.* 5, 111). — III, 79.
2) Rhizocarpsäure (oder $C_{26}H_{20}O_6$). Sm. 177—179°. K + H_2O (*A.* 284, 114; 295, 236; *B.* 30, 362; *J. pr.* [2] 57, 446; [2] 58, 511). — II, 2039.
3) Verbindung (aus Pyrogallol u. Benzaldehyd) (*B.* 5, 281; *Am.* 9, 131). — III, 11.

- C₁₅H₂₀O**, C 70,3 — H 4,5 — O 25,2 — M. G. 444.
 1) Diacetat d. Kresorcinnphthalein. Sm. 200° (B. 15, 1069; A. 215, 96). — II, 2066.
 2) Diacetat d. Orcinphthalein. Sm. 219—220° (A. 183, 66). — II, 2066.
 3) Diacetat d. β-Orcinphthalein. Sm. 227—228° (B. 29, 2636).
 4) Diacetat d. γ-Orcinphthalein. Sm. 207—208° (B. 29, 2639).
- C₁₅H₂₀O₂**, C 67,8 — H 4,3 — O 27,8 — M. G. 460.
 1) Triacetat d. Benzoylpyrogallolphthalein. Sm. 231° (B. 14, 1864). — II, 2037.
- C₁₅H₂₀O₃**, C 65,6 — H 4,2 — O 30,2 — M. G. 476.
 1) Hymatomelansäure (H. 13, 90).
- C₁₆H₂₀O₁₇**, C 59,5 — H 3,8 — O 36,6 — M. G. 524.
 1) Cetrarsäure. (NH₄), Ba, Pb (A. 55, 156; 300, 356; B. 23, 464; J. pr. [2] 57, 301; [2] 58, 502). — II, 2082.
- C₁₆H₂₀O₁₁**, C 56,1 — H 3,6 — O 40,3 — M. G. 556.
 1) Hexaacetat d. 1,2,3,5,6,7-Hexaoxy-9,10-Anthrachinon (A. 170, 83; B. 9, 1257; 10, 883). — III, 439.
- C₁₆H₂₀N₂**, C 86,7 — H 5,5 — N 7,8 — M. G. 360.
 1) αβ-Diphenylimido-αβ-Diphenyläthan (Benzildiani). Sm. 141—142° (B. 25, 2601). — III, 284.
 2) 1,3-Di-2-Naphtylamido-benzol. Sm. 192°; Sd. oberh. 460°₄₅. 2HCl (B. 26, 977, 3087). — IV, 573.
 3) 1,4-Di-2-Naphtylamido-benzol. Sm. 235°; Sd. oberh. 400° u. Zers. Pikrat (B. 22, 1089). — IV, 587.
 4) 4,4'-Dibenzylidenamidobiphenyl. Sm. 239—240° (231—232°) (B. 11, 832; J. r. 17, 366; 23, 48; A. 258, 375). — IV, 567.
 5) Di[4-Phenylbenzyliden]hydrazin. Sm. 245° (Bl. [3] 17, 810).
 6) s-Di[Diphenylmethylen]hydrazin (Diphenylketazin; Bisdiphenylazimethyleu). Sm. 162° (J. pr. [2] 44, 207). — III, 188.
 7) 1,2,3-Triphenyl-1,2-Dihydro-1,4-Benzdiazin. Sm. 116—117° (B. 24, 1875). — IV, 1075.
- C₁₆H₂₀N₄**, C 80,4 — H 5,2 — N 14,4 — M. G. 388.
 1) Di[Diphenylmethylen]tetrazon (J. pr. [2] 44, 200). — III, 188.
 2) 2,4-Diphenylimido-3-Phenyl-1,2,3,4-Tetrahydro-1,3-Benzdiazin. α-Modif. Sm. 171°; β-Modif. Sm. 184° (B. 30, 1092, 1686; Am. 21, 139). — IV, 1269.
- C₁₆H₂₁N**, C 89,9 — H 6,1 — N 4,0 — M. G. 347.
 1) 4-Benzylidenamidotriphenylmethan. Sm. 135—136° (B. 26, 3082). — III, 31.
- C₁₆H₂₁N₂**, C 83,2 — H 5,6 — N 11,2 — M. G. 375.
 1) 4,4-Di[Benzylidenamido]diphenylamin. Sm. 182° (A. 303, 366).
- C₁₇H₂₁N₃**, C 77,4 — H 5,2 — N 17,4 — M. G. 403.
 1) 1,3-Di[Amidophenyl]methylen-2-Phenylimido-2,3-Dihydrobenzimidazol. Sm. 188° (B. 24, 2506). — IV, 567.
- C₁₈H₂₁Br**, 1) β-Brom-αααβ-Tetraphenyläthan. Sm. 177° (Bl. [3] 1, 778). — II, 301.
- C₁₈H₂₁O**, C 89,1 — H 6,3 — O 4,6 — M. G. 350.
 1) α-Oxy-ααββ-Tetraphenyläthan. Sm. 151°. — II, 1095.
 2) Di[Diphenylmethylen]äther (Benzhydroläther). Sm. 111° (109°; 118°); Sd. 315°₄₅ (267°₁₅) (A. 133, 14; 184, 176; 278, 362; 298, 234; Bl. 33, 341; J. r. 12, 431; B. 11, 1398; 29, 2159; C. 1897 [2] 662). — II, 1078.
 3) Benzyläther d. α-Oxytriphenylmethan. Sm. 93° (C. 1896 [1] 416).
- C₁₈H₂₁O₂**, C 85,2 — H 6,0 — O 8,7 — M. G. 366.
 1) αα-Diphenyl-ββ-Di[β-Oxyphenyl]äthan. Sm. 230—232° (A. 279, 331). — II, 1008.
 2) αβ-Dioxy-ααββ-Tetraphenyläthan (Benzpinakon). Sm. 168° (A. 133, 27; B. 10, 1473; J. r. 12, 426). — II, 1105.
 3) 4-Keto-3-Acetyl-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol. Sm. 221° (A. 281, 90). — III, 309.
- C₁₈H₂₁O₄**, C 78,4 — H 5,5 — O 16,1 — M. G. 398.
 1) ααββ-Tetra[β-Oxyphenyl]äthan (A. 202, 133). — II, 1039.
 2) ααββ-Tetra[β-Oxyphenyl]äthan. Sm. 248° (B. 11, 930). — II, 1039.
 3) Verbindung (aus d. β-Verb. C₂₀H₂₅O₄) (Am. 5, 345). — III, 11.

- $C_{20}H_{22}O_5$ C 75,4 — H 5,3 — O 19,3 — M. G. 414.
1) α -[4-Methylbenzoat]- β -Aethyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten. Sm. 125—126° (B. 27, 713). — III, 317.
- $C_{20}H_{22}O_6$ C 72,6 — H 5,1 — O 22,3 — M. G. 430.
1) Diacetat d. α -Kresolphtalein. Sm. 73—75° (A. 202, 156). — II, 1987.
2) α -2-Lakton d. α -Oxytriphenylmethan- $\alpha^1, \alpha^4, \alpha^5$ -Tricarbonsäurediäthylester. Sm. 138—139° (A. 209, 298).
- $C_{20}H_{22}O_7$ C 70,0 — H 4,9 — O 25,1 — M. G. 446.
1) Verbindung (aus Pyrogallol u. Benzaldehyd). kryst. (B. 5, 281; Am. 9, 131). — III, 11.
2) Verbindung (aus Pyrogallol u. Benzaldehyd). amorph. (B. 5, 281). — III, 11.
- $C_{20}H_{22}O_8$ C 67,6 — H 4,7 — O 27,7 — M. G. 462.
1) Diäthylester d. 2,5-Dibenzoxybenzol-1,4-Dicarbonsäure. Sm. 174° (A. 268, 308). — II, 2003.
2) Diäthylester d. Disalicylsäurephtalid. Sm. 144° (A. 303, 287).
3) Diäthylester d. Phtalyldi-3-Oxybenzol-1-Carbonäure. Sm. 66° (A. 303, 276).
4) Diäthylester d. Phtalyldi-4-Oxybenzol-1-Carbonäure. Sm. 97° (A. 303, 276).
- $C_{20}H_{22}O_9$ C 65,3 — H 4,6 — O 30,1 — M. G. 478.
1) Hymatomelansäure (oder $C_{20}H_{20}O_9$) (H. 13, 90). — I, 1109.
- $C_{20}H_{22}O_{10}$ C 63,1 — H 4,5 — O 32,4 — M. G. 494.
1) Huminsäure. BaO (H. 13, 108). — I, 1108.
- $C_{20}H_{22}O_{11}$ C 61,2 — H 4,3 — O 34,5 — M. G. 510.
1) Ratanhiaroth (A. 143, 275). — III, 590.
2) Tormentillgerbstoff (A. 145, 8). — III, 688.
3) Tormentillroth (A. 145, 7). — III, 688.
4) Verbindung (aus Kastaniengerbsäure). — III, 685.
- $C_{20}H_{22}O_{13}$ C 57,6 — H 4,0 — O 38,4 — M. G. 542.
1) Hexaacetat d. Verb. $C_{14}H_{10}O_7$ (B. 9, 1257). — III, 439.
2) Verbindung (aus Kastaniengerbsäure). — III, 685.
- $C_{18}H_{22}N_2$ C 86,2 — H 6,1 — N 7,7 — M. G. 362.
1) α -Phenylimido- α -Phenylbenzylamido- α -Phenylmethan. Sm. 111° (A. 273, 11). — IV, 843.
2) β -Phenylhydrazon- $\alpha\alpha\beta$ -Triphenyläthan. Sm. 156° (C. 1897 [2] 661). — IV, 775.
3) α -Diphenylhydrazon-4-Methylidiphenylmethan. Sm. 122° (B. 26, 32). — IV, 777.
4) isom. α -Diphenylhydrazon-4-Methylidiphenylmethan. Sm. 95—96° (B. 26, 33). — IV, 777.
5) α -[4-Methylphenyl]azotriphenylmethan. Sm. 103,5° u. Zers. (C. 1898 [2] 1131). — IV, 1404.
6) 3-Phenyl-2-[4-Isopropylphenyl]- α -Naphtimidazol. Sm. 136° (B. 25, 2831). — IV, 1065.
7) Base (aus Benzylidenamidobenzol). (2HCl, PtCl₄) (A. 148, 336; A. Spl. 3, 357). — III, 29.
8) Base (aus d. Base $C_{18}H_{14}N_2$). Sm. 154° (B. 25, 3289). — IV, 1091.
- $C_{20}H_{22}N_4$ C 80,0 — H 5,6 — N 14,3 — M. G. 390.
1) anti- $\alpha\beta$ -Di[Phenylhydrazon]- $\alpha\beta$ -Diphenyläthan. Sm. 225° (228 bis 229°) (A. 232, 230; 305, 173; G. 22 [2] 611; 23 [2] 225; 27 [2] 284; Soc. 67, 612; Am. 16, 111). — IV, 785.
2) syn- $\alpha\beta$ -Di[Phenylhydrazon]- $\alpha\beta$ -Diphenyläthan. Sm. 208° (Soc. 67, 611; B. 31, 1251; A. 305, 172). — IV, 785.
3) $\alpha\beta$ -Di[Benzylidenamido]- $\alpha\beta$ -Diphenylhydrazin. Sm. 186° (190°) (Soc. 67, 611; B. 26, 1045; G. 22 [2] 228; 26 [1] 441; 27 [2] 261; A. 305, 174). — IV, 749.
4) Dehydrobenzalphenylhydrazon. Sm. 198—200° (202°) (Soc. 67, 615; G. 26 [1] 448; 27 [2] 261). — IV, 749.
5) 2,8-Di[Benzylamido]-5,10-Naphtdiazin + 3H₂O. (2HCl, PtCl₄) (Soc. 55, 599). — IV, 1283.
6) Dimethylamidophenylindulin (Indazin). Sm. 218—220°. + C₆H₆ (A. 262, 263). — IV, 1285.

- $C_{20}H_{22}N_4$ 7) Base (aus 1,3-Di[Phenylamido]benzol u. 4-Nitroso-1-Dimethylamidobenzol). Sm. 218—220°. + C_6H_6 (A. 262, 263; 286, 204).
- $C_{20}H_{11}N_6$ C 74,6 — H 5,3 — N 20,1 — M. G. 418.
- 1) 4,4'-Di[4-Methylphenylazo]azobenzol. Sm. 201—202° (B. 31, 996). — IV, 1355.
- $C_{20}H_{22}N_8$ C 70,0 — H 4,9 — N 25,1 — M. G. 446.
- 1) $\alpha\beta$ -Diphenylazo- $\alpha\beta$ -Di[Phenylhydrazon]äthan (Diformazyli). Sm. 226°. HCl, H_2SO_4 (B. 26, 2979). — IV, 1372.
- $C_{20}H_{22}S_2$ 1) $\alpha\beta$ -Dimerkapto- $\alpha\alpha\beta\beta$ -Tetraphenyläthan (Dithiobenzpinakon). Sm. 151° (B. 5, 970; II, 925; Soc. 49, 479). — II, 1105.
- $C_{20}H_{11}S_4$ 1) Tetraphenyläther d. $\alpha\alpha\beta\beta$ -Tetramerkaptoäthan. Sm. 115° (B. 23, 3243). — II, 790.
- $C_{20}H_{23}N$ C 89,4 — H 6,6 — N 4,0 — M. G. 349.
- 1) α -[2-Methylphenyl]amidotriphenylmethan. Sm. 142° (B. 17, 705). — II, 642.
- 2) α -[4-Methylphenyl]amidotriphenylmethan. Sm. 177° (B. 17, 706). — II, 642.
- 3) α -Benzylamidotriphenylmethan. Sm. 110°. HCl (B. 17, 703). — II, 642.
- 4) Di[Diphenylmethyl]amin (Dibenzhydrilamin). Sm. 136°. Pikrat (Bl. 33, 587). — II, 635.
- 5) 2-Phenylbenzylamidodiphenylmethan (Soc. 41, 198). — II, 635.
- 6) *p*-Tribenzylpyridin. Sm. 278—280° (A. 280, 46). — IV, 477.
- $C_{20}H_{14}O_3$ C 84,7 — H 6,5 — O 8,7 — M. G. 368.
- 1) Diäthyläther d. Di[1-Oxy-*p*-Naphtyl]äthen. 2 Modifikationen. Sm. 185—186°. Pikrat (J. pr. [2] 47, 71). — II, 1008.
- 2) Diäthyläther d. Di[2-Oxy-*p*-Naphtyl]äthen. Sm. 186° (J. pr. [2] 47, 76). — II, 1008.
- $C_{20}H_{14}O_3$ C 81,2 — H 6,2 — O 12,5 — M. G. 384.
- 1) $\gamma\gamma$ -Diacetyl- α -Benzoyl- $\alpha\beta$ -Diphenylpropan. Sm. 191—192° (A. 281, 88). — III, 322.
- $C_{20}H_{14}O_6$ C 72,2 — H 5,5 — O 22,2 — M. G. 432.
- 1) Triacetat d. Phenolphthalol. Sm. 40° (A. 202, 90). — II, 1115.
- 2) Triacetat d. $\alpha\beta\beta$ -Tri[*p*-Oxyphenyl]äthen (A. 243, 161). — II, 1028.
- 3) Triacetat d. Di[*p*-Dioxyphenyl]-[*p*-Oxy-*p*-Methylphenyl]methan. Sm. 148—149° (A. 179, 199). — II, 1028.
- 4) Tribenzoat d. $\alpha\alpha\alpha$ -Tri[Oxymethyl]äthan (A. 276, 78). — II, 1142.
- 5) Diacetyl-*o*-Kresolphtalinsäure. Sm. 138—140° (A. 202, 169). — II, 1912.
- $C_{20}H_{14}O_8$ C 67,2 — H 5,2 — O 27,6 — M. G. 464.
- 1) Diäthylester d. 2,5-Dibenzoxy-1,4-Dihydrobenzol-1,4-Dicarbon-säure. α -Derivat Sm. 105°; β -Derivat Sm. 138°; γ -Derivat Sm. 102,5° (A. 258, 310). — II, 1992.
- $C_{20}H_{14}O_{10}$ C 62,9 — H 4,8 — O 32,2 — M. G. 496.
- 1) Quebrachogerbsäure (J. 1879, 906). — III, 590.
- $C_{20}H_{14}O_{11}$ C 60,9 — H 4,7 — O 34,4 — M. G. 512.
- 1) Pentaacetat d. Hämatoxylin. Sm. 165—166° (B. 4, 331; A. 216, 234). — III, 665.
- $C_{20}H_{14}O_{13}$ C 59,1 — H 4,5 — O 36,4 — M. G. 528.
- 1) Eichenroth (H. 13, 89). — III, 588.
- $C_{20}H_{14}O_{13}$ C 57,3 — H 4,4 — O 38,2 — M. G. 544.
- 1) Verbindung (aus Kastaniengerbsäure). — III, 655.
- 2) Phylläscintannin + H_2O (Z. 1867, 84). — III, 655.
- $C_{20}H_{14}O_{16}$ C 52,7 — H 4,0 — O 43,2 — M. G. 592.
- 1) β -Ampelochroinsäure (B. 25 [2] 478; Bl. [3] 7, 827).
- $C_{20}H_{14}N_2$ C 85,7 — H 6,6 — N 7,7 — M. G. 364.
- 1) α -Triphenylmethyl- β -[4-Methylphenyl]hydrazin. Sm. 157° u. Zers. (C. 1898 [2] 1131).
- $C_{20}H_{24}N_4$ C 79,6 — H 6,1 — N 14,3 — M. G. 392.
- 1) 4,4'-Di[Methylphenylamido]azobenzol. Sm. 150° (M. 4, 798). — IV, 1362.
- 2) 1,2,4,5-Tetraphenylhexahydro-1,2,4,5-Tetrazin. Sm. 200° (B. 31, 3250). — IV, 1496.
- 3) Diphenyldibenzyltetrazon. Sm. 141—142° (166°) (A. 252, 290; G. 22 [2] 225). — IV, 1309.

- $C_{26}H_{16}O_4$ C 77,6 — H 6,4 — O 15,9 — M. G. 402.
 1) Diäthylester d. *aaa*-Triphenyläthan- $\beta\beta$ -Dicarbonsäure. Sm. 133° (Soc. 51, 225). — II, 1913.
 2) Di[2,4,5-Trimethylphenylester] d. Benzol-1,2-Dicarbonsäure. Sm. 118—119° (B. 26, 208). — II, 1794.
- $C_{26}H_{20}O_5$ C 74,6 — H 6,2 — O 19,1 — M. G. 418.
 1) Triäthyläther d. Fluorescein. Sm. 110° (B. 28, 51). — II, 2038.
- $C_{26}H_{16}O_6$ C 71,9 — H 6,0 — O 22,1 — M. G. 434.
 1) Baphiniton (J. 1876, 896). — III, 620.
 2) Diäthylester d. 2,5-Dioxybenzoldibenzyläther-1,4-Dicarbonsäure. Sm. 96,5° (A. 258, 299). — II, 2002.
- $C_{26}H_{16}O_7$ C 67,0 — H 5,6 — O 27,4 — M. G. 466.
 1) Diäthylester d. $\beta\epsilon$ -Dibenzoxyl- $\beta\delta$ -Hexadien- $\gamma\delta$ -Dicarbonsäure. Sm. 111° (B. 30, 1994).
 2) Diäthylester d. $\alpha\delta$ -Diacetoxyl- $\alpha\delta$ -Diphenyl- $\alpha\gamma$ -Butadien- $\beta\gamma$ -Dicarbonsäure. Sm. 106° (B. 30, 1996).
- $C_{26}H_{20}O_{11}$ C 55,5 — H 4,6 — O 49,9 — M. G. 562.
- $C_{26}H_{16}N_2$ C 85,2 — H 7,1 — N 7,6 — M. G. 366.
 1) Rheumgerbsäure. 2PbO (Z. 1868, 308). — III, 591.
- $C_{26}H_{16}N_4$ C 79,2 — H 6,6 — N 14,2 — M. G. 394.
 1) $\alpha\alpha\beta\beta$ -Tetra[4-Amidophenyl]äthan. Sm. 264° (272° cor.). (4HCl, SaCl₂) (A. 296, 227).
 2) 4,4'-Di[2-Amidobenzylamido]biphenyl. Sm. 185° (B. 29, 1452). — IV, 964.
- $C_{26}H_{17}N_3$ C 81,9 — H 7,1 — N 11,0 — M. G. 381.
 1) $\alpha\alpha$ -Di[4-Dimethylamidophenyl]- $\alpha\alpha$ -[6-Chinoly]methan. Sm. 165°. 3HCl (B. 24, 3141). — IV, 1213.
- $C_{26}H_{16}O_2$ C 83,8 — H 7,5 — O 8,6 — M. G. 372.
 1) bim. Methylphenylcyklohexanon. Sm. 159° (B. 32, 426).
 2) Acetat d. 3-Oxy- β -Dibenzyl-4-Isopropyl-1-Methylbenzol. Sm. 82 bis 85° (G. 11, 349). — II, 905.
- $C_{26}H_{16}O_6$ C 71,5 — H 6,4 — O 22,0 — M. G. 436.
 1) Diäthylester d. 2,5-Dioxy-1,4-Dihydrobenzoldibenzyläther-1,4-Dicarbonsäure. α -Derivat Sm. 169° (A. 258, 301); β -Derivat Sm. 148,5° (A. 258, 302); γ -Derivat Sm. 140,5° (A. 258, 305); π -Derivat Sm. 272° = (C₂₆H₁₆O₆)₂ (A. 258, 304). — II, 1991.
- $C_{26}H_{16}O_{14}$ C 55,3 — H 4,9 — O 39,7 — M. G. 564.
 1) Ruberythrin säure. Sm. 258—260°. K, Ba + H₂O, Pb₂ + 2H₂O? (A. 66, 176; 80, 324; A. Spl. 7, 296; J. 1855, 666; 1861, 938; B. 20, 2241; Soc. 63, 1180). — III, 607.
- $C_{26}H_{16}O_{16}$ C 52,3 — H 4,7 — O 42,9 — M. G. 596.
 1) Säure (aus Sordidin). Sm. 182—183° (G. 24 [2] 334). — II, 2059.
- $C_{26}H_{16}N_6$ C 73,6 — H 6,6 — N 19,8 — M. G. 424.
 1) $\beta\epsilon$ -Tri[Phenylhydrason]- γ -Methyl- γ -Hepten. Sm. 204—205° (B. 21, 1420). — IV, 787.
 2) 5-Methyl-3,5-Di[α -Phenylhydrasonäthyl]-1-Phenyl-4,5-Dihydropyrazol. Sm. 204—205° (B. 21, 1420; 28, 1846).
- $C_{26}H_{16}O_7$ C 68,7 — H 6,6 — O 24,7 — M. G. 454.
 1) Anhydrid d. β -Acetoxyl- β -Phenyl- $\alpha\alpha$ -Dimethylpropionsäure. Sm. 155° (A. 227, 69). — II, 1591.
- $C_{26}H_{20}O_8$ C 66,4 — H 6,4 — O 27,2 — M. G. 470.
 1) Tetracetylorguajakharz säure. Sm. 100—102° (M. 18, 721).
 2) Dipropylester d. Diphenylsigweinsäure. Fl. (A. ch. [7] 3, 476) — II, 1319.
 3) Diisobutylester d. Dibenzoylweinsäure (B. 15, 2243) — II, 1155.
- $C_{26}H_{20}O_9$ C 64,2 — H 6,2 — O 29,6 — M. G. 486.
 1) Isobutyraldehydphloroglucid (C. 1896 [2] 486).
- $C_{26}H_{20}O_{12}$ C 58,4 — H 5,6 — O 36,0 — M. G. 534.
 1) Verbindung (aus Holzsulfitlauge oder C₂₆H₂₀O₁₂) (A. 267, 357).
- $C_{26}H_{20}O_{13}$ C 56,7 — H 5,4 — O 37,8 — M. G. 550.
 1) Pentaacetat d. Kolatannin (C. 1898 [1] 579).
 2) Anhydrid d. Fraxinusgerbsäure (M. 3, 750). — III, 681.

- $C_{25}H_{30}O_{15}$ C 53,6 — H 5,1 — O 41,2 — M. G. 582.
 1) **2-Oxybenzol-1-Carbonsäureglykosid**. Sm. 184–185° (*Ann.* 5, 173). — II, 1493.
- $C_{26}H_{30}N_4$ C 78,4 — H 7,5 — N 14,1 — M. G. 398.
 1) **1,4-Di[4-Aethylamido-3-Methylbenzylidenamido]benzol**. Sm. 234 bis 235° (*B.* 31, 2256).
 2) **Tetraäthylphenosafrarin**. (2HCl, PtCl₄) (*B.* 16, 472). — IV, 1283.
 3) **Phenylhydrazon d. Methylcinchonin**. Sm. 151,5° (*B.* 27, 1187). — IV, 798.
- $C_{26}H_{33}O_6$ C 66,1 — H 6,8 — O 27,1 — M. G. 472.
 1) **Hexaäthyläther d. 1,2,3,5,6,7-Hexaoxy-9,10-Anthrachinon**. Sm. bei etwa 40° (*B.* 10, 886). — III, 439.
- $C_{26}H_{33}O_9$ C 63,9 — H 6,6 — O 29,5 — M. G. 488.
 1) **Säure (aus Myrrhe)** (*B.* 23 [2] 494). — III, 560.
- $C_{26}H_{33}O_{11}$ C 60,0 — H 6,2 — O 33,8 — M. G. 520.
 1) **Glykosid (aus Olea fragrans)**. Sm. 184° (*R.* 5, 127). — III, 600.
- $C_{26}H_{33}O_{14}$ C 54,9 — H 5,6 — O 39,4 — M. G. 568.
 1) **Baptisin + 9H₂O**. Sm. 240° (wasserfrei) (*C.* 1897 [2] 429, 709).
 2) **Fraxinusgerbsäure (M. 3, 750)**. — III, 681.
- $C_{26}H_{33}O_{16}$ C 52,0 — H 5,3 — O 42,7 — M. G. 600.
 1) **Verbindung (aus Fraxinus excelsior) (M. 3, 757)**. — III, 682.
- $C_{26}H_{34}N_2$ C 83,9 — H 8,6 — N 7,4 — M. G. 372.
 1) **1,2-Di[2,4,5-Trimethylphenylamidomethyl]benzol** (*B.* 31, 422).
 2) **4',4'-Di[Dimethylamido]-4'-Isopropyltriphenylmethan**. Sm. 118 bis 119°. 2HCl. (2HCl, PtCl₄), Pikrat (*B.* 13, 786; *A.* 206, 139). — IV, 1048.
 C 80,6 — H 8,5 — N 10,9 — M. G. 387.
- $C_{27}H_{33}N_3$ 1) $\alpha\alpha$ -**Tri[4-Dimethylamidophenyl]äthan**. Sm. 125° (*B.* 20, 2424). — IV, 1198.
 2) **3'-Amido-4',4'-Di[Dimethylamido]-2',4',6'-Trimethyltriphenylmethan**. Sm. 142° (*B.* 24, 3135). — IV, 1199.
 3) **4',4',5'-Tri[Dimethylamido]-2'-Methyltriphenylmethan**. Sm. bei 100° (*B.* 24, 3139). — IV, 1197.
- $C_{27}H_{34}O$ C 86,2 — H 9,4 — O 4,4 — M. G. 362.
 1) **Di[3-Methyl-5-Phenylhexahydrophenyl]äther**. Sm. 80–100°; Sd. oberh. 300°₁₀ (*A.* 303, 262).
- $C_{27}H_{34}O_4$ C 76,1 — H 8,3 — O 15,6 — M. G. 410.
 1) **Diacetat d. Dithymoläthan**. Sm. 100° (*B.* 11, 288). — II, 997.
- $C_{27}H_{34}O_5$ C 73,2 — H 8,0 — O 18,8 — M. G. 426.
 1) **Harz (aus Myrrhe) (B. 23 [2] 494)**. — III, 560.
- $C_{27}H_{34}O_{10}$ C 61,6 — H 6,7 — O 31,6 — M. G. 506.
 1) **Kosotoxin (B. 27 [2] 311)**.
 C 54,7 — H 5,9 — O 39,3 — M. G. 570.
- $C_{27}H_{34}O_{16}$ 1) **Helicoidin (A. 56, 69; 154, 14)**. — III, 69.
 C 51,8 — H 5,6 — O 42,5 — M. G. 602.
- $C_{27}H_{34}O_{17}$ 1) **Verbindung (aus Jute) (Soc. 41, 92)**. — I, 1080.
 C 50,5 — H 5,5 — O 34,0 — M. G. 618.
- $C_{27}H_{35}O_8$ 1) **Heptacetylinulin (A. 180, 85)**. — I, 1096.
 C 78,8 — H 9,1 — O 12,1 — M. G. 396.
- 1) **Verbindung (aus Benzolcarbonsäureäthylester)**. Sd. 217° (*J. pr.* [2] 4, 448). — II, 1139.
 C 49,1 — H 5,6 — O 45,3 — M. G. 636.
- $C_{27}H_{36}O_{16}$ 1) **Heptacetat d. Rohrzucker (Bl. 12, 207)**. — I, 1070.
 C 83,0 — H 9,6 — N 7,4 — M. G. 376.
- $C_{27}H_{36}N_7$ 1) **Diönanthylidenbenzidin**. Sm. 113–115° (*A.* 258, 377). — IV, 967.
 C 81,7 — H 9,9 — O 8,4 — M. G. 382.
- $C_{27}H_{36}O_2$ 1) **Diäthyläther d. Dithymoläthan**. Sm. 72° (*B.* 11, 288). — II, 997.
 C 75,4 — H 9,2 — O 15,4 — M. G. 414.
- $C_{27}H_{36}O_4$ 1) **Resorcinbicampher (Jb. [3] 4, 726)**. — III, 487.
 C 72,6 — H 8,8 — O 18,6 — M. G. 430.
- $C_{27}H_{36}O_5$ 1) **Äthylester d. Dehydrocholsäure**. Sm. 221° (*H.* 16, 495; *B.* 14, 74). — II, 1969.
 C 67,5 — H 8,2 — O 24,2 — M. G. 462.
- $C_{27}H_{36}O_7$ 1) **Strophantidin + 1 $\frac{1}{2}$ H₂O**. Sm. 169–170° (*B.* 31, 538).

- C₂₆H₃₆N₂** C 82,5 — H 10,1 — N 7,4 — M. G. 378.
 1) **Diönanthylidendiphenyldiamin.** Fl. (*A. Spl.* 3, 352; *A.* 148, 336). — II, 445.
- C₂₆H₃₆J₂** 1) **Carotindijodid** (*B.* 46, 488; 48, 65). — II, 243; III, 626.
C₂₆H₄₀O C 84,8 — H 10,9 — O 4,3 — M. G. 368.
 1) **Ergosterin** + H₂O. Sm. 154°; Sd. 185°₂. (*A. ch.* [6] 20, 289). — II, 1076.
- C₂₆H₄₀O₂** C 81,3 — H 10,4 — O 8,3 — M. G. 384.
 1) **Onoketon.** Sm. 186—187° (*B.* 29, 2987).
- C₂₆H₄₀O₃** C 67,2 — H 8,6 — O 24,1 — M. G. 464.
 1) **Monomethylester d. Cholansäure** + ¹/₂H₂O. Sm. 206—207°. Ba (*B.* 19, 479). — II, 2017.
 2) **Monomethylester d. Isocholansäure.** Ba (*B.* 19, 1530). — II, 2017.
 C 82,1 — H 10,5 — N 7,4 — M. G. 380.
 1) **Hydrazon d. α-Jonon.** Sm. 99° (*B.* 31, 877).
 2) **Hydrazon d. β-Jonon.** Sm. 104—105° (*B.* 31, 872).
 C 84,3 — H 11,3 — O 4,3 — M. G. 370.
- C₂₆H₄₂O** 1) **Lupeol.** Sm. 204° (*H.* 15, 415). — II, 1077.
 C 77,6 — H 10,4 — O 11,9 — M. G. 402.
- C₂₆H₄₂O₂** 1) **Oenocarpol** + H₂O. Sm. 304°; Sd. 405° u. Zers. K + 2H₂O, (2 + 3PbO + H₂O), (2 + 3AgOH + 4H₂O) (*B.* 25 [2] 215). — III, 638.
 C 71,9 — H 9,7 — O 18,4 — M. G. 434.
- C₂₆H₄₂O₃** 1) **Säure** (aus Oenocarpol) (*B.* 25 [2] 216). — III, 638.
 C 67,0 — H 9,0 — O 24,0 — M. G. 466.
- C₂₆H₄₂O₄** 1) **Chologlykolsäure.** Na, Ba + 3H₂O, Ag (*B.* 25, 182).
 C 60,7 — H 8,2 — O 31,1 — M. G. 514.
- C₂₆H₄₂O₁₀** C 60,7 — H 8,2 — O 31,1 — M. G. 514.
 1) **Quercitpentabutytrat** (*A. ch.* [5] 15, 51). — I, 424.
- C₂₆H₄₃Cl** 1) **Cholesterylechlorid** (oder C₂₇H₄₅Cl). Sm. 97° (*A.* 112, 359; 118, 26; *J. r.* 8, 236; *B.* 47, 899; *M.* 15, 87, 368; 17, 46). — II, 1073.
 2) **Isocholesterylechlorid** (*J. pr.* [2] 7, 175). — II, 1075.
 C 83,8 — H 11,8 — O 4,3 — M. G. 372.
- C₂₆H₄₄O** 1) **Cholesterin** + H₂O, siehe C₂₇H₄₆O. — II, 1071.
 2) **Isocholesterin.** Sm. 137—138° (*J. pr.* [2] 7, 172; [2] 25, 459; *B.* 12, 249; 31, 99, 1126, 1200; *H.* 14, 522). — II, 1075.
 3) **Parcholesterin** + H₂O (oder C₂₆H₄₄O + H₂O). Sm. 134—134,5° (*A.* 207, 229; 211, 283; *J. pr.* [2] 25, 459). — II, 1075.
 4) **Caulosterin** + H₂O. Sm. 158—159° (*J. pr.* [2] 25, 166). — II, 1076.
 5) **Phyosterin** + H₂O. Sm. 132—133° (*J.* 1863, 542; 1866, 698; *A.* 122, 249; 192, 175; 211, 283; *H.* 8, 356; *B.* 29 [2] 38). — II, 1075.
 6) **Paraphyosterin** + H₂O (oder C₂₇H₄₆O). Sm. 149—150° (*H.* 15, 150). — II, 1075.
 7) **Heptadekyl-2,4-Dimethylphenylketon.** Sm. 139° (*J. pr.* [2] 54, 393).
 8) **Heptadekyl-2,5-Dimethylphenylketon.** Sm. 57° (*J. pr.* [2] 54, 400).
 9) **Verbindung** (Cholesterol aus *Hygroptila spinosa*). Sm. 184° (*B.* 25 [2] 685).
 C 80,4 — H 11,3 — O 8,2 — M. G. 388.
- C₂₆H₄₄O₁** 1) **Dracoresen.** Sm. 74° (*C.* 1896 [2] 713).
 2) **Onocerin** (Onocol). Sm. 232° (*J.* 1855, 717; *B.* 29, 2985). — III, 638.
- C₂₆H₄₄O₂** C 71,5 — H 10,1 — O 8,3 — M. G. 436.
 1) **Aethylester d. Cholsäure.** Sm. 158° (*B.* 6, 1285; *J. pr.* [1] 89, 272; *H.* 10, 194; 16, 497; 22, 196). — I, 782.
 C 69,0 — H 9,7 — O 21,2 — M. G. 452.
- C₂₆H₄₄O₃** 1) **Verbindung** (aus d. Glykosid C₃₂H₅₄O₁₁). Sm. 278—280° (*B.* 35, 231). — III, 582.
 C 60,5 — H 8,5 — O 31,0 — M. G. 516.
- C₂₆H₄₄O₁₀** 1) **Tetracetylativinsäure.** Fl. (*M.* 8, 154). — I, 787.
- C₂₆H₄₄O₁₅** C 52,3 — H 7,4 — O 40,3 — M. G. 596.
 1) **Helleborein** (siehe auch C₂₇H₄₆O₁₅). Zers. bei 220—230° (*A.* 135, 55; *C.* 1897 [2] 764). — III, 593.
 C 84,1 — H 12,1 — N 3,8 — M. G. 371.
- C₂₆H₄₅N** 1) **Cholesterylammin.** Sm. 104° (*B.* 5, 513). — II, 590.
 C 83,4 — H 12,3 — O 4,3 — M. G. 374.
- C₂₆H₄₆O** 1) **Mochylalkohol.** Sm. 234° (*Soc.* 53, 274). — II, 1069.
 C 62,2 — H 9,1 — O 28,7 — M. G. 502.
- C₂₆H₄₆O₉** 1) **Paridol** (*J.* 1860, 543). — III, 599.

- $C_{26}H_{18}O_2$ C 83,0 — H 12,8 — O 4,2 — M. G. 376.
 1) **Palmitat d. Geraniol** (P. d. Rhodinol). Sd. bei 260°₁₃ (B. 31, 357).
 C 52,0 — H 8,0 — O 40,0 — M. G. 600.
 $C_{26}H_{14}O_{15}$ 1) **Chiratin** (J. 1869, 772). — III, 576.
 C 73,2 — H 11,7 — O 15,0 — M. G. 426.
 $C_{26}H_{16}O_4$ 1) **Tetrakosan- α -Dicarbonsäure**. Sm. 114° (C. 1896 [1] 643).
 C 78,8 — H 13,1 — O 8,1 — M. G. 396.
 $C_{26}H_{18}O_2$ 1) **Cerotinsäure** (siehe $C_{25}H_{36}O_2$ u. $C_{27}H_{44}O_2$). Sm. 78,5° (B. 30, 1416).
 2) **Methylester d. Carotinsäure**. Sm. 62,5° (C. 1896 [1] 642).
 3) **Aethylester d. Lignocerinsäure**. Sm. 55°; Sd. 305–310°_{13–23} (B. 13, 1715). — I, 448.
 4) **Oktylester d. Stearinsäure**. Sm. –4,5° (J. 1858, 301). — I, 445.
 $C_{26}H_{14}O$ C 81,7 — H 14,1 — O 4,2 — M. G. 382.
 1) **Cerylalkohol** (siehe auch $C_{27}H_{46}O$). Sm. 79° (B. 30, 1415).

C_{26} -Gruppe mit drei Elementen.

- $C_{26}H_{15}O_2Br_2$ 1) **Verbindung** (aus Diphenylketon). Sm. 125° (A. 133, 6). — III, 180.
 $C_{26}H_{15}O_2N$ C 71,4 — H 3,4 — O 22,0 — N 3,2 — M. G. 437.
 1) **Galleinanilid**. Sm. über 300° (B. 27, 2794). — II, 2088.
 $C_{26}H_{18}ON_2$ C 83,9 — H 4,3 — O 4,3 — N 7,5 — M. G. 372.
 1) **Naphtindon**. Sm. 295° (A. 266, 249; 272, 333; B. 31, 2487). — IV, 1084.
 2) **7-[2-Naphtyl]rosindon** [9] (ms-2-Naphtylisrosindon). HCl, HBr, HJ (B. 31, 2481).
 $C_{26}H_{16}O_2N_2$ C 80,4 — H 4,1 — O 8,2 — N 7,2 — M. G. 388.
 1) **4-Oxynaphtindon**. Zers. bei 300°. HCl (A. 262, 239; 272, 337; 286, 230). — IV, 1085.
 2) **10,10'-Biakridonyl**. Sm. 251° (A. 276, 52). — IV, 407.
 $C_{26}H_{18}O_4N_2$ C 74,3 — H 3,8 — O 15,2 — N 6,7 — M. G. 420.
 1) α -**3-Dinitrodibiphenyläthan**. Sm. 184–185° (A. 291, 4).
 2) **Phenylhydraonderivat d. 4,4'-Di[1,2-Naphtochinon]oxyd**. Sm. 264° (B. 30, 2202). — IV, 795.
 3) **2,8-Diphenylphenanthrolin-4,10-Dicarbonsäure**. Sm. 235°. Mg + MgO, Ba, Zn + H₂O, Ag₂ (A. 281, 16). — IV, 1093.
 $C_{26}H_{16}O_6N_6$ C 65,6 — H 3,4 — O 13,4 — N 17,6 — M. G. 476.
 1) **peri-Naphtylendi-m-Nitroisobenzalasin**. Sm. 246° (C. 1899 [1] 115).
 $C_{26}H_{18}O_6N_4$ C 65,0 — H 3,3 — O 20,0 — N 11,7 — M. G. 480.
 1) **Di[2,4-Dioxyphenylazo]phenanthrenchinon** (B. 26, 850). — IV, 1481.
 $C_{26}H_{18}O_8N_2$ C 64,5 — H 3,3 — O 26,4 — N 5,8 — M. G. 484.
 1) **Dibenzoat d. 3,3'-Dinitro-4,4'-Dioxybiphenyl**. Sm. 206° (B. 21, 3531). — II, 988.
 2) **Dibenzoat d. p-Dinitro-p-Dioxybiphenyl**. Sm. 191° (J. r. 10, 318). — II, 990.
 $C_{26}H_{16}O_8N_4$ C 60,9 — H 3,1 — O 25,0 — N 10,9 — M. G. 512.
 1) **Tetranitro[4-Nitrophenyl]äthen**. Sm. 100° (A. 296, 235).
 $C_{26}H_{16}O_8S_2$ 1) **Dibenzolsulfonat d. 1,2-Dioxy-9,10-Anthrachinon**. Sm. 182–184°. — III, 422.
 $C_{26}H_{18}O_8N_4$ C 59,1 — H 3,0 — O 27,3 — N 10,6 — M. G. 528.
 1) $\alpha\alpha\beta\beta$ -**Tetra[4-Nitrophenyl]äthanoxyd**. Sm. 294° (298–299°) (A. 296, 236).
 2) β -**Keto- $\alpha\alpha\beta\beta$ -Tetra[4-Nitrophenyl]äthan** (Tetranitro- β -Benzpinakolin). Sm. 120–140° (A. 296, 237, 239).
 $C_{26}H_{18}O_8N_4$ C 57,3 — H 2,9 — O 29,4 — N 10,3 — M. G. 544.
 1) $\alpha\alpha\beta\beta$ -**Tetra[4-Nitrophenyl]äthandioxyd**. Sm. 183° (A. 296, 238).
 $C_{26}H_{17}ON_3$ C 80,6 — H 4,4 — O 4,1 — N 10,9 — M. G. 387.
 1) **4-Amidonaphtindon**. HCl (A. 286, 230). — IV, 1215.
 $C_{26}H_{17}O_2N$ C 83,2 — H 4,5 — O 8,5 — N 3,7 — M. G. 375.
 1) **3,3-Anhydroderivat d. 1-Keto-2-Phenyl-3,3-Di[*p*-Oxyphenyl]-1,3-Dihydroisindol** (Phenolphthaleinanhydridanilid). Sm. 242° (B. 27, 2794). — II, 1984.

- C₂₈H₁₇O₂N** 2) *p*-Oxy-*p*-Phenyl-1,4-Naphtochinonnaphtylimid. Sm. 148° (A. 226, 41). — III, 460.
- 3) 2-Naphtylimid d. $\alpha\beta$ -Diphenyläthen- $\alpha\beta$ -Dicarbonsäure (2-N. d. Diphenylmaleinsäure). Sm. 192° (B. 26, 2479). — II, 1898.
- 4) Verbindung (aus 2-Methylchinolin). Sm. 153° (B. 26, 2480). — IV, 309.
- 5) Verbindung (aus Phenanthrenchinon). Sm. noch nicht bei 250° (B. 21, 2366). — III, 445.
- C₂₈H₁₇O₃N₂** C 69,8 — H 3,8 — O 10,7 — N 15,7 — M. G. 447.
- 1) 2-Oxy-4'-[3-Nitrophenyl]azo-1,1'-Azonaphtalin. Zers. bei 245° (Soc. 45, 115). — IV, 1439.
- 2) 4-Oxy-4'-[3-Nitrophenyl]azo-1,1'-Azonaphtalin (Soc. 45, 116). — IV, 1439.
- C₂₈H₁₇O₄N** C 76,7 — H 4,2 — O 15,7 — N 3,4 — M. G. 407.
- 1) Fluoresceinanilid (B. 26, 2236). — II, 2062.
- 2) 2-Diphtalidylmethylchinolin. Sm. 192° (B. 29, 189). — IV, 309.
- C₂₈H₁₇O₇N₃** C 64,6 — H 3,5 — O 23,2 — N 8,7 — M. G. 483.
- 1) *p*-Trinitro-4-Benzoyltriphenylmethan. Sm. 74–75° (Bl. [3] 17, 81).
- 2) Benzoesäure d. 4-[*p*-Dinitrophenyl]benzoylamido-1-Oxybenzol. Sm. 194 bis 195° (B. 17, 2437). — II, 1177.
- C₂₈H₁₇O₈N₃** C 62,5 — H 3,4 — O 25,6 — N 8,4 — M. G. 499.
- 1) α -Oxy-*p*-Trinitro-4-Benzoyltriphenylmethan. Sm. 85–88° (Bl. [3] 17, 82).
- C₂₈H₁₇N₃Cl** 1) Phenylphenanthrophenazoniumchlorid (Flavivudin) (B. 31, 3074).
- C₂₈H₁₇N₃Br** 1) Phenylphenanthrophenazoniumbromid (A. 292, 267). — IV, 1086.
- C₂₈H₁₅ON₂** C 83,4 — H 4,8 — O 4,3 — N 7,5 — M. G. 374.
- 1) Phenylphenanthrophenazoniumhydrazid. Zers. oberh. 100°. Bromid (A. 292, 266). — IV, 1086.
- 2) Phenylhydrazinderivat d. 2-Phenylbenzoylbenzol-1-Carbonsäure. Sm. 192–194° (A. 257, 98). — IV, 699.
- C₂₈H₁₅O₂N₂** C 80,0 — H 4,6 — O 8,2 — N 7,2 — M. G. 390.
- 1) Fluoranphenylhydrazid. Sm. 285–287° u. Zers. (B. 26, 1272). — IV, 719.
- 2) 2,3-Difuranyl-4-Phenyl-1,4-Dihydro-1,4-Naphtisodiazin. Sm. 176°. HCl (B. 25, 2845). — IV, 1080.
- 3) 2-Phenylamido-5-Phenylakridin-5'-Carbonsäure (B. 24, 2047). — IV, 1077.
- C₂₈H₁₅O₃N₂** C 76,8 — H 4,4 — O 11,8 — N 6,9 — M. G. 406.
- 1) 4-Phenyloxyhydrat d. 2,3-Difuranyl-1,4-Naphtisodiazin. Sm. 160° (B. 25, 2845). — IV, 1080.
- C₂₈H₁₅O₄N₄** C 69,3 — H 4,0 — O 14,2 — N 12,4 — M. G. 450.
- 1) 2,4-Di[3-Nitrobenzylidenamido]biphenyl. Sm. 184–185° (B. 22, 3011). — IV, 960.
- 2) 2,4'-Di[4-Nitrobenzylidenamido]biphenyl. Sm. 205° (B. 22, 3012). — IV, 960.
- 3) 4,4'-Di[2-Nitrobenzylidenamido]biphenyl. Sm. 221–222° (J. r. 23, 77). — IV, 967.
- 4) 4,4'-Di[3-Nitrobenzylidenamido]biphenyl. Sm. 237° (J. r. 23, 76). — IV, 968.
- 5) 4,4'-Di[4-Nitrobenzylidenamido]biphenyl. Sm. 242° (J. r. 23, 68). — IV, 968.
- C₂₈H₁₅O₅S** 1) Thiosuperoxyd d. 1-Acetoxylnaphtalin-2-Dithiocarbonsäure (J. pr. [2] 54, 421).
- C₂₈H₁₅O₅N₄** C 66,9 — H 3,9 — O 17,2 — N 12,0 — M. G. 466.
- 1) 6,4'-Di[4-Nitrobenzylidenamido]-3-Oxybiphenyl. Sm. 218° (A. 303, 346).
- 2) 3-Methyläther d. 4,5-Diphenylazo-1,3,7-Trioxanthon. Sm. 251 bis 252° u. Zers. (Soc. 73, 673). — IV, 1479.
- C₂₈H₁₅O₆N₂** C 68,7 — H 3,9 — O 21,1 — N 6,2 — M. G. 454.
- 1) Phenylhydrazinderivat d. Säure C₂₈H₁₁O₆. Sm. 175° u. Zers. (B. 21, 1615). — II, 2087.
- C₂₈H₁₅O₆N₄** C 64,7 — H 3,7 — O 19,9 — N 11,6 — M. G. 482.
- 1) 4,4'-Di[4-Oxyphenylazo]biphenyl-3,3'-Dicarbonsäure + 2H₂O (B. 31, 2578). — IV, 1557.
- C₂₈H₁₄O₆S** 1) Dibenzoesäure d. 2,5-Dioxydiphenylsulfon. Sm. 186° (B. 27, 3290).

- C₂₈H₁₈O₂N₂** C 60,7 — H 3,5 — O 24,9 — N 10,9 — M. G. 514.
 1) $\alpha\alpha\beta\beta$ -Tetra-4-Nitrophenyl]äthan. Sm. 300° u. Zers. (337,5—338,5° cor.) (B. 11, 930; A. 296, 223). — II, 301.
- C₂₈H₁₈ON** C 86,4 — H 5,3 — O 4,4 — N 3,9 — M. G. 361.
 1) 3-Keto-1,1,2-Triphenyl-1,3-Dihydroisindol. Sm. 189° (B. 27, 2793). — II, 1722.
- C₂₈H₁₈ON₂** C 80,2 — H 4,9 — O 4,1 — N 10,8 — M. G. 389.
 1) Base (aus 2-Phenylamido-1,1'-Azonaphthalin). 2 Chlorid + PtCl₄, Nitrat, Pikrat (B. 23, 1331). — IV, 1400.
 2) Base (aus 2-Phenylamido-1,2'-Azonaphthalin). Nitrat, Pikrat (B. 23, 1322). — IV, 1401.
 3) Base (aus 2- α -Naphthylamido-1-Phenylazonaphthalin). 2 Chlorid + PtCl₄, Nitrat (B. 23, 1330). — IV, 1398.
 C 82,8 — H 5,0 — O 8,5 — N 3,7 — M. G. 377.
- C₂₈H₁₈O₂N** 1) Benzoesäure d. 4-Benzoylbiphenylloxim. Sm. 193° (M. 12, 506). — III, 257.
 C 79,4 — H 4,8 — O 12,2 — N 3,6 — M. G. 393.
- C₂₈H₁₈O₃N** 1) 1-Keto-2-Phenyl-3,3-Di[β -Oxyphenyl]-1,3-Dihydroisindol (Phenolphthaleinamid). Sm. 279° (B. 26, 3077). — II, 1984.
 2) Benzoesäure d. 2-Benzoylphenylamido-1-Oxybenzol (J. pr. [2] 50, 90). — II, 1146.
 3) Benzoesäure d. 4-Benzoylphenylamido-1-Oxybenzol. Sm. 175° (B. 17, 2437). — II, 1177.
 C 74,1 — H 4,5 — O 11,4 — N 10,0 — M. G. 421.
- C₂₈H₁₈O₂N₂** 1) β -[5-Nitro-2-Phenylamido]imid- α -Keto- $\alpha\beta$ -Diphenyläthan. Sm. bei 200° (B. 31, 2427).
 2) 1-Phenyloxyhydrat d. 6-Nitro-2,3-Diphenyl-1,4-Benzodiazin. Sm. 161° (B. 31, 2427).
 3) 1-Phenyloxyhydrat d. 2-[4-Nitrophenyl]-3-Phenyl-1,4-Benzodiazin. Sm. 169°. Chlorid + FeCl₃ (B. 31, 2425).
 4) isom. 1-Phenyloxyhydrat d. 2-[4-Nitrophenyl]-3-Phenyl-1,4-Benzodiazin + $\frac{1}{2}$ H₂O (B. 31, 2427).
- C₂₈H₁₈O₂N** C 76,3 — H 4,6 — O 15,6 — N 3,4 — M. G. 409.
 1) Dibenzoesäure d. 2,6-Dioxy-3-Benzylpyridin. Sm. 164° (Soc. 63, 260). — IV, 377.
- C₂₈H₁₈O₂Cl** 1) Diacetat d. $\beta\beta\beta$ -Trichlor- α -Di[1-Oxynaphtyl]äthan. Sm. 176° (J. r. 23, 219). — II, 1007.
- C₂₈H₁₈N₂Cl** 1) 5-Chlor-2,4'-Dibenzylidenamidobiphenyl. Sm. 104° (A. 303, 319).
 2) Chlorphenylat d. 2,3-Diphenyl-1,4-Benzodiazin + FeCl₃, 2 + PtCl₄ (B. 24, 1240). — IV, 1075.
 3) Isochinolinroth. 2 + PtCl₄ (B. 20, 9). — IV, 1093.
- C₂₈H₂₀ON₂** C 83,0 — H 5,3 — O 4,3 — N 7,4 — M. G. 376.
 1) β -Diphenylhydrazon- α -Keto- $\alpha\beta$ -Diphenyläthan. Sm. 108° (B. 26, 34). — IV, 785.
 2) Phenylhydrazonderivat d. Diphenylphtalid. Sm. 230—231° (B. 26, 1273). — IV, 699.
 3) Phenyloxyhydrat d. 2,3-Diphenyl-1,4-Benzodiazin. Sm. 134—135°. Chlorid + FeCl₃, 2 Chlorid + PtCl₄, Nitrat (B. 24, 1240; 31, 2425; 32, 1042). — IV, 1075.
- C₂₈H₂₀ON₄** C 77,2 — H 5,0 — O 4,0 — N 13,8 — M. G. 404.
 1) 6-Benzoylamido-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benzotriazin. Sm. 221° u. Zers. (B. 30, 2597). — IV, 1286.
- C₂₈H₂₀O₂N₂** C 79,6 — H 5,1 — O 8,2 — N 7,1 — M. G. 392.
 1) 4-[2-Nitrobenzyliden]amidotriphenylmethan. Sm. 114—115° (B. 26, 3082). — III, 31.
 2) 4-[4-Nitrobenzyliden]amidotriphenylmethan. Sm. 126—127° (B. 26, 3082). — III, 31.
 3) 2,4'-Di[2-Oxybenzylidenamido]biphenyl. Sm. 145° (B. 22, 3012). — IV, 960.
 4) 4,4'-Di[2-Oxybenzylidenamido]biphenyl. Sm. 260° (A. 258, 375). — IV, 968.
 5) 4,4'-Di[Benzoylamido]biphenyl. subl. (B. 17, 379). — IV, 966.
 6) Phtalyl-1-Methylindol. Sm. 300° (A. 242, 382). — IV, 219.

- C₂₀H₂₀O₂N₂** C 74,3 — H 4,8 — O 7,6 — N 13,3 — M. G. 420.
 1) **3,3'-Di[Benzoylamido]azobenzol.** Sm. 284—285° (Soc. 69, 12). — IV, 1361.
 2) **1,2-Diacetyl-3,6-Di[2-Naphtyl]-1,2-Dihydro-1,2,4,5-Tetrazin.** Sm. 210° (B. 30, 1885; A. 298, 44). — IV, 1304.
 3) **5,7-Anhydrid d. 5,10-Di[Acetylamido]-αβ-Naphtophenazin-7-Phenyl oxyhydrat** (B. 31, 3082).
 4) **Dinitroderivat d. Base C₂₀H₂₀N₂.** Sm. 208° (B. 25, 3290; 26, 1704). — IV, 1091.
 5) **Diphenylester d. Biphenylen-4,4'-Diamidoameisensäure.** Sm. 240° (Soc. 49, 256). — IV, 964.
- C₂₀H₂₀O₂N₂** C 76,5 — H 4,9 — O 11,8 — N 6,8 — M. G. 408.
 1) **6,4'-Di[2-Oxybenzylidenamido]-3-Oxybiphenyl.** Sm. 206—207° (A. 303, 345).
- C₂₀H₂₀O₂N₂** C 71,6 — H 4,6 — O 11,0 — N 12,8 — M. G. 436.
 1) **2,2'-Di[Benzoylamido]azoxybenzol.** Sm. 195° (Am. 6, 26). — IV, 1337.
 2) **3,3'-Di[Benzoylamido]azoxybenzol.** Sm. bei 272° (Am. 5, 5). — IV, 1337.
 3) **4,4'-Di[Benzoylamido]azoxybenzol.** Sm. 310° (Am. 5, 284). — IV, 1338.
- C₂₀H₂₀O₂N₂** C 73,6 — H 4,7 — O 15,1 — N 6,6 — M. G. 424.
 1) **1-Naphtylamid-1-Naphtylimid d. Citronensäure.** Sm. 194° (B. 19, 2617). — II, 612.
 2) **2-Naphtylamid-2-Naphtylimid d. Citronensäure.** Sm. 233° (235 bis 236°) (B. 19, 2615; C. 1896 [1] 997). — II, 621.
 C 65,0 — H 4,2 — O 13,2 — N 17,5 — M. G. 480.
 1) **Di-3-Nitrobenzaldiphenylhydrotetrazon.** Sm. 148° (G. 27 [2] 222). — IV, 752.
 2) **Dehydro-3-Nitrobenzalphenylhydrazon.** Sm. 190—194° (G. 27 [2] 224). — IV, 752.
 3) **isom. Dehydro-3-Nitrobenzalphenylhydrazon.** Sm. 244—245° u. Zers. (G. 27 [2] 225). — IV, 752.
- C₂₀H₂₀O₂N₂** C 60,9 — H 3,9 — O 18,7 — N 16,4 — M. G. 512.
 1) **4,4'-Di[2-Nitrobenzylidenamido]biphenyl.** Sm. 204° (B. 29, 1452). — IV, 963.
- C₂₀H₂₀O₂Br** 1) **Aethylester d. p-Tetrabrom-4',4''-Diacetoxytriphenylmethan-2'-Carbonsäure.** Sm. 231° (B. 30, 176).
- C₂₀H₂₀O₂N₂** C 66,1 — H 4,2 — O 23,7 — N 5,9 — M. G. 472.
 1) **Resorcin** (M. 11, 241). — II, 966.
- C₂₀H₂₀O₁₁Br** 1) **Pentaacetat d. Tetrabromhämatoxylin.** Zers. oberh. 180° (B. 17, 374). — III, 665.
- C₂₀H₂₀O₁₁S** 1) **Tetraphenyläthentetrasulfonsäure.** Ba₂ (B. 5, 278). — II, 302.
- C₂₀H₂₀N₂Cl** 1) **1-Chlorphenylat d. 6-Amido-2,3-Diphenyl-1,4-Benzdiazin.** + FeCl₃ + 2½ H₂O (B. 25, 1633; 31, 2425). — IV, 1124.
- C₂₀H₂₀N₂Cl** 1) **αβ-Di[Phenylhydrazon]-αβ-Di[3-Chlorphenyl]äthan.** Sm. 127—128°. — IV, 785.
- C₂₀H₂₀N₂S** 1) **2,5-Diphenylimido-3,4-Diphenyltetrahydro-1,3,4-Thiodiazol.** Sm. 131° (B. 23, 358). — IV, 1236.
- C₂₀H₂₀S₂P₂** 1) **Verbindung (aus Benzophenon).** Sm. 226—227° (Soc. 49, 480). — II, 1105.
- C₂₀H₂₁ON** C 86,0 — H 5,8 — O 4,4 — N 3,8 — M. G. 363.
 1) **4-[2-Oxybenzyliden]amidotriphenylmethan.** Sm. 138° (B. 26, 3082). — III, 73.
- C₂₀H₂₁ON₂** C 79,8 — H 5,4 — O 4,1 — N 10,7 — M. G. 391.
 1) **1-Phenyl oxyhydrat d. 6-Amido-2,3-Diphenyl-1,4-Benzdiazin.** Chlorid + FeCl₃ + 2½ H₂O (B. 25, 1633). — IV, 1124.
- C₂₀H₂₁O₂N₂** C 76,7 — H 5,2 — O 7,8 — N 10,3 — M. G. 407.
 1) **1,3-Diacetyl-2,5-Di[2-Naphtyl]-2,3-Dihydro-1,3,4-Triazol.** Sm. 138° (B. 30, 1886; A. 298, 47). — IV, 1216.
- C₂₀H₂₁O₂N₂** C 71,1 — H 4,8 — O 14,6 — N 9,5 — M. G. 439.
 1) **1,4-Dibenzoyl-3-[2,4-Dimethylphenylamido]-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin (Hippuroflavin-in-Xylid).** Sm. 223—225° (A. 287, 90).

- $C_{26}H_{21}O_2N_3$ 2) *o*-Diphtalyldiäthylenphenyltriämin. Sm. 210—211° (B. 22, 2224). — II, 1800.
- $C_{26}H_{21}N_4Cl$ 1) 1-[4-Amidochlorphenylat] d. 6-Amido-2,3-Diphenyl-1,4-Benzodiazin + 2H₂O (B. 25, 1635). — IV, 1124.
C 82,5 — H 5,8 — O 4,2 — N 7,4 — M. G. 378.
- $C_{26}H_{21}ON_2$ 1) α -[4-Methylphenyl]nitrosamidotriphenylmethan. Sm. 145—148° u. Zers. (B. 17, 706). — II, 642.
2) β -Phenylhydrason- α -Oxy- $\alpha\beta$ -Triphenyläthan. Sm. 144° (C. 1897 [2] 661).
3) Methyläther d. α -Diphenylhydrason-4-Oxydiphenylmethan. Sm. 151—152° (B. 26, 30). — IV, 776.
4) Methyläther d. isom. α -Diphenylhydrason-4-Oxydiphenylmethan. Sm. 115° (B. 26, 30). — IV, 776.
- $C_{26}H_{22}ON_4$ C 76,8 — H 5,4 — O 3,9 — N 13,8 — M. G. 406.
1) β -Benzoyl- β -Phenylamidophenylimidomethyl- α -Phenylhydrasin. Sm. 110—111° (J. pr. [2] 58, 463).
- $C_{26}H_{22}ON_6$ 2) 1-[4-Amidophenyl]oxyhydrat d. 6-Amido-2,3-Diphenyl-1,4-Benzodiazin. Chlorid + 2H₂O (B. 25, 1634). — IV, 1124.
C 71,9 — H 5,1 — O 3,7 — N 19,3 — M. G. 434.
- $C_{26}H_{22}O_2N_2$ 1) 4,4'-Di[Phenylhydrasonmethyl]azoxybenzol. Sm. 230° u. Zers. (B. 30, 1598). — IV, 1345.
C 79,2 — H 5,6 — O 8,1 — N 7,1 — M. G. 394.
- $C_{26}H_{22}O_2N_2$ 1) 2,7-Di[Acetylphenylamido]naphthalin. Sm. 197,5° (B. 23, 528). — IV, 925.
2) 3,6-Diketo-2,5-Dimethyl-1,4-Di[1-Naphtyl]hexahydro-1,4-Diazin. Sm. 220—224° (B. 25, 2922). — II, 614.
3) 3,6-Diketo-2,5-Dimethyl-1,4-Di[2-Naphtyl]hexahydro-1,4-Diazin. Sm. 269° (B. 25, 2313, 2923). — II, 621.
4) Acetat d. 6-Oxy-5-Phenyl-2,4-Dibenzyl-1,3-Diazin. Sm. 84—85° (J. pr. [2] 39, 258). — IV, 1089.
5) Bisnitrosylbenzhydril. Sm. 118—120° (A. 278, 367).
6) Aethylster d. γ -[9-Phenylhydrason-9,10-Dihydro-10-Phenanthrylen]propen- γ -Carbonsäure. Zers. bei 195° (Soc. 59, 8). — II, 1721.
- $C_{26}H_{22}O_2N_4$ C 73,9 — H 5,2 — O 7,6 — N 13,3 — M. G. 422.
1) $\alpha\beta$ -Di[Phenylhydrason]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 227—228° (A. 305, 179).
2) isom. $\alpha\beta$ -Di[Phenylhydrason]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 281 bis 282° (A. 305, 180; B. 27, 2290). — IV, 759.
3) $\alpha\beta$ -Di[Phenylamidoformyl]-*s*-Diphenylhydrasin. Sm. 218—220° (B. 23, 490). — IV, 1496.
4) Phenylamid d. Biphenylen-4,4'-Diamidoameisensäure (*s*-Diphenyl-4,4'-Biphenylendiharnstoff). Sm. oberh. 300° (B. 18, 1478; C. 1896 [1] 489). — IV, 964.
- $C_{26}H_{22}O_2S$ 1) Di[4-Benzylphenyl]sulfon. Sm. 162° (Bl. [3] 11, 501). — II, 897.
- $C_{26}H_{22}O_2N_3$ C 76,1 — H 5,4 — O 11,7 — N 6,8 — M. G. 410.
1) Aethylster d. Phenylhydrasonisophenanthroxylencetessigsäure. Sm. 210—212° u. Zers. (Soc. 59, 7). — IV, 712.
- $C_{26}H_{22}O_4N_2$ C 73,2 — H 5,2 — O 15,0 — N 6,6 — M. G. 426.
1) Lignonblau (B. 30, 239).
2) Di[1-Naphtylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure (α -Naphtolpiperazindurethan). Sm. 190—191° (Bl. [3] 19, 187).
3) Di[2-Naphtylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure. Sm. 220° (Bl. [3] 19, 187).
4) 1,1-Dinaphtylamid d. Acetyläpfelsäure (B. 23, 2046; 24, 2005). — II, 612.
5) polym. 1-Naphtylamid d. Acetylameisensäure. Sm. 202—203° (A. 279, 98).
- $C_{26}H_{22}O_4N_4$ C 68,7 — H 4,8 — O 14,1 — N 12,3 — M. G. 454.
1) 4,4'-Di[2-Nitrobenzylamido]biphenyl. Sm. 226—227° u. Zers. 2H₂SO₄ (B. 29, 1451). — IV, 963.
2) 4,4'-Di[2,5-Dioxyphenylazo]-3,3'-Dimethylbiphenyl (B. 26, 1911). — IV, 1447.

- C₂₀H₂₁O₂N₂** C 70,5 — H 5,0 — O 18,1 — N 6,3 — M. G. 442.
 1) 1,1-Dinaphtylamid d. Citronensäure. Sm. 149°. Ag (B. 19, 2617; C. 1896 [1] 109). — II, 612.
 2) 2,2-Dinaphtylamid d. Citronensäure. Sm. 172° (B. 19, 2615). — II, 620.
 3) Verbindung (aus d. Jodmethylat d. Methylhydrasteinphenylhydrazon). Sm. 162–164° (A. 271, 398). — IV, 800.
- C₂₀H₂₁O₂N₄** C 64,2 — H 4,5 — O 19,7 — N 11,5 — M. G. 486.
 1) Diäthylester d. 1,4-Dioxybenzol-2,3,5,6-Tetracarbonsäureanhydrodiphenylhydrazid (Am. 11, 8). — IV, 733.
- C₂₀H₂₁O₂N₂** C 65,8 — H 4,6 — O 23,6 — N 5,9 — M. G. 474.
 1) Phenylamid d. Anhydroberberilsäure. Sm. 199° (Soc. 57, 1046). — III, 802.
- C₂₀H₂₁O₂S₂** 1) Di[4-Methylphenylester] d. Diphenylsulfon-*p*-Disulfonsäure. Sm. 171–172° (J. pr. [2] 47, 373). — II, 840.
- C₂₀H₂₁O₁₁S₂** 1) $\alpha\alpha\beta\beta$ -Tetraphenyläthan-*p*-Tetrasulfonsäure. Ba₂ (B. 11, 929). — II, 301.
- C₂₀H₂₁N₂S** 1) Di[4-Benzylidenhydrazidophenyl]sulfd. Sm. 185° (A. 270, 152). — IV, 816.
- C₂₀H₂₁ON₃** C 79,4 — H 5,8 — O 4,1 — N 10,7 — M. G. 393.
 1) *p*-Triamido-4-Benzoyltriphenylmethan. Zers. bei 115° (Bl. [3] 17, 84). C 81,9 — H 6,0 — O 8,4 — N 3,7 — M. G. 381.
- C₂₀H₂₁O₁N** 1) Äthylester d. 2,5-Diphenyl-1-[2-Methylphenyl]pyrrol-3-Carbonsäure. Sm. 134–135° (B. 22, 3088). — IV, 449.
 2) Äthylester d. 2,5-Diphenyl-1-[4-Methylphenyl]pyrrol-3-Carbonsäure. Sm. 145° (B. 22, 3069). — IV, 449.
- C₂₀H₂₁O₂N₃** C 76,3 — H 5,6 — O 7,8 — N 10,3 — M. G. 409.
 1) Äthylester d. 1-Benzolazo-2-Methyl-5-Phenylpyrrol-3-Carbonsäure. Sm. 123° (B. 19, 3162). — IV, 1487.
- C₂₀H₂₁O₂Cl₂** 1) Diäthyläther d. $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[1-Naphtyl]äthan. Sm. 198 bis 200° (J. pr. [2] 47, 69). — II, 1007.
 2) Diäthyläther d. $\beta\beta\beta$ -Trichlor- $\alpha\alpha$ -Di[2-Oxynaphtyl]äthan. Sm. 206° u. Zers. (J. pr. [2] 47, 75). — II, 1007.
- C₂₀H₂₁O₂N₃** C 73,3 — H 5,4 — O 11,3 — N 9,9 — M. G. 425.
 1) Verbindung (aus 4-Amido-1-Methylbenzol). Sm. 196° (B. 25, 2233). — II, 501.
- C₂₀H₂₁O₂N₃** C 66,0 — H 4,8 — O 20,3 — N 8,9 — M. G. 473.
 1) Pentaacetyloxyamidoamidodiindyl. Sm. 176°; Zers. bei 180° (B. 31, 1253).
- C₂₀H₂₁O₁₁Br** 1) Pentacetat d. Bromhämatoxylin. Sm. 210° (B. 17, 685). — III, 665.
- C₂₀H₂₁ON₂** C 82,1 — H 6,3 — O 4,2 — N 7,4 — M. G. 380.
 1) *p*-Acetyl-1-Benzylamido-2-[4-Methylphenyl]amidonaphtalin. Sm. 162° (B. 27, 2779). — IV, 918.
- C₂₀H₂₁O₂N₃** C 78,8 — H 6,0 — O 8,1 — N 7,1 — M. G. 396.
 1) $\alpha\beta$ -Di[Acetyl-1-Naphtylamido]äthan. Sm. 239–241° (B. 25, 3263). — II, 605.
 2) $\alpha\beta$ -Di[Acetyl-2-Naphtylamido]äthan. Sm. 175–176° (B. 25, 3268). — II, 615.
 3) Diäthyläther d. Di[4-Oxy-1-Naphtyliden]hydrazin. Sm. 204° (Bl. [3] 17, 812).
 4) 1,10-Dibenzoyloktahydro- α -Chinochinolin. Sm. 160° (B. 28, 129). — IV, 889.
- C₂₀H₂₁O₂N₂** C 69,0 — H 5,3 — O 7,1 — N 18,6 — M. G. 452.
 1) Anhydro-1,4-Di[2,5-Diacetyldiamidophenyl]-1,4-Azophenylene. Sm. oberh. 300° (B. 27, 485). — IV, 596.
 2) Di[Phenylhydrazid] d. Biphenylene-4,4'-Diamidoameisensäure (Diphenyldiphenylsemicarbazid) (C. 1898 [1] 945). C 75,7 — H 5,8 — O 11,6 — N 6,8 — M. G. 412.
- C₂₀H₂₁O₂N₃** 1) 2-Chinolyäther d. Morphin. Sm. 158°. (2 HCl, PtCl₄), H₂SO₄ + 3 H₂O, H₂CrO₄, Tartrat (M. 19, 107).
 2) Monacetat d. Bis-2-Nitroso-1,4-Dimethylnaphtalin. Sm. 182° (G. 26 [1] 34).
 3) Äthylester d. 1-Naphtylamidoacetyl-1-Naphtylamidoessigsäure. Sm. 180° (B. 25, 2292). — II, 613.

- $C_{20}H_{24}O_2N_2$ 4) 1-Naphtylmonamid d. 1-Naphtylamidobernsteinsäuremonooäthylester. Sm. 223° u. Zers. (B. 25, 908). — II, 614.
- 5) 2-Naphtylmonamid d. 2-Naphtylamidobernsteinsäuremonooäthylester. Sm. 215° u. Zers. (B. 25, 971). — II, 622.
- $C_{20}H_{24}O_2N_2$ C 72,9 — H 5,6 — O 15,0 — N 6,5 — M. G. 428.
- 1) $\alpha\beta$ -Di[2-Methyl-5-Phenyl-1-Pyrazolyl]äthan- $\alpha^2\beta^2$ -Dicarbonsäure. Sm. 181° (B. 19, 3158). — IV, 357.
- $C_{20}H_{24}O_2N_2$ C 70,3 — H 5,4 — O 18,0 — N 6,3 — M. G. 444.
- 1) Verbindung (aus Aethylacetessigester u. Anthranilsäure). Sm. 286° (B. 27, 1401). — II, 1252.
- $C_{20}H_{24}O_2N_2$ C 68,8 — H 5,2 — O 20,9 — N 6,1 — M. G. 460.
- 1) Diäthyläther d. 1,2-Phtalybenzhydroxamsäure. Sm. 54° (A. 281, 266). — II, 1815.
- 2) Diäthylester d. Phtalyldi-3-Amidobenzol-1-Carbonsäure. Sm. 191° (A. 303, 278).
- 3) Diäthylester d. Phtalyldi-4-Amidobenzol-1-Carbonsäure. Sm. 188° (A. 303, 279).
- $C_{20}H_{24}N_2S$
 $C_{20}H_{24}N_2HS$ 1) Di[α -Phenyl-4-Amidobenzyl]sulfid. 2HCl (B. 30, 1139).
- 2) Quecksilberdi[4-Methylphenylamidophenyl]. Sm. 138–139° (G. 28, [2] 134). — IV, 1707.
- $C_{20}H_{24}N_2S$ 2) Quecksilberdi[4-Benzylamidophenyl] (G. 27 [1] 15). — IV, 1708.
- 1) Sulfid d. α -[4-Merkaptophenyl]amido- β -Phenylthioharnstoff. Sm. 180–182° u. Zers. (A. 270, 154). — IV, 816.
- $C_{20}H_{24}N_2S_2$
 $C_{20}H_{24}ON_2$ 1) 4,4-Biphenylendi[Phenylsemicarbazid] (B. 27, 1560). — IV, 965.
- C 79,0 — H 6,3 — O 4,0 — N 10,6 — M. G. 395.
- 1) Phenylrosanilin (N. Handb. d. Ch. I, 626). — II, 1092.
- $C_{20}H_{24}ON_2$ C 73,8 — H 5,9 — O 3,8 — N 16,5 — M. G. 423.
- 1) 4-[2,4-Dimethylphenyl]azo-6-[1-Naphtyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 141° (B. 31, 2782). — IV, 1418.
- 2) 4-[2,4-Dimethylphenyl]azo-6-[2-Naphtyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 171–172° (B. 31, 2783). — IV, 1418.
- 3) 4-[1-Naphtyl]azo-6-[2,4-Dimethylphenyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 147–148° (B. 31, 2782). — IV, 1418.
- 4) 4-[2-Naphtyl]azo-6-[2,4-Dimethylphenyl]azo-3-Dimethylamido-1-Oxybenzol. Sm. 175° (B. 31, 2783). — IV, 1418.
- $C_{20}H_{25}O_2N$ C 78,2 — H 6,3 — O 12,0 — N 3,5 — M. G. 399.
- 1) α -Monoxim d. $\gamma\gamma$ -Diacetyl- α -Benzoyl- α - β -Diphenylpropan. Sm. 205 bis 206° (A. 281, 89). — III, 322.
- $C_{20}H_{25}O_2N_2$ C 73,1 — H 5,8 — O 11,2 — N 9,9 — M. G. 427.
- 1) Diäthyläther d. 1-Acetylamido-4-Oxy-2-[4-Oxy-1-Naphtyl]azonaphtalin. Sm. 224,5° (B. 25, 3066). — IV, 1427.
- $C_{20}H_{25}O_2N_2$ C 70,4 — H 5,6 — O 14,4 — N 9,5 — M. G. 443.
- 1) Phenylhydrazon d. Papaveraldin. Sm. 80–81° (M. 6, 962). — IV, 443.
- $C_{20}H_{25}O_2N$ C 72,4 — H 5,8 — O 18,6 — N 3,2 — M. G. 431.
- 1) Acetylbenzoylmorphin. HCl, (2 HCl, PtCl₄) (Soc. 28, 25). — III, 900.
- $C_{20}H_{25}O_2Br_2$
 $C_{20}H_{26}O_2N_2$ 1) Pentaacetat d. Pentabromkolatannin (C. 1898 [1] 579).
- C 78,4 — H 6,5 — O 8,0 — N 7,0 — M. G. 398.
- 1) Benzoylcinchonin. Sm. 105–106° (75°). HCl + 2 1/2 H₂O, 2 HCl, (2 HCl, PtCl₄), HBr, H₂SO₄ + 1 1/2 H₂O (A. 108, 351; M. 16, 163; B. [3] 9, 714). — III, 834.
- $C_{20}H_{26}O_2N_4$ C 73,2 — H 6,1 — O 7,5 — N 13,1 — M. G. 426.
- 1) Cyanamin. HCl (B. 23, 2249). — III, 676.
- $C_{20}H_{26}O_2N_4$ C 70,6 — H 5,9 — O 10,8 — N 12,7 — M. G. 442.
- 1) Phenylmonohydrazon d. 4,4'-Di[β -Ketobutyrylamido]biphenyl (M. 19, 699).
- $C_{20}H_{26}O_2N_6$ C 64,2 — H 5,3 — O 13,2 — N 17,3 — M. G. 486.
- 1) 1,4-Di[2,5-Diacetyldiamidophenyl]-1,4-Azophenylen + 2 H₂O. Sm. 294° (B. 27, 483). — IV, 595.
- $C_{20}H_{26}O_2N_2$ C 69,9 — H 5,8 — O 17,9 — N 6,3 — M. G. 446.
- 1) Benzoylchitenin. Sm. 85°. (2 HCl, PtCl₄) (M. 14, 598). — III, 820.
- $C_{20}H_{26}O_2N_6$ C 58,4 — H 4,9 — O 21,0 — N 15,7 — M. G. 534.
- 1) Tetramethyldialloxanyl-2-Amidodi[4-Methylphenyl]amin. Sm. bei 260° u. Zers. (B. 26, 544). — IV, 616.

- $C_{70}H_{30}O_{10}N_4$ C 56,3 — H 4,7 — O 28,9 — N 10,1 — M. G. 554.
 1) 4,4'-Di[Acetessigsäureäthylesterazo]biphenyl-3,3'-Dicarbonsäure + H₂O. Sm. 275—278° (B. 31, 2579). — IV, 4557.
- $C_{70}H_{30}O_{13}Br_4$ 1) Pentaacetat d. Tetrabromkolatannin (C. 1898 [1] 579).
- $C_{70}H_{26}N_4S_2$ 1) 4,4'-Biphenyldi[phenylthiosemicarbazid] (B. 27, 1560).
- $C_{70}H_{31}O_7N$ C 67,1 — H 5,8 — O 24,1 — N 3,0 — M. G. 465.
 1) Di[2-Oxy- α -Oxybenzyl]dihydrocotarnin. (2HCl, PtCl₄) (B. 31, 2100).
- $C_{70}H_{37}O_{13}Br_4$ 1) Pentacetat d. Tribromkolatannin (C. 1898 [1] 579).
- $C_{72}H_{28}ON_2$ C 81,2 — H 7,3 — O 4,2 — N 7,3 — M. G. 384.
 1) Benzylcinchonin. Sm. 117°. HCl, (2HCl, PtCl₄ + 2H₂O) (B. 13, 2295). — III, 834.
 2) Benzylcinchonidin. Fl. (2HCl, PtCl₄ + 3H₂O) (A. 269, 252). — III, 852.
 C 70,9 — H 6,4 — O 3,6 — N 19,1 — M. G. 440.
- $C_{72}H_{28}ON_6$ 1) Acetylderivat d. Verb. C₂₁H₁₆N₆. Sm. 220° (B. 21, 2497). — IV, 766.
 C 78,0 — H 7,0 — O 8,0 — N 7,0 — M. G. 400.
- $C_{72}H_{28}O_2N_2$ 1) Bis- α -, Keto- γ -Methylulolidyl. Sm. 257,5° (B. 25, 113). — IV, 494.
 2) Di[2,3,5-Trimethylphenylamid] d. Benzol-1,2-Dicarbonsäure. Sm. 227° (B. 30, 1443).
 3) Di[Aethyltolylamid] d. Benzol-1,2-Dicarbonsäure (Aethyltoluidinphthalin) (A. 227, 188). — II, 1808.
- $C_{72}H_{28}O_7N_6$ C 68,4 — H 6,1 — O 7,0 — N 18,4 — M. G. 456.
 1) Verbindung (aus Chinolin u. Nitrosodimethylanilinhydrocyanid) (M. 6, 543). — IV, 250.
 C 72,2 — H 6,5 — O 14,8 — N 6,5 — M. G. 432.
- $C_{72}H_{28}O_8N_2$ 1) Di-Diphenylmethyloxid. Sm. 118—120° (A. 278, 367). — II, 636.
- $C_{72}H_{28}O_9N_6$ C 63,9 — H 5,7 — O 13,1 — N 17,2 — M. G. 488.
 1) 1,4-Di[2,5-Di(Acetylamido)phenylamido]benzol. 2HCl (B. 27, 484). — IV, 596.
 C 69,6 — H 6,2 — O 17,9 — N 6,2 — M. G. 448.
- $C_{72}H_{28}O_{12}N_2$ 1) Helicinanilidtoluid (A. 154, 33). — III, 69.
- $C_{72}H_{28}O_2N$ C 80,6 — H 7,5 — O 8,3 — N 3,6 — M. G. 387.
- $C_{72}H_{28}O_2N_3$ 1) Oxim d. bim. Methylphenylcyklohexenon. Sm. 207° (B. 32, 426).
 C 75,2 — H 7,0 — O 7,7 — N 10,1 — M. G. 415.
 1) 4',4''-Di[Acetylamido]-4³-Dimethylamido-2'-Methyltriphenylmethan. Sm. bei 130° (B. 24, 555). — IV, 1198.
 2) 2-Dimethylamido-1,4-Di β -Dimethylamidobenzoylbenzol? Sm. 122° (B. 9, 717, 1898). — III, 305.
 3) Phenylidi[2,4,5-Trimethylphenylbiuret]. Sm. 123°. — II, 552.
- $C_{72}H_{28}O_3N_3$ C 72,4 — H 6,7 — O 11,1 — N 9,7 — M. G. 431.
 1) 4',4',4''-Tri[Acetylamido]- β -Methyltriphenylmethan. Sm. 168° (B. 16, 1303). — IV, 1198.
- $C_{72}H_{28}O_4N$ C 74,4 — H 6,9 — O 15,3 — N 3,3 — M. G. 410.
 1) Diäthylester d. 2,6-Dimethyl-4-Phenyl-1-[4-Methylphenyl]-1,4-Dihydropyridin-3,5-Dicarbonsäure. Sm. 133° (M. 17, 353). — IV, 371.
- $C_{72}H_{28}N_2S_2$ 1) Dipropyltriphenyldithiobiuret. Sm. 153,7° (B. 21, 109). — II, 400.
- $C_{72}H_{30}O_2N_2$ C 77,6 — H 7,4 — O 8,0 — N 7,0 — M. G. 402.
 1) 2,5-Dimethylhexahydro-1,4-Diazin + 2 Molec. α -Naphtol. Sm. 147° (Bl. [3] 19, 620).
 2) 2,5-Dimethylhexahydro-1,4-Diazin + 2 Molec. β -Naphtol. Sm. 93° (Bl. [3] 19, 621).
 3) Cinchoninbenzylxyhydrat. Salze siehe (B. 13, 2294; A. 269, 262). — III, 834.
 4) Verbindung (aus Chinin u. Benzol) (J. 1874, 867). — III, 812.
- $C_{72}H_{30}O_2N_4$ C 72,6 — H 7,0 — O 7,4 — N 13,0 — M. G. 430.
 1) Diacetylderivat d. Base C₂₁H₂₀N₄ (G. 23 [1] 337). — IV, 796.
- $C_{72}H_{30}O_3N_2$ C 74,6 — H 7,2 — O 11,5 — N 6,7 — M. G. 418.
 1) Verbindung (aus Chinin u. Phenol). 2HCl + 2H₂O (J. 1875, 769; A. 180, 250; Bl. 24, 535). — III, 812.
- $C_{72}H_{30}O_4N_2$ C 71,9 — H 6,9 — O 14,7 — N 6,4 — M. G. 434.
 1) Brenzkatechinchinin. H₂SO₄ + H₂O (Sm. 167° wasserfrei) (Bl. [3] 9, 147). — III, 813.
 2) dimolec. 4-Methylphenylimid d. Butan- α - γ -Dicarbonsäure. Sm. 170° (A. 292, 212).

- $C_{26}H_{20}O_4N_2$ C 60,2 — H 5,8 — O 12,4 — N 21,6 — M. G. 518.
1) Dibenzocetophenontetraureid. Zers. 176—180° (*G.* 23 [1] 409). — III, 127.
- $C_{26}H_{20}O_6N_4$ C 63,1 — H 6,1 — O 19,4 — N 11,3 — M. G. 494.
1) Triäthylester d. 4,5-Di[Phenylhydrason]-R-Pentamethylen-1,2,3-Tricarbonsäure. Sm. 163—164° (*A.* 297, 109). — IV, 731.
C 59,3 — H 5,7 — O 24,3 — N 10,6 — M. G. 526.
- $C_{26}H_{20}O_8N_4$ 1) Phenylhydrasinverbindung d. Dioxalbernsteinsäurelaktontriäthylester. Sm. 138° (*A.* 285, 26). — IV, 733.
- $C_{26}H_{20}O_{10}S$ 1) Verbindung (aus Holzschwefelauflage) (*A.* 267, 361).
 $C_{26}H_{20}O_{12}S$ 1) Verbindung (aus Holzschwefelauflage) (*A.* 267, 358).
 $C_{26}H_{20}N_4J$ 1) Dijodäthylat d. 2,4,2',4'-Tetramethyl-6,6'-Bichinoly. Sm. 158° u. Zers. (*B.* 20, 2508). — IV, 1077.
- $C_{26}H_{21}ON_3$ C 77,8 — H 7,7 — O 4,0 — N 10,5 — M. G. 401.
1) 4'-Methylacetamidido-4',4''-Di[Dimethylamido]triphenylmethan. Sm. 142—143° (128° aus Alkohol) (*B.* 16, 2906). — IV, 1196.
C 74,8 — H 7,4 — O 7,7 — N 10,1 — M. G. 417.
- $C_{26}H_{21}O_2N_3$ 1) 4'-Nitro-4''-Dimethylamido-4''-Diäthylamido-2''-Methyltriphenylmethan. Sm. 165—166° (*B.* 24, 556). — IV, 1045.
C 74,1 — H 7,4 — O 15,2 — N 3,3 — M. G. 421.
- $C_{26}H_{21}O_4N$ 1) Codeinviolet. (2HCl, PtCl₄) (*Bl.* [3] 6, 905). — III, 906.
- $C_{26}H_{21}O_{11}N$ C 49,6 — H 4,9 — O 43,2 — N 2,2 — M. G. 629.
1) Indikan (*J.* 1856, 660; 1858, 465; *B.* 12, 2311). — III, 595.
- $C_{26}H_{21}O_2N_2$ C 69,0 — H 7,1 — O 17,7 — N 6,2 — M. G. 452.
1) Brucinallaloxylhydrat. Salze siehe (*J. pr.* [2] 3, 171). — III, 947.
2) Anhydrid d. α -Benzoylamido-norm. Capronsäure. Sm. 85° (*Bl.* 30, 561). — II, 1191.
- $C_{26}H_{21}O_6N_2$ C 62,4 — H 6,4 — O 25,6 — N 5,6 — M. G. 500.
1) o-Phtalylid-d-Eegonin. Fl. 2HJ (*B.* 24, 12). — III, 870.
- $C_{26}H_{21}NCl$ 1) Chlormethylat d. 3,5-Di[4-Isopropylbenzyl]pyridin. 2 + PtCl₄ (*A.* 280, 65). — IV, 458.
- $C_{26}H_{21}NJ$ 1) Jodmethylat d. 3,5-Di[4-Isopropylbenzyl]pyridin. Sm. 173—174° (*A.* 280, 64). — IV, 458.
- $C_{26}H_{21}JAs$ 1) Isamyltribenzylarsoniumjodid. Sm. 146° (*A.* 233, 78). — IV, 1691.
 $C_{26}H_{21}ON_3$ C 77,4 — H 8,2 — O 4,0 — N 10,4 — M. G. 403.
1) Triäthylrosanilin. Chlorid, Jodid (*A.* 132, 163; *J.* 1863, 419). — II, 1092.
2) Hexamethylrosanilin. Jodid (*B.* 6, 364). — II, 1092.
- $C_{26}H_{21}N_3J_2$ 1) Jodmethylat d. α -Jodtri[4-Dimethylamidophenyl]methan + H₂O. Zers. unterh. 100° (*Bl.* [3] 13, 573). — IV, 1195.
- $C_{26}H_{21}N_3S$ 1) Verbindung (aus Phenylhydrasoncarbidiphenylamin). Sm. 175° (*B.* 21, 2277). — IV, 1224.
- $C_{26}H_{21}ON_2$ C 80,0 — H 8,7 — O 4,1 — N 7,2 — M. G. 390.
1) Dicamphanhexan-1-on-4-Phenylhydrason. Sm. 117—118° (*G.* 27 [1] 171). — IV, 784.
2) IsoDicamphanhexan-1-on-4-Phenylhydrason. Sm. 177—178° (*G.* 27 [1] 172). — IV, 784.
- $C_{26}H_{21}O_2N_2$ C 76,8 — H 8,4 — O 7,9 — N 6,9 — M. G. 406.
1) Loxopterygin. Sm. 81° (*A.* 211, 278). — III, 890.
- $C_{26}H_{21}O_2N_2$ C 73,9 — H 8,1 — O 11,4 — N 6,6 — M. G. 422.
1) Strychnineisomylaloxylhydrat. Salze siehe (*A.* 92, 343; *J. pr.* [2] 3, 159). — III, 938.
- $C_{26}H_{21}O_4N_2$ C 71,2 — H 7,7 — O 14,6 — N 6,4 — M. G. 438.
1) Di[2-Methyl-5-Isopropylphenylester] d. Hexahydro-1,4-Diazin-1,4-Dicarbonsäure. Sm. 139—140° (*Bl.* [3] 19, 765).
- $C_{26}H_{21}O_4N_4$ C 67,0 — H 7,3 — O 13,7 — N 12,0 — M. G. 466.
1) Diäthylester d. γ -Diphenylhydrasonoktan- α - β -Dicarbonsäure. Sm. 104—105° (*A.* 294, 172). — IV, 722.
2) Diäthylester d. β - γ -Di[Phenylhydrason]oktan- γ - δ -Dicarbonsäure. Sm. 143—145° (*Soc.* 57, 221). — IV, 723.
- $C_{26}H_{21}N_3J$ 1) Jodmethylat d. α -Oxytri[4-Dimethylamidophenyl]methan (*B.* 6, 365). — II, 1089.
- $C_{26}H_{21}O_6N$ C 68,3 — H 7,6 — O 21,0 — N 3,1 — M. G. 457.
1) 1-Benzoiat d. 1-Oximido-3-Hexyl-5-Methyl-1,2,3,4-Tetrahydrobenzol-2,4-Dicarbonsäurediäthylester. Sm. 165—166° (*A.* 288, 342).

- $C_{26}H_{36}ON_2$ C 79,6 — H 9,2 — O 4,1 — N 7,1 — M. G. 392.
1) Monophenylhydrazon d. $\beta\beta$ -Dioampher. Sm. 142—145° (G. 27 [1] 163). — IV, 784.
- $C_{26}H_{36}O_2N_2$ C 79,6 — H 9,2 — O 4,1 — N 7,1 — M. G. 392.
1) Diacetylderivat d. Base $C_{21}H_{31}N_7$. Sm. 132° (B. 25, 2044). — II, 445.
C 62,4 — H 7,2 — O 19,2 — N 11,2 — M. G. 500.
- $C_{26}H_{36}O_2N_4$ 1) Di[$\beta\beta$ -Diäthoxyläthylamid] d. Azobenzol-4,4'-Dicarbonsäure (p-Azobenzoylamidoacetal). Sm. 202,5° (B. 27, 3097). — IV, 1459.
- $C_{26}H_{36}O_3N_4$ C 56,1 — H 6,5 — O 17,3 — N 20,1 — M. G. 556.
1) Verbindung (aus Benzaldehyd, Harnstoff u. Acetylacetessigsäureäthylester). Zers. bei 181—183° (G. 23 [1] 410). — III, 35.
C 60,5 — H 7,0 — O 21,7 — N 10,8 — M. G. 516.
- $C_{26}H_{36}O_4N_4$ 1) Di[$\beta\beta$ -Diäthoxyläthylamid] d. Azoxybenzol-4,4'-Dicarbonsäure (p-Azoxybenzoylamidoacetal). Sm. 182° (B. 27, 3096). — IV, 1344.
C 61,9 — H 7,1 — O 25,4 — N 5,6 — M. G. 504.
- $C_{26}H_{36}O_5N_2$ 1) Verbindung (aus $\alpha\beta$ -Diamido- $\alpha\beta$ -Diphenyläthan u. Oxalsäurediäthylester). Sm. 164° u. Zers. (B. 28, 3179). — IV, 978.
- $C_{26}H_{36}N_3J_3$ 1) Trijodmethylat d. 2'-Amido-4',4'-Di[Dimethylamido]triphenylmethan. Sm. 172° (B. 22, 1887). — IV, 1194.
- $C_{26}H_{37}OCl_7$ 1) Heptachlorcholesterin. Sm. 60° (A. 59, 119). — II, 1073.
- $C_{26}H_{37}O_2N$ C 75,9 — H 9,0 — O 11,7 — N 3,4 — M. G. 411.
1) Jervin + 2H₂O. Sm. 231—237° (238—240°). (211Cl, PtCl₄), (HCl, AuCl₃) (A. 35, 116; Soc. 35, 405; B. 23 [2] 699). — III, 950.
- $C_{26}H_{39}ON$ C 81,9 — H 10,2 — O 4,2 — N 3,7 — M. G. 381.
1) Solanicin. Sm. oberh. 250° u. Zers. HCl, (2HCl, PtCl₄) (A. 123, 344). — III, 613.
- $C_{26}H_{39}O_2N$ C 72,7 — H 9,1 — O 14,9 — N 3,3 — M. G. 429.
1) Glykodylsyn (B. 25, 182). — I, 1193.
- $C_{26}H_{41}OBr$ 1) Bromlupeol. Sm. 165° (H. 15, 424). — II, 1077.
- $C_{26}H_{41}O_2N$ C 69,8 — H 9,2 — O 17,9 — N 3,1 — M. G. 447.
1) Glykocholonsäure. Na, Ba (A. 67, 26; M. G. 166; J. 1847/48, 907). — I, 1193.
- $C_{26}H_{41}O_{10}N$ C 59,2 — H 7,8 — O 30,4 — N 2,6 — M. G. 527.
1) Japaconin. HJ, Hg₂ (Soc. 35, 387). — III, 776.
- $C_{26}H_{41}O_2N_2$ C 75,4 — H 10,1 — O 7,7 — N 6,8 — M. G. 414.
1) Onoketondioxim (B. 20, 2988).
- $C_{26}H_{43}O_2N_2$ C 67,5 — H 9,1 — O 17,3 — N 6,1 — M. G. 462.
1) Dinitrocholesterin. Sm. 120—121° (B. 12, 225; M. 15, 110). — II, 1073.
- $C_{26}H_{43}O_3N$ C 77,8 — H 10,7 — O 8,0 — N 3,5 — M. G. 401.
1) Rubjervin. Sm. 236° (240—246°) (Soc. 35, 405). — III, 950.
- $C_{26}H_{43}O_4N$ C 72,1 — H 9,9 — O 14,8 — N 3,2 — M. G. 433.
1) Diäthylester d. 2,6-Dimethyl-4-Tridekylpyridin-3,5-Dicarbonsäure. Sd. 265₁₀. HCl (B. 22, 1758). — IV, 171.
- $C_{26}H_{43}O_5N$ C 69,5 — H 9,6 — O 17,8 — N 3,1 — M. G. 449.
1) α -Hyoglykocholsäure. Na + H₂O, K + $\frac{1}{2}$ H₂O, Mg, Ba + 2H₂O (A. 62, 215; J. 1858, 568; H. 12, 512; 13, 209). — I, 1193.
2) β -Hyoglykocholsäure. Na, K, Mg + 7H₂O, Ca, Ba + 4H₂O, Cu, Ag (A. 62, 205; H. 12, 512, 548). — I, 1194.
- $C_{26}H_{43}O_6N$ C 67,1 — H 9,2 — O 20,6 — N 3,0 — M. G. 465.
1) Glykocholsäure. Sm. 132—134°. Na, Ba, Pb. Lit. bedeutend. — I, 1192.
2) Paraglykocholsäure. Sm. 183—184° (A. 65, 12; M. 3, 340). — I, 1193.
- $C_{26}H_{43}ClBr_2$ 1) Dibromid d. Cholesterylchlorid. Sm. 128° (B. 47, 900). — II, 1073.
- $C_{26}H_{44}OBr_2$ 1) Cholesterinbromid (A. 146, 179). — II, 1072.
- $C_{26}H_{44}O_2N_2$ 1) s-Stearyl-2-Methylphenylharnstoff. Sm. 94—95° (Soc. 69, 1600).
- $C_{26}H_{45}ON$ C 80,6 — H 11,6 — O 4,1 — N 3,6 — M. G. 387.
1) α -Oximido- α -[2,4-Dimethylphenyl]oktadekan. Sm. 45° (J. pr. [2] 54, 394).
2) α -Oximido- α -[2,5-Dimethylphenyl]oktadekan. Sm. 50° (J. pr. [2] 54, 400).
3) Phenylamid d. Arachinsäure. Sm. 96° (M. 17, 545).
4) 2,4-Dimethylphenylamid d. Stearinsäure. Sm. 95° (J. pr. [2] 54, 396).

- $C_{74}H_{45}O_2N$ C 77,4 — H 11,2 — O 7,9 — N 3,5 — M. G. 403.
 1) α -Phenylamidoarachinsäure. Sm. 138—139^a (M. 17, 542).
 $C_{28}H_{45}O_2N$ C 71,7 — H 10,3 — O 14,7 — N 3,2 — M. G. 435.
 1) Diäthylester d. Tridekylidihydrolutidindicarbonsäure. Sm. 60^a (B. 22, 1757). — IV, 96.
 $C_{76}H_{45}O_2N$ C 62,5 — H 9,0 — O 25,6 — N 2,8 — M. G. 499.
 1) Protoveratridin. Sm. 265^a (B. 23 [2] 699). — III, 951.
 $C_{78}H_{46}O_2Cl_2$ 1) Diisoamyläther d. 3,6-Dichlor-2,5-Dioxy-1,4-Benzochinondiisoamylacetal. Na₂ (Ann. 18, 7). — III, 351.
 $C_{79}H_{46}N_2Cl_2$ 1) Di[Chlormethylat] d. Connessin + 5H₂O (B. 19, 84). — III, 875.
 $C_{76}H_{46}N_2J_2$ 1) Di[Jodmethylat] d. Connessin (B. 19, 82). — III, 875.
 $C_{79}H_{49}O_2N$ C 76,6 — H 12,0 — O 7,9 — N 3,4 — M. G. 407.
 1) α -Cyancerotinsäure. Sm. 88^a (C. 1896 [1] 643).
 $C_{78}H_{49}O_2N_3$ C 60,6 — H 9,5 — O 21,7 — N 8,2 — M. G. 515.
 1) Tri[Acetylamido]dracoalban (C. 1896 [2] 713).
 $C_{78}H_{51}O_2N$ C 73,4 — H 12,0 — O 11,3 — N 3,3 — M. G. 425.
 1) Monamid d. Tetrakosan- α -Dicarbonsäure (C. 1896 [1] 643).
 $C_{78}H_{53}O_2N_2$ C 73,6 — H 12,3 — O 7,5 — N 6,6 — M. G. 424.
 1) s-Dodekyltridekoxyharnstoff. Sm. 100,5^a (B. 19, 1440). — I, 1304.

C₃₆-Gruppe mit vier Elementen.

- $C_{28}H_{13}O_2N_2Br_3$ 1) Tribrom-4-Oxynaphtindon (A. 272, 345). — IV, 1085.
 $C_{28}H_{17}O_2N_2J$ 1) 5-Jod-2,4'-Di[4-Nitrobenzylidenamido]biphenyl. Sm. 213^a (A. 303, 333).
 $C_{36}H_{17}O_6NBr$ 1) 1-Keto-2-Acetyl-3,3-Di[*p*-Dibrom-*p*-Acetoxyphenyl]-1,3-Dihydroisindol (Triacetyltetrabromimidophenolphthalain). Sm. 176 bis 178^a (G. 24 [1] 80). — II, 1985.
 $C_{28}H_{17}O_2N_2S_8$ 1) 2-Nitro-1,4-Di[3,6-Disulfo-2-Oxy-*p*-Naphtylazo]benzol. Na₄ (B. 30, 986). — IV, 1551.
 $C_{28}H_{19}O_2N_2Br_2$ 1) *p*-Dibrom-4,4'-Di[Benzoylamido]biphenyl. Sm. 195^a (u. 99^a) (B. 15, 2835, 2838). — IV, 966.
 $C_{36}H_{15}O_2N_3Cl$ 1) 1-Chlorphenylat d. 2-[4-Nitrophenyl]-3-Phenyl-1,4-Benzdiazin. + FeCl₃ (B. 31, 2427).
 $C_{36}H_{19}N_3ClJ$ 1) 1-Chlorphenylat d. 6-Brom-2,3-Diphenyl-1,4-Benzdiazin (A. 303, 336).
 $C_{28}H_{19}ON_3Cl$ 1) 1-Phenyloxyhydrat d. 7-Chlor-2,3-Diphenyl-1,4-Benzdiazin. Sm. 164—166^a (A. 303, 310).
 $C_{28}H_{19}O_2N_2Cl$ 1) 5-Chlor-2,4'-Di[2-Oxybenzylidenamido]biphenyl. Sm. 166—167^a (A. 303, 318).
 $C_{28}H_{19}O_2N_2Br$ 1) 5-Brom-2,4'-Di[2-Oxybenzylidenamido]biphenyl. Sm. 154—156^a (A. 303, 327).
 $C_{28}H_{19}O_2N_2J$ 1) 5-Jod-2,4'-Di[2-Oxybenzylidenamido]biphenyl. Sm. 151^a (A. 303, 333).
 $C_{28}H_{20}O_2N_2S$ 1) Di[2-Benzoylamidophenyl]sulfid. Sm. 162—163^a (B. 29, 2774).
 2) Di[4-Benzoylamidophenyl]sulfid. Sm. 255^a (B. 27, 2812).
 3) Di[*p*-Benzoylamidophenyl]sulfid. Sm. 234^a (255^a) (B. 27, 2812; 29, 2775).
 $C_{26}H_{20}O_2N_2Cl_2$ 1) m-Dichlorlignonblau (B. 30, 240).
 $C_{26}H_{20}O_2N_2Br_2$ 1) p-Dibromlignonblau (B. 30, 240).
 $C_{26}H_{20}O_2N_2Cl$ 1) 7-[4-Acetylamidochlorphenylat] d. 10-Nitro-5-Acetylamido- $\alpha\beta$ -Naphtophenazin. Sm. 260—261^a (B. 31, 3086).
 $C_{28}H_{20}O_2N_2S_2$ 1) Stilbendisulfonsäuredisazophenol. Na₂ (Brilliantgelb) (B. 27, 3357). — IV, 1418.
 $C_{30}H_{21}O_2N_4Cl$ 1) 7-Chlorphenylat d. 5,10-Di[Acetylamido]- $\alpha\beta$ -Naphtophenazin. 2 + PtCl₄ (B. 31, 3081).
 $C_{28}H_{21}O_2N_4P$ 1) Laktone d. Di[s-Benzoylphenylhydrazido]phosphorsäure. Sm. 164,5^a (B. 27, 2124). — IV, 668.
 $C_{28}H_{21}O_2N_2Cl$ 1) Verbindung (aus Reruzurin) (B. 17, 1855). — II, 933.
 $C_{26}H_{22}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[Bromacetyl-1-Naphtylamido]äthan. Sm. 215^a u. Zers. (B. 25, 3264). — II, 605.
 2) $\alpha\beta$ -Di[Bromacetyl-2-Naphtylamido]äthan. Sm. 144^a (B. 25, 3269). — II, 615.

- $C_{20}H_{21}O_2N_2S_1$ 1) $\alpha\alpha$ -Succinylidi[β -1-Naphtylthioharnstoff]. Sm. 224—225° (Soc. 67, 569).
- $C_{20}H_{21}O_2N_2S_1$ 1) Di[4-(2,4-Dioxyphenyl)azobenzyl]sulfid. Sm. 211° u. Zers. (B. 28, 1340). — IV, 1444.
- $C_{20}H_{21}O_2N_2Cl_2$ 1) Diäthylester d. Dicarbanilidodichlorhydrochinondicarbonsäure. Sm. 195° (B. 23, 260). — II, 2003.
- $C_{20}H_{21}O_2N_2Br_2$ 1) Diäthylester d. Dicarbanilidodibromhydrochinondicarbonsäure. Sm. gegen 200° (B. 23, 264). — II, 2004.
- $C_{20}H_{21}O_2N_2S_2$ 1) Lignonblau-p-Disulfonsäure. Nu_2 (B. 30, 241).
- $C_{20}H_{21}NSP$ 1) Triphenylbenzylphosphoniumrhodanid. Sm. 189° (A. 229, 323). — IV, 1663.
- $C_{20}H_{23}ON_2Sb$ 1) Dibenzaldiphenylhydrasonantimonoxydsalz (Bl. [3] 17, 484). — IV, 745.
- $C_{20}H_{23}O_2N_2P$ 1) Di[α -Benzoylphenylhydrazido]phosphorsäure. Sm. 131—132° (B. 27, 2123). — IV, 668.
- $C_{20}H_{21}ON_2Cl$ 1) Verbindung (aus Acetylchlorid u. Kyanbenzylin). Sm. 116° (J. pr. [2] 53, 249). — IV, 1217.
- $C_{20}H_{21}O_2N_2S_2$ 1) Di[5-Propionylamido-1-Naphtyl]disulfid. Sm. 242° (B. 23, 1123). — II, 869.
- $C_{20}H_{21}O_2N_2As_2$ 1) Dibenzaldiphenylhydrasonarsenit (Bl. [3] 17, 484). — IV, 748.
- $C_{20}H_{21}O_2NP$ 1) Diphenylmonamid d. Phosphorsäuredi[4-Methylphenylester]. Sm. 178° (B. 28, 615).
- $C_{20}H_{21}O_2N_2S_1$ 1) 4,4'-Di[Methylphenylsulfonamido]biphenyl. Sm. 179—180° (A. 272, 232). — IV, 966.
- 2) α -[4-Methylphenyl]sulfon- γ -[2-Naphtyl]sulfon- β -Phenylhydrazonpropan. Sm. 186° (J. pr. [2] 55, 410). — IV, 768.
- $C_{20}H_{20}ON_2P$ 1) Di[2-Methylphenylamid]-Diphenylmonamid d. Phosphorsäure. Sm. 219° (B. 28, 615).
- $C_{20}H_{20}O_2N_2Hg_2$ 1) Diquecksilberbenzylanilin. Sm. 215,5° u. Zers. Salze siehe (G. 27 [1] 15). — IV, 1708.
- 2) Quecksilberdi[4-Methylphenylamidophenyl]quecksilberdiamoniumhydrat + 3H₂O. Salze siehe (G. 28 [2] 133).
- $C_{20}H_{21}ON_2Br_2$ 1) Verbindung (aus Chinin u. Tribromphenol) (G. 16, 528). — III, 812.
- $C_{20}H_{21}ON_2P$ 1) Tri[4-Methylphenylhydrasid] d. Phosphorsäure. Sm. 189° (A. 270, 136). — IV, 805.
- $C_{20}H_{20}O_2N_2P_2$ 1) Verbindung (aus d. Oxyphosphazobenzolanilid). Sm. 220° (B. 29, 718).
- $C_{20}H_{20}O_2N_2Br_2S$ 1) Verbindung (aus Holzschwefel) (A. 267, 362).
- $C_{20}H_{20}ON_2Cl$ 1) Chlorbenzylat d. Cinchonin. Sm. 248° (HCl, PtCl₄)₂ + Hg(CN)₂ (B. 13, 2295; A. 269, 262). — III, 834.
- 2) Chlorbenzylat d. Cinchonidin + H₂O. Sm. 198° u. Zers. (HCl, HgCl₂) (HCl, PtCl₄ + H₂O) (A. 269, 250). — III, 852.
- $C_{20}H_{20}O_2N_2J_2$ 1) Jodmethylat d. Laktone d. α -Oxy- α' -[Tetramethylamidodiphenyl]- α' -Phenylmethan- α' -2-Carbonsäure. Sm. 185° u. Zers. (A. 206, 98). — II, 1723.
- $C_{20}H_{20}O_2N_2S$ 1) Resorcinchininsulfat + 1½ H₂O (A. 138, 77). — III, 813.
- $C_{20}H_{20}O_2N_2S$ 1) Phloroglucininchininsulfat + 3H₂O (J. 1865, 594). — III, 813.
- $C_{20}H_{21}O_2N_2Cl$ 1) Chlorallylat d. Brucin. 2 + PtCl₄ (J. pr. [2] 3, 171). — III, 947.
- $C_{20}H_{21}O_2N_2J_2$ 1) Jodallylat d. Brucin + H₂O. + J₂, + J₄ + H₂O (J. pr. [2] 3, 171). — III, 947.
- $C_{20}H_{21}ON_2Cl$ 1) Base (aus Cocainalkaloiden). Sm. 220,5°. 3HBr (B. 22, 399). — III, 869.
- $C_{20}H_{21}O_2N_2Cl$ 1) Chlorisoamylat d. Strychnin + 4H₂O (A. 92, 343). — III, 935.
- $C_{20}H_{21}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[α -Bromisovaleryl-2-Methylphenylamido]äthan. Sm. 203° (B. 31, 3246).
- 2) $\alpha\beta$ -Di[α -Bromisovaleryl-4-Methylphenylamido]äthan. Sm. 109° (B. 31, 3246).
- $C_{20}H_{21}O_2N_2J_2$ 1) Jodmethylat-Methyläther d. α -Oxy-4,4'-Di[Dimethylamido]triphenylmethan (B. 15, 236; A. 206, 134). — II, 1085.
- $C_{20}H_{21}O_2N_2S$ 1) 4-Methoxybenzaldehyd-2,4,6-Trimethylphenylthionaminsäure-2-Amido-1,3,5-Trimethylbenzol. Sm. 79,5° (A. 274, 240). — III, 82.
- $C_{20}H_{21}O_2N_2J$ 1) Jodmethylat d. Narceinäthylester. Sm. 203° (A. 277, 40). — II, 2080.
- 2) Jodäthylat d. Narceinmethyläther. Sm. 203° (A. 277, 41). — II, 2080.

- $C_{30}H_{43}O_2N_2S$ 1) Oenantholanilinsulfat (A. 140, 129). — II, 445.
 $C_{30}H_{44}ON_2S$ 1) s-Stearyl-2-Methylphenylthioharnstoff. Sm. 67—68° (Soc. 69, 1600).
 $C_{30}H_{44}O_2N_2Cl$ 1) 3,6-Dichlor-2,5-Di[Diisocamylamido]-1,4-Benzochinon. Sm. 77 bis 78° (Am. 20, 420).
 $C_{30}H_{45}ON_2Cl$ 1) Verbindung (aus Acetylchlorid u. Kyanpropin). Sm. 210° (J. pr. [2] 53, 249). — IV, 1135.
 $C_{30}H_{45}O_2NS$ 1) Taurocholsäure. Na, K (A. 60, 109; 65, 194; 67, 1; 70, 169; 102, 93; M. 4, 96; J. 1886, 752; J. pr. [2] 25, 99). — I, 1180.

C₂₆-Gruppe mit fünf Elementen.

- $C_{26}H_{34}O_2N_4Br_2P_2$ 1) Verbindung (aus d. Oxyphosphazo-m-Brombenzol-m-Bromanilid). Sm. 203° (B. 29, 723).

C₂₇-Gruppe mit einem Element.

- $C_{27}H_{38}$ C 94,7 — H 5,3 — M. G. 342.
 $C_{27}H_{40}$ 1) Truxen. Sm. 365—368° (B. 22, 786, 2024; 23, 317; 27, 1416).
 C 94,2 — H 5,8 — M. G. 344.
 $C_{27}H_{44}$ 1) Phenyl-1,1-Dinaphtylmethan. Sm. bei 180° (J. pr. [2] 35, 507). — II, 303.
 C 93,1 — H 6,9 — M. G. 348.
 1) p-Tri[4-Methylphenyl]benzol. Sm. 171° (J. pr. [2] 41, 405). — II, 301.
 2) Kohlenwasserstoff (aus Phenylaceton u. Benzaldehyd). Sm. 120° (M. 18, 445).
 $C_{27}H_{46}$ C 88,5 — H 11,5 — M. G. 366.
 1) α -Cholesterilen. Sm. 240° (260°) u. Zers. (A. 66, 7; M. 17, 32). — II, 176.
 2) β -Cholesterilen. Sm. 255° (A. 66, 8; M. 17, 31). — II, 177.
 3) γ -Cholesterilen, siehe $C_{28}H_{44}$. — II, 177.
 4) isom. Cholesterilen (α -Cholesteron). Sm. 80° (J. r. 8, 237; M. 17, 33, 34; C. r. 92, 195; A. 69, 348). — II, 177.
 5) b-Cholesteron. Sm. 192° (175°) (A. 69, 349; M. 17, 33 Anm.). — II, 177.
 $C_{27}H_{44}$ C 88,0 — H 12,0 — M. G. 368.
 $C_{27}H_{54}$ 1) Sitosten. Sm. 61—63° (M. 18, 563).
 C 85,7 — H 14,3 — M. G. 378.
 $C_{27}H_{54}$ 1) Ceroten (aus Wachs). Sm. 59,5°; Sd. 270°₁₅ (B. 15, 1714). — I, 124.
 2) Ceroten (aus Wiesenheu). Sm. 65—66° (B. 6, 500). — I, 124.
 $C_{27}H_{56}$ C 85,3 — H 14,7 — M. G. 380.
 1) norm. Heptakosan. Sm. 59,5°; Sd. 270°₁₅ (172°₅) (B. 15, 1714; 29, 1323; A. 235, 117; C. 1897 [1] 338). — I, 107.

C₂₇-Gruppe mit zwei Elementen.

- $C_{27}H_{18}O_2$ C 84,4 — H 3,1 — O 12,5 — M. G. 384.
 1) o-Tribenzoylbenzol. Sm. oberh. 360° (B. 10, 1557; 11, 1007; 14, 925, 927; 22, 2023; 23, 318; 30, 2143; 31, 2986; Soc. 65, 285, 503). — II, 2040.
 2) Verbindung (aus 1,4-Naphtochinon). Sm. oberh. 360° (Soc. 39, 221). — III, 371.
 $C_{27}H_{18}N_2$ C 85,5 — H 3,4 — N 11,1 — M. G. 379.
 $C_{27}H_{18}O_2$ 1) Benzylidenrosanilin. (2HCl, PtCl₄) (A. 140, 110; Z. 1867, 176). — III, 9.
 C 77,5 — H 3,3 — O 19,1 — M. G. 418.
 $C_{27}H_{18}O_2$ 1) Anhydroverb. d. Di[3-Oxy-1,4-Naphtochinonyl-2-]methylbenzol. Zers. bei 245° (Soc. 65, 81). — III, 464.
 $C_{27}H_{18}O_2$ C 74,3 — H 3,7 — O 12,0 — M. G. 436.
 1) Di[3-Oxy-1,4-Naphtochinonyl-2-]methylbenzol. Sm. 230° (Soc. 65, 79). — III, 464.
 2) Dibenzolat d. 1,7-Dioxyxanthon. Sm. 214° (B. 15, 1678). — III, 206.

- $C_{27}H_{16}O_6$ C 69,2 — H 3,4 — O 27,4 — M. G. 468.
- $C_{27}H_{17}N$ 1) **Tribenzoat d. 2,3,5-Trioxo-1,4-Benzochinon** (*B.* 12, 2043). — III, 354.
C 91,3 — H 4,8 — N 3,9 — M. G. 355.
- $C_{27}H_{17}N_1$ 1) **Phenyl- β -Naphthoakridin**. Sm. 297° (294°). HCl, (2HCl.PtCl₄) (*B.* 17, 1595, 2030; 18, 1586). — IV, 478.
C 84,6 — H 4,4 — N 11,0 — M. G. 383.
- $C_{27}H_{18}O$ 1) **2-[4-Chinoly]-3-[2-Chinoly]chinolin**. Sm. 150—151°. 3HCl, (6HCl, 3PtCl₄), (3HCl, AuCl₃) (*M.* 17, 414).
C 90,5 — H 5,0 — O 4,5 — M. G. 358.
- $C_{27}H_{18}O$ 1) **Anhydrid d. Phenylid[2-Oxynaphtyl]methan**. Sm. 189—190° (*B.* 17, 499; *A.* 237, 265). — II, 1009.
- $C_{27}H_{18}O_3$ C 83,1 — H 4,6 — O 12,3 — M. G. 390.
- $C_{27}H_{18}O_4$ 1) **Monobenzoat d. β -Dioxybinaphtyl**. Sm. 204° (*J. r.* 6, 192). — II, 1152.
C 79,8 — H 4,4 — O 15,8 — M. G. 406.
- $C_{27}H_{18}O_5$ 1) **Anhydrid d. α -Oxyphenylid[1,2-Dioxybinaphtyl]methan** (*J. pr.* [2] 49, 551). — III, 6.
C 76,8 — H 4,3 — O 18,9 — M. G. 422.
- $C_{27}H_{18}O_5$ 1) **Dibenzoat d. 2,4-Dioxydiphenylketon**. Sm. 141° (*A.* 210, 258; *B.* 27, 1908). — III, 199.
2) **Dibenzoat d. 2,5-Dioxydiphenylketon** (D. d. Benzohydrochinon). Sm. 118° (*B.* 24, 1343). — III, 199.
3) **Dibenzoat d. 3,4[β]-Dioxydiphenylketon** (D. d. Benzobrenzkatechin). Sm. 95° (*A.* 210, 262). — III, 199.
4) **Dibenzoat d. 2,2'-Dioxydiphenylketon**. Sm. 104° (*J. pr.* [2] 28, 288). — III, 195.
5) **Dibenzoat d. 3,3'-Dioxydiphenylketon**. Sm. 101—102° (*B.* 13, 836; *A.* 218, 357). — III, 198.
6) **Dibenzoat d. 4,4'-Dioxydiphenylketon**. Sm. 181—182° (*A.* 194, 335). — II, 199.
C 74,0 — H 4,1 — O 21,9 — M. G. 438.
- $C_{27}H_{18}O_6$ 1) **Tribenzoat d. 1,2,3-Trioxobenzol**. Sm. 89—90° (*M.* 10, 391; *A.* 301, 106). — II, 1152.
2) **Tribenzoat d. 1,3,5-Trioxobenzol**. Sm. 172° (173—174°) (*A.* 119, 201; *M.* 10, 722; *B.* 26, 2026). — II, 1152.
3) **1,3,5-Triphenylbenzol-2,4,6-Tricarbonsäure** (Phenyltribenzoesäure). Sm. 259—261° (257—259°). Na₃, Ag₃ (*B.* 11, 1006; 32, 2478). — II, 2040.
4) **Triphenylbenzol-4',4'',4'''-Tricarbonsäure**. subl. bei 280° ohne Sm. K, K₂, K₃ (*J. pr.* [2] 41, 406). — II, 2040.
5) **Verbindung** (aus Benzoylessigsäureäthylester). Sm. 273—275° (*Soc.* 47, 280). — II, 1643.
- $C_{27}H_{19}N_2$ C 87,6 — H 4,8 — N 7,6 — M. G. 370.
- $C_{27}H_{19}N_4$ 1) **2-Phenyl-3-[2-Naphtyl]- α -Naphtimidazol**. Sm. 163°. + C₆H₆ (Sm. 113—114°). subl. (*B.* 20, 2626). — IV, 1062.
C 76,0 — H 4,2 — N 19,7 — M. G. 426.
- $C_{27}H_{19}N_4$ 1) **Benzotritolazin**. + CHCl₃ (*B.* 20, 324). — IV, 621.
C 84,1 — H 4,9 — N 10,9 — M. G. 385.
- $C_{27}H_{20}O$ 1) **3-Phenyl-2-[2-Naphtyl]-2,3-Dihydronaphttriazin**. Sm. 204—205°. + $\frac{1}{2}$ CH₂O (*Soc.* 59, 698). — IV, 1390.
C 90,0 — H 5,5 — O 4,4 — M. G. 360.
- $C_{27}H_{20}O$ 1) **Isolepiden**. Sm. 150° (*J.* 1877, 394; *J. r.* 5, 20; *Soc.* 57, 689). — III, 696.
2) **α -Oxyphenylid[1-Naphtyl]methan** (*J. pr.* [2] 35, 506). — II, 1096.
3) **10-Keto-9-Phenyl-9-[4-Methylphenyl]-9,10-Dihydroanthracen**. Sm. 209° (*Bh.* [3] 15, 392; [3] 17, 983).
C 86,2 — H 5,3 — O 8,5 — M. G. 376.
- $C_{27}H_{20}O_2$ 1) **Di[2-Naphtyläther] d. Dioxymethylbenzol**. Sm. 204—205° (*A.* 237, 269). — III, 10.
2) **Benzoat d. β -Oxy- $\alpha\alpha\beta$ -Triphenyläthen**. Sm. 151° (153°) (*C.* 1897 [2], 661; *B.* 32, 655).
C 82,7 — H 5,1 — O 12,2 — M. G. 392.
- $C_{27}H_{20}O_3$ 1) **Benzoat d. α -Oxy- β -Keto- $\alpha\alpha\beta$ -Triphenyläthan**. Sm. 169° (*C.* 1897 [2], 661).
2) **Diphenylmethylester d. α -Oxydiphenyllessigsäure** (Benzilsäurebenzohydrolyäther). Sm. 100° (*B.* 22, 1214). — II, 1697.

- C₂₇H₂₀O₄ C 79,4 — H 4,9 — O 15,7 — M. G. 408.
 1) Dibenzosäure d. Di[4-Oxyphenyl]methan. Sm. 156° (A. 194, 325). — II, 1151.
- C₂₇H₂₀N₂ C 87,1 — H 5,4 — N 7,5 — M. G. 372.
 1) *α*-[2-Naphtyl]imido-*α*-[2-Naphtyl]amido-*α*-Phenylmethan. Sm. 155° (J. 1886, 868). — IV, 845.
- C₂₇H₂₀N₄ C 81,0 — H 5,0 — N 14,0 — M. G. 400.
 1) 4-Phenylazo-1,3,5-Triphenylpyrazol. Sm. 156—157° (B. 21, 1703; 23, 3383). — IV, 1480.
 2) Verbindung (aus Tetrabromdibenzylketon u. Phenylhydrazin). Sm. 65 bis 70° (B. 22, 1369). — IV, 777.
- C₂₇H₂₀S₂ 1) Di[1-Naphtyläther] d. Dimerkaptomethylbenzol. Sm. 136—137° (B. 27 [2] 881). — III, 10.
 2) Di[2-Naphtyläther] d. Dimerkaptomethylbenzol. Sm. 137° (B. 27 [2] 881). — III, 10.
- C₂₇H₂₁N₃ C 83,7 — H 5,4 — N 10,8 — M. G. 387.
 1) 4-(4-Methylphenyl)amido-1,1'-Azonaphthalin. HCl (B. 7, 1292). — IV, 1390.
 2) 2,2,4,6-Tetraphenyl-1,2-Dihydro-1,3,5-Triazin. Sm. 190—191°, + C₆H₆O, HCl, (2HCl, PtCl₄ + H₂O), HNO₃, H₂SO₄, H₂CrO₄ (J. pr. [2] 54, 135). — IV, 1219.
- C₂₇H₂₁Br₃ 1) *p*-Tribromtri[4-Methylphenyl]benzol. Sm. 212° (J. pr. [2] 41, 406). — II, 301.
- C₂₇H₂₁O C 89,5 — H 6,1 — O 4,4 — M. G. 362.
 1) *α*-Keto-*α*-Acenaphthenyl-*βγ*-Diphenylpropan. Sm. 104° (B. 21, 1343). — III, 265.
 2) *α*-Keto-*α*-Biphenyl-*βγ*-Diphenylpropan. Sm. 158° (B. 21, 1339). — III, 265.
 3) Dihydroisolepiden. Sm. 182° (J. 1877, 394). — III, 696.
- C₂₇H₂₁O₂ C 85,7 — H 5,8 — O 8,5 — M. G. 378.
 1) Benzoesäure d. *β*-Oxy-*ααβ*-Triphenyläthan. Sm. 145° (C. 1897 [2] 661).
- C₂₇H₂₁O₃ C 84,4 — H 4,6 — O 27,0 — M. G. 474.
 1) Tribenzoyllävoglucosan. Sm. 194° (Bl. [3] 11, 953).
- C₂₇H₂₁O₁₃ C 58,5 — H 4,0 — O 37,5 — M. G. 554.
 1) Quercetageretin + 4H₂O (Bl. 28, 337). — III, 647.
- C₂₇H₂₁O₁₄ C 56,9 — H 3,8 — O 39,3 — M. G. 570.
 1) Hexaoctat d. Myricetin. Sm. 203—204° (204—206°) (Soc. 69, 1291; 73, 375). — III, 606.
- C₂₇H₂₁O₁₇ C 52,4 — H 3,6 — O 44,0 — M. G. 620.
 1) Glykotannin, siehe C₂₇H₂₁O₁₃, — II, 1926.
- C₂₇H₂₁N₃ C 86,6 — H 5,9 — N 7,5 — M. G. 374.
 1) *α*-Phenylimido-*β*-[4-Methylphenyl]imido-*αβ*-Diphenyläthan. Sm. 135° (M. 14, 287). — III, 284.
 2) Di[4-Benzylidenamidophenyl]methan. Sm. 125° (B. 25, 303). — IV, 975.
 3) 4,4'-Di[Benzylidenamido]-2-Methylbiphenyl. Sm. 111—112° (B. 28, 2550). — IV, 975.
 4) 4,4'-Di[Benzylidenamido]-3-Methylbiphenyl. Sm. 134° (B. 28, 2545). — IV, 975.
 5) isom. *p*-4,4'-Di[Benzylidenamido]-3-Methylbiphenyl. Sm. 217° (B. 23, 3225). — IV, 975.
 6) *γ*-Phenylhydrason-*αβγ*-Triphenylpropan. Sm. 163—164° (B. 26, 443). — IV, 779.
 7) 1,3,4,5-Tetraphenyl-2,3-Dihydropyrazol⁹ Sm. 212—213° (A. 269, 123). — IV, 787.
 8) Phenylhydrason d. Verb. C₂₇H₁₆O (aus Benzamaron). Sm. 164° (A. 275, 64). — III, 314.
- C₂₇H₂₁N₄ C 75,4 — H 5,1 — N 19,5 — M. G. 430.
 1) Tetraphenylmelamin. Sm. 217°. HCl, (2HCl, PtCl₄) (B. 7, 1736; 8, 912; 20, 1066). — II, 353.
- C₂₇H₂₁N₅ C 83,3 — H 5,9 — N 10,8 — M. G. 389.
 1) *α*-Phenyl-*β*-Benzyliden-*α*-[2-Benzylidenamidobenzyl]hydrazin. Sm. 148—150° (B. 27, 2903). — IV, 1130.

- C₂₇H₂₃N₆** C 77,7 — H 5,5 — N 16,8 — M. G. 417.
 1) **2-Phenylimido-1,3-Di[Phenylamido]methylen-5-Methyl-2,3-Dihydrobenzimidazol.** Sm. 199—200° (B. 24, 2517). — IV, 624.
- C₂₇H₂₄O** C 89,0 — H 6,6 — O 4,4 — M. G. 364.
 1) **TetrahydroisolepidinP** Sm. 132° (J. 1877, 395). — III, 696.
- C₂₇H₂₄O₂** C 85,3 — H 6,3 — O 8,4 — M. G. 380.
 1) **ββ-Di[P-Oxyphenyl]-αγ-Diphenylpropan** (B. 25, 1274). — II, 1008.
 2) **Dibenzyläther d. αα-Dioxydiphenylmethan.** Sm. 104—105° (Soc. 69, 992).
- C₂₇H₂₄O₃** C 81,8 — H 6,0 — O 12,1 — M. G. 396.
 1) **Aethylester d. 4-Keto-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure.** Sm. 184° (A. 281, 68). — II, 1730.
- C₂₇H₂₄O₄** C 75,7 — H 5,6 — O 18,7 — M. G. 428.
 1) **α-[4-Isopropylbenzoat]-β-Methyläther d. αβ-Dioxy-γδ-Diketo-αδ-Diphenyl-α-Buten.** Sm. 112° (B. 27, 715). — III, 317.
 2) **Verbindung (aus 3,5-Dioxy-1-Methylbenzol)** (J. pr. [2] 26, 56). — II, 960.
- C₂₇H₂₄O₆** C 72,9 — H 5,4 — O 21,6 — M. G. 444.
 1) **Dimethylester d. αε-Diketo-αγε-Triphenylpentan-βδ-Dicarbonsäure.** Sm. 113° (B. 18, 2376). — II, 2039.
- C₂₇H₂₄O₈** C 68,1 — H 5,0 — O 26,9 — M. G. 476.
 1) **Erythrocentaurin.** Sm. 136° (Z. 1866, 336; J. 1870, 877). — III, 631.
- C₂₇H₂₄O₉** C 56,8 — H 4,9 — O 29,2 — M. G. 492.
 1) **Tribenzoat d. Glykose** (H. 14, 345). — II, 1143.
- C₂₇H₂₄N₇** C 86,2 — H 6,4 — N 7,4 — M. G. 376.
 1) **Hydrocinnamid + 1/2 H₂O.** Sm. 106° (131° wasserfrei). HCl + 3 H₂O, (2HCl, PtCl₄), HNO₃, H₂SO₄, Laktat, 2 + AgNO₃ (J. pr. [1] 27, 309; A. 34, 173; B. 17, 2110; Bl. [3] 19, 270). — III, 60.
 2) **ε-Phenylhydrason-αα-Diphenyl-αγ;δ-Nonatetraën.** Sm. 166° (B. 18, 2325). — IV, 779.
 3) **2,3-Diphenyl-1-Benzyl-1,2,3,4-Tetrahydro-1,3-Benzodiazin.** Sm. 120° (B. 27, 3244). — IV, 637.
 4) **Diphenylaminakrolein** (B. 15, 1158). — II, 445.
- C₂₇H₂₄N₈** C 80,2 — H 5,9 — N 13,8 — M. G. 404.
 1) **Di[β-Benzyliden-α-Phenylhydrazido]methan.** Sm. 134—135° (Soc. 69, 1285). — IV, 751.
 2) **Mauvein.** HCl, (2HCl, PtCl₄), (HCl, AuCl₃), HBr, HJ, H₂SO₄, Acetat, Carbonat (J. 1859, 756, 759; 1863, 420; Soc. 35, 717). — III, 678.
- C₂₇H₂₄S₂** 1) **α-Trithiosimmltaldehyd.** Sm. 167° (B. 24, 1452). — III, 60.
 2) **β-Trithiosimmltaldehyd.** Sm. 213° (B. 24, 1453). — III, 60.
- C₂₇H₂₃N** C 89,3 — H 6,9 — N 3,8 — M. G. 363.
 1) **β-Dibenzylamidodiphenylmethan** (Soc. 41, 198). — II, 635.
- C₂₇H₂₃N₃** C 82,9 — H 6,4 — N 10,7 — M. G. 391.
 1) **α-Phenyl-β-Benzyliden-α-[2-Benzylamidobenzyl]hydrazin.** Sm. 140 bis 142° (B. 27, 3243). — IV, 1130.
- C₂₇H₂₆O** C 88,5 — H 7,1 — O 4,4 — M. G. 366.
 1) **Keton (aus Methyl-4-Methylphenylketon).** Sm. 168° (J. pr. [2] 41, 405). — III, 264.
- C₂₇H₂₆O₄** C 78,2 — H 6,3 — O 15,5 — M. G. 414.
 1) **Acetat d. αε-Diketo-γ-[2-Oxyphenyl]-αε-Di[4-Methylphenyl]pentan.** Sm. 95° (B. 29, 243). — III, 308.
 2) **Aethylester d. α-Acetyl-γ-Benzoyl-βγ-Diphenylbuttersäure.** Sm. 123° (A. 281, 65). — II, 1915.
- C₂₇H₂₆O₆** C 72,6 — H 5,8 — O 21,5 — M. G. 446.
 1) **Tribenzyliden-d-Idit.** Sm. 224—228° (cor.) (B. 28, 1562).
 2) **Tribenzyliden-l-Idit.** Sm. 224—228° (cor.) (B. 28, 1579). — III, 9.
 3) **Tribenzyliden-d-Mannit.** Sm. 207° u. Zers. (218—222°) (A. ch. [6] 22, 420; B. 28, 1579). — III, 9.
 4) **Tribenzyliden-l-Mannit.** Sm. 190—192° (B. 27, 1530). — III, 9.
 5) **Tribenzyliden-d-Talit.** Sm. 210° (cor.) (B. 27, 1528). — III, 9.
 6) **Tribenzyliden-l-Talit.** Sm. 210° (cor.) (B. 27, 1529). — III, 9.
- C₂₇H₂₆O₇** C 70,1 — H 5,6 — O 24,3 — M. G. 462.
 1) **Verbindung (aus Phloretinsäure)** (A. 172, 358). — II, 1570.
- C₂₇H₂₆O₉** C 65,6 — H 5,3 — O 29,1 — M. G. 494.
 1) **Dibenzoat d. Salicin** (A. 154, 7). — III, 609.

- $C_{22}H_{20}O$, 2) Tri 4-Methoxybenzoat d. $\alpha\beta\gamma$ -Trioxypropan. Sm. 163,5° (B. 24, 77). — II. 1525.
- 3) Tri 6-Oxy-3-Methylbenzoat d. $\alpha\beta\gamma$ -Trioxypropan. Sm. 118° (B. 24, 77). — II. 1546.
- $C_{22}H_{20}O_1$, C 61,8 — H 4,9 — O 33,5 — M. G. 526.
- $C_{22}H_{20}O_2$, 1) Verbindung $-1, H_2O$ aus Fuscochlorophan: Z. 1870, 179. — III. 689. C 59,5 — H 4,5 — O 35,4 — M. G. 542.
- 2) Fuscochlorophan (Z. 1870, 177). — III. 689.
- 3) Glaukophansäure. Sm. 188—188°. Na (A. 297, 55). C 54,9 — H 4,4 — O 40,7 — M. G. 560.
- $C_{22}H_{20}O_3$, 1) Violaquercitrin (oder $C_{22}H_{20}O_3$) (J. 1893, 1399; Soc. 73, 700). — III. 615.
- C 58,5 — H 7,4 — N 2,5 — M. G. 265.
- $C_{22}H_{21}N$, 1) Tri γ -Phenylpropenylamin. Sm. 89°. HCl (B. 26, 1864). — II. 585.
- $C_{22}H_{21}N_2$, C 82,4 — H 6,9 — N 10,7 — M. G. 493.
- 1) 1,3,5-Tri 4-Methylphenylamido benzol. Sm. 186—187°. HCl, 2HCl, (2HCl, PtCl₄) (G. 20, 323). — IV, 1125.
- 2) trimolec. Dihydrochinolin. Sm. unterh. 80° (C. 1896 [1], 1126). C 77,9 — H 6,7 — O 15,4 — M. G. 416.
- $C_{22}H_{21}O_4$, 1) Diäthylester d. $\alpha\beta\gamma$ -Triphenylpropan- $\alpha\gamma$ -Dicarbonsäure. Sm. bei 95° (B. 31, 364).
- C 74,0 — H 6,5 — O 18,5 — M. G. 432.
- $C_{22}H_{21}O_5$, 1) Benzoylguaajakharzsäure (oder $C_{22}H_{21}O_5$) Sm. 131° (C. 1897 [1], 167; M. 18, 718).
- 2) Benzozat d. Bidurochinon. Sm. 142—143° (B. 29, 2183).
- C 67,5 — H 5,8 — O 26,7 — M. G. 480.
- $C_{22}H_{21}O_6$, 1) Verbindung (aus d. Verb. $C_{22}H_{21}O_6$) + H_2O . Sm. 142—143° wasserfrei (G. 24 [1], 363).
- C 61,4 — H 5,3 — O 33,3 — M. G. 528.
- $C_{22}H_{21}O_7$, 1) Gerbstoff (aus Erlenholz), Pb, 2Cu + Cu(OH)₂ (J. 1870, 558). — III. 599.
- C 53,4 — H 4,6 — O 42,1 — M. G. 608.
- $C_{22}H_{21}O_8$, 1) Myrticolarin. Sm. 178° (Soc. 73, 698).
- C 65,1 — H 6,0 — O 28,9 — M. G. 498.
- $C_{22}H_{21}O_9$, 1) Lecanorol + H_2O . Sm. 90—95° (A. 295, 259).
- 2) Dimethylester d. Eupittonsäure. Sm. 242° (B. 12, 2219). — II. 2092.
- 3) Verbindung (aus d. Flechte Lecanora sulphurea) + H_2O . Sm. 92—93° (123—124° wasserfrei). Ag (G. 24 [1], 298).
- C 57,6 — H 5,3 — O 37,0 — M. G. 502.
- $C_{22}H_{21}O_{10}$, 1) Triacetylphloridzin + H_2O (A. 156, 5). — III. 600.
- C 56,1 — H 5,2 — O 35,7 — M. G. 578.
- $C_{22}H_{21}O_{11}$, 1) Pseudobaptisin + 7 H_2O . Sm. 247—248°. + CH_4O + 11 H_2O (C. 1897 [2], 1077).
- C 51,7 — H 4,8 — O 43,5 — M. G. 628.
- $C_{22}H_{21}O_{12}$, 1) Oxyritrin. Sm. 189—185° (Soc. 71, 1132; 73, 700).
- C 84,8 — H 7,9 — N 7,3 — M. G. 382.
- $C_{22}H_{21}N_2$, 1) 2,4-Di-4-Isopropylbenzylidenamido-1-Methylbenzol. Sm. oberh. 96° u. Zers. (A. 253, 331). — IV, 607.
- C 81,6 — H 7,8 — N 10,6 — M. G. 397.
- $C_{22}H_{21}N_3$, 1) Oenanthydenrosanilin. (2HCl, PtCl₄), HAsO₄ (Z. 1867, 176). — II, 1093.
- 2) α -[4-Amidophenyl]- $\alpha\alpha$ -Di 2-Methyl-1,2,3,4-Tetrahydrochinolyl-6]-methan (B. 24, 1717). — IV, 1212.
- C 83,5 — H 8,2 — O 8,2 — M. G. 388.
- $C_{22}H_{21}O_3$, 1) Phenylidithymolmethan. Sm. 165,5—166,5° (B. 22, 1947). — II, 1004.
- C 52,9 — H 5,2 — O 41,8 — M. G. 610.
- $C_{22}H_{21}O_4$, 1) Apitin. Sm. 228° (A. 48, 349; 74, 262; B. 9, 1121, 1124; Soc. 71, 806). — III, 571.
- 2) Rutin + 2 H_2O . Sm. oberh. 190°. Pb. (A. 53, 385; 82, 200; 96, 123; 123, 145; J. 1859, 528; 1862, 498; 1863, 594; 1865, 587; J. pr. [1] 58, 309; [1] 85, 351; [1] 88, 280; B. 15, 217; Soc. 53, 264; 67, 31; C. 1896 [2], 501). — III, 607.
- C 78,6 — H 7,8 — N 13,6 — M. G. 412.
- $C_{22}H_{21}N_4$, 1) Phenylhydrazone d. Aethylcinchonin. Sm. 152—153° (B. 27, 1187). — IV, 798.

- $C_{27}H_{33}N_3$ C 81,2 — H 8,3 — N 10,5 — M. G. 399.
 1) **Triäthylentri[4-Methylphenyl]triamin.** Sm. 186° (*J.* 1873, 698). — II, 488.
- $C_{27}H_{33}Cl_{21}$ 1) **Verbindung (aus Wachs)** (*A.* 67, 211).
 $C_{27}H_{33}Bi$ 1) **Wismutetri[4-Isopropylphenyl].** Sm. 159° (*B.* 30, 2847). — IV, 1699.
 $C_{27}H_{31}O_{11}$ C 60,7 — H 6,3 — O 33,0 — M. G. 534.
 1) **Phillyrin + 1 1/2 H₂O.** Sm. 160° (*A.* 92, 109; 108, 124). — III, 600.
 $C_{27}H_{31}N_2$ C 83,9 — H 8,8 — N 7,3 — M. G. 386.
 1) **4',4'-Di[Diäthylamido]triphenylmethan.** Sm. 62°. (2HCl, PCl₄ + 3H₂O) (*A.* 217, 263). — IV, 1042.
- $C_{27}H_{33}N_3$ 1) **2'-Amido-2',2'-Di[Diäthylamido]triphenylmethan.** Sm. 136° (*B.* 17, 1894). — IV, 1193.
 2) **4'-Amido-4',4'-Di[Diäthylamido]triphenylmethan.** Sm. 118° (*B.* 19, 747). — IV, 1195.
 3) **P-Tri[Dimethylamido]-P-Dimethyltriphenylmethan** (*B.* 24, 561). — IV, 1198.
- $C_{27}H_{31}Cl_3$ 1) **Verbindung (aus Wachs)** (*A.* 67, 211).
 $C_{27}H_{31}Cl_{11}$ 1) **Undekachlorcholestan** (*M.* 15, 101).
 $C_{27}H_{31}O_5$ C 73,3 — H 8,6 — O 18,1 — M. G. 442.
 1) **Salicylsäurecampher.** Sm. 60° (*Bf.* [3] 4, 727). — III, 488.
 $C_{27}H_{31}O_7$ C 68,4 — H 8,0 — O 23,6 — M. G. 474.
 1) **Anhydrid d. Erythropleinsäure** (oder $C_{27}H_{40}O_7$) (*C.* 1897 [1] 301).
 $C_{27}H_{31}O_{13}$ C 56,9 — H 6,6 — O 36,5 — M. G. 570.
 1) **Cyclamin** (*C.* 1897 [1] 230).
 $C_{27}H_{31}O$ C 85,3 — H 10,5 — O 4,2 — M. G. 380.
 1) **Oxycholesterylen.** Sm. 112° (*M.* 17, 596).
 $C_{27}H_{31}O_2$ C 81,8 — H 10,1 — O 8,1 — M. G. 396.
 1) **Oxycholestenon.** Sm. 122–123° (*M.* 17, 584).
 2) **Formiat d. Ergosterin.** Sm. 154° (*A. ch.* [6] 20, 294). — II, 1075.
 $C_{27}H_{31}O_3$ C 73,0 — H 9,0 — O 18,0 — M. G. 444.
 1) **Verbindung (aus Cholesterin).** Sm. 171° (*M.* 17, 593).
 $C_{27}H_{31}O_6$ C 65,9 — H 8,1 — O 26,0 — M. G. 492.
 1) **Cerberin.** Sm. 191–192° u. Zers. (*R.* 12, 26). — III, 573.
 2) **Tanginin.** Ba (*J.* 1889, 2031). — III, 649.
 3) **Erythropleinsäure** (oder $C_{27}H_{40}O_6$) (*C.* 1897 [1] 301).
 $C_{27}H_{31}O_{10}$ C 61,8 — H 7,6 — O 30,5 — M. G. 524.
 1) **Dimethylester d. Pseudocholeoidansäure** $C_{25}H_{30}O_{10}$. Sm. 194–196° (*B.* 19, 1528). — I, 727.
- $C_{27}H_{31}O_9$ C 81,4 — H 10,5 — O 8,0 — M. G. 398.
 1) α -**Oxycholestenol.** Sm. bei 180° (*M.* 17, 582).
 2) β -**Oxycholestenol.** Sm. 157° (*M.* 17, 595).
 $C_{27}H_{31}O_2$ C 78,2 — H 10,1 — O 11,6 — M. G. 414.
 1) **Oxycholestendiol.** Sm. 231° (*M.* 17, 590).
 2) **Verbindung (aus Diacetylcaprinsäureäthylester).** Sd. 320–330°₃₅ (*Soe.* 57, 26). — I, 694.
- $C_{27}H_{31}O_5$ C 72,6 — H 9,4 — O 17,9 — M. G. 446.
 1) **Säure (aus Cholesterin).** Cu (*M.* 17, 590).
 $C_{27}H_{31}O_7$ C 67,8 — H 8,8 — O 23,4 — M. G. 478.
 1) **Dimethylester d. Cholansäure + 1/4 H₂O.** Sm. 174–176°. Pb (*B.* 19, 477). — II, 2017.
 2) **Monäthylester d. Cholansäure + 1/4 H₂O.** Sm. 188–190°. Ba, Pb (*B.* 19, 478). — II, 2017.
- $C_{27}H_{31}O_{10}$ C 61,6 — H 8,0 — O 30,4 — M. G. 526.
 1) **Antiarin + 4H₂O.** Sm. 225° (*A.* 28, 304; *Z.* 1869, 351; *C.* 1896 [2] 591). — III, 570.
 2) **Leukoglykodrin** (oder $C_{27}H_{44}O_{10}$) (*C.* 1896 [1] 561).
 $C_{27}H_{31}O_{12}$ C 58,0 — H 7,5 — O 35,4 — M. G. 558.
 1) **Argyräsein** (*J.* 1862, 489; 1867, 751). — III, 572.
- $C_{27}H_{31}Cl$ 1) **Sitosterylehlid.** Sm. 87,5° (*M.* 18, 561).
 $C_{27}H_{41}O$ C 84,4 — H 11,4 — O 4,2 — M. G. 384.
 1) **Sitosterin + H₂O.** Sm. 137,5° (*M.* 18, 553).
 2) **Parasitosterin.** Sm. 127,5° (*M.* 18, 566).
 $C_{27}H_{41}O_2$ C 77,9 — H 10,6 — O 11,5 — M. G. 416.
 1) **Verbindung (aus Cholesterylacefat).** Sm. 217–218° u. Zers. (*M.* 17, 598).

- $C_{27}H_{41}O_4$ C 75,0 — H 10,2 — O 14,8 — M. G. 432.
 1) **Chenocholsäure**. Ba (*J.* 1869, 635; *A.* 149, 196).
 $C_{27}H_{39}Br_2$ 1) **Sitostendibromid**. Sm. 105—110° (*M.* 18, 565).
 $C_{27}H_{41}O_{15}$ 1) **Digitalin** = $(C_{27}H_{41}O_{15})_x$ (*J.* 1875, 776). — III, 581.
 $C_{27}H_{41}Cl_2$ 1) **Trichlorcholestan**. Sm. 106° (*M.* 15, 100).
 $C_{27}H_{41}O$ C 83,9 — H 11,9 — O 4,1 — M. G. 386.
 1) **Cholesterin** + H_2O (oder $C_{27}H_{44}O$). Sm. 148,5° (145—146°). Na, K. Lit. bedeutend. — II, 1071.
 2) **Verbindung** (Keton aus Isovaleriansäure). Sd. 240—260° (*A.* 202, 329).
 $C_{27}H_{41}O_2$ C 80,6 — H 11,4 — O 8,0 — M. G. 402.
 1) **Acetat** d. **Ilcylalkohol**. Sm. 204—206° (*Bl.* 42, 152). — II, 1069.
 2) **Acetat** d. **Alkohol** $C_{27}H_{44}O$ (aus Sesamöl). Sm. 130—131° (*C.* 1897 [2] 773).
 $C_{27}H_{46}O_5$ C 72,0 — H 10,2 — O 17,8 — M. G. 450.
 $C_{27}H_{46}O_{14}$ C 54,5 — H 7,7 — O 37,7 — M. G. 594.
 1) **Digitonin**. Sm. 235° (*B.* 24, 339, 3954; **26** [2] 686; **32**, 341). — III, 581.
 $C_{27}H_{46}Cl_2$ 1) **Dichlorcholestan**. Sm. 119—120° (*M.* 15, 95).
 $C_{27}H_{46}Br_2$ 1) α -**Dibromcholestan**. Sm. 141—142° (*M.* 15, 90).
 2) β -**Dibromcholestan**. Sm. 106° (*M.* 15, 90).
 $C_{27}H_{46}O$ C 83,5 — H 12,4 — O 4,1 — M. G. 388.
 1) **Koprosterin** (Stercorin). Sm. 95—96° (*B.* 29, 476; *H.* 22, 397; **23**, 363; **24**, 395).
 $C_{27}H_{46}O_3$ C 79,4 — H 12,7 — O 7,8 — M. G. 408.
 1) **Cerotoisäure**. Sm. 70° (*A.* 271, 223).
 $C_{27}H_{52}O$ C 82,2 — H 13,7 — O 4,1 — M. G. 394.
 1) **Myriston** (Tridekylketon). Sm. 76,3° (75°) (*A.* 84, 290; *B.* 15, 1713; *Soc.* 63, 458). — I, 1006.
 2) **Hippokoprosterin** (oder $C_{27}H_{54}O$). Sm. 74—75° (*H.* 22, 409).
 $C_{27}H_{52}O_2$ C 79,0 — H 13,2 — O 7,8 — M. G. 410.
 1) **Cerotinsäure** (siehe auch $C_{25}H_{50}O_2$ u. $C_{29}H_{58}O_2$). Sm. 78°. Na, K, Mg, Cu, Pb, Ag (*A.* 67, 180; **224**, 237; **271**, 225; *Z.* 1868, 415; **1869**, 65; *Bl.* 42, 201; [3] 11, 908; *M.* 3, 677; *B.* 7, 1453; **27** [2] 79; **29**, 2897). — I, 448.
 2) **Säure** (aus Bienenwachs). Sm. 78,5°. Pb (*A.* 235, 143). — I, 449.
 3) **Säure** (aus Wollfettwachs). Sm. 79°. Mg (*B.* 31, 103).
 4) **Aethylester** d. **Cerotinsäure**. Sm. 60,5° (*C.* 1896 [1] 642).
 $C_{27}H_{52}O_3$ C 76,0 — H 12,7 — O 11,3 — M. G. 426.
 1) **Oxycerotinsäure**. Sm. 82° (*A.* 271, 222).
 $C_{27}H_{56}O$ C 81,8 — H 14,1 — O 4,0 — M. G. 396.
 1) **Cerylalkohol** (siehe auch $C_{25}H_{54}O$). Sm. 79° (*A.* 67, 201; **271**, 224; *Soc.* 57, 198; *G.* 25 [1] 44; *B.* 3, 639; **29**, 2895). — I, 241.
 2) **Isocerylalkohol**. Sm. 62° (*B.* 11, 2113). — I, 241.
 3) **Dimyristylcarbinol** (Ditridekylcarbinol). Sm. 80,5—81,5° (*Soc.* 63, 459).
 4) **Alkohol** (aus Bienenwachs) (*A.* 235, 142). — I, 241.
 5) **Alkohol** (aus Carnaubawachs) (*A.* 223, 293). — I, 241.

C_{27} -Gruppe mit drei Elementen.

- $C_{27}H_{19}O_6Br_2$ 1) **Tri[4-Brombenzoat]** d. **1,2,3-Trioxylbenzol**. Sm. 140° (*Am.* 9, 86). — II, 1223.
 $C_{27}H_{19}O_6Cl_2$ 1) **Tribenzoat** d. **p-Dichlor-1,2,3-Trioxylbenzol**. Sm. 165° (*G.* 28 [1] 225).
 $C_{27}H_{17}O_5N$ C 70,4 — H 4,2 — O 11,9 — N 3,5 — M. G. 403.
 1) **Anhydrid** d. **2-Nitrophenylid[2-Oxynaphtyl]methan**. Zers. oberh. 250° (*G.* 23 [2] 216). — II, 1009.
 2) **Anhydrid** d. **3-Nitrophenylid[2-Oxynaphtyl]methan**. Sm. 220° (*G.* 23 [2] 218). — II, 1009.
 3) **Anhydrid** d. **4-Nitrophenylid[2-Oxynaphtyl]methan**. Zers. bei 260° (*G.* 23 [2] 221). — II, 1009.
 $C_{27}H_{17}O_4N$ C 77,3 — H 4,1 — O 15,3 — N 3,3 — M. G. 419.
 1) **Dibenzoat** d. **2,4-Dioxyakridin**. Sm. 163° (*B.* 25, 1759). — IV, 407.

- $C_{17}H_{17}O_2N_2$ C 67,6 — H 3,6 — O 20,0 — N 8,8 — M. G. 479.
 1) $\alpha\beta\gamma$ -Tri[1,2-Phthalylamido]propan. Sm. 226—227° (B. 25, 3057). — II, 1807.
- $C_{17}H_{17}O_2Cl$ 1) Tribenzoesä d. β -Chlor-1,2,3-Trioxybenzol. Sm. 140° (G. 28 [1] 225).
 $C_{17}H_{15}ON_2$ C 78,3 — H 4,3 — O 3,9 — N 13,5 — M. G. 414.
 1) Verbindung (aus 2-Phenylbenzimidazol-2'-Carbonsäure). Sm. 277°. 2HCl + 2H₂O, (2HCl, PtCl) (A. 205, 121; 210, 340; B. 11, 297). — IV, 1021.
- $C_{17}H_{15}O_2N_2$ C 80,6 — H 4,5 — O 8,0 — N 6,9 — M. G. 402.
 1) Methyläther d. 4-Oxynaphtindon. Sm. oberh. 330° (A. 272, 345). — IV, 1085.
- $C_{17}H_{14}O_2Cl_2$ 1) Di[2-Naphtyläther] d. 2,5-Dichlor-1-Dioxyethylbenzol. Sm. bei 205° u. Zers. (A. 299, 348).
- $C_{17}H_{14}O_2N_2$ C 77,5 — H 4,3 — O 11,5 — N 6,7 — M. G. 418.
 1) 1-Nitro-2,2-Dinaphtylamid d. Benzolcarbonsäure. Sm. 168°. + C₆H₆ (Sm. 95°) (B. 20, 2625). — II, 1168.
- $C_{17}H_{14}O_2N$ C 70,1 — H 3,9 — O 13,8 — N 12,1 — M. G. 462.
 1) 6,8-Diphenylazo-5,7-Dioxy-2-Phenyl-1,4-Benzopyron (Diphenylazochrysin). Sm. 251—252° (Soc. 73, 669). — IV, 1492.
- $C_{17}H_{14}O_2N_2$ C 67,8 — H 3,8 — O 16,7 — N 11,7 — M. G. 478.
 1) 6,8-Diphenylazo-5,7-Dioxy-2-[4-Oxyphenyl]-1,4-Benzopyron (Diphenylazopigmenin). Sm. 290—292° (Soc. 71, 808; 73, 667). — IV, 1482.
- $C_{17}H_{14}O_2N_2$ C 62,1 — H 3,4 — O 18,4 — N 16,1 — M. G. 522.
 1) Dinitroderivat d. Verbindung $C_{17}H_{14}O_2N_2$. Sm. 200°. + C₂H₄O, (Sm. 130°) (B. 26, 1188). — IV, 1225.
- $C_{17}H_{14}O_2N_2$ C 67,2 — H 3,7 — O 23,2 — N 5,8 — M. G. 482.
 1) Lycoctoninsäure. Sm. 146,1—148,6° (J. 1884, 1394). — III, 776.
- $C_{17}H_{14}O_2N_2$ C 63,5 — H 3,5 — O 22,0 — N 11,0 — M. G. 510.
 1) Diphenylazomorin (Soc. 73, 670). — IV, 1482.
- $C_{17}H_{13}ON$ C 86,9 — H 5,1 — O 4,3 — N 3,7 — M. G. 373.
 1) 2,2-Dinaphtylamid d. Benzolcarbonsäure. Sm. 173° (B. 17, 1593, 2030). — II, 1168.
- $C_{17}H_{13}ON_2$ C 80,8 — H 4,7 — O 4,0 — N 10,5 — M. G. 401.
 1) 4-Benzoylamido-1,1'-Azonaphtalin (A. 129, 112). — IV, 1390.
 2) Benzoylamido- β -Azonaphtalin. Sm. 177° (B. 18, 2423). — II, 1391.
- $C_{17}H_{13}O_2N$ C 83,3 — H 4,9 — O 8,2 — N 3,6 — M. G. 389.
 1) 2,5-Diphenyl-1-[1-Naphtyl]pyrrol-3-Carbonsäure. Sm. 271,5—272° (B. 22, 3091). — IV, 449.
 2) 2,5-Diphenyl-1-[2-Naphtyl]pyrrol-3-Carbonsäure. Sm. 350° (B. 22, 3032). — IV, 450.
- $C_{17}H_{13}O_2N_2$ C 77,7 — H 4,6 — O 7,7 — N 10,0 — M. G. 417.
 1) 1,3-Dibenzoyl-2-Phenylimido-2,3-Dihydrobenzimidazol. Sm. 171° (B. 24, 2502). — IV, 566.
- $C_{17}H_{13}O_2N$ C 80,0 — H 4,7 — O 11,8 — N 3,5 — M. G. 405.
 1) 4-Oxy-5-Keto-3-Benzoyl-2-Phenyl-1-[2-Naphtyl]-2,5-Dihydro-pyrrol. Zers. bei 252—254° (B. 31, 1308).
- $C_{17}H_{13}O_2N_2$ C 74,8 — H 4,4 — O 11,1 — N 9,7 — M. G. 433.
 1) Benzoesä d. 6-Phenylhydrason-5-Oxy-3-Methyl-1-Phenylbenzoxazol. Sm. 171° (M. 19, 505). — IV, 1448.
- $C_{17}H_{13}O_2N$ C 76,9 — H 4,5 — O 15,2 — N 3,3 — M. G. 421.
 1) 2-Nitrophenylidi[2-Oxynaphtyl]methan. Sm. 207° (G. 23 [2] 216). — II, 1009.
 2) 3-Nitrophenylidi[2-Oxynaphtyl]methan. Sm. 184° (G. 23 [2] 218). — II, 1009.
 3) Methyläther d. Fluoresceinanilid. Sm. 280° (B. 28, 397). — II, 2062.
- $C_{17}H_{13}O_2Cl$ 1) Verbindung + H₂O (aus Benzaldehyd u. α -Hydronaphtochinon) (J. pr. [2] 49, 551). — III, 6.
- $C_{17}H_{13}O_2N_2$ C 65,2 — H 3,8 — O 22,5 — N 8,4 — M. G. 497.
 1) Benzoesä d. 3-[*p*-Dinitro-4-Methylphenyl]benzoylamido-1-Oxybenzol. Sm. 110° (J. pr. [2] 33, 215). — II, 1177.
 2) 1,4-Benzochinonimidobenzol-3-Carbonsäuredi[Amidobenzol-3-Carbonsäure] (Bl. [3] 15, 1027).
 3) Verbindung (aus 1,4-Benzochinondiamidobenzoesäure). Sm. bei 145° u. Zers. (Bl. [3] 13, 748). — III, 343.

- $C_{27}H_{30}ON_2$ C 83,5 — H 5,2 — O 4,1 — N 7,2 — M. G. 388.
 1) α -Phenyl- $\beta\beta$ -Di[2-Naphtyl]harnstoff. Sm. 179° (181—182°) (B. 17, 3039; 23, 429). — II, 618.
- $C_{27}H_{30}O_2N_2$ C 80,2 — H 4,9 — O 7,9 — N 6,9 — M. G. 404.
 1) 2,3-Difuranyl-4-[4-Methylphenyl]-1,4-Dihydro-1,4-Naphtisodiazin. Sm. 186° (B. 25, 2846). — IV, 1080.
- $C_{27}H_{20}O_2N_4$ C 75,0 — H 4,6 — O 7,4 — N 13,0 — M. G. 432.
 1) Benzoylderivat d. Verb. $C_{20}H_{16}ON_4$. Sm. 172° (B. 26, 1187). — IV, 1225.
 2) Verbindung (aus 2-Phenylimido-4-Keto-3-Phenyl-1,2,3,4-Tetrahydro-1,3-Benziazin). Sm. 127° (Am. 21, 154).
- $C_{27}H_{30}O_4N_2$ C 74,3 — H 4,6 — O 14,7 — N 6,4 — M. G. 436.
 1) Benzoesäure d. 2,4-Di[Benzoylamido]-1-Oxybenzol. Sm. 231—233° (A. 205, 69). — II, 1178.
 2) Benzoesäure d. 2,6-Di[Benzoylamido]-1-Oxybenzol. Sm. 183—184° (A. 205, 83). — II, 1178.
- $C_{27}H_{30}O_5N_2$ C 71,7 — H 4,4 — O 17,7 — N 6,2 — M. G. 452.
 1) Di[4-Benzoylamidophenylester] d. Kohlensäure. Sm. 220° u. Zers. (C. 1897 [1] 469).
- $C_{27}H_{30}O_5S$ 1) Phenyl-di[1-Oxy- β -Naphtyl]methan-3-Sulfonsäure. *ibid.* (B. 24, 795). — II, 1009.
- $C_{27}H_{30}O_6N_4$ C 65,3 — H 4,0 — O 19,3 — N 11,3 — M. G. 496.
 1) Diphenylazocyanomaklurin (Soc. 67, 942). — III, 684.
- $C_{27}H_{31}ON_3$ C 80,4 — H 5,2 — O 4,0 — N 10,4 — M. G. 403.
 1) α -Phenyl- β -Benzylidenhydrasid d. 2-Benzylidenamidobenzol-1-Carbonsäure. Sm. 150—151° (A. 301, 92).
- $C_{27}H_{31}O_7N$ C 82,8 — H 5,4 — O 8,2 — N 3,6 — M. G. 391.
 1) Anhydrobisdiketohydrindenpseudocumidid (B. 30, 3143).
- $C_{27}H_{31}O_7N_3$ C 77,3 — H 5,0 — O 7,6 — N 10,0 — M. G. 419.
 1) Diphenyldibenzoylguanidin. Sm. 102° (B. 8, 384). — II, 1173.
- $C_{27}H_{31}O_8N$ C 79,6 — H 5,2 — O 11,8 — N 3,4 — M. G. 407.
 1) Benzoesäure d. α -Benzoylamido-2-Oxydiphenylmethan. Sm. 176° (M. 15, 663; 18, 269).
 2) Benzoesäure d. 4-[2-Methylphenyl]benzoylamido-1-Oxybenzol. Sm. 171° (J. pr. [2] 34, 61). — II, 1177.
 3) Benzoesäure d. 3-[4-Methylphenyl]benzoylamido-1-Oxybenzol. Sm. 105° (J. pr. [2] 33, 215). — II, 1177.
 4) Benzoesäure d. 4-[4-Methylphenyl]benzoylamido-1-Oxybenzol. Sm. 169° (J. pr. [2] 33, 228). — II, 1177.
- $C_{27}H_{31}O_9N_3$ C 74,5 — H 4,8 — O 11,0 — N 9,7 — M. G. 435.
 1) 1,2,4-Tri[Benzoylamido]benzol. Sm. 260° (A. 254, 256). — IV, 1124.
 2) β -[3-Nitrobenzyliden]hydrazon- α -Oxy- $\alpha\beta$ -Triphenyläthan. Sm. 123° (B. 32, 656).
- $C_{27}H_{31}O_9N_5$ C 67,1 — H 4,3 — O 19,9 — N 8,7 — M. G. 483.
 1) β -Trinitrotri[4-Methylphenyl]benzol. Sm. oberh. 160° u. Zers. (J. pr. [2] 41, 406). — II, 301.
 2) Tri[Phenylamidoformiat] d. 1,2,3-Trioxbenzol. Sm. 173° (B. 18, 2430). — II, 1013.
 3) Tri[Phenylamidoformiat] d. 1,3,5-Trioxbenzol. Sm. 123° (B. 23, 269). — II, 1019.
- $C_{27}H_{31}O_9Cl$ 1) Aethylester d. 3[oder 5]-Chlor-4,5[oder 4,6]-Dibenzoxy-1,6[oder 1,3]-Dimethylbensfuran-2-Carbonsäure. Sm. 174—175° (A. 283, 264). — III, 732.
- $C_{27}H_{31}O_9N_3$ C 61,0 — H 3,9 — O 27,1 — N 7,9 — M. G. 531.
 1) Tribenzyläther d. 2,4,6-Trinitro-1,3,5-Trioxbenzol. Sm. 171° (Am. 15, 632). — II, 1022.
- $C_{27}H_{32}O_9N_2$ C 79,8 — H 5,4 — O 7,9 — N 6,9 — M. G. 406.
 1) $\alpha\gamma$ -Di[Phenylimido]- $\beta\beta$ -Dioxy- $\alpha\gamma$ -Diphenylpropan. Sm. 148° (B. 23, 3387). — III, 316.
 2) 4,4'-Di[2-Oxybenzylidenamido]-2-Methylbiphenyl. Sm. 160—165° (B. 28, 2550). — IV, 975.
 3) 3-Benzoylamido-1-[Benzoylbenzylamido]benzol. Sm. 178° (Soc. 55, 597). — IV, 573.

- $C_{27}H_{23}O_2N_2$ 4) **4-Benzoylamido-1-[Benzoylbenzoylamido]benzol.** Sm. 124° (Soc. 55, 591). — IV, 586.
- 5) **7-Methyläther d. 1,7-Dioxy-1,2,3-Triphenyl-1,1-Dihydro-1,4-Benzodiazin.** Sm. 163–165° (B. 29, 2682). — IV, 1079.
- $C_{27}H_{21}O_3N_2$ C 76,8 — H 5,2 — O 11,4 — N 6,6 — M. G. 422.
- 1) **α -Benzoylamido- β -[Benzoyl-1-Naphtoyl]amidoäthan.** Sm. 161° (B. 25, 2141). — II, 1445.
- $C_{27}H_{21}O_2N_2$ C 74,0 — H 5,0 — O 14,6 — N 6,4 — M. G. 438.
- 1) **Methylenlignonblau** (B. 31, 621).
- $C_{27}H_{21}O_2N_4$ C 67,2 — H 4,6 — O 16,6 — N 11,6 — M. G. 482.
- 1) **Phloretindisazobenzol.** Sm. 254–256° u. Zers. (Soc. 71, 1151). — IV, 1479.
- $C_{27}H_{21}O_2N_4$ C 65,1 — H 4,4 — O 19,3 — N 11,2 — M. G. 498.
- 1) **Di[2-Methylphenylazo]maklurin** (Soc. 67, 934). — IV, 1479.
- 2) **Di[4-Methylphenylazo]maklurin** (Soc. 67, 934).
- $C_{27}H_{21}N_3Cl$ 1) **α -Benzyliden- β -[4-Chlorphenyl]- β -2-Benzylidenamidobenzyl]hydrazin.** Sm. 150° (J. pr. [2] 52, 388). — IV, 1130.
- $C_{27}H_{21}N_3Br$ 1) **α -Benzyliden- β -[4-Bromphenyl]- β -2-Benzylidenamidobenzyl]hydrazin.** Sm. 171° (J. pr. [2] 52, 395). — IV, 1130.
- $C_{27}H_{21}ON$ C 85,9 — H 6,1 — O 4,2 — N 3,7 — M. G. 377.
- 1) **α -Oximido- α -Biphenyl- β - γ -Diphenylpropan.** Sm. 175° (B. 21, 1340). — III, 265.
- 2) **Benzyläther d. 5-Phenylakridin-10-Methoxyhydrat.** Sm. 133° (J. pr. [2] 45, 200). — IV, 468.
- $C_{27}H_{21}O_2N_2$ C 77,0 — H 5,5 — O 7,6 — N 9,9 — M. G. 421.
- 1) **α - β -Diphenyl- α -[2-Benzoylamidobenzyl]harnstoff.** Sm. 170° (J. pr. [2] 55, 242). — IV, 633.
- $C_{27}H_{21}ON$ C 70,2 — H 5,4 — O 15,1 — N 3,3 — M. G. 425.
- 1) **Diisocamylester d. α -Cyan- α - β -Diphenyläthan- α - β -Dicarbonsäure.** Fl. (B. 23, 115). — II, 1891.
- $C_{27}H_{21}O_2N_3$ C 71,5 — H 5,1 — O 14,1 — N 9,3 — M. G. 453.
- 1) **o -Diphtalylidiäthylen- p -Tolyltriämin.** Sm. 200° (B. 24, 2195). — II, 1800.
- $C_{27}H_{23}O_2N$ C 70,9 — H 5,0 — O 21,0 — N 3,1 — M. G. 457.
- 1) **Triacetylhydrocyanrosolsäure.** Sm. 143° (A. 179, 200). — II, 1122.
- $C_{27}H_{21}ON_2$ C 82,6 — H 6,1 — O 4,1 — N 7,1 — M. G. 392.
- 1) **1-Benzyl-2-[2-Oxyphenyl]-3-Phenyl-1,2,3,4-Tetrahydro-1,3-Benzodiazin.** Sm. 172° (B. 27, 3244). — IV, 638.
- $C_{27}H_{21}O_2N_4$ C 74,3 — H 5,5 — O 7,3 — N 12,8 — M. G. 436.
- 1) **α - β -Diphenyl- α -[2-Phenylureidobenzyl]harnstoff.** Sm. 139–140° (J. pr. [2] 55, 242). — II, 633.
- 2) **α -Phenyl- α -Di[5-Keto-3-Methyl-1-Phenyl-4,5-Dihidropyrazolyl-4]methan.** Sm. 154°. + CH_2O , + $\frac{1}{2}C_6H_6O$, HCl + C_6H_6O , + NH_3 , + $\frac{1}{2}H_2O$, Piperidinsalz + $\frac{1}{2}C_6H_6O$ (M. 17, 356). — IV, 1288.
- $C_{27}H_{21}O_2N_4$ C 71,7 — H 5,3 — O 10,6 — N 12,4 — M. G. 452.
- 1) **α -Phenylhydrazon- α -Phenyl- α -[3,4,5-Trioxo-2- α -Phenylhydrazon-äthyl]phenylmethan** (Gallacetobenzophenobisphenylhydrazon). Sm. 233 bis 234° (J. r. 25, 117). — IV, 785.
- $C_{27}H_{21}O_2N_6$ C 67,5 — H 5,0 — O 10,0 — N 17,5 — M. G. 480.
- 1) **1,3,5-Tri[4-Methylphenylnitrosamido]benzol.** Sm. 233–234° (G. 20, 329). — IV, 1125.
- 2) **trimolec. p -Nitroso- p -Dihydrochinolin** (C. 1896 [1] 1126).
- $C_{27}H_{21}O_2S$ 1) **Verbindung** (aus s -Diphenylsulfonacetone u. Phenylmercaptan). Sm. 190 bis 191° (J. pr. [2] 36, 422). — II, 791.
- $C_{27}H_{21}O_2N_2$ C 68,6 — H 5,1 — O 20,3 — N 5,9 — M. G. 472.
- 1) **Phenylhydrazid** (aus Narceonsäure). Sm. 181–182° (A. 286, 253). — II, 2082.
- $C_{27}H_{21}O_2N_6$ C 61,3 — H 4,5 — O 18,2 — N 15,9 — M. G. 528.
- 1) **2,4,6-Trimethyläther d. 2,4,6-Tri-2-Oxyphenylazo-1,3,5-Trioxo-benzol.** Sm. oberh. 300° (Soc. 71, 1155). — IV, 1451.
- $C_{27}H_{21}O_{12}N_4$ C 54,4 — H 4,0 — O 32,2 — N 9,4 — M. G. 596.
- 1) **5 oder 6-Methyl-2-[p -Nitro-3,4-Dimethoxyphenyl]-1-[p -Nitro-3,4-Dimethoxybenzyl]benzimidazol-1',2'-Dicarbonsäure.** Sm. 205 bis 206° u. Zers. (B. 25, 1987). — IV, 619.

- $C_{17}H_{19}N_3S$: s-Di-2-Benzylphenylthioharnstoff. Sm. 147^o B. 27. 1786.
- $C_{17}H_{19}N_3S$: s-Di-4-Phenylhydrazonmethylphenylthioharnstoff. Sm. 139^o *J. pr.* 2 56. 181. — IV. 753.
- $C_{17}H_{19}O_2N$: C 75.8 — H 6.1 — O 11.7 — N 14. — M. G. 411.
- Aethylester d. 4-Oximido-1,2,6-Triphenyl-1,2,3,4-Tetrahydrobenzol-3-Carbonsäure. Sm. 15—155^o Zers. d. 291^o d. 7. — II. 1915.
- $C_{17}H_{19}O_2N_2$: C 77.1 — H 7.2 — O 11.2 — N 14.5 — M. G. 423.
- 2,4-Dinitro-1,3,5-Tri-2-Methylphenylamido benzol. Sm. 241^o d. 18. 42. — IV. 1122.
- 2,4-Dinitro-1,3,5-Tri-4-Methylphenylamido benzol. Sm. 197^o. — CHCl₃ d. 16. 41. — IV. 1125.
- $C_{17}H_{19}ON_2$: C 72.2 — H 6.8 — O 11.1 — N 11. — M. G. 394.
- 4-Amido-1-Dibenzylamidobenzol — Benzaldehyd. Sm. 139^o B. 20. 177. — IV. 535.
- $C_{17}H_{19}O_2N_2$: C 75.5 — H 6.3 — O 11.5 — N 12.5 — M. G. 413.
- 2-4,4-Tetramethylamidodiphenylmethyl-1,4-Naphthochinon. Sm. 167^o B. 31. 257.
- $C_{17}H_{19}O_2N_2$: C 73.4 — H 5.9 — O 14.5 — N 12.4 — M. G. 442.
- Dicarboxäthylamarin *J. pr.* 2 27. 34. — III. 24.
- $C_{17}H_{19}O_2N$: C 71.6 — H 6.5 — O 12.1 — N 13.5 — M. G. 397.
- Aethylester d. 6-Methyl-2,3,4-Triphenyl-1,4-Dihydropyridin-5-Carbonsäure. Sm. 17^o d. 291^o d. 7. — II. 1912.
- $C_{17}H_{19}O_2N_2$: C 73.5 — H 6.1 — O 11.2 — N 13.5 — M. G. 441.
- 1) Dicarboxäthylamidamarin. HCl, 2HCl, PtCl₄ · H₂O, H₂SO₄. *J. pr.* 2 27. 34. — III. 25.
- $C_{17}H_{19}O_2N$: C 75.5 — H 6.3 — O 14.9 — N 13.3 — M. G. 429.
- 1) 3-Nitrophenyl-Dianetholmethan. Sm. 145—17^o (G. 21, 150). — II. 1695.
- 2) Benzylidenpapaverinium. Sm. 139^o *J. pr.* 2 56. 324.
- $C_{17}H_{17}O_2N$: C 76.3 — H 5.7 — O 15.5 — N 13. — M. G. 451.
- 1) Tribenzoesäure d. Tri-β-Oxyäthylamin. Fl. B. 30. 920.
- 2) Verbindung (aus Papaverinbenzylchlorid) oder C₁₆H₁₅O₁₁N₂. Sm. 153 bis 154 (M. 9, 342). — IV. 412.
- $C_{17}H_{17}O_2N_2$: C 64.1 — H 5.3 — O 22.2 — N 8.3 — M. G. 505.
- 1) Verbindung (aus-α-Oximido-β-Keto-α-Phenylpropan). Sm. 117—118^o (d. 291, 234). — III. 265.
- $C_{17}H_{19}O_2N_2$: C 75.7 — H 6.5 — O 11.2 — N 12.5 — M. G. 428.
- 1) Benzoylchinin. Sm. 139^o. HCl + 1¹/₂H₂O, 2HCl, 2HCl, PtCl₄, HBr + 1¹/₂H₂O, Tartrat, Bitartrat, Succinat, Salicylat (d. 108, 332; d. ch. 7, 127; Bl. 3¹/₂ 11, 1199). — III. 815.
- $C_{17}H_{19}O_2N_2$: C 73.9 — H 6.3 — O 14.4 — N 12.3 — M. G. 444.
- 1) Aethyläther d. Benzoylchinotenin. HCl, 2HCl (M. 16, 170). — III. 842.
- $C_{17}H_{19}O_2N_4$: C 68.7 — H 5.9 — O 13.6 — N 11.5 — M. G. 472.
- 1) d-Cocainazo-1-Amidonaphtalin (B. 27, 1887). — IV. 1452.
- 2) Disazobenzolsantonsäure. Sm. 125—139^o (B. 31, 1981). — IV. 1474.
- $C_{17}H_{19}O_2N_2$: C 65.9 — H 5.7 — O 22.7 — N 8. — M. G. 492.
- 1) 2-Nitrobenzoyloxyhydrat d. Papaverin. Chlorid, Nitrat + 1¹/₂H₂O, Bichromat, Pikrat (M. 9, 357). — IV. 441.
- $C_{17}H_{19}O_2N_2Br$ 1) Verbindung (aus Espartoharz) (See. 41, 94). — I. 1050.
- $C_{17}H_{19}N_2J$ 1) Dihäthylat d. Di-2-Methylenamido-β-Naphtylmethan (*J. pr.* [2] 35, 399). — IV. 1076.
- $C_{17}H_{19}O_2N_2$: C 70.6 — H 6.3 — O 13.9 — N 9.2 — M. G. 459.
- 1) 3-Nitro-2¹,2¹-Di-Acetylamido-3¹,5¹,3¹,5¹-Tetramethyltriphenylmethan? Sm. 131—132^o (B. 21, 3217). — IV. 1048.
- 2) 4'-Nitro-2¹,2¹-Di-Acetylamido]-3¹,5¹,3¹,5¹-Tetramethyltriphenylmethan. Sm. 88^o (B. 21, 3216). — IV. 1049.
- 3) 4-Nitrophenyl-di-Acetylamidodimethylphenylmethan (aus 2-Amido-1,3-Dimethylbenzol). Zers. bei 299^o (M. 19, 641).
- 4) Tri-4-Methylphenylamid d. Citronensäure. Sm. 189^o (B. 19, 2352). — II. 563.
- $C_{17}H_{19}O_2N$: C 72.5 — H 6.5 — O 17.9 — N 3.1 — M. G. 447.
- 1) Benzoyloxyhydrat d. Papaverin. Chlorid, Bichromat, Pikrat (B. 18, 1578; M. 9, 339, 756; *J. pr.* [2] 56, 324, 337; *J.* 1886, 1718). — IV. 441.

- C₁₇H₂₇O₃N₃** C 68,2 — H 6,1 — O 16,8 — N 8,8 — M. G. 475.
 1) **3-Nitrobenzaldehydchinin.** Sm. 113–118° (*G.* 13, 368). — III, 813.
- C₁₇H₂₉O₁₆N** C 61,5 — H 5,5 — O 30,3 — N 2,6 — M. G. 527.
 1) **Tetracetylhelicinmonanilid** (*A.* 154, 34). — III, 69.
- C₁₇H₁₀O₂N₂** C 78,3 — H 7,2 — O 7,7 — N 6,8 — M. G. 414.
 1) **2-Methylphenylchinin.** 2 Modif. (2HCl, PtCl₄ + H₂O) (*B.* 14, 80). — III, 815.
 2) **4-Methylphenylchinin.** 2 Modif. (2HCl, PtCl₄ + H₂O) (*B.* 14, 80). — III, 815.
- C₁₇H₃₀O₂N₄** C 73,3 — H 6,8 — O 7,2 — N 12,7 — M. G. 442.
 1) **α-[4-Diacetylamidophenyl]imidodi[4-Dimethylamidophenyl]methan.** Sm. 194–195° (*J. pr.* [2] 50, 407). — IV, 1174.
- C₁₇H₃₀O₃N₂** C 75,4 — H 7,0 — O 11,1 — N 6,5 — M. G. 430.
 1) **Aethylsalidin.** (2HCl, PtCl₄) (*A.* 145, 309). — III, 72.
 2) **Triäthyläther d. Hydrosalicylamid** (*A.* 145, 308). — III, 72.
- C₁₇H₂₆O₂N₄** C 70,7 — H 6,5 — O 10,5 — N 12,2 — M. G. 458.
 1) **Tri[β-Benzoylamidoäthyl]amin.** Sm. 148–149° (*B.* 29, 2532).
- C₁₇H₃₀O₄N₄** C 68,4 — H 6,3 — O 13,5 — N 11,8 — M. G. 474.
 1) **Diäthylester d. 4-[3-p-Dimethylamidophenylasophenyl]-2,6-Dimethylpyridin-3,5-Dicarbonsäure.** Sm. 107°. (2HCl, PtCl₄) (*G.* 17, 467). — IV, 1487.
- C₁₇H₃₀O₄N₄** C 64,5 — H 6,0 — O 12,7 — N 16,7 — M. G. 502.
 1) **Verbindung** (aus Aceton, Benzaldehyd u. Harnstoff). Sm. 270° u. Zers. (*G.* 23 [1] 406). — III, 38.
- C₁₇H₂₀O₆S₃** 1) **Trimethyltribenzyl-R-Trimethyltrisulfon.** Sm. 268° (*B.* 27, 1676). — III, 144.
 2) **Hexamethyläther d. α-Trithio-2,5-Dioxybenzaldehyd.** Sm. 95–96° (*B.* 29, 148). — III, 99.
 3) **Hexamethyläther d. β-Trithio-2,5-Dioxybenzaldehyd.** Sm. 180°. + 2C₆H₆ (*B.* 29, 149). — III, 99.
 4) **Hexamethyläther d. α-Trithio-3,4-Dioxybenzaldehyd.** Sm. 168° (*B.* 29, 145). — III, 102.
 5) **Hexamethyläther d. β-Trithio-3,4-Dioxybenzaldehyd.** Sm. 220°. + 2C₆H₆, + 2 Thiophen (*B.* 29, 146). — III, 102.
- C₁₇H₂₀N₃P** 1) **Tri[1,2,3,4-Tetrahydro-1-Chinoly]phosphin.** Sm. 202–204° (*B.* 31, 1038). — IV, 1683.
- C₁₇H₂₀N₄J** 1) **Diäthyljodid d. Aribin.** — III, 780.
- C₁₇H₂₇ON₄** C 75,7 — H 7,5 — O 3,7 — N 13,1 — M. G. 428.
 1) **Phenylhydrason d. Methylchinin.** Sm. 133–136° (*B.* 27, 1187). — IV, 798.
- C₁₇H₂₁O₂N₂** C 77,9 — H 7,7 — O 7,7 — N 6,7 — M. G. 416.
 1) **Verbindung** (aus Chinin u. Toluol) (*J.* 1874, 867). — III, 812.
- C₁₇H₂₁O₄N** C 72,3 — H 7,1 — O 14,3 — N 6,2 — M. G. 448.
 1) **Homobrenskatechinin.** H₂SO₄ + H₂O (Sm. 157° wasserfrei) (*Bl.* [3] 9, 147). — III, 813.
- C₁₇H₂₉O₁₁Cl₂** **Dichlorphillyrin** (*A.* 118, 128). — III, 600.
- C₁₇H₂₉O₁₁Br₂** 1) **Dibromphillyrin** (*A.* 118, 128). — III, 600.
- C₁₇H₂₁O₁₁N₂** C 51,9 — H 5,1 — O 38,4 — N 4,5 — M. G. 624.
 1) **Dinitrophillyrin** (*A.* 118, 128). — III, 600.
- C₁₇H₂₁O₂N₃** C 75,2 — H 7,6 — O 7,4 — N 9,7 — M. G. 431.
 1) **2-Nitro-4²,4²-Di[Diäthylamido]triphenylmethan.** Sm. 109–110° (*B.* 17, 1893). — IV, 1044.
 2) **3'-Nitro-4²,4²-Di[Diäthylamido]triphenylmethan.** Sm. 95–96° (*A.* 294, 379). — IV, 1044.
 3) **4'-Nitro-4²,4²-Di[Diäthylamido]triphenylmethan.** Sm. 113° (*B.* 19, 746). — IV, 1044.
 4) **3'-Nitro-5²,5²-Diamido-2²,2²-Diisobutyltriphenylmethan.** Sm. 64 bis 65° (*B.* 21, 3214). — IV, 1049.
 5) **4'-Nitro-5²,5²-Diamido-2²,2²-Diisobutyltriphenylmethan.** Sm. 125 bis 126°. 2HCl, (2HCl, PtCl₄) (*B.* 21, 3213). — IV, 1049.
- C₁₇H₃₁O₃P** 1) **Phosphorsäuretri-2,4,5-Trimethylphenylester.** Sd. 270–274°₁₆ (*B.* 31, 1052).
- C₁₇H₃₁O₄P** 1) **Tri[2-Isopropylphenylester] d. Phosphorsäure.** Sd. 375–380°₂₀₀ (*G.* 18, 130). — II, 762.

- $C_{27}H_{31}O_2N$ C 69,4 — H 7,9 — O 26,6 — N 3,0 — M. G. 467.
 1) **Camphorylmorphin.** (2HCl, PtCl₄) (Soc. 28, 694). — III, 966.
- $C_{27}H_{31}O_3Cl$ 1) **Verbindung** (aus Espartobarz) (Soc. 41, 54). — I, 1956.
- $C_{27}H_{31}O_{11}N$ C 59,9 — H 5,7 — O 35,9 — N 2,4 — M. G. 579.
 1) **Nitrophillyrin** (A. 118, 128). — III, 660.
- $C_{27}H_{31}N_2Cl$ 1) **4'-Chlor-4,4'-Di-Diäthylamido-triphenylmethan.** Sm. 110° (B. 19, 745). — IV, 1943.
- $C_{27}H_{31}Cl_2Bi$ 1) **Tri-4-Isopropylphenyl-wismuthdichlorid.** Sm. 206° (B. 30, 2848). — IV, 1699.
- $C_{27}H_{31}Br_2Bi$ 1) **Tri-4-Isopropylphenyl-wismuthdibromid.** Sm. 150° (B. 30, 2848). — IV, 1699.
- $C_{27}H_{34}ON_2$ C 80,8 — H 8,4 — O 4,0 — N 7,0 — M. G. 402.
 1) **α-Oxy-4',4'-Di-Diäthylamido-triphenylmethan.** (2HCl, ZnCl₂+2H₂O), H₂SO₄, Oxalat (B. 14, 2521; A. 217, 262; J. 1884, 760). — II, 1985.
- $C_{27}H_{34}O_2N_2$ C 77,5 — H 8,1 — O 7,6 — N 6,7 — M. G. 418.
 1) **α-Oxy-3'-Oxy-4',4'-Di-Diäthylamido-triphenylmethan** (A. 294, 377).
- $C_{27}H_{34}O_3N_2$ C 69,5 — H 7,3 — O 17,2 — N 6,9 — M. G. 466.
 1) **Methylhydrastisoamylimid.** (2HCl, PtCl₄) (B. 23, 2905). — II, 2053.
- $C_{27}H_{34}O_4N_2$ C 67,2 — H 7,1 — O 19,9 — N 5,8 — M. G. 482.
 1) **Lycaeonitin** + 2H₂O. Sm. 111–114°. (2HCl, PtCl₄) (HCl, AuCl₃), HNO₃ + 2H₂O (J. 1884, 1394). — III, 776.
 2) **Myocotonin** + 5H₂O. Sm. 143,5–144° (J. 1884, 1394). — III, 776.
- $C_{27}H_{34}NJ$ 1) **Jodäthylat d. 3,5-Di[4-Isopropylbenzyl]pyridin.** Sm. 168–169° (A. 280, 65). — IV, 458.
- $C_{27}H_{34}O_4N_2$ C 66,9 — H 7,4 — O 19,5 — N 5,8 — M. G. 484.
 1) **Methylhydrastisoamylamid.** Sm. 171° (B. 23, 2906). — II, 2053.
- $C_{27}H_{37}ON$ C 82,9 — H 9,4 — O 4,1 — N 3,6 — M. G. 391.
 1) **Phenylamidoformiat d. Oxycampherpinakonon.** Sm. 161° (B. 27, 2350; A. 292, 15).
- $C_{27}H_{39}O_2Br$ 1) **Dibromoxycholestenon?** (oder C₂₇H₃₉O₂Br₂) Sm. 167–168° (M. 17, 588).
- $C_{27}H_{39}O_2N_2$ C 66,8 — H 8,9 — O 16,5 — N 8,7 — M. G. 485.
 1) **Pikrorocellin.** Sm. 192–194° (A. 185, 14). — II, 1752.
- $C_{27}H_{39}O_2N_3$ C 63,1 — H 7,6 — O 15,6 — N 13,6 — M. G. 513.
 1) **Paucin** + 5 $\frac{1}{2}$ H₂O. Sm. 126°. 2HCl + 6H₂O, (2HCl, PtCl₄ + 6H₂O) (C. 1895 [1] 434).
- $C_{27}H_{39}O_3N$ C 64,2 — H 7,7 — O 25,3 — N 2,8 — M. G. 505.
 1) **Apopseudoaconin?** (Soc. 33, 160). — III, 776.
- $C_{27}H_{39}NCl$ 1) **Trichlormethylat d. Tri[β-Dimethylamidophenyl]amin.** 2 + 3 PtCl₄ (B. 19, 760). — IV, 1295.
- $C_{27}H_{40}OBr$ 1) **Oxycholesterylendibromid.** Sm. 91–92° u. Zers. (M. 17, 597).
- $C_{27}H_{40}OCl$ 1) **Oxycholesten.** Sm. 121–122° (M. 17, 599).
- $C_{27}H_{40}OCl_2$ 1) **Verbindung** (aus Cerylalkohol) (A. 67, 206). — I, 241.
- $C_{27}H_{40}ON$ C 79,0 — H 10,2 — O 3,9 — N 6,8 — M. G. 410.
 1) **6-Oxy-2-Heptadekyl-4-Phenyl-1,3-Diazin.** Sm. 117° (PINNER, Imidoäther 234). — IV, 986.
- $C_{27}H_{41}O_2Cl_{12}$ 1) **Dodekanchlorcerotinsäure.** Na (A. 67, 190). — I, 477.
- $C_{27}H_{41}O_4N_2$ C 73,5 — H 9,8 — O 7,2 — N 9,5 — M. G. 441.
 1) **Monosemicarbazon d. Onoketon.** Sm. 175° u. Zers. (B. 29, 2988).
- $C_{27}H_{41}O_2N$ C 63,8 — H 8,4 — O 25,1 — N 2,8 — M. G. 509.
 1) **Cevin.** Sm. 145°. (HJ, H₂J₂) (Soc. 33, 338). — III, 949.
- $C_{27}H_{41}OCl$ 1) **Dichlorcholesterindichlorid** (M. 15, 103). — II, 1072.
- $C_{27}H_{41}OBr$ 1) **Sitosterindibromid.** Sm. 98° u. Zers. (M. 18, 556).
- $C_{27}H_{41}O_2N$ C 63,4 — H 8,8 — O 25,0 — N 2,7 — M. G. 511.
 1) **Sabadinin.** HCl, (HCl, AuCl₃), H₂SO₄ + 3H₂O. — III, 950.
- $C_{27}H_{41}OCl_2$ 1) **Cholesterindichlorid** + H₂O (M. 15, 101). — II, 1072.
- $C_{27}H_{41}OBr$ 1) **Cholesterindibromid.** Sm. 109° (H. 22, 408).
- $C_{27}H_{41}O_2N$ C 75,4 — H 10,7 — O 7,4 — N 6,5 — M. G. 430.
 1) **s-Stearyl-2,4-Dimethylphenylharnstoff.** Sm. 92–93° (Soc. 69, 1601).
- $C_{27}H_{46}O_2N_2$ C 70,1 — H 10,0 — O 13,8 — N 6,1 — M. G. 462.
 1) **Delphinin** (J. 1877, 897). — III, 880.
- $C_{27}H_{46}O_8$ 1) **α-Scymnolschwefelsäure.** Na, Ba + 2C₂H₅O (H. 24, 335).
- $C_{27}H_{46}O_2Br$ 1) **Bromcerotinsäure.** Sm. 65–66° (Bl. [3] 7, 111). — I, 489.
 2) **Aethylester d. α-Bromcerotinsäure.** Sm. 46,5° (C. 1896 [1] 642).

- C₂₇H₂₅ON C 79.2 — H 13.4 — O 3.9 — N 3.4 — M. G. 409.
 1) Oxim d. Myriston. Sm. 51° (47—48°) (M. 5, 242; Soc. 63, 458). — I, 1031.
 C₂₇H₂₆O₂S 1) Cerylschwefelsäure. Na, Ca, Ba (C. 1897 [1] 1037).

C₂₇-Gruppe mit vier Elementen.

- C₂₇H₂₁ONCl₂ 1) 2,2-Di[*p*-Chlornaphtyl]amid d. Benzolcarbonsäure. Sm. 203° (B. 17, 1593). — II, 1168.
 C₂₇H₂₁ONS 1) Benzoylthio-2-Dinaphtylamin. Sm. 196—197° (B. 23, 2459). — II, 1180.
 C₂₇H₂₁O₂NS 1) Phenylester d. Thio-*β*-Dinaphtylamidoameisensäure. Sm. 215° (B. 24, 2916). — II, 869.
 C₂₇H₂₁O₂N₂Cl 1) Benzat d. 5-Chlor-6-Oxy-2,3-Diphenyl-1,4-Benzdiazin. Sm. 192° (C. 1895 [1] 855).
 C₂₇H₂₁ON₂S 1) *α*-Phenyl-*β*-[Thio-*β*-Dinaphtyl]harnstoff. Zers. bei 215—220° (B. 24, 2917). — II, 870.
 C₂₇H₂₁O₂N₂Br 1) Bromderivat d. Verbindung C₂₇H₂₀O₂N₂. Sm. 154° (B. 26, 1188). — IV, 1225.
 C₂₇H₂₀O₂N₂S 1) *αβ*-Dibenzoyl-*αβ*-Diphenylthioharnstoff. Sm. 160,5° (B. 28, 1322).
 2) *s*-Di[4-Benzoylphenyl]thioharnstoff. Sm. 166° (A. 210, 273; B. 14, 1839). — III, 184.
 C₂₇H₂₁O₂N₂S₃ 1) Tri[Benzoylamid] d. Benzol-1,3,5-Trisulfonsäure. Na₂, Ba₂ + 12H₂O (Am. 9, 343). — II, 1174.
 C₂₇H₂₁O₂N₂S₂ 1) Benzaldehydphtalimidomerkaptal. Sm. 155—156° (B. 25, 3053). — III, 8.
 C₂₇H₂₄ON₂S 1) *αβ*-Diphenyl-*α*-[2-Phenylthioureidobenzyl]harnstoff. Sm. 222° (J. pr. [2] 55, 244). — IV, 635.
 C₂₇H₂₄O₂N₂S 1) Benzaldehyd-1-Naphtylthionaminsäure 1-Amidonaphtalin. Sm. 84° (A. 274, 255). — III, 7.
 C₂₇H₂₄O₂N₂S₂ 1) *αβ*-Diphenyl-*αβ*-Di[4-Methylphenylsulfon]harnstoff. Sm. 210° (J. pr. [2] 51, 350).
 C₂₇H₂₄O₂N₂Br₂ 1) 5 oder 6-Methyl-2-[*p*-Brom-3,4-Dimethoxyphenyl]-1-[*p*-Brom-3,4-Dimethoxybenzyl]benzimidazol-1²,2'-Dicarbonsäure. Sm. 213° u. Zers. (B. 25, 1988). — IV, 619.
 C₂₇H₂₀O₂N₂P 1) Di[4-Methylphenylamid] d. Phenylphosphorsäure-2-Carbonsäurephenylester. Sm. 146° (B. 31, 2178).
 C₂₇H₂₇ON₂Br 1) *α*-[1-Naphtylamido]-*β*-[*α*-Bromisovaleryl-1-Naphtylamido]äthan. Sm. 223° (B. 31, 3247).
 C₂₇H₂₇O₂NBr₂ 1) Tri[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl]amin. Sm. 218—219° (223—224°). HBr (B. 29, 1110; A. 301, 278).
 C₂₇H₂₇O₂N₂Cl 1) 2-Nitrochlorbensylat d. Papaverin + 4(6 u. 9)H₂O. 2 + PtCl₄ (M. 9, 857). — IV, 441.
 C₂₇H₂₇O₂N₂S₂ 1) Trinitrotrimethyltribenzyl-*R*-Trimethyltrisulfon. Zers. oberh. 132° (B. 27, 1677). — III, 145.
 C₂₇H₂₈O₄NCl 1) Chlorbensylat d. Papaverin + 7H₂O. 2 + PtCl₄ (B. 18, 1578; M. 9, 330; J. 1866, 1718; J. pr. [2] 56, 323). — IV, 441.
 C₂₇H₂₉O₂N₂Br 1) Brommethylat d. Benzoylcinchonin (Bl. [3] 9, 714). — III, 835.
 C₂₇H₂₉O₂N₂J 1) Jodmethylat d. Benzoylcinchonin (Bl. [3] 9, 714). — III, 835.
 C₂₇H₂₉N₂ClP 1) Tri[Phenylamido]-2,4,5-Trimethylphenylphosphoniumchlorid. Sm. 247° (A. 294, 11). — IV, 1678.
 C₂₇H₂₉N₂BrP 1) Tri[Phenylamido]-2,4,5-Trimethylphenylphosphoniumbromid. Sm. 259° (A. 294, 13). — IV, 1678.
 C₂₇H₂₉N₂JP 1) Tri[Phenylamido]-2,4,5-Trimethylphenylphosphoniumjodid. Sm. 220° (A. 294, 13). — IV, 1678.
 C₂₇H₃₀ON₂P 1) Tri[Phenylamido]-2,4,5-Trimethylphenylphosphoniumhydrat. Sm. 203,5°. Salze siehe (A. 294, 11). — IV, 1678.
 C₂₇H₃₀O₄NJ 1) Jodäthylat d. Benzoylcodein + 1/2 H₂O (Soc. 28, 15, 321). — III, 906.
 C₂₇H₃₀O₂NJ 1) Jodallylat d. Allylhydrastin. Sm. 180° (A. 271, 351). — II, 2054.

- C₂₇H₃₀O₇N₂P** 1) Phenylamid d. Phosphorsäuretri[α -Oxypropionsäure]. Sm. 205° (A. 279, 81).
2) 2-Methylphenylamid d. Phosphorsäuretri[Oxyessigsäure]. Sm. 143° (A. 279, 61).
3) 4-Methylphenylamid d. Phosphorsäuretri[Oxyessigsäure]. Sm. 188° (A. 279, 65).
4) Phosphat d. β -Äthylbenzhydroxamsäure. Sm. 130—131° (B. 25, 40; 26, 1566). — II, 1198.
- C₂₇H₁₉O₁₁N₄S** 1) Alloxanbrucindisulfid + 1 $\frac{1}{2}$ H₂O (A. 248, 150). — III, 946.
- C₂₇H₃₀N₂Cl₁₁P₅** 1) Verbindung (aus Cincholoiponsäure) (M. 17, 375). — III, 842.
- C₂₇H₃₀N₂SP** 1) Tri[1,2,3,4-Tetrahydro-1-Chinoly]phosphinsulfid. Sm. 192° (B. 31, 1039). — IV, 1683.
- C₂₇H₃₁O₂N₂Cl** 1) Chlorbenzylat d. Chinin. (HCl, PtCl₄ + H₂O) (G. 13, 530). — III, 814.
2) Chlorbenzylat d. Conchinin. Sm. 190—195° (HCl, PtCl₄) (A. 269, 235). — III, 825.
- C₂₇H₃₁O₃N₂S** 1) 3,3'-Di[Diäthylamido]phenolsaccharin. Sm. 243° (Bl. [3] 17, 697).
- C₂₇H₃₁O₂N₂J** 1) Jodallylat d. Allylhydrastimid. Sm. 207° (B. 23, 2913). — II, 2054.
- C₂₇H₃₁O₂N₂Cl₂** 1) 2,6-Dichlorphenylidi[4-Diäthylamido-2-Oxyphenyl]methan (A. 299, 356).
- C₂₇H₃₁O₂N₂S** 1) Diäthylanilinsulfonphtalein (Am. 20, 129).
- C₂₇H₃₂O₂N₂J₂** 1) Di[Jodmethylat] d. Dioxymethylcinchotenin. Sm. 205° u. Zers. + 3 $\frac{1}{2}$ H₂O (Sm. 198° u. Zers.) (A. 269, 246). — III, 842.
- C₂₇H₃₂O₇N₂S** 1) Orcinichininsulfat + 2 H₂O (A. 130, 33; 134, 290; 138, 77). — III, 813.
- C₂₇H₃₂O₂N₂S₂** 1) Patentblau. Mg + 3 H₂O, CaOH (A. 294, 376; B. 29, 2290; Bl. [3] 13, 905).
- C₂₇H₃₂O₂NCl** 1) Chlornitrophillyrin (A. 118, 128). — III, 600.
- C₂₇H₃₂O₂NBr** 1) Bromnitrophillyrin (A. 118, 128). — III, 600.
- C₂₇H₃₃ON₂Cl** 1) α -Oxy-4-Chlor-4'-Di[Diäthylamido]triphenylmethan. Sm. 120 bis 121° (B. 19, 745). — II, 1086.
- C₂₇H₃₃O₆N₂P** 1) Phosphortrihydrobrenstraubensäurephenylhydrazid. Sm. 132° (B. 21, 2921). — IV, 639.
- C₂₇H₃₃O₃N₂S** 1) Verbindung (aus β -Phenylakrylsäurealdehyd u. 5-Thionylamido-1,2,4-Trimethylbenzol). Sm. 68° (A. 274, 238). — III, 59.
- C₂₇H₃₃O₁N₂S** 1) 3'-Oxy-4',4'-Di[Diäthylamido]triphenylmethan-4-Sulfonsäure (A. 294, 385).
- C₂₇H₃₅O₃N₂S** 1) 3'-Amido-4',4'-Di[Diäthylamido]triphenylmethan-4'-Sulfonsäure (A. 294, 383). — IV, 1196.
- C₂₇H₃₅ON₂J** 1) Jodmethylat- α -Methyläther d. α -Oxytri[β -Dimethylamido-phenyl]methan (B. 28 [2] 179).
- C₂₇H₃₅O₂N₂J** 1) Jodäthylat d. Dibutyrylmorphin (Soc. 28, 322). — III, 899.
- C₂₇H₃₅O₂N₂J** 1) Jodäthylat d. Narceinäthylester. Sm. 131—132° (A. 277, 41). — II, 2080.
- C₂₇H₃₅O₂N₂Br₂** 1) Di[Bromäthylat] d. Diäthyltetranitrodihydrocinchonin (J. pr. [2] 8, 307). — III, 836.
- C₂₇H₃₅ON₂Br₂** 1) Di[Bromäthylat] d. Diäthylhydrocinchonin (J. pr. [2] 8, 306). — III, 836.
- C₂₇H₄₁O₂NCl** 1) Nitrocholesterylechlorid. Sm. 148—149° (B. 12, 225; M. 15, 105; 17, 46). — II, 1074.
- C₂₇H₄₅O₂NS** 1) Hyotaurocholsäure (A. 70, 187). — I, 1181.
- C₂₇H₄₅O₂N₂S** 1) s-Stearyl-2,4-Dimethylphenylthioharnstoff. Sm. 71—72° (Soc. 69, 1601).

C₂₇-Gruppe mit fünf Elementen.

- C₂₇H₁₉O₆N₂Cl₂S₂** 1) Verbindung (aus d. Tri[Benzoylamid] d. 1,3,5-Benzoltrisulfonsäure) (Am. 9, 345). — II, 1175.
- C₂₇H₄₆O₁₀N₂Br₂S₂** 1) Verbindung (aus Seide) (J. 1879, 871). — IV, 1585.

C₂₈-Gruppe mit einem Element.

- C₂₈H₁₈ C 94,9 — H 5,1 — M. G. 354.
 1) 9,9'-Bianthryl. Sm. 300° (B. 18, 3035; 20, 1855; 21, 2512). — II, 303.
 C 94,5 — H 4,5 — M. G. 356.
 C₂₈H₂₀ 1) Paranthracen. Sm. 272—274° (244°) (Z. 1867, 290; A. Spl. 7, 264; J. pr. [2] 9, 248; [2] 44, 467; Am. 14, 599; 17, 658). — II, 259.
 C 93,9 — H 6,1 — M. G. 358.
 C₂₈H₂₂ 1) Tetrahydro-9,9'-Bianthryl. Sm. 248—249° (B. 21, 2512). — II, 303.
 C 93,3 — H 6,7 — M. G. 360.
 C₂₈H₂₄ 1) 9,9-Dibenzyl-9,10-Dihydroanthracen. Sm. 115° (B. 21, 2509). — II, 302.
 C 92,8 — H 7,2 — M. G. 362.
 C₂₈H₂₆ 1) αβγδ-Tetraphenylbutan. Fl. (C. 1898 [2] 284).
 2) ααββ-Tetraphenyl-β-Methylpropan. Sd. 272° (J. pr. [2] 41, 524). — II, 301.
 3) Kohlenwasserstoff (aus d. Pinakolin C₂₈H₂₄O). Sm. 213—213,5° (A. 189, 119). — II, 301.
 C 90,3 — H 9,7 — M. G. 372.
 C₂₈H₂₈ 1) Kohlenwasserstoff (aus Santonin). Sm. 93° (B. 26, 2507).
 C 88,5 — H 11,5 — M. G. 380.
 C₂₈H₃₀ 1) Kohlenwasserstoff (aus Cholesterin). Sd. 240° (A. 76, 368).
 C 85,3 — H 14,7 — M. G. 394.
 1) Oktokosan (B. 16, 391).

C₂₈-Gruppe mit zwei Elementen.

- C₂₈H₁₀O₁₅ C 57,3 — H 1,7 — O 40,9 — M. G. 586.
 1) Graphitoxyl + 1/2 H₂O (Am. ch. [6] 20, 23). — II, 2021.
 C₂₈H₁₁Cl₆ 1) Hexachlor-9,9'-Bianthryl. Sm. 308—310° (B. 21, 1183). — II, 304.
 C₂₈H₁₁O₆ C 78,2 — H 3,2 — O 18,6 — M. G. 430.
 1) Verbindung (aus d. Verb. C₂₇H₁₁O₅) (Soc. 53, 838). — III, 416.
 C₂₈H₁₁O₈ C 75,3 — H 3,1 — O 21,5 — M. G. 446.
 1) Verbindung (aus 9,10-Anthracinon-2-Sulfonsäure). Sm. oberh. 300° (B. 18, 1724; Soc. 53, 836). — III, 415.
 C₂₈H₁₁O₇ C 72,7 — H 3,0 — O 24,3 — M. G. 462.
 1) Verbindung (aus d. Verb. C₂₇H₁₁O₆) (Soc. 53, 834). — III, 415.
 C₂₈H₁₃O C 91,3 — H 4,3 — O 4,3 — M. G. 368.
 1) Tetraphenylfuran. Sm. 295—297° (Soc. 63, 772; 71, 1120). — II, 1000.
 C₂₈H₁₃O₈ C 81,0 — H 4,0 — O 12,0 — M. G. 400.
 1) α-Naphtofluoran (α-Naphtolphtalein). Sm. 300° (B. 4, 661; 26, 207). — II, 1989.
 2) β-Naphtofluoran (β-Naphtolphtalein). Sm. 293° (B. 26, 206). — II, 1989.
 C₂₈H₁₃O₆ C 75,0 — H 3,6 — O 21,4 — M. G. 448.
 1) Dibenzosäure d. 1,2-Dioxy-9,10-Anthracinon. — III, 422.
 2) Dibenzosäure d. 2,6-Dioxy-9,10-Anthracinon. Sm. 275° (J. 1873, 450). — III, 430.
 C₂₈H₁₃O₇ C 72,4 — H 3,4 — O 24,1 — M. G. 464.
 1) Dibenzosäure d. 1,2,6-Trioxy-9,10-Naphtochinon. Sm. 208—210° (B. 10, 1822). — III, 435.
 C₂₈H₁₃O₈ C 70,0 — H 3,3 — O 26,7 — M. G. 480.
 1) Tetrasalicylid (siehe auch C₂₈H₁₃O₆). Sm. 260—261° (A. 273, 77; B. 25, 3507). — II, 1498.
 2) Verbindung (aus Benzaldehyd u. Gallussäure) (B. 31, 151).
 C 88,4 — H 4,2 — N 7,4 — M. G. 380.
 C₂₈H₁₆N₂ 1) Diphenanthrylenazotid. subl.; Sm. oberh. 400° (M. 1, 159; J. pr. [2] 41, 335; Soc. 49, 845; 55, 109). — III, 444.
 2) Chrysonaphtasin (B. 20, 2443). — IV, 1096.
 C₂₈H₁₆Cl₂ 1) p-Dichlor-9,9'-Bianthryl (B. 21, 2513). — II, 303.
 C₂₈H₁₆Cl₁₀ 1) Dekachloroktohydro-9,9'-Bianthryl. Zers. bei 80° (B. 21, 1183). — II, 303.

- $C_{20}H_{16}Br_2$ 1) **P-Dibrom-9,9'-Bianthryl**. Sm. oberb. 300° (*B.* 20, 1855; 21, 2513). — II, 304.
- $C_{20}H_{16}Br_{10}$ 1) **Dekabromoktohydro-9,9'-Bianthryl**. Sm. 156—160° u. Zers. (*B.* 21, 1184). — II, 304.
- $C_{20}H_{16}O$ C 90,8 — H 4,9 — O 4,3 — M. G. 370.
1) **9,9'-Diphenanthryläther** (β -Phenanthryloxyd). Sm. 210°. Pikrat (*Soc.* 71, 1119).
- $C_{20}H_{16}O_2$ C 83,6 — H 4,5 — O 11,9 — M. G. 402.
1) **9-Oxy-9,9'-Bi[10-Keto-9,10-Dihydrophenanthryl]**. Sm. 155° (156 bis 157°) (*Soc.* 63, 773; 71, 1121). — II, 1000.
- $C_{20}H_{16}O_4$ C 80,4 — H 4,3 — O 15,3 — M. G. 418.
1) α -Naphtholphtalein + $\frac{1}{2}H_2O$ (*B.* 4, 726). — II, 1989.
2) **Phenanthrenchinhydron**. Sm. 167—169° (*A.* 211, 69; *B.* 19, 1870). — III, 442.
3) **Dilakton d. $\alpha\beta$ -Dioxy- $\alpha\alpha\beta\beta$ -Tetraphenyläthan- α^2, β^2 -Dicarbonsäure**. Sm. 265° (*A.* 291, 20).
4) **Acetat d. Dihydrodiphenylenoxyanthrachinon**. Sm. 180° (*B.* 23, 321). — III, 464.
5) **Dibenzot d. β -Dioxyanthracen** (D. d. Rufol). Sm. 263° (*B.* 11, 1616). II, 1152.
- $C_{20}H_{16}O_6$ C 77,4 — H 4,1 — O 18,4 — M. G. 434.
1) **Anhydrid d. 2-Benzoylbensol-1-Carbonsäure**. Sm. 120° (*B.* 14, 1866; *C.* 1895 [2] 443). — II, 1704.
- $C_{20}H_{16}O_8$ C 74,7 — H 4,0 — O 21,3 — M. G. 450.
1) **1,3-Phenyleneöster d. 3-Oxynaphtalin-2-Carbonsäure**. Sm. 232—233° (*B.* 26, 81). — II, 1691.
- $C_{20}H_{16}O_7$ C 72,1 — H 3,8 — O 24,0 — M. G. 466.
1) **Dibenzot d. 1,3,7-Trioxyanthonmonomethyläther** (D. d. Gentisin). Sm. 192° (*M.* 15, 8). — III, 210.
C 69,7 — H 3,7 — O 26,6 — M. G. 482.
- $C_{20}H_{16}O_8$ 1) **Hydrisalizarin** (*B.* 3, 395). — III, 425.
2) **3,4,5-Tribenzoxylbensol-1-Carbonsäure**. Sm. 191—192° (*A.* 163, 212; 301, 110). — II, 1922.
- $C_{20}H_{16}O_9$ C 67,5 — H 3,6 — O 28,9 — M. G. 498.
1) **Trisalicyclosalicylsäure**. Fl. (*A.* 150, 15; *M.* 4, 128). — II, 1498.
2) **Tetrasalicylid**. Sm. 205—230° (*A.* 163, 221; *M.* 4, 125). — II, 1498.
3) **Tetra-4-Oxybenzoid** (*A.* 172, 360; *B.* 15, 2588). — II, 1529.
- $C_{20}H_{16}O_{10}$ C 59,8 — H 3,2 — O 37,0 — M. G. 562.
1) **Tetra-3,4-Dioxybensol-1-Carbonsäure** (Tetraprotocatechusäure) (*B.* 15, 2590). — II, 1744.
- $C_{20}H_{16}N_2$ C 88,0 — H 4,7 — N 7,3 — M. G. 382.
1) **2,3-Diphenylphenanthrendiazin**. Sm. 265° (*B.* 28, 3180). — IV, 1096.
- $C_{20}H_{16}N$ C 91,0 — H 5,1 — N 3,8 — M. G. 369.
1) **Dianthracylamin** (Dianthramin). Sm. noch nicht bei 320° (*B.* 16, 1636). — II, 639.
2) **Di[9-Phenanthryl]amin**. Sm. 237° (*Soc.* 71, 1124).
C 84,6 — H 4,8 — N 10,6 — M. G. 397.
- $C_{20}H_{16}N_2$ 1) **1-Phenyl-3,5-Di[1-Naphtyl]-1,2,4-Triazol**. Sm. 75—78°? (*J. pr.* [2] 54, 162). — IV, 1217.
2) **1-Phenyl-3,5-Di[2-Naphtyl]-1,2,4-Triazol**. Sm. bei 160° (*J. pr.* [2] 54, 163). — IV, 1217.
3) **Tri[β -Chinoly]methan**. Sm. 202°. 3HCl, (3HCl, 3PtCl₄ + 3H₂O), Pikrat (*B.* 24, 1606). — IV, 1221.
4) **Phenylrosindulin**. Sm. 236°. HCl + $\frac{1}{2}H_2O$, (2HCl, PtCl₄), HNO₃, H₂SO₄ + H₂O, Pikrat (*B.* 21, 2621; 30, 1829; 31, 2431; *A.* 256, 241, 352). — IV, 1206.
5) **Phenylisosindulin**. Sm. 169—171°. HCl, HNO₃ (*B.* 29, 2754; 31, 304). — IV, 1202.
- $C_{20}H_{16}O$ C 90,3 — H 5,4 — O 4,3 — M. G. 372.
1) **Tetraphenylylfuran** (Lepiden). Sm. 175° (*Z.* 1867, 314; *G.* 19, 269). — III, 695.
- $C_{20}H_{16}O_2$ C 86,6 — H 5,1 — O 8,2 — M. G. 388.
1) **Dianthranol**. Sm. 246—251° (*Ann.* 18, 455).
2) $\alpha\delta$ -**Diketo- $\alpha\beta\gamma\delta$ -Tetraphenyl- β -Buten** (Oxylepiden, nadelförmiges). Sm. 220° (*A.* 153, 131, 353; *Z.* 1871, 315; *B.* 4, 337). — III, 311.

- C₁₇H₂₀O₄**
- 3) **Lakton d. α -Oxy- $\alpha\beta\gamma\gamma$ -Tetraphenylpropen- γ -Carbonsäure** (Oxy-
lepiden, tafelförmiges). Sm. 136° (*J. r.* 5, 16). — III, 312.
 - 4) **Oxylepiden** (oktaëdrisches). Sm. 232° (*J. r.* 5, 16; 7, 186; *J.* 1875, 409).
— III, 312.
 - 5) **Oxyisolepiden**. Sm. 161° (*J.* 1877, 395). — III, 312.
 - 6) **isom. Oxyisolepiden**. Sm. 162° (*J.* 1877, 396). — III, 312.
 - 7) **isom. Oxyisolepiden**. Sm. 152,5° (*J.* 1877, 396). — III, 312.
- C₁₇H₂₀O₃**
- C 83,2 — H 4,9 — O 11,9 — M. G. 404.
 - 1) **Dioxylepiden**. Sm. 157° (*Z.* 1871, 483). — III, 310.
 - 2) **Isodioxylepiden**. Sm. 164° (*J.* 1875, 410; *J. r.* 7, 190). — III, 310.
- C₁₇H₂₀O₂**
- C 80,0 — H 4,8 — O 15,2 — M. G. 420.
 - 1) **Dibenzosat d. $\alpha\beta$ -Dioxy- $\alpha\beta$ -Diphenyläthen** (Isobenzil). Sm. 159° (*A.*
135, 172; 155, 104; *B.* 16, 994; 19, 1862; 24, 1265, 1276).
 - 2) **α -Dibenzosat d. $\alpha\beta$ -Di[2-Oxyphenyl]äthen**. Sm. 107—108° (*B.* 24, 3179).
— II, 1152.
 - 3) **β -Dibenzosat d. $\alpha\beta$ -Di[2-Oxyphenyl]äthen**. Sm. 174° (*A.* 277, 356).
— II, 1152.
 - 4) **Dibenzosat d. $\alpha\beta$ -Di[3-Oxyphenyl]äthen**. Sm. 160° (*A.* 277, 359). —
II, 1152.
 - 5) **Dibenzosat d. $\alpha\beta$ -Di[4-Oxyphenyl]äthen**. Sm. 238° (*A.* 277, 360). —
II, 1152.
 - 6) **Inn. Anhydrid d. α -Oxydiphenylessigsäure** (Benzilid). Sm. 196° (*B.*
22, 1213). — II, 1697.
- C₁₇H₂₀O**
- C 77,1 — H 4,6 — O 18,3 — M. G. 436.
 - 1) **Dibenzosat d. p -Dioxy- p -Methyldiphenylketon** (D. d. Benzomethyl-
resorcin). Sm. 149° (*B.* 28, 2306 Anm.). — III, 216.
- C₁₇H₂₀O₆**
- C 74,3 — H 4,4 — O 21,2 — M. G. 452.
 - 1) **Dibenzosat d. Cotoïn** (D. d. 2,4,6-Trioxydiphenylketonmonomethyläther).
Sm. 134—135° (*A.* 282, 194). — III, 203.
 - 2) **Tribenzosat d. 2,4,6-Trioxy-1-Methylbenzol**. Sm. 111—112° (*A.* 302, 179).
C 71,7 — H 4,3 — O 23,9 — M. G. 468.
- C₁₇H₂₀O₇**
- 1) **1,3,5-Tribenzosat d. 1,2,3,5-Tetraoxybenzol-2-Methyläther**. Fl.
(*B.* 26, 2025). — II, 1152.
- C₁₇H₂₀O₁₀**
- C 65,1 — H 3,9 — O 31,0 — M. G. 516.
 - 1) **Anhydrid d. Kinoroth** (*B.* 11, 1881). — III, 687.
 - 2) **Tetracetat d. Cörlin**. Sm. 256° (*A.* 209, 276). — II, 2088.
- C₁₇H₂₀O₁₁**
- C 63,2 — H 3,7 — O 33,1 — M. G. 532.
 - 1) **Tetracetat d. Hydrogallein**. Sm. 247—248° (*A.* 209, 263). — II, 2093.
- C₁₇H₂₀N₂**
- C 87,5 — H 5,2 — N 7,3 — M. G. 384.
 - 1) **p -Diamidobianthryl**. Sm. 307—309° u. Zers. Pikrat (*B.* 20, 2433). —
IV, 1095.
 - 2) **Tetraphenyl-1,4-Diazin** (Amaron; Benzoimid; Ditolanazotid). Sm. 245
bis 246° (*Berz. J.* 25, 635; *A.* 135, 185; *B.* 21, 489, 1269; 22, 2302;
26, 1973; 28, 3180; *Soc.* 49, 826; 71, 35, 527, 531; *J. pr.* [2] 41, 333;
[2] 52, 125). — III, 37; IV, 1095.
 - 3) **Nitril d. $\alpha\alpha\beta\beta$ -Tetraphenyläthan- $\alpha\beta$ -Dicarbonsäure** (*B.* 22, 1227;
A. 233, 349; 250, 148). — II, 1916.
- C₁₇H₂₀N**
- C 81,6 — H 4,8 — N 13,6 — M. G. 412.
 - 1) **9-Amido-5-Phenylrosindulin[5]**. Sm. 147° u. Zers. (*A.* 272, 320). —
IV, 1296.
 - 2) **5- p -Amidophenylrosindulin[5]**. (2HCl, PtCl₄), H₂SO₄ (*B.* 31, 2432).
 - 3) **2-Phenylamidorosindulin[9]**. 2HCl, (2HCl, PtCl₄) (*A.* 272, 325). —
IV, 1297.
 - 4) **9- p -Amidophenylrosindulin[9]**. Sm. 247° (*B.* 23, 840). — IV, 1202.
 - 5) **10-Phenylamidorosindulin[9]**. Sm. 151—152° u. Zers. HCl (*B.* 29,
2757). — IV, 1297.
- C₁₇H₂₀N₆**
- C 76,4 — H 4,5 — N 19,1 — M. G. 440.
 - 1) **1,5,1',5'-Tetraphenyl-3,3'-Bi-1,2,4-Triazol**. Sm. 257—258° (*B.* 22,
3115). — IV, 1332.
- C₁₇H₂₀Cl₂**
- 1) **$\alpha\alpha\beta\beta$ - $\delta\delta$ -Hexachlor- $\alpha\beta\gamma\delta$ -Tetraphenylbutan** (Ditolanhexachlorid). Sm.
150° (*B.* 4, 379; *A.* 248, 28). — II, 272.
- C₁₇H₂₀S**
- 1) **Tetraphenylthiophen** (Thiolepidin; Thionessal). Sm. 184° (*A.* 52, 354;
138, 94; 140, 239; 144, 192; 153, 349; 178, 376; *B.* 23, 2473; 24,
3311). — III, 750.

- C₂₅H₂₀S**
C₂₅H₂₁N
- 2) Verbindung (aus Stilben). Sm. 240–250° (B. 24, 3312). — III, 751. C 90,6 — H 5,6 — N 3,8 — M. G. 371.
 - 1) **1,2,3,5-Tetraphenylpyrrol**. Sm. 196–197° (Soc. 57, 646). — IV, 474.
 - 2) **2,3,4,5-Tetraphenylpyrrol**. Sm. 214,5° (211–212°) (B. 21, 3107; 22, 855; A. 269, 121). — IV, 478.
- C₂₅H₂₁N₃**
- 1) **1,4-Diphenylimido-2-Phenylamido-1,4-Dihydronaphtalin**. Sm. 159° + $\frac{1}{2}$ C₂H₄O (Sm. 142–143°) (A. 262, 247; 272, 346). — IV, 1162.
 - 2) **ms-Aethylidinaphtophenylaposafranin**. Sm. 254–255°. HCl (B. 31, 2487).
 - 3) Verbindung (aus Hydrobenzamid). subl. bei 300° (A. 111, 153). — III, 21.
 - 4) Verbindung (aus α -Naphtalinazosalicylsäure). Sm. 197° (A. 251, 196). — IV, 1470.
 - 5) Verbindung (aus β -Naphtalinazosalicylsäure). Sm. 230° (A. 251, 196). — IV, 1470.
- C₂₅H₂₂O**
- 1) **10-Keto-9,9-Dibenzyl-9,10-Dihydroanthracen**. Sm. 217° (B. 21, 2509). — III, 266.
 - 2) **10-Keto-9,9-Di[4-Methylphenyl]-9,10-Dihydroanthracen**. Sm. 235° (Bl. [3] 15, 392; [3] 17, 985).
 - 3) **10-Keto-3-Methyl-9-Phenyl-9-[4-Methylphenyl]-9,10-Dihydroanthracen**. Sm. 176° (Bl. [3] 15, 392; [3] 17, 987).
 - 4) **α -Keto- β -Diphenyl- α -Fluorenylpropan**. Sm. 149–150° (B. 21, 1342). — III, 266.
 - 5) Verbindung (aus d. Aethylester d. Anhydridbenzilacetessigsäure). Sm. 187–188° (Soc. 69, 744).
 - 6) **Isom. Verbindung** (aus d. Aethylester d. Anhydridbenzilacetessigsäure). Sm. 155–159° (Soc. 69, 746).
- C₂₅H₂₁O₂**
- 1) **α -Diketo- $\alpha\beta\gamma\delta$ -Tetraphenylbutan** (Bidesyl; Hydroxylepiden). Sm. 260–261° (254–255°) (J. 1875, 409; J. r. 7, 188; B. 21, 1356; 22, 553, 855; A. 289, 327). — III, 309.
 - 2) **Isobidesyl**. Sm. 160–161° (B. 21, 1358). — III, 310.
 - 3) **Anthrapinakon** (9,9'-Dioxy-9,10-Dihydrobianthracyl). Sm. 182° u. Zers. (B. 18, 3034). — II, 1106.
 - 4) **Dibenzyläther d. 9,10-Dioxyanthracen**. Sm. 220° (B. 18, 3038). — II, 1000.
 - 5) Verbindung (aus d. Aethylester d. Anhydridbenzilacetessigsäure). Sm. 221° (Soc. 69, 744).
- C₂₅H₂₂O₃**
- 1) **Benzoinäther**. Sm. 157° (A. 155, 94). — III, 223.
 - 2) **β -Benzoyl- $\alpha\alpha\beta$ -Triphenylpropionsäure** (Oxylepidensäure). Sm. 196° u. Zers. (J. r. 5, 18; Soc. 57, 747; J. 1877, 397). — III, 310.
 - 3) Verbindung (aus d. Anhydro- $\alpha\beta$ -Dioxy- $\alpha\beta$ -Diphenyläthan). Sm. 154,5 bis 155° (A. 198, 169). — II, 1101.
- C₂₅H₂₂O₄**
- 1) **Dibenzooat d. 4,4'-Dioxy-3,3'-Dimethylbiphenyl**. Sm. 185° (B. 21, 1067). — II, 993.
 - 2) **Dibenzooat d. $\alpha\alpha$ -Di[4-Oxyphenyl]äthan**. Sm. 152° (B. 11, 286). — II, 1151.
 - 3) **Dibenzooat d. $\alpha\beta$ -Dioxy- $\alpha\beta$ -Diphenyläthan**. Sm. 247° (A. 182, 278). — II, 1145.
 - 4) **Dibenzooat d. Isohydrobenzoin**. Sm. 155–156° (A. 182, 287; B. 17, 910). — II, 1145.
 - 5) **$\alpha\alpha\beta\beta$ -Tetraphenyläthan- $\alpha\beta$ -Dicarbonsäure**. Sm. 260–262° u. Zers. (B. 22, 1538). — II, 1916.
- C₂₅H₂₃O₃**
- 1) **Anhydrid d. α -Oxydiphenyllessigsäure** (Dibenzilsäure). Sm. 196° (B. 2, 385; 22, 1213). — II, 1697.
- C₂₅H₂₄O₂**
- 1) **Rhizocarpsäure** (oder C₂₅H₂₄O₂). Sm. 177–178°. K + H₂O (J. pr. [2] 56, 511).
 - 2) **Diacetat d. Verb. C₂₄H₁₆O₅** (B. 10, 1469). — II, 917.

- $C_{22}H_{22}O_6$ C 69,1 — H 4,5 — O 26,3 — M. G. 486.
1) Tetracetat d. Binaphtyldihydrochinon. Sm. 165—166° u. Zers. (B. 17, 3025). — III, 397.
- $C_{22}H_{22}O_6$ C 66,9 — H 4,4 — O 28,7 — M. G. 502.
1) Tetracetat d. Di[3,4-Dioxy-1-Naphtyl]äther. Sm. 164—165° (B. 30, 2201).
- $C_{22}H_{22}O_{11}$ C 62,9 — H 4,1 — O 33,0 — M. G. 534.
1) Kinoroth. Sm. 160—170° (B. 11, 1880). — III, 687.
2) Lakton d. Eichengerbsäure (Fr. 20, 217). — III, 587.
- $C_{22}H_{22}O_{13}$ C 59,4 — H 3,9 — O 36,7 — M. G. 566.
1) Thujetinsäure (J. 1858, 514). — III, 614.
- $C_{22}H_{22}O_{14}$ C 57,7 — H 3,8 — O 38,5 — M. G. 582.
1) Chinoroth. Ca, Ba (A. 143, 271). — III, 586.
- $C_{21}H_{21}N_2$ C 87,0 — H 5,7 — N 7,2 — M. G. 386.
1) 1-Phenylamido-2,3,5-Triphenylpyrrol. Sm. bei 230° u. Zers. (B. 21, 551). — IV, 786.
2) 1,3,4,6-Tetraphenyl-1,2-Dihydro-1,2-Diazin. Sm. 149° (Soc. 57, 647; A. 289, 325). — IV, 1082.
3) Benzylolphin. Sm. 165°. (2HCl, PtCl₄ + 3C₂H₅O) (Soc. 67, 39). — III, 27.
4) Verbindung (aus Benzil u. 6,6'-Diamido-3,3'-Dimethylbiphenyl). Sm. 235° (B. 26, 1705). — IV, 1095.
- $C_{20}H_{20}N_4$ C 81,1 — H 5,3 — N 13,5 — M. G. 414.
1) 2,7-Di[Phenylamido]-1-Phenylazobenzol? (B. 23, 528). — IV, 1397.
2) Di[Phenylhydrazon] d. Diphensuccinon. Sm. bei 260—270° u. Zers. (A. 247, 156). — IV, 786.
3) Di[Benzylidenamido]dimethyldiphenylenazon. Sm. 239° u. Zers. (B. 26, 2241). — IV, 1288.
- $C_{19}H_{19}N_3$ C 83,8 — H 5,7 — N 10,5 — M. G. 401.
1) 1,2,4-Tri[Phenylamido]naphthalin. Sm. 148° (A. 256, 251). — IV, 1162.
2) Verbindung (aus Benzolnhydrazin). Sm. 261° (J. pr. [2] 52, 126). — III, 225.
- $C_{18}H_{18}O$ C 89,4 — H 6,4 — O 4,2 — M. G. 376.
1) α -Phenyl-4-Methylphenylpinakolin. Sm. 214—215° (A. 189, 108; B. 10, 1477; 11, 71). — III, 265.
2) β -Phenyl-4-Methylphenylpinakolin. Sm. 136—137° (A. 189, 110; B. 10, 1477). — III, 266.
- $C_{17}H_{17}O_2$ C 85,7 — H 6,1 — O 8,2 — M. G. 392.
1) Anhydrid d. Hydrobenzoin. Sm. 131—132° (A. 160, 186; 198, 158; B. 24, 1782). — II, 1100.
2) Anhydrid d. Isohydrobenzoin. Sm. 101—102,5° (A. 198, 159). — II, 1102.
3) Acetat d. α -Oxy- $\alpha\alpha\beta\beta$ -Tetraphenyläthan. Sm. 131°. — II, 1095.
- $C_{17}H_{17}O_3$ C 68,8 — H 4,9 — O 26,2 — M. G. 488.
1) Verbindung (aus δ -Di[2,5-Dioxy-1-Methyl]biphenyl). Sm. 217—220° (M. 10, 180). — II, 956.
- $C_{17}H_{17}O_{12}$ C 60,9 — H 4,3 — O 34,8 — M. G. 552.
1) Eichenroth (Fr. 20, 219). — III, 587.
- $C_{17}H_{17}O_{13}$ C 59,2 — H 4,2 — O 36,6 — M. G. 568.
1) Tetracetat d. Purpurogallin. Sm. 186° (J. 1862, 683; B. 20, 1279). — III, 346.
- $C_{17}H_{17}O_{19}$ C 50,6 — H 3,6 — O 45,8 — M. G. 664.
1) Chebulinsäure + H₂O (B. 26 [2] 245).
- $C_{17}H_{17}N_2$ C 86,6 — H 6,2 — N 7,2 — M. G. 388.
1) $\alpha\beta$ -Di[Benzylidenamido]- $\alpha\beta$ -Diphenyläthan. Sm. 152° (164°) (B. 22, 2301; 28, 3179; A. 245, 285). — IV, 979.
2) 4,4'-Di-Benzylidenamido]-2,2'-Dimethylbiphenyl. Sm. 172—173° (B. 28, 2554). — IV, 980.
3) 1,2-Di[1-Naphtylamidomethyl]benzol. Sm. 148° (B. 31, 1158).
4) 1,4-Di[Methyl-2-Naphtylamido]benzol. Sm. 180° (B. 22, 1081). — IV, 587.

- C₂₅H₁₄N₂**
- 5) $\alpha\beta$ -Di[4-Methylphenylimido]- $\alpha\beta$ -Diphenyläthan. Sm. 161° (M. 9, 691). — III, 284.
 - 6) Di[Phenylbenzylmethylen]hydrazin (Benzylphenylketazin). Sm. 164° (J. pr. [2] 52, 137). — III, 218.
 - 7) α -Dibenzilazin (Biphenylbenzylazimethylen). Sm. 161–162° (J. pr. [2] 44, 184). — III, 268.
 - 8) Benzylamarin. Sm. 123–124°. HCl, (2HCl, PtCl₄ + 2 $\frac{1}{2}$ H₂O), H₂Cr₂O₇, Oxalat, (Ag, HCl) (B. 13, 1418, 1419; 16, 1273; 18, 1851, 3079). — III, 24.
 - 9) 6-Methyl-2,3-Diphenyl-1-[4-Methylphenyl]-1,2-Dihydro-1,4-Benzodiazin (B. 24, 721). — IV, 1076.
- C₂₆H₁₄N₄**
- 10) Base (aus Hydrobenzamid) (A. 111, 153). — III, 21.
C 80,8 — H 5,8 — N 13,4 — M. G. 416.
 - 1) Tetraphenyltetracarbazon. Sm. 137° (A. 232, 235). — IV, 1291.
 - 2) p-Diphenylenbisdihydrochinazolin. Sm. oberh. 300°. 2HCl, (2HCl, PtCl₄) (B. 29, 1452). — IV, 1306.
 - 3) Verbindung (aus Anilin u. Glyoxal). (2HCl, PtCl₄) (B. 11, 831; A. 140, 124). — II, 446.
C 75,7 — H 5,4 — N 18,9 — M. G. 444.
- C₂₅H₁₄N₄**
- 1) 2,3,5,6-Tetra[β -Amidophenyl]-1,4-Diazin. Sm. oberh. 260° u. Zers. 4HCl + 5H₂O, (4HCl, PtCl₄ + 11H₂O) (C. 1896 [1] 702).
C 83,4 — H 6,2 — N 10,4 — M. G. 403.
- C₂₅H₁₅N₃**
- 1) 5-Dimethylamido-2,4-Di[Benzylidenamido]biphenyl. Sm. 146–147° (A. 303, 357).
C 78,0 — H 5,8 — N 16,2 — M. G. 431.
- C₂₅H₁₅N₅**
- 1) 1,3-Di[4-Methylphenylamido]methylen-2-Phenylimido-2,3-Dihydrobenzimidazol. Sm. 187° (B. 24, 2508). — IV, 567.
 - 2) 2-[4-Methylphenyl]imido-1,3-Di[Phenylamido]methylen-5-Methyl-2,3-Dihydrobenzimidazol. Sm. 176° (B. 24, 2522). — IV, 624.
C 85,3 — H 6,6 — O 8,1 — M. G. 394.
- C₂₅H₂₀O₂**
- 1) $\alpha\beta$ -Dioxy- $\alpha\beta$ -Diphenyl- $\alpha\beta$ -Di[4-Methylphenyl]äthan (Phenyltolylpinakon). Sm. 164–165° (B. 10, 1476). — II, 1106.
 - 2) α -Desoxybenzoinpinakon. Sm. 213° (A. 155, 62; 174, 332; J. r. 4, 353; 7, 46). — II, 1106.
 - 3) β -Desoxybenzoinpinakon. Sm. 172° (A. 248, 9). — II, 1106.
 - 4) Isodesoxybenzoinpinakon. Sm. 61° (A. 155, 98). — II, 1106.
C 82,0 — H 6,3 — O 11,7 — M. G. 410.
- C₂₅H₂₀O₃**
- 1) $\alpha\beta\delta$ -Trioxy- $\alpha\beta\gamma\delta$ -Tetraphenylbutan. Sm. 175° (C. 1898 [1] 1232).
C 78,9 — H 6,1 — O 15,0 — M. G. 426.
- C₂₅H₂₀O₄**
- 1) $\alpha\beta\gamma\delta$ -Tetraoxy- $\alpha\beta\gamma\delta$ -Tetraphenylbutan (Benzoïnpinakon; Tetraphenylerythrit). Sm. bei 235° u. Zers. (C. 1898 [1] 1232).
C 76,0 — H 5,9 — O 18,1 — M. G. 442.
- C₂₅H₁₆O₅**
- 1) Saliretin (siehe C₁₄H₁₄O₅) (A. ch. [3] 7, 215). — II, 1109.
 - 2) α -[4-Isopropylbenzoyl]- β -Aethyläther d. $\alpha\beta$ -Dioxy- $\gamma\delta$ -Diketo- $\alpha\delta$ -Diphenyl- α -Buten. Sm. 108–109° (B. 27, 714). — III, 318.
C 73,4 — H 5,7 — O 20,9 — M. G. 458.
- C₂₅H₂₀O₆**
- 1) 1,2-Phthalat d. 3,4-Dioxy-1-Allylbenzol-3-Methyläther (Ph. d. Eugenol). Sm. 98,5–99° (C. 1897 [2] 275; B. 30, 1796).
C 70,9 — H 5,5 — O 23,6 — M. G. 474.
- C₂₅H₁₈O₇**
- 1) Verbindung (aus 1,3-Dioxybenzol) (A. ch. [7] 1, 99). — II, 919.
C 60,7 — H 4,7 — O 34,6 — M. G. 554.
- C₂₅H₁₈O₁₂**
- 1) Chinovaroth (A. 79, 138; 143, 273). — III, 586.
C 86,1 — H 6,7 — N 7,2 — M. G. 390.
- C₂₅H₁₈N₂**
- 1) 1,2-Di[Diphenylamido]- β -Tetramethylen? Sm. 50° (B. 14, 2095). — IV, 1091.
- C₂₅H₁₆N₄**
- 2) Base (aus d. Base C₂₅H₁₇N₃). Sm. 163° (B. 26, 1705). — IV, 1091.
C 80,4 — H 6,2 — N 13,4 — M. G. 418.
 - 1) $\alpha\beta$ -Di[4-Benzylidenamidophenylamido]äthan. Sm. 226–227° (Soc. 71, 424). — IV, 587.
 - 2) $\alpha\beta$ -Di[β -Benzyliden- α -Phenylhydrazido]äthan. Sm. 194,5° (A. 254, 126). — IV, 750.
 - 3) $\alpha\delta$ -Di[Phenylhydrazon]- $\alpha\delta$ -Diphenylbutan. Sm. bei 180° (B. 21, 3056). — IV, 786.
 - 4) $\alpha\beta$ -Di[Methylphenylhydrazon]- $\alpha\beta$ -Diphenyläthan. Sm. 179–180° (A. 253, 16). — IV, 785.

- C₂₅H₂₅N₅** C 75,3 — H 5,8 — N 18,8 — M. G. 446.
1) **Difo-Azodibenzylamin**. Sm. 230° (B. 24, 3558; 25, 663). — IV, 1385.
- C₂₄H₂₇N₃** C 83,0 — H 6,7 — N 10,3 — M. G. 405.
1) **Phenylhydrazon d. Dibenzylidencetropinon**. Sm. 193° (B. 30, 735). — IV, 466.
- C₂₄H₂₇N₅** C 77,6 — H 6,2 — N 16,2 — M. G. 433.
1) **Base** (aus 1,3-Di[Phenylamido]benzol u. 4-Nitroso-1-Dimethylamidobenzol). Sm. 210—212°. + C₆H₆ (Sm. 178°) (A. 289, 205). — IV, 1285.
2) **Verbindung** (aus *s*-Bisdiphenylformamidylphenylhydrazin). α -Derivat Sm. 258—260°; β -Derivat Sm. 258—260° (B. 26, 1190). — IV, 1225.
- C₂₃H₂₆O** C 88,4 — H 7,3 — O 4,2 — M. G. 380.
1) **5-Phenyl-2,3-Di[4-Isopropylphenyl]furan**. Sm. 85° (B. 26, 64; A. 289, 323). — III, 695.
- C₂₃H₂₆O₄** C 73,1 — H 6,1 — O 20,8 — M. G. 460.
1) **Triacetat d. Tri[4-Oxy-3-Methylphenyl]methan**. Sm. 170° (B. 27, 1815).
C 58,7 — H 4,9 — O 36,4 — M. G. 572.
1) **Hexaacetat d. Aloin**. Sm. 140—141° (B. 23 [2] 207). — III, 618.
- C₂₃H₂₆O₁₄** C 57,1 — H 4,8 — O 38,1 — M. G. 588.
1) **Eichenrindengerbsäure + H₂O + 3 PbO** (Fr. 20, 213). — III, 587.
- C₂₂H₂₁N₂** C 85,7 — H 7,1 — N 7,1 — M. G. 392.
1) $\alpha\beta$ -Di[Benzylamido]- $\alpha\beta$ -Diphenyläthan. Sm. 153° (B. 22, 2301). — IV, 978.
2) $\alpha\beta$ -Di[Phenylbenzylamido]äthan. Sm. 134—135° (C. 1898 [1] 381).
3) **Tetrabenzylhydrazin**? Sm. 149° (A. 257, 225). — IV, 1089.
4) **Tetra[4-Methylphenyl]hydrazin**. Sm. 138° u. ger. Zers. (Soc. 67, 1093). — IV, 803.
5) **Di[α -(2-Naphtyl)butyliden]hydrazin**. Sm. 130° (B. [3] 17, 313).
C 80,0 — H 6,7 — N 13,3 — M. G. 420.
1) ***p*-Benzylidenimid = (C₆H₅N₂)₂**. Sm. 110—115°. (4HCl, 2PtCl₄) (B. 19, 1612; 28, 1650; A. 259, 55). — IV, 186.
2) **4,4'-Di[Aethylphenylamido]azobenzol**. Sm. 178° (M. 4, 798). — IV, 1363.
3) **2,2'-Di[2-Methylphenylamidomethyl]azobenzol**. Sm. 160° (J. pr. [2] 51, 274). — IV, 1385.
4) **Verbindung** (aus *s*-Dibenzylhydrazin). Sm. 152° (B. 28, 2346; J. pr. [2] 58, 383). — IV, 811.
- C₂₁H₂₄Pb** 1) **Bleitetra[4-Methylphenyl]**. Sm. 239—240° (B. 20, 721). — IV, 1716.
- C₂₀H₂₄Si** 1) **Siliciumtetrabenzyl**. Sm. 127,5°; Sd. oberh. 550° (B. 18, 1543; 19, 1023). — IV, 1702.
2) **Siliciumtetra[3-Methylphenyl]**. Sm. 150,5°; Sd. oberh. 550° (B. 19, 1021). — IV, 1702.
3) **Siliciumtetra[4-Methylphenyl]**. Sm. 228°; Sd. oberh. 450° (B. 18, 1542; 19, 1019). — IV, 1702.
- C₂₀H₂₀O₅** 1) **Farbstoff** (aus Beth-a-barra-Holz) + 3 H₂O = (C₂₀H₂₀O₅)₂. Sm. 135° (Am. 3, 22). — III, 651.
C 84,4 — H 7,6 — O 8,0 — M. G. 398.
- C₂₀H₂₀O₂** 1) $\alpha\beta$ -Diketo- β -Phenyl- $\alpha\beta$ -Di[4-Isopropylphenyl]butan (Phenacyldeoxy-cuminoin). Sm. 145° (A. 289, 321; B. 26, 63). — III, 305.
- C₂₀H₂₀O₄** C 78,1 — H 7,0 — O 14,9 — M. G. 478.
1) **Lakton d. 1-Di[3-Methyl-6-Isopropylphenoxy]oxymethylbenzol-2-Carbonsäure** (Thymolphthalid). Sm. 84—85° (B. 28, 1876).
C 75,3 — H 6,7 — O 17,9 — M. G. 446.
- C₂₀H₃₀O₅** 1) **Stearopten** (aus Cassiaöl) (J. 1850, 509). — III, 58.
- C₂₀H₃₀O₇** C 70,3 — H 6,3 — O 23,4 — M. G. 478.
1) **Cubensäure** (oder C₁₅H₁₄O₇) + H₂O (J. 1861, 411; 1870, 881; 1873, 863). — II, 1114.
2) **Anhydrid d. Dihydrocurcumin**. Sm. bei 120° (Am. 4, 360). — III, 660.
C 55,4 — H 4,9 — O 39,6 — M. G. 606.
- C₂₀H₃₀O₁₅** 1) **Eichengerbsäure** (Fr. 20, 213). — III, 587.
- C₂₀H₃₀N₄** C 70,3 — H 6,3 — N 23,4 — M. G. 478.
1) **5,5'-Diphenylazo-4,4'-Diamido-2,2'-Di[Dimethylamido]biphenyl** (4HCl, PtCl₄) (B. 30, 2914). — IV, 1403.

- C₁₆H₁₃O₁₀** C 63,6 — H 6,1 — O 30,3 — M. G. 528.
- C₁₆H₁₃N₃** 1) Triacetat d. Kosin (C. 1897 [2] 1076).
C 84,8 — H 8,1 — N 7,1 — M. G. 396.
- 1) *p*-Di[Diäthylamido]-*p*-Binaphtyl. Sm. 190°; Sd. oberh. 360° (Soc. 41, 182). — IV, 1073.
- C₁₆H₁₇N₄** C 79,2 — H 7,5 — N 13,2 — M. G. 424.
- 1) 4,4'-Di[Diäthylamido]-1,1'-Azonaphthalin. Sm. 143°. 2 Pikrat (M. 16, 803). — IV, 1391.
- C₁₈H₁₁O** C 87,1 — H 8,8 — O 4,1 — M. G. 386.
- 1) β -Oxy-*aaa*-Tri[4-Methylphenyl]- β -Methylpropan. Sd. oberh. 300° (J. pr. [2] 37, 370). — II, 1094.
- C₁₈H₁₄O₃** C 72,1 — H 7,3 — O 20,6 — M. G. 450.
- 1) Bixin. Sm. 175–176°. Na + 2H₂O, Na₂ + 2H₂O, K + 2H₂O, K₂ + 2H₂O, Ca, Ba (J. 1861, 709; 1864, 546; 1867, 730; B. 3, 166; 11, 864; 30, 1072). — III, 651.
- C₁₉H₁₄O₁₇** C 52,3 — H 5,3 — O 42,4 — M. G. 642.
- 1) Lokain. NH. (J. 1869, 1169; 1871, 1106; 1872, 1068). — III, 596.
- C₁₉H₁₄N₄** C 78,9 — H 8,0 — N 13,1 — M. G. 426.
- 1) 4-[4-Diäthylamidobensylidenamido]benzol. Sm. 206,5–207,5°. 2HCl + 7H₂O (B. 31, 2255).
- C₁₉H₁₅N₃** C 81,3 — H 8,5 — N 10,2 — M. G. 413.
- 1) Tri[4-norm. Propylphenyl]guanidin. (2HCl, PtCl₄) (B. 17, 1226). — II, 549.
- 2) Tri[4,4,6-Trimethylphenyl]guanidin. Sm. 225° (B. 15, 1014).
- C₁₉H₁₆O₄** C 77,1 — H 8,2 — O 14,7 — M. G. 436.
- 1) Diisoamylester d. α -Truxillsäure (B. 22, 2242). — II, 1901.
- C₁₉H₁₆O₁₇** C 52,2 — H 5,6 — O 42,2 — M. G. 644.
- 1) Tetracetylamygdalinsäure + H₂O (A. 154, 352). — II, 2108.
- C₁₉H₁₆N₄** C 78,5 — H 8,4 — N 13,1 — M. G. 428.
- 1) Tetralutidin. (HCl, PtCl₄) (J. 1861, 430). — IV, 132.
- C₁₉H₁₇N₃** C 81,0 — H 8,9 — N 10,1 — M. G. 415.
- 1) Tri[4-Dimethylamido-2-Methylphenyl]methan. Sm. 190–191° (B. 24, 562). — IV, 1199.
- 2) 5-Amido-4',4'-Di[Diäthylamido]-2'-Methyltriphenylmethan. Sm. 103° (B. 24, 3135). — IV, 1197.
- C₁₉H₁₈O₄** C 76,7 — H 8,7 — O 14,6 — M. G. 438.
- 1) Bryogenin (Bl. [3] 9, 1055). — III, 573.
- 2) *d*-Diborneolester d. Benzol-1,2-Dicarbonsäure. Sm. 101° (B. 22 [2] 255). — III, 471.
- 3) *l*-Diborneolester d. Benzol-1,2-Dicarbonsäure. Sm. 101° (B. 22 [2] 255). — III, 472.
- 4) Disoborneolester d. Benzol-1,2-Dicarbonsäure. Sm. 118° (B. 22 [2] 255). — III, 473.
- C₁₉H₁₈O₁₉** C 49,6 — H 5,6 — O 44,8 — M. G. 678.
- 1) Oktacetyldiglykose. Sm. 39–40° (Bl. 12, 204; B. 12, 1940; 26, 2402). — I, 1049.
- 2) isom. Oktacetyldiglykose. Sm. 131° (B. 12, 1940; 13, 266; 22, 1466; 25 [2] 911; 26, 2402). — I, 1049.
- 3) Oktacetylmaltose. Sm. 158–159° (156–157°) u. Zers. (B. 13, 267; 25, 440, 1019; A. 220, 215; Soc. 67, 212). — I, 1061.
- 4) Oktacetylmelibiose. Sm. 170–171° (B. 23, 1441). — I, 1061.
- 5) Oktacetylmilchzucker. Sm. 95–100° (B. 12, 1936; 13, 266; 25, 1453; A. 220, 218; Bl. 12, 208). — I, 1064.
- 6) Oktacetylrohrrucker. Sm. 78° (67°) (Bl. 12, 208; B. 12, 1936; 13, 267; J. 1887, 2260). — I, 1070.
- 7) Oktacetyltrhalose. Sm. 97–98° (B. 24 [2] 554). — I, 1070.
- C₂₀H₁₉N** C 86,3 — H 10,0 — N 3,6 — M. G. 389.
- 1) 5-Pentadekylakridin. Sm. 65°. HCl, H₂SO₄ (G. 21 [2] 235). — IV, 421.
- C₂₀H₄₀O₃** C 82,4 — H 9,8 — O 7,8 — M. G. 408.
- 1) β -Paracatol. Sd. 236° (A. 199, 80; 271, 307).
- 2) γ -Paracatol. Sd. 240–242° (A. 199, 81; 271, 307).
- C₂₀H₄₀O₄** C 76,4 — H 9,1 — O 14,5 — M. G. 440.
- 1) Verbindung (aus Bixin) (B. 11, 867). — III, 651.

- $C_{28}H_{40}O_7$ C 68,9 — H 8,2 — O 22,9 — M. G. 488.
- $C_{28}H_{40}O_7$ 1) Verbindung (aus Bixin) (B. 11, 867). — III, 651.
C 81,9 — H 10,3 — O 7,8 — M. G. 410.
- $C_{28}H_{42}O_1$ 1) Acetat d. Ergosterin. Sm. 169° u. Zers. (A. ch. [6] 20, 294). — II, 1076.
C 76,0 — H 9,5 — O 14,5 — M. G. 442.
- $C_{28}H_{42}O_1$ 1) Parigenin (J. 1877, 907). — III, 600.
2) Dimethylester d. Benzol-1,2-Dicarbonsäure. Sm. 133° (A. ch. [6] 7, 485). — III, 467.
- $C_{28}H_{44}O_8$ C 66,4 — H 8,3 — O 25,3 — M. G. 506.
1) Urechitin + xH₂O (J. 1878, 974). — III, 614.
2) Trimethylester d. Biliansäure. Sm. 126–127° (B. 19, 482). — II, 2076.
3) Trimethylester d. Isobiliansäure. Sm. 98° (B. 19, 1531). — II, 2077.
- $C_{28}H_{44}O_{24}$ C 44,1 — H 5,5 — O 50,4 — M. G. 762.
- $C_{28}H_{44}N_2$ 1) Pektin (siehe auch C₂₂H₃₄O₂₇) (A. 51, 356). — I, 1105.
C 82,8 — H 10,3 — N 6,9 — M. G. 406.
- $C_{28}H_{44}O_2$ 1) Diönanthylidendi[4-Methylphenyl]diamin. Fl. (A. 140, 97). — II, 511.
C 81,6 — H 10,7 — O 7,7 — M. G. 412.
- $C_{28}H_{44}O_2$ 1) Lactucerin (Lactucon). Sm. 210° (A. 60, 83; 238, 220). — III, 634.
2) Acetat d. Lupeol. Sm. 223° (H. 16, 423). — II, 1077.
- $C_{28}H_{44}O_7$ C 68,3 — H 8,9 — O 22,8 — M. G. 492.
1) Diacetylcholsäure (J. r. 19, 164; 19, 2003).
2) Trimethylester d. Cholsäure. Sm. 121° (B. 19, 478). — II, 2017.
3) Trimethylester d. Isocholsäure. Sm. 135–136° (B. 19, 1530). — II, 2018.
- $C_{28}H_{44}N_4$ C 77,1 — H 10,1 — N 12,8 — M. G. 436.
1) 4,4'-Di[Diisobutylamido]azobenzol. Sm. 158°. 2 + 6J (M. 3, 713; 4, 291). — IV, 1362.
- $C_{28}H_{46}O$ C 84,4 — H 11,6 — O 4,0 — M. G. 398.
- $C_{28}H_{46}O_1$ 1) Verbindung (aus Copal). Sd. 199–201° (C. 1896 [2] 795).
C 81,2 — H 11,1 — O 7,7 — M. G. 414.
- $C_{28}H_{46}O_1$ 1) Acetat d. Cholesterin (oder C₂₇H₄₆O₂). Sm. 114,3–114,7° (113°) (B. 5, 513; A. ch. [3] 56, 60; J. 1866, 1301; Bl. 47, 899; M. 9, 428; 15, 367, 370). — II, 1073.
2) Acetat d. Isocholesterin. Sm. unter 100° (J. pr. [2] 7, 174). — II, 1075.
3) Acetat d. Phytosterin. Sm. 120° (A. 228, 296). — II, 1075.
4) Verbindung (aus Gurjunbalsamharz). Sm. 126° (J. 1877, 907). — III, 559.
- $C_{28}H_{46}O_{10}$ C 62,0 — H 8,5 — O 29,5 — M. G. 542.
- $C_{28}H_{46}O$ 1) β-Digitoxin + 5H₂O. Sm. 145–150° (B. 28 [2] 1057).
C 84,0 — H 12,0 — O 4,0 — M. G. 400.
- $C_{28}H_{46}O_2$ 1) Chironol. Sm. 176° (B. 28 [2] 1056).
2) Homocholesterin. Sm. 183° (G. 19, 209). — II, 1076.
C 77,8 — H 11,1 — O 11,1 — M. G. 432.
- $C_{28}H_{46}O_2$ 1) Verbindung (des Cholesterin mit Essigsäure). Sm. 110° (J. 1863, 545). — II, 1073.
2) Verbindung (aus Isobutyraldehyd). Sd. 227–229°₁₀₀ (Soc. 43, 95; M. 19, 374). — I, 947.
- $C_{28}H_{46}O_1$ C 75,0 — H 10,7 — O 14,3 — M. G. 448.
1) Chironolsäure (B. 28 [2] 1056).
2) Stearocutinsäure (J. 1865, 1802). — I, 1079.
- $C_{28}H_{50}O$ C 83,6 — H 12,4 — O 4,0 — M. G. 402.
- $C_{28}H_{50}O_1$ 1) Tetraönantaldehyd. Sd. 330–340° (B. 15, 2805, 2807; 16, 211). — I, 954, 962.
C 56,6 — H 8,4 — O 35,0 — M. G. 594.
- $C_{28}H_{50}O_{13}$ 1) Säure (aus Jalapinsäure). Sm. 80°. Ba (A. 95, 158). — III, 595.
C 80,0 — H 12,4 — O 7,6 — M. G. 420.
- $C_{28}H_{52}O_2$ 1) Stearat d. d-Borneol (A. 112, 366). — III, 470.
C 79,6 — H 12,8 — O 7,6 — M. G. 422.
- $C_{28}H_{54}O_2$ 1) Stearat d. Menthol. Sm. 39° (J. pr. [2] 55, 17).
2) Wachs (aus Cladonia rangiformis). Sm. 81° (J. pr. [2] 57, 275).
3) Verbindung (aus Kamala). Sm. 82° (Soc. 63, 985). — III, 671.
- $C_{28}H_{54}O_3$ C 76,7 — H 12,3 — O 11,0 — M. G. 438.
1) Verbindung (aus polym. Oenanthol). Sd. 330–340°₂₈₀ (B. 5, 481; 6, 982; Soc. 43, 82). — I, 955.

- $C_{26}H_{54}O_2$ C 79,2 — H 13,2 — O 7,5 — M. G. 424.
 1) Geocerain. Sm. 80° (*J.* 1852, 649). — *I*, 689.
 2) Geocerinsäure. Sm. 82° (*J.* 1852, 649). — *I*, 689.
 3) Methylester d. Cerotinsäure. Sm. 60° (*A.* 224, 233). — *I*, 449.
 4) Dodekylester d. Palmitinsäure. Sm. 41° (*B.* 16, 3019). — *I*, 443.
 5) Acetat d. Cerylalkohol. Sm. 63,5° (*B.* 30, 1418).
 $C_{16}H_{30}O_4$ C 73,7 — H 12,3 — O 14,0 — M. G. 456.
 1) Glycerinmonocerotin. Sm. 78,75° (*C.* 1896 [1] 642).
 $C_{78}H_{58}O_2$ C 79,6 — H 13,7 — O 7,6 — M. G. 426.
 1) Drimol. Sm. 73–74° (*A.* 286, 374; *C.* 1896 [2] 715). — *III*, 630.

C_{26} -Gruppe mit drei Elementen.

- $C_{21}H_2O_4N_3$ 1) Chryiodin (*A.* 72, 289). — *III*, 428.
 $C_{21}H_{11}OCl_5$ 1) Oktochlortetraphenylfuran (Oktochlorlepiden). Sm. 97° (*A.* 153, 357). — *III*, 696.
 $C_{25}H_{11}O_4N_4$ C 53,5 — H 1,9 — O 35,7 — N 8,9 — M. G. 628.
 1) Dibenzosäat d. 1,6-Dioxy-9,10-Anthrachinon (*A.* 142, 90). — *III*, 428.
 $C_{26}H_1OCl_5$ 1) Hexachlortetraphenylfuran (Hexachlorlepiden). Sm. 80–89° (*A.* 153, 356). — *III*, 696.
 $C_{28}H_{14}O_6N_4$ C 62,9 — H 2,6 — O 24,0 — N 10,5 — M. G. 534.
 1) *p*-Dinitro-4,4'-Diphtalylamidobiphenyl (*B.* 17, 1182). — *IV*, 966.
 $C_{28}H_{11}N_6Br_2$ 1) Tetrabromtetraimidooceanthracen. Sm. 233° (*B.* 14, 1336). — *III*, 412.
 $C_{25}H_{11}OCl_5$ 1) Pentachlortetraphenylfuran (Pentachlorlepiden). Sm. 186° (*A.* 153, 355). — *III*, 696.
 $C_{26}H_{15}O_3N$ C 75,5 — H 3,4 — O 18,0 — N 3,1 — M. G. 445.
 1) Benzonylbenzoylamidoalizarin (Benzosäat d. Oxyphenylanthrachinon-oxazol). Sm. oberh. 300° (*B.* 18, 1669). — *III*, 424.
 $C_{28}H_{16}ON_3$ C 84,8 — H 4,0 — O 4,0 — N 7,2 — M. G. 396.
 1) Anhydrophenanthrenchinonimid. Sm. 247° (*B.* 12, 1643). — *III*, 444.
 $C_{21}H_{16}O_4N_2$ C 75,7 — H 3,6 — O 14,4 — N 6,3 — M. G. 444.
 1) *p*-Dinitro-9,9'-Bianthryl. Sm. 337° u. Zers. (*B.* 20, 2433). — *II*, 304.
 2) 2,4'-Di[Phtalylamido]biphenyl. Sm. 255–257° (*B.* 22, 3013). — *IV*, 960.
 3) 4,4'-Diphtalylamidobiphenyl. Sm. oberh. 360° (*B.* 17, 1181). — *IV*, 966.
 4) *p*-Diphtalylamidobiphenyl. Sm. 193–195° (*B.* 17, 1183). — *IV*, 966.
 $C_{21}H_{16}O_4N_2$ C 70,6 — H 3,4 — O 20,1 — N 5,9 — M. G. 476.
 1) Imidohydroxyl-9,10-Anthrachinon? Sm. 240° (*A.* 166, 153). — *III*, 410.
 2) *p*-Dinitro-9,10-Anthrachinon + Anthracen (*Z.* 1869, 115). — *III*, 411.
 $C_{25}H_{16}O_6N_6$ C 63,2 — H 3,0 — O 18,0 — N 15,8 — M. G. 532.
 1) Trinitrophenylrosindulin (*A.* 286, 214). — *IV*, 1206.
 $C_{25}H_{16}O_4N_6$ C 59,6 — H 2,8 — O 22,7 — N 14,9 — M. G. 564.
 1) Tetranitrotetraphenyl-1,4-Diasin. Sm. 130–140° (*B.* 21, 1271). — *IV*, 1095.
 $C_{25}H_{14}O_8Br_2$ 1) 2,6-Dibrom-3,4,5-Tribensoxylbenzol-1-Carbonsäure. Sm. 95–96° (*B.* [3] 9, 117). — *II*, 1924.
 $C_{28}H_{16}O_{16}N_{13}$ C 43,3 — H 2,1 — O 33,0 — N 21,6 — M. G. 776.
 1) Oktonitroderivat d. Verb. $C_{28}H_7N_4$ (*B.* 11, 831). — *II*, 446.
 $C_{28}H_{16}Cl_8S$ 1) Tetrachlortetraphenylthiophen (*A.* 153, 352). — *III*, 750.
 $C_{28}H_{16}Br_8S$ 1) Tetrabromtetraphenylthiophen (*A.* 144, 195). — *III*, 750.
 $C_{25}H_{17}ON$ C 87,7 — H 4,4 — O 4,2 — N 3,7 — M. G. 383.
 1) Verbindung (aus Phenanthrenchinon u. Benzylamin) (*Soc.* 67, 47).
 $C_{28}H_{17}O_2N$ C 84,2 — H 4,3 — O 8,0 — N 3,5 — M. G. 399.
 1) Anhydrobisdiketohydrinden-2-Naphtalid (*B.* 30, 3144).
 $C_{25}H_{17}O_4N_4$ C 73,3 — H 3,7 — O 13,9 — N 9,1 — M. G. 459.
 1) Dianthrachinonamidoimid (*J. pr.* [2] 18, 156). — *III*, 424.
 $C_{25}H_{17}O_6N_5$ C 61,0 — H 3,1 — O 23,2 — N 12,7 — M. G. 551.
 1) 2,3,4,5-Tetra[*p*-Nitrophenyl]pyrrol. Zers. bei 123° (*B.* 22, 554). — *IV*, 478.

- C₂₀H₁₇O₆N₃** C 62,3 — H 3,1 — O 26,7 — N 7,8 — M. G. 539.
 1) Verbindung (aus 1,5-Dinitro-9,10-Anthrachinon) (B. 17, 895). — III, 412.
 2) isom. Verbindung (aus 1,5-Dinitro-9,10-Anthrachinon) (B. 17, 894). — III, 412.
- C₂₀H₁₇O₁₂N₃** C 37,2 — H 2,9 — O 32,7 — N 7,1 — M. G. 587.
 1) Verbindung (aus 1,5-Dinitro-9,10-Anthrachinon) (B. 17, 894). — III, 412.
- C₂₀H₁₇Br₃S** 1) Tribromtetraphenylthiophen. Sm. 265–270° (A. 144, 194). — III, 750.
- C₂₀H₁₅OCl₂** 1) Dichlortetraphenylfuran (Dichlorlepiden). Sm. 169° (J. r. 5, 22; 7, 333). — III, 695.
 2) isom. Dichlortetraphenylfuran (Dichlorlepiden). Sm. 156° (A. 153, 355). — III, 695.
 3) Isodichlorlepiden. Sm. 166° (J. r. 7, 194, 331). — III, 695.
- C₂₀H₁₅OBr₂** 1) Dibromtetraphenylfuran (Dibromlepiden). Sm. 190° (185°) (Z. 1867, 315; A. 153, 131; J. r. 7, 330). — III, 696.
- C₂₀H₁₅O₂N₂** C 81,2 — H 4,3 — O 7,7 — N 6,8 — M. G. 414.
 1) Dibenzoyldiimidotolan. Sm. 239,5–240,5°. + C₆H₆ (J. r. 16, 581). — III, 282.
 2) Acetat d. 4-Oxynaphtindon. Sm. 290–295° (A. 272, 343). — IV, 1085.
 3) Benzoesäure d. 2-[2-Oxyphenyl]phenanthrenimidazol. Sm. 218–220° (Soc. 41, 146). — III, 447.
- C₂₀H₁₅O₂N₄** C 76,0 — H 4,1 — O 7,2 — N 12,7 — M. G. 442.
 1) Nitrophenylosindulin. Sm. 270° (A. 286, 213). — IV, 1206.
- C₂₀H₁₅O₂Cl₂** 1) Dichloroxylepiden. Sm. 178° (A. 153, 353). — III, 313.
 2) isom. Dichloroxylepiden. Sm. 202° (J. r. 5, 23; 7, 332; J. 1876, 426). — III, 312.
 3) isom. Dichloroxylepiden. Sm. 230° (J. r. 7, 191). — III, 313.
 4) isom. Dichloroxylepiden (J. r. 7, 191). — III, 313.
- C₂₀H₁₅O₂Br₂** 1) Dibromoxylepiden. Sm. 222° (J. r. 7, 329; J. 1876, 425). — III, 313.
 2) isom. Dibromoxylepiden (2 Isomere). Sm. 239° (J. r. 7, 329; J. 1876, 425). — III, 313.
- C₂₀H₁₅O₆N₂** C 71,4 — H 3,7 — O 20,1 — N 5,8 — M. G. 478.
 1) p-Dinitro-9,10-Anthrachinon + Stilben (Z. 1869, 116). — III, 411.
 2) Dibenzoat d. 1,5-Di[Hydroxylamido]-9,10-Anthrachinon. Sm. 188° (B. 29, 2936).
- C₂₀H₁₅O₇N₂** C 68,0 — H 3,6 — O 22,7 — N 5,7 — M. G. 494.
 1) Diphenylcarbamidflavopurpurin (B. 18, 2610). — III, 435.
- C₂₀H₁₅O₇N₄** C 64,4 — H 3,5 — O 21,4 — N 10,7 — M. G. 522.
 1) Verbindung (aus 1,5-Dinitro-9,10-Anthrachinon) (B. 17, 895). — III, 412.
- C₂₀H₁₅O₁₁Br₂** 1) Tetracetat d. Dibromhydrogallein. Sm. 234° (A. 209, 266). — II, 2093.
- C₂₀H₁₅Cl₂S** 1) Dichlortetraphenylthiophen. Sm. 219° (A. 153, 351). — III, 750.
- C₂₀H₁₅ON₅** C 71,3 — H 4,6 — O 3,9 — N 10,2 — M. G. 413.
 1) Diphenanthrenoxytrimid. α-Modif. Sm. 282°; β-Modif. Sm. oberh. 300° (M. 1, 149, 157). — III, 444.
 2) α-Oxy-α-α-Tri[β-Chinoly]methan. Sm. 198° (B. 24, 1608). — IV, 1221.
 3) 7-Phenylamidorosindon (A. 286, 226). — IV, 1207.
- C₂₀H₁₅OCl** 1) Chlortetraphenylfuran (Chlorlepiden). Sm. 143–146° (A. 153, 355). — III, 695.
- C₂₀H₁₅O₂Cl** 1) Chloroxylepiden. Sm. 185° (J. r. 5, 21). — III, 312.
- C₂₀H₁₅O₄N** C 77,6 — H 4,4 — O 14,8 — N 3,2 — M. G. 433.
 1) Mono-1-Naphtylamid d. Pulvinsäure. Sm. 211–212°. NH₄, Ba (A. 282, 28). — II, 2031.
 2) Mono-2-Naphtylamid d. Pulvinsäure. Sm. 192°. NH₄, Ba (A. 282, 29). — II, 2031.
- C₂₀H₁₅O₆N** C 72,2 — H 4,1 — O 20,6 — N 3,0 — M. G. 465.
 1) Dimethyläther d. Galleinanilid. Sm. 205° (B. 27, 2794). — II, 2088.
 2) 1-Naphtylimid d. Dibenzoylweinsäure. Sm. 215–217° (A. 279, 150).
 3) 2-Naphtylimid d. Dibenzoylweinsäure. Sm. 179–180° (A. 279, 152).
- C₂₀H₂₀ON₂** C 84,0 — H 5,0 — O 4,0 — N 17,0 — M. G. 400.
 1) 4-Benzoyl-1,3,5-Triphenylpyrazol. Sm. 172–173° (G. 24 [1] 12). — IV, 1037.
- C₂₀H₂₀O₂N₂** C 80,8 — H 4,8 — O 7,7 — N 6,7 — M. G. 416.
 1) Di[Phenylbenzoylmethylen]hydrasin (Bisphenylbenzoylazimethylen). Sm. 202° (J. pr. [2] 52, 132). — III, 225.

- $C_{22}H_{20}O_2N_2$ 2) Aethyläther d. 4-Oxynaphtindon. Sm. oberh. 340° (A. 272, 344). — IV, 1085.
- $C_{22}H_{20}O_2Cl_2$ 1) Hydrodichloroxylepiden. Sm. 261° (J. 1875, 413). — III, 309.
- $C_{22}H_{20}O_2Br_2$ 1) Hydrodibromoxylepiden (J. 1876, 425; J. r. 7, 330). — III, 310.
- $C_{22}H_{20}O_2N_2$ C 77,8 — H 4,6 — O 11,1 — N 6,5 — M. G. 432.
- $C_{22}H_{20}O_2N_2$ 1) Verbindung (aus Dibenzaldiphenylhydrotetrazon). Sm. 183—187° (G. 27 [2] 287). — IV, 749.
- $C_{22}H_{20}O_2N_4$ C 73,0 — H 4,3 — O 10,4 — N 12,2 — M. G. 460.
- $C_{22}H_{20}O_2N_4$ 1) Anhydrid d. Di[Diphenylhydrason]äthan- $\alpha\beta$ -Dicarbonsäure. Sm. 218—220° u. Zers. (B. 20, 843). — IV, 730.
- $C_{22}H_{20}O_2Cl_2$ 1) Dichloroxylepidsäure. Sm. 182° (J. r. 7, 191; J. 1875, 411). — III, 310.
- $C_{22}H_{20}O_2Br_2$ 1) Dibromoxylepidsäure (J. 1876, 425; J. r. 7, 330). — III, 310.
- $C_{22}H_{20}O_2N_2$ C 75,0 — H 4,5 — O 14,3 — N 6,2 — M. G. 448.
- $C_{22}H_{20}O_2N_2$ 1) Diphtalaldehydsäure. Zers. bei 290° (B. 24, 2351). — IV, 966.
- $C_{24}H_{20}O_2Br_2$ 1) Dibenzoat d. $\alpha\beta$ -Dibrom- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 58—59° (B. 24, 3180). — II, 1151.
- $C_{24}H_{20}O_2N_2$ 2) isom. Dibenzoat d. $\alpha\beta$ -Dibrom- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 176° u. Zers. (A. 277, 357). — II, 1151.
- $C_{24}H_{20}O_2N_2$ C 70,0 — H 4,2 — O 20,0 — N 5,8 — M. G. 480.
- $C_{24}H_{20}O_2N_2$ 1) 4,4'-Di[Benzoylamido]biphenyl-3,3'-Dicarbonsäure. Sm. 302—304°. (NH₄)₂ + 2H₂O (B. 31, 2582).
- $C_{24}H_{20}O_2N_2$ C 56,4 — H 3,3 — O 21,5 — N 18,8 — M. G. 596.
- $C_{24}H_{20}O_2N_2$ 1) Tetrantiroderivat d. Verb. $C_{22}H_{21}N_4$ (B. 11, 831). — II, 446.
- $C_{24}H_{20}N_2Cl$ 1) 7-Chlorphenylat d. 5-Phenylamido- $\alpha\beta$ -Naphtophenasin (Phenylrosindulinchlorid) (B. 31, 2431).
- $C_{24}H_{20}N_2Cl$ 2) 12-Chlorphenylat d. 10-Phenylamido- $\alpha\beta$ -Naphtophenasin. 2 + PtCl₄ (B. 30, 2635). — IV, 1201.
- $C_{24}H_{21}ON$ C 86,8 — H 5,4 — O 4,1 — N 3,6 — M. G. 387.
- $C_{24}H_{21}ON$ 1) 2-Keto-3,3,4,5-Tetraphenyl-2,3-Dihydropyrrrol. Sm. 206—207° (Soc. 59, 142). — III, 311.
- $C_{24}H_{21}ON_2$ 2) Dibenzoylestilbenimid. Sm. 180—182° (Soc. 59, 142). — III, 311.
- $C_{24}H_{21}ON_2$ C 75,9 — H 4,7 — O 3,6 — N 15,8 — M. G. 443.
- $C_{24}H_{21}ON_2$ 1) 4-[4-Phenylamidophenylazo]-1-[2-Oxy-1-Naphtylazo]benzol. Sm. 203—204° (Soc. 43, 441). — IV, 1434.
- $C_{24}H_{21}O_2N$ C 83,4 — H 5,2 — O 7,9 — N 3,5 — M. G. 403.
- $C_{24}H_{21}O_2N$ 1) α -Phenylamido- $\beta\beta$ -Dibenzoyl- α -Phenyläthen. Sm. 140—142° (A. 201, 104). — III, 322.
- $C_{24}H_{21}O_2N_2$ C 78,0 — H 4,9 — O 7,4 — N 9,7 — M. G. 431.
- $C_{24}H_{21}O_2N_2$ 1) 1,3-Dibenzoyl-2-[4-Methylphenyl]imido-2,3-Dihydrobenzimidazol. Sm. 191° (B. 24, 2512). — IV, 567.
- $C_{24}H_{21}O_2N_2$ 2) 1,3-Dibenzoyl-2-Phenylimido-5-Methyl-2,3-Dihydrobenzimidazol. Sm. 222° (B. 24, 2516). — IV, 623.
- $C_{24}H_{21}O_2N_2$ 3) Verbindung (aus ?-Amidoanthracen). Sm. 250° (B. 16, 1638). — II, 640.
- $C_{24}H_{21}O_2N_2$ C 73,2 — H 4,6 — O 7,0 — N 15,2 — M. G. 459.
- $C_{24}H_{21}O_2N_2$ 1) Imid d. Di[Diphenylhydrason]äthan- $\alpha\beta$ -Dicarbonsäure^p Sm. 191 bis 192° (B. 20, 844). — IV, 730.
- $C_{24}H_{21}O_2N$ C 80,2 — H 5,0 — O 11,4 — N 3,3 — M. G. 419.
- $C_{24}H_{21}O_2N$ 1) Verbindung (aus Benzil u. Benzonitril). Sm. 225° (B. 16, 2653). — III, 295.
- $C_{24}H_{21}O_2N_2$ C 75,2 — H 4,7 — O 10,7 — N 9,4 — M. G. 447.
- $C_{24}H_{21}O_2N_2$ 1) Verbindung (aus 1,3,4,6-Tetraphenyl-1,2-Dihydro-1,2-Diazin). Sm. 255° u. Zers. (A. 289, 331). — IV, 1082.
- $C_{24}H_{21}O_2N$ C 77,2 — H 4,8 — O 14,7 — N 3,2 — M. G. 435.
- $C_{24}H_{21}O_2N$ 1) 2-Diphtalidylmethyl-6,8-Dimethylchinolin. Sm. 224° (B. 29, 190). — IV, 451.
- $C_{24}H_{21}O_2N$ 2) Orcinphaleinanilid. Sm. noch nicht bei 300° (B. 26, 3078). — II, 2066.
- $C_{24}H_{21}O_2N$ 3) Dimethyläther d. Fluoresceinanilid. Sm. 207—208° (B. 27, 2237). — II, 2062.
- $C_{24}H_{21}O_2N$ 4) Benzoat d. *p*-Benzoylamido-*p*-Oxy-*p*-Methyldiphenylketon. Sm. 192 bis 193° (B. 16, 1930). — III, 216.
- $C_{24}H_{21}O_2N$ C 74,5 — H 4,6 — O 17,7 — N 3,1 — M. G. 451.
- $C_{24}H_{21}O_2N$ 1) Dibenzoat d. 2-Benzoylamido-3,5-Dioxy-1-Methylbenzol. Sm. 165 bis 166° (M. 19, 495).

- C₂₀H₂₁O₂N₂** C 60,5 — H 3,8 — O 23,1 — N 12,6 — M. G. 555.
 1) *p*-Trinitro- $\alpha\beta$ -Di[Benzoylamido]- $\alpha\beta$ -Diphenyläthan. Sm. 137° u. Zers. (B. 28, 3176). — IV, 979.
- C₂₀H₂₁N₄Cl** 1) 12-Chlorphenylat d. 9-Amido-10-Phenylamido- $\alpha\beta$ -Naphtophenazin (B. 31, 3103).
- C₂₀H₂₁ON₂** C 83,6 — H 5,5 — O 4,0 — N 6,9 — M. G. 402.
 1) Benzoylamarin. Sm. 180°. HCl, (2HCl, PtCl₂), H₂Cr₂O₇, Acetat (B. 18, 3061). — III, 25.
 2) Phenylhydrason d. $\alpha\beta$ -Diketo- $\alpha\beta\beta$ -Triphenyl- β -Buten. Sm. 173 bis 174° (Soc. 57, 708). — IV, 786.
 3) 1-Phenylamido-2-Keto-3,3,5-Triphenyl-2,3-Dihydropyrrrol. Sm. 185° (Soc. 57, 682). — IV, 699.
- C₂₀H₂₁ON₄** C 78,1 — H 5,1 — O 3,7 — N 13,0 — M. G. 430.
 1) Verbindung (aus Gaultheriaöl). Sm. 254–256° (A. 171, 144). — II, 1500.
- C₂₀H₂₁ON₆** C 73,4 — H 4,8 — O 3,5 — N 18,3 — M. G. 458.
 1) 3,4-Di[α -Phenylhydrasonbenzyl]-1,2,5-Oxiazol. Sm. 172° (B. 26, 529). — III, 323.
- C₂₀H₂₁O₂N₂** C 80,4 — H 5,2 — O 7,6 — N 6,7 — M. G. 418.
 1) Diphenylaminofumarid. Sm. 275–276° (G. 16, 22). — II, 416.
- C₂₀H₂₁O₂N₄** C 75,3 — H 4,9 — O 7,2 — N 12,6 — M. G. 446.
 1) $\alpha\beta$ -Di[Benzoylhydrason]- $\alpha\beta$ -Diphenyläthan. Sm. 206° (J. pr. [2] 50, 307). — III, 288.
- C₂₀H₂₁O₂N₃** C 77,4 — H 5,1 — O 11,0 — N 6,4 — M. G. 434.
 1) *p*-Di[Benzoylamido]-*p*-Methyldiphenylketon. Sm. 226° (B. 16, 1929). — III, 216.
 2) *s*-3,3'-Di[4-Methylbenzoyl]oxyazobenzol (m-Oxyazophenyl-*p*-Tolylketon). Sm. 145° (A. 286, 311). — IV, 1345.
 3) Verbindung (aus Benzil u. Benzonitril). Sm. 176°. + 2C₂H₆O (B. 16, 2653). — III, 295.
 4) Verbindung (aus Salicylaldehyd u. 1,3,4-Toluylendiamin). Sm. 106 bis 110° (B. 11, 597). — IV, 620.
- C₂₀H₂₁O₄N₂** C 74,7 — H 4,9 — O 14,2 — N 6,2 — M. G. 450.
 1) Dibenzat d. α -Phenylhydrason- α -[2,5-Dioxyphenyl]äthan. Sm. 148° (B. 31, 1216).
 2) Dibenzoylphenylhydrasid d. α -Oxyphenylessigsäure. Sm. 208° (B. 23, 3704). — IV, 694.
- C₂₀H₂₁O₄N₃** 1) Verbindung (aus d. Verb. C₁₁H₁₁O₂N₃ aus Stilben). Sm. 57–73° (B. 7, 1098). — II, 249.
- C₂₀H₂₁O₄N₄** C 70,3 — H 4,6 — O 13,4 — N 11,7 — M. G. 478.
 1) $\alpha\beta$ -Di[3-Nitrobenzylidenamido]- $\alpha\beta$ -Diphenyläthan. Sm. 159–161° (B. 22, 2303). — IV, 979.
 2) *s*-Diphenyläthylendi 2-Hydrazidobenzol-1-Carbonsäure. Sm. über 320° (B. 27, 1139). — III, 288.
 3) *s*-Diphenyläthylendi 4-Hydrazidobenzol-1-Carbonsäure. Sm. über 320° (B. 27, 1133). — III, 288.
 4) Di[Diphenylhydrason]äthan- $\alpha\beta$ -Dicarbonsäure (Tetraphenylindioxyweinsäure). Sm. 177° u. Zers. Ag₂ (B. 20, 841). — IV, 730.
 5) Di[Phenylamidoformiat] d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (Dicarbanilido- α -Benzildioxim). Sm. 180° (B. 22, 3111). — III, 294.
 6) Di[Phenylamidoformiat] d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan. Sm. 175° (B. 22, 3111). — III, 294.
 7) Di[Phenylamidoformiat] d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan. Sm. 187° (B. 22, 3111). — III, 294.
- C₂₀H₂₁O₆N₄** C 65,9 — H 4,3 — O 18,8 — N 11,0 — M. G. 510.
 1) $\alpha\beta$ -Di[Benzoyl-2-Nitrophenylamido]äthan. Sm. 218–220° (J. pr. [2] 48, 198). — II, 1169.
 2) 4,4-Di[2-Nitrobenzylformylamido]biphenyl. Sm. 205° (B. 29, 1452). — IV, 963.
- C₂₀H₂₁O₆N₆** C 62,4 — H 4,1 — O 17,8 — N 15,6 — M. G. 538.
 1) Verbindung (aus 3-Oxy-5-Keto-1-Phenyl-4,5-Dihydropyrazol) oder C₁₉H₁₄O₄N₄. Sm. 303° (B. 30, 1019). — IV, 702.
- C₂₀H₂₃O₂N₄** C 63,9 — H 4,2 — O 21,3 — N 10,6 — M. G. 526.
 1) Disazobenzolhesperitin. Sm. 246–247° (Soc. 73, 1033). — IV, 1474.

- C₂₀H₂₂O₆N₂** C 65,4 — H 4,3 — O 24,9 — N 5,4 — M. G. 514.
 1) Lignonblau-o-Dicarbonsäure (B. 30, 241).
 2) Lignonblau-m-Dicarbonsäure (B. 30, 241).
- C₂₀H₂₂N₂Br₄** 1) P-Tetrabrom-1,2-Di[Diphenylamido]-R-Tetramethylen (B. 14, 2096). — IV, 1091.
- C₂₀H₂₂N₂J₂** 1) Chinolinjodoform. Sm. 65° u. Zers. (B. 16, 202). — IV, 251.
- C₂₀H₂₂N₂S₂** 1) Sulfid d. 5-Merkapto-2,3-Diphenyl-2,3-Dihydro-1,3,4-Thiodiazol. Sm. 138° (B. 28, 2645). — IV, 1750.
- C₂₀H₂₂ON** C 86,4 — H 5,9 — O 4,1 — N 3,6 — M. G. 389.
 1) 2-Keto-3,3,4,5-Tetraphenyltetrahydropyrrrol. Sm. 237° (Soc. 59, 145). — III, 311.
- C₂₀H₂₂OCl** 1) Verbindung (aus Isohydrobenzoin). Sm. 149—150° (A. 198, 168). — II, 1102.
- C₂₀H₂₂O₂N** C 83,0 — H 5,7 — O 7,9 — N 3,4 — M. G. 405.
 1) Benzoinidam. Sm. 199° (Soc. 49, 825; A. 135, 187). — III, 223.
- C₂₀H₂₂O₂N₂** C 77,6 — H 5,3 — O 7,4 — N 9,7 — M. G. 433.
 1) 5-Nitro-4,4'-Dibenzylidenamido-3,3'-Dimethylbiphenyl. Sm. 147° (B. 25, 1034). — IV, 982.
 2) Verbindung (aus 1,3,4,6-Tetraphenyl-1,2-Dihydro-1,2-Diazin). Sm. 262° u. Zers. (A. 289, 329). — IV, 1082.
 C 79,8 — H 5,5 — O 11,4 — N 3,3 — M. G. 421.
- C₂₀H₂₂O₂N** 1) Dimethyläther d. 1-Keto-2-Phenyl-3,3-Di[P-Oxyphenyl]-1,3-Dihydroisocindol (D. d. Phenolphthaleinanilid). Sm. 192° (B. 26, 3078). — II, 1984.
 2) Benzoesäure d. β-Benzoylamido-α-Oxy-αβ-Diphenyläthan. Sm. 254° (B. 29, 1215).
 3) Benzoesäure d. isom. β-Benzoylamido-α-Oxy-αβ-Diphenyläthan. Sm. 186—187° (B. 29, 1216).
- C₂₀H₂₂O₂N₂** C 64,5 — H 4,4 — O 12,3 — N 18,8 — M. G. 521.
 1) Verbindung (aus 3-Amidobenzoyl-3-Amidobenzolcarbonsäureamid) (A. 251, 171). — IV, 1577.
- C₂₀H₂₂N₂Cl** 1) Verbindung (aus Hydrobenzamid) + H₂O. 2 + PtCl₄ (A. III, 152). — III, 21.
- C₂₀H₂₂N₂J** 1) Jodäthylat d. Akridin (A. 158, 275). — IV, 406.
- C₂₀H₂₂ON₂** C 83,2 — H 5,9 — O 4,0 — N 6,9 — M. G. 404.
 1) 4-[4-Methylphenyl]oxydhydrat d. 6-Methyl-2,3-Diphenyl-1,4-Benzdiazin. Sm. 173° (B. 25, 1023). — IV, 1076.
 2) Äthyläther d. 7-Oxy-1,2,3-Triphenyl-1,2-Dihydro-1,4-Benzdiazin. Sm. 126—128° (B. 25, 1009). — IV, 1075.
 3) Benzoinam (Berr. J. 18, 354; 26, 666; A. 135, 183; Soc. 49, 825). — III, 223.
- C₂₀H₂₂ON** C 77,8 — H 5,5 — O 3,7 — N 13,0 — M. G. 432.
 1) α-Acetyl-αβ-Di[Phenylhydrason]-αβ-Diphenyläthan. Sm. 80—90° (A. 305, 176).
 2) isom. α-Acetyl-αβ-Di[Phenylhydrason]-αβ-Diphenyläthan. Sm. 183° (A. 305, 178).
 3) Acetyldehydrobenzalphenylhydrason. Sm. 124—125° (G. 27 [2] 255). — IV, 749.
 4) α-Phenyl-β-Benzylidenhydrasid d. β-Benzyliden-α-Phenylhydrasido-essigsäure. Sm. 180—181° (A. 301, 86).
 5) Verbindung (aus Phtalidmethylphenylketon). Sm. 163—175° (M. 19, 453).
 C 80,0 — H 5,7 — O 7,6 — N 6,7 — M. G. 420.
- C₂₀H₂₂O₂N₂** 1) αβ-Di[Phenylbenzoylamido]äthan (J. 1873, 696). — II, 1169.
 2) αβ-Di[Benzoylamido]-αβ-Diphenyläthan. Sm. 287° (B. 22, 2300; 28, 3176). — IV, 979.
 3) αβ-Di[2-Benzoylamidophenyl]äthan. Sm. 255° (A. 305, 99).
 4) αβ-Di[2-Oxybenzylidenamido]-αβ-Diphenyläthan. Sm. 205° (B. 22, 2303). — IV, 979.
 5) 4,4'-Di[Benzoylamido]-3,3'-Dimethylbiphenyl. Sm. 259° (B. 21, 1065). — IV, 982.
 6) 4,4'-Di[2-Oxybenzylidenamido]-2,2'-Dimethylbiphenyl. Sm. 198 bis 199° (B. 28, 2554). — IV, 980.
 7) 4,4'-Di[2-Oxybenzylidenamido]-3,3'-Dimethylbiphenyl. Sm. 202° (A. 258, 377). — IV, 982.

- $C_{22}H_{21}O_2N_2$ 8) Di- β -Oxy- $\alpha\beta$ -Diphenyläthyliden]hydrasin (Benzoinketazin). Sm. 157° (*J. pr.* [2] 52, 131). — III, 225.
- 9) Dibenzyläther d. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. α -Benzildioxim). 2 isom. Formen. α -Derivat Sm. 153—154°; β -Derivat Sm. 104 bis 105° (*B.* 23, 3600, 3601, 3602). — III, 292.
- 10) Dibenzyläther d. isom. $\alpha\beta$ -Dioximido- $\alpha\beta$ -Diphenyläthan (D. d. β -Benzildioxim). Sm. 59—60° (*B.* 23, 3601). — III, 293.
- 11) 4-Phenylxydhydrat d. 6-Oxy-2,3-Diphenyl-1,4-Diazin-6-Aethyläther. Sm. bei 145° (*B.* 25, 1010). — IV, 1075.
- 12) Tetraphenylamid d. Bernsteinsäure. Sm. 234° (231°) (*G.* 14, 467; *A.* 292, 194). — II, 414.
- $C_{23}H_{21}O_2N_2$ C 75,0 — H 5,4 — O 7,1 — N 12,5 — M. G. 448.
- 1) 6,6'-Di[Benzoylamido]-3,3'-Dimethylazobenzol. Sm. 242° (*Am.* 17, 449). — IV, 1378.
- $C_{23}H_{21}O_2N_2$ C 77,1 — H 5,5 — O 11,0 — N 6,4 — M. G. 436.
- 1) 6,4'-Di[4-Methoxybenzylidenamido]-3-Oxybiphenyl. Sm. 184—185° (*A.* 303, 346).
- 2) Äthyläther d. 6,4'-Di[Benzoylamido]-3-Oxybiphenyl. Sm. 221° (*A.* 303, 352).
- $C_{23}H_{21}O_3N_2$ C 72,4 — H 5,2 — O 10,3 — N 12,1 — M. G. 464.
- 1) 5,5'-Di[Benzoylamido]-2,2'-Dimethylazoxybenzol. Sm. 290° (*Am.* 5, 284). — IV, 1339.
- 2) Dioxim d. 3,3'-Di[4-Methylbenzoyl]oxyazobenzol. α -Modif. Sm. 235°; β -Modif. Sm. 245° (*A.* 286, 312). — IV, 1345.
- $C_{23}H_{21}O_4N_2$ C 74,3 — H 5,3 — O 14,1 — N 6,2 — M. G. 452.
- 1) $\alpha\beta$ -Di[Benzoylamido]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. oberh. 300° u. Zers. (*Soc.* 45, 673; *B.* 17, 2403). — II, 994; III, 287.
- 2) Dimethyläther d. 4,4'-[Benzoylamido]-3,3'-Dioxybiphenyl. Sm. 236° (*J. pr.* [2] 58, 215).
- 3) Di[Acetyl-1-Naphtylamid] d. Bernsteinsäure. Sm. 122° (*C.* 1896 [1] 109).
- $C_{23}H_{21}O_4N_2$ C 70,0 — H 5,0 — O 13,3 — N 11,7 — M. G. 480.
- 1) Verbindung (aus Benzylenimid) (*B.* 28, 1653).
- $C_{23}H_{21}O_4N_2$ C 69,4 — H 5,0 — O 19,8 — N 5,8 — M. G. 484.
- 1) 1-Naphtylamid d. Diacetylweinsäure. Sm. 260° (*A.* 279, 149).
- 2) 2-Naphtylamid d. Diacetylweinsäure. Sm. 240° (226°) (*A.* 279, 151; *C.* 1896 [1] 996; *Soc.* 71, 1062).
- $C_{23}H_{21}O_7N_2$ C 67,2 — H 4,8 — O 22,4 — N 5,6 — M. G. 500.
- 1) Orcein (*M.* 11, 231). — II, 966.
- $C_{23}H_{21}O_8N_2$ C 61,8 — H 4,4 — O 23,5 — N 10,3 — M. G. 544.
- 1) Dinitrodimethylignonblau (aus 2-Nitro-4-Amido-1-Methylbenzol) (*B.* 31, 621).
- $C_{23}H_{21}N_2S$ 1) Di[4-Benzylidenamidobenzyl]sulfid. Sm. 95° (*B.* 24, 726; 28, 1338). — III, 52.
- $C_{23}H_{21}N_2Cl_2$ 1) Verbindung (aus d. Verb. $C_{23}H_{25}O_2N_2Cl$) (*B.* 31, 1412).
- $C_{23}H_{21}ON_3$ C 80,2 — H 6,0 — O 3,8 — N 10,0 — M. G. 419.
- 1) Base (aus 3-Amido-4-p-Tolylamido-1-Methylbenzol). Sm. 188° (2HCl, PtCl₄) (*B.* 23, 3801; 27, 2782). — IV, 612.
- 2) Base (aus d. isom. Base $C_{23}H_{25}ON_3$ Sm. 188°). Sm. 260° (*B.* 27, 2783). — IV, 612.
- $C_{23}H_{21}O_7N_3$ C 77,2 — H 5,7 — O 7,4 — N 9,7 — M. G. 435.
- 1) 5-Dimethylamido-2,4'-Di[2-Oxybenzylidenamido]biphenyl. Sm. 158—159° (*A.* 303, 357).
- 2) α -Phenyl- β -(4-Methylphenyl)- β -[2-Benzoylamidobenzyl]harnstoff. Sm. 192—193° (*J. pr.* [2] 55, 246). — IV, 633.
- $C_{23}H_{25}O_3N_3$ C 74,5 — H 5,5 — O 10,6 — N 9,3 — M. G. 451.
- 1) Acetat d. α -Oxy- γ -Triamido-4-Benzoyltriphenylmethan (*Bl.* [3] 17, 83).
- $C_{23}H_{25}O_4N$ C 76,5 — H 5,7 — O 14,6 — N 3,2 — M. G. 439.
- 1) Diäthylester d. 1,2,5-Triphenylpyrrol-2',5'-Dicarbonsäure. Sm. 122° (*B.* 20, 1488). — IV, 452.
- $C_{23}H_{25}O_4N_2$ C 71,9 — H 5,3 — O 13,7 — N 9,0 — M. G. 467.
- 1) 1,2-Diphtalylditrimethylenphenyltriamin. Sm. 144—145° (*B.* 23, 1168). — II, 1893.

- C₂₅H₂₆O₂N₂** C 79,6 — H 6,2 — O 7,6 — N 6,6 — M. G. 422.
 1) **3,6-Diketo-2,5-Diäthyl-1,4-Di[1-Naphtyl]hexahydro-1,4-Diazin.** Sm. 287—289° (B. 25, 2925). — II, 614.
 2) **3,6-Diketo-2,5-Diäthyl-1,4-Di[2-Naphtyl]hexahydro-1,4-Diazin.** Sm. 304—306° (B. 25, 2926). — II, 622.
 3) **isom. 3,6-Diketo-2,5-Diäthyl-1,4-Di[2-Naphtyl]hexahydro-1,4-Diazin.** Sm. 195—196° (B. 25, 2926). — II, 622.
- C₂₅H₂₆O₂N₁** C 74,6 — H 5,8 — O 7,1 — N 12,4 — M. G. 450.
 1) **α,β-Di[4-(2-Oxybenzylidenamidophenylamido)]äthan.** Sm. 224° (Soc. 71, 424). — IV, 587.
 2) **α-Phenyl-β-[4-Methylphenyl]-β-[2-Phenylureidobenzyl]harnstoff.** Sm. 135° (J. pr. [2] 55, 247). — IV, 633.
 3) **Dimethyläther d. Di-4-Oxybensaldiphenylhydrotetrazon.** Sm. 152° (G. 27 [2] 236). — IV, 1307.
 4) **Dimethyläther d. Dehydro-4-Oxybensalphenylhydrazon.** Sm. 190° (G. 27 [2] 227). — IV, 1307.
 5) **Diphenylamid d. α,β-Di[Phenylamido]bernsteinsäure.** Sm. 220°; Sd. bei 300° (B. 24, 2961). — II, 438.
- C₂₅H₂₆O₂N₂** C 76,7 — H 5,9 — O 10,9 — N 6,4 — M. G. 438.
 1) **Benzoylstrychnin** (A. 108, 353; M. 6, 859). — III, 939.
 2) **Verbindung** (aus d. Acetylderivat C₂₅H₂₆O₄). Sm. 220° u. Zers. (Soc. 59, 18). — II, 1908.
- C₂₅H₂₆O₂N₁** C 74,0 — H 5,7 — O 14,1 — N 6,2 — M. G. 454.
 1) **p-Dimethylignonblau** (B. 30, 239).
 2) **Diäthylester d. 1-Phenylamido-2,5-Diphenylpyrrol-3,4-Dicarbon-säure.** Sm. 184—185° (A. 293, 109). — IV, 1037.
- C₂₅H₂₆O₁N₁** C 69,7 — H 5,4 — O 13,3 — N 11,6 — M. G. 482.
 1) **Verbindung** (aus 1,4-Benzochinon u. 3-Amido-2-Oxy-1-Methylbenzol). Sm. 283—285° (A. 226, 73). — III, 346.
- C₂₅H₂₆O₂N₁** C 67,5 — H 5,2 — O 16,1 — N 11,2 — M. G. 498.
 1) **Verbindung** (aus Benzylamid) (B. 28, 1653).
- C₂₅H₂₆O₂N₂** C 69,1 — H 5,3 — O 19,8 — N 5,8 — M. G. 486.
 1) **Dimethyläther d. o-Dioxyignonblau** (B. 30, 240).
- C₂₅H₂₆O₆S₂** 1) **αα-Tri[Benzylsulfon phenylmethan].** Sm. 207° (B. 25, 360). — II, 1292.
- C₂₅H₂₆O₂N₁** C 45,3 — H 3,5 — O 17,2 — N 34,0 — M. G. 742.
 1) **Diacetat d. Verbindung** C₂₅H₂₆O₄N₁. Sm. 164—165° (B. 27, 941).
- C₂₅H₂₆O₄S₂** 1) **Verbindung** (aus Rubbadin). Zers. über 200° (B. 25, 1883). — II, 658.
- C₂₅H₂₆N₄S** 1) **Di[β-Phenylhydrazon-β-Phenyläthyl]sulfid.** Sm. 146—147° (B. 23, 3475). — IV, 771.
 2) **Sulfid d. α-[4-Merkaptofenyl]hydrazon-α-Phenyläthan.** Sm. 170° u. Zers. (A. 270, 152). — IV, 816.
- C₂₅H₂₆N₄S₂** 1) **4,4'-Biphenylendi[uns-Methylphenylthioharnstoff]** (B. 27, 1561). — IV, 965.
 2) **4,4'-Biphenylendi[2-Methylphenylthioharnstoff].** Sm. noch nicht bei 300° (B. 27, 1559). — IV, 965.
- C₂₅H₂₆N₄S₂** 1) **Thiodiphenylditolyldithioharnstoff.** Sm. 134° (B. 20, 670). — II, 821.
- C₂₅H₂₇ON₂** C 79,8 — H 6,4 — O 3,8 — N 10,0 — M. G. 421.
 1) **p-Di[4-Methylphenylamido]-2-Methyl-1,4-Benzochinon-4-Methylphenylimid.** Sm. 191° (B. 21, 679). — III, 360.
- C₂₅H₂₇O₂N₂** C 76,9 — H 6,2 — O 7,3 — N 9,6 — M. G. 437.
 1) **Verbindung** (aus d. Methyläther d. α-Bromäthyl-3,5-Dibrom-4-Oxyphenylketon (J. pr. [2] 52, 208). — III, 142.
- C₂₅H₂₇O₁P** 1) **Verbindung** (aus Benzaldehyd u. Phosphorwasserstoff). Sm. 153° (B. 21, 332). — III, 6.
- C₂₅H₂₇O₂N** C 71,0 — H 5,7 — O 20,3 — N 3,0 — M. G. 473.
 1) **Benzylhydrastin.** Sm. 135°. HCl, HBr, HNO₃ (B. 26, 2489). — II, 2054.
- C₂₅H₂₇N₂J** 1) **Jodmethylat d. Hydrocinamid.** Sm. 185° (Bl. [3] 19, 274).
- C₂₅H₂₆ON₂** C 82,3 — H 6,9 — O 3,9 — N 6,9 — M. G. 408.
 1) **Verbindung** (Base aus Dibenzylhydroxylamin). 2HCl, (2HCl, PtCl₄), HJ, 2HJ, 2HNO₃, H₂SO₄ (B. 19, 1631, 3289). — II, 535.
- C₂₅H₂₆OAs₂** 1) **Di[4-Methylphenyl]arsenoxyd.** Sm. 98° (A. 208, 20). — IV, 1692.
 2) **Tetramethyläther d. Di[4-Oxyphenyl]arsenoxyd.** Sm. 130° (B. 20, 50). — IV, 1688.

- $C_{25}H_{25}O_2N$ C 74,3 — H 6,2 — O 7,1 — N 12,4 — M. G. 452.
 1) **Bisazoxybenzyl**. Sm. 210—211° (A. 263, 211; B. 30, 2281). — IV, 1341.
 2) **Dimethyläther d. 2,2'-Di[2-Oxyphenylamidomethyl]azobenzol**. Sm. 150—151° (J. pr. [2] 62, 402). — IV, 1386.
- $C_{21}H_{23}O_2N_6$ C 70,0 — H 5,8 — O 6,7 — N 17,5 — M. G. 468.
 1) **Di[Phenylhydrazid] d. Phenylhydrazonanemonsäure**. Sm. 164° (M. 17, 292). — IV, 796.
- $C_{25}H_{25}O_2N_2$ C 76,3 — H 6,4 — O 10,9 — N 6,4 — M. G. 440.
 1) **Verbindung** (aus Diphenylacetamid). Sm. 85° (B. 14, 2372). — II, 367.
- $C_{25}H_{25}O_3N_4$ C 71,8 — H 6,0 — O 10,3 — N 11,9 — M. G. 468.
 1) **Diäthyläther d. 3,3'-Di[Phenylamido]-4,4'-Dioxyazoxybenzol**. Sm. 125° (B. 26, 685). — IV, 1343.
- $C_{25}H_{25}O_3N_2$ C 73,7 — H 6,1 — O 14,0 — N 6,1 — M. G. 456.
 1) **Diäthylester d. 1,1-Dinaphthyläthylen-Diamidocameisensäure**. Sm. 150° (B. 8, 25). — II, 608.
- $C_{25}H_{25}O_3Si$ 1) **Tetra[2-Methylphenylester] d. Kieselsäure**. Sd. 435—438° (B. 18, 1687). — II, 738.
 2) **Tetra[3-Methylphenylester] d. Kieselsäure**. Sd. 443—446°₇₆₀ (B. 18, 1688). — II, 744.
 3) **Tetra[4-Methylphenylester] d. Kieselsäure**. Sm. 69—70°; Sd. 442 bis 445° (B. 18, 1252; 18, 1689). — II, 749.
- $C_{25}H_{25}O_3N_2$ C 71,2 — H 5,9 — O 17,0 — N 5,9 — M. G. 472.
 1) **Benzylhydrastimid**. Sm. 140°. HCl (B. 26, 2490). — II, 2054.
 2) **Verbindung** (aus Äthylacetessigester u. m-Homoanthranilsäure) (B. 27, 1402).
- $C_{25}H_{25}O_6N_2$ C 68,8 — H 5,7 — O 19,7 — N 5,7 — M. G. 488.
 1) **Oximanhydrid d. Benzylhydrastein**. Sm. 135° (B. 26, 2489). — II, 2054.
- $C_{25}H_{25}O_9N_6$ C 56,7 — H 4,7 — O 24,3 — N 14,2 — M. G. 592.
 1) **Tetrasparriddianilid**. Zers. bei 270—275° (A. 303, 211).
- $C_{25}H_{25}NCl$ 1) **Tetrabenzylammoniumchlorid**. Sm. 230° (A. 151, 136). — II, 523.
- $C_{25}H_{25}N_4S$ 1) **Thiodiphenylidi[*p*-Methylphenyl]guanidin**. Sm. 152—153° (B. 20, 675). — II, 821.
- $C_{25}H_{25}N_4S_2$ 1) α,β -Di[β -Phenylthiouramidophenylamido]äthan (Äthylentetraphenyl-dithiosemicarbazid). Sm. 194,5° (A. 254, 126). — IV, 679.
- $C_{25}H_{25}ClP$ 1) **Tetrabenzylphosphoniumchlorid + 2H₂O**. Sm. 224° (228,5°). + CHCl₃, 2 + SnCl₄, + HgCl₂ + H₂O, 2 + PtCl₄, + AuCl₃ (B. 21, 406). — IV, 1666.
- $C_{25}H_{25}ClAs$ 1) **Tetrabenzylarsoniumchlorid + H₂O**. Sm. 160°. 2 + PtCl₄ (A. 233, 78). — IV, 1691.
- $C_{25}H_{25}BrP$ 1) **Tetrabenzylphosphoniumbromid** (B. 21, 407). — IV, 1666.
- $C_{25}H_{25}BrAs$ 1) **Tetrabenzylarsoniumbromid + H₂O**. Sm. 173° (A. 233, 80). — IV, 1691.
- $C_{25}H_{25}JP$ 1) **Tetrabenzylphosphoniumjodid**. Sm. 191° (B. 21, 406). — IV, 1666.
- $C_{25}H_{25}JAs$ 1) **Tetrabenzylarsoniumjodid**. Sm. 168° (A. 233, 80). — IV, 1691.
- $C_{25}H_{25}J_3As$ 1) **Tetrabenzylarsoniumtrijodid**. Sm. 149—150° (A. 233, 81). — IV, 1691.
- $C_{25}H_{25}OP$ 1) **Tetrabenzylphosphoniumoxyhydrat**. Sm. 190°. Chlorid + H₂O, Bromid, Jodid, Nitrat, Sulfat + 6H₂O, Oxalat, Pikrat (B. 21, 406). — IV, 1666.
- $C_{25}H_{25}OAs$ 1) **Tetrabenzylarsoniumoxyhydrat**. Chlorid, 2 Chlorid + PtCl₄, Bromid, Jodid, Trijodid (A. 233, 78). — IV, 1691.
- $C_{25}H_{25}O_3N_3$ C 69,0 — H 5,9 — O 16,4 — N 8,6 — M. G. 487.
 1) **Phenylhydrazon d. Methylhydrastein**. Sm. 175—176°. HCl, HNO₃ (A. 271, 396). — IV, 800.
 2) **Tetraacetyrosanilin**. Sm. 153—155° (B. 18, 1303). — II, 1093.
- $C_{25}H_{25}O_8N$ C 70,7 — H 6,1 — O 20,2 — N 2,9 — M. G. 475.
 1) **Papaverinphenacyloxyhydrat**. Chlorid + 6H₂O, Bromid, Nitrat, Bicromat, Pikrat (M. 9, 1035). — IV, 441.
- $C_{25}H_{25}O_7N$ C 68,4 — H 5,9 — O 22,8 — N 2,8 — M. G. 491.
 1) **Benzylhydrastein + xH₂O**. Sm. 159° (wasserfrei) (B. 26, 2489). — II, 2054.
 2) **Hydrastinbenzyloxyhydrat + H₂O**. Sm. 194° (wasserfrei). Jodid, siehe dieses (B. 26, 2489). — II, 2051.
- $C_{25}H_{25}ON_4$ C 76,7 — H 6,8 — O 3,6 — N 12,8 — M. G. 438.
 1) **Base** (aus Benzylidenimid). Sm. 130—135° (B. 28, 1651). — IV, 187.
 2) **Verbindung** (aus Diphenylacetamid). Sm. 186° (B. 14, 2371). — II, 367.
- $C_{25}H_{25}ON_5$ C 68,0 — H 6,1 — O 3,2 — N 22,7 — M. G. 494.
 1) **Anhydrid d. 2-Amido-3-Methylamido-5,10-Naphtdiazin-5-Methyl-oxyhydrat** (B. 26, 381). — IV, 1281.

- C₂₈H₃₀O₂N₂** C 76,0 — H 6,8 — O 10,9 — N 6,3 — M. G. 442.
 1) Benzylstrychnin + 9H₂O (Strychninbenzyloxyhydrat). Sm. 220°. Salze siehe (M. 10, 1; A. 304, 53). — III, 939.
- C₂₈H₃₀O₄N₄** C 69,1 — H 6,2 — O 13,2 — N 11,5 — M. G. 486.
 1) Brenzkatechinantipyryn. Sm. 78—79° (Bl. [3] 16, 172). — IV, 510.
 2) Hydrochinonantipyryn. Sm. 127—128° (Bl. [3] 15, 510). — IV, 510.
- C₂₈H₃₀O₆N₂** C 68,6 — H 6,1 — O 19,6 — N 5,7 — M. G. 490.
 1) Benzylhydrastamid. Sm. 116° (B. 26, 2490). — II, 2054.
- C₂₈H₃₀O₄Cl₂** 1) Diäthyläther d. 3,6-Dichlor-2,5-Dioxy-1,4-Benzochinondibenzoyldiäthylacetat. Sm. 170° (Am. 17, 636). — III, 351.
- C₂₈H₃₀O₁₂N₆** C 52,3 — H 4,7 — O 29,9 — N 13,1 — M. G. 642.
 1) 4,5-Di[3,5-Dinitro-4-Pseudobutyl-2,6-Dimethylbenzoyl]-1,2,3,6-Dioxidiazin. Sm. 245° (B. 31, 1348).
- C₂₈H₃₀NCl** 1) Methyltri[γ-Phenylpropenyl]ammoniumchlorid. Sm. 166°. 2 + PtCl₄ (B. 26, 1864). — II, 585.
- C₂₈H₃₀NJ** 1) Methyltri[γ-Phenylpropenyl]ammoniumjodid. Sm. 129—130° (B. 26, 1864). — II, 585.
- C₂₈H₃₁ON₂** C 79,0 — H 7,3 — O 3,8 — N 9,9 — M. G. 425.
 1) Methyläther d. αα-Di[4-Dimethylamidophenyl]-n-[7-Oxy-5-Methyl-6-Chinoly]methan. Sm. 183° (B. 24, 3143). — IV, 1214.
- C₂₈H₃₁O₁₀N** C 62,1 — H 5,7 — O 29,6 — N 2,6 — M. G. 541.
 1) Tetracetylhelicotuloid (A. 154, 34). — III, 69.
- C₂₈H₃₁N₂Cl₂** 1) Farbstoff (aus Tetrahydrochinolin) (C. 1897 [1] 906).
- C₂₈H₃₁O₅N₂** C 70,6 — H 6,7 — O 16,8 — N 5,9 — M. G. 476.
 1) Verbindung (aus 2-Methylchinolin-3-Carbonsäureäthylesterchloromethylat). Sm. 235°; Zers. bei 150—240° (B. 19, 38; A. 292, 111). — IV, 353.
- C₂₈H₃₂O₂N₂** C 64,1 — H 6,1 — O 24,4 — N 5,3 — M. G. 524.
 1) Phthalat d. Camphonitrosophenol. Sm. 275° u. Zers. (Bl. [3] 1, 471). — III, 494.
- C₂₈H₃₂O₄N₂** C 60,9 — H 5,8 — O 23,2 — N 10,1 — M. G. 552.
 1) 4,6-Di[β-Nitro-4-Pseudobutyl-2,6-Dimethylbenzoyl]-1,2,3,6-Dioxidiazin. Sm. 176° (B. 31, 1348).
- C₂₈H₃₂N₂Si** 1) 2-Methylphenylamid d. Orthokieselsäure (Soc. 55, 480). — II, 460.
 2) 4-Methylphenylamid d. Orthokieselsäure. Sm. 131—132° (Soc. 55, 479). — II, 490.
- C₂₈H₃₂O₃N₂** C 73,2 — H 7,2 — O 10,5 — N 9,1 — M. G. 459.
 1) Acetat d. α-Oxy-4',4'',4'''.Pentamethylacetyltriimidotriphenylmethan. Sm. 223—225° (B. 16, 2905). — II, 1088.
- C₂₈H₃₃O₄N₂** C 60,1 — H 5,9 — O 11,4 — N 22,5 — M. G. 559.
 1) Verbindung (aus Dioximidotropinon) = (C₂₈H₃₃O₄N₂)_n. Sm. 224—225° u. Zers. (B. 30, 2707). — IV, 798.
- C₂₈H₃₄O₂N₂** C 78,1 — H 7,9 — O 7,4 — N 6,5 — M. G. 430.
 1) Dipiperidid d. α-Truxillsäure. Sm. 259° (B. 22, 2264). — IV, 17.
 2) Dipiperidid d. β-Truxillsäure. Sm. 180° (B. 22, 2264). — IV, 17.
 3) Dipiperidid d. γ-Truxillsäure. Sm. 248° (B. 22, 2265). — IV, 17.
- C₂₈H₃₄O₄N₂** C 72,7 — H 7,4 — O 13,8 — N 6,1 — M. G. 462.
 1) 4,5-Di[4-Pseudobutyl-2,6-Dimethylbenzoyl]-1,2,3,6-Dioxidiazin. Sm. 201° (B. 31, 1348).
 2) dimolec. 4-Methylphenylimid d. mal.Pentan-ββ-Dicarbonsäure. Sm. 237° (A. 285, 237; 292, 201).
- C₂₈H₃₄O₆N₂** C 61,1 — H 6,2 — O 17,4 — N 15,3 — M. G. 550.
 1) Diäthylester d. 2,5-Diketo-1,4-Di[2-Isopropylphenyl-5-Carbonsäure]hexahydro-1,4-Diazin. Sm. 192—193° (J. pr. [2] 40, 440). — II, 1388.
- C₂₈H₃₅O₆N** C 69,8 — H 7,3 — O 20,0 — N 2,9 — M. G. 481.
 1) Camphoryleocidin + 4H₂O. HCl + 3H₂O, (2HCl, PtCl₄) (Soc. 28, 689). — III, 906.
- C₂₈H₃₆O₂N₁₀** C 56,7 — H 6,1 — O 13,5 — N 23,6 — M. G. 592.
 1) Verbindung (aus Dioximidotropinon). Sm. 177—178° (B. 30, 2706). — IV, 798.
- C₂₈H₃₆O₃N₂** C 54,9 — H 5,9 — O 20,9 — N 18,3 — M. G. 612.
 1) Dimethylester d. o-Phталyldiegonin. (2HCl, PtCl₄) (B. 21, 3338). — III, 870.
 2) Dimethylester d. o-Phталyldi-d-Eegonin. Fl. 2HJ (B. 24, 11). — III, 870.

- $C_{26}H_{16}N_2J$ 1) Jodid d. Tetraäthylrosanilin (*J.* 1863, 419). — II, 1092.
 $C_{26}H_{16}O_2N_2$ C 73,3 — H 8,3 — O 12,2 — N 6,1 — M. G. 458.
- 1) polym. 2-Heptylidenamidobenzol-1-Carbonsäure. Sm. 183° (*B.* 28, 2816).
- $C_{26}H_{20}O_2N_2$ C 69,7 — H 7,9 — O 16,6 — N 5,8 — M. G. 482.
- 1) Brucinisoamyloxydhydrat. Salze siehe (*J. pr.* [2] 3, 167). — III, 947.
- $C_{26}H_{20}N_2J$ 1) Jodmethylat d. 4',4'-Di[Dimethylamido]-4²-Isopropyltriphenylmethan. Sm. 200° (*B.* 13, 787). — IV, 1048.
- $C_{26}H_{16}O_2N_2$ C 77,1 — H 9,2 — O 7,3 — N 6,4 — M. G. 436.
- 1) Diphenylamid d. Thapsiasäure. Sm. 162–163° (*G.* 13, 517). — II, 416.
- $C_{26}H_{16}N_2Cl$ 1) Trichlormethylat d. Tri[2-Dimethylamidophenyl]methan. 2 + 3PtCl₄ (*B.* 18, 1307). — IV, 1193.
- 2) Trichlormethylat d. Tri[4-Dimethylamidophenyl]methan. 2 + 3PtCl₄ (*B.* 12, 2345). — IV, 1195.
- 3) Trichlormethylat d. 3',4',4²-Tri[Dimethylamido]triphenylmethan. 2 + 3PtCl₄ (*B.* 12, 803). — IV, 1193.
- $C_{26}H_{16}N_2J_3$ 1) Trijodmethylat d. Tri[2-Dimethylamidophenyl]methan (*B.* 16, 1306). — IV, 1193.
- 2) Trijodmethylat d. Tri[4-Dimethylamidophenyl]methan. Sm. 188° u. Zers. (*B.* 2, 448; 12, 2344; 14, 1953; *Bt.* [3] 13, 552). — IV, 1195.
- 3) Trijodmethylat d. 3',4',4²-Tri[Dimethylamido]triphenylmethan (*B.* 12, 803; 13, 673). — IV, 1193.
- $C_{26}H_{16}O_2N$ C 71,1 — H 9,1 — O 16,9 — N 2,9 — M. G. 473.
- 1) Veratralbin (*Soc.* 35, 405). — III, 950.
- $C_{26}H_{16}O_2N$ C 66,5 — H 8,5 — O 22,2 — N 2,8 — M. G. 505.
- 1) Erythroplein (oder $C_{26}H_{16}O_2N$). HCl, (2HCl, PtCl₄) (*C.* 1897 [1] 301).
- $C_{26}H_{16}O_2N_2$ C 76,3 — H 10,0 — O 7,3 — N 6,4 — M. G. 440.
- 1) 2-Oktyl-1,4-Benzdiazin-3-[Undekyl-1-Carbonsäure] (Oktyl-dodekylsäurechinoxalin). Sm. 45°. (2HCl, PtCl₄) (*B.* 29, 812). — IV, 950.
- $C_{26}H_{16}ON$ C 81,7 — H 10,9 — O 3,9 — N 3,4 — M. G. 411.
- 1) Phenylamid d. Behenolsäure. Sm. 73° (*B.* 25, 2669). — II, 371.
- $C_{27}H_{18}O_2N$ C 64,2 — H 8,6 — O 24,5 — N 2,7 — M. G. 523.
- 1) Verin. Sm. 130° (*Soc.* 33, 338). — III, 949.
- $C_{27}H_{16}ON_2$ C 78,9 — H 10,8 — O 3,7 — N 6,6 — M. G. 426.
- 1) Phenylhydrazid d. Behenolsäure. Sm. 86,5° (*B.* 25, 2670). — IV, 667.
- $C_{28}H_{16}O_2N_2$ C 70,0 — H 10,4 — O 7,2 — N 6,3 — M. G. 442.
- 1) Phenylhydrazid d. Oxybrassidinsäure. Sm. 111° (*B.* 26, 840). — IV, 693.
- $C_{28}H_{16}ON$ C 81,3 — H 11,4 — O 3,9 — N 3,4 — M. G. 413.
- 1) Phenylamid d. Brassidinsäure. Sm. 78° (*B.* 19, 3326). — II, 371.
- 2) Phenylamid d. Erucasäure. Sm. 55° (*B.* 19, 3326). — II, 371.
- $C_{28}H_{16}O_2N$ C 68,2 — H 9,5 — O 19,5 — N 2,8 — M. G. 493.
- 1) Aethylester d. Glykochohsäure. Fl. (*Am.* 1, 182). — I, 1193.
- $C_{28}H_{16}ON_2$ C 78,5 — H 11,2 — O 3,7 — N 6,5 — M. G. 428.
- 1) Phenylhydrazid d. Brassidinsäure. Sm. 95° (*B.* 25, 2671). — IV, 667.
- 2) Phenylhydrazid d. Erucasäure. Sm. 82° (*B.* 25, 2671). — IV, 667.
- $C_{28}H_{16}N_2J_2$ 1) Di[Jodäthylat] d. Conessin + H₂O (*B.* 19, 82). — III, 875.
- $C_{28}H_{16}ON$ C 80,2 — H 12,6 — O 3,8 — N 3,3 — M. G. 419.
- 1) Tetraönanthoxaldin. Fl. (*A. Spl.* 6, 25). — I, 955.
- $C_{28}H_{16}O_2N_2$ C 74,3 — H 12,4 — O 7,1 — N 6,2 — M. G. 452.
- 1) s-Tridekylmristylharnstoff. Sm. 103° (*B.* 18, 2016; 19, 1436). — I, 1304.
- $C_{28}H_{16}OJ$ 1) Verbindung (aus Drimol). Sm. 47° (*A.* 286, 375). — III, 630.
- $C_{28}H_{16}O_2N_2$ C 67,5 — H 12,4 — O 3,2 — N 16,9 — M. G. 498.
- 1) Verbindung (aus Isobutyraldehyd). Sm. 31°; Zers. bei 90° (*A.* 205, 5; *B.* 13, 904). — I, 947.

C₂₈-Gruppe mit vier Elementen.

- $C_{28}H_{16}O_2N_2Br_2$ 1) 2,2-Dibrom-4,4'-Diphtalylamidobenzol (*B.* 11, 2262). — IV, 966.
- $C_{28}H_{16}O_2N_2S$ 1) Tetranitrotetraphenylthiophen. Sm. oberh. 250° (*A.* 144, 197). — III, 750.

- $C_{20}H_{14}O_1N_1S_1$ 1) Di[*p*-Amido-*p*-Oxy-9,10-Anthracinonyl]äther-*p*-Disulfonsäure (B. 16, 1522; 16, 56, 903). — III, 431.
 $C_{26}H_{17}O_1N_1Br_3$ 1) Säure (aus Tribromtetraphenylthiophen). $Ba_2 + 8H_2O$ (A. 144, 201). — III, 750.
 $C_{27}H_{17}O_1N_1Br_3$ 1) Verbindung (aus Tribromtetraphenylthiophen) (A. 144, 201). — III, 750.
 $C_{28}H_{10}O_2N_3S_8$ 1) Phenylrosindulin-*m*-Sulfonsäure (A. 262, 242). — IV, 1206.
 $C_{28}H_{20}O_2N_2S_8$ 1) 7-Phenyloxydhydrat d. 6-Phenylsulfon- $\alpha\beta$ -Naphthophenasin. Sm. 287° (B. 31, 2434).
 $C_{29}H_{20}O_2N_2Br_1$ 1) Tetracetyltetrabromdiimidophenolphalein. Sm. 241° (A. 202, 117). — II, 1985.
 $C_{29}H_{23}ON_1Cl_1$ 1) 1-Chlorphenylat d. 6-Acetylamido-2,3-Diphenyl-1,4-Benzodiazin (B. 31, 2426).
 $C_{29}H_{23}O_1N_4S_8$ 1) 4,4'-Di[4-Nitrobenzylidenamidobenzyl]sulfid. Sm. 173° (B. 28, 1339). — III, 32.
 $C_{29}H_{23}ON_1Cl_1$ 1) Verbindung (aus Amarin u. Benzoylchlorid) (J. pr. [2] 27, 300). — III, 25.
 $C_{29}H_{21}O_2N_2S_8$ 1) Di[4-(2-Oxybenzyliden)amidobenzyl]sulfid. Sm. 176–177° (163°) (B. 24, 727; 28, 1339). — III, 74.
 2) Di[4-Benzoylamidobenzyl]sulfid. Sm. 223° (224°) (B. 24, 726; 28, 915).
 3) *s*-Di[4-Benzoylamido-1-Methylphenyl]sulfid. Sm. 185–186° (B. 20, 668). — II, 1179.
 $C_{29}H_{24}O_2N_1S_8$ 1) 5-Dibenzylamido-2-[3-Nitrophenyl]-3-Phenyl-2,3-Dihydro-1,3,4-Thiodiazol. HCl (B. 30, 855). — IV, 686.
 $C_{29}H_{21}O_2N_2S_8$ 1) Äthyläther d. Stilbendisulfonsäuredisäphenol. Na_2, Cu (B. 27, 3357). — IV, 1419.
 $C_{29}H_{21}N_1Cl_1Br_1$ 1) Verbindung (aus d. Verb. $C_{29}H_{20}O_2N_2Br_1$) (B. 31, 1413).
 $C_{29}H_{23}O_2N_2Cl_1$ 1) Verbindung (aus Chloral u. β -2-Methyl-7-Chinolyakrylsäure). Sm. 128°. HCl (B. 22, 284). — IV, 382.
 $C_{29}H_{26}ON_1S_8$ 1) α -Phenyl- β -[4-Methylphenyl]- β -[2-Phenylthioureidobenzyl]-harnstoff. Sm. 230–231° (J. pr. [2] 55, 248). — IV, 635.
 $C_{29}H_{20}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[α -Brompropionyl-2-Naphtylamido]äthan. Sm. 196–197° (B. 25, 3269). — II, 617.
 $C_{29}H_{20}O_2N_1Cl_1$ 1) Verbindung (aus Chloralhydrat u. saizs. Phenylhydrazin). Zers. bei 145°. Ag_2 (B. 31, 1410).
 $C_{29}H_{20}O_2N_1Br_1$ 1) Verbindung (aus Bromalhydrat u. saizs. Phenylhydrazin). Ag_2 (B. 31, 1412).
 $C_{29}H_{20}O_2N_2S_8$ 1) 4-Methoxybenzaldehyd-2-Naphtylthionaminsäures-2-Amidonaphtalin. Sm. 110° (A. 274, 256). — III, 82.
 $C_{29}H_{20}O_2N_2Hg_2$ 1) Diacetat d. Quecksilberammoniumbase $C_{29}H_{22}O_2N_2Hg_2$. Sm. 178° (G. 28 [2] 131). — IV, 1707.
 $C_{29}H_{21}O_2N_1Br_1$ 1) 2-Brom-4,4'-Dimethylazoxybenzol + 4,4'-Dimethylazoxybenzol. Sm. 63° (M. 10, 598). — IV, 1340.
 $C_{29}H_{27}O_2N_3Cl_1$ 1) Leukoochlordimethylignonblau (B. 31, 620).
 $C_{29}H_{27}O_2Br_1S_4$ 1) Bromid d. Di[4-Methylphenyl]disulfoxyd (A. 149, 105). — II, 826.
 $C_{29}H_{27}O_2N_1Cl_1$ 1) Papaverinphenacylchlorid + 6H₂O. 2 + PtCl₄ (M. 9, 1039). — IV, 441.
 $C_{29}H_{27}O_2N_1Br_1$ 1) Papaverinphenacylbromid + 2 $\frac{1}{2}$ H₂O. Zers. bei 194° (M. 9, 1035). — IV, 441.
 $C_{29}H_{29}O_2N_1J_1$ 1) Jodbenzylat d. Hydrastin. Sm. 177° (B. 26, 2488). — II, 2051.
 $C_{29}H_{29}O_2N_2S_2$ 1) Verbindung (aus d. 4-Aethoxyphenylamid d. Benzolsulfonsäure). Sm. 168°. K (A. 265, 185). — II, 721.
 $C_{29}H_{30}O_2N_1J_1$ 1) Jodäthylat d. Acetylbenzoylmorphin + $\frac{1}{2}$ H₂O (Soc. 28, 323). — III, 900.
 $C_{29}H_{31}O_2N_2J_1$ 1) Jodmethylat d. Benzoylchinin (A. ch. [7] 7, 142). — III, 815.
 $C_{29}H_{31}O_2N_2J_1$ 1) Di[Jodmethylat] d. Benzoylchinonin (B. [3] 9, 714). — III, 835.
 $C_{29}H_{31}ON_2Cl_1$ 1) Chlorbenzylat d. Dimethyleinchonin (A. 277, 287). — III, 833.
 $C_{29}H_{33}N_3Cl_1P$ 1) Methyltri[1,2,3,4-Tetrahydro-1-Chinoly]phosphoniumchlorid. Sm. 148–150°. 2 + PtCl₄ (B. 31, 1040). — IV, 1683.
 $C_{29}H_{33}N_3JP$ 1) Methyltri[1,2,3,4-Tetrahydro-1-Chinoly]phosphoniumjodid. Sm. 188° (B. 31, 1040). — IV, 1683.
 $C_{29}H_{34}O_2N_2S_2$ 1) Verbindung (aus 1-Methylbenzol-4-Sulfinsäure). Sm. 132° u. Zers. (J. pr. [2] 56, 227).

- $C_{25}H_{25}O_2N_2S$ 1) **1,2-Di[Isobutylphenylsulfonamidomethyl]benzol**. Sm. 157° (*B.* 31, 1706).
- $C_{25}H_{25}O_2NJ$ 1) **Jodallylat d. Narceïnäthylester**. Sm. 154—155° (*A.* 277, 42). — II, 2080.
- $C_{25}H_{25}O_2N_2Cl$ 1) **Chlorisoamylat d. Brucin + H₂O**. 2 + PtCl₄ (*J. pr.* [2] 3, 167). — III, 947.
- $C_{25}H_{25}O_2N_2J$ 1) **Jodisoamylat d. Brucin + J₂, + J₅** (*J. pr.* [2] 3, 167). — III, 947.
- $C_{25}H_{25}O_2JP$ 1) **Tetrahydrooxyänthrylidenphosphoniumjodid**. Sm. 120—122° (*A. ch.* [6] 2, 40). — I, 955.

C_{25} -Gruppe mit einem Element.

- $C_{25}H_{27}$ C 94,0 — H 6,0 — M. G. 370.
- $C_{25}H_{25}$ 1) **2,3,4,5-Tetraphenyl-R-Penten**. Sm. 177° (*A.* 302, 231).
C 93,1 — H 6,9 — M. G. 374.
- $C_{25}H_{24}$ 1) **1,2,3,4-Tetraphenyl-R-Pentamethylen**. Sm. 80,5—81° (*A.* 302, 229).
C 86,6 — H 13,4 — M. G. 402.
- $C_{25}H_{20}$ 1) **Kohlenwasserstoff (aus Polyporus officinalis)**. Sm. 125—126° (*J.* 1886, 1823). — III, 645.
C 85,3 — H 14,7 — M. G. 408.
- 1) **Kohlenwasserstoff (aus Charas)**. Sm. 63,5—64°; Sd. 285—290°₁₅ (*Soc.* 60, 543).

C_{25} -Gruppe mit zwei Elementen.

- $C_{25}H_{18}O_6$ C 75,3 — H 3,9 — O 20,8 — M. G. 462.
- 1) **Dibenzolat d. Chrysophansäure**. Sm. 200° (*J.* 1862, 323; *A.* 183, 173; 212, 38). — III, 452.
- 2) **Dibenzolat d. 7,8-Dioxy-2-Phenyl-1,4-Benzpyron**. Sm. 192,5—194° (*B.* 29, 2432).
- $C_{25}H_{20}O_4$ C 70,6 — H 4,6 — O 14,8 — M. G. 432.
- 1) **Benzolat d. α -Oxy- β,β -Dibenzoyl- α -Phenyläthen**. Sm. 121—122° (*A.* 201, 102). — III, 322.
- $C_{25}H_{20}O_5$ C 70,2 — H 4,0 — O 25,8 — M. G. 496.
- 1) **Säure (aus Phenol)** (*G.* 14, 103). — II, 649.
- 2) **Methylester d. 3,4,5-Tribenzoylbenzol-1-Carbonsäure**. Sm. 139° (*A.* 301, 110).
- 3) **Verbindung (aus Krapp)** (*B.* 3, 295). — III, 425.
- $C_{25}H_{20}O_{18}$ C 53,0 — H 3,0 — O 43,9 — M. G. 656.
- 1) **Tannoform**. Zers. bei 230° (*C.* 1896 [1] 560).
- $C_{25}H_{20}N_2$ C 87,8 — H 5,0 — N 7,1 — M. G. 396.
- 1) **Dianthracylamidoimidomethan (Methenyldianthraminamidin)** (*B.* 16, 1639). — II, 640.
- $C_{25}H_{20}Br_2$ 1) **1,1-Dibrom-2,3,4,5-Tetraphenyl-R-Penten**. Sm. 151,5—152° (*A.* 302, 232).
- $C_{25}H_{21}N$ C 90,9 — H 5,5 — N 3,6 — M. G. 383.
- 1) **2,3,4,6-Tetraphenylpyridin**. Sm. 179° (*A.* 281, 51, 52). — IV, 478.
- 2) **2,3,5,6-Tetraphenylpyridin**. Sm. 233,5° (*A.* 302, 234).
- $C_{25}H_{21}N_3$ C 84,7 — H 5,1 — N 10,2 — M. G. 411.
- 1) **2-Methylphenyrosindulin**. Sm. 197° (*A.* 272, 318). — IV, 1207.
- 2) **4-Methylphenyrosindulin**. Sm. 212—213° (*A.* 272, 318). — IV, 1207.
- 3) **9-Methyl-5-Phenyrosindulin**. Sm. 224,5° (*B.* 26, 581). — IV, 1210.
- $C_{25}H_{21}N_2$ C 87,4 — H 5,5 — N 7,0 — M. G. 398.
- 1) **α -[1-Naphthyl]azotriphenylmethan**. Sm. 114° (*C.* 1898 [2] 1132). — IV, 1404.
- $C_{25}H_{21}N_4$ C 81,7 — H 5,2 — N 13,1 — M. G. 426.
- 1) **9-Phenylamido-5-Methylrosindulin[5]**. Sm. 225° u. Zers. HCl (*A.* 286, 161). — IV, 1297.
- $C_{25}H_{23}N$ C 90,4 — H 6,0 — N 3,6 — M. G. 385.
- 1) **1-Methyl-2,3,4,5-Tetraphenylpyrrol**. Sm. 214° (*B.* 22, 555). — IV, 478.

- $C_{29}H_{24}O$ C 89,7 — H 6,2 — O 4,1 — M. G. 388.
- 1) **10-Keto-3-Methyl-9,10-Di[4-Methylphenyl]-9,10-Dihydroanthracen.** Sm. 217° (*Bt.* [3] 15, 392; [3] 17, 988).
- $C_{29}H_{24}O_2$ C 86,1 — H 5,9 — O 7,9 — M. G. 404.
- 1) **αs -Diketo- $\alpha\beta\gamma s$ -Tetraphenylpentan.** Sm. 189° (*A.* 281, 50, 53). — III, 310.
- 2) **αs -Diketo- $\alpha\beta\delta s$ -Tetraphenylpentan.** Sm. 145,5—146,5° (*A.* 302, 223).
- $C_{29}H_{24}O_3$ C 79,8 — H 5,5 — O 14,7 — M. G. 436.
- 1) **Dibenzoat d. $\beta\beta$ -Di[4-Oxyphenyl]propan.** Sm. 153,5° (*J. r.* 23, 495). — II, 1151.
- $C_{29}H_{24}O_6$ C 74,4 — H 5,1 — O 20,5 — M. G. 468.
- 1) **Dibenzoat d. Verb. $C_{13}H_{14}O_4$.** Sm. 115° (*Bt.* [3] 7, 564). — II, 919.
- $C_{29}H_{24}O_8$ C 69,6 — H 4,8 — O 25,6 — M. G. 500.
- 1) **Piscidin.** Sm. 192° (*Am.* 5, 39). — III, 644.
- 2) **Tetracetat d. Di[2,7-Dioxynaphtyl]methan.** Sm. 249,5° (*B.* 26, 85). — II, 1039.
- $C_{29}H_{24}N_2$ C 87,0 — H 6,0 — N 7,0 — M. G. 400.
- 1) **α -Triphenyl- β -[1-Naphtyl]hydrasin (C. 1898 [2] 1132).**
- 2) **1,2,6-Triphenyl-4-Benzoyl-1,4-Dihydro-1,4-Diazin.** Sm. 184—185° (*Soc.* 63, 1374). — IV, 1031.
- $C_{29}H_{26}O_2$ C 85,7 — H 6,4 — O 7,9 — M. G. 406.
- 1) **2,3-Dioxy-1,2,3,4-Tetraphenyl-R-Pentamethylen.** Sm. 138° (*A.* 302, 225).
- 2) **Allo-2,3-Dioxy-1,2,3,4-Tetraphenyl-R-Pentamethylen.** Sm. 239 bis 240° (*A.* 302, 227).
- $C_{29}H_{26}O_6$ C 74,1 — H 5,5 — O 20,4 — M. G. 470.
- 1) **Rottleron (Soc. 67, 237).** — III, 971.
- $C_{29}H_{26}O_9$ C 67,2 — H 5,0 — O 27,8 — M. G. 518.
- 1) **Dibenzoat d. Pikrotin.** Sm. 247—248° (*B.* 31, 2972).
- $C_{29}H_{26}O_{11}$ C 61,5 — H 4,6 — O 33,9 — M. G. 566.
- 1) **Aromadendrin + 3H₂O.** Sm. 216° (*C.* 1897 [1] 170).
- $C_{29}H_{27}N_5$ C 78,2 — H 6,1 — N 15,7 — M. G. 445.
- 1) **1,3-Di[4-Methylphenylamido]methylen-2-[4-Methylphenyl]imido-2,3-Dihydrobensimidazol.** Sm. 187,5—188° (*B.* 24, 2513). — IV, 567.
- 2) **2-Phenylimido-1,3-Di[4-Methylphenylamido]methylen-5-Methyl-2,3-Dihydrobensimidazol.** Sm. 193° (*B.* 24, 2510). — IV, 624.
- $C_{29}H_{28}O_8$ C 73,7 — H 5,9 — O 20,3 — M. G. 472.
- 1) **Diäthylester d. αs -Diketo- $\alpha\gamma s$ -Triphenylpentan- $\beta\delta$ -Dicarbonsäure.** Sm. 103° (95°). *Na₂* (*B.* 18, 2375; *A.* 281, 55). — II, 2039.
- $C_{29}H_{28}O_{14}$ C 58,0 — H 4,7 — O 37,3 — M. G. 600.
- 1) **Eichentannoform + H₂O.** Zers. bei 275° (*C.* 1896 [1] 560).
- $C_{29}H_{28}N_4$ C 80,6 — H 6,5 — N 12,9 — M. G. 432.
- 1) **Aethylmauvein (Dahlia).** HCl, (2HCl, PtCl₄), (HJ, J₂) (*Soc.* 35, 721). — III, 678.
- 2) **Base (aus Acetanilid u. Succinylchlorid).** Sm. 132—133°. 2HCl, 2HNO₃ (*B.* 10, 2165). — IV, 1305.
- $C_{29}H_{30}O_4$ C 78,7 — H 6,8 — O 14,5 — M. G. 442.
- 1) **Diphenylester d. Phenyloxyamphocarbonsäure (A. ch. [7] 2, 277).** — II, 1872.
- $C_{29}H_{30}O_6$ C 73,4 — H 6,3 — O 20,3 — M. G. 474.
- 1) **Triacetat d. $\alpha\alpha\beta$ -Tri[2-Oxy-1-Methylphenyl]äthan (A. 257, 325).** — II, 1029.
- 2) **Triacetat d. $\alpha\alpha\beta$ -Tri[3-Oxy-1-Methylphenyl]äthan (A. 257, 325).** — II, 1029.
- 3) **Triacetat d. $\alpha\alpha\beta$ -Tri[4-Oxy-1-Methylphenyl]äthan (A. 257, 325).** — II, 1029.
- $C_{29}H_{30}O_{10}$ C 64,7 — H 5,6 — O 29,7 — M. G. 538.
- 1) **Melanthin (C. 1895 [1] 352).**
- $C_{29}H_{30}O_{11}$ C 62,8 — H 5,4 — O 31,8 — M. G. 554.
- 1) **Diacetylauptonsäure.** Sm. 265° u. Zers. (*B.* 12, 2218). — II, 2092.
- $C_{29}H_{31}N_3$ C 82,6 — H 7,4 — N 9,9 — M. G. 421.
- 1) **4'-Phenylamido-4',4''-Di[Dimethylamido]triphenylmethan.** Sm. 176°. Pikrat (*A.* 274, 214). — IV, 1195.

- $C_{77}H_{91}O_{16}$ C 54,7 — H 5,0 — O 40,3 — M. G. 636.
- $C_{79}H_{93}N_4$ 1) Lupinin + $7H_2O$ (*B.* 11, 2200; *A.* 278, 352). — III, 597.
C 79,8 — H 7,3 — N 12,8 — M. G. 436.
- 1) Phenylhydrason d. Malachitgrün. Sm. 167° u. Zers. (*B.* 28, 211). — IV, 661.
- $C_{79}H_{94}O_6$ C 66,2 — H 6,4 — O 27,4 — M. G. 526.
- 1) Säure (aus Pyrogalloldiäthyläther u. Methylpyrogalloldimethyläther) (*B.* 12, 1384). — II, 2092.
- 2) Diäthylester d. Eupittonsäure. Sm. 201–202° (*B.* 12, 2220). — II, 2092.
- $C_{79}H_{94}O_{13}$ C 60,6 — H 5,9 — O 33,4 — M. G. 574.
- 1) Onospin. Sm. 162° (*J.* 1855, 715). — III, 599.
- $C_{79}H_{94}O_{15}$ C 59,0 — H 5,8 — O 35,2 — M. G. 590.
- 1) Diglyko-o-Cumarketon + $4H_2O$. Sm. 257° wasserfrei (*B.* 18, 1967). — III, 252.
- $C_{79}H_{96}O_6$ C 68,0 — H 7,0 — O 25,0 — M. G. 512.
- 1) Tetraäthylester d. $\alpha\alpha$ -Diphenylpentan- $\beta\beta\beta\beta$ -Tetracarbonsäure. Sd. 230–250° (i. V.) (*A.* 256, 191; *B.* 30, 961). — II, 2085.
- $C_{79}H_{96}O_7$ C 82,4 — H 9,9 — O 7,6 — M. G. 422.
- 1) Benzoesäure d. Cholestol. Sm. 144° (*B.* 18, 1807). — II, 1069.
- $C_{79}H_{94}O_3$ C 79,1 — H 10,0 — O 10,9 — M. G. 440.
- 1) Acetat d. α -Oxycholestenol. Sm. 101–102° (*M.* 17, 584).
- 2) Acetat d. β -Oxycholestenol. Sm. 152–153° (*M.* 17, 594).
- $C_{79}H_{94}O_8$ C 66,9 — H 8,5 — O 24,6 — M. G. 520.
- 1) Diäthylester d. Biliansäure + $\frac{1}{2}H_2O$. Sm. 192–193°. Ba, Pb (*B.* 19, 481). — II, 2077.
- $C_{79}H_{94}O_{10}$ C 63,0 — H 8,0 — O 29,0 — M. G. 552.
- 1) Tetramethylester d. Pseudocholeoidansäure $C_{79}H_{94}O_{10}$. Sm. 127 bis 128° (*B.* 19, 1528). — I, 727.
- 2) Diäthylester d. Pseudocholeoidansäure $C_{79}H_{94}O_{10}$ + $\frac{1}{2}H_2O$. Sm. 245–247°. Ba + H_2O (*B.* 19, 1528). — I, 727.
- $C_{79}H_{94}O_{11}$ C 61,3 — H 7,7 — O 31,0 — M. G. 568.
- 1) Verbindung (aus Digitalin) (*E.* 25 [2] 680).
- $C_{79}H_{94}O_{18}$ C 53,7 — H 6,8 — O 39,5 — M. G. 648.
- 1) Oktoäthylester d. Propan- $\alpha\alpha\gamma\gamma$ -Tetracarbonsäure- $\beta\beta$ -Di[Methyldi-carbonsäure]. Fl. (*B.* [3] 7, 19). — I, 873.
- $C_{79}H_{96}O_2$ C 81,7 — H 10,8 — O 7,5 — M. G. 426.
- 1) Acetat d. Sitosterin. Sm. 127° (*M.* 18, 557).
- 2) Acetat d. Parasitosterin. Sm. 115–120° (*M.* 18, 567).
- $C_{79}H_{96}O_4$ C 76,0 — H 10,0 — O 14,0 — M. G. 458.
- 1) Acetat d. Verb. $C_{79}H_{96}O_4$ (aus Cholesteryllacetat). Sm. 154° (*M.* 17, 597).
- $C_{79}H_{96}O_5$ C 73,4 — H 9,7 — O 16,9 — M. G. 474.
- 1) Diaacetat d. Trioxycholesterin. Sm. 77° (*J.* r. 10, 358). — II, 1074.
- $C_{79}H_{96}O_7$ C 68,8 — H 9,1 — O 22,1 — M. G. 506.
- 1) Diäthylester d. Cholansäure + $\frac{1}{2}H_2O$. Sm. 130–131°. Ba, Pb (*B.* 13, 1056; 19, 477). — II, 2017.
- 2) Verbindung (aus Cholesäure) (*B.* 19, 2003). — I, 783.
- $C_{79}H_{97}O_8$ 1) Bisabolreson = $(C_{79}H_{97}O_8)_2$ (*C.* 1897 [2] 429).
- $C_{79}H_{98}O_4$ C 75,7 — H 10,4 — O 13,9 — M. G. 460.
- 1) Cerin (*A.* 45, 286). — III, 627.
- $C_{79}H_{98}O_{17}$ C 42,0 — H 5,8 — O 52,2 — M. G. 828.
- 1) Arabinose (*Soc.* 45, 54). — I, 1101.
- $C_{79}H_{98}O_2$ C 80,9 — H 11,6 — O 7,4 — M. G. 430.
- 1) Acetat d. Koprosterin. Sm. 85° (*H.* 22, 400).
- $C_{79}H_{98}O_5$ C 72,7 — H 10,5 — O 16,7 — M. G. 478.
- 1) β -Scymnol (*H.* 24, 349).
- $C_{79}H_{98}O_{20}$ C 48,3 — H 7,2 — O 44,5 — M. G. 720.
- 1) Rhinanthin (*J.* 1870, 876, 877). — III, 606.
- 2) Sapotin. Sm. 240° u. Zers. (*Am.* 13, 572). — III, 611.
- $C_{79}H_{98}O_4$ C 74,4 — H 11,9 — O 13,7 — M. G. 468.
- 1) Äthylester d. α -Acetoxylerotinsäure. Sm. 57–58° (*C.* 1896 [1] 642).
- $C_{79}H_{98}O$ C 82,5 — H 13,7 — O 3,8 — M. G. 422.
- 1) Laktaron. Sm. 81,5–82,5° (*B.* [3] 2, 158). — I, 1006.

- $C_{29}H_{56}O_2$ C 79,4 — H 13,2 — O 7,3 — M. G. 438.
 1) Aethyl ester d. Cerotinsäure. Sm. 59—60° (A. 67, 189; 224, 234). — I, 449.
 2) Ceryl ester d. Essigsäure. Sm. 65° (62°) (M. 9, 581; A. 271, 224). — I, 411.
 3) Isocerylester d. Essigsäure. Sm. 57° (B. 11, 2114). — I, 411.
 4) Dimyristylcarbinolester d. Essigsäure. Sm. 45—45,5° (Soc. 63, 459).
 $C_{29}H_{54}O_4$ C 74,0 — H 12,3 — O 13,6 — M. G. 470.
 1) Raphanol. Sm. 62° (Bl. [3] 15, 797). — III, 647.

C₂₉-Gruppe mit drei Elementen.

- $C_{29}H_{19}O_4Br$ 1) 4-Brombenzoesäure d. α -Oxy- $\beta\beta$ -Dibenzoyl- α -Phenyläthen. Sm. 155 bis 156° (A. 291, 105). — III, 922.
 $C_{29}H_{20}O_2N_2$ C 73,1 — H 4,2 — O 16,8 — N 5,9 — M. G. 476.
 1) Carbonat d. β -Oximido- α -Keto- $\alpha\beta$ -Diphenyläthan (aus α -Benziloxim). Sm. 122° (B. 26, 796). — III, 289.
 2) Carbonat d. isom. β -Oximido- α -Keto- $\alpha\beta$ -Diphenyläthan (aus β -Benziloxim). Sm. 163° (B. 26, 796). — III, 290.
 $C_{29}H_{20}O_6N_4$ C 66,9 — H 3,8 — O 18,5 — N 10,8 — M. G. 520.
 1) Acetat d. Diphenylazoapigenin. Sm. 277—280° (C. 1897 [1] 653; Soc. 73, 668). — IV, 1482.
 2) Diacetat d. 4,5-Diphenylazo-1,7-Dioxyxanthon. Sm. 197—198° (Soc. 73, 672). — IV, 1479.
 $C_{29}H_{20}O_{14}Br_4$ 1) Pentacetat d. Tetrabromdehydroeichenrindengerbsäure (A. 240, 338). — III, 588.
 $C_{29}H_{21}ON_5$ C 81,5 — H 4,9 — O 3,7 — N 9,8 — M. G. 427.
 1) Methylphenylamidocrosindon. Sm. 235—237°. (2HCl, PtCl₄) (B. 31, 306). — IV, 1203.
 $C_{29}H_{21}ON_5$ C 76,5 — H 4,6 — O 3,5 — N 15,4 — M. G. 455.
 1) 6-[2-Oxynaphthyl]azo-2,3-Diphenyl-2,3-Dihydro-1,2,4-Benzotriazin (B. 30, 2598). — IV, 1492.
 $C_{29}H_{21}O_3N_5$ C 75,8 — H 4,6 — O 10,5 — N 9,1 — M. G. 459.
 1) Verbindung (aus Salicylaldehyd). Sm. 108° (B. 6, 341). — III, 75.
 $C_{29}H_{23}ON_4$ C 84,0 — H 5,3 — O 3,9 — N 6,8 — M. G. 414.
 1) Triphenyl-2-Naphtylharnstoff. Sm. 128° (B. 24, 2922). — II, 617.
 2) Triphenylmethanazo- β -Naphtol. Sm. 150° (B. 26, 3082). — IV, 1439.
 $C_{29}H_{23}O_2N_4$ C 76,0 — H 4,8 — O 7,0 — N 12,2 — M. G. 458.
 1) Verbindung (aus d. Chlorid d. β -Trichloracetyl- $\alpha\beta$ -Dichlorakrylsäure). Sm. 146—147° (B. 25, 2232). — II, 406.
 $C_{29}H_{23}O_2N_4$ C 75,3 — H 4,8 — O 13,8 — N 6,1 — M. G. 462.
 1) Diäthylester d. $\alpha\gamma$ -Di[Phenylimido]- $\alpha\gamma$ -Diphenylpropan- $\beta\beta$ -Dicarbonsäure. Sm. 160° (B. 18, 2625). — II, 1893.
 $C_{29}H_{23}N_3Br$ 1) Brommethylat d. Phenylrosindulin (B. 31, 304). — IV, 1206.
 $C_{29}H_{23}N_3J$ 1) Jodmethylat d. Phenylrosindulin (B. 31, 305). — IV, 1202.
 $C_{29}H_{23}ON$ C 86,8 — H 5,7 — O 4,0 — N 3,5 — M. G. 401.
 1) 2-Keto-1-Methyl-3,3,4,5-Tetraphenyl-2,3-Dihydropyrrol. Sm. 161° (Soc. 59, 146; B. 24, 517). — III, 312.
 2) Nitril d. γ -Benzoyl- $\alpha\beta\gamma$ -Triphenylbuttersäure (Gemisch isom. Verb.). Sm. 205—210° (B. 26, 445). — II, 1730.
 $C_{29}H_{23}O_2N$ C 83,4 — H 5,5 — O 7,7 — N 3,1 — M. G. 417.
 1) Aethyl ester d. 2,5-Diphenyl-1-[1-Naphtyl]pyrrol-3-Carbonsäure. Sm. 181—182° (B. 22, 3091). — IV, 450.
 2) Aethyl ester d. 2,5-Diphenyl-1-[2-Naphtyl]pyrrol-3-Carbonsäure. Sm. 181—182° (B. 22, 3032). — IV, 450.
 $C_{29}H_{23}O_2N_3$ C 78,2 — H 5,2 — O 7,2 — N 9,4 — M. G. 445.
 1) 1,3-Dibenzoyl-2-[4-Methylphenyl]imido-5-Methyl-2,3-Dihydrobenzimidazol. Sm. 201° (B. 24, 2520). — IV, 623.
 $C_{29}H_{23}O_2Cl_3$ 1) Tribenzoesäure d. β -Galaktochloral. Sm. 141° (C. 1896 [2] 83).
 $C_{29}H_{21}ON_4$ C 78,4 — H 5,4 — O 3,6 — N 12,6 — M. G. 444.
 1) Phenylhydrazid d. β -Phenylhydrazone- $\alpha\beta$ -Diphenyl- α -Butin- γ -Carbonsäure. Sm. bei 100° (B. 21, 3059). — IV, 699.

- $C_{29}H_{31}O_2N_2$ C 80,6 — H 5,5 — O 7,4 — N 6,5 — M. G. 432.
 1) 1,3-Dibenzoyl-2-Methyl-4-Phenyl-1,2,3,4-Tetrahydro-1,3-Benzodiazin. Sm. 188—189° (B. 25, 3095). — IV, 995.
- $C_{29}H_{31}O_3N_2$ C 77,7 — H 5,3 — O 10,7 — N 6,2 — M. G. 448.
 1) 4,4'-Di[Methylbenzoylamido]diphenylketon. Sm. 102° (B. 22, 1877). — III, 186.
- $C_{29}H_{31}O_4N_2$ C 75,0 — H 5,2 — O 13,8 — N 6,0 — M. G. 464.
 1) 3,4,3',4'-Dimethylenäther d. *o*-Phenylhydrason- α -Di[3,4-Dioxyphenyl]- α - γ ; δ -Nonatetraen. Sm. 58—80° (B. 23, 1194). — IV, 779.
- $C_{29}H_{31}O_5N_2$ C 66,4 — H 4,6 — O 18,3 — N 10,7 — M. G. 524.
 1) Acetat d. Phloretindiasazobenzol. Sm. 217—219° (Soc. 71, 1152). — IV, 1479.
- $C_{29}H_{31}O_{11}Br_2$ 1) Pentacetat d. Dibromeisenchinrindengerbsäure (A. 240, 333). — III, 588.
 $C_{29}H_{31}O_9N_2$ C 83,0 — H 6,0 — O 7,6 — N 3,3 — M. G. 419.
 1) Monoxim d. α -Diketot- α - γ -Tetraphenylpentan. Sm. 212° (A. 281, 51). — III, 310.
 2) Methylamid d. β -Benzoyl- α - β -Triphenylpropionsäure. Sm. 267° (Soc. 59, 147). — III, 312.
- $C_{29}H_{31}O_8N$ C 77,1 — H 5,5 — O 14,2 — N 3,1 — M. G. 451.
 1) Diäthylester d. 2,4,6-Triphenylpyridin-3,5-Dicarbonsäure. Sm. 146° (A. 281, 56). — IV, 477.
- $C_{29}H_{31}O_7N_2$ C 72,7 — H 5,2 — O 13,3 — N 8,8 — M. G. 479.
 1) Äthylester d. Di[4-Benzoylamidophenyl]amidoameisensäure. Sm. 235° (B. 18, 2577). — IV, 1169.
 2) Verbindung (aus d. 4-Amidophenylamidoameisensäure). Sm. noch nicht bei 360° (B. 17, 2628). — IV, 595.
- $C_{29}H_{31}N_3S_1$ 1) Dibenzyl- α -Phenyl-*o*-Phenyldithioalduret. Sm. 112° (A. 275, 41). — III, 34.
- $C_{29}H_{30}O_2N_2$ C 80,2 — H 6,4 — O 7,4 — N 6,4 — M. G. 434.
 1) α - β -Di[Phenylbenzoylamido]propan. Sm. 136—137° (B. 25, 3273). — II, 1169.
 2) 7-Äthyläther d. 1,7-Dioxy-6-Methyl-1,2,3-Triphenyl-1,1-Dihydro-1,4-Benzdiazin. Sm. 136° (A. 287, 150). — III, 285.
 3) 7-Äthyläther d. 1,7-Dioxy-2,3-Diphenyl-1-[3-Methylphenyl]-1,1-Dihydro-1,4-Benzdiazin. Sm. 176° (A. 287, 171). — III, 285.
 4) 7-Äthyläther d. 1,7-Dioxy-2,3-Diphenyl-1-[4-Methylphenyl]-1,1-Dihydro-1,4-Benzdiazin? Sm. 144—146° (A. 287, 178). — III, 285.
- $C_{29}H_{30}O_3N_4$ C 68,2 — H 5,1 — O 15,7 — N 11,0 — M. G. 510.
 1) Phloretindiasazo-2-Methylbenzol. Sm. 250—251° (Soc. 71, 1152). — IV, 1480.
 2) Phloretindiasazo-4-Methylbenzol. Sm. 250—251° u. Zers. (Soc. 71, 1151). — IV, 1480.
- $C_{29}H_{27}ON_3$ C 80,4 — H 6,2 — O 3,6 — N 9,7 — M. G. 433.
 1) Äthyläther d. α -[4-Oxyphenyl]- β -Benzyliden- α -[2-Benzylidenamidobenzyl]hydrasin. Sm. 152° (B. 27, 2904). — IV, 1131.
 2) Azoniumbase (aus 4-Dimethylamido-6'-Amido-3'-Methylidiphenylamin). Sm. 173° u. Zers. (Soc. 65, 887). — IV, 621.
- $C_{29}H_{27}O_4N_3$ C 72,3 — H 5,6 — O 13,3 — N 8,7 — M. G. 481.
 1) 4-Di[γ -Phtylamidopropyl]amido-1-Methylbenzol (p-Toluidodipropylidiphtalimid). Sm. 124° (B. 30, 2499).
- $C_{29}H_{27}O_3N_3$ C 70,0 — H 5,4 — O 16,1 — N 8,4 — M. G. 497.
 1) Diäthylester d. 4-[3- β -Naphtholaso-phenyl]-2,6-Dimethylpyridin-3,5-Dicarbonsäure. Sm. 151° (G. 17, 468). — IV, 1487.
- $C_{29}H_{27}N_3J$ 1) Jodmethylat d. Benzylamarin. Sm. 130° (B. 18, 1855). — III, 24.
 $C_{29}H_{25}ON_3$ C 82,8 — H 6,7 — O 3,8 — N 6,7 — M. G. 420.
 1) Tetrabenzylharnstoff. Sm. 85° (B. 25, 1820). — II, 527.
 2) Tetra[4-Methylphenyl]harnstoff. Sm. 78—80,5° (B. 25, 1822). — II, 495.
 3) α - β -Dibenzyl- α - β -Di[4-Methylphenyl]harnstoff. Sm. 91—93° (B. 25, 1823). — II, 527.
 4) Methylbenzylidihydroamarin. Sm. 208°. HCl + xH₂O, (2HCl, PtCl₄ + 2H₂O) (B. 15, 2327). — III, 26.
- $C_{29}H_{25}O_2N_4$ C 75,0 — H 6,0 — O 6,9 — N 12,1 — M. G. 464.
 1) α - γ -Di[s-Diphenylharnstoff]propan. Sm. 153° (B. 20, 783). — II, 381.

- $C_{27}H_{20}O_2N_2$ 2) *n*-Phenyl-*n*-Di³-Keto-2-Phenyl-1,5-Dimethyl-2,3-Dihydropyrazolyl-4 methan (Benzylidenbisantipyryl) Sm. 591' (A. 239, 214). — IV. 1258.
- $C_{25}H_{20}O_2N_2$ 1) 2-Oxybenzylidenbisantipyryl + H₂O. Sm. 189—190'. Pikrat (B. 28, 1185). — IV, 1259.
- $C_{27}H_{27}O_2N_2$ 1) C 57,3 — H 4,8 — O 26,3 — N 11,5 — M. G. 607.
1) d-Cocainasophenylamidobenzol. Sm. 198' u. Zers. (R. 14, 66). — III, 946.
- $C_{29}H_{29}O_2N_2$ C 74,0 — H 6,4 — O 13,6 — N 6,0 — M. G. 470.
- $C_{27}H_{29}O_2N_2$ 1) Benzoesäure d. Gelseminin. HCl (Sm. 363', C. 1896 [1] 111).
C 72,9 — H 6,0 — O 12,9 — N 11,2 — M. G. 496.
- $C_{27}H_{29}O_2N_2$ 1) d-Cocainasophenylamidobenzol. Sm. 172—173' (B. 27, 1887). — IV, 1452.
- $C_{27}H_{29}O_2N_2$ C 65,2 — H 5,6 — O 24,0 — N 5,2 — M. G. 534.
- $C_{27}H_{29}O_2N_2$ 1) Diäthylester d. *α*,*γ*-Di[1,2-Phthalamido]heptan-*β*,*δ*-Dicarbonsäure. Sm. 1555' (B. 26, 2190). — II, 1812.
- $C_{27}H_{29}N_2Cl$ 1) Diphenylauraminchlorid (J. pr. 2, 47, 411). — IV, 1173.
- $C_{27}H_{21}ON_2$ C 74,6 — H 7,1 — O 3,7 — N 9,6 — M. G. 437.
1) *n*-Oxy-4-Phenylamido-4,4'-Tetramethyldiamidotriphenylmethan. Chlorid (A. 274, 219). — II, 1689.
- $C_{27}H_{21}O_2N_2$ C 63,4 — H 5,6 — O 23,3 — N 7,6 — M. G. 549.
1) Narceinphenylhydrazon. HCl (A. 277, 53). — IV, 732.
2) Triphenylamidoformiat d. Aethylchinovosid (B. 18, 971, 2606). — III, 575.
- $C_{29}H_{27}O_2N_2$ C 71,9 — H 6,6 — O 9,9 — N 11,6 — M. G. 484.
1) *α*-(4-Diacetylamido-*p*-Acetylphenylimidodi-4-Dimethylamido)phenylmethan. Sm. 257—258' (J. pr. [2] 50, 412). — IV, 1174.
- $C_{29}H_{21}O_2N_2$ C 69,6 — H 6,4 — O 12,8 — N 11,2 — M. G. 500.
1) Verbindung (aus Furoil, Anilin u. 2,4-Diamido-1-Methylbenzol). 2HCl (A. 239, 358). — IV, 605.
- $C_{29}H_{21}N_2Cl_2$ 1) Diammoniumchlorid (aus d. Diammoniumbromid $C_{29}H_{24}N_2Br_2$) + PtCl₄ + 2 AuCl₃ (B. 31, 1705).
- $C_{29}H_{21}N_2Br_2$ 1) Diammoniumbromid (aus Pentamethylen-1,2-Xylylendiamin u. 1,2-Xylylenbromid). Sm. 65' (B. 31, 1705).
- $C_{29}H_{21}N_2Br_2$ 1) Diammoniumperbromid (aus d. Diammoniumbromid $C_{29}H_{24}N_2Br_2$) (B. 31, 1705).
- $C_{29}H_{25}N_2Cl$ 1) Disoamylcyaninchlorid. (HCl, PtCl₄) (Z. 1867, 343). — IV, 315.
- $C_{29}H_{25}N_2J$ 1) Disoamylcyaninjodid + 11 H₂O. Sm. bei 100°. 2HCl + J₂ (J. 1862, 351; Z. 1867, 343; R. 2, 28, 42, 324; 3, 352). — IV, 315.
- $C_{29}H_{25}N_2J_3$ 1) Disoamylcyanintrijodid. Sm. 187—189' (R. 3, 361). — IV, 315.
- $C_{29}H_{25}ON_2$ C 81,3 — H 8,4 — O 3,7 — N 6,5 — M. G. 428.
1) Disoamylcyaninhydrat. Chlorid, Jodid, Superjodid, Nitrat, Sulfat + 2H₂O (Z. 1867, 343; J. 1862, 351; R. 2, 28, 42, 324; 3, 352). — IV, 315.
2) Benzoylderivat d. Base $C_{27}H_{22}N_2$. Sm. 132—134' (B. 25, 2044). — II, 445.
- $C_{27}H_9O_2N_2$ C 75,8 — H 8,1 — O 7,0 — N 9,1 — M. G. 459.
1) 4'-Nitro-2',2'-Di[Diäthylamido]-4',4'-Dimethyltriphenylmethan. Sm. 155' (B. 24, 559). — IV, 1047.
- $C_{29}H_{29}O_2N_2$ C 68,2 — H 7,4 — O 18,8 — N 5,5 — M. G. 510.
- $C_{29}H_{29}O_2N_2$ 1) Allylhydratisoamylamid. Sm. 123—124' (A. 271, 361). — II, 2054.
C 68,5 — H 7,9 — O 12,6 — N 11,0 — M. G. 508.
- $C_{29}H_{29}O_2N_2$ 1) Diäthylester d. *β*,*β*-Di[Phenylhydrazon]-*γ*,*γ*-Dimethylnonan-*γ*,*γ*-Dicarbonsäure. Fl. (Soc. 59, 574). — IV, 723.
- $C_{29}H_{29}O_2N_2$ C 77,3 — H 9,3 — O 7,1 — N 6,3 — M. G. 450.
1) Diphenylamid d. Rocellsäure. Sm. 55,3' (A. 117, 342). — II, 416.
- $C_{29}H_{29}O_2N_2$ C 72,2 — H 8,7 — O 13,3 — N 5,8 — M. G. 482.
1) d-Diborneolester d. Benzylidendiamidoameisensäure (Benzylidenborneolurethan). Sm. 185—187' (J. 1882, 393). — III, 471.
- $C_{29}H_{29}N_2Cl_3$ 1) Trichlormethylat d. 4',4',4'-Tri[Dimethylamido]-*p*-Methyltriphenylmethan. 2 + 3 PtCl₄ + 2H₂O (B. 2, 448; 12, 2344). — IV, 1197.
- $C_{29}H_{29}N_2J_3$ 1) Trijodmethylat d. 4',4',4'-Tri[Dimethylamido]-*p*-Methyltriphenylmethan + 11 H₂O (B. 2, 448; 12, 2344). — IV, 1197.

- $C_{21}H_{43}O_2N$ C 67,3 — H 8,4 — O 21,6 — N 2,7 — M. G. 517.
 1) Pseudojervin. Sm. 300—307° (209°). HCl + 2 H₂O, (HCl, AuCl₃), H₂SO₄ (Soc. 35, 405). — III, 950.
- $C_{22}H_{44}O_2N_2$ C 77,0 — H 9,7 — O 7,1 — N 6,2 — M. G. 452.
 1) *n*-Stearyl-1-Naphtylharnstoff. Sm. 114—115° (Soc. 69, 1601).
- $C_{22}H_{46}ON_2$ C 79,4 — H 10,5 — O 3,6 — N 6,4 — M. G. 438.
 1) 8-Oxy-4-Methyl-2-Heptadekyl-5-Benzyl-1,3-Diazin. Sm. 94° (PINNER, Imidoäther 234). — IV, 986.
- $C_{22}H_{46}O_2Cl_{12}$ 1) Aethylester d. Dodekachlorcerotinsäure (A. 67, 191). — I, 477.
- $C_{22}H_{46}O_2Br_2$ 1) Acetat d. Sitosterindibromid (M. 18, 558).
 2) Acetat d. Parasitosterindibromid. Sm. 112° (M. 18, 568).
- $C_{22}H_{46}O_2N_2$ C 71,6 — H 9,5 — O 13,2 — N 5,7 — M. G. 486.
 1) Verbindung (aus d. Amidoformiat d. Menthol). Sm. 143° (A. ch. [6] 7, 464). — III, 467.
- $C_{22}H_{46}O_2Cl_2$ 1) Verbindung (aus Cholesterinacetat). Sm. 93—94° (M. 15, 103). — II, 1073.
- $C_{22}H_{46}O_2Br_2$ 1) Verbindung (aus Cholesterinacetat). Sm. 115,8° (u. 118°) (M. 9, 424, 433; 15, 371). — II, 1073.
- $C_{22}H_{40}O_2Br$ 1) Bromacetat d. Koprosterin. Sm. 118° (H. 22, 404).
- $C_{22}H_{51}O_2N$ C 64,3 — H 9,4 — O 23,6 — N 2,6 — M. G. 541.
 1) Sabadin. Sm. 238—240° u. Zers. HCl + 2 H₂O, (HCl, AuCl₃), HNO₃. — III, 950.
- $C_{22}H_{53}O_2N_2$ 1) Secalin (C. 1897 [1] 1060).

C₂₂-Gruppe mit vier Elementen.

- $C_{22}H_{30}ON_2S$ 1) *α*-Phenyl-*β*-[2-Naphtyl]-*β*-Thiodiphenylharnstoff. Sm. 169—170° (B. 24, 2914). — II, 807.
- $C_{22}H_{30}ON_2S$ 1) 2-[1-Naphtylbenzoylamido]-5-[1-Naphtylamido]-1,3,4-Thiodiazol. Sm. 270° (B. 23, 361). — IV, 1237.
 2) 2-[2-Naphtylbenzoylamido]-5-[2-Naphtylamido]-1,3,4-Thiodiazol. Sm. 247° (B. 23, 363). — IV, 1237.
- $C_{22}H_{30}ON_2J$ 1) Jodmethylat d. Benzoylamarin. Sm. 318° (B. 18, 3084). — III, 25.
- $C_{22}H_{28}O_{10}NCl$ 1) Tetracetylchlor-*α*-Oreindichroin (B. 21, 2483). — II, 966.
- $C_{22}H_{28}O_2N_2Cl$ 1) Strychnin + Acetophenonchlorid + H₂O. Sm. 232—233°. 2 + PtCl₄ + AuCl₃ (C. 1897 [2] 556).
- $C_{22}H_{28}O_2N_2Br$ 1) Strychnin + Acetophenonbromid + H₂O. Sm. 245—250° (C. 1897 [2] 556).
- $C_{22}H_{30}O_2N_2S$ 1) Thioharnstoff d. 4-Amido-4'-Aethoxyldiphenylamin. Sm. 155 bis 156° (B. 26, 694). — IV, 554.
- $C_{22}H_{30}O_2NJ$ 1) Jodmethylat d. Benzylhydrastin. Sm. 240° (A. 271, 351). — II, 2054.
- $C_{22}H_{31}O_2N_2J$ 1) Jodmethylat d. Benzylhydrastimid. Sm. 230° (B. 26, 2490). — II, 2054.
- $C_{22}H_{31}O_2N_2J$ 1) Jodmethylat d. Methylhydrasteinphenylhydrason. Sm. 243° (A. 271, 398). — IV, 800.
- $C_{22}H_{33}O_2N_2J$ 1) Jodäthylat d. Benzoylchinin (A. ch. [7] 7, 143). — III, 815.
- $C_{22}H_{33}O_2N_2S$ 1) Acetyl-3,3'-Di[Diäthylamido]phenylsaccharin. Sm. 230—232° (Bl. [3] 17, 699).
- $C_{22}H_{34}O_2N_2J_2$ 1) Di[Jodmethylat] d. Benzoylchinin (A. ch. [7] 7, 143). — III, 815.
- $C_{22}H_{35}O_2N_2S$ 1) Äthyl-3,3'-Di[Diäthylamido]phenolsaccharin. Sm. 220—222° (Bl. [3] 17, 700).
- $C_{22}H_{36}O_2N_2Br_2$ 1) Di[Bromäthylat] d. Dioxybenzylcinchotenin. Sm. 210° u. Zers. (A. 269, 246). — III, 842.
- $C_{22}H_{44}ON_2S$ 1) *n*-Stearyl-1-Naphtylthioharnstoff. Sm. 80—81° (Soc. 69, 1601).
- $C_{22}H_{49}O_2NS$ 1) Taurochenocholsäure. Na + H₂O (J. 1849, 547; 1859, 636; A. 149, 192). — I, 1181.
- $C_{22}H_{49}O_{12}N_2P_2$ 1) Nuclein. Lit. bedeutend. — IV, 1621.

C₃₀-Gruppe mit einem Element.

- C₃₀H₂₂ C 94,3 — H 5,8 — M. G. 382.
 1) 1,2,3,5 oder 1,2,4,5-Tetraphenylbenzol. Sm. 277—278° (A. 302, 211).
 2) Kohlenwasserstoff (aus Dibenzylcarbinol). Sm. 268—269° (B. 25, 1273; A. 302, 211). — II, 304.
- C₃₀H₂₀ C 92,8 — H 7,2 — M. G. 388.
 1) Tetra[*p*-Methylphenyl]äthen. Sm. 215° (B. 14, 1530). — II, 302.
- C₃₀H₁₈ C 88,2 — H 11,8 — M. G. 408.
 1) α -Amyrilen. d-Derivat Sm. 134—135°; l-Derivat Sm. 193—194° (B. 20, 1244; 24, 3834, 3835). — III, 540.
 2) β -Amyrilen. Sm. 175—178° (B. 20, 1245; 24, 3836). — III, 540.
 3) Triterpen (aus Galbanum- oder Kamillenöl). Sd. 250—255° (A. 119, 263; B. 4, 39). — III, 540.
- C₃₀H₁₆ C 87,8 — H 12,2 — M. G. 410.
 1) Kohlenwasserstoff (aus Caryophyllenhydrat). Sm. 144—145° (A. 271, 293; 279, 393). — III, 513.
- C₃₀H₁₀ C 85,7 — H 14,3 — M. G. 420.
 1) Melen. Sm. 62° (A. 2, 259; 71, 156).

C₃₀-Gruppe mit zwei Elementen.

- C₃₀H₁₆O₄ C 81,4 — H 4,1 — O 14,5 — M. G. 442.
 1) 2,2'-Bi[1,3-Diketo-2-Phenyl-2,3-Dihydroindanyl]. Sm. 208° (B. 26, 2580). — III, 325.
- C₃₀H₁₄O₆ C 71,1 — H 3,6 — O 25,3 — M. G. 506.
 1) 3,4-Methylenäther-7,8-Dibenzol d. 7,8-Dioxy-2-[3,4-Dioxyphenyl]-1,4-Benzopyron. Sm. 178° (B. 29, 2435).
 2) Verbindung (aus 1-Oxynaphtalin u. Benzol-1,2,4,5-Tetracarbonsäure). (B. 4, 726). — II, 2073.
- C₃₀H₁₂N₂ C 88,7 — H 4,4 — N 6,9 — M. G. 406.
 1) Trinaphtylendiamin + H₂O. Zers. bei 180°. HCl (B. 9, 1107). — IV, 925.
- C₃₀H₁₀N₂ C 85,5 — H 4,5 — N 10,0 — M. G. 421.
 1) α -[2-Naphtyl]amido- α - β -Naphtasin. Sm. 296°. HCl (B. 26, 185; 29, 2087). — IV, 1216.
 2) *ms*- α -Naphtyl- α -Naphtindulin (A. 286, 233). — IV, 1215.
- C₃₀H₂₀O₆ C 75,6 — H 4,2 — O 20,2 — M. G. 476.
 1) Tetraphenyläther d. 2,3,5,6-Tetraoxy-1,4-Benzochinon. Sm. 229 bis 230° (Ann. 17, 646). — III, 355.
- C₃₀H₁₈O₇ C 73,2 — H 4,1 — O 22,7 — M. G. 492.
 1) Dibenzoylphyscion. Sm. 230° (A. 294, 182). — III, 641.
- C₃₀H₁₆O₈ C 70,9 — H 3,9 — O 25,2 — M. G. 508.
 1) Dibenzol d. Kämpferid. Sm. 185—186° (B. 14, 2388). — III, 632.
 2) Verbindung (aus Idrisdifluorsäure). Sm. 246° (M. 1, 234).
- C₃₀H₁₄N₂ C 88,2 — H 4,9 — N 6,9 — M. G. 408.
 1) Biacenaphtylidenonphenylhydrason (A. 290, 203). — IV, 779.
- C₃₀H₁₂N₄ C 82,6 — H 4,6 — N 12,8 — M. G. 436.
 1) Diphenylfluorindin. 2HCl, (HCl, AuCl₃ + H₂O) (B. 23, 2789; 28, 300; 29, 1251). — IV, 1301.
 2) Diphenylisofluorindin. 2HCl, (2HCl + FeCl₃), (2HCl, PtCl₄), (2HCl, AuCl₃), Bichromat (B. 29, 1821; 31, 2442). — IV, 1301.
 3) *s*-Amido-*ms*-Naphtylnaphtindulin. HCl (Magdalaroth), (2HCl, PtCl₄), Pikrat (B. 2, 374; 11, 623; 19, 1365; A. 286, 235). — IV, 1303.
- C₃₀H₂₂O C 90,5 — H 5,5 — O 4,0 — M. G. 398.
 1) Verbindung (aus 1,2-Dioxy-1,2,3,5 oder 1,2,4,5-Tetraphenyl-1,2-Dihydrobenzol). Sm. 180—181° (A. 302, 208).
- C₃₀H₂₀O₂ C 87,0 — H 5,3 — O 7,7 — M. G. 414.
 1) α -Diketo- $\alpha\beta\delta$ oder $\alpha\gamma\delta$ -Tetraphenyl- $\beta\delta$ -Hexadien. Sm. 191—192° (A. 302, 198).

- C₂₀H₂₂O₂** 2) Verbindung (aus 2-Methyl-9,10-Anthracinon). Sm. 217—218° (B. 16, 1823). — III, 450.
C 80,7 — H 4,9 — O 14,3 — M. G. 446.
- C₂₀H₂₂O₄** 1) Diacetat d. $\alpha\beta$ -Dioxydibiphenyläthan. Sm. 230° u. Zers. (A. 291, 5).
C 75,3 — H 4,6 — O 20,1 — M. G. 478.
- C₂₀H₂₂O₅** 1) 1,2,4,5-Tetraphenyläther d. Hexaoxybenzol. Sm. 219—220° u. Zers. (Am. 17, 648).
2) 9,9-Di[β -Acetoxyphenyl]fluoren- β -Carbonsäure. Sm. 130° u. Zers. (A. 247, 287). — II, 1916.
C 57,9 — H 3,5 — O 38,6 — M. G. 622.
- C₂₀H₂₁O₁₅** 1) Protocetrarsäure + H₂O. Zers. bei 230°. Ba₃, Ag₅ (J. pr. [2] 57, 297, 442; [2] 58, 468).
2) Usarsäure. Zers. bei 230° (J. pr. [2] 57, 241).
C 52,5 — H 3,2 — O 44,3 — M. G. 686.
- C₂₀H₂₁O₁₀** 1) Anhydrid d. Methylendigallussäure (B. 31, 262).
2) Anhydrid d. isom. Methylendigallussäure. NH₄ (B. 5, 1097; 31, 264; A. 263, 285).
C 87,8 — H 5,4 — N 6,8 — M. G. 410.
- C₂₀H₂₂N₂** 1) 2,3,4-Triphenyl-3,4-Dihydro-1,4-Naphtisodiazin. Sm. 163—164° (B. 24, 722). — IV, 1090.
C 82,2 — H 5,0 — N 12,8 — M. G. 438.
- C₂₀H₂₂N₄** 1) 1,1',5,5'-Tetraphenyl-3,3'-Bipyrazol. Sm. 232° (A. 278, 295). — IV, 1299.
2) Tetraphenylglykosin. Sm. oberh. 300° (Soc. 51, 553). — III, 286.
3) Phenylamidophenylposafranin (Phenylindulin). Sm. 231°. HNO₃ (A. 256, 261; 262, 257; 266, 190, 193; B. 28, 2288; 29, 368; 30, 2626). — IV, 1280.
4) Phenylmauvein. Sm. 256—257° (A. 286, 208). — IV, 1286.
C 79,4 — H 5,1 — N 15,4 — M. G. 453.
- C₂₀H₂₃N₅** 1) Amidophenylindulin. Sm. 150—152°. HCl + $\frac{1}{2}$ H₂O, (HCl, AuCl₃), HNO₃ + H₂O (B. 17, 75; 29, 368; A. 262, 256; 286, 195; Soc. 43, 116). — IV, 1326.
2) Base (aus Phenylamidindulin). HCl (A. 272, 315). — IV, 1284.
C 74,8 — H 4,8 — N 20,4 — M. G. 481.
- C₂₀H₂₃N₇** 1) 5-Imido-4-[1,3-Diphenyl-4,5-Dihydropyrazolyl-5]-azo-1,3-Diphenyl-4,5-Dihydropyrazol. Sm. 217° (J. pr. [2] 58, 142).
C 86,5 — H 5,7 — O 7,7 — M. G. 416.
- C₂₀H₂₁O₂** 1) $\alpha\zeta$ -Diketo- $\alpha\beta\delta\zeta$ oder $\alpha\gamma\delta\zeta$ -Tetraphenyl- β -Hexen. Sm. 220—222° (A. 302, 203).
2) 1,2-Dioxy-1,2,3,5 oder 1,2,4,5-Tetraphenyl-1,2-Dihydrobenzol. Sm. 170—171° (A. 302, 206).
3) 2,7,2',7'-Tetramethyldixanthylen. Sm. 275—277° (B. 28, 2311). — III, 232.
4) 4,5,4',5'-Tetramethyldixanthylen. Sm. noch nicht bei 360° (B. 28, 2311). — III, 232.
5) Verbindung (aus d. Verb. C₂₀H₂₂O). K (A. 302, 206).
C 83,3 — H 5,6 — O 11,1 — M. G. 432.
- C₂₀H₂₁O₂** 1) 2,4,6-Tribenoyl-1,3,5-Trimethylbenzol. Sm. 215—216° (A. ch. [6] 6, 237). — III, 322.
C 80,3 — H 5,3 — O 14,3 — M. G. 448.
- C₂₀H₂₁O₄** 1) Diacetat d. Verb. C₂₀H₂₀O₂ (aus Phenol- u. Benzaldehyd) (Am. 9, 131). — III, 10.
- C₂₀H₂₁O₆** C 75,0 — H 5,0 — O 20,0 — M. G. 480.
- C₂₀H₂₁O₈** 1) β -Truxillfluorescein (B. 26, 835). — II, 2067.
C 70,3 — H 4,7 — O 25,0 — M. G. 512.
- C₂₀H₂₁O₉** 1) Dibenzoat d. Di[4,6-Dioxy-2-Methylphenyl]essigsäure. Sm. 204° (Soc. 73, 401).
2) Acetylrrhizocarpsäure. Sm. 168° (J. pr. [2] 58, 515).
C 68,1 — H 4,5 — O 27,3 — M. G. 528.
- C₂₀H₂₁O₉** 1) Dibenzoat d. Barbaloin (C. 1897 [2] 525).
C 87,4 — H 5,8 — N 6,8 — M. G. 412.
- C₂₀H₂₁N₂** 1) 4,4'-Dicinnamylidenamidobiphenyl. Sm. 260—261°. 2HCl (A. 239, 385). — IV, 568.

- $C_{30}H_{21}N$, 2) 2,6-Diphenyl-3,5-Dibenzyl-1,4-Diazin. Sm. 146—147° (Soc. 63, 1371). — IV, 1096.
- 3) Nitril d. $\alpha\beta\gamma\delta$ -Tetraphenylbutan- $\beta\gamma$ -Dicarbonsäure. Sm. 235° (B. 25, 290). — II, 1916.
- $C_{30}H_{21}N_4$, 1) 2,5-Di-Phenylamido]-1,4-Di-[Phenylimido]-1,4-Dihydrobenzol (Azophenin). Sm. 236—237° (B. 8, 1028; 10, 1311; 20, 1539, 2480; 21, 683; A. 255, 180; 256, 258; M. 9, 417; Soc. 43, 115; J. 1882, 369; B. 31, 1789). — III, 341.
- $C_{30}H_{17}N_6$, C 76,9 — H 5,1 — N 17,9 — M. G. 468.
- 1) 5,5'-Diphenyl-1,1'-Di[4-Methylphenyl]-3,3'-Bi-1,2,4-Triazol. Sm. bei 300°. + C_6H_6 (B. 22, 3117). — IV, 1332.
- $C_{30}H_{25}N$, C 90,2 — H 6,3 — N 3,5 — M. G. 399.
- 1) 1-Aethyl-2,3,4,5-Tetraphenylpyrrol. Sm. 221° (B. 22, 555). — IV, 478.
- $C_{30}H_{21}N_2$, C 79,1 — H 5,5 — N 15,4 — M. G. 455.
- 1) Anilinschwarz. 2HCl. Lit. bedeutend. — III, 675.
- $C_{30}H_{25}O$, C 89,5 — H 6,5 — O 4,0 — M. G. 402.
- 1) Verbindung (aus d. Diketon $C_{30}H_{24}O_7$). Sm. 110—111° (A. 302, 205).
- 2) Verbindung (aus d. Diketon $C_{30}H_{24}O_8$). Sm. 194—195° (A. 302, 205).
- $C_{30}H_{26}O_2$, C 86,1 — H 6,2 — O 7,6 — M. G. 418.
- 1) $\alpha\gamma$ -Diketo- $\alpha\gamma\delta\delta$ -Tetraphenylhexan. Sm. 270° (266—267°) (A. 296, 327; 302, 202, 214).
- $C_{30}H_{26}O_3$, C 82,9 — H 6,0 — O 11,0 — M. G. 434.
- 1) Methyläther d. $\alpha\alpha$ -Diketo- ϵ -[4-Oxyphenyl]- $\alpha\beta\gamma$ -Triphenylpentan. Sm. 206° (A. 281, 59). — III, 310.
- $C_{30}H_{26}O_4$, C 80,0 — H 5,8 — O 14,2 — M. G. 450.
- 1) Aethyldibenzoin. Sm. 200° (A. 155, 79, 93; B. 4, 336). — III, 283.
- 2) Diacetat d. $\alpha\alpha$ -Diphenyl- $\beta\beta$ -Di[p -Oxyphenyl]äthan. Sm. 155° (A. 279, 331). — II, 1008.
- 3) Succinat d. α -Oxydiphenylmethan. Sm. 141—142° (A. 133, 23). — II, 1078.
- $C_{30}H_{26}O_5$, C 77,2 — H 5,6 — O 17,2 — M. G. 466.
- 1) Anhydrid d. α -Oxy- $\beta\beta$ -Diphenylpropionsäure (A. 248, 48). — II, 1699.
- 2) Verbindung (aus Lapachon) (G. 12, 373; 19, 618). — III, 403.
- $C_{30}H_{26}O_7$, C 72,3 — H 5,2 — O 22,5 — M. G. 498.
- 1) Chrysarobin. Sm. 170—178° (A. 212, 29; B. 14, 2700; 19, 2331). — III, 453.
- 2) Diäthylester d. Rhizocarpsäure. Sm. 159° (J. pr. [2] 58, 514).
- $C_{30}H_{26}O_8$, C 67,9 — H 4,9 — O 27,2 — M. G. 530.
- 1) Oxypeucedanin. Sm. 140—141° (C. 1899 [1] 432).
- $C_{30}H_{26}O_{11}$, C 64,0 — H 4,6 — O 31,3 — M. G. 562.
- 1) Pentacetat d. Gallol. Sm. 230° (A. 209, 269). — II, 1124.
- 2) Pentacetat d. α -Verb. $C_{30}H_{26}O_8$ (A. 243, 183).
- 3) Pentacetat d. m -Verb. $C_{30}H_{26}O_8$ (A. 243, 179).
- $C_{30}H_{26}N_2$, C 87,0 — H 6,3 — N 6,6 — M. G. 414.
- 1) 2,5-Diphenyl-1,4-Dibenzyl-1,4-Dihydro-1,4-Diazin. Sm. 163° (Soc. 63, 1362). — IV, 1030.
- 2) 2,6-Diphenyl-1,4-Dibenzyl-1,4-Dihydro-1,4-Diazin. Sm. 86°. (2HCl, PtCl₄ + 5H₂O) (Soc. 63, 1369). — IV, 1031.
- $C_{30}H_{26}N_4$, C 81,4 — H 5,9 — N 12,7 — M. G. 442.
- 1) Hydrazophenin. Sm. 173—174° (B. 20, 2483). — III, 342.
- $C_{30}H_{26}O$, C 89,1 — H 6,9 — O 4,0 — M. G. 404.
- 1) 1-Oxy-1,2,4,5-Tetraphenylhexahydrobenzol. Sm. 182° (A. 296, 327).
- 2) Phenyl-2,5-Dimethylphenylpinakolin. Sm. 146° (J. pr. [2] 36, 477). — III, 266.
- $C_{30}H_{26}O_2$, C 85,7 — H 6,6 — O 7,6 — M. G. 420.
- 1) 1,2-Dioxy-1,2,4,5-Tetraphenylhexahydrobenzol. Sm. 210—211° (A. 296, 326).
- $C_{30}H_{26}O_4$, C 79,6 — H 6,2 — O 14,2 — M. G. 452.
- 1) Tetramethyläther d. $\alpha\alpha\beta\beta$ -Tetra[4-Oxyphenyl]äthen. Sm. 181 bis 182° (B. 28, 2874).
- $C_{30}H_{26}O_5$, C 76,9 — H 6,0 — O 17,1 — M. G. 468.
- 1) Tetramethyläther d. $\alpha\alpha\beta\beta$ -Tetra[4-Oxyphenyl]äthanoxyd. Sm. 188 bis 189° (B. 28, 2874).

- $C_{30}H_{20}N_2$ C 86,5 — H 6,7 — N 6,7 — M. G. 416.
 1) **Aethylbenzylamarin**. Sm. 135°. (2HCl, PtCl₄) (B. 18, 1855). — III, 24.
- $C_{30}H_{20}N_5$ C 78,4 — H 6,3 — N 15,2 — M. G. 459.
 1) **2-[4-Methylphenyl]imido-1,3-Di[4-Methylphenylamido]methyl-5-Methyl-2,3-Dihydrobenzimidazol**. Sm. 210° (B. 24, 2521). — IV, 624.
- $C_{30}H_{20}O_6$ C 76,6 — H 6,4 — O 17,0 — M. G. 470.
 1) **Anhydroderivat** (aus d. Lakton d. α -Oxydi[? -Methylphenyl]essigsäure) (B. 28 [2] 613).
- $C_{30}H_{20}O_{11}$ 1) **Cetrarsäure**, siehe $C_{18}H_{14}O_8$. — II, 2082.
 $C_{30}H_{20}N_4$ C 80,7 — H 6,7 — N 12,5 — M. G. 446.
 1) $\alpha\beta$ -Di[4-Benzylidenamido-2-Methylphenylamido]äthan. Sm. 175 bis 176° (Soc. 71, 426). — IV, 602.
 2) **Acetophenonäthylenphenylhydrazon**. Sm. 117—118° (A. 254, 127). — IV, 771.
- $C_{30}H_{20}O_4$ C 78,9 — H 7,0 — O 14,0 — M. G. 456.
 1) **Bis-Dihydrosantinsäure**. Sm. 215° (G. 23 [1] 60). — II, 2035.
- $C_{30}H_{20}N_5$ C 82,7 — H 7,6 — N 9,7 — M. G. 435.
 1) **4'-[4-Methylphenyl]amido-4¹, 4²-Di[Dimethylamido]triphenylmethan**. Sm. 177°. Pikrat (A. 274, 229). — IV, 1196.
 2) **trimolec. 2-Methyl-*p*-Dihydrochinolin** (C. 1896 [1] 1127).
 3) **Base** (aus Isobutylidenphenylhydrazin). Sm. 215—216° (M. 18, 860). — IV, 227.
- $C_{30}H_{24}O_4$ C 78,6 — H 7,4 — O 14,0 — M. G. 458.
 1) **Santonon**. Sm. 223° (G. 22 [2] 126). — II, 2035.
 2) **Isosantonon**. Sm. 280° u. Zers. (G. 22 [2] 132). — II, 2035.
- $C_{30}H_{24}O_{10}$ C 65,5 — H 6,1 — O 28,9 — M. G. 554.
 1) **Aethylenester d. Filixsäure**. Sm. 165° (B. 21, 2964). — II, 1967.
- $C_{30}H_{24}O_{12}$ C 61,4 — H 5,8 — O 32,8 — M. G. 586.
 1) **Hexapropionat d. α -Hexaoxybiphenyl** (A. 169, 243). — II, 1042.
- $C_{30}H_{24}O_{13}$ C 59,8 — H 5,6 — O 34,5 — M. G. 602.
 1) **Ledixanthin** (J. 1883, 1402). — III, 688.
 2) **Ononin**. Sm. 235° u. Zers. (J. 1855, 713). — III, 599.
 3) **Pikrotoxin**, siehe $C_{15}H_{10}O_6$. — III, 642.
- $C_{30}H_{24}O_{15}$ C 56,8 — H 5,3 — O 37,9 — M. G. 634.
 1) **Alcoeretsäure** (J. 1863, 597). — III, 618.
- $C_{30}H_{26}O_{10}$ C 64,7 — H 6,5 — O 28,8 — M. G. 556.
 1) **Coriamyrtin**. Sm. 220° (Z. 1866, 663). — III, 578.
- $C_{30}H_{26}O_{20}$ C 37,6 — H 3,8 — O 58,6 — M. G. 956.
 1) **Mannitweinsäure**. $Mg_3 + 30H_2O, Ca_3 + 6H_2O$ (A. ch. [3] 47, 330). — I, 795.
 2) **Pin-itweinsäure**. Ca_3 (Beuthelot, Chim. org. 2, 220). — I, 795.
- $C_{30}H_{26}N_2$ C 84,9 — H 8,5 — N 6,6 — M. G. 424.
 1) **Hydrocuminamid**. Sm. 65° (A. 108, 259; 245, 304; B. 6, 1253). — III, 56.
 2) **Base** (aus Hydrocuminamid). Sm. bei 205°. H_2SO_4 (B. 6, 1253). — III, 56.
- $C_{30}H_{26}S_2$ 1) α -Trithiocuminaldehyd. Sm. 165° (B. 29, 150). — III, 55.
 2) β -Trithiocuminaldehyd. Sm. 205°. $+ 3C_2H_6$ (B. 29, 150). — III, 55.
- $C_{30}H_{26}O_8$ C 83,7 — H 8,8 — O 7,4 — M. G. 430.
 1) **Di[3-Methyl-6-Propylphenyläther] d. $\alpha\alpha$ -Dioxy- α -[4-Isopropylphenyl]methan** (Cumylenthymoläther). Sm. 157° (Z. 1869, 43). — III, 55.
- $C_{30}H_{26}O_2$ C 80,7 — H 8,5 — O 10,8 — M. G. 446.
 1) **Anhydrid d. Säure $C_{15}H_{20}O_2$** (aus Camphersäureanhydrid). Sm. 135° (C. 1895 [2] 1082).
- $C_{30}H_{26}O_4$ C 77,9 — H 8,2 — O 13,9 — M. G. 462.
 1) **Helleboresin**. Sm. 140—150° u. Zers. (A. 135, 64). — III, 593.
- $C_{30}H_{26}O_6$ C 72,9 — H 7,7 — O 19,4 — M. G. 494.
 1) **Santononsäure**. Sm. 215—216° u. Zers. Ag_2 (G. 22 [2] 129). — II, 2035.
 2) **Isosantononsäure**. Sm. 167—168°. Ag_2 (G. 22 [2] 137). — II, 2035.
 3) **d-Disantonige Säure**. Sm. 250° u. Zers. (G. 25 [1] 507). — II, 2036.
 4) **l-Disantonige Säure**. Sm. 250—250,5° (B. 28 [2] 394; G. 25 [1] 521). — II, 2036.

- C₃₀H₃₄O₆** 5) racem. i-Disantonige Säure. Sm. 243—244° u. Zers. (*G.* 25 [1] 528; *B.* 28 [2] 394). — II, 2036.
- C₃₀H₃₆O₆** 6) Didesmotropisantonige Säure. Sm. 254—255° (*B.* 28 [2] 394; *G.* 25 [1] 538). — II, 2036.
- C₃₀H₃₈O₆** 1) C 68,4 — H 7,2 — O 24,3 — M. G. 526.
- C₃₀H₃₈O₁₀** 1) Tetraäthylester d. α-Diphenylhexan-ββεε-Tetracarbonsäure. Sm. 126—127° (*Soc.* 65, 1018). — II, 2085.
- C₃₀H₄₀O₁₀** 1) C 64,5 — H 6,8 — O 28,7 — M. G. 558.
- C₃₀H₃₈N** 1) Quassiasäure + H₂O. Sm. 244—245° u. Zers. Ba + 7H₂O, Pb + 6H₂O, Fe₂ (*G.* 14, 7; 17, 570). — III, 647.
- C₃₀H₃₈N** 1) C 87,2 — H 9,4 — N 3,4 — M. G. 413.
- C₃₀H₄₁N₂** 1) Tri[4-Isopropylbenzyl]amin. Sm. 81—82°. HCl, (2HCl, PtCl₄) (*A. Spl.* 1, 143). — II, 561.
- C₃₀H₄₁N₂** 1) C 81,3 — H 9,2 — N 9,5 — M. G. 443.
- C₃₀H₄₀N** 1) 2-Pentadekyl-4,6-Diphenyl-1,3,5-Triazin. Sm. 64°; Sd. 327—328° (*B.* 22, 809). — IV, 1199.
- C₃₀H₄₀N** 1) C 86,3 — H 10,3 — N 3,4 — M. G. 417.
- C₃₀H₄₀O** 1) 5-Heptadekylakridin. Sm. 69—70°. HCl, (2HCl, PtCl₄), H₂SO₄ (*G.* 22 [2] 549). — IV, 421.
- C₃₀H₄₁O** 1) C 85,7 — H 10,5 — O 3,8 — M. G. 420.
- C₃₀H₄₀O** 1) α-Keto-αβ-Diphenylotkadekan (Cetyldeoxybenzoin). Sm. 76°; Sd. bei 430° (*B.* 25, 2239). — III, 239.
- C₃₀H₄₀O** 1) C 85,3 — H 10,9 — O 3,8 — M. G. 422.
- C₃₀H₄₀O₂** 1) Verbindung (aus Sandelöl). Sd. 290—285° (*Bf.* 37, 303). — III, 549.
- C₃₀H₄₀O₂** 1) C 82,2 — H 10,5 — O 7,3 — M. G. 438.
- C₃₀H₄₀O₂** 1) Butyrat d. Ergosterin. Sm. 95° u. Zers. (*A. ch.* [6] 20, 295). — II, 1076.
- C₃₀H₄₀O₂** 1) C 76,6 — H 9,8 — O 13,6 — M. G. 470.
- C₃₀H₄₀O₁₂** 1) Echicerinsäure (*A.* 178, 64). — III, 630.
- C₃₀H₄₀O₁₂** 1) C 60,2 — H 7,7 — O 32,1 — M. G. 598.
- C₃₀H₄₀O₁₄** 1) Ouabain + 9H₂O. Sm. 185—200°. Ba (*B.* 21 [2] 359; 22 [2] 106; *Bf.* [3] 19, 201, 734, 831). — III, 599.
- C₃₀H₄₀O₁₄** 1) C 57,2 — H 7,3 — O 35,5 — M. G. 630.
- C₃₀H₄₀O₂₁** 1) Menganthin. Sm. 60—65° (*J.* 1861, 749; 1865, 610). — III, 597.
- C₃₀H₄₀N₂** 1) C 48,5 — H 6,2 — O 45,3 — M. G. 742.
- C₃₀H₄₀N₂** 1) Glykolignose (*A. Spl.* 6, 223). — III, 592.
- C₃₀H₄₀N₂** 1) C 82,9 — H 10,6 — N 6,4 — M. G. 434.
- C₃₀H₄₀O** 1) Verbindung (aus Campherimin). Sm. bei 100°. (HCl, AuCl₃) (*B.* 29, 2810). — IV, 77.
- C₃₀H₄₀O** 1) C 84,9 — H 11,3 — O 3,8 — M. G. 424.
- C₃₀H₄₀O₂** 1) α-Amyron + H₂O. Sm. 125—130° (*B.* 24, 3836). — III, 557.
- C₃₀H₄₀O₂** 2) β-Amyron. Sm. 178—180° (*B.* 24, 3837). — III, 557.
- C₃₀H₄₀O₂** 1) C 81,8 — H 10,9 — O 7,3 — M. G. 440.
- C₃₀H₄₀O₂** 1) Echicerin. Sm. 157° (*A.* 178, 61; *P.* 65, 240). — III, 629.
- C₃₀H₄₀O₂** 2) Oxy-α-Amyrin + 2H₂O. Sm. 207—208° (*B.* 24, 3838). — III, 557.
- C₃₀H₄₀O₂** 3) Propionat d. Sitosterin. Sm. 108,5° (*M.* 18, 559).
- C₃₀H₄₀O₂** 1) C 78,9 — H 10,5 — O 10,5 — M. G. 456.
- C₃₀H₄₀O₂** 1) Gentiol. Sm. 215—219° (*M.* 12, 480). — III, 633.
- C₃₀H₄₀O₂** 2) Uron + 2H₂O. Sm. 264—266° (*Z.* 1866, 382; *J.* 1854, 659; *M.* 14, 255). — III, 649.
- C₃₀H₄₀O₂** 1) C 76,3 — H 10,2 — O 13,5 — M. G. 472.
- C₃₀H₄₀O₂** 1) Diacetat d. Onocol. Sm. 224° (*B.* 29, 2986).
- C₃₀H₄₀O₂** 2) d-Diborneolester d. Camphersäure. Sm. 102—128° (?) (*B.* 23 [2] 283). — III, 471.
- C₃₀H₄₀O₂** 3) l-Diborneolester d. Camphersäure. Sm. 122° (*B.* 23 [2] 283). — III, 471.
- C₃₀H₄₀O₂** 1) C 67,1 — H 8,9 — O 23,9 — M. G. 536.
- C₃₀H₄₀O₂** 1) α-Chinovin. PbO (*A.* 17, 161; 40, 323; 45, 278; 79, 145; 111, 182; 145, 9; *Z.* 1867, 537; *J.* 1859, 578; *B.* 16, 928; *R.* 2, 162). — III, 575.
- C₃₀H₄₀O₁₃** 2) β-Chinovin. Sm. 235° u. Zers. + 5C₂H₄O (*B.* 16, 928, 930). — III, 575.
- C₃₀H₄₀O₁₃** 1) C 60,0 — H 8,0 — O 32,0 — M. G. 600.
- C₃₀H₄₀O₁₃** 1) Periplocin. Sm. 205° (*C.* 1897 [2] 130).
- C₃₀H₄₀O₁₃** 1) C 58,4 — H 7,8 — O 33,8 — M. G. 616.
- C₃₀H₄₀O₁₃** 1) Ouabainsäure. Sm. bei 235° u. Zers. Na + 3H₂O, Sr + 6H₂O, Ba + H₂O (*Bf.* [3] 19, 832).

- C₃₀H₄₆O₁₄** C 56,9 — H 7,6 — O 35,4 — M. G. 632.
 1) Hexaacetyllinusinsäure. Fl. (M. 8, 161). — I, 861.
- C₃₀H₄₄O₂₀** C 35,4 — H 4,7 — O 59,8 — M. G. 1016.
 1) Pachymose (B. 28, 776; H. 21, 149).
- C₃₀H₅₀O** C 84,5 — H 11,7 — O 3,8 — M. G. 426.
 1) α-Amyrin. Sm. 181—181,5° (J. 1851, 528; 1876, 911; A. 192, 179; B. 20, 1243; 23, 3186; 24, 3836). — III, 556.
 2) β-Amyrin. Sm. 193—194° (B. 20, 1245; 23, 3187; 24, 3836; A. 271, 216). — III, 556.
- C₃₀H₅₀O₂** C 81,5 — H 11,3 — O 7,2 — M. G. 442.
 1) Cerin (oder C₂₇H₅₁O₂). Sm. 249° (C. 1898 [2] 1102).
 2) Conduransterin (G. 21, 210). — III, 577.
 3) Pertusarin. Sm. 235° (J. pr. [2] 58, 504).
 4) Acetat d. Chironol. Sm. 196° (B. 28 [2] 1056).
 5) Acetat d. Homocholesterin. Sm. 223° (G. 19, 211). — II, 1076.
 6) Propionat d. Cholesterin (oder C₂₉H₄₈O₂). Sm. 98° (H. 15, 39, 368, 373). — II, 1073.
 7) Butyrat d. Cholesterin (A. ch. [3] 56, 59; M. 15, 374). — II, 1073.
- C₃₀H₄₈O₂** C 81,1 — H 11,7 — O 7,2 — M. G. 444.
 1) Propionat d. Koprosterin. Sm. 92° (H. 22, 400).
 2) Verbindung (aus Diisovaleraldehyd) (B. 8, 373). — I, 962.
- C₃₀H₅₂O₂** C 66,7 — H 9,6 — O 23,7 — M. G. 540.
 1) Boldoglykosid (Bl. 42, 291). — III, 573.
- C₃₀H₅₂O₁₀** C 62,9 — H 9,1 — O 28,0 — M. G. 572.
 1) Randiasäure. Sm. 208—210° (C. 1895 [1] 226).
- C₃₀H₄₉O₁₄** C 56,6 — H 8,2 — O 35,2 — M. G. 636.
 1) Verbindung (Glykosid) (B. 26 [2] 897).
- C₃₀H₅₀O₃** C 77,3 — H 12,4 — O 10,3 — M. G. 466.
 1) Lakton d. Lanocerinsäure. Sm. 104—105° (B. 28, 3134; 29, 1474).
 2) isom. Lakton d. Lanocerinsäure. Sm. 86° (B. 29, 1476).
- C₃₀H₅₀O₆** C 70,0 — H 11,3 — O 18,7 — M. G. 514.
 1) Lithobilinsäure. Sm. 199°. Ba + 6H₂O (B. 12, 1925; J. 1880, 831; J. Th. 1879, 244). — I, 806.
- C₃₀H₄₉N** C 83,2 — H 13,6 — N 3,2 — M. G. 433.
 1) Nitril d. Melissinsäure. Sm. 70° (C. 1896 [1] 642).
- C₃₀H₅₀O₂** C 79,6 — H 13,2 — O 7,1 — M. G. 452.
 1) Melissinsäure (oder C₂₉H₄₉O₂). Sm. 90° (90,6°). Pb, Ag (A. 71, 149; 183, 353; 223, 295; J. r. 11, 113; M. 14, 736; C. 1896 [1] 642). — I, 449.
 2) Säure (aus Bienenwachs). Sm. 89—90° (A. 224, 249). — I, 449.
 3) Tetradekylester d. Palmitinsäure. Sm. 48° (B. 16, 3021). — I, 443.
- C₃₀H₅₀O₃** C 76,9 — H 12,8 — O 10,3 — M. G. 468.
 1) α-Oxymelissinsäure. Sm. 96,5° (C. 1896 [1] 642).
 2) Acetat d. Drimol. Sm. 42—43° (A. 286, 375). — III, 630.
- C₃₀H₅₀O₄** C 74,4 — H 12,4 — O 13,2 — M. G. 484.
 1) Lanocerinsäure. Sm. 104—105° (B. 29, 1475).
- C₃₀H₅₁Cl** 1) Chlortriakontan (Myricylechlorid). Sm. 64,5° (A. 183, 348). — I, 157.
- C₃₀H₅₁J** 1) Jodtriakontan (Myricyljodid). Sm. 69,5° (A. 183, 347). — I, 196.
- C₃₀H₅₁O** C 82,2 — H 14,1 — O 3,6 — M. G. 438.
 1) Myricylalkohol. Sm. 85° (88°) (A. 71, 147; 183, 344; 223, 283; Z. 1869, 300; B. 3, 569; M. 14, 735; Bl. [3] 11, 185). — I, 241.
- C₃₀H₄₉O₇** C 79,3 — H 13,6 — O 7,0 — M. G. 454.
 1) Coccerylalkohol. Sm. 101—104° (B. 18, 1981). — I, 267.
- C₃₀H₄₉S** 1) Merkaptotriakontan (Myricylmerkaptan). Sm. 94,5° (A. 183, 349). — I, 350.
- C₃₀H₄₈Pb** 1) Bleitriisoamyl. Fl. (J. 1860, 383). — I, 1530.

C₃₀-Gruppe mit drei Elementen.

- C₃₀H₁₀O₆N₂** C 70,2 — H 2,9 — O 18,7 — N 8,2 — M. G. 513.
 1) Tri[Phenylimid] d. Benzolhexacarbonsäure (J. pr. [2] 32, 238). — II, 2106.

- $C_{25}H_{15}O_4N_3$ C 66,0 — H 2,8 — O 21,2 — N 7,9 — M. G. 529.
1) Triphalylpikramid. Sm. oberh. 300° (*G.* 18, 253). — II, 1809.
- $C_{35}H_{15}ON_7$ C 85,3 — H 4,3 — O 3,8 — N 6,6 — M. G. 422.
1) Phenylnaphtindon (*A.* 286, 234). — IV, 1084.
2) Phenylhydrason d. Biacenaphtylidendion. Sm. 105—110° (*A.* 276, 20). — III, 311.
- $C_{35}H_{15}O_2N_7$ C 82,2 — H 4,1 — O 7,3 — N 6,4 — M. G. 438.
1) Oxynaphtylnaphtindon. HCl (*A.* 286, 237). — IV, 1085.
- $C_{35}H_{15}O_2N_4$ C 77,2 — H 3,9 — O 6,9 — N 12,0 — M. G. 466.
1) Verbindung (aus Rhodizonsäure u. 2-Amido-1-Phenylamidobenzol) (*B.* 31, 2441).
- $C_{35}H_{15}O_4N_3$ C 76,6 — H 3,8 — O 13,6 — N 6,0 — M. G. 470.
1) Dibenzoylindigo. Sm. 108° (*J.* 1863, 557). — II, 1621.
- $C_{35}H_{15}O_4Br_2$ 1) Verbindung (aus Brommorphenolmethyliäther). Sm. oberh. 315° (*B.* 30, 2441).
- $C_{35}H_{15}ON_5$ C 82,4 — H 4,3 — O 3,7 — N 9,6 — M. G. 437.
- $C_{35}H_{20}ON_5$ 1) Amidonaphtylnaphtindon (*A.* 286, 237). — IV, 1216.
C 84,9 — H 4,7 — O 3,8 — N 6,6 — M. G. 424.
1) 4-[1-Naphtyl]imido-3-[1-Naphtyl]amido-1-Keto-1,4-Dihydronaphtalin. Sm. 237° (*A.* 272, 352). — IV, 1166.
2) 4-[1-Naphtyl]imido-*p*-(1-Naphtyl)amido-1-Keto-1,4-Dihydronaphtalin. Sm. 178° (*B.* 21, 395). — III, 394.
3) 4-[2-Naphtyl]imido-*p*-[2-Naphtyl]amido-1-Keto-1,4-Dihydronaphtalin. Sm. 246—247° (*Soc.* 45, 160). — III, 394.
4) Phenylnaphtophenanthroniumhydrat. HNO_3 (*B.* 20, 1185). — III, 445.
5) 2,3,4-Triphenyl-1,4-Naphtisodiazinon[6] (Phenylnaphtostilborosindon). HCl (*B.* 25, 2006). — IV, 1092.
- $C_{36}H_{20}OS$ 1) 1,1-Dinaphtyläther d. 1-Merkapto-*p*-Oxynaphtalin. Sm. 111° (*J. pr.* [2] 38, 140). — II, 870.
- $C_{36}H_{20}O_2N_4$ C 81,8 — H 4,5 — O 7,3 — N 6,4 — M. G. 440.
1) 6,11-Di[Phenylamido]*p*-5,12-Diketo-5,12-Dihydronaphtacen. Sm. bei 245° (*B.* 31, 1283).
2) Diphalsuccindehydroanilid. Sm. noch nicht bei 280° (*B.* 18, 3123). — II, 1809.
- $C_{36}H_{20}O_2N_2$ C 76,3 — H 4,2 — O 13,6 — N 5,9 — M. G. 472.
- $C_{36}H_{20}O_4S$ 1) Dibenzosäure d. Phenyl-3,4-Dioxy-1-Naphtylsulfon. Sm. 178° (*B.* 28, 1316).
- $C_{36}H_{20}O_4N_2$ C 69,8 — H 3,4 — O 21,6 — N 14,2 — M. G. 592.
1) Di[3-Oxyphenyläther] d. Cyanursäure + 6H₂O. Sm. oberh. 360° u. Zers. (*B.* 13, 1619). — II, 918.
- $C_{36}H_{20}O_6N_2$ 2) Verbindung (aus d. Verb. $C_{24}H_{15}O_4N_3$). Sm. 229° (*A.* 226, 67). — IV, 1005.
C 65,2 — H 3,6 — O 26,1 — N 5,1 — M. G. 552.
- $C_{36}H_{20}O_6N_2$ 1) Anhydrid d. 2-[3-Nitro-4-Methylbenzoyl]benzol-1-Carbonsäure. Sm. 203° (*A.* 299, 313).
- $C_{36}H_{20}O_{11}Br_4$ 1) Pentacetat d. Verb. $C_{24}H_{15}O_6Br_4$ (aus $\alpha\alpha\beta$ -Tri[1,2-Dioxyphenyl]äthan) (*A.* 243, 184). — II, 1045.
2) Pentacetat d. Verb. $C_{24}H_{15}O_6Br_4$ (aus $\alpha\beta\beta$ -Tri[1,3-Dioxyphenyl]äthan) (*A.* 243, 180). — II, 1045.
- $C_{36}H_{20}N_2Cl_4$ 1) Tetrachlorasopenin. Sm. 265° (*B.* 21, 678). — III, 342.
- $C_{36}H_{20}N_2Br_4$ 1) Tetrabromasopenin. Sm. 243° (*B.* 20, 2481; 21, 682; *A.* 243, 85). — III, 342.
- $C_{36}H_{21}O_2N_3$ C 74,5 — H 4,3 — O 6,6 — N 14,5 — M. G. 483.
1) Rubazonsäure. Sm. 200°? (*B.* 27, 785). — IV, 1491.
- $C_{36}H_{21}O_2As$ 1) Tri[2-Naphtylester] d. Arsenigensäure. Sm. 113—114° (*B.* 28, 622).
- $C_{36}H_{21}O_2P$ 1) Tri[1-Naphtylester] d. Phosphorsäure. Sm. 145° (149—150°) (*A.* 152, 289; *B.* 15, 312 Anm.; 16, 640, 1770; 28, 3054; 30, 2380). — II, 858.
2) Tri[2-Naphtylester] d. Phosphorsäure. Sm. 108° (110,5—111°) (*A.* 152, 290; *B.* 16, 1768; 28, 3057; 30, 2377). — II, 877.
- $C_{36}H_{21}O_{10}N_3$ C 61,7 — H 3,6 — O 27,4 — N 7,2 — M. G. 583.
1) 2,4,6-Tri[Benzoylamido]-1-Oxybenzol-2',2'',2'''-Tricarbonsäure (Pikramintriphalylsäure). Sm. oberh. 300° (*G.* 16, 254). — II, 1809.

- C₃₀H₂₁N₃Cl** 1) 4-Chlorphenylat d. 2,3-Diphenyl-1,4-Naphtisodiazin (*B.* 24, 1872). — *IV*, 1092.
- C₃₀H₂₁N₃Cl₃** 1) Trichlorazophenin. Sm. 246° (*B.* 21, 677). — *III*, 342.
- C₃₀H₂₁ON₃** C 84,5 — H 5,2 — O 3,7 — N 6,6 — M. G. 426.
- 1) 4-Phenylxyhydrat d. 2,3-Diphenyl-1,4-Naphtisodiazin. Sm. 167°. Chlorid (*B.* 24, 1817, 2679). — *IV*, 1092.
- C₃₀H₂₁ON₄** C 79,3 — H 4,8 — O 3,5 — N 12,3 — M. G. 454.
- 1) 4-Acetylamidophenylrosindulin. HCl (*B.* 31, 2431).
- 2) 3-Phenyl-2-[3-Benzoylamidophenyl]-2,3-Dihydro-1,2,4-Naphtisotriazin. Sm. 176—177° (*Soc.* 59, 700). — *IV*, 1359.
- C₃₀H₂₁O₂N₃** C 81,4 — H 5,0 — O 7,2 — N 6,3 — M. G. 442.
- 1) 3-Benzoylamido-1-[Benzoyl-2-Naphtyl]amidobenzol. Sm. 213° (*B.* 26, 980). — *IV*, 573.
- 2) 1,4-Dibenzoyl-2,3-Diphenyl-1,4-Dihydro-1,4-Diazin. Sm. 188—189° (*Soc.* 63, 1293). — *III*, 284.
- C₃₀H₂₁O₂N₄** C 76,6 — H 4,7 — O 6,8 — N 11,9 — M. G. 470.
- 1) 5,5'-Diketo-1,3,1',3'-Tetraphenyl-4,5,4',5'-Tetrahydro-4,4'-Bipyrazol. Sm. 320° u. Zers. (316—317°) (*B.* 20, 2548; 27, 1168; 30, 116; *A.* 293, 108). — *IV*, 1299.
- 2) Phenylhydrosonderivat d. s-Aethylendibenzoyl-2,2'-Dicarbonsäure. Sm. 236—237° (*B.* 18, 804). — *IV*, 725.
- C₃₀H₂₁O₂Br₂** 1) $\beta\gamma$ oder $\delta\epsilon$ -Dibrom- α '-Diketo- $\alpha\beta\delta$ ' oder $\alpha\gamma\delta$ '-Tetraphenyl- β -Hexen. Zers. bei 170° (*A.* 302, 200).
- C₃₀H₂₁O₂Br₄** 1) $\beta\gamma\delta\epsilon$ -Tetrabrom- α '-Diketo- $\alpha\beta\delta$ ' oder $\alpha\gamma\delta$ '-Tetraphenylhexan (*A.* 302, 200).
- C₃₀H₂₁O₂N₂** C 75,9 — H 4,6 — O 13,5 — N 5,9 — M. G. 474.
- 1) 3,4,3',4'-Dimethylenäther d. 1,6-Diphenyl-3,4-Di[3,4-Dioxyphenyl]-1,2-Dihydro-1,2-Diazin. Sm. 166° (*A.* 289, 325). — *IV*, 786.
- C₃₀H₂₁O₄N₄** C 71,7 — H 4,4 — O 12,7 — N 11,2 — M. G. 502.
- 1) 1,4-Dibenzoyl-3,6-Di[Phenylamido]-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin (Hippuroflavindianilid). Sm. 235° (*A.* 287, 74). — *II*, 1185.
- C₃₀H₂₁O₂N₃** C 73,5 — H 4,5 — O 16,3 — N 5,7 — M. G. 490.
- 1) Verbindung (aus 5-Keto-2-Benzyliden-3,4-Diphenyl-2,5-Dihydropyrrrol). Sm. 173° (*B.* 24, 3873). — *II*, 1728.
- C₃₀H₂₁O₂N₄** C 65,4 — H 4,0 — O 20,4 — N 10,2 — M. G. 550.
- 1) 3-Methyläther-1,7-Diacetat d. 4,5-Diphenylazo-1,3,7-Trioxyanthon. Sm. 218—220° (*Soc.* 73, 673). — *IV*, 1479.
- C₃₀H₂₁O₂N₅** C 56,4 — H 3,4 — O 22,6 — N 17,6 — M. G. 638.
- 1) Verbindung (aus 2-Nitrophenylbrenztraubensäure). Sm. 157° (*B.* 30, 1040). — *IV*, 697.
- C₃₀H₂₁N₃Cl** 1) 4-Chlorphenylat d. 6-Amido-2,3-Diphenyl-1,4-Naphtisodiazin + H₂O. 2 + PtCl₄ (*B.* 25, 2003). — *IV*, 1218.
- 2) Farbstoff (aus 4 Chlor-2-Methylchinolin). Sm. 220°. 2HCl (*B.* 20, 957). — *IV*, 309.
- C₃₀H₂₁N₄S₂** 1) Disulfid d. 2-Merkapto-4,5-Diphenylimidazol. Zers. bei 300° (*A.* 284, 16). — *III*, 224.
- C₃₀H₂₁ON** C 87,2 — H 5,5 — O 3,9 — N 3,4 — M. G. 413.
- 1) 1-Acetyl-2,3,4,5-Tetraphenylpyrrrol. Sm. 226° (*B.* 22, 554). — *IV*, 478.
- C₃₀H₂₁ON₅** C 76,7 — H 4,9 — O 3,4 — N 14,9 — M. G. 469.
- 1) Verbindung (aus Diazobenzolchlorid) (*Soc.* 37, 752). — *IV*, 1515.
- C₃₀H₂₁N₄Cl** 1) 3-Chlor-2,5-Di[Phenylamido]-1,4-Di[Phenylamido]-1,4-Dihydrobenzol (Chlorazophenin). Sm. 230° (*B.* 20, 481; *A.* 243, 289). — *III*, 342.
- 2) Anilidophenylposafrinchlorid (*B.* 30, 2626).
- C₃₀H₂₁ON₄** C 79,0 — H 5,2 — O 3,5 — N 12,3 — M. G. 456.
- 1) Hydroxyazophenin. Sm. 197° (*B.* 21, 910). — *II*, 730.
- C₃₀H₂₁O₂N₃** C 81,1 — H 5,4 — O 7,2 — N 6,3 — M. G. 444.
- 1) α '-Dioximido- $\alpha\beta\delta$ ' oder $\alpha\gamma\delta$ '-Tetraphenyl- $\beta\delta$ -Hexadiën. Sm. 246° u. Zers. (*A.* 302, 199).
- 2) 1,3-Di[Acetyl-2-Naphtylamido]benzol. Sm. 175° (*B.* 26, 981). — *IV*, 574.
- 3) 1,4-Di[Acetyl-2-Naphtylamido]benzol. Sm. 210° (*B.* 22, 1802). — *IV*, 590.

- $C_{20}H_{14}O_4N_2$ C 75,6 — H 5,0 — O 13,4 — N 5,9 — M. G. 476.
 1) Diphthalsuccinamid. Sm. 267° u. Zers. (B. 18, 3123). — II, 1808.
- $C_{19}H_{14}O_4N_4$ C 71,4 — H 4,8 — O 12,7 — N 11,1 — M. G. 504.
 1) 1,4-Dibenzoyl-3,6-Di[Phenylamido]-2,5-Dioxy-1,4-Dihydro-1,4-Diazin (Dihydrohippuroflavindianilid). Sm. 158—160° (A. 287, 73).
- $C_{20}H_{21}O_4Cl$ 1) Tetramethyläther d. $\alpha\alpha\beta\beta$ -Tetra[*p*-Chlor-*p*-Oxyphenyl]äthen. Sm. 257° (B. 28, 2875).
- $C_{16}H_{21}O_5N_4$ C 69,2 — H 4,6 — O 15,4 — N 10,8 — M. G. 520.
 1) Anhydroverbindung d. $\alpha\beta$ -Di[Phenylamido]- $\alpha\beta$ -Di[Benzoylamido]-bernsteinsäure. Sm. 226—227°. Ca (B. 26, 2322; A. 287, 77). — II, 1185.
- $C_{19}H_{21}O_6N_4$ C 70,9 — H 4,7 — O 18,9 — N 5,5 — M. G. 508.
 1) Aethylenäther d. Benzoylbenshydroxamsäure. Sm. 148° (A. 175, 342). — II, 1208.
- $C_{19}H_{21}O_6N_4$ C 67,2 — H 4,5 — O 17,9 — N 10,4 — M. G. 536.
 1) Tri[β -Phthalylamidöthyl]amin. Sm. 187,5°. HCl, HBr (B. 29, 2531).
- $C_{16}H_{14}O_6N_4$ C 63,4 — H 4,2 — O 22,5 — N 9,9 — M. G. 568.
 1) Acetat d. Disazobenzolhesperitin. Sm. 240—242° (Soc. 73, 1033). — IV, 1474.
- $C_{20}H_{24}O_{12}Br_4$ 1) Pentacetyltetrabromhemlockgerbsäure (B. 17, 1042). — III, 684.
- $C_{18}H_{21}ON_5$ C 76,4 — H 5,3 — O 3,4 — N 14,9 — M. G. 471.
 1) 4-[4-Aethylphenylamidophenylazo]-1-[2-Oxy-1-Naphtylazo]benzol (Soc. 45, 111). — IV, 1434.
- $C_{16}H_{21}O_2N$ C 83,5 — H 5,8 — O 7,4 — N 3,2 — M. G. 431.
 1) 1,3-Diketo-2,4,4-Tribenzyl-1,2,3,4-Tetrahydroochinolin. Sm. 109° (B. 20, 2498). — II, 1913.
- $C_{20}H_{21}O_4N$ C 77,8 — H 5,4 — O 13,8 — N 3,0 — M. G. 463.
 1) Dimethyläther d. Orcinphthaleinanilid. Sm. noch nicht bei 300° (B. 26, 3079). — II, 2066.
 2) Diäthyläther d. Fluoresceinanilid. Sm. 162—164° (B. 27, 2791). — II, 2062.
- $C_{20}H_{21}N_4Cl$ 1) *o*-Chlormethylat d. 2-Phenylamido-*o*-Methylrosindulin[9]. HCl (A. 272, 328). — IV, 1297.
- $C_{22}H_{29}ON_7$ C 86,5 — H 6,2 — O 3,8 — N 3,4 — M. G. 416.
 1) 4-Phenylhydrazon-1-Oxy-1,2,5-Triphenyl-1,2,3,4-Tetrahydrobenzol. Sm. 197° (B. 26, 67). — IV, 779.
- $C_{20}H_{29}ON_4$ C 78,6 — H 5,7 — O 3,5 — N 12,2 — M. G. 458.
 1) Verbindung (aus Diphenacylessigsäure u. Phenylhydrazin). Sm. 164—166° (B. 19, 3148). — IV, 712.
- $C_{20}H_{29}O_2N_2$ C 80,7 — H 5,8 — O 7,2 — N 6,3 — M. G. 446.
 1) $\alpha\zeta$ -Dioximido- $\alpha\beta\delta\zeta$ oder $\alpha\gamma\delta\zeta$ -Tetraphenyl- β -Hexen. Sm. 230° (A. 302, 204).
 2) Monophenylhydrazon d. $\alpha\beta\gamma$ -Tribenzoylpropan. Sm. 57—60° (B. 24, 602). — IV, 788.
 3) Cinnidimabenzil. Sm. 283° (Soc. 49, 471). — III, 286.
 4) Di[Phenylamid] d. γ -Truxillsäure. Sm. 255° (B. 26, 838). — II, 1903.
 5) Diacetylderivat d. Base $C_{26}H_{31}N_7$. Sm. 280° (B. 26, 1704). — IV, 1091.
 6) Verbindung (aus Amarin) (J. pr. [2] 27, 302). — III, 26.
- $C_{20}H_{29}O_3N_2$ C 77,9 — H 5,6 — O 10,4 — N 6,0 — M. G. 462.
 1) 3,3'-Di[2,4-Dimethylbenzoyl]oxyazobenzol. Sm. 124° (A. 286, 335). — IV, 1345.
- $C_{19}H_{26}O_6N_4$ C 66,9 — H 4,8 — O 17,8 — N 10,4 — M. G. 538.
 1) $\alpha\beta$ -Di[Benzoylamido]- $\alpha\beta$ -Di[Phenylamido]bernsteinsäure. Sm. 221 bis 222°. Ca (B. 26, 2322; A. 287, 77). — II, 1192.
- $C_{19}H_{26}O_6N_4$ C 63,2 — H 4,6 — O 22,4 — N 9,8 — M. G. 570.
 1) Katechinazobenzol (M. 2, 552). — III, 687.
- $C_{20}H_{26}N_2J_2$ 1) Tri[Jodmethylat] d. 2-[4-Chinoly]-3-[2-Chinoly]chinolin + 2H₂O. Sm. 201° u. Zers. (M. 17, 417). — IV, 1220.
- $C_{20}H_{27}O_2N$ C 83,2 — H 6,2 — O 7,4 — N 3,2 — M. G. 433.
 1) Di[β -Benzoyl- α -Phenyläthyl]amin (Dibenzalacetophenonamin). Sm. 163° u. Zers. (B. 31, 349).
- $C_{20}H_{27}O_2N_2$ 1) Oxytrinkotin? (4HCl, 2PtCl₄ + 8H₂O) (J. 1883, 1338). — IV, 857.

- C₂₀H₂₇O₂N₂** C 75,3 — H 5,7 — O 10,0 — N 8,8 — M. G. 477.
 1) **1,3,5-Tri[Phenyltriacetylamido]benzol.** Sm. 172—173° (*G.* 20, 340). — *IV*, 1125.
- C₂₀H₂₇O₁₂N₂** C 51,6 — H 3,9 — O 34,4 — N 10,0 — M. G. 697.
 1) **Verbindung** (aus Furfurinsulfat). Sm. 94—95°. (2HCl, PtCl₄) (*B.* 10, 1189). — *III*, 723.
- C₂₀H₂₅O₂N₂** C 80,4 — H 6,2 — O 7,1 — N 6,2 — M. G. 448.
 1) **βγ-Di[Phenylbenzoylamido]butan.** Sm. 243—244° (*B.* 25, 3281). — *II*, 1170.
 2) **αβ-Di[Phenylbenzoylmethylamido]äthan** (Diphenylacetyläthylendiphenyl-diamin). Sm. 170—172,5° (*G.* 21 [2] 500). — *III*, 126.
 3) **7-Aethyläther d. 1,7-Dioxy-6-Methyl-2,3-Diphenyl-1-(2-Methylphenyl)-1,1-Dihydro-1,4-Benzdiazin.** Sm. 153° (*A.* 287, 191). — *III*, 285.
 4) **7-Aethyläther d. 1,7-Dioxy-6-Methyl-2,3-Diphenyl-1-(3-Methylphenyl)-1,1-Dihydro-1,4-Benzdiazin.** Sm. 137,5—140° (*A.* 287, 197). — *III*, 285.
 5) **7-Aethyläther d. 1,7-Dioxy-5-Methyl-2,3-Diphenyl-1-(4-Methylphenyl)-1,1-Dihydro-1,4-Benzdiazin?** Sm. 178—179° (*A.* 287, 210). — *III*, 285.
 6) **7-Aethyläther d. 1,7-Dioxy-6-Methyl-2,3-Diphenyl-1-(4-Methylphenyl)-1,1-Dihydro-1,4-Benzdiazin.** Sm. 146—149° (*A.* 287, 202).
 7) **Tetrabenzoyldiamid d. Oxalsäure.** Sm. 127—128° (*B.* 25, 1825). — *II*, 530.
 8) **Tetra[4-Methylphenyl]diamid d. Oxalsäure.** Sm. 100—101,5° (*B.* 25, 1826). — *II*, 501.
 9) **Di[αβ-Diphenyläthylamid] d. Oxalsäure.** Sm. 212° (*G.* 23 [2] 229). — *II*, 636.
 10) **Base** (aus Benzoyl-R-Trimethylen). 2HCl, (2HCl, PtCl₄) (*Soc.* 47, 846). — *III*, 163.
- C₂₀H₂₅O₂N₄** C 75,6 — H 5,9 — O 6,7 — N 11,8 — M. G. 476.
 1) **2,2'-Di[Benzoylamido]-3,5,3',5'-Tetramethylazobenzol.** Zers. bei 280—290° (*Am.* 17, 450). — *IV*, 1387.
 2) **Di[Phenylhydrazid] d. α-Truxillsäure.** Sm. 320° (*B.* 27, 1411). — *IV*, 712.
 3) **Di[Phenylhydrazid] d. γ-Truxillsäure.** Sm. 305° (*B.* 27, 1412). — *IV*, 712.
- C₂₀H₂₅O₂N₂** C 77,6 — H 6,0 — O 10,3 — N 6,0 — M. G. 464.
 1) **5-Aethyläther d. 4,4'-Di[2-Oxybenzylidenamido]-5-Oxy-2,2'-Dimethylbiphenyl?** Sm. 127° (*B.* 27, 2705). — *III*, 75.
 2) **5-Aethyläther d. p-Di[2-Oxybenzylidenamido]-6-Oxy-2,4'-Dimethylbiphenyl?** Sm. 106° (*B.* 27, 2713). — *III*, 75.
 3) **Aethyläther d. 6,4'-Di[4-Methoxybenzylidenamido]-3-Oxybiphenyl.** Sm. 124° (*A.* 303, 349).
- C₂₀H₂₅O₂N₄** C 73,2 — H 5,7 — O 9,7 — N 11,4 — M. G. 492.
 1) **Bisphenylhydrason d. Mekoninmethylphenylketon.** Sm. 187° u. Zers. (*M.* 13, 669). — *II*, 2022.
 2) **Di[Phenylamid] d. α-Phenylamido-β-Phenylacetylamidobernsteinsäure.** Sm. 252° (*B.* 24, 2962). — *II*, 438.
- C₂₀H₂₅O₂N₆** C 69,2 — H 5,4 — O 9,2 — N 16,1 — M. G. 520.
 1) **Verbindung** (aus 4-α-Brompropionylamidoazobenzol). Sm. 227—228° (*B.* 31, 2851).
- C₂₀H₂₅O₂N₂** C 75,0 — H 5,8 — O 13,3 — N 5,8 — M. G. 480.
 1) **Verbindung** (aus Isohydrobenzoin). Sm. 163° (*B.* 24, 1779). — *II*, 1102.
 2) **Verbindung** (aus αβ-Dioxy-αβ-Diphenyläthan). Sm. 233—234° (*B.* 24, 1779). — *II*, 1101.
- C₂₀H₂₅O₂N₆** C 67,2 — H 5,2 — O 11,9 — N 15,7 — M. G. 536.
 1) **Diäthylester d. Benzol-1,3-Di[β-Phenylhydrason-α-Cyanpropionsäure].** Sm. 260—261° (*Bil.* [3] 11, 1098). — *IV*, 725.
 2) **Diäthylester d. Benzol-1,4-Di[β-Phenylhydrason-α-Cyanpropionsäure].** Sm. 267—268° (*Bil.* [3] 11, 927). — *IV*, 725.
- C₂₀H₂₅O₂N₄** C 63,8 — H 5,0 — O 11,3 — N 19,8 — M. G. 564.
 1) **Tetra[Phenylhydrazid] d. Aethentetracarbonsäure.** Zers. bei 225° (*B.* 26, 2357). — *IV*, 731.

- $C_{30}H_{20}O_5N_4$ C 68,7 — H 5,3 — O 15,3 — N 10,7 — M. G. 524.
 1) Verbindung (aus α -Umsinsäure) + $3H_2O$. Sm. 220° (wasserfrei) (A. 284, 164). — IV, 727.
- $C_{30}H_{20}O_{12}N_2$ C 59,2 — H 4,6 — O 31,6 — N 4,6 — M. G. 608.
 1) Verbindung (aus Hemipinsäure u. Amidoäthylpiperonylcarbonsäure-anhydrid) + H_2O . Sm. 187–189° (Soc. 57, 1101). — II, 1995.
- $C_{30}H_{20}N_8S_4$ 1) Dithiotetra-[3-Methylphenyl]dithioharnstoff. Sm. 228–231° (B. 20, 672). — II, 821.
- $C_{30}H_{20}O_5N_3$ C 71,0 — H 5,7 — O 9,5 — N 13,8 — M. G. 507.
 1) Phenylamid d. Di[3-Keto-1,5-Dimethyl-2-Phenyl-2,3-Dihydropyrazolyl-4-]essigsäure. Sm. 237° (A. 255, 245). — IV, 1266.
- $C_{30}H_{20}O_6N_3$ C 64,9 — H 5,2 — O 17,3 — N 12,6 — M. G. 555.
 1) Verbindung (aus 3-Cyanamidobenzol-1-Carbonsäure) (B. 15, 2121). — II, 1270.
- $C_{30}H_{20}O_{12}N$ C 58,9 — H 4,7 — O 34,0 — N 2,3 — M. G. 611.
 1) Teropiammon (A. 86, 187). — III, 916.
- $C_{30}H_{20}N_2Cl$ 1) Äthylchlorid d. Benzylamarin. Sm. 125°. 2 + $PtCl_4$ + $3H_2O$ (B. 18, 1854). — III, 24.
- $C_{30}H_{20}N_2J$ 1) Äthyljodid d. Benzylamarin. Sm. 182° (B. 18, 1854). — III, 24.
- $C_{30}H_{20}ON_4$ C 77,9 — H 6,5 — O 3,5 — N 12,1 — M. G. 462.
 1) α -[2-Benzoylamidophenyl]imidodi[4-Dimethylamidophenyl]methan. Sm. 236–237° (J. pr. [2] 50, 426). — IV, 1173.
 2) α -[4-Benzoylamidophenyl]imidodi[4-Dimethylamidophenyl]methan. Sm. 117° (J. pr. [2] 50, 415). — IV, 1174.
- $C_{30}H_{20}O_3N_2$ C 77,3 — H 6,4 — O 10,3 — N 6,0 — M. G. 466.
 1) Piperidylrhodamin. 2HCl, (2HCl, $PtCl_4$) (B. 23, 1387). — IV, 17.
- $C_{30}H_{20}O_3N_0$ C 68,9 — H 5,7 — O 9,2 — N 16,1 — M. G. 422.
 1) trimolec. *p*-Nitroso-2-Methyl-*p*-Dihydrochinolin (C. 1896 [1] 1127).
- $C_{30}H_{20}O_4N_2$ C 34,7 — H 6,2 — O 13,3 — N 5,8 — M. G. 482.
 1) Verbindung (aus Dimethylamidobenzol u. 2-Oxybenzol-1-Carbonsäurechlorid). HCl + $2H_2O$, (2HCl, $PtCl_4$), Acetat (B. 10, 955). — II, 1500.
- $C_{30}H_{20}O_4N_0$ C 63,6 — H 5,3 — O 11,3 — N 19,8 — M. G. 566.
 1) Tetra[Phenylhydrazid] d. Aethan- $\alpha\alpha\beta\beta$ -Tetracarbonsäure. Zers. bei 255° (269°) (B. 26, 2357; 29, 1290).
- $C_{30}H_{20}O_{11}N_2$ C 60,6 — H 5,0 — O 29,6 — N 4,7 — M. G. 594.
 1) Düngersäure (J. 1857, 631). — II, 2109.
- $C_{30}H_{20}N_6S_2$ 1) Dithiotetra[3-Methylphenyl]diguamidin. Sm. 194–196° u. Zers. (2HCl, $PtCl_4$) (B. 20, 673). — II, 821.
- $C_{30}H_{21}ON_3$ C 80,2 — H 6,9 — O 3,6 — N 9,3 — M. G. 449.
 1) 2-Benzoylamido-4',4''-Di[Dimethylamido]triphenylmethan. Sm. 123° (B. 22, 1887). — IV, 1194.
- $C_{30}H_{21}O_2N_2$ C 70,2 — H 6,0 — O 15,6 — N 8,2 — M. G. 513.
 1) Verbindung (aus Caramel u. Amidobenzol). (2HCl, $PtCl_4$) (B. 4, 909). II, 448.
- $C_{30}H_{21}N_5S$ 1) Phenylsenfö1-2-Amidophenylauramin. Sm. 166–167° (J. pr. [2] 50, 428). — IV, 1174.
 2) Phenylsenfö1-4-Amidophenylauramin. Sm. 124–127° (J. pr. [2] 50, 420). — IV, 1174.
- $C_{30}H_{21}O_2N_2$ C 76,9 — H 6,8 — O 10,3 — N 6,0 — M. G. 468.
 1) 2-Naphtylamid d. α -[α -Aethoxybutyryl-2-Naphtyl]amidobuttersäure. Sm. 106–110° (B. 25, 2926). — II, 622.
 2) 2-Naphtylamid d. α -[α -Aethoxylisobutyryl-2-Naphtyl]amidoisobuttersäure. Sm. 156–165° (B. 25, 2930). — II, 622.
- $C_{30}H_{21}O_4N_2$ C 74,4 — H 6,6 — O 13,2 — N 5,8 — M. G. 484.
 1) Diäthylester d. $\alpha\beta$ -Di[2-Methyl-5-Phenyl-1-Pyrazolyl]äthan- $\alpha^2\beta^2$ -Dicarbonsäure. Sm. 197° (B. 19, 3158). — IV, 357.
- $C_{30}H_{22}O_4N_4$ C 70,3 — H 6,2 — O 12,5 — N 10,9 — M. G. 512.
 1) Di[Phenylhydrazon] d. Dicappherylsäure + H_2O . Zers. bei 237° (Soc. 75, 184).
- $C_{30}H_{22}O_{14}N_2$ C 55,9 — H 5,0 — O 34,8 — N 4,3 — M. G. 644.
 1) Verbindung (aus Hemipinsäure u. ω -Amidoäthylpiperonylcarbonsäure). Sm. 175° u. Zers. (Soc. 57, 1103). — II, 1994.
- $C_{30}H_{22}O_7P$ 1) Tri[2-Methoxy-4-Allylphenylester] d. Phosphorsäure (Triengenol-ester d. Phosphorsäure). Fl. (B. 27, 2456). — II, 975.

- $C_{10}H_{13}O_2P$ 2) Tri[2-Methoxy-4-Propenylphenylester] d. Phosphorsäure (Triisoeugenolester d. Phosphorsäure). Fl. (B. 27, 2456).
- $C_{30}H_{34}O_5N_4$ C 72,3 — H 6,8 — O 9,6 — N 11,2 — M. G. 498.
1) Verbindung (aus Benzidin u. Acetessigsäureäthylester). Sm. 128° (M. 19, 692).
- $C_{25}H_{31}O_10Br_1$ 1) Dibromcoriamyrtin (Z. 1866, 664). — III, 579.
C 73,8 — H 7,4 — O 13,1 — N 5,7 — M. G. 488.
- $C_{25}H_{30}O_8N_2$ 1) Eugenolchinin (A. 135, 329). — III, 813.
2) P-Diisocamyl-1,4-Phenyleneester d. Phenylamidoameisensäure. Sm. 248° (B. 25, 2652). — II, 972.
- $C_{30}H_{30}O_6S_3$ 1) Tri-2-Methylbenzyl]trimethyltrimethyletrisulfon. Sm. 206° (B. 27, 1677). — III, 150.
- $C_{35}H_{36}O_{10}N_2$ C 61,6 — H 6,2 — O 27,4 — N 4,8 — M. G. 584.
1) Hydroxylaminderivat d. Quassinin. Sm. 228–230° u. Zers. (G. 17, 575). — III, 647.
- $C_{30}H_{38}O_5N_2$ C 70,0 — H 8,0 — O 10,1 — N 5,9 — M. G. 474.
1) Verbindung (aus 6-Nitrothymol u. Chloranil) (B. 19, 2317). — II, 773.
- $C_{35}H_{38}O_{10}N_{12}$ C 26,7 — H 2,8 — O 58,1 — N 12,4 — M. G. 1350.
1) Pyrokollodion (C. 1897 [2] 451).
- $C_{35}H_{39}O_9P$ 1) Tri-4-tert. Butylphenylester] d. Phosphorsäure. Fl. (B. 18, 1700). — II, 765.
2) Tri-2-Methyl-5-Isopropylphenylester] d. Phosphorsäure. Sm. 75° (71,5–72°) (B. 15, 818; 18, 1704). — II, 767.
3) Tri-3-Methyl-6-Isopropylphenylester] d. Phosphorsäure. Sm. 59° (Z. 1869, 44). — II, 770.
- $C_{25}H_{39}O_2Br_1$ 1) Verbindung (aus Lascrptin) (J. 1883, 1361). — III, 635.
- $C_{25}H_{39}N_3Cl_1$ 1) Cyaninchlorid. HCl, (HCl, $PtCl_4$) (J. 1862, 351). — IV, 315.
- $C_{25}H_{39}N_3J_1$ 1) Cyanin. HJ (J. 1862, 351; Z. 1865, 733; R. 4, 61). — IV, 315.
C 70,8 — H 7,9 — O 15,7 — N 5,5 — M. G. 508.
- $C_{35}H_{40}O_8N_2$ 1) Emetin (B. 20 [2] 574; 27 [2] 885).
C 46,9 — H 5,3 — O 31,3 — N 16,4 — M. G. 767.
1) Oxylfleichsäure. Ba, Zn, $Ag_2 + 2H_2O$ (H. 22, 256). — IV, 1640.
- $C_{35}H_{41}O_8N_2$ C 77,6 — H 9,5 — O 6,9 — N 6,0 — M. G. 464.
1) α -Palmityl- β -Phenyl- β -Benzylharnstoff. Sm. 68–69° (Soc. 69, 1598).
- $C_{35}H_{41}O_8N_2$ C 72,6 — H 8,9 — O 12,9 — N 5,6 — M. G. 496.
1) Emetin (oder $C_{25}H_{40}O_8N_2$; oder $C_{25}H_{39}O_8N_2$). Sm. 68° (62–65°). $2HCl$, $2HNO_3$ (A. ch. [2] 4, 172; [5] 8, 233; [5] 12, 277; Z. 1869, 414; J. 1887, 2213; Fr. 19, 481; 32, 262, 263; C. 1896 [2] 894). — III, 881.
- $C_{25}H_{41}O_8Br_1$ 1) Diacetat d. Tetrabromonocol. Sm. 140–145° u. Zers. (B. 29, 2987).
- $C_{35}H_{44}O_{13}N_2$ 1) Cornein (B. 17, 1843; J. Th. 1881, 357). — IV, 1628.
- $C_{35}H_{45}O_8N_2$ C 60,9 — H 7,6 — O 24,4 — N 7,1 — M. G. 591.
1) Triamphosphonitrophenol + $3H_2O$. Sm. 75° (98° wasserfrei). $Ba + 3H_2O$ (B. [3] 1, 244, 422). — III, 494.
- $C_{35}H_{46}O_{10}N_2$ C 60,6 — H 7,7 — O 26,9 — N 4,7 — M. G. 594.
1) Säure (aus Camphersäureanhydrid). Na_2 , Pb_2 (G. 24 [2] 337).
- $C_{35}H_{46}N_2S_2$ 1) 4,4'-Biphenylendi[uns-Diisobutylthioharnstoff]. Sm. 185° (B. 27, 1560). — IV, 965.
- $C_{25}H_{47}O_2Br_1$ 1) Bromechicerin. Sm. 116° (A. 178, 63). — III, 629.
C 74,4 — H 9,9 — O 9,9 — N 5,8 — M. G. 484.
- $C_{35}H_{48}O_8N_2$ 1) Chlorophyll (aus Raygras) (C. 1895 [1] 656).
C 82,0 — H 11,2 — O 3,6 — N 3,2 — M. G. 439.
- $C_{35}H_{49}ON$ 1) Oxim d. α -Amyron. Sm. 233–234° u. Zers. (B. 24, 3837). — III, 557.
2) Oxim d. β -Amyron. Sm. 262–263° u. Zers. (B. 24, 3838). — III, 557.
- $C_{35}H_{49}OBr$ 1) Brom- α -Amyrin. Sm. 177–178° (B. 23, 3189; A. 192, 180). — III, 557.
2) Brom- β -Amyrin. Sm. 182–186° (B. 23, 3190). — III, 557.
- $C_{35}H_{49}O_{31}N$ C 47,4 — H 6,4 — O 44,3 — N 1,8 — M. G. 759.
1) Verbindung (aus Milchzucker u. Amidobenzol) (B. 4, 835). — II, 448.
- $C_{35}H_{50}O_2Br_1$ 1) Bromid d. Cholesterinpropionat. Sm. 110° (H. 15, 39). — II, 1073.
- $C_{35}H_{51}O_{17}N$ 1) Verbindung (aus Cardol). Sm. 105° (C. 1896 [1] 112).
- $C_{35}H_{54}O_{18}S_3$ 1) Atractylsäure. K_2 (Z. 1869, 94). — II, 2109.
- $C_{35}H_{57}O_8N_{17}$ C 47,9 — H 7,6 — O 12,8 — N 31,7 — M. G. 751.
1) Clupein (Salmin), siehe auch $C_{16}H_{31}O_3N_3$. $2H_2SO_4$ (C. 1898 [1] 1061; H. 25, 167, 169).

- $C_{30}H_{58}O_2Br_1$ 1) Dibrommelissinsäure. Sm. 47° (C. 1896 [1] 642).
 $C_{30}H_{59}O_2Cl_1$ 1) Chlorid d. Melissinsäure. Sm. 60° (C. 1896 [1] 642).
 $C_{30}H_{59}O_2Br_1$ 1) α -Brommelissinsäure. Sm. 79,5° (C. 1896 [1] 642; Bl. [3] 15, 573).
 $C_{30}H_{60}O_2N_1$ C 46,9 — H 7,8 — O 12,5 — N 32,8 — M. G. 768.
 $C_{30}H_{61}ON$ 1) Scobrin. $2H_2SO_4, 2H_2CrO_4$ (H. 26, 526).
 C 79,8 — H 13,5 — O 3,6 — N 3,1 — M. G. 451.
 $C_{30}H_{61}O_2N$ 1) Amid d. Melissinsäure. Sm. 116° (C. 1896 [1] 642).
 C 77,1 — H 13,1 — O 6,8 — N 3,0 — M. G. 467.
 $C_{30}H_{61}O_2N$ 1) α -Amidomelissinsäure. Sm. 205° u. Zers. (C. 1896 [1] 642).
 $C_{30}H_{60}OPb_2$ 1) Bleitriisocamyloxyd (J. 1860, 383). — I, 1530.
 $C_{30}H_{60}OSn_2$ 1) Zinntriisocamyloxyd (A. 92, 393). — I, 1529.

C₃₀-Gruppe mit vier Elementen.

- $C_{30}H_{17}OBr_2S$ 1) Tribromderivat d. 1,1-Dinaphtyläther d. 1-Merkapto- β -Oxy-naphtalin. Sm. 182° (J. pr. [2] 38, 141). — II, 871.
 $C_{30}H_{18}O_4Cl_1P$ 1) Tri[1-Chlor-2-Naphtylester] d. Phosphorsäure. Sm. 152° (B. 21, 896; Ch. 20, 2379). — II, 878.
 $C_{30}H_{20}O_4N_2S$ 1) 4,4'-Di[Phthalylamidobenzyl]sulfid. Sm. 225° (B. 28, 1339). — II, 1809.
 $C_{30}H_{20}O_4N_2S_2$ 1) Dibenzooat d. Di[2-Oxybenzyliden]dithiooxamid. Sm. 156° (B. 24, 1028). — III, 74.
 $C_{30}H_{23}ON_2Cl$ 1) 7-Chlorphenylat d. 5-[4-Acetylamidophenyl]amido- $\alpha\beta$ -Naphtophenazin (B. 31, 2431).
 $C_{30}H_{24}ON_2P$ 1) 1-Naphtylamid d. Orthophosphorsäure. Sm. 216° (B. 26, 573). — II, 605.
 2) 2-Naphtylamid d. Orthophosphorsäure. Sm. 170° (B. 26, 573). — II, 615.
 $C_{30}H_{24}O_2N_2S_2$ 1) Succinylidibenzoylamid d. Benzolsulfonsäure. Sm. 146° (J. 1856, 507). — II, 1174.
 $C_{30}H_{24}O_2N_2S_4$ 1) 1,2-Di[Diphenylsulfonamido]benzol(Tetrabenzolsulfon-o-Phenylendiamin). Sm. 150—151° (A. 287, 224). — IV, 561.
 $C_{30}H_{27}ON_2J$ 1) Jodäthylat d. Benzoylamin. Sm. 354° (B. 18, 3085). — III, 25.
 $C_{30}H_{28}O_2N_2S$ 1) Dithio[3-Methylphenyl]harnstoff (B. 20, 671). — II, 821.
 $C_{30}H_{28}O_2N_2P_2$ 1) Verbindung (aus Oxyphosphazobenzolanilid). Sm. 240° (B. 29, 719).
 $C_{30}H_{30}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[α -Brombutyryl-1-Naphtylamido]äthan. Sm. 232—234° (B. 25, 3266). — II, 607.
 2) $\alpha\beta$ -Di[α -Brombutyryl-2-Naphtylamido]äthan. Sm. 180° (B. 25, 3270). — II, 617.
 3) $\alpha\beta$ -Di[α -Bromisobutyryl-1-Naphtylamido]äthan. Sm. 194° (B. 25, 3266). — II, 607.
 4) $\alpha\beta$ -Di[α -Bromisobutyryl-2-Naphtylamido]äthan. Sm. 201° (B. 31, 3247).
 $C_{30}H_{30}O_2N_2Hg_2$ 1) Diacetat d. Diquecksilberbenzylanilin. Sm. 143,5—144° (G. 27 [1] 15). — IV, 1708.
 2) Diacetat d. Quecksilberammoniumbase $C_{28}H_{26}O_2N_2Hg_2$. Sm. 128° (G. 28 [2] 133). — IV, 1707.
 $C_{30}H_{30}O_2N_2S_4$ 1) Tetramethyläther d. 1,4,1',4'-Tetraoxybiphenyldi[Phenylthioharnstoff]. Sm. 184° (B. 17, 2128). — II, 1037.
 $C_{30}H_{30}O_2N_2S_6$ 1) Hexanitrotri[2-Methylbenzyl]trimethyltrimethylentrisulfon. Sm. 191° u. Zers. (B. 27, 1677). — III, 150.
 $C_{30}H_{31}O_2N_2J$ 1) Jodäthylat d. Benzylhydrastimid. Sm. 232° (B. 26, 2490). — II, 2064.
 $C_{30}H_{31}O_2N_2S_3$ 1) β -Trithio-3-Nitrocuminaldehyd. Sm. 118° (B. 29, 156). — III, 56.
 $C_{30}H_{31}O_2N_2Fe$ 1) Hämatin (siehe auch $C_{22}H_{26}O_2N_2Fe$) (B. 29 [2] 239; C. 1897 [2] 1153). — IV, 1618.
 $C_{30}H_{31}O_2Cl_1Br_1$ 1) Hexäthyläther d. Trichlorxanthogallol. Sm. 75° (A. 245, 338). — II, 1014.
 $C_{30}H_{35}O_2N_2Cl_1$ 1) Verbindung (aus ?-Chlor-?-Amido-3-Oxy-1-Isopropyl-1-Methylbenzol u. Chloranil) (B. 19, 2317). — II, 774.
 $C_{30}H_{36}O_2Br_1P$ 1) Tri[4-Brom-3-Methyl-6-Isopropylphenylester] d. Phosphorsäure. Sm. 94—95° (G. 23 [2] 70). — II, 772.

- C₃₀H₃₆O₇N₃P** 1) **Phenylamid d. Phosphorsäuretri[α-Oxyisobuttersäure]**. Sm. 158 bis 159° (A. 279, 114).
 2) **2-Methylphenylamid d. Phosphorsäuretri[α-Oxypropionsäure]**. Sm. 177° (A. 279, 87).
 3) **4-Methylphenylamid d. Phosphorsäuretri[α-Oxypropionsäure]**. Sm. 156° (A. 279, 91).
- C₃₀H₄₂O₁₀N₃P** 1) **Phosphat d. Camphonitrosophenol** (B. [3] 1, 469). — III, 494.
- C₃₀H₄₃O₁₅N₃S** 1) **Sinalbin + 5H₂O**. Sm. 83—84° (138,5—140° wasserfrei). Hg (C. 1896 [2] 922; 1897 [1] 821; A. 199, 150; B. 30, 2327). — III, 611.
- C₃₀H₄₅O₁₁N₃Cl₂** 1) **Verbindung (aus Nitrocampher)**. Sm. 110° (G. 11, 26). — III, 494.
- C₃₀H₄₃O₁₁N₃Br** 1) **Verbindung (aus Nitrocampher)**. Sm. 94—95° (G. 11, 22; C. 1897 [2] 551). — III, 494.
- C₃₀H₄₄ON₃S** 1) **α-Palmitylimido-α-Phenylbensylamido-α-Merkaptomethan (Palmitylpseudophenylbenzylthioharnstoff)**. Sm. 62—63° (Soc. 69, 1598).

C₃₁-Gruppe mit einem Element.

- C₃₁H₄₄** C 85,3 — H 14,7 — M. G. 436.
 1) **norm. Hentriakontan**. Sm. 68,1°; Sd. 302°₁₃ (199°) (B. 15, 1714; 29, 1323; A. 235, 117; C. 1897 [1] 338). — I, 107.

C₃₁-Gruppe mit zwei Elementen.

- C₃₁H₃₀O₆** C 76,2 — H 4,1 — O 19,7 — M. G. 488.
 1) **Tribenzoat d. isom. Trioxybenzol (Tr. d. β-Hydrojnglon)**. Sm. 228 bis 229° (B. 18, 2570). — II, 1027.
- C₃₁H₃₂O** C 90,7 — H 5,4 — O 3,9 — M. G. 410.
 1) **α-Oxytri[*p*-Naphthyl]methan**. Sm. 278° (B. 16, 1275). — II, 1096.
- C₃₁H₂₂O₃** C 78,5 — H 4,6 — O 16,9 — M. G. 474.
 1) **Acetondiphenanthrenchinon**. Sm. 190° u. Zers. (B. 17, 2829). — III, 448.
- C₃₁H₂₂N₄** C 82,6 — H 4,9 — N 12,4 — M. G. 450.
 1) **Benzylidenamidodiphenylindulin**. Sm. 261—262° (A. 286, 201).
- C₃₁H₂₃N₃** C 85,1 — H 5,3 — N 9,6 — M. G. 437.
 1) **1,1,1-Trinaphthylguanidin**. Sm. 178° (B. 21, 969). — II, 605.
- C₃₁H₂₄O₄** C 80,9 — H 5,2 — O 13,9 — M. G. 460.
 1) **Anhydroacetondibenzil**. Sm. 158—160° (194—195°). + C₇H₈O (B. 18, 175, 186; Soc. 71, 297). — III, 300.
- C₃₁H₂₄N₂** C 87,7 — H 5,7 — N 6,6 — M. G. 424.
 1) **2,3-Diphenyl-4-[4-Methylphenyl]-3,4-Dihydro-1,4-Naphthosdiazin**. Sm. 173° (B. 25, 2834). — IV, 1090.
- C₃₁H₂₅N₃** C 84,7 — H 5,7 — N 9,6 — M. G. 439.
 1) **Trimethylphenylrosindulin** (A. 256, 244). — IV, 1210.
- C₃₁H₂₆N₂** C 87,3 — H 6,1 — N 6,6 — M. G. 426.
 1) **4',4'-Di[Phenylamido]triphenylmethan**. Sm. bei 170° (Soc. 41, 192). — IV, 1043.
- C₃₁H₂₆N₄** C 82,0 — H 5,7 — N 12,3 — M. G. 454.
 1) **Methylasphenin**. Sm. 230° (A. 255, 166). — III, 342.
- C₃₁H₂₇N₃** C 84,4 — H 6,1 — N 9,5 — M. G. 441.
 1) **1,4-Di[4-Methylphenylimido]-2-Amido-1,4-Dihydronaphthalin**. Sm. 147° (A. 256, 246). — IV, 1162.
- C₃₁H₂₇N₂** C 74,8 — H 5,4 — N 19,7 — M. G. 497.
 1) **4-Amidobenzylidendi-4-Amidoazobenzol**. Sm. 115° (J. pr. [2] 56, 115). — IV, 1357.
- C₃₁H₂₈O₄** C 80,2 — H 6,0 — O 13,8 — M. G. 464.
 1) **Dibenzoat d. γγ-Di[4-Oxyphenyl]pentan**. Sm. 162,5° (J. r. 23, 501). — II, 1151.
 2) **Verbindung (aus Benzil)**. Sm. 147—148° (Soc. 49, 832). — III, 283.

- $C_{11}H_{12}O_2$
 1) Diäthylester d. 29-Dibenzoyl- $\alpha\alpha$ -Dimethyl- β -Phenylpentan- $\alpha\alpha$ -Diacetbonsäure (O. 4. Benzylbenzylbenzylbenzylacetarsäure. Sm. 162^a (A. 251, 74). — II, 276.)
- $C_{11}H_{12}N_2$
 1) 1,2,4-Tris-4-Methylphenylamido-naphthalin. Sm. 119—120 (A. 256, 247). — IV, 112.
 2) α -2-Methyl-6-Chinolinyl- $\alpha\alpha$ -Di-2-Methyl-1,2-Dihydro-6-Chinolinyl-methan ($C_{11}H_{12}$). B. 24, 177. — IV, 1219.
- $C_{11}H_{14}O_2$
 1) Dibenzylmolester d. Benzolcarbonsäure. Sm. 75—80 (O. 11, 44). — II, 114.
- $C_{11}H_{14}O_4$
 1) 114 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{14}N_2$
 1) Pentacetat d. Rubiadinylglykosid. Sm. 277. — III, 607.
- $C_{11}H_{16}N_2$
 1) α -Phenyl- $\alpha\alpha$ -Di-1-Dimethylamido-7-Naphthylmethan. Sm. 188—189 (B. 21, 312). — IV, 123.
- $C_{11}H_{16}O_4$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_5$
 1) Oktacetat d. Leukodrin. Sm. 188—189 (A. 1896 [1], 561).
- $C_{11}H_{16}N_2$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}N_4$
 1) α -Phenyl- $\alpha\alpha$ -Di-1,2,4-Trimethyl-7-Dihydrochinolinyl-3-methan Benzylbenzyltrimethylhydracinnonin. Sm. 142—144 (A. 24 [2], 194). — IV, 1229.
- $C_{11}H_{16}O$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}N_2$
 1) Diacetat d. Phenylidithymolmethan. Sm. 125—126 (B. 23, 1949). — II, 104.
- $C_{11}H_{16}N_2$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_2$
 1) Tri-2-Methyl-1,2,3,4-Tetrahydro-6-Chinolinylmethan (B. 24, 1719). — IV, 1214.
- $C_{11}H_{16}O_3$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_4$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_5$
 1) Tetraäthylester d. $\alpha\alpha$ -Diphenylheptan-2,2,3,3-Tetracarbonsäure. Sm. 17—18 (A. 59, 543).
- $C_{11}H_{16}N_2$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}N_4$
 1) Tri-4-Isobutylphenylguanidin. Sm. 163—164. (2HClPtCl₆) (B. 17, 124). — II, 357.
- $C_{11}H_{16}N_2$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_2$
 1) Brenzchinosäure. Sm. 216. Sd. oberb. 30%. K, Ba (B. 16, 926). 17, 826. — II, 1259.
- $C_{11}H_{16}O_3$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_4$
 1) Triacetylnolensäure (J. r. 19, 164; B. 19, 203). — I, 753.
- $C_{11}H_{16}O_5$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_6$
 1) Strophantin (oder $C_{11}H_{16}O_6$) (J. 1877, 945; B. 21, 273; 31, 271, 345; M. 19, 369). — III, 549.
- $C_{11}H_{16}O$
 1) Harz aus *Isobona ceylanica* = ($C_{11}H_{16}O_4$) (M. 12, 102). — III, 555.
- $C_{11}H_{16}O_2$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_3$
 1) Triäthylester d. Cholansäure + $\frac{1}{2}$ H₂O. Sm. 75—76 (B. 19, 478). — II, 2017.
 2) Triäthylester d. Isocholansäure. Sm. 43—50 (B. 19, 1530). — II, 2018.
- $C_{11}H_{16}O_4$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_5$
 1) Asebotoxin (Andromedotoxin). Sm. 226 n. Zers. (B. 1, 224, 225, 285; 2, 327; 4, 422; 5, 313). — III, 619.
 2) Digtoxin, oder $C_{11}H_{16}O_5$. Sm. 145 (J. 1875, 840; B. 29 [2], 699; 31, 2457; C. 1896, 2, 369). — III, 552.
- $C_{11}H_{16}O_7$
 1) 116 — H 43 — O 57 — M. G. 226.
- $C_{11}H_{16}O_8$
 1) 116 — H 43 — O 57 — M. G. 226.

- C₃₁H₃₁N** C 83,2 — H 13,6 — N 3,1 — M. G. 447.
- C₃₁H₃₁O** 1) **Myricyleyanid**. Sm. 75° (A. 183, 357). — I, 1468.
C 82,7 — H 13,8 — O 3,5 — M. G. 450.
- 1) **Palmiton**. Sm. 84° (82,8°) (J. 1855, 519; A. 82, 249; 94, 246; B. 15, 1714; Soc. 57, 985; 63, 462). — I, 1006.
- C₃₁H₃₁O₂** C 79,8 — H 13,3 — O 6,9 — M. G. 466.
- 1) **Melissinsäure** (siehe auch C₂₉H₅₀O₄). Sm. 88,5—89°. Mg, Pb, Cu, Ag (A. 235, 135). — I, 449.
- 2) **Methylester d. Melissinsäure**. Sm. 74,5° (C. 1996 [1] 642).
- 3) **Pentadekylester d. Palmitinsäure**. Sm. 57° (M. 14, 85).
- C₃₁H₃₁O₃** C 77,2 — H 12,9 — O 9,9 — M. G. 482.
- 1) **Cocerinssäure**. Sm. 92—93°. Ca, Ba (B. 18, 1980). — I, 580.
C 82,3 — H 14,1 — O 3,5 — M. G. 452.
- C₃₁H₃₄O** 1) π -**Oxyhentriakontan** (Dipalmitylcarbinol). Sm. 84—85° (Soc. 57, 986). — I, 241.
- 2) **Alkohol** (aus Bienenwachs). Sm. 85—85,5° (A. 235, 126; C. 1897 [1] 338).

C₃₁-Gruppe mit drei Elementen.

- C₃₁H₁₇O₆N** C 74,5 — H 3,4 — O 19,2 — N 2,8 — M. G. 499.
- 1) **Dibenzooat d. Dioxyanthrachinolinchinon** (D. d. Alizarinblau). Sm. 244° (A. 201, 342). — IV, 462.
- C₃₁H₁₇ON₄** C 80,2 — H 4,3 — O 3,4 — N 12,1 — M. G. 464.
- 1) **Benzoylphenylfluoridin** (B. 29, 1250). — IV, 1300.
- C₃₁H₂₀O₄N₄** C 68,4 — H 3,7 — O 17,6 — N 10,3 — M. G. 544.
- 1) **Verbindung** (aus Anthranilcarbonsäure). Sm. 280° u. Zers. (J. pr. [2] 33, 25). — II, 1249.
- C₃₁H₁₇ON₄** C 79,8 — H 4,7 — O 3,4 — N 12,0 — M. G. 466.
- 1) **2-Oxybenzylidenamidodiphenylindulin** (A. 296, 201).
- C₃₁H₂₂O₄N₂** C 76,5 — H 4,5 — O 13,2 — N 5,7 — M. G. 486.
- 1) **Benzoat d. s-Di[β -Benzoylamido]-2-Oxy-naphtalin**. Sm. 265° (B. 23, 2543). — II, 1180.
- C₃₁H₁₇N₁S₁** 1) **1,1'-Benzylidendi[2-Thiänylindol]**. Sm. 245° u. Zers. (A. 272, 203). — IV, 394.
- C₃₁H₁₇O₃N₃** C 76,7 — H 4,7 — O 9,9 — N 8,7 — M. G. 485.
- 1) **1,2,6 oder 1,2,7-Tri[Benzoylamido]naphtalin**. Sm. 277° (B. 23, 2545). — IV, 1163.
- C₃₁H₁₇O₅N** C 73,7 — H 4,5 — O 19,0 — N 2,8 — M. G. 505.
- 1) **Diacetat d. 3-Nitrophenyl-di[2-Oxy-naphtyl]methan**. Sm. 242° (G. 23 [2] 218). — II, 1009.
- C₃₁H₁₇O₁Br₁** 1) **Verbindung** (aus Hexabromfichtengerbsäure) (B. 17, 1128). — III, 681.
- C₃₁H₁₇N₁Cl₁** 1) **Chlor-4-Methylphenylat d. 2,3-Diphenyl-1,4-Naphtisodiazin**. + FeCl₃, 2 + PtCl₄ (B. 25, 2836). — IV, 1092.
- C₃₁H₁₇N₁Br₁** 1) **Brom-4-Methylphenylat d. 2,3-Diphenyl-1,4-Naphtisodiazin** (B. 25, 2836). — IV, 1092.
- C₃₁H₁₇ON₂** C 84,6 — H 5,4 — O 3,6 — N 6,4 — M. G. 440.
- 1) **4-[4-Methylphenyl]oxyhydrat d. 2,3-Diphenyl-1,4-Naphtisodiazin**. Sm. 194°. Chlorid + FeCl₃, 2 Chlorid + PtCl₄, Nitrat (B. 25, 2835). — IV, 1092.
- C₃₁H₁₇O₂N₁** C 76,8 — H 5,0 — O 6,6 — N 11,6 — M. G. 484.
- 1) **Monobenzyläther d. 4,4'-Di[4-Oxyphenylazo]biphenyl** (B. 27, 3360). — IV, 1418.
- C₃₁H₁₇O₁N₁** C 62,4 — H 4,0 — O 24,2 — N 9,4 — M. G. 596.
- 1) **Triacetat d. Maclurinazobenzol**. Sm. 240—243° u. Zers. (Soc. 71, 188). — IV, 1479.
- C₃₁H₁₇N₃Cl₁** 1) **Verbindung** (d. Safranin-Gruppe) + H₂O (B. 27, 2355). — IV, 1218.
- C₃₁H₁₇O₂N₁** C 78,9 — H 5,3 — O 6,8 — N 9,0 — M. G. 471.
- 1) **α -2-Oxybenzyliden- β -2-[2-Oxybenzyliden]amidobenzyl- γ -2-Naphtylhydrazin**. Sm. 176° (J. pr. [2] 52, 416). — IV, 1130.
- C₃₁H₁₇O₁N₁** C 76,4 — H 5,1 — O 9,9 — N 8,6 — M. G. 487.
- 1) **Verbindung** (aus 4-Oxy-2-Methylchinolin). Sm. 192° (B. 21, 1974). — IV, 372.

- $C_{21}H_{21}N_3O$ 1) *o*-Chlor-4,4-Di-Phenylamido-triphenylmethan. *Sm.* 41, 192^a. — II, 1146.
- $C_{21}H_{21}ON_2$ 1) *o*-Oxy-4,4-Di-Phenylamido-triphenylmethan. *Sm.* 41, 192^a. A. 217, 247. — II, 1146.
- $C_{21}H_{21}ON$ 1) Verbindung aus Phenylglyoxamat u. Kyanbenzylol. *Sm.* 162^a J. pr. 2, 53, 247. — IV, 1227.
- $C_{21}H_{21}O_2N_2$ 1) *o*-Di-Phenylhydrason-*yo*-Diphenylazo-*yo*-Triketoseptan. *Sm.* 122^a B. 26, 182^a. — IV, 1277.
- $C_{21}H_{21}O_2N$ 1) Dibenzoylmorphin. *Sm.* 188—190^a. *Hdl.* (HCl, PtCl₄). *Sm.* 28, 23, 229, 37, 219; *B.* 13, 98; *C.* 1899, 1, 705. — III, 599.
- $C_{21}H_{21}O_2N_2$ 1) Verbindung aus Phenylglydram u. Acetylacetyd. *Sd.* 290—240^a, *J.M.* 15, 171.
- $C_{21}H_{21}N_2J$ 1) Trijodmethylat d. Tri β -Chinolyli methan. *Sm.* 265—267^a u. *Zers.* *B.* 24, 109^a. — IV, 1224.
- $C_{21}H_{21}ON_2$ 1) Phenylhydrazid d. 3,4,5-Tri-Phenylhydrazido-benzol-1-Carbonsäure. *Sm.* 177^a u. *Zers.* *B.* 15, 78^a. — IV, 715.
- $C_{21}H_{21}O_2N_2$ 1) *o*-Di-4-Methylphenylbenzoylamido-propan. *Sm.* 151—152^a (*B.* 25, 327^a). — II, 1179.
- $C_{21}H_{21}O_2N$ 1) Dibenzozat d. Di-4-Dimethylamido-2-Oxyphenylmethan. 2HCl. *Sm.* 72—73^a J. pr. 2, 54, 229.
- $C_{21}H_{21}O_2S_3$ 1) 1,1,3,5-Tetrabenzyl-R-Trimethylentrisulfon. *Sm.* 171—172^a (*B.* 25, 245). — III, 229.
- $C_{21}H_{21}O_2N_2$ 1) Di-2-Naphtylamidoformiat d. Geraniol (D. d. Rhodinol). *Sm.* 105 bis 107^a J. pr. 2, 56, 124.
- $C_{21}H_{21}N_2J$ 1) Jodmethylat d. *o*-Naphtylamido-*s*-Naphtazin (*B.* 26, 185). — IV, 1216.
- $C_{21}H_{21}O_2N_2$ 1) Base (aus Pararosanilin) (*B.* 24, 170^a). — III, 675.
2) Verbindung (aus 4-Amido-1-Methylbenzol u. Succinylbenzsteinsäure-diäthylester). *Sm.* 263^a (*B.* 17, 545^a). — I, 824.
- $C_{21}H_{21}O_2N_2$ 1) Tricinnamaltetraureid. *Sm.* 152—154^a u. *Zers.* (*G.* 23 [1] 383). — III, 61.
- $C_{21}H_{21}O_2N_2$ 1) Benzylidendihydrocotarnin. *Sm.* 229—230^a. (2HCl, PtCl₄) (*B.* 31, 2101).
- $C_{21}H_{21}O_2N_2$ 1) Phenylharnstoff d. Base $C_{21}H_{21}ON_2$ (aus Amylalkohol). *Sm.* 286^a (*B.* 30, 229).
- $C_{21}H_{21}O_2N_2$ 1) Tetraäthylester d. 2,4-Di-2,5-Dimethyl-1-Pyrryl-1-Methylbenzol-2',2',4',4'-Tetracarbonsäure. *Fl.* (A. 236, 313). — IV, 1022.
- $C_{21}H_{21}O_2N_2$ 1) 4'-Nitro-5',5'-Di-Acetylamido-2',2'-Dimethyltriphenylmethan. *Sm.* 114^a (*B.* 21, 3214). — IV, 1049.
- $C_{21}H_{21}O_2N$ 1) Pyroaconitin. *Sm.* 167, 5^a. HCl, (HCl, AuCl₃), HBr, HJ (*Soc.* 65, 177). — III, 774.
- $C_{21}H_{21}O_2N$ 1) Diacetylapocseudoaconin. *Sm.* unter 100^a (*Soc.* 33, 330). — III, 776.
- $C_{21}H_{21}O_2N$ 1) Benzoylaconin (Napellin; Picroaconitin) (oder $C_{21}H_{21}O_2N$; $C_{23}H_{25}O_2N$). *Sm.* 125^a (150—165^a wasserfrei). HCl + H₂O, (HCl, AuCl₃), HBr, HJ, Benzozat (*Soc.* 31, 146; 63, 444, 992; 65, 174, 290; *B.* 27, 434, 727). — III, 773.

- $C_{31}H_{16}O_6N_2$ C 62,8 — H 8,1 — O 24,3 — N 4,7 — M. G. 592.
 1) **Septentrionalin**. Sm. 128,9° (C. 1895 [1] 1184).
 $C_{31}H_{16}N_2J$ 1) **Verbindung** (aus Isoamyljodid u. Diönanthylidendiphenyldiamin) (*A. Spl.* 3, 352).
 $C_{31}H_{16}O_6N_3$ C 33,9 — H 4,5 — O 23,3 — N 38,3 — M. G. 1098.
 1) **Divicin**. 8 HNO₃ (*J. pr.* [2] 24, 202). — III, 951.
 $C_{31}H_{24}O_6N_6$ C 48,3 — H 7,5 — O 33,3 — N 10,9 — M. G. 770.
 1) **Verbindung** (Säure aus Blut). Ba (*B. 25* [2] 476).
 $C_{31}H_{26}OBR_2$ 1) **Dibrompalmiton**. Sm. 55° (A. 186, 269).
 $C_{31}H_{26}OBR_2$ 1) **Verbindung** (aus Dibrompalmiton). Sm. 5,5° (A. 186, 269).
 $C_{31}H_{23}ON$ C 80,0 — H 13,5 — O 3,4 — N 3,0 — M. G. 465.
 1) **Palmitonoxim**. Sm. 59° (*Soc.* 57, 986). — I, 1031.

C₃₁-Gruppe mit vier Elementen.

- $C_{31}H_{22}O_6N_2S$ 1) **3,3'-Di[Phenylamido]phenolsaccharin** (*Bt.* [3] 17, 699).
 $C_{31}H_{17}O_5N_2S$ 1) **Inn. Anhydrid d. α -Oxy-4',4''-Di[Phenylamido]triphenylmethan-4''-Sulfonsäure**. Na (*Soc.* 41, 192). — II, 1086.
 $C_{31}H_{20}ON_2Cl$ 1) **Verbindung** (aus Benzoylchlorid u. Kyanbenzylin). Sm. 129° (*J. pr.* [2] 53, 249). — IV, 1217.
 $C_{31}H_{20}ON_4Br$ 1) **Phenylhydrazid d. 2,6-Dibrom-3,4,5-Tri[Phenylhydrazido]benzol-1-Carbonsäure**. Zers. bei 200° (*Bt.* [3] 15, 786). — IV, 716.
 $C_{31}H_{20}O_2N_2Cl$ 1) **Chlorid d. Aethyldiphenylharnstoff?** Sm. 167° (*B. 14*, 2183).
 $C_{31}H_{13}O_2N_2S$ 1) **Diäthyläther d. β -Di[4-(4-Oxy-2-Methylphenyl)amidophenyl]thioharnstoff**. Sm. 181,5° (A. 287, 159).
 $C_{31}H_{30}O_6N_3S$ 1) **Aldehydgrün** (siehe auch $C_{33}H_{30}O_5N_3S$) (*B. 24*, 1711). — III, 675.
 $C_{31}H_{31}O_2N_2Cl$ 1) **Paraaldehydblau** (*B. 22*, 228; 24, 1703). — III, 675.
 $C_{31}H_{43}O_2N_2Cl$ 1) **Chlormethylat d. Emetin**. (HCl, PtCl₄) (*J. 1887*, 2213). — III, 881.
 $C_{31}H_{43}O_6N_2Br$ 1) **Tribromseptentrionalin**. Sm. 88° (C. 1895 [1] 1184).

C₃₁-Gruppe mit einem Element.

- $C_{31}H_{24}$ C 94,1 — H 5,9 — M. G. 408.
 1) **Dypnopinakolen**. Sm. 200–200,5° (*B. 25* [2] 428). — II, 305.
 $C_{31}H_{26}$ C 93,7 — H 6,3 — M. G. 410.
 1) α -**Dypnopinakolen**. Sm. 95,5–96° (*B. 25* [2] 425). — II, 304.
 2) γ -**Dypnopinakolen**. Sm. 81–82° (*B. 27* [2] 339).
 $C_{31}H_{28}$ C 93,2 — H 6,8 — M. G. 412.
 1) **Tetraphenyläthan + Benzol** (*A. 184*, 177). — II, 301.
 2) **Kohlenwasserstoff** (aus Benzol u. Toluol). Sd. 404–427° (*Soc.* 37, 702, 713). — II, 303.
 $C_{31}H_{32}$ C 92,3 — H 7,7 — M. G. 416.
 1) $\alpha\alpha$ -**Ditolyl- $\beta\beta$ -Dixyläthen**. Sm. 244–245° (*B. 14*, 1532).
 $C_{31}H_{36}$ C 85,3 — H 14,7 — M. G. 450.
 1) **Dotriakontan** (Dicetyl). Sm. 70,5°; Sd. 310°₁₅ (205°₀) (*B. 19*, 2219; 29, 1323; *J. r.* 16 [2] 299; *Soc.* 47, 39). — I, 107.

C₃₂-Gruppe mit zwei Elementen.

- $C_{32}H_{14}O_5$ C 80,3 — H 2,9 — O 16,7 — M. G. 478.
 1) **Pentaacetat d. Scoparinäthyläther**. Sm. 140–141° (*M. 15*, 330). — III, 648.
 $C_{32}H_{18}O_6$ C 77,1 — H 3,6 — O 19,3 — M. G. 498.
 1) **Dibenzoat d. 6,11-Dioxy-5,12-Diketo-5,12-Dihydronaphtacen**. Sm. 334–339° (*B. 31*, 1281).
 $C_{32}H_{18}O_{13}$ C 62,9 — H 2,9 — O 34,1 — M. G. 610.
 1) **Verbindung** (aus d. Säure C₁₆H₁₀O₆) (*M. 10*, 659). — II, 2091.
 $C_{32}H_{20}O_{13}$ C 62,7 — H 3,2 — O 34,0 — M. G. 612.
 1) **Verbindung** (aus Carminsäure) (*A. 163*, 114). — II, 2098.

- $C_{22}H_{20}O_{11}$ C 61,1 — H 3,2 — O 35,7 — M. G. 628.
1) Verbindung (aus d. Säure $C_{16}H_{14}O_8$) (M. 10, 659). — II, 2091.
- $C_{22}H_{10}N_4$ C 83,5 — H 4,3 — N 12,2 — M. G. 460.
1) Tetraphenyldiazin. Sm. 271° (Soc. 63, 1299). — IV, 1306.
- $C_{22}H_{21}N_3$ C 85,9 — H 4,7 — N 9,4 — M. G. 447.
1) α - β -Phenylnaphtindulin. Sm. 256° (268°) (A. 256, 248; 262, 240; 272, 331; B. 31, 2486). — IV, 1215.
2) 1-Naphtylrosindulin. Sm. 247° (A. 256, 248). — IV, 1207.
- $C_{22}H_{23}O_3$ C 87,7 — H 5,0 — O 7,3 — M. G. 438.
1) Lakton d. 1-[Dibiphenyloxymethyl]benzol-2-Carbonsäure (Biphenyl-*o*-Phtalid) (B. 28, 513). — II, 1730.
- $C_{22}H_{21}O_3$ C 84,6 — H 4,8 — O 10,6 — M. G. 454.
1) Verbindung (aus $\alpha\beta\beta$ -Tri[1-Oxynaphtyl]äthan) (A. 243, 168). — II, 1029.
- $C_{22}H_{22}O_4$ C 81,7 — H 4,7 — O 13,6 — M. G. 470.
1) Phenylnaphtylchinhydron. Sm. 132–133° (A. 226, 31). — III, 460.
2) 2,2'-Bis-1,3-Diketo-6-Methyl-2-Phenyl-2,3-Dihydroinden. Sm. 209° (B. 29, 2379).
3) 2,2'-Bis-1,3-Diketo-2-[3-Methylphenyl]-2,3-Dihydroinden. Sm. 203–205° (B. 28, 1391). — III, 326.
- $C_{22}H_{21}O_5$ C 79,0 — H 4,5 — O 16,4 — M. G. 486.
1) 3-Oxy-2-Phenyl-1,4-Naphtochinhydron. Sm. 171–172,5° (A. 206, 30).
2) Verbindung (aus Oxyphenylnaphtochinonimid). Sm. 186–187° (A. 226, 42). — III, 461.
3) Verbindung (aus d. polym. Phenylnaphtochinon). Sm. oberh. 300° (A. 226, 45). — III, 461.
- $C_{22}H_{22}O_{10}$ C 67,8 — H 3,9 — O 28,3 — M. G. 566.
1) Heraclin. Sm. 185° (J. 1879, 905). — III, 633.
- $C_{22}H_{21}N_4$ C 83,1 — H 4,8 — N 12,1 — M. G. 462.
1) Phenylamidonaphtindulin (Naphtylviolet) (A. 272, 331). — IV, 1303.
- $C_{22}H_{23}N_5$ C 80,5 — H 4,8 — N 14,7 — M. G. 477.
1) $\alpha\beta$ -Dinaphtylamidiniazobenzol. Sm. 238° (B. 22, 3347). — IV, 1401.
- $C_{22}H_{24}O$ C 90,5 — H 5,7 — O 3,8 — M. G. 424.
1) Dehydrodypnopinakolin. Sm. 186,5–187° (B. 25 [2] 427). — II, 1107.
- $C_{22}H_{24}O_2$ C 87,4 — H 5,4 — O 7,2 — M. G. 440.
1) 2,5-Di[Diphenylmethyl]-1,4-Benzochinon. Sm. 238° (B. 31, 2351).
- $C_{22}H_{24}O_3$ C 84,2 — H 5,3 — O 10,5 — M. G. 456.
1) $\alpha\beta\beta$ -Tri[1-Oxynaphtyl]äthan (A. 243, 165). — II, 1029.
- $C_{22}H_{24}O_4$ C 81,4 — H 5,1 — O 13,5 — M. G. 472.
1) Diacetat d. Dianthranol. Sm. 276–279° u. Zers. (Am. 18, 462).
- $C_{22}H_{24}O_5$ C 71,6 — H 4,5 — O 23,9 — M. G. 536.
1) polym. inn. Anhydrid d. 2-Oxy-1-Methylbenzol-3-Carbonsäure (Tetra- β -Kresotid). Sm. 293–295° (A. 273, 88; B. 25, 3510). — II, 1545.
2) Verbindung (aus 1,4-Benzochinon u. Benzaldehyd). Sm. 116–117° (B. 24, 1341). — III, 346.
- $C_{22}H_{24}O_{10}$ C 67,6 — H 4,2 — O 28,2 — M. G. 568.
1) Dibenzosäat d. Irogenin. Sm. 123–126° (B. 26, 2013). — III, 596.
- $C_{22}H_{24}O_{16}$ C 57,8 — H 3,6 — O 38,6 — M. G. 664.
1) Verbindung (aus d. Säure $C_{16}H_{14}O_8$) (M. 10, 659). — II, 2091.
- $C_{22}H_{24}N_6$ C 78,1 — H 4,9 — N 17,0 — M. G. 492.
1) Äthylentetraphenylnhexacyanid. Sm. bei 245° (B. 23, 2388). — IV, 1333.
- $C_{22}H_{25}N_3$ C 85,1 — H 5,5 — N 9,3 — M. G. 451.
1) 7-Phenylamido-1,2,3-Triphenyl-1,2-Dihydro-1,4-Benzodiazin. Sm. 223° (B. 24, 722). — IV, 1212.
- $C_{22}H_{25}Cl$ C 78,1 — H 4,9 — N 17,0 — M. G. 492.
1) α -Chlorpentaphenyläthan. Sm. 120–125°; Sd. oberh. 340° (J. 1877, 403). — II, 304.
- $C_{22}H_{26}O$ C 90,1 — H 6,1 — O 3,8 — M. G. 426.
1) α -Dypnopinakolin. Sm. 133,5–134° (B. 25 [2] 424; 27 [2] 339). — II, 1107.
2) β -Dypnopinakolin. Sm. 140,5–141° (B. 25 [2] 426; 27 [2] 339). — II, 1107.
3) γ -Dypnopinakolin. Sm. 178° (B. 27 [2] 339). — II, 1107.
4) α -Isodypnopinakolin (Bl. [3] 15, 1175).
5) β -Isodypnopinakolin. Sm. 196° (Bl. [3] 15, 1175).

- C₃₇H₁₆O** 6) γ -Isodypnopinakolin. Sm. 179—180° (Bl. [3] 15, 1177).
7) δ -Isodypnopinakolin. Sm. 169—170° (Bl. [3] 15, 1176).
8) ϵ -Isodypnopinakolin. Sm. 139,5° (Bl. [3] 15, 1176).
C 86,9 — H 5,9 — O 7,2 — M. G. 442.
- C₃₇H₂₆O₂** 1) Chinon (aus d. Kohlenw. C₂₁H₁₆). Sm. 180° (Soc. 37, 713). — III, 464.
C 78,4 — H 5,3 — O 16,3 — M. G. 490.
- C₃₇H₂₀O₃** 1) Dibenzosäat d. Pyroguajacin (oder C₁₀H₁₆O₂). Sm. 179° (M. 1, 599; 19, 99). — III, 645.
C 75,9 — H 5,1 — O 19,0 — M. G. 506.
- C₃₇H₂₀O₆** 1) Succinat d. β -Oxy- α -Keto- α - β -Diphenyläthan. Sm. 129° (A. 155, 92; B. 5, 331). — III, 223.
C 71,4 — H 4,8 — O 23,8 — M. G. 538.
- C₃₇H₂₀O₈** 1) Dibenzosäat d. Pinoresinol. Sm. 160° (M. 15, 513). — III, 563.
2) Tetrabenzosäat d. Erythrit. Sm. 186,5—187° (190°) (M. 10, 393; A. 301, 102). — II, 1142.
3) Dibenzylester d. Dibenzoylweinsäure. Sm. 76—77° (Bl. [3] 13, 831).
C 82,4 — H 5,6 — N 12,0 — M. G. 466.
- C₃₇H₂₀N₄** 1) 4-Methylphenyl-4-Methylphenylamidoposafuranin. Sm. 238—240° (B. 29, 366). — IV, 1231.
C 79,8 — H 5,6 — N 14,6 — M. G. 481.
- C₃₇H₂₇N₅** 1) Pentaphenyldiguanid. Sm. 160°. HCl, (2HCl, PtCl₄) (A. 286, 361; J. pr. [2] 55, 416).
C 75,4 — H 5,3 — N 19,3 — M. G. 509.
- C₃₇H₂₇N₇** 1) 5-Imido-4-[1-Phenyl-3-p-Methylphenyl-4,5-Dihydropyrazolyl-5]-aso-1-Phenyl-3-[4-Methylphenyl]-4,5-Dihydropyrazol. Sm. 212° (J. pr. [2] 58, 145).
C 89,7 — H 6,5 — O 3,7 — M. G. 428.
- C₃₇H₂₈O** 1) α -Dypnopinalkohol. Sm. 138,5—139° (B. 25 [2] 425; 27 [2] 339). — II, 1096.
2) γ -Dypnopinalkohol? Sm. 128—129° (B. 27 [2] 339). — II, 1096.
3) β -Isodypnopinalkohol. Sm. 164° (Bl. [3] 15, 1176).
C 86,5 — H 6,3 — O 7,2 — M. G. 444.
- C₃₇H₂₈O₂** 1) Dypnopinakon. Sm. 160,5—161° (B. 25 [2] 423). — II, 1107.
C 78,0 — H 5,7 — O 16,3 — M. G. 492.
- C₃₇H₂₈O₃** 1) Acetyläthylidibenzoin. Sm. 145° (B. 4, 337; 18, 177). — III, 283.
C 71,1 — H 5,2 — O 23,7 — M. G. 540.
- C₃₇H₂₈O₅** 1) polym. inn. Anhydrid d. 4-Oxy-1-Methylbenzol-3-Carbonsäure. Sm. 295—297° (A. 273, 91). — II, 1547.
C 63,6 — H 4,6 — O 31,8 — M. G. 604.
- C₃₇H₂₈O₁₇** 1) Hesperitin (oder C₁₆H₁₁O₆). Sm. 226° u. Zers. Na, K (B. 9, 607; 14, 951; Soc. 73, 1036).
C 87,3 — H 6,3 — N 6,3 — M. G. 440.
- C₃₇H₂₈N₂** 1) 1,2-Di[Diphenylamidomethyl]benzol. Sm. 179° (B. 31, 429).
2) 4,4'-Dicinnamylidenamido-3,3'-Dimethylbiphenyl. Sm. 213—214° (A. 258, 378). — IV, 982.
C 77,4 — H 5,6 — N 16,9 — M. G. 496.
- C₃₇H₂₇N₆** 1) α -Phenyl- β -Di[Phenylimidophenylamidomethyl]hydrazin. Sm. 204°. 4HCl, (4HCl, 2PtCl₄), Pikrat (B. 21, 2275; 25, 3119; 26, 1181). — IV, 1224.
C 79,5 — H 6,0 — N 14,5 — M. G. 483.
- C₃₇H₂₆N₅** 1) 9-Dimethylamido-5-[4-Dimethylamidophenyl]rosindulin. 2 HCl, 2HNO₃ (A. 272, 323; 286, 222). — IV, 1297.
C 80,3 — H 6,3 — O 13,4 — M. G. 478.
- C₃₇H₂₆O₄** 1) Diäthylester d. $\alpha\alpha\beta\beta$ -Tetraphenyläthan- $\alpha\beta$ -Dicarbonsäure. Sm. 88 bis 89° (B. 22, 1538). — II, 1916.
C 63,4 — H 4,9 — O 31,7 — M. G. 606.
- C₃₇H₂₆O₁₇** 1) Hexacetat d. $\alpha\beta\beta$ -Tri[1,2-Dioxyphenyl]äthan (A. 243, 182). — II, 1045.
2) α -Hexacetat d. $\alpha\beta\beta$ -Tri[1,3-Dioxyphenyl]äthan (A. 243, 175). — II, 1045.
3) β -Hexacetat d. $\alpha\beta\beta$ -Tri[1,3-Dioxyphenyl]äthan (A. 243, 177). — II, 1045.
4) Hexacetat d. $\alpha\beta\beta$ -Tri[1,4-Dioxyphenyl]äthan (A. 243, 185). — II, 1045.
5) Tetraäthylester d. 3,6-Dibenzoylbenzol-1,2,4,5-Tetracarbonsäure. Sm. 157° (A. 258, 294). — II, 2095.

- $C_{20}H_{16}O_2$ C 653 — H 73 — O 314 — M. G. 96.
 2) Tetraäthyläster d. 2,5-Dibenzoyl-³-Dihydrobenzol-1,3,4,6-Tetra-carboxylsäure. Sm. 251 A 256, 257. — II, 2094.
 C₂₀H₁₆O₄ C 771 — H 85 — O 361 — M. G. 172.
 1) Hexaacetat d. Scoparin. Sm. 251—252 a. Zers. M. 15, 107. — III, 646.
 C₂₀H₁₄O C 801 — H 78 — O 127 — M. G. 130.
 1) Di-*v*-2,4,6-Trimethylphenyl benzyläther. Sm. 157 A u. 158 B. — II, 2094.
 C₂₀H₁₆O₂ C 653 — H 73 — O 314 — M. G. 96.
 2) *sp*-Dioxy-*o*,*o*'-Tetra-4-Methylphenylbutan? Sm. 237 A 279, 337. — III, 225.
 C₂₀H₁₆O₄ C 643 — H 77 — O 303 — M. G. 96.
 1) Anhydrokolatannin C 1998 [177].
 C₂₀H₁₆O₄ C 552 — H 47 — O 421 — M. G. 722.
 1) Glykosid (aus *Cuscutum imbricatum* + C₂H₄O). Sm. 215—220 a. Zers. A. 1878, 512. — III, 576.
 C₂₀H₁₆N₂ C 676 — H 72 — N 118 — M. G. 174.
 1) *o*-Diphenylhydrazon-*o*-Diphenyloktan. Sm. 144 B. 29, 385. — IV, 786.
 2) *o*-Di-Phenylhydrazon-*o*-Di-2,4-Dimethylphenylbutan. Sm. 189 (B. 20, 1371). — IV, 786.
 3) Di-4-Isopropylbenzaldiphenylhydrotetrazon. Sm. 169^a (150, 5^a—169^a) (G. 27², 225). — IV, 1366.
 4) Dehydro-4-Isopropylbenzalphenylhydrazon. Sm. 151, 5—152, 5^a (G. 27², 225). — IV, 1367.
 5) Isodehydro-4-Isopropylbenzalphenylhydrazon. Sm. 215—219^a (G. 27², 231). — IV, 1367.
 C₂₀H₁₆O₂ C 701 — H 65 — O 334 — M. G. 548.
 C₂₀H₁₆N₂ 1) Pinoresinotannol (M. 18, 497).
 C 702 — H 71 — N 117 — M. G. 544.
 1) Base (aus Bromphenylacetat). Sm. 227. 3HCl, 5HCl, 3PtCl₄ (3HCl, 3AgCl), Pikrat (A. 291, 271).
 C₂₀H₁₆O₂ C 695 — H 69 — O 233 — M. G. 550.
 C₂₀H₁₆O₁₄ 1) Quassinanhydrid. Sm. bei 150—158^a (G. 15, 61. — III, 647).
 C 549 — H 57 — O 362 — M. G. 692.
 C₂₀H₁₆O₂ 1) Anhydrokolatannin (C. 1898 [177]).
 C 542 — H 58 — O 70 — M. G. 456.
 C₂₀H₁₆O₂ 1) bim. Methyl-1-Isopropylphenyl-3-Cyklohexanon-(5). Sm. 175^a (B. 32, 427).
 C 675 — H 79 — O 254 — M. G. 568.
 C₂₀H₁₆N₂ 1) Quassid. Sm. 192—194^a (G. 14, 4). — III, 647.
 C 809 — H 83 — N 117 — M. G. 480.
 C₂₀H₁₆O₁₃ 1) Phenylhydrazon d. Dicumphochinon. Sm. 190—191^a u. Zers. (G. 23 [2], 321). — III, 591.
 C 655 — H 72 — O 273 — M. G. 586.
 C₂₀H₁₆O₁₁ 1) Quassin. Sm. 210—211^a (A. 21, 40; J. 1877, 931; 1882, 1116; G. 14, 1; 15, 8; 17, 575; B. 15, 2624; 25 [2], 349). — III, 646.
 C 415 — H 45 — O 53,8 — M. G. 922.
 C₂₀H₁₆N₂ 1) Verbindung (aus d. Rosskastanie) (Z. 1868, 727). — I, 1106.
 C₂₀H₁₆N₂ C 707 — H 87 — N 116 — M. G. 482.
 C₂₀H₁₆H₂ 1) Di[Phenylhydrazon] d. *i*-Dicarvelon. Zers. bei 200^a (A. 305, 227).
 C₂₀H₁₆O₁₃ 2) Di[Phenylhydrazon] d. act. Dicarvelon. Sm. 215^a u. Zers. (A. 305, 227).
 C 469 — H 47 — O 54,4 — M. G. 940.
 C₂₀H₁₆O₁₁ 1) Verbindung (aus d. Rosskastanie) (Z. 1868, 381). — I, 1106.
 C 48,1 — H 5,8 — O 46,1 — M. G. 798.
 C₂₀H₁₆O₁₁ 1) Heptaacetat d. lösl. Stärke C₂₀H₃₃O₁₄. Sm. 110—120^a (B. 31, 1793).
 C 41,5 — H 5,0 — O 53,5 — M. G. 926.
 C₂₀H₁₆O₁₁ 1) Pektinsäure (A. 67, 274). — I, 1105.
 2) Verbindung (aus *Syringa vulgaris*) (J. 1856, 692). — I, 1106.
 C₂₀H₁₆B 1) Verbindung (aus Asphalt). — III, 565.
 C₂₀H₁₆O₆ C 727 — H 9,1 — O 18,2 — M. G. 528.
 1) Chinovasäure (oder C₂₀H₁₆O₆). K₂ + 1½ H₂O, Na + 3½ H₂O, Cu + 3Cu(OH)₂ + 5H₂O, Ag (A. 111, 184; 145, 6; B. 16, 932; R. 2, 163; Z. 1867, 537). — II, 1866.

- $C_{32}H_{48}O_{16}$ C 55,8 — H 7,0 — O 37,2 — M. G. 688.
 1) Strophantin + H_2O . Sm. 170° u. Zers. (B. 31, 535).
 2) Polymethakrylsäure. Zers. bei 200° (B. 30, 1227).
- $C_{32}H_{48}O_{32}$ C 40,7 — H 5,1 — O 54,2 — M. G. 944.
 1) Pektin (A. 67, 262). — I, 1105.
 2) Metapektin. + BaO (A. 67, 269). — I, 1105.
 3) Parapektin (A. 67, 266). — I, 1105.
- $C_{32}H_{49}N$ C 85,9 — H 11,0 — N 3,1 — M. G. 447.
 1) Phenylamidocholesterin. Sm. 187°. HCl, H_2SO_4 (J. r. 10, 355). — II, 590.
- $C_{32}H_{50}O_3$ C 79,7 — H 10,4 — O 9,9 — M. G. 482.
 1) Cardol (C. 1896 [1] 112).
 2) Acetat d. Oxy- α -Amyrin. Sm. 278° (B. 24, 3839). — III, 557.
- $C_{32}H_{50}O_4$ C 77,1 — H 10,0 — O 12,9 — M. G. 498.
 1) Acetat d. Urson + $5H_2O$ (M. 14, 261). — III, 649.
- $C_{32}H_{52}O_2$ C 82,1 — H 11,1 — O 6,8 — M. G. 468.
 1) Echitin. Sm. 170° (A. 178, 66). — III, 630.
 2) Acetat d. α -Amyrin. Sm. 221° (B. 20, 1243; 23, 3188; J. 1876, 912). — III, 556.
 3) Acetat d. β -Amyrin. Sm. 236° (B. 20, 1245; 23, 3188; A. 271, 218). — III, 556.
 4) Verbindung (aus Cardol). Fl. (C. 1896 [1] 112).
 C 76,8 — H 10,4 — O 12,8 — M. G. 500.
- $C_{32}H_{52}O_3$ 1) Boswellinsäure. Sm. bei 150° (C. 1898 [2] 985).
 C 74,4 — H 10,1 — O 15,5 — M. G. 516.
- $C_{32}H_{52}O_{17}$ 1) β -Panax-Resen (B. 28 [2] 1056).
 C 54,2 — H 7,3 — O 38,4 — M. G. 708.
 1) Saponin. Zers. bei 195°. Lit. bedeutend. — III, 609.
 2) Senegin (G. 19, 21). — III, 610.
- $C_{32}H_{52}N_4$ C 78,0 — H 10,6 — N 11,4 — M. G. 492.
 1) 4,4'-Di[Diisocamylamido]azobenzol. Sm. 115°. 2 + J_6 , Pikrat (M. 3, 713; 4, 286). — IV, 1362.
- $C_{32}H_{54}O$ C 84,6 — H 11,9 — O 3,5 — M. G. 454.
 1) Verbindung (Alkohol aus Harz) Sm. 114° (Soc. 61, 918). — II, 1076.
- $C_{32}H_{54}O_4$ C 76,5 — H 10,8 — O 12,7 — M. G. 502.
 1) α -Panax-Resen (B. 28 [2] 1056).
 C 62,5 — H 8,8 — O 28,7 — M. G. 614.
- $C_{32}H_{54}O_{11}$ 1) Glykosid (aus Hedera helix). Sm. 233° (J. 1875, 827; 1881, 991; Bl. 35, 231). — III, 582.
 C 52,9 — H 7,4 — O 39,7 — M. G. 726.
- $C_{32}H_{54}O_{18}$ 1) Saponin, siehe $C_{32}H_{52}O_{17}$. — III, 609.
- $C_{32}H_{54}O_9$ C 77,7 — H 12,5 — O 9,7 — M. G. 494.
 1) Anhydrid d. Palmitinsäure. Sm. 64° (B. 9, 1932). — I, 464.
- $C_{32}H_{54}O_5$ C 73,0 — H 11,8 — O 15,2 — M. G. 526.
 1) Verbindung (aus Angelikaöl). Sm. 74–77° (G. 26 [2] 317).
- $C_{32}H_{54}O_7$ C 68,8 — H 11,1 — O 20,1 — M. G. 558.
 1) Jalapinol. Sm. 62–62,5° (A. 95, 145; J. 1884, 1447). — III, 595.
- $C_{32}H_{54}O_9$ C 65,1 — H 10,5 — O 24,4 — M. G. 590.
 1) Verbindung (aus Hanfölsäure). Sm. 133° (M. 7, 227). — I, 535.
- $C_{32}H_{54}O_{16}$ C 54,7 — H 8,8 — O 36,5 — M. G. 702.
 1) Convulvulin (Rhodeoretin), siehe auch $C_{32}H_{56}O_{27}$. Sm. 158° (A. 51, 89; 83, 121; 95, 161; R. 13, 192; C. 1897 [1] 418). — III, 578.
- $C_{32}H_{56}O_2$ C 80,3 — H 13,3 — O 6,7 — M. G. 480.
 1) Methylester d. Melissinsäure $C_{31}H_{57}O_2$. Sm. 71–71,5° (A. 235, 138). — I, 449.
 2) Aethylester d. Melissinsäure $C_{33}H_{59}O_2$. Sm. 73° (A. 183, 355; C. 1896 [1] 642). — I, 449.
 3) Cetyylester d. Palmitinsäure. Sm. 53,5° (A. 80, 297; B. 16, 3023; J. pr. [2] 31, 305). — I, 443.
 4) Myricylester d. Essigsäure. Sm. 70° (73°) (M. 9, 581; Bl. [3] 11, 186). — I, 411.
- $C_{32}H_{60}O$ C 82,4 — H 14,2 — O 3,4 — M. G. 466.
 1) Cetyläther. Sm. 55°; Sd. 300° (A. 83, 22). — I, 300.
- $C_{32}H_{60}S$ 1) Cetylsulfid. Sm. 57,5° (A. 83, 16). — I, 363.

C₃₂-Gruppe mit drei Elementen.

- C₃₂H₁₆O₆N₇ C 73,0 — H 3,4 — O 18,2 — N 5,3 — M. G. 526.
1) P-Dinitro-9,10-Anthracinon + Chrysen. Sm. 294° (B. 3, 811; J. pr. [2] 9, 250). — III, 411.
- C₃₂H₂₀ON₄ C 80,7 — H 4,2 — O 3,4 — N 11,7 — M. G. 476.
1) Verbindung (aus 4-Oxy-1-Phenylazonaphthalin). Sm. 290—291° u. Zers. (B. 30, 2666). — IV, 1428.
- C₃₂H₂₀O₂N₄ C 71,1 — H 3,7 — O 14,8 — N 10,4 — M. G. 540.
1) Indoin (B. 14, 1742; 15, 52, 56). — II, 1439.
- C₃₂H₂₀O₂S₂ 1) Verbindung (aus Rubbadin) (B. 25, 1890). — II, 658.
- C₃₂H₂₀O₁₁S₂ 1) Galleindibenzolsulfonat. — II, 2088.
- C₃₂H₂₀O₁₁S₃ 1) Tribenzolsulfonat d. 1,2,7-Trioxy-9,10-Anthracinon. Sm. 182 bis 186°. — III, 436.
- C₃₂H₂₁ON₃ C 82,9 — H 4,5 — O 3,4 — N 9,1 — M. G. 463.
1) Phenylamidonaphthindon (A. 272, 336, 342). — IV, 1304.
- C₃₂H₂₁O₂N₃ C 83,7 — H 3,4 — O 21,2 — N 11,7 — M. G. 603.
1) P-Trinitro-1,4-Di[Benzoylphenylamido]benzol. Sm. 248° (B. 25, 2722). — IV, 594.
- C₃₂H₂₁ON₄* C 80,3 — H 4,6 — O 3,3 — N 11,7 — M. G. 478.
1) Benzoylmethylphenylfluoridin (B. 29, 1247). — IV, 1302.
- C₃₂H₂₁O₂N₂ C 82,4 — H 4,7 — O 6,9 — N 6,0 — M. G. 466.
1) 4,4'-Di[2-Oxy-1-Naphtylazo]biphenyl. Sm. 243—245° (B. 22, 3014). — IV, 1439.
- C₃₂H₂₁O₂N₁ C 77,7 — H 4,4 — O 6,5 — N 11,3 — M. G. 494.
1) 1,1'-Dioxy-4,4'-Diphenylazo-2,2'-Binaphtyl. Sm. 245—246° u. Zers. (B. 30, 2661). — IV, 1428.
- C₃₂H₂₁O₂N₆ C 73,6 — H 4,2 — O 6,1 — N 16,1 — M. G. 522.
1) 3,3'-Di[2-Oxynaphtylazo]azobenzol. Sm. 282° (Soc. 69, 12). — IV, 1431.
- C₃₂H₂₂O₂N₂ C 77,4 — H 4,4 — O 9,7 — N 8,5 — M. G. 466.
1) Diphenylrhodamin. Sm. 260—262° (B. 31, 1333).
- C₃₂H₂₂O₂N₆ C 71,4 — H 4,1 — O 8,9 — N 15,6 — M. G. 538.
1) 3,3'-Di[2-Oxynaphtylazo]azoxybenzol. Sm. 244—245° (Soc. 69, 9). — IV, 1431.
- C₃₂H₂₂O₂N₄ C 73,0 — H 4,2 — O 12,2 — N 10,6 — M. G. 526.
1) Verbindung (aus Indigo) (B. 34, 530). — II, 1624.
- C₃₂H₂₂O₂N₄ C 70,8 — H 4,1 — O 14,8 — N 10,3 — M. G. 542.
1) Hydrindin. K + 3H₂O (J. pr. [1] 25, 449; A. 72, 283). — II, 1617.
- C₃₂H₂₂O₂S 1) Verbindung (aus Resorein u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) + 3H₂O (Am. 16, 520; 17, 568).
- C₃₂H₂₂O₁₃N₂ C 59,8 — H 3,4 — O 32,4 — N 4,4 — M. G. 642.
1) Aristolochin. Zers. bei 215° (B. 25 [2] 635; 29 [2] 38). — III, 780.
- C₃₂H₂₃O₁₃Br₁₃ 1) Anhydrohexabromkolatannin (C. 1898 [1] 579).
- C₃₂H₂₄O₂N₂ C 82,0 — H 5,1 — O 6,8 — N 6,0 — M. G. 468.
1) 1,3-Di[Benzoylphenylamido]benzol. Sm. 184° (B. 16, 2797). — IV, 572.
2) 1,4-Di[Benzoylphenylamido]benzol. Sm. 218,5° (B. 16, 2808). — IV, 585.
3) P-Di[Acetylamido]bianthryl (B. 20, 2435). — IV, 1095.
- C₃₂H₂₄O₂N₁ 1) Di[Diphenylamid] d. Benzol-1,2-Dicarbonensäure (Diphenylaminphthalin). Sm. 238—238,5° (A. 227, 192; G. 14, 470). — II, 1608.
- C₃₂H₂₄O₂N₇ C 75,0 — H 4,7 — O 9,4 — N 10,9 — M. G. 512.
1) Isaton (Z. 1865, 630). — II, 1612.
- C₃₂H₂₄O₂N₇ C 74,4 — H 4,6 — O 15,5 — N 5,4 — M. G. 516.
1) Verbindung (aus 5-Keto 4-Phenyl-5-Benzyl-4,5-Dihydrooxazol). Sm. 148 bis 149° u. Zers. (A. 296, 9).
- C₃₂H₂₄O₂N₄ C 70,6 — H 4,4 — O 14,7 — N 10,3 — M. G. 544.
1) Flavindin (A. 72, 284; B. 34, 530). — II, 1624.
2) Isatochlorin (Z. 1865, 630). — II, 1612.
- C₃₂H₂₄O₂N₂ 3) isom. Verbindung (aus Isatin) (Z. 1865, 630). — II, 1612.
C 72,1 — H 4,5 — O 18,0 — N 5,3 — M. G. 532.
1) Succinat d. β-Oximido-α-Keto-α-β-Diphenyläthan. Sm. 164° (B. 26, 797). — III, 289.

- $C_{27}H_4O_8N_2$ 2) Succinat d. isom. β -Oximido- α -Keto- α - β -Diphenyläthan. Sm. 195° (B. 26, 797). — III, 290.
- $C_{31}H_4O_8S$ 1) Verbindung (aus 1,4-Dioxybenzol u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) + H_2O (Am. 16, 525).
- $C_{29}H_{24}N_2S$ 1) Phenylhydrazinverbindung d. Di[2-Oxynaphtyl]- p -Sulfid. Sm. 184° (B. 27, 3000).
- $C_{31}H_{25}ON_3$ C 77,6 — H 5,0 — O 3,2 — N 14,1 — M. G. 495.
- $C_{31}H_{20}O_3N_2$ 1) Acetylamidophenylindulin. Sm. 160° (A. 286, 199). — IV, 1326.
C 81,7 — H 5,5 — O 6,8 — N 6,0 — M. G. 470.
- 2) 4-Phenyloxyhydrat d. 6-Oxy-2,3-Diphenyl-1,4-Naphtisodiazin-6-Aethyläther. Sm. 175—178°. Chlorid (B. 25, 1018; 31, 895 Ann.). — IV, 1092.
- $C_{27}H_{30}O_7N_4$ 2) Verbindung (aus β -Benzoylpropionsäure). Sm. 195° (Bh. [3] 19, 393).
C 77,1 — H 5,2 — O 6,4 — N 11,2 — M. G. 498.
- 1) p -Di[2-Benzylphenylazo]-1,3-Dioxybenzol. Sm. 189° (B. 27, 2788). — IV, 1446.
C 69,3 — H 4,7 — O 5,8 — N 20,2 — M. G. 554.
- $C_{22}H_{16}O_2N_4$ 1) 4,4'-Di[5-Keto-3-Methyl-1-Phenyl-4,5-Dihydro-4-Pyrazolylazo]-biphenyl. Sm. 289° u. Zers. (A. 295, 337). — IV, 1291.
- $C_{33}H_{30}O_4N_2$ C 76,5 — H 5,2 — O 12,7 — N 5,6 — M. G. 502.
- 1) Dimethyläther d. 1,4-Dibenzoyl-5,6-Di[4-Oxyphenyl]-2,3-Dihydro-1,4-Diazin. Sm. 182—183° (Soc. 63, 1301). — III, 295.
- $C_{22}H_{30}O_4N_4$ C 72,5 — H 4,9 — O 12,1 — N 10,5 — M. G. 530.
- 1) 1,4-Dibenzoyl-3,6-Di[Methylphenylamido]-2,5-Diketo-1,2,4,5-Tetrahydro-1,4-Diazin (Hippuroflavindimethylamid). Sm. 233—234° (A. 287, 84).
C 70,3 — H 4,8 — O 14,6 — N 10,2 — M. G. 546.
- $C_{23}H_{30}O_5N_4$ 1) Verbindung (aus Isatin) (Z. 1865, 631). — II, 1672.
- $C_{27}H_{26}O_6N_4$ C 68,3 — H 4,6 — O 17,1 — N 10,0 — M. G. 562.
- $C_{27}H_{26}O_6N_4$ 1) Isatan. Ag_2 (J. pr. [1] 28, 346; J. 1865, 584). — II, 1616.
- $C_{27}H_{26}O_6N_4$ C 65,1 — H 4,4 — O 16,3 — N 14,2 — M. G. 590.
- 1) Azopiansäurephenylhydrazid. Sm. 222° (258°) (B. 19, 2275; J. pr. [2] 55, 179). — IV, 717.
- $C_{27}H_{26}O_{11}Br_4$ 1) Anhydrotetrabromkolatannin (C. 1898 [1] 579).
- $C_{27}H_{26}O_{11}Br_4$ 1) Anhydrohexabromkolatannin (C. 1898 [1] 579).
- $C_{33}H_{30}O_{17}N_8$ C 48,4 — H 3,3 — O 34,2 — N 14,1 — M. G. 794.
- 1) Oktaspartid + $6H_2O$ (A. 157, 30; 303, 187; J. 1871, 738; B. 38, 64; 42, 158; B. 30, 2450). — I, 1211.
C 81,9 — H 5,7 — O 3,4 — N 9,0 — M. G. 469.
- $C_{32}H_{27}ON_3$ 1) Benzacin. Sm. 170° (Soc. 37, 567). — II, 1314.
- $C_{32}H_{28}O_7N_2$ C 81,4 — H 5,9 — O 6,8 — N 5,9 — M. G. 472.
- 1) γ -Di[Benzoylamido]- α - β -Diphenyl- α -Hexadiën (Dibenzoylcinnylendiamin). Sm. 264° (Soc. 49, 468). — III, 286.
- $C_{33}H_{28}O_5N_2$ C 78,7 — H 5,7 — O 9,8 — N 5,7 — M. G. 488.
- 1) 3,5-Di[Phenylbenzoylamido]-1-Oxybenzol. Sm. 184—185° (G. 20, 349). — II, 1178.
C 74,4 — H 5,4 — O 9,3 — N 10,9 — M. G. 516.
- $C_{27}H_{28}O_5N_4$ 1) Isatopurpurin (Z. 1865, 630). — II, 1612.
- $C_{32}H_{28}O_4N_4$ C 72,2 — H 5,3 — O 12,0 — N 10,5 — M. G. 532.
- 1) 1,4-Dibenzoyl-3,6-Di[Methylphenylamido]-2,5-Dioxy-1,4-Dihydro-1,4-Diazin (Dihydrohippuroflavindimethylamid). Sm. 238° u. Zers. (A. 287, 83).
- 2) 1,4-Dibenzoyl-3,6-Di[2-Methylphenylamido]-2,5-Dioxy-1,4-Dihydro-1,4-Diazin (Dihydrohippuroflavindi- o -Toluid). Sm. 235—238° u. Zers. (A. 287, 86).
- 3) Formyl- p -Benzylidenimid + H_2O . Sm. 160° (B. 28, 1652). — IV, 187.
- $C_{31}H_{28}O_8S$ 1) Tetramethyläther d. Tetra[2-Oxyphenyl]thiophen. Sm. 136° (B. 25, 602). — III, 751.
- 2) Tetramethyläther d. Tetra[4-Oxyphenyl]thiophen. Sm. 217° (B. 28, 890). — III, 751.
- $C_{32}H_{28}O_7N_4$ C 70,1 — H 5,1 — O 14,6 — N 10,2 — M. G. 548.
- 1) Triacetyl- α - β -Di[Phenylhydrazon]- α - β -Di[2-Oxyphenyl]äthan. Sm. 80—90° (A. 305, 184).

- $C_{21}H_{20}O_4N_2$ C 71,6 — H 5,2 — O 17,9 — N 5,2 — M. G. 536.
1) Diacetat d. $\alpha\beta$ -Di[Benzoylamido]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 225—227* (*Soc.* 45, 678; *B.* 17, 2405). — II, 994; III, 287.
- $C_{21}H_{18}O_4N_2$ C 67,6 — H 4,9 — O 22,5 — N 4,9 — M. G. 568.
1) Benzidylopiansäure. Sm. noch nicht bei 320° (*B.* 21, 2522). — IV, 967.
2) Di[Acetyl-1-Naphtylamid] d. Diacetylweinsäure. Sm. 243—244* (*C.* 1898 [1] 109).
- $C_{21}H_{21}N_2S$ 1) Di[1-Benzylchinolin]sulfid. Sm. bei 63°. + PtCl₄ (*J. pr.* [2] 51, 95). — IV, 252.
2) 4,4'-Di[γ -Phenylallylidenamidobenzoyl]sulfid. Sm. 158—159° (*B.* 24, 727; 28, 880, 1339). — III, 61.
- $C_{21}H_{19}ON_3$ C 81,5 — H 6,1 — O 3,4 — N 9,0 — M. G. 471.
1) Diphenylrosanilin (*N. Handw. d. Ch.* 1, 626). — II, 1092.
- $C_{21}H_{17}O_2N$ C 80,8 — H 6,1 — O 10,1 — N 2,9 — M. G. 475.
1) Di[β -Benzoyl- α -Phenyläthyl]amid d. Essigsäure (Acetylidibenzalacetophenonamin). Sm. 149° (*B.* 31, 350).
- $C_{21}H_{17}O_2Cl_2$ 1) Verbindung (aus Quassin). Sm. 119—120° u. Zers. (*G.* 15, 8). — III, 646.
- $C_{20}H_{20}O_2N_2$ C 81,0 — H 6,3 — O 6,7 — N 5,9 — M. G. 474.
1) 4-Phenyloxydhydrat d. 6-Oxy-2,3-Diphenyl-7,8,9,10-Tetrahydro-1,4-Naphtisodiazin-6-Aethyläther. Sm. 151,5° (*B.* 31, 902).
2) Di[4-Methylphenylamid] d. γ -Truxillsäure. Sm. 289° (*B.* 27, 1411). — II, 1903.
- $C_{21}H_{20}O_4N_2$ C 75,9 — H 5,9 — O 12,6 — N 5,5 — M. G. 506.
1) Di[Benzoylmethyläther] d. 1,4-Di[4-Oxyphenyl]hexahydro-1,4-Diazin (*C.* 1897 [1] 505).
2) dimolec. 2-Naphtylimid d. Butan- $\alpha\gamma$ -Dicarbonsäure. Sm. 166—169° (*A.* 292, 213).
- $C_{21}H_{20}O_4N_4$ C 71,9 — H 5,6 — O 12,0 — N 10,5 — M. G. 534.
1) Diäthylester d. *s*-Diphenyläthylendi[4-Hydrasidobenzol-1-Carbonsäure]. Sm. 229° (*B.* 27, 1137). — III, 288.
- $C_{21}H_{20}O_8N_2$ C 71,4 — H 5,6 — O 17,8 — N 5,2 — M. G. 538.
1) Benzoylhelicinindianilid (*A.* 154, 30). — III, 69.
- $C_{21}H_{20}O_6N_2$ C 67,8 — H 5,3 — O 17,0 — N 9,9 — M. G. 566.
1) Diacetat d. Verb. $C_{20}H_{18}O_6N_2$ (*A.* 226, 73). — III, 346.
- $C_{20}H_{20}O_6N_4$ C 64,2 — H 5,0 — O 21,4 — N 9,4 — M. G. 598.
1) $\alpha\beta$ -Bisphenylhydron- $\alpha\beta$ -Di[5,6-Dimethoxyphenyl]äthan-2,2'-Dicarbonsäure (*M.* 12, 70). — II, 2100.
2) Phenylamidformiat d. Erythrit. Sm. 215° u. Zers. (*B.* 18, 970). — II, 372.
- $C_{20}H_{20}O_{12}Br_2$ 1) Anhydrotetrabromkolatannin (*C.* 1898 [1] 579).
- $C_{20}H_{21}O_2N_2$ C 81,0 — H 6,3 — O 6,7 — N 5,9 — M. G. 474.
1) Di[$\beta\gamma$ -Diphenyl-norm. Propylamid] d. Oxalsäure. Sm. 115—116° (*B.* 23, 2862). — II, 637.
- $C_{20}H_{21}O_2N_4$ C 70,2 — H 6,3 — O 6,3 — N 11,1 — M. G. 504.
1) Diacetyl-*p*-Benzolenimid + H₂O. + C₆H₄O₂ (*B.* 28, 1653). — IV, 187.
- $C_{20}H_{21}O_2N_2$ C 70,1 — H 5,8 — O 8,8 — N 15,3 — M. G. 548.
1) Verbindung (aus 4- α -Brombutyrylamidoazobenzol). Sm. 280° (*B.* 31, 2852).
- $C_{20}H_{21}O_2N_2$ C 67,1 — H 5,6 — O 22,4 — N 4,9 — M. G. 572.
1) Lycorin. Zers. bei 250°. 2HCl + 2H₂O, (2HCl, PtCl₄) (*C.* 1898 [1] 254).
- $C_{20}H_{21}O_{12}Br_2$ 1) Anhydrotribromkolatannin (*C.* 1898 [1] 579).
- $C_{20}H_{21}ON_2$ C 83,1 — H 7,4 — O 3,5 — N 6,0 — M. G. 462.
1) Phenylhydrason d. bim. Methylphenylecyklohexanon. Sm. 250 bis 251° (*B.* 32, 427).
- $C_{20}H_{21}O_2N_4$ C 75,9 — H 6,3 — O 6,7 — N 11,1 — M. G. 506.
1) Phylloporphyrin. Zn (*A.* 278, 320; 284, 93; 288, 212; 290, 306). — III, 658.
- $C_{20}H_{21}O_4N_2$ C 75,3 — H 6,6 — O 12,6 — N 5,5 — M. G. 510.
1) Hexamethylignonblau (*B.* 30, 240).
- $C_{20}H_{21}O_4N_4$ C 71,4 — H 6,3 — O 11,9 — N 10,4 — M. G. 538.
1) Verbindung (aus 2,4-Dimethylphenylhydrasin u. Acetessigsäureäthylester). Sm. 203° (*M.* 12, 213). — IV, 313.
- $C_{20}H_{21}O_4N_6$ C 64,6 — H 5,7 — O 10,8 — N 18,8 — M. G. 594
1) Tetra[Phenylhydrasid] d. *n*-Butan- $\alpha\beta\gamma\delta$ -Tetracarbonsäure. Sm. oberh. 280° (*B.* 28, 886). — IV, 731.

- $C_{22}H_{14}O_4N_2$ 2) Tetra[Phenylhydrazid] d. h-Butan- $\alpha\beta\gamma\delta$ -Tetracarbonsäure. Sm. oberh. 280° (B. 28, 889). — IV, 731.
- $C_{22}H_{14}O_5N_2$ C 69,3 — H 6,1 — O 14,4 — N 10,1 — M. G. 554.
- $C_{22}H_{14}O_6N_2$ 1) Hämatoporphyrin (A. 288, 212).
C 67,4 — H 6,0 — O 16,8 — N 9,8 — M. G. 570.
- $C_{22}H_{14}O_7N_2$ 1) Verbindung (aus Glyoxal u. Benzindisemiretin) (A. 258, 373). — IV, 967.
C 66,9 — H 5,9 — O 22,3 — N 4,0 — M. G. 574.
- $C_{22}H_{14}O_8N_2$ 1) Piperonaldihydrocotarnin. Sm. 202°. (2HCl, PtCl₄) (B. 31, 2102).
C 55,3 — H 4,9 — O 27,7 — N 12,1 — M. G. 694.
- $C_{22}H_{14}O_{11}N_2$ 1) p-Trinitro-3-Pseudobutyl-1-Methylbenzol + Naphtalin. Sm. 89—90° (B. 24, 2837). — II, 182.
C 80,5 — H 7,3 — O 3,3 — N 8,8 — M. G. 477.
- $C_{22}H_{14}O_9N_2$ 1) Leukophtalgrün (siehe auch $C_{24}H_{14}ON_2$). Sm. 235—236° (C. 1897 [2] 548).
C 77,9 — H 7,1 — O 6,5 — N 8,5 — M. G. 493.
- $C_{22}H_{14}O_7N_2$ 1) Phtalgrün (siehe auch $C_{24}H_{14}ON_2$). Chlorid + H₂O, 6 Chlorid + 3 PtCl₄, Nitrat (Bl. [3] 16, 989; C. 1897 [2] 548; 1898 [1] 330).
C 75,0 — H 7,0 — O 12,5 — N 5,5 — M. G. 512.
- $C_{22}H_{16}O_4N_2$ 1) Leukohexamethylignonblau (aus Pseudocumidin) (B. 31, 620).
C 75,0 — H 7,0 — O 12,5 — N 5,5 — M. G. 512.
- $C_{21}H_{14}O_4Si$ 1) Tetra[2,3-Dimethylphenylester] d. Kieselsäure. C. Kieselsäure. Sd. 350—360°₁₃₀ (B. 18, 1691). — II, 758.
2) Tetra[2,4-Dimethylphenylester] d. Kieselsäure. Sd. 453—457° (B. 18, 1690). — II, 758.
- $C_{21}H_{16}O_7N_4$ C 65,3 — H 6,1 — O 19,0 — N 9,5 — M. G. 588.
- $C_{21}H_{16}O_8N_4$ 1) Verbindung (aus Bilirubin) (H. 26, 322).
C 63,6 — H 5,9 — O 21,2 — N 9,3 — M. G. 604.
- $C_{21}H_{16}O_9N_4$ 1) Biliverdin (Z. 1869, 365; J. 1876, 935; A. 132, 334; 181, 124; G. 11, 430; H. 26, 321). — III, 663.
- $C_{21}H_{17}O_4Br_3$ 1) Tribromquassid. Sm. bei 155° u. Zers. (G. 14, 6). — III, 647.
- $C_{21}H_{18}O_{11}N_4$ C 57,3 — H 5,7 — O 28,7 — N 8,3 — M. G. 670.
1) 4,4-Di[Mesoxalsäurediäthylesterhydrazido]biphenyl-3,3'-Dicarbonsäure + 2H₂O. Sm. 257° (H. 31, 2580). — IV, 1557.
- $C_{21}H_{18}O_7N_4$ C 64,8 — H 6,8 — O 18,9 — N 9,4 — M. G. 592.
1) Hydrobilirubin (Urobilin). Zn₂ (Z. 1869, 666; J. Th. 1871, 230; 1881, 212; A. 163, 77; 181, 256; B. 7, 1065; 14, 1213; 16, 1106; J. r. 16, 269; M. 10, 572). — III, 663.
- $C_{21}H_{18}N_4Si$ 1) Siliciumtetra[4-Dimethylamidophenyl]. Sd. 225° u. Zers. (C. 1896 [1] 843).
- $C_{21}H_{18}N_6S_8$ 1) Verbindung (aus 2-Amido-5-Dimethylamidobenzolthioisulfonsäure). Sm. 97° (A. 251, 40). — II, 817.
C 76,9 — H 8,2 — O 6,4 — N 8,4 — M. G. 499.
- $C_{21}H_{11}O_7N_2$ 1) 2-Diäthylamido-1,4-Di[*p*-Diäthylamidobenzoyl]benzol. Sm. 70° (B. 9, 1914). — III, 305.
- $C_{21}H_{14}O_8N_2$ C 74,1 — H 8,1 — O 12,3 — N 5,4 — M. G. 518.
1) dimolec. 4-Methylphenylimid d. Heptan-*γ*-Dicarbonsäure. Sm. 176—178° (A. 292, 209).
- $C_{21}H_{17}O_{13}N_8$ C 35,6 — H 3,9 — O 37,1 — N 23,4 — M. G. 1078.
1) Oktaspartsäure + 3H₂O. NH₄, (NH₄)₂ K₂, K₂ + H₂O, Cu₄ + 12H₂O, Ag₄, Ag₆ (B. 30, 2450; A. 303, 188).
- $C_{21}H_{17}N_7Br_2$ 1) Diammoniumbromid (aus Diisobutyl-1,2-Xylylendiamin u. 1,2-Xylylenbromid). Sm. 57° (B. 31, 1706).
C 62,0 — H 7,3 — O 28,4 — N 2,3 — M. G. 619.
- $C_{21}H_{18}O_{11}N$ 1) Methylbenzoylaconin. Sm. 210—211° (C. 1896 [2] 791). — III, 774.
C 69,3 — H 8,3 — O 17,3 — N 5,1 — M. G. 554.
- $C_{21}H_{18}O_6N_2$ 1) Nitroglycyrrhetin (J. 1880, 1030). — III, 592.
C 75,4 — H 9,2 — O 12,6 — N 2,7 — M. G. 509.
- $C_{21}H_{18}O_7N_2$ 1) Glycyrrhetin. Sm. 200° (J. 1880, 1029). — III, 592.
C 57,4 — H 7,0 — O 33,5 — N 2,1 — M. G. 669.
- $C_{21}H_{18}O_7N_2$ 1) Tetracetylaconin. Sm. 196° (C. 1896 [1] 208). — III, 774.
C 78,1 — H 9,7 — O 6,5 — N 5,7 — M. G. 492.
- $C_{21}H_{18}O_7N_2$ 1) α -Stearyl- β -Phenyl- β -Benzylharnstoff. Sm. 74—75° (Soc. 69, 1602).
C 65,0 — H 8,3 — O 24,3 — N 2,4 — M. G. 591.
- $C_{21}H_{18}O_9N$ 1) Cevadin (Veratrin). Sm. 205°. HCl, (HCl, HgCl₂), (2HCl, PtCl₄), (HCl, AuCl₃), (HJ, J₂, H₂SO₄), Pikrat (A. 95, 200; 185, 224; J. 1861, 49);

- 1862, 376; 1874, 861; 1883, 1351; *Soc.* 33, 338; *Fr.* 13, 454; *C.* 1872, 229; *B.* 23, 2701). — III, 948.
- $C_{22}H_{19}O_9N$ 2) Veratrin + H_2O . Sm. 146–148°. (HCl , $AuCl_3$) (*Am.* 20, 361).
 $C_{22}H_{19}O_9N_2$ C 80,3 — H 10,5 — O 3,3 — N 5,9 — M. G. 478.
 1) Phenylamid d. α -Phenylamidoarachinsäure. Sm. 82° (*M.* 17, 541).
 $C_{22}H_{20}O_2S$ 1) Di[Pentaäthylphenyl]sulfon. Sm. 76° (*B.* 21, 2815). — II, 828.
 $C_{22}H_{31}O_2Br$ 1) Bromochitin. Sm. 100° (*A.* 178, 68). — III, 630.
 2) Acetat d. Brom- α -Amyrin. Sm. 268° (*B.* 23, 3189). — III, 557.
 3) Acetat d. Brom- β -Amyrin. Sm. 238° (*B.* 23, 3190). — III, 557.
 $C_{22}H_{31}O_{11}N$ C 61,4 — H 8,2 — O 28,2 — N 2,2 — M. G. 625.
 1) Protoveratrin. Sm. 245–250° (*B.* 23 [2] 699). — III, 951.
 $C_{22}H_{32}O_3N_2$ C 75,0 — H 10,1 — O 9,4 — N 5,5 — M. G. 512.
 1) Lycopodin. Sm. 114–115°. $2HCl + H_2O$, ($2HCl$, $2AuCl_3 + H_2O$) (*A.* 208, 363; *J.* 1864, 463). — III, 893.
 $C_{22}H_{33}O_2Br$ 1) Aethyl ester d. α -Brommelissinsäure. Sm. 65° (*C.* 1896 [1] 642).

C₃₂-Gruppe mit vier Elementen.

- $C_{32}H_{23}O_8N_2S_2$ 1) Verbindung (aus 2-Oxynaphtalin-6-Sulfonsäure) + H_2O (*B.* 30, 189). — IV, 1427.
- $C_{32}H_{24}O_4N_2Cl$ 1) Diäthyläther d. Verbind. $C_{32}H_{24}O_4N_2Cl$ (*B.* 31, 1412).
 $C_{32}H_{23}ON_2Cl$ 1) 4-Chlorphenylat d. 6-Oxy-2,3-Diphenyl-1,4-Naphtisodiazin-6-Aethyläther (*B.* 25, 1018). — IV, 1092.
- $C_{32}H_{26}ON_2Cl$ 1) Verbindung (d. Safranin-Gruppe) + H_2O . 2 + $PtCl_4$ (*B.* 27, 2363). — IV, 1218.
- $C_{32}H_{26}O_6N_4S_2$ 1) Dibenzolsulfonat d. 4,4'-Bi[5-Oxy-3-Methyl-1-Phenylpyrazol]. Sm. 190° (*B.* 29, 1660). — IV, 1263.
- $C_{32}H_{26}O_6N_2Br_2$ 1) Benzidylbromopiansäure. Sm. noch nicht bei 300° (*B.* 25, 2001). — IV, 967.
- $C_{32}H_{27}O_3N_2Cl$ 1) Verbindung (aus 8-Oxychinolinchlorbenzylat) + $3H_2O$. Sm. 145° (*J. pr.* [2] 54, 8). — IV, 273.
- $C_{32}H_{30}O_2N_4S_2$ 1) $\alpha\alpha$ -Succinyldi[β -Phenyl- β -Benzylpseudothioharnstoff]. Sm. 137 bis 138° (*Soc.* 67, 570).
- $C_{32}H_{30}O_3N_4Fe$ 1) Hämin (siehe auch $C_{30}H_{34}O_3N_4Fe$). HCl , HBr , $HBr + C_2H_5O$, $4HCl + Isoamylalkohol$ (*B.* 17, 2269; 18, 392; 27, 572; 29, 821, 2842; 30, 109). — IV, 1618.
- $C_{32}H_{30}O_2N_7Cl$ 1) Diacetylderivat d. Verb. $C_{32}H_{30}O_2N_7Cl$ (*B.* 31, 1410).
 $C_{32}H_{30}O_2N_7Br$ 1) Diacetylderivat d. Verb. $C_{32}H_{30}O_2N_7Br$ (*B.* 31, 1413).
 $C_{32}H_{32}O_2N_4Fe$ 1) Hämatin. HCl (*B.* 29, 822, 2842, 2846; 30, 105; 32, 677). — IV, 1618.
- $C_{32}H_{33}O_2N_4Br_2$ 1) Tribrombilirubin (*A.* 181, 117). — III, 662.
 $C_{32}H_{34}O_2N_2Br_2$ 1) $\alpha\beta$ -Di[α -Bromisovaleryl-2-Naphtylamido]äthan. Sm. 193° (*B.* 31, 3247).
- $C_{32}H_{34}O_2N_7Br$ 1) Diäthyläther d. Verb. $C_{32}H_{34}O_2N_7Br$ (*B.* 31, 1413).
 $C_{32}H_{35}O_2N_7S$ 1) Aldehydgrün (*J.* 1869, 1164; *B.* 3, 761; 24, 1711, 1713). — III, 675.
 $C_{32}H_{35}O_2N_7Fe$ 1) Hexahydrohämatoporphyrin (*B.* 17, 2273). — IV, 1620.
 $C_{32}H_{35}O_2N_7Cl_2$ 1) Aldehydblau (*B.* 22, 233). — III, 675.
 $C_{32}H_{40}ON_2Br$ 1) Bromglycyrrhetin (*J.* 1880, 1031). — III, 592.
 $C_{32}H_{40}ON_2S$ 1) α -Stearylido- α -Phenylbenzylamido- n -Merkaptomethan (Stearyl-pseudophenylbenzylthioharnstoff). Sm. 66–66,5° (*Soc.* 69, 1602).
 $C_{32}H_{40}O_2N_2Br_2$ 1) Cevadindibromid (*B.* 23, 2702). — III, 949.
 $C_{32}H_{40}O_2N_2Br$ 1) Cevadintetrabromid (*B.* 23, 2701). — III, 949.
 $C_{32}H_{40}O_2N_2J$ 1) Veratrinmonojodid + $2H_2O$. Sm. 212–214° (*Am.* 20, 366).
 $C_{32}H_{40}O_2N_2J_2$ 1) Veratrintrijodid. Sm. 136–138° (*Am.* 20, 365).
 $C_{32}H_{40}O_2N_2J_4$ 1) Veratrintetrajodid + $3H_2O$. Sm. 129–130° (*Am.* 20, 363).

C₃₂-Gruppe mit fünf Elementen.

- $C_{32}H_{44}N_8Br_8Si$ 1) Verbindung (aus Allylthioharnstoff u. $SiBr_4$) (*Soc.* 53, 854).

C₃₃-Gruppe mit zwei Elementen.

- C₃₃H₂₁O₄ C 83,6 — H 4,6 — O 11,8 — M. G. 474.
 1) 1-Naphtoat d. α -Oxy- β - β -Dibenzoyl- α -Phenyläthen. Sm. 150—151° (A. 291, 105). — III, 322.
- C₃₃H₂₁O₇ C 76,7 — H 4,3 — O 19,0 — M. G. 516.
 1) Tribenzoat d. 2,5,3'-Trioxydiphenyläther. Sm. 188—191° (B. 30, 2568).
- C₃₃H₂₇N₂ C 88,8 — H 4,9 — N 6,3 — M. G. 446.
 1) 2-Naphtylamido-meso-Phennaphtakridin. Sm. 244° (B. 26, 3086). — IV, 1090.
- C₃₃H₂₃N₃ C 81,0 — H 4,7 — N 14,3 — M. G. 489.
 1) β -Trinaphtylguanidindicyanid. Sm. 220°. HNO₃. — II, 624.
- C₃₃H₂₄O C 91,2 — H 5,6 — O 3,2 — M. G. 434.
 1) Verbindung (aus d. Verb. C₃₄H₂₄O₂ aus Anhydroacetonenbenzil). Sm. 175° (162—163°) (Soc. 61, 526; 71, 131 Anm.). — III, 252.
- C₃₃H₂₄O₄ C 83,2 — H 5,1 — O 11,7 — M. G. 476.
 1) Dibenzoat d. 4,4'-Dioxytriphenylmethan. Sm. 129—130° (B. 22, 1946). — II, 1003.
- C₃₃H₂₄N₂ C 88,4 — H 5,4 — N 6,2 — M. G. 448.
 1) Hydro- β -Naphtamid. Sm. 146—150° (A. 168, 118). — III, 64.
- C₃₃H₂₄N₆ C 78,5 — H 4,8 — N 16,7 — M. G. 504.
 1) α -Trinaphtylmelamin. Sm. 223° (B. 19, 244). — II, 624.
 2) β -Trinaphtylmelamin. Sm. 209° (B. 19, 2057). — II, 624.
- C₃₃H₂₆O₃ C 73,9 — H 5,2 — O 20,9 — M. G. 536.
 1) Tetrabenzoat d. Penta-Erythrit. Sm. 99—101° (A. 276, 60). — II, 1142.
- C₃₃H₂₈N₄ C 82,5 — H 5,8 — N 11,7 — M. G. 480.
 1) 2,4,5-Triphenyl-1,3-Di[4-Amidophenyl]-2,3-Dihydroimidazol + 2H₂O. Sm. 122—123° wasserfrei (B. 27, 570). — III, 29.
- C₃₃H₂₉N₃ C 80,0 — H 5,8 — N 14,1 — M. G. 495.
 1) Verbindung (aus Diphenyleyanamid u. p-Toluidin). Sm. 150°. HCl, (2HCl, PtCl₄) (A. 286, 360).
- C₃₃H₃₀O₆ C 79,5 — H 6,0 — O 14,1 — M. G. 496.
 1) β -Keto- $\alpha\alpha\gamma\gamma$ -Tetrabenzylpropan- $\alpha\gamma$ -Dicarbonsäure (Tetrabenzylacetondicarbonsäure). Sm. 95°. Ag₂ (A. 261, 186). — II, 1989.
- C₃₃H₃₀O₈ C 69,5 — H 5,2 — O 25,3 — M. G. 570.
 1) Rottlerin. Sm. 200—201° (191—191,5°). Na + H₂O, K + H₂O, Ba + 2H₂O, Pb, Ag (J. 1855, 669; B. 20, 182; Soc. 63, 979; 65, 234; 67, 233; G. 24 [1] 4; 24 [2] 480). — III, 671.
- C₃₃H₃₀N₆ C 77,6 — H 5,9 — N 16,5 — M. G. 510.
 1) Tetraphenyl-1,2,4-Toluylunguanidin. HCl (B. 8, 671). — IV, 606.
 2) isom. Tetraphenyl-1,2,4-Toluylunguanidin. Sm. 76°. (2HCl, PtCl₄), HNO₃ (B. 3, 8). — IV, 606.
- C₃₃H₃₀N₈ C 73,6 — H 5,6 — N 20,8 — M. G. 538.
 1) p-Dicyanbenzophenonphenylhydrazon. Sm. 212° (B. 20, 522). — IV, 776.
- C₃₃H₃₂O₄ C 81,8 — H 6,6 — O 11,6 — M. G. 484.
 1) Dibenzoat d. $\delta\delta$ -Di[4-Oxyphenyl]heptan. Sm. 144—145° (J. r. 23, 503). — II, 1151.
- C₃₃H₃₂O₁₄ C 60,7 — H 4,9 — O 34,4 — M. G. 652.
 1) Verbindung (aus Phloretinsäure) (A. 119, 212). — II, 1570.
- C₃₃H₃₂N₈ C 84,1 — H 7,0 — N 8,9 — M. G. 471.
 1) $\alpha\alpha$ -Di[4-Dimethylamidophenyl]- α -[1-Phenylamido-p-Naphtyl]-methan. Sm. 125°. (2HCl, PtCl₄), Pikrat (B. 22, 1890). — IV, 1213.
- C₃₃H₃₄O₁₃ C 64,7 — H 5,6 — O 29,7 — M. G. 612.
 1) Phlobaphen (aus Eichenrinde) (C. 1897 [2] 1151).
- C₃₃H₃₄O₂₀ C 52,8 — H 4,5 — O 42,7 — M. G. 750.
 1) Randiaroth (C. 1895 [1] 227).
- C₃₃H₃₅N₈ C 83,7 — H 7,4 — N 8,9 — M. G. 473.
 1) α -[4-Dimethylamidophenyl]- $\alpha\alpha$ -Di[1-Dimethylamido-p-Naphtyl]-methan. Sm. 178—179° (B. 21, 3129). — IV, 1218.

- $C_{33}H_{56}O_9$ C 68,8 — H 6,2 — O 25,0 — M. G. 576.
 1) Homorotlerin. Sm. 192° (See. 67, 233).
 C 63,5 — H 5,8 — O 30,7 — M. G. 624.
- $C_{33}H_{56}O_{13}$ 1) Propionaldehydphloroglucid (C. 1896 [2] 486).
 C 83,0 — H 8,2 — N 8,8 — M. G. 477.
- $C_{33}H_{59}N_3$ 1) Aethyldihydrochinolin = $(C_{11}H_{13}N)_3$. Fl. (2HCl, PtCl₄) (B. 17, 1331).
 — IV, 254.
 C 83,6 — H 9,7 — O 6,7 — M. G. 474.
- $C_{33}H_{46}O_2$ 1) Benzoesäure d. Lupeol. Sm. 250° (H. 15, 422). — II, 1144.
 C 83,2 — H 10,1 — O 6,7 — M. G. 476.
- $C_{33}H_{46}O_2$ 1) Benzoesäure d. Cholesterin. Sm. 146,6° (150—151°) (A. ch. [3] 56, 61; J. pr. [2] 7, 171; M. 9, 435; H. 15, 47). — II, 1144.
 2) Benzoesäure d. Isocholesterin. Sm. 190—191° (194—195°) (J. pr. [2] 7, 174; B. 31, 1200). — II, 1144.
- $C_{33}H_{46}O_6$ 3) Benzoesäure d. Paracholesterin. Sm. 127—128° (A. 207, 234). — II, 1144.
 C 73,3 — H 8,9 — O 17,8 — M. G. 540.
- $C_{33}H_{51}N$ 1) Aethylster d. Benzoylcholsäure (B. 8, 1186; H. 10, 196). — II, 1154.
 C 85,8 — H 11,1 — N 3,0 — M. G. 461.
- $C_{33}H_{51}O$ 1) 4-Methylphenylamidocholesterin. Sm. 172° (J. r. 10, 355). — II, 590.
 C 83,5 — H 13,1 — O 3,4 — M. G. 474.
- $C_{33}H_{53}Br$ 1) Verbindung (aus Hendekananphenen). Sd. 240—242° (J. r. 15, 335). — II, 16.
- $C_{33}H_{56}O$ 1) Bromid d. Psyllostearylalkohol (H. 17, 428).
 C 82,9 — H 13,8 — O 3,3 — M. G. 478.
- $C_{33}H_{56}O_2$ 1) Daturon. Sm. 95° (B. 26 [2] 288). — I, 1006.
 C 80,2 — H 13,3 — O 6,5 — M. G. 494.
- 1) Aethylster d. Melissinsäure $C_{31}H_{51}O_7$. Sm. 69,5—70° (A. 235, 138).
 — I, 449.
 2) Dipalmitylcarbinolester d. Essigsäure. Sm. 47—49° (See. 57, 987).
 — I, 411.
- $C_{33}H_{56}O_3$ C 77,6 — H 12,9 — O 9,4 — M. G. 510.
- 1) Aethylster d. Cocerinsäure. Sm. 70° (B. 18, 1980). — I, 580.
- $C_{33}H_{56}O_4$ C 75,3 — H 12,5 — O 12,2 — M. G. 526.
- 1) Glycerinmonomelissin. Sm. 91,5—92° (C. 1896 [1] 642).
- $C_{33}H_{58}O_2$ C 79,8 — H 13,7 — O 6,5 — M. G. 496.
- 1) Psyllostearylalkohol. Sm. 86—87° (H. 25, 118).

C_{33} -Gruppe mit drei Elementen.

- $C_{33}H_{50}O_5N_3$ C 80,5 — H 4,1 — O 9,6 — N 5,7 — M. G. 492.
- $C_{33}H_{51}O_5N_3$ 1) Benzoesäure d. 4-Oxynaphtindon (A. 272, 344). — IV, 1085.
 C 78,1 — H 4,1 — O 9,5 — N 8,3 — M. G. 507.
- 1) Tri[1-Naphtylecyanurat]. Zers. bei 160—225° (B. 20, 2239). — II, 859.
 2) Tri[2-Naphtylecyanurat]. Zers. bei 230° (B. 20, 2239). — II, 878.
- $C_{33}H_{51}O_{10}N_7$ C 58,6 — H 3,1 — O 23,7 — N 14,5 — M. G. 675.
- 1) 2,4,5-Tri[3-Nitrophenyl]-1,3-Di[4-Nitrophenyl]-2,3-Dihydroimidazol. Sm. 227—228° (B. 27, 569). — III, 30.
 2) 1,2,3,4,5-Penta[4-Nitrophenyl]-2,3-Dihydroimidazol. Sm. noch nicht bei 290° (B. 27, 570). — III, 30.
- $C_{33}H_{54}ON_2$ C 85,3 — H 5,2 — O 3,4 — N 6,0 — M. G. 464.
- 1) $\alpha\beta$ -Diphenyl- $\alpha\beta$ -Di[2-Naphtyl]harnstoff. Sm. 185—186° (B. 24, 2920).
 — II, 618.
 2) $\alpha\alpha$ -Diphenyl- $\beta\beta$ -Di[2-Naphtyl]harnstoff. Sm. 103—104° (B. 24, 2923).
 — II, 618.
- $C_{33}H_{54}O_2N_4$ C 77,9 — H 4,7 — O 6,3 — N 11,0 — M. G. 508.
- 1) Di[β -Phenylazo-2-Oxynaphtyl]methan. Sm. 127—128° (B. 25, 3481).
 — IV, 1450.
- $C_{33}H_{54}O_4N_2$ C 77,3 — H 4,7 — O 12,5 — N 5,5 — M. G. 512.
- 1) Benzoesäure d. 6,4'-Di[Benzoylamido]-3-Oxybiphenyl. Sm. 177—178° (A. 303, 348).
- $C_{33}H_{54}O_4N_4$ C 73,3 — H 4,4 — O 11,8 — N 10,4 — M. G. 540.
- 1) 2,4,5-Triphenyl-1,3-Di[4-Nitrophenyl]-2,3-Dihydroimidazol. Sm. 182—183° (B. 27, 569). — III, 29.

- C₂₃H₂₆ON₄** C 80,2 — H 5,3 — O 3,2 — N 11,3 — M. G. 494.
 1) **Benzoyldehydrobenzalphenylhydrason**. Sm. 173°. + $\frac{1}{2}$ C₆H₆ (G. 27, [2] 250). — IV, 749.
 2) **isom. Benzoyldehydrobenzalphenylhydrason**. Sm. 187—188° (G. 26, [1] 455; 27 [2] 252). — IV, 749.
- C₂₃H₂₆O₂N₂** C 82,2 — H 5,4 — O 6,6 — N 5,8 — M. G. 482.
 1) **3,5-Di[Benzoylphenylamido]-1-Methylbenzol**. Sm. 190—191° (J. pr. [2] 33, 544). — IV, 625.
- C₂₃H₂₆O₂S₂** 1) **Di[2-Naphtyläther] d. β - γ -Dimerkaptopropyl-2-Naphtylsulfon**. Sm. 129° (J. pr. [2] 53, 499).
- C₂₃H₂₆O₂S₂** 1) **α - β -Tri[2-Naphtylsulfon]propan**. Sm. 230° (J. pr. [2] 53, 494).
- C₂₃H₂₆N₂S** 1) **s-Di[4-Phenylamido-1-Naphtyl]thioharnstoff**. Sm. 196° (A. 286, 185). — IV, 923.
- C₂₃H₂₇O₂N₂** C 79,7 — H 5,4 — O 6,4 — N 8,4 — M. G. 497.
 1) **Base (aus Lepidonviolet)**. 2HCl, (2HCl, PtCl₄) (B. 25, 122). — IV, 317.
- C₂₃H₂₇O₂N₂** C 71,1 — H 4,8 — O 11,5 — N 12,6 — M. G. 557.
 1) **Verbindung (aus Carbanilidoxyhydrasobenzol)**. Sm. 215—218° (B. 23, 493). — IV, 1504.
- C₂₃H₂₈O₂N₂** C 77,3 — H 5,5 — O 6,2 — N 10,9 — M. G. 512.
 1) **Verbindung (aus β -Benzoylphenylhydrasin u. Benzaldehyd)**. Sm. 212—215° (G. 22 [2] 238). — IV, 751.
- C₂₃H₂₈O₄N₄** C 72,8 — H 5,1 — O 11,8 — N 10,3 — M. G. 544.
 1) **Anhydrodi[benzoylphenylhydrasid] d. Hydrochelidonsäure**. Zers. bei 110° (A. 267, 99). — IV, 714.
- C₂₃H₂₉O₆N₂** C 70,1 — H 5,5 — O 17,0 — N 7,4 — M. G. 565.
 1) **Trianililäskulin**. (2HCl, PtCl₄) (B. 3, 366). — III, 567.
- C₂₃H₂₉N₂Cl** 1) **Victoriablu B**. 2 + PtCl₄ (B. 22, 1889). — IV, 1213.
- C₂₃H₂₉ON₂** C 81,3 — H 6,8 — O 3,3 — N 8,6 — M. G. 487.
 1) **α -Oxy- α -Di[4-Dimethylamidophenyl]- α -[1-Phenylamido- β -Naphtyl]-methan**. Sm. 95°. Pikrat (B. 22, 1890). — II, 1095.
- C₂₃H₂₉O₂N₂** C 76,3 — H 6,3 — O 9,2 — N 8,1 — M. G. 519.
 1) **1,3,5-Tri[4-Methylphenylacetylamido]benzol**. Sm. 192—193° (G. 20, 326). — IV, 1125.
- C₂₃H₂₉O₆N₂** C 69,8 — H 5,8 — O 16,9 — N 7,4 — M. G. 567.
 1) **Tri[2-Methoxy-4-Allylphenyl]cyanurat (Triuegenolcyanurat)**. Sm. 122° (B. 20, 2238). — II, 975.
- C₂₃H₃₁O₂N₂** C 80,0 — H 6,9 — O 6,5 — N 5,7 — M. G. 490.
 1) **Oenanthylidendiphenylamid d. Benzolcarbonsäure** (A. 148, 336). — II, 1194.
- C₂₃H₃₁O₈N₂** C 67,6 — H 5,8 — O 21,8 — N 4,8 — M. G. 586.
 1) **Phloridsinanilid** (A. 156, 9). — III, 600.
- C₂₃H₃₁O₆N₂** C 71,2 — H 6,5 — O 17,3 — N 5,0 — M. G. 556.
 1) **Cinnamylidendihydrocotarnin**. Sm. 139—140°. (2HCl, PtCl₄) (B. 31, 2102).
- C₂₃H₃₁O₇N₂** C 69,0 — H 6,6 — O 19,5 — N 4,9 — M. G. 574.
 1) **α -Oxy- γ -Phenylallylidendihydrocotarnin?** Sm. 228—230° u. Zers. (2HCl, PtCl₄) (B. 31, 2102).
- C₂₃H₃₁O₁₁N₂** C 60,5 — H 5,8 — O 29,3 — N 4,3 — M. G. 654.
 1) **Helicin-2,4-Diamido-1-Methylbenzol + xH₂O** (B. 16, 800; G. 12, 467). — IV, 607.
- C₂₃H₃₁O₃N₂** C 75,4 — H 7,4 — O 9,1 — N 8,0 — M. G. 525.
 1) **Tri[3-Methyl-6-Isopropylphenyl]cyanurat**. Sm. 151° (B. 20, 2239). — II, 771.
- C₂₃H₄₁O₂N₂** C 72,9 — H 7,5 — O 11,8 — N 7,7 — M. G. 543.
 1) **Tri[2,4,5-Trimethylphenylamid d. Citronensäure**. Sm. 185° (B. 21, 660). — II, 553.
- C₂₃H₄₁O₂S₂** 1) **Triisobutyläther d. α -Trithio-2-Oxybenzaldehyd**. Sm. 142° (B. 24, 1449). — III, 71.
 2) **Triisobutyläther d. β -Trithio-2-Oxybenzaldehyd**. Sm. 162—163° + C₆H₆ (B. 24, 1450). — III, 71.
- C₂₃H₄₃O₁₁N** C 63,0 — H 6,8 — O 28,0 — N 12,2 — M. G. 629.
 1) **Anhydroaconitin (Apoaconitin)**. Sm. 185—186°. (HCl, AuCl₃), HBr + $\frac{1}{2}$ H₂O, + AuCl₃ (Soc. 33, 324; 59, 284). — III, 773.

- C₃₃H₃₀O₄P** 1) Tri[4-tert. Amylphenylester] d. Phosphorsäure. Fl. (B. 18, 1701). — II, 775.
C₃₃H₃₄ON₂ C 81,4 — H 9,5 — O 3,3 — N 5,8 — M. G. 486.
 1) Phenylhydrason d. Oxycholestenon. Sm. 271° (M. 17, 585).
C₃₃H₃₀O₁₀N C 63,6 — H 8,5 — O 25,7 — N 2,2 — M. G. 623.
 1) Methyloxyhydrat d. Veratrin + 3H₂O. HCl, (2HCl, AuCl₃) (Am. 20, 369).

C₃₃-Gruppe mit vier Elementen.

- C₃₃H₃₁ON₂S** 1) αα-Di[2-Naphtyl]-β-Thiodiphenylharnstoff. Sm. 225° (B. 24, 2914). — II, 807.
C₃₃H₂₉O₇N₂Cl₂ 1) p-Dichlor-1,4-Benzochinon-2-Imidosimmtsäuredi[2-Amidosimmtsäure] (Bl. [3] 15, 1033).
C₃₃H₂₆O₅N₄S₂ 1) Benzyläther d. Stilbendisulfonsäurediazophenol. Na₂ (B. 27, 3359). — IV, 1419.
C₃₃H₂₇ON₂Cl 1) 4-[Chlor-4-Methylphenyl] d. 6-Oxy-2,3-Diphenyl-1,4-Naphtisodiazin-6-Aethyläther (B. 27, 2354). — IV, 1092.
C₃₃H₃₁O₄N₂Br 1) 4,4'-Di[Phenylamidoformiat] d. Methyldi[3,6-Dibrom-4-Oxy-2,5-Dimethylbenzyl]amin. Sm. 202° (B. 29, 1113).
C₃₃H₃₂O₅NJ 1) Jodäthylat d. Dibenzoylmorphin + 1/2 H₂O (Soc. 28, 23, 323). — III, 900.
C₃₃H₃₀ON₂Cl 1) Chlorbenzylat d. Benzylcinchonin. Sm. 255° u. Zers. (B. 13, 2296). — III, 834.
C₃₃H₃₀O₇N₂S 1) Diäthyläther d. s-Di[4-(4-Methylphenyl)amido-6-Oxy-3-Methylphenyl]thioharnstoff. Sm. 176,5° (B. 27, 2708).
 2) Diäthyläther d. s-Di[4-(4-Oxy-2-Methylphenyl)amido-3-Methylphenyl]thioharnstoff. Sm. 70—72° (A. 286, 208).
 3) Diäthyläther d. s-Di[4-(4-Oxy-3-Methylphenyl)amido-2-Methylphenyl]thioharnstoff. Sm. 179—180° (A. 287, 194).
C₃₃H₃₀O₄N₂S 1) Tetraäthyläther d. s-Di[4(4-Oxyphenyl)amido-2-Oxyphenyl]thioharnstoff. Sm. 154,5—155° (A. 287, 217).
C₃₃H₂₉O₃NBr₂ 1) Triäthyläther d. Tri[3,6-Tribrom-4-Oxy-2,5-Dimethylbenzyl]amin. Sm. 196—197° (B. 29, 1111).
C₃₃H₃₂O₇N₂P 1) 2-Methylphenylamid d. Phosphorsäuretri[α-Oxyisobuttersäure]. Sm. 194—196° (A. 279, 116).
 2) 4-Methylphenylamid d. Phosphorsäuretri[α-Oxyisobuttersäure]. Sm. 160—162° (A. 279, 117).
C₃₃H₃₁O₉NJ 1) Jodmethylat d. Veratrin + 1 1/2 H₂O. Sm. 210—212° u. Zers. (Am. 20, 368).

C₃₄-Gruppe mit einem Element.

- C₃₄H₃₆** C 91,9 — H 8,1 — M. G. 444.
 1) Tetra[β-Dimethylphenyl]äthen. Sm. 244—245° (B. 14, 1531). — II, 302.

C₃₄-Gruppe mit zwei Elementen.

- C₃₄H₂₀O₄** C 82,9 — H 4,0 — O 13,0 — M. G. 492.
 1) Tetraphenyluvionon. Sm. noch nicht bei 280° (Soc. 57, 956). — III, 737.
C₃₄H₂₀O₇ C 75,6 — H 3,7 — O 20,7 — M. G. 540.
 1) Dibenzolat d. Fluorescein. Sm. 215° (216—217°) (A. 183, 14; B. 28, 2963). — II, 2062.
 2) Dibenzolat d. Hydrochinonphtalein. Sm. 252—253° (B. 28, 2963).
C₃₄H₂₀O₁₀ C 69,4 — H 3,4 — O 27,2 — M. G. 588.
 1) Tetrabenzolat d. 2,3,5,6-Tetraoxy-1,4-Benzochinon (B. 20, 3152; A. ch. [6] 12, 115). — III, 355.
C₃₄H₂₇O₈ C 85,4 — H 4,6 — O 10,0 — M. G. 478.
 1) Verbindung (aus Phenanthrenacetonchinon). Sm. 235° (Soc. 59, 105). — III, 447.

- $C_{24}H_{20}O_4$ C 82,6 — H 4,4 — O 13,0 — M. G. 494.
 1) Dibenzoesäure d. α -Dioxybinaphthyl. Sm. 253° (*J. r.* 6, 190). — II, 1152.
 2) Dibenzoesäure d. β -Dioxybinaphthyl. Sm. 160° (*J. r.* 6, 192). — II, 1152.
- $C_{24}H_{20}O_5$ C 77,6 — H 4,2 — O 18,2 — M. G. 526.
 1) Dibenzoesäure d. Phenolphthalein. Sm. 169° (*B.* 29, 132).
 2) Dibenzoesäure d. *p*-Dibenzoyl-1,3-Dioxybenzol. Sm. 151° (*A.* 210, 259). — III, 305.
 3) Dibenzoesäure d. *p*-Dibenzoyl-1,4-Dioxybenzol. Sm. 146° (*A.* 210, 265). — III, 305.
- $C_{24}H_{17}N_4$ C 83,9 — H 4,5 — N 11,5 — M. G. 486.
 1) 2,3,7,8-Tetraphenyl-1,4,6,9-Naphhtetrazin. Sm. 289° (*B.* 22, 446). — IV, 1244.
- $C_{24}H_{24}O$ C 91,1 — H 5,3 — O 3,6 — M. G. 448.
 1) Phenyl-1-Naphtylpinakolin. Sm. bei 130° (*J. pr.* [2] 35, 505). — III, 267.
- $C_{24}H_{24}O_2$ C 88,0 — H 5,1 — O 6,9 — M. G. 464.
 1) Verbindung (aus Anhydroacetonbenzil). Sm. 195–200° u. Zers. (*Soc.* 51, 425; 71, 130). — III, 251.
- $C_{24}H_{24}N_2$ C 88,7 — H 5,2 — N 6,1 — M. G. 460.
 1) $\alpha\beta$ -Di[1-Naphtylimido]- $\alpha\beta$ -Diphenyläthan. Sm. 218–219° (*M.* 9, 692). — III, 285.
- $C_{24}H_{24}N_4$ C 83,6 — H 4,9 — N 11,5 — M. G. 488.
 1) 6-Phenylamido-5-Phenylrosindulin[5]. Sm. 192° (*A.* 256, 254). — IV, 1298.
 2) 9-Phenylamido-5-Phenylrosindulin[5]. HCl (*A.* 286, 219). — IV, 1298.
 3) 2-Phenylamido-9-Phenylrosindulin[9]. HCl, (2HCl, PtCl₄) (*A.* 286, 219). — IV, 1298.
 4) 10-Phenylamido-9-Phenylrosindulin[9] (*B.* 29, 2758). — IV, 1298.
 5) isom. Phenylamidophenylrosindulin. HCl, (2 HCl, PtCl₄) (*A.* 272, 327). — IV, 1298.
- $C_{24}H_{26}O_2$ C 87,6 — H 5,6 — O 6,8 — M. G. 466.
 1) $\alpha\beta$ -Dioxy- $\alpha\beta$ -Diphenyl- $\alpha\beta$ -Dinaphtyläthan? Sm. 61° (*B.* 13, 1360). — II, 1107.
- $C_{24}H_{26}O_4$ C 81,9 — H 5,2 — O 12,9 — M. G. 498.
 1) Dibenzyläther d. Phenolphthalein. Sm. 150° (*B.* 26 [2] 232; *M.* 17, 433). — II, 1983.
- $C_{24}H_{26}O_5$ C 74,7 — H 4,8 — O 20,5 — M. G. 546.
 1) Tetracetat d. Verb. $C_{26}H_{18}O_4$ (aus Resorcin u. Benzylchlorid). Sm. 90 bis 100° (*B.* 31, 311).
- $C_{24}H_{26}O_{15}$ C 60,5 — H 3,8 — O 35,6 — M. G. 674.
 1) Eichenroth (*M.* 1, 270). — III, 587.
- $C_{24}H_{26}N_2$ C 88,3 — H 5,6 — N 6,1 — M. G. 462.
 1) 1-Phenylamido-2,3,4,5-Tetraphenylpyrrol. Sm. 207° (*A.* 269, 117). — IV, 786.
- $C_{24}H_{26}N_4$ C 83,3 — H 5,3 — N 11,4 — M. G. 490.
 1) 2,3-Di[Phenylamido]-1,4-Diphenylimido-1,4-Dihydronaphtalin. Sm. 169° (*A.* 256, 253). — IV, 1273.
- $C_{24}H_{28}N_6$ C 78,8 — H 5,0 — N 16,2 — M. G. 518.
 1) Verbindung (aus Benzalazin). Sm. 207° (*J. pr.* [2] 58, 386).
- $C_{24}H_{28}O_4$ C 81,6 — H 5,6 — O 12,8 — M. G. 500.
 1) Dibenzoesäure d. Alkohol $C_{26}H_{18}O_2$. Sm. 185–186° (*B.* 9, 311). — II, 1145.
- $C_{24}H_{28}O_5$ C 79,1 — H 5,4 — O 15,5 — M. G. 516.
 1) $\alpha\gamma\epsilon$ -Tribenzoyl- $\beta\delta$ -Di[2-Furanyl]pentan (Difuraltriacetophenon). Sm. 175° (*B.* 29, 2249). — III, 730.
 2) isom. Difuraltriacetophenon. Sm. 211–212° (*B.* 29, 2250). — III, 730.
- $C_{24}H_{28}O_6$ C 76,7 — H 5,2 — O 18,1 — M. G. 532.
 1) Äthylanhydridibenzilacetessigsäure. Sm. 216°. Ba, Ag (*Soc.* 67, 739).
 2) Äthylester d. Anhydridibenzilacetessigsäure. Sm. 210–211° (*Soc.* 69, 737).
- $C_{24}H_{28}O_8$ C 72,3 — H 4,9 — O 22,7 — M. G. 564.
 1) Acetat d. α -Verb. $C_{26}H_{20}O_4$ (*Am.* 5, 343). — III, 10.
 2) Acetat d. β -Verb. $C_{26}H_{20}O_4$ (*Am.* 5, 344). — III, 10.

- $C_{24}H_{28}O_6$ C 70,3 — H 4,8 — O 24,8 — M. G. 580.
1) Tetrabenzoat d. Dulcitan (*A. ch.* [4] **27**, 163). — II, 1142.
- $C_{24}H_{26}O_{10}$ C 68,4 — H 4,7 — O 26,8 — M. G. 596.
1) Tetrabenzoat d. Glykose. Sm. 141° (*H.* **14**, 344). — II, 1143.
2) Tetrabenzoat d. Lävulose. Sm. 108° (*M.* **10**, 397). — II, 1143.
- $C_{24}H_{26}O_{16}$ C 59,0 — H 4,0 — O 37,0 — M. G. 692.
1) Anhydrid d. Eichengerbsäure (*M.* **1**, 270). — III, 587.
- $C_{24}H_{26}O_{19}$ C 51,8 — H 3,5 — O 44,7 — M. G. 788.
1) Glykotannin (*J.* **1858**, 256; *A.* **90**, 340; **170**, 74). — II, 1926.
- $C_{24}H_{23}N_2$ C 87,9 — H 6,0 — N 6,0 — M. G. 464.
1) Verbindung (aus 4-Nitroso-1-Dimethylamidobenzol u. 4-Methylphenyl-2-Naphtylamin). Sm. 224—225° (*B.* **21**, 727). — IV, 1096.
- $C_{24}H_{23}N_4$ C 82,9 — H 5,7 — N 11,4 — M. G. 492.
1) 1,2,3,4-Tetra[Phenylamido]naphtalin. Sm. 191° (*A.* **256**, 242; *B.* **21**, 679). — IV, 1273.
- $C_{24}H_{21}N_6$ C 78,5 — H 5,4 — N 16,1 — M. G. 520.
1) 1,3-Di[Phenylhydrason]-2-(α -Phenylhydrasonäthyl)-2,3-Dihydroinden. Sm. 163—167° (*B.* **27**, 109). — IV, 788.
- $C_{24}H_{20}O_4$ C 81,3 — H 6,0 — O 12,7 — M. G. 502.
1) Verbindung (aus Phenylacetone). Sm. 209° u. Zers. (*A.* **291**, 281).
- $C_{24}H_{18}O_8$ C 72,1 — H 5,3 — O 22,6 — M. G. 566.
1) Tetracetat d. $\alpha\alpha\beta\beta$ -Tetra[β -Oxyphenyl]äthan (*A.* **202**, 134). — II, 1039.
- $C_{24}H_{18}O_{17}$ C 57,5 — H 4,2 — O 38,3 — M. G. 710.
1) Anhydrid d. Eichengerbsäure. Ba (*M.* **1**, 270; *B.* **14**, 1826; *Bl.* [3] **19**, 584). — III, 587.
- $C_{24}H_{18}O_8$ C 76,1 — H 6,0 — O 17,9 — M. G. 536.
1) Dibenzoat d. Disoeugenol. Sm. 161° (*B.* **15**, 2068; **24**, 2874). — II, 1151.
- $C_{24}H_{18}O_7$ C 78,9 — H 5,8 — O 20,3 — M. G. 552.
1) Dibenzoylguajakonsäure. Sm. 81—83° (*C.* **1897** [1] 167).
- $C_{24}H_{17}O_{14}$ C 61,4 — H 4,8 — O 33,7 — M. G. 664.
1) Verbindung (aus Hesperitin). Na, K (*Soc.* **73**, 1035).
- $C_{24}H_{17}N_2$ C 87,2 — H 6,8 — N 6,0 — M. G. 468.
1) 1,3-Di[Dibenzylamido]benzol. Sm. 80—81° (*Soc.* **55**, 602). — IV, 573.
2) 1,4-Di[Dibenzylamido]benzol. Sm. 149° (*Soc.* **55**, 600). — IV, 586.
- $C_{24}H_{17}N_4$ C 82,2 — H 6,4 — N 11,3 — M. G. 496.
1) 2,5-Di[4-Methylphenylamido]-1,4-Di[4-Methylphenylimido]-1,4-Dihydrobenzol. Sm. 238° (*B.* **8**, 1031; **20**, 2480; *A.* **243**, 286; **262**, 249). — IV, 1245.
- $C_{24}H_{17}N_6$ C 77,8 — H 6,1 — N 16,0 — M. G. 524.
1) Verbindung (aus Carbodi-p-Tolylimid u. Phenylhydrasoncarbodiphenylamin). Sm. 128°. 3 + 4HCl, (3 + 4HCl + 2PtCl₂) (*B.* **21**, 2277). — IV, 1225.
- $C_{24}H_{17}O_4$ C 80,6 — H 6,7 — O 12,7 — M. G. 506.
1) Dibenzoat d. $\beta\beta$ -Di[4-Oxyphenyl]oktan. Sm. 114° (*J. r.* **23**, 505). — II, 1151.
2) Dibenzoat d. Dithymol. Sm. 209—210° (215°) (*J. r.* **14**, 141; *B.* **23**, 503). — II, 1151.
- $C_{24}H_{14}O_8$ C 75,8 — H 6,3 — O 17,8 — M. G. 538.
1) Dibenzoylguajakharzsäure. Sm. 132—135° (131°) (*M.* **18**, 718; *C.* **1897** [1] 167).
- $C_{24}H_{14}N_2$ C 86,8 — H 7,2 — N 6,0 — M. G. 470.
1) 1,3-Diphenyl-5,6-Di[4-Isopropylphenyl]-1,2-Dihydro-1,2-Diazin. Sm. 162—163° (*B.* **26**, 64; *A.* **259**, 323). — IV, 786.
- $C_{24}H_{15}N_3$ C 84,1 — H 7,2 — N 8,7 — M. G. 485.
1) $\alpha\alpha$ -Di[4-Dimethylamidophenyl]- α -[1-Methylphenylamido]- β -Naphtylmethan. Sm. 87°. (2HCl, PtCl₂). Pikrat (*B.* **22**, 1893). — IV, 1214.
- $C_{24}H_{16}O_4$ C 80,3 — H 7,1 — O 12,6 — M. G. 508.
1) Tetramethyläther d. $\alpha\alpha\beta\beta$ -Tetra[β -Oxy- β -Methylphenyl]äthen. Sm. 195° (*B.* **28**, 2875).
2) Tetraäthyläther d. $\alpha\alpha\beta\beta$ -Tetra[4-Oxyphenyl]äthen. Sm. 120—121° (*B.* **28**, 2874).

- $C_{24}H_{36}O_4$ 3) Dimethylester d. Bis-Dihydrosantinsäure. Sm. 130,5—131° (G. 23 [1] 60). — II, 2036.
C 86,4 — H 7,6 — N 5,9 — M. G. 472.
- $C_{24}H_{36}N_2$ 1) $\alpha\beta$ -Di[4-Isopropylbenzylidenamido]- $\alpha\beta$ -Diphenyläthan. Sm. 168° (B. 22, 2303). — IV, 979.
- 2) 4,4'-Di[4-Isopropylbenzylidenamido]-3,3'-Dimethylbiphenyl. Sm. 152° (A. 258, 377). — IV, 982.
C 85,4 — H 7,9 — O 6,7 — M. G. 478.
- $C_{24}H_{36}O_3$ 1) $\alpha\alpha$ -Di[3-Oxy-4-Isopropyl-1-Methylphenyl]- $\beta\beta$ -Diphenyläthan. Sm. 224° (A. 279, 332). — II, 1008.
- $C_{24}H_{36}O_4$ C 80,0 — H 7,4 — O 12,6 — M. G. 510.
- 1) Tetraäthyläther d. $\alpha\alpha\beta\beta$ -Tetra[4-Oxyphenyl]äthan. Sm. 163—164° (B. 28, 2875).
C 59,5 — H 5,5 — O 35,0 — M. G. 686.
- $C_{24}H_{36}O_{15}$ 1) Socoloin + 5H₂O (C. 1898 [2] 118, 212).
C 70,8 — H 6,9 — O 22,2 — M. G. 576.
- $C_{24}H_{40}O_6$ 1) Dimethyläther d. Pinoresinotannol (M. 18, 496).
C 55,4 — H 5,4 — O 39,1 — M. G. 736.
- $C_{24}H_{40}O_{10}$ 1) Tetracetylfraxinusgerbsäure. Sm. oberh. 100° (M. 3, 752). — III, 682.
C 80,9 — H 7,9 — N 11,1 — M. G. 504.
- $C_{24}H_{40}N_4$ 1) $\alpha\alpha\beta\beta$ -Tetra[4-Dimethylamidophenyl]äthan. Sm. 310—315° (B. 28, 2876). — IV, 1305.
C 77,0 — H 7,9 — O 15,1 — M. G. 530.
- $C_{24}H_{42}O_5$ 1) Anhydrid d. Podocarpinsäure (A. 170, 278).
2) Diäthylester d. d-Dehydrosantonigensäureanhydrid (G. 25 [2] 293).
3) Verbindung (aus Podocarpinsäure) (A. 170, 275). — II, 1685.
C 53,0 — H 5,4 — O 41,6 — M. G. 470.
- $C_{24}H_{42}O_{20}$ 1) Heptaacetylamygdalinsäure (A. 154, 349). — II, 2108.
C 80,6 — H 8,3 — N 11,1 — M. G. 506.
- $C_{24}H_{42}N_4$ 1) $\alpha\alpha\beta\beta$ -Tetra[4-Dimethylamidophenyl]äthan. Sm. 90°; Sd. 300°. (4Cl, 2PtCl₄), Pikrat (B. 13, 2199). — IV, 1304.
C 78,3 — H 8,3 — N 13,4 — M. G. 521.
- $C_{24}H_{42}N_2$ 1) Verbindung (aus α -Oxy-4,4'-Tetramethyldiamidodiphenylmethan). Sm. 185° (B. 27, 1406). — II, 1079.
C 74,2 — H 8,4 — O 17,4 — M. G. 550.
- $C_{24}H_{46}O_8$ 1) Diäthylester d. d-Disantonigen Säure. Sm. 183° (G. 25 [1] 509). — II, 2036.
C 68,2 — H 7,7 — O 24,1 — M. G. 598.
- $C_{24}H_{46}O_9$ 1) Crocetin (B. 17, 2231). — III, 602.
C 64,8 — H 7,3 — O 27,9 — M. G. 630.
- $C_{24}H_{46}O_{11}$ 1) Crocetin (J. 1858, 475). — III, 579.
C 49,6 — H 5,6 — O 44,8 — M. G. 822.
- $C_{24}H_{46}O_{23}$ 1) Dekaacetat d. α -Glykoheptose. Sm. 131—132° (A. 270, 79). — I, 1057.
C 83,6 — H 9,8 — O 6,5 — M. G. 488.
- $C_{24}H_{46}O_2$ 1) Benzoeat d. Sitosterin. Sm. 145—145,5° (M. 18, 559).
C 68,0 — H 8,0 — O 24,0 — M. G. 600.
- $C_{24}H_{46}O_7$ 1) Bryonin, siehe $C_{46}H_{76}O_{17}$. — III, 573.
C 69,6 — H 8,5 — O 21,8 — M. G. 586.
- $C_{24}H_{48}O$ 1) Pana-Resitannol (B. 28 [2] 1056).
C 85,7 — H 10,9 — O 3,4 — M. G. 476.
- $C_{24}H_{48}O_2$ 1) Benzyläther d. Cholesterin. Sm. 78° (H. 15, 44). — II, 1072.
C 82,9 — H 10,6 — O 6,5 — M. G. 492.
- $C_{24}H_{48}O_3$ 1) Benzoeat d. Koprosterin. Sm. 114—115° (B. 29, 477; H. 22, 401).
C 67,5 — H 8,6 — O 23,8 — M. G. 604.
- $C_{24}H_{48}O_9$ 1) Gratioleretin (J. 1858, 518). — III, 593.
C 83,6 — H 10,6 — N 5,7 — M. G. 488.
- $C_{24}H_{48}N_2$ 1) 2,8-Diamyl-3,9-Dihexyl-4,10-Naphtisodiasin (Diamyldihexylphenanthrolin). Sm. 50—51°. (2HCl, PtCl₄ + 2H₂O), Pikrat (B. 24, 1731). — IV, 1019.
C 67,3 — H 8,9 — O 23,8 — M. G. 606.
- $C_{24}H_{48}O_6$ 1) Verbindung (aus Saponin) (Z. 1867, 633). — III, 610.
C 63,9 — H 8,5 — O 27,6 — M. G. 638.
- $C_{24}H_{48}O_{11}$ 1) Digitoxin, siehe auch $C_{21}H_{36}O_{10}$ (B. 31, 2457).

- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Campten*, *Ann.* 1870, 97, — III 412.
- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Acetat* d. *Alkonois* $C_{10}H_{12}O_2$, *Ann.* 120—121², *Ann.* 41, 118, — II 2074.
- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Hydrogenoacetoacetin*, *J.* 1858, 120, — III 123.
- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Salapin*, *Ann.* *chem.* 1807, 1, 95, 120; 118, 296; 2, 25, 127, — III 544.
 3) *Terpentin*, *J.* 139, 42, — III 414.
- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Ericolin*, *J.* 1852, 25; 1853, 33, *Ann.* 1880, 1402, — III 582.
- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Campteninsäure*, *Z.* 1870, 97, — III 412.
- $C_{10}H_{12}O_2$ 1) $C_{10}H_{12}O_2 - H_2O - C_{10}H_{10}O$ — M. G. 548.
 2) *Salapinsäure* (riber $C_{10}H_{10}O$), *Ann.* 120², *Ba. Ba.*, 1, 95, 120; 118, 296; 2, 27, 127.
 3) *Terpentininsäure*, *Ann.* 1807, *Ba.*, 1, 139, 40; 2, 1896 [2] 790, — III 544.
- $C_{10}H_{10}O_2$ 1) $C_{10}H_{10}O_2 - H_2O - C_{10}H_8O$ — M. G. 514.
 2) *Anhydrid* d. *Oxyacellinsäure*, *Ann.* 121², *J. pr.* [2] 57, 260.
- $C_{10}H_{10}O_2$ 1) $C_{10}H_{10}O_2 - H_2O - C_{10}H_8O$ — M. G. 514.
 2) *Convallarin*, *J.* 1858, 120, — III 174.
- $C_{10}H_{10}O_2$ 1) $C_{10}H_{10}O_2 - H_2O - C_{10}H_8O$ — M. G. 514.
 2) *Diacetat* d. *Cocerylalcohol*, *Ann.* 48—49², *B.* 20, 80, — I 414.
- $C_{10}H_{10}O_2$ 1) $C_{10}H_{10}O_2 - H_2O - C_{10}H_8O$ — M. G. 514.
 2) *Diacetylsäure*, *Ann.* 60—61², *Ag.* 1, 304, 265, — I 450.
 3) *Äure* aus *Rosenwachs*, *Ann.* 111², *J. pr.* 3, 16, 225; *B.* 9, 378, 270.
 4) *Complexer* d. *Stearinsäure*, *Ann.* 55—56², *J.* 1858, 430, — I 445.
 5) *Oktadecylester* d. *Palmitinsäure*, *Ann.* 58², *B.* 18, 1023, — I 443.
 6) *Geomyzin*, *Ann.* 60—61², *J.* 1862, 448, — I 459.
- $C_{10}H_{10}O_2$ 1) $C_{10}H_{10}O_2 - H_2O - C_{10}H_8O$ — M. G. 514.
 2) *Verbindung* aus *Rosenwachs*, *Ann.* 77², *B.* 36, 181.

C_{10} -Gruppe mit drei Elementen.

- $C_{10}H_8O_2Br_2$ 1) *Verbindung* aus 3,4,5-Troxypheyl-4-Oxy-1-Naphtylkohl., *Ann.* 293², *A.* 299, 1, 7, — III 256.
- $C_{10}H_8O_2N_2$ 1) $C_{10}H_8O_2N_2 - H_2O - C_{10}H_6N_2$ — N 312 — M. G. 548.
 2) *Dt* 2-Oxy-1-Naphtylazo phenanthrenchinon, *B.* 26, 850, — IV 1482.
 3) *Dt* 4-Oxy-1-Naphtylazo phenanthrenchinon, *B.* 26, 850, — IV 1482.
- $C_{10}H_8O_2S_2$ 1) *Methioninsulfonsäure*, $K_2 + 12H_2O, Ca_2 + 12H_2O, Ba_2$, *B.* 16, 2836; 17, 100, — II 1019.
- $C_{10}H_8O_2N_2$ 1) $C_{10}H_8O_2N_2 - H_2O - C_{10}H_6N_2$ — N 314 — M. G. 548.
 2) *Dt* 2-Amido-1-Naphtylazo phenanthrenchinon, *B.* 26, 850, — IV 1482.
- $C_{10}H_8O_2N_2$ 1) $C_{10}H_8O_2N_2 - H_2O - C_{10}H_6N_2$ — N 312 — M. G. 570.
 2) *Verbindung* aus d. Verb. $C_{10}H_{10}O_2N_2$, *Ann.* 290—295², *B.* 15, 1972, — III 276.
- $C_{10}H_8O_2S$ 1) *Dibenzoz* d. *Dt* 2-Oxynaphtyl-*p*-Sulfid, *Ann.* 208², *B.* 27, 2545, — II 284.
- $C_{10}H_8O_2S_2$ 1) *Dibenzoz* d. *Dt* 2-Oxynaphtyl-*p*-Disulfid, *Ann.* 187², *B.* 23, 3367, — II 284.
- $C_{10}H_8O_2S_3$ 1) *Dibenzoz* d. *Dt* 1-Oxynaphtyl-*p*-Trisulfid, *Ann.* 194², *B.* 23, 3369, — II 284.
- $C_{10}H_8O_2N_2$ 1) $C_{10}H_8O_2N_2 - H_2O - C_{10}H_6N_2$ — N 316 — M. G. 582.
- $C_{10}H_8O_2N_2$ 1) *Verbindung* aus 1,2-Naphtochinon-4-Tourm., *B.* 15, 1971, — III 394.
 2) $C_{10}H_8O_2N_2 - H_2O - C_{10}H_6N_2$ — N 49 — M. G. 570.
- $C_{10}H_8O_2N_2$ 1) *Fluoresceinbiphenylcarbam.*, *Ann.* 195², *B.* 26, [2] 232, — II 2062.
- $C_{10}H_8O_2N_2$ 1) $C_{10}H_8O_2N_2 - H_2O - C_{10}H_6N_2$ — N 48 — M. G. 602.
 2) *Farbstoff* aus *Fluoresceinchlorid* u. 5-Amido-2-Oxybenzol-1-Carbonsäure, *B.* 32, 11.

- $C_{21}H_{23}O_7N$ C 73,3 — H 4,1 — O 20,1 — N 2,5 — M. G. 557.
1) Phenylamid d. 3,4,5-Tribensoxybenzol-1-Carbonsäure. Sm. 181° (B. [3] 9, 849). — II, 1923.
- $C_{21}H_{21}O_4N_2$ C 77,8 — H 4,6 — O 12,2 — N 5,3 — M. G. 524.
1) Aethylenimid d. $\alpha\beta$ -Diphenyläthen- $\alpha\beta$ -Dicarbonsäure (Ae. d. Diphenylmaleinsäure). Sm. noch nicht bei 270° (B. 26, 2479). — II, 1897.
- $C_{21}H_{21}O_5N_2$ C 75,6 — H 4,4 — O 14,8 — N 5,2 — M. G. 540.
1) 2,6-Di[Benzoylamido]-1-Oxybenzol. Sm. 182° (A. 205, 83). — II, 1178.
- $C_{21}H_{21}O_6N_2$ C 73,4 — H 4,3 — O 17,3 — N 5,0 — M. G. 556.
1) Phenolphthaleinbisphenylcarbamat. Sm. 135° (B. 26 [2] 232). — II, 1933.
- $C_{21}H_{21}O_6S_2$ 1) Verbindung (aus Rubbadin) (B. 25, 1891). — II, 658.
- $C_{21}H_{23}O_5N_2$ C 78,0 — H 4,8 — O 9,2 — N 8,0 — M. G. 523.
1) Diphenyltribensoylguanidin. Sm. 185° (B. 8, 383). — II, 1173.
2) 1-Naphtyloxyhydrat d. 8-[1-Naphtyl]amido-2-Methyl-5,10-Naphtdiazin-7-Carbonsäure. Chlorid, Bromid, Jodid, Nitrat, Sulfat (B. 31, 1787). — IV, 1186.
- $C_{21}H_{23}O_5N_2$ C 73,5 — H 4,5 — O 14,4 — N 7,6 — M. G. 555.
1) Benzoat d. 2,4,6-Tri[Benzoylamido]-1-Oxybenzol. Sm. 256° (A. 254, 257). — II, 1178.
- $C_{21}H_{23}O_6N_2$ C 74,2 — H 4,7 — O 5,8 — N 15,3 — M. G. 550.
1) β -Naphtolazo-p-Benzolazo-m-Xylolazo- β -Naphtol (Soc. 43, 439). — IV, 1438.
- $C_{21}H_{23}O_6N_4$ C 73,6 — H 4,7 — O 11,5 — N 10,1 — M. G. 554.
1) Dibenzoat d. 4,4'-Bi[5-Oxy-3-Methyl-1-Phenylpyrazol]. Sm. 194 bis 196° (A. 266, 130; B. 29, 1660, 2170). — IV, 1263.
2) Verbindung (aus Essigsäurealdehyd u. 1-Phenylazo-2,4-Dioxynaphtalin). Sm. 258° u. Zers. (B. 21, 2205). — IV, 1449.
3) Verbindung (aus d. Verb. $C_{21}H_{23}O_6N_4$) (B. 15, 1971). — III, 394.
- $C_{21}H_{25}O_6N_2$ C 75,3 — H 4,8 — O 14,8 — N 5,1 — M. G. 542.
1) Benzylidencinchoxinsäure. + 2CHCl₃, Ca + 4H₂O, Ba + 3H₂O, Ag (A. 270, 341). — IV, 347.
- $C_{21}H_{27}O_7N_2$ C 80,1 — H 5,3 — O 6,3 — N 8,2 — M. G. 509.
1) 1,1-Dinaphtylamid d. 1-Naphtylimidobernsteinsäure. Sm. 276 bis 277° u. Zers. (B. 25, 968). — II, 614.
2) 2,2-Dinaphtylamid d. 2-Naphtylimidobernsteinsäure. Sm. 250° u. Zers. (B. 25, 971). — II, 623.
3) 1,1-Dinaphtylamid d. 1-Naphtylimidodiessigsäure. Sm. 200–202° (B. 23, 2004). — II, 613.
- $C_{21}H_{27}O_7N_2$ C 69,7 — H 4,6 — O 13,7 — N 12,0 — M. G. 585.
1) Di[4-Nitrobenzyliden]rosanilin. Sm. 235–240° (B. 28, 208). — III, 16.
- $C_{21}H_{29}ON_2$ C 87,6 — H 6,0 — O 3,4 — N 3,0 — M. G. 466.
1) 2-Oxy-1-Phenylamido-2,3,4,5-Tetraphenyl-2,3-Dihydropyrrol. Sm. 201° (A. 269, 120). — IV, 787.
2) Verbindung (aus Dibenzoylstilben u. Phenylhydrazin). Sm. bei 196° u. Zers. (A. 269, 126). — IV, 787.
- $C_{21}H_{29}O_2N_2$ C 82,3 — H 5,6 — O 6,4 — N 5,6 — M. G. 496.
1) 1,3-Di[Benzoyl-4-Methylphenylamido]benzol. Sm. 162° (J. pr. [2] 33, 222). — IV, 573.
2) 1,4-Di[Benzoyl-2-Methylphenylamido]benzol. Sm. 235° (J. pr. [2] 34, 68). — IV, 594.
3) 1,4-Di[Benzoyl-4-Methylphenylamido]benzol. Sm. 222° (J. pr. [2] 33, 233). — IV, 594.
- $C_{21}H_{29}O_4N_2$ C 69,8 — H 4,8 — O 10,9 — N 14,4 — M. G. 584.
1) Base (aus 1,4-Phthalylamidobenzol). HCl, (2HCl, PtCl₄) (B. 10, 1164). — IV, 505.
- $C_{21}H_{29}O_5N_2$ C 75,7 — H 5,4 — O 5,9 — N 13,0 — M. G. 539.
1) Diacetylanilinschwarz (B. 11, 1096). — III, 676.
- $C_{21}H_{29}O_6N_2$ C 71,0 — H 5,0 — O 16,7 — N 7,3 — M. G. 575.
1) Glauconinsäure. Na (B. 31, 691). — IV, 1220.
- $C_{21}H_{29}ON_2$ C 75,8 — H 5,6 — O 3,0 — N 15,6 — M. G. 538.
1) α -Acetyl- α -Phenyl- β -Di[Phenylimidophenylamidomethyl]hydrasin. Sm. 274° (B. 28, 1182). — IV, 1224.

- $C_{24}H_{30}O_8N_4$ C 69,1 — H 5,1 — O 16,3 — N 9,5 — M. G. 590.
1) Tetraoetyl- $\alpha\beta$ -Di[Phenylhydrazon]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 244° (A. 305, 185).
- $C_{24}H_{30}O_8N_4$ C 63,9 — H 4,7 — O 22,6 — N 8,8 — M. G. 638.
1) Phenylcarbamidmetasaccharin. Sm. 210° (B. 18, 2606). — II, 372.
2) Phenylcarbamidisosaccharin. Sm. 181° (B. 18, 2609). — II, 373.
- $C_{24}H_{30}O_{11}N_7$ C 59,2 — H 4,3 — O 32,5 — N 4,0 — M. G. 690.
1) Verbindung (aus Papaverinsäure). Sm. 192–194°. 2HCl, (4HCl, PtCl₄ + 8H₂O). Ba, Ag₂ (M. 17, 500).
- $C_{24}H_{31}O_8N_3$ C 70,7 — H 5,4 — O 16,6 — N 7,3 — M. G. 577.
1) Hydroglauconinsäure. Sm. 192° u. Zers. (B. 31, 689). — IV, 1218.
- $C_{24}H_{31}O_8N_3$ C 76,7 — H 6,0 — O 12,0 — N 5,3 — M. G. 532.
1) Diäthylester d. 1,3-Di[2-Methyl-5-Phenylpyrryl]benzol-1',3'-Dicarbonsäure. Sm. 185° (B. 19, 3161). — IV, 1093.
- $C_{24}H_{31}O_4Cl_4$ C 25,8—259° (B. 28, 2876).
1) Tetraäthyläther d. $\alpha\alpha\beta\beta$ -Tetra[ρ -Chlor- ρ -Oxyphenyl]äthan. Sm. 258—259° (B. 28, 2876).
- $C_{24}H_{33}O_8N_3$ C 76,8 — H 6,2 — O 9,0 — N 7,9 — M. G. 531.
1) Aethylcoeyminyltribenzoylguanidin. Sm. 165° (A. 221, 175). — II, 1173.
- $C_{24}H_{33}O_8N_3$ C 81,3 — H 6,8 — O 6,3 — N 5,6 — M. G. 502.
1) Di[Diphenylamid] d. Camphersäure. Sm. 252° (Bl. [3] 15, 985).
- $C_{24}H_{33}O_8N_3$ C 74,7 — H 6,2 — O 8,8 — N 10,3 — M. G. 546.
1) Diäthylester d. Diphenylhydrazondiphenylacetessigsäure. Sm. 88—92° (B. 22, 3227). — IV, 719.
- $C_{24}H_{33}O_8N_4$ C 72,6 — H 6,0 — O 11,4 — N 10,0 — M. G. 562.
1) $\alpha\alpha\beta\beta$ -Tetra[4-Acetylamidophenyl]äthan. Sm. 336—337° (A. 206, 229).
2) Tetrabenzoyltriäthylentetramin. Sm. 228—229° (B. 23, 3717). — II, 1169.
3) Bensindifuralanilin. 2HCl (A. 239, 357). — IV, 967.
4) Tetra[Methylphenylamid] d. Aethan- $\alpha\alpha\beta\beta$ -Tetracarbonsäure. Sm. 231° (B. 31, 1827).
- $C_{24}H_{34}O_8N_4$ C 70,6 — H 5,9 — O 13,8 — N 9,7 — M. G. 578.
1) Hämatoporphyrin (B. 25 [2] 867).
- $C_{24}H_{34}N_2Cl_2$ C 81,4 — H 7,0 — O 3,2 — N 8,4 — M. G. 501.
1) Victoriablau 4 R. 2 + PtCl₄ (B. 22, 1891). — IV, 1214.
- $C_{24}H_{35}ON_5$ C 81,4 — H 7,0 — O 3,2 — N 8,4 — M. G. 501.
1) α -Oxy- $\alpha\alpha$ -Di[4-Dimethylamidophenyl]- α -[1-Methylphenylamido- ρ -Naphthyl]methan. Sm. 77°. Pikrat (B. 22, 1892). — II, 1095.
2) α -[4-Benzoylamidophenyl]- $\alpha\alpha$ -Di[2-Methyl-1,2,3,4-Tetrahydrochinolyl-6-methan] (B. 24, 1718). — IV, 1212.
- $C_{24}H_{35}O_7N_7$ C 59,6 — H 5,1 — O 21,0 — N 14,3 — M. G. 685.
1) Tetraspartidtrianilid. Sm. 245—260° (A. 303, 212).
- $C_{24}H_{36}O_8N_4$ C 72,3 — H 6,4 — O 11,3 — N 9,9 — M. G. 564.
1) Acetylderivat d. Base $C_{24}H_{36}ON_4$ (aus Benzenylimid). Sm. 125° (B. 28, 1652).
- $C_{24}H_{39}O_8N_4$ C 71,8 — H 6,3 — O 16,9 — N 4,9 — M. G. 568.
1) Pseudomorphin + 3H₂O (Dehydromorphin). Sm. 245° u. Zers. HCl + 6H₂O, 2HCl + 2(4H₂O), (2HCl, PtCl₄ + 8H₂O), 2HJ + 2H₂O, H₂SO₄ + 6H₂O, H₂CrO₄ + 6H₂O, Oxalat + 6H₂O, Ditartrat + 12H₂O (A. 141, 87; 176, 195; 222, 234; 234, 255; 235, 231; 294, 206, 214; A. Spl. 8, 267; B. 13, 86, 91; 19, 1761; Bl. 4, 176; J. pr. [2] 33, 560; Fr. 24, 642). — III, 910.
- $C_{24}H_{39}O_8N_2$ C 66,2 — H 5,8 — O 23,4 — N 4,5 — M. G. 616.
1) Sekianin. Sm. bei 200°. (2HCl, PtCl₄) (C. 1898 [1] 254).
2) Tetracetylheliceinanilidtoluid (A. 154, 35). — III, 69.
- $C_{24}H_{37}O_8N_4$ C 59,9 — H 5,2 — O 19,7 — N 19,2 — M. G. 730.
1) Urofusohämatin + 8H₂O? (B. 7, 1171). — III, 666.
- $C_{24}H_{37}O_8N_4$ C 59,9 — H 5,2 — O 19,7 — N 19,2 — M. G. 730.
1) Tribromfraxinusgerbsäure + 2H₂O (M. 3, 755). — III, 682.
- $C_{24}H_{38}O_8N_{10}$ C 62,0 — H 6,1 — O 17,0 — N 14,9 — M. G. 658.
1) Tetraspartsäurephenylhydrazid (B. 30, 2454; A. 303, 200). — IV, 704.
- $C_{24}H_{40}O_7N_7$ C 62,0 — H 6,1 — O 17,0 — N 14,9 — M. G. 658.
1) Anhydroscopolamin. (HCl, AuCl₃) (C. 1898 [1] 1195).
- $C_{24}H_{40}O_{11}P_4$ C 41,3 — H 4,0 — O 40,5 — N 14,2 — M. G. 988.
1) Verbindung (aus 4-Isopropylphenylphosphinsäure) (A. 294, 52).
- $C_{24}H_{40}O_{21}N_{10}$ C 41,3 — H 4,0 — O 40,5 — N 14,2 — M. G. 988.
1) Verbindung (aus Harnstoff) (Bl. 38, 68; B. 30, 2458). — I, 1384.

- $C_{31}H_{41}O_{13}N$ C 54,3 — H 5,4 — O 38,3 — N 1,9 — M. G. 751.
 1) Heptacetylamygdalin (*A.* 154, 339). — III, 570.
- $C_{31}H_{45}O_{13}N$ C 65,1 — H 7,2 — O 25,5 — N 2,2 — M. G. 627.
 1) Pyropseudoaconitin. *HJ* (*Soc.* 71, 358).
- $C_{31}H_{47}O_{11}N$ C 63,2 — H 7,3 — O 27,3 — N 2,2 — M. G. 645.
 1) Aconitin (Acetylbenzoylaconin). *Sm.* 193—194°. $HCl + 3(3\frac{1}{2})H_2O$, $(HCl, AuCl_3)$, $HBr + 2\frac{1}{2}H_2O$, $HJ + 3\frac{1}{2}H_2O$, $HNO_3 + 5\frac{1}{2}H_2O$, $2 + 3HNO_3$. *Lit.* bedeutend. — III, 772.
 2) Pikropseudoaconitin + H_2O (Veratrylpseudoaconin). *Sm.* 210° (199°). $(HCl, AuCl_3)$, $HBr + 3H_2O$, HNO_3 (*B.* 29, 855; *Soc.* 31, 356). — III, 775.
 C 66,7 — H 7,8 — O 20,9 — N 4,6 — M. G. 612.
- $C_{31}H_{48}O_8N_2$ 1) Lappaconitin. *Sm.* 205,1° (*C.* 1895 [1] 1184).
 C 81,3 — H 9,9 — O 3,2 — N 5,6 — M. G. 502.
- $C_{31}H_{48}O_9N_2$ 1) $\beta\beta$ -Diphenylhydrazid d. Behenolsäure. *Sm.* 104—105° (*B.* 25, 2670). — IV, 667.
 C 68,7 — H 8,8 — O 21,2 — N 2,3 — M. G. 603.
- $C_{31}H_{51}O_2N$ 1) Cevadillin. $(HCl, AuCl_3)$, (HJ, HgJ_2) (*Soc.* 33, 338). — III, 950.
- $C_{31}H_{51}N_4S_2$ 1) 4,4'-Biphenylendi(uns-Diisocamylthioharstoff). α -Modif. *Sm.* 162°; β -Modif. *Sm.* 123° (*B.* 27, 1560). — IV, 965.
- $C_{31}H_{50}O_8N_2$ C 70,8 — H 10,4 — O 13,9 — N 4,9 — M. G. 576.
 1) Samandarin. $2HCl$ (*Z.* 1867, 62). — III, 931.

C_{34} -Gruppe mit vier Elementen.

- $C_{34}H_{21}O_2N_2Cl$ 1) Verbindung (aus 1,4-Benzochinondiamidobenzoesäure) (*Bl.* [3] 13, 749). — III, 343.
- $C_{34}H_{21}O_2N_3Cl$ 1) Chlor-1-Naphtylat d. 8-[1-Naphtyl]amido-2-Methyl-5,10-Naphtdiazin-7-Carbonsäure (*B.* 31, 1787). — IV, 1186.
- $C_{34}H_{21}O_2N_2Br$ 1) Brom-1-Naphtylat d. 8-[1-Naphtyl]amido-2-Methyl-5,10-Naphtdiazin-7-Carbonsäure (*B.* 31, 1788). — IV, 1186.
- $C_{34}H_{20}O_2N_4S$ 1) Di[4-(1-Oxynaphtyl)azobenzyl]sulfid. *Sm.* 198° u. Zers. (*B.* 28, 1340). — IV, 1436.
 2) Di[4-(2-Oxynaphtyl)azobenzyl]sulfid. *Sm.* 237° (*B.* 28, 1340). — IV, 1436.
- $C_{34}H_{20}O_2N_3Cl$ 1) 4-(Chlor-4-Aethoxyphenylat) d. 6-Oxy-2,3-Diphenyl-1,4-Naphtisodiazin-6-Aethyläther (*B.* 27, 2361). — IV, 1093.
- $C_{34}H_{21}O_2N_2Fe$ 1) Urorubrohämatin + $8H_2O$ (*B.* 7, 1171). — III, 667.
- $C_{34}H_{20}O_2N_3Cl_2$ 1) Base (aus Morphin) (*Soc.* 26, 215). — III, 901.
- $C_{34}H_{20}O_2N_3Cl$ 1) Base (aus Morphin) (*Soc.* 26, 215). — III, 901.
- $C_{34}H_{20}O_2N_2Fe$ 1) Hämochromogen (*B.* 25 [2] 867).
- $C_{34}H_{20}O_2N_3Cl$ 1) Dipropyläther d. Verb. $C_{38}H_{17}O_2N_3Cl$ (*B.* 31, 1412).
- $C_{34}H_{20}O_2N_3Br$ 1) Dipropyläther d. Verb. $C_{38}H_{17}O_2N_3Br$ (*B.* 31, 1413).
- $C_{34}H_{20}O_2N_3Cl$ 1) Base (aus Morphin) (*Soc.* 26, 215). — III, 901.
- $C_{34}H_{21}O_2N_4J$ 1) Verbindung (aus Morphin). $2HJ$ (*Soc.* 25, 151, 504). — III, 901.
- $C_{34}H_{20}O_2N_3Br_3$ 1) Tribromlappaconitin. *Sm.* 98° (*C.* 1895 [1] 1184).
- $C_{34}H_{21}O_6NBr$ 1) Bromäthylat d. Veratrin (*Am.* 20, 371).

C_{36} -Gruppe mit einem Element.

- $C_{36}H_{60}$ C 87,5 — H 12,5 — M. G. 450.
 1) Illoen. *Sm.* 182—183° (*B.* 28 [2] 236).
- $C_{36}H_{72}$ C 85,4 — H 14,6 — M. G. 492.
 1) norm. Pentatriakontan. *Sm.* 74,7°; *Sd.* 331°₅ (*B.* 16, 1715). — I, 107.

C_{35} -Gruppe mit zwei Elementen.

- $C_{35}H_{70}O_2$ C 73,9 — H 3,5 — O 22,5 — M. G. 568.
 1) Tribenzoat d. 1,2,3-Trioxy-9,10-Anthrachinon. *Sm.* 207° (*M.* 18, 298).
 2) Tribenzoat d. 1,2,7-Trioxy-9,10-Anthrachinon. *Sm.* 183—185° (*J.* 1873, 452). — III, 436.

- $C_{35}H_{21}O_6$ C 73,7 — H 3,9 — O 22,4 — M. G. 570.
 1) $\alpha,2$ -Lakton d. 2-Oxy-4,2',4'-Tribenzoxyldiphenylmethan- α -Carbon-
 säure. Sm. 165° (Soc. 71, 1068).
- $C_{35}H_{22}O_9$ C 71,7 — H 3,7 — O 24,6 — M. G. 586.
 1) Tribenzoxyphlobaphen (A. 202, 277). — III, 588.
- $C_{35}H_{24}O$ C 91,3 — H 5,2 — O 3,5 — M. G. 460.
 1) Verbindung (aus Phenanthrenchinon u. Benzaldehyd). Sm. 329,5° (Soc. 37, 661). — III, 446.
- $C_{35}H_{24}O_1$ C 82,6 — H 4,7 — O 12,6 — M. G. 508.
 1) Dibenzolat d. Di[2-Oxynaphtyl]methan. Sm. 158—159° (B. 25, 3480). — II, 1152.
- $C_{35}H_{24}O_9$ C 71,4 — H 4,1 — O 24,5 — M. G. 588.
 1) Dibenzolat d. Katechuretine? (Bl. 4, 8). — III, 686.
 2) Tribenzolat d. Baptigenin. Sm. 208° (C. 1897 [2] 430).
- $C_{35}H_{24}N_4$ C 84,0 — H 4,8 — N 11,2 — M. G. 500.
 1) Base (aus 2,3,4,5-Tetraamido-1-Methylbenzolsulfat u. Benzil). Sm. 222 bis 225° (B. 23, 3218). — IV, 1306.
- $C_{35}H_{25}N$ C 91,5 — H 5,4 — N 3,0 — M. G. 459.
 1) Pentaphenylpyridin. Sm. 239—240° (B. 26, 440). — IV, 478.
- $C_{35}H_{26}N_2$ C 88,6 — H 5,5 — N 5,9 — M. G. 474.
 1) 1,1'-Benzylidendi[2-Phenylindol]. Sm. 262—263° (B. 21, 1074). — IV, 413.
- $C_{35}H_{26}O_2$ C 87,5 — H 5,8 — O 6,7 — M. G. 480.
 1) $\alpha\alpha$ -Diketo- $\alpha\beta\gamma\delta\epsilon$ -Pentaphenylpentan (Benzamaron). Sm. 217—218° (Z. 1871, 127; B. 21, 1356, 2935; 26, 437, 444). — III, 313.
 2) Isobenzamaron. Sm. 179—180° (B. 26, 437). — III, 313.
- $C_{35}H_{26}O_4$ C 82,0 — H 5,5 — O 12,5 — M. G. 512.
 1) Dibenzolat d. p -Dioxy- p -Dimethyltriphenylmethan. Sm. 91,5° (A. 257, 72). — II, 1152.
- $C_{35}H_{26}O_{11}$ C 67,3 — H 4,5 — O 28,2 — M. G. 624.
 1) Dibenzolat d. Katechin (Bl. 4, 6). — III, 686.
- $C_{35}H_{30}O_{17}$ C 58,2 — H 4,1 — O 37,7 — M. G. 722.
 1) Acetylderivat d. Podophylloquercetin. Sm. 180—182° (B. 24 [2] 646). — III, 645.
- $C_{35}H_{30}N_2$ C 87,9 — H 6,3 — N 5,8 — M. G. 478.
 1) Dibenzylamarin. Sm. 139—140°. HCl, (2HCl, PtCl₄ + 2H₂O), HJ, (HJ, J₂) (B. 13, 1420; 15, 2329; 18, 1853). — III, 24.
- $C_{35}H_{34}O_{18}$ C 63,4 — H 5,1 — O 31,4 — M. G. 662.
 1) Hexacetat d. Verb. $C_{21}H_{22}O_6$ (aus 3,5-Dioxy-1-Methylbenzol oder $C_{12}H_{10}O_3$). Sm. 185° (Am. 9, 135; Soc. 73, 401). — II, 962.
- $C_{35}H_{34}O_{17}$ C 57,9 — H 4,7 — O 37,4 — M. G. 726.
 1) Rubrophlobaphen (Z. 1870, 180). — III, 689.
- $C_{35}H_{34}N_4$ C 82,3 — H 6,7 — N 11,0 — M. G. 510.
 1) p -Di[4-Methylphenylamido]-1,4-Di[4-Methylphenylimido]-2-Methyl-1,4-Dihydrobenzol? (B. 17, 82). — IV, 1246.
- $C_{35}H_{36}N_5$ C 80,0 — H 6,7 — N 13,3 — M. G. 525.
 1) Toluidinschwarz (B. 11, 1097). — III, 676.
- $C_{35}H_{41}N$ C 88,4 — H 8,6 — N 2,9 — M. G. 475.
 1) p -Tri[4-Isopropylbenzyl]pyridin. Sm. 299—302° u. Zers. (A. 280, 70). — IV, 477.
- $C_{35}H_{41}N_2$ C 85,7 — H 8,6 — N 5,7 — M. G. 490.
 1) Benzyliden-3,5-Diisopropylindol. Sm. 162—165° u. Zers. (B. 21, 3435). — IV, 234.
- $C_{35}H_{52}O_2$ C 83,3 — H 10,3 — O 6,3 — M. G. 504.
 1) Benzolat d. Chironol. Sm. 186° (B. 28 [2] 1056).
 2) Benzolat d. Homocholesterin. Sm. 246° u. Zers. (G. 19, 211). — II, 1144.
- $C_{35}H_{52}O_6$ C 73,9 — H 9,2 — O 16,9 — M. G. 568.
 1) Verbindung (aus Lärchenschwammharz) (J. 1875, 862). — III, 560.
- $C_{35}H_{52}O_8$ C 82,7 — H 11,0 — O 6,3 — M. G. 508.
 1) Ehiretin. Sm. 52° (A. 178, 73). — III, 630.
- $C_{35}H_{56}O_4$ C 77,8 — H 10,4 — O 11,8 — M. G. 540.
 1) Elementaräure. Sm. 215°. K + 18H₂O, Ag (J. 1878, 983). — II, 1878.
- $C_{35}H_{56}O_{14}$ C 60,0 — H 8,0 — O 32,0 — M. G. 700.
 1) Digitalin (oder $C_4H_8O_4$) (B. 31, 2461).

- $C_{35}H_{56}O_{11}$ C 64,2 — H 8,9 — O 26,9 — M. G. 654.
 1) neutr. Pentaäthylester d. Cholecamphersäure (B. 19, 1525). — I, 727.
- $C_{35}H_{56}O_{14}$ C 59,9 — H 8,2 — O 31,9 — M. G. 702.
 1) Perseithheptabutytrat (A. ch. [6] 19, 13). — I, 424.
- $C_{35}H_{56}O_{22}$ C 42,4 — H 5,9 — O 51,7 — M. G. 990.
 1) Arabinoce (Soc. 45, 54). — I, 1101.
- $C_{35}H_{56}S$ 1) Verbindung (aus Asphalt). Sd. 225°. — III, 565.
 $C_{35}H_{56}O_4$ C 76,1 — H 12,3 — O 11,6 — M. G. 552.
 1) Tritriakontan- ϵ -Dicarbonsäure (Dicetylmalonsäure). Sm. 86—87°. Ag (A. 206, 364). — I, 691.
- $C_{35}H_{56}O_5$ C 73,9 — H 12,0 — O 14,1 — M. G. 568.
 1) Glycerindipalmitin. Sm. 59° (61°) (A. ch. [3] 41, 240; Am. 6, 226). — I, 444.
- $C_{35}H_{70}O$ C 83,0 — H 13,8 — O 3,2 — M. G. 506.
 1) Stearon. Sm. 87,8° (88,4°) (J. 1855, 514; B. 15, 1715; Soc. 57, 538). — I, 1006.
- $C_{35}H_{70}O_2$ C 80,5 — H 13,4 — O 6,1 — M. G. 522.
 1) Isomyylester d. Melissinsäure $C_{10}H_{20}O_2$. Sm. 69° (A. 183, 356). — I, 449.

C_{35} -Gruppe mit drei Elementen.

- $C_{35}H_{11}O_{10}N$ C 68,5 — H 3,1 — O 26,1 — N 2,3 — M. G. 613.
 1) Tribenzoat d. *p*-Nitro-1,2,3-Trioxy-9,10-Anthrachinon. Sm. 209° (M. 18, 299).
- $C_{35}H_{21}O_7N_2$ C 72,2 — H 3,8 — O 19,2 — N 4,8 — M. G. 582.
 1) 1,5-Dibenzoat d. 1-Benzoylhydroxylamido-5-Hydroxylamido-9,10-Anthrachinon. Sm. 228° (B. 29, 2936).
- $C_{35}H_7ON_4$ C 81,4 — H 4,6 — O 3,1 — N 10,9 — M. G. 516.
 1) Verbindung (aus Benzil). Sm. 242° (B. 25, 283). — III, 285.
- $C_{35}H_{25}ON_5$ C 85,7 — H 5,3 — O 3,3 — N 5,7 — M. G. 490.
 1) 2-Benzoyl-1,3,4,6-Tetraphenyl-1,2-Dihydro-1,2-Diazin. Sm. 139 bis 140° (A. 289, 328). — IV, 1082.
- $C_{35}H_{25}O_2N_2$ C 83,0 — H 5,1 — O 6,3 — N 5,5 — M. G. 506.
 1) Dibenzoylamarin. Sm. oberh. 360° (B. 18, 3083). — III, 25.
- $C_{35}H_{25}O_3N_4$ C 76,3 — H 4,7 — O 8,7 — N 10,2 — M. G. 550.
 1) Verbindung (aus d. 3-[2-Oxybenzyliden]amidobenzol-1-Carbonsäure) (A. 218, 188). — III, 74.
- $C_{35}H_{27}O_4N$ C 80,0 — H 5,1 — O 12,2 — N 2,7 — M. G. 525.
 1) *p*-Nitro- $\alpha\epsilon$ -Diketo- $\alpha\beta\gamma\delta\epsilon$ -Pentaphenylpentan (m-Nitrobenzamaron). Sm. 220° (A. 275, 58). — III, 313.
- $C_{35}H_{27}O_5N_5$ C 68,5 — H 4,4 — O 15,7 — N 11,4 — M. G. 613.
 1) Verbindung (aus 2-Amidobenzol-1-Carbonsäure) (J. pr. [2] 36, 330). — II, 1246.
- $C_{35}H_{29}ON_2$ C 85,4 — H 5,7 — O 3,2 — N 5,7 — M. G. 492.
 1) Benzylbenzoylamarin (B. 18, 3064). — III, 25.
 2) isom. Benzoylbenzoylamarin. Sm. 318° (B. 18, 3064). — III, 25.
- $C_{35}H_{29}O_2N_3$ C 80,1 — H 5,3 — O 9,2 — N 5,3 — M. G. 524.
 1) Imabenzil. Sm. 194° (J. pr. [1] 35, 461; B. 18, 891; A. 228, 343; Soc. 49, 476). — III, 283.
- $C_{35}H_{29}O_3N_4$ C 74,0 — H 4,9 — O 11,3 — N 9,8 — M. G. 568.
 1) Verbindung (aus Aceton u. 1-Phenylazo-2,4-Dioxynaphtalin). Sm. 245 bis 250° (B. 21, 2205). — IV, 1449.
- $C_{35}H_{29}O_4N_3$ C 77,9 — H 5,4 — O 8,9 — N 7,8 — M. G. 539.
 1) α -Benzoyldi[2-Benzoylamidobenzyl]amin. Sm. 218° (J. pr. [2] 55, 362). — IV, 628.
- $C_{35}H_{29}O_5N_2$ C 75,7 — H 5,2 — O 11,5 — N 7,6 — M. G. 555.
 1) 3'-Nitro-5',5'-Di[Benzoylamido]-2',2'-Dimethyltriphenylmethan. Sm. 146° (B. 21, 3211). — IV, 1047.
 2) 4'-Nitro-5',5'-Di[Benzoylamido]-2',2'-Dimethyltriphenylmethan. Sm. 152° (B. 21, 3208). — IV, 1048.
- $C_{35}H_{29}N_2Cl$ 1) Chlorbenzylat d. Benzyllophin. Sm. 235°. 2 + ZnCl₂ (Soc. 67, 36). — III, 27.

- $C_{25}H_{30}ON_2$ C 85,0 — H 6,1 — O 3,2 — N 5,7 — M. G. 494.
 1) Dibenzyllophanammoniumhydrat. Sm. 170°. Salze siehe (Soc. 67, 36). — III, 27.
- $C_{25}H_{30}O_2N_2$ C 82,3 — H 5,9 — O 6,3 — N 5,5 — M. G. 510.
 1) 6',6'-Di[Benzoylamido]-3',3'-Dimethyltriphenylmethan. Sm. 196° (J. pr. [2] 36, 261). — IV, 1047.
- $C_{25}H_{31}O_2N_4$ C 75,6 — H 5,7 — O 8,6 — N 10,0 — M. G. 556.
 1) Asurin. Sm. 250,5°. Pikrat (B. 11, 598). — IV, 620.
- $C_{25}H_{33}O_2N_2$ C 76,8 — H 6,0 — O 14,6 — N 2,6 — M. G. 547.
 1) Saliretasin. Zers. über 300° (B. 27, 1802). — II, 1109.
- $C_{25}H_{30}O_2N_2$ C 74,5 — H 6,4 — O 14,2 — N 4,9 — M. G. 564.
 1) Diäthylester d. $\alpha\alpha$ -Di[Phenylamido]- γ -Oxy- $\alpha\alpha$ -Diphenyl- β -Penten- $\beta\delta$ -Dicarbonsäure. Sm. 139° (B. 31, 1391).
 2) Diäthylester d. $\alpha\alpha$ -Di[Phenylamido]- γ -Keto- $\alpha\alpha$ -Diphenylpentan- $\beta\delta$ -Dicarbonsäure. Sm. 117–118° (B. 31, 1390).
- $C_{25}H_{36}O_6N_2$ C 66,9 — H 5,7 — O 22,9 — N 4,5 — M. G. 628.
 1) Acetylphloridsinamilid (A. 156, 10). — III, 601.
- $C_{25}H_{38}O_6N_2$ C 72,1 — H 6,5 — O 16,5 — N 4,8 — M. G. 582.
 1) Monomethyläther d. Pseudomorphin + 7 H₂O. Sm. 257–260°. 2HCl + 4 H₂O, (2HCl, PtCl₄), H₂SO₄ (A. 294, 211).
- $C_{25}H_{40}O_6N_4$ C 68,6 — H 6,5 — O 15,7 — N 9,1 — M. G. 612.
 1) Ergotin. HCl, HBr (A. ch. [5] 17, 493; J. 1877, 943, 944). — III, 881.
- $C_{25}H_{45}O_6N_3$ C 69,6 — H 7,5 — O 15,9 — N 7,0 — M. G. 603.
 1) Yohimbenin. Sm. 135° (C. 1899 [1] 530).
- $C_{25}H_{45}O_{14}N$ C 62,6 — H 6,7 — O 28,6 — N 2,1 — M. G. 671.
 1) Acetylpaconitin. Sm. 180–181° (Soc. 33, 324). — III, 773.
- $C_{25}H_{47}O_{13}N$ C 61,0 — H 6,8 — O 30,2 — N 2,0 — M. G. 689.
 1) Diacetylbenzoylaconin (Soc. 67, 459). — III, 774.
- $C_{25}H_{44}O_2N_3$ 1) Capsacutin (C. 1897 [2] 593).
- $C_{25}H_{40}O_4N_3$ 1) Imperialin = (C₂₅H₄₀O₄N₃). Sm. 254°. HCl, (2HCl, PtCl₄), (HCl, AuCl₃) (B. 21, 3284). — III, 887.
- $C_{25}H_{67}O_7Cl$ 1) Glycerindipalmitochlorhydrin. Sm. 44° (A. ch. [3] 41, 240; B. 9, 1933). — I, 444.
- $C_{25}H_{86}OBR_2$ 1) Dibromstearon. Sm. 72° (J. 1855, 517). — I, 1006.
- $C_{25}H_{80}O_2N_2$ C 76,2 — H 12,5 — O 8,7 — N 2,5 — M. G. 551.
 1) Aesthesin (J. pr. [2] 25, 27). — III, 574.
- $C_{25}H_{11}ON$ C 80,6 — H 13,6 — O 3,1 — N 2,7 — M. G. 521.
 1) Stearonoxim. Sm. 62–63° (M. 5, 243). — I, 1031.
- $C_{25}H_{12}ON_2$ C 78,4 — H 13,4 — O 3,0 — N 5,2 — M. G. 536.
 1) sym. Diheptadekylharnstoff. Sm. 75° (B. 21, 2491). — I, 1300.
- $C_{25}H_{17}N_4S$ 1) sym. Diheptadekylthioharnstoff. Sm. 94° (B. 21, 2490). — I, 1321.

C₂₅-Gruppe mit vier Elementen.

- $C_{25}H_{27}O_2N_2Cl$ 1) Benzoylamarinbenzoylchlorid. Sm. 312° (B. 18, 3082). — III, 25.
 $C_{25}H_{29}ON_2Cl$ 1) Benzylamarinbenzoylchlorid. Sm. 340–350° (B. 18, 3084). — III, 25.
 2) Chlorbenzylat d. Benzoylamarin. Sm. 351° (B. 18, 3083). — III, 25.
- $C_{25}H_{34}O_6N_2S_2$ 1) Verbindung (aus d. 4-Aethoxyphenylamid d. Benzolsulfonsäure). Sm. 158° (A. 265, 188). — II, 721.
- $C_{25}H_{42}O_2N_2S$ 1) α -Di-d-Cocainthioharnstoff. Sm. 63° (B. 27, 1885). — III, 868.
- $C_{25}H_{50}O_{11}NJ$ 1) Jodmethylat d. Acetylbenzoylaconin (J. d. Aconitin). Sm. 219,5° (Soc. 61, 404). — III, 773.
- $C_{25}H_{54}O_2NJ$ 1) Jodallylat d. Veratrin + H₂O. Sm. 235–236° (Am. 20, 372).

C₂₅-Gruppe mit fünf Elementen.

- $C_{25}H_{35}O_2N_4ClFe$ 1) β -Hämin. — IV, 1619.

C₃₆-Gruppe mit zwei Elementen.

- C₃₆H₁₆O₄ C 84,4 — H 3,1 — O 12,5 — M. G. 512.
1) Verbindung (aus Dianhydrobisdiketodihydroinden). Sm. noch nicht bei 320° (B. 31, 2069, 2937).
- C₃₆H₂₂O₇ C 76,3 — H 3,9 — O 19,8 — M. G. 566.
1) Säure (aus 2-[2-Oxynaphtyl]benzol-1-Carbonsäure). Sm. 149° (B. 16, 305). — II, 2067.
- C₃₆H₂₂O₈ C 74,2 — H 3,8 — O 22,0 — M. G. 582.
1) Tribenzoat d. Apigenin. Sm. 210–212° (Soc. 71, 809).
2) Tribenzoat d. 7,8-Dioxy-2-[3-Oxyphenyl]-1,4-Benzopyron. Sm. 173° (B. 29, 2434).
- C₃₆H₂₇O₉ C 72,2 — H 3,7 — O 24,1 — M. G. 598.
1) Dipulvinsäure. Sm. 211° (B. 30, 1984; J. pr. [2] 57, 440).
- C₃₆H₂₄O₇ C 76,1 — H 4,2 — O 19,7 — M. G. 568.
1) Dibenzoat d. α-Orcinphthalein. Sm. 284–285° (B. 29, 2632).
2) Dibenzoat d. β-Orcinphthalein. Sm. 244–245° (B. 29, 2637).
- C₃₆H₂₆O₆ C 78,0 — H 4,7 — O 17,3 — M. G. 554.
1) Dibenzoat d. o-Kresolphthalein. Sm. 195–196° (A. 202, 157). — II, 1987.
- C₃₆H₂₆O₈ C 73,7 — H 4,4 — O 21,8 — M. G. 586.
1) Dibenzoat d. Brenzkatechinphthaleindimethyläther (B. 22, 2199). — II, 2065.
- C₃₆H₂₆O₁₀ C 60,5 — H 3,6 — O 35,9 — M. G. 714.
1) Verbindung (aus Lokansäure). Ba (B. 18, 3426). — III, 597.
- C₃₆H₂₇N₃ C 86,2 — H 5,4 — N 8,4 — M. G. 501.
1) Nigrosin. HCl (J. 1879, 1161). — III, 678.
- C₃₆H₂₇N₅ C 81,7 — H 5,1 — N 13,2 — M. G. 529.
1) Phenylamidophenylindulin. Sm. 245–250°. HCl (A. 266, 259; B. 29, 371). — IV, 1326.
2) Anilidophenylamidophenylindulin (oder C₄₅H₃₃N₅). Sm. 286–288°. HCl, HBr (Soc. 43, 117; A. 266, 261; B. 29, 370). — IV, 1327.
3) Phenylamidophenylmauvein. Sm. 202° u. Zers. (A. 286, 207). — IV, 1285.
4) Verbindung (aus 2-Amidodiphenylamin). Sm. 258–259° (B. 29, 1606). — IV, 1280.
- C₃₆H₂₆O₅ C 85,0 — H 5,5 — O 9,4 — M. G. 508.
1) Verbindung (aus Desoxybenzofin). Sm. 198° (A. 275, 81). — III, 226.
- C₃₆H₂₆O₆ C 77,7 — H 5,0 — O 17,3 — M. G. 556.
1) Tribensoylderivat d. αβγ-Trioxypropan-αγ-Diphenyläther. Fl. (B. 19, 66). — II, 1146.
- C₃₆H₂₄N₆ C 79,4 — H 5,2 — N 15,4 — M. G. 544.
1) Base (aus Anilidophenylchinondiimid). Sm. 235° (B. 26, 384). — IV, 1332.
- C₃₆H₂₇N₅ C 81,3 — H 5,5 — N 13,2 — M. G. 531.
1) Phenylanilinschwarz. HCl, (2HCl, PtCl₄), HJ, Pikrat (B. 9, 1168; II, 1096). — III, 676.
- C₃₆H₃₀O₅ C 84,7 — H 5,9 — O 9,4 — M. G. 510.
1) Diacetyl-α-Isodynopinakolin. Sm. 98° (Bl. [3] 15, 1177).
- C₃₆H₃₀O₈ C 73,2 — H 5,1 — O 21,7 — M. G. 590.
1) Diäthylester d. αδ-Dibenzoxy-αδ-Diphenyl-αγ-Butadien-βγ-Dicarbonsäure. Sm. 204° (B. 30, 1997).
- C₃₆H₃₀O₁₃ C 64,5 — H 4,5 — O 31,0 — M. G. 670.
1) Anhydrid d. Katechugerbsäure C₃₆H₁₄O₁₃ (M. 2, 551). — III, 687.
2) Anhydrid d. α-Urninsäure. Sm. 189° (A. 284, 160). — II, 2057.
- C₃₆H₃₀O₁₆ C 60,2 — H 4,2 — O 35,6 — M. G. 718.
1) Fiethinglykosid. Sm. 215–217° (Soc. 71, 1196).
- C₃₆H₃₁O₆ C 77,1 — H 5,7 — O 17,1 — M. G. 560.
1) Isobutylanhydrodibenzilacetessigsäure. Sm. 237°. Ba, Ag (Soc. 69, 740).
2) Äthylester d. Äthylanhydrodibenzilacetessigsäure. Sm. 167° (Soc. 69, 738).

- $C_{36}H_{32}O_{10}$ C 69,2 — H 5,1 — O 25,6 — M. G. 624.
1) Tetrabenzoat d. Inosiddimethyläther. Sm. 250° (A. ch. [6] 12, 568). — II, 1143.
- $C_{36}H_{32}O_{14}$ C 62,8 — H 4,6 — O 32,6 — M. G. 688.
1) Anhydrid d. Katechugersäure $C_{36}H_{34}O_{18}$ (M. 2, 551). — III, 687.
- $C_{36}H_{34}O_8$ C 72,7 — H 5,7 — O 21,5 — M. G. 594.
1) Dibenzoat d. Aloresinotannol (C. 1898 [2] 118).
C 61,2 — H 4,8 — O 34,0 — M. G. 706.
1) Katechugersäure (M. 2, 551). — III, 687.
- $C_{36}H_{34}O_{17}$ C 58,5 — H 4,6 — O 36,9 — M. G. 738.
1) Lävulose-Phloroglucid. Zers. bei 250° (B. 28, 26; C. 1896 [2] 485).
C 55,0 — H 4,3 — O 40,7 — M. G. 786.
- $C_{36}H_{34}O_{20}$ 1) Hexacetylcarmine Säure. Sm. 210° u. Zers. (B. 30, 1760, 1765).
C 80,4 — H 6,5 — N 13,0 — M. G. 537.
- $C_{36}H_{36}N_2$ 1) Phenyltetra[2-Methylphenyl]diguamid. Sm. 111°. (2HCl, PtCl₄) (A. 288, 367).
C 76,6 — H 6,4 — O 17,0 — M. G. 564.
- $C_{36}H_{36}O_8$ 1) Disoegenolacetophenon. Sm. 119—120° (B. 27, 2463). — III, 153.
C 61,0 — H 5,1 — O 33,9 — M. G. 708.
- $C_{36}H_{36}O_{15}$ 1) Gyrophorsäure (A. 70, 218; 300, 356). — II, 1754.
C 53,7 — H 4,4 — O 41,8 — M. G. 804.
- $C_{36}H_{36}O_{21}$ 1) Lokansäure. NH₄, Ba, Pb (B. 18, 3421). — III, 597.
C 78,3 — H 6,5 — N 13,2 — M. G. 552.
- $C_{36}H_{36}N_6$ 1) Verbindung (aus Phenylhydrazoncarbodi-p-Tolylamin). Sm. 163°. 3 + 4HCl, (3 + 4 HCl + 2 PtCl₄) (B. 21, 2276). — IV, 1226.
C 80,9 — H 7,1 — O 12,0 — M. G. 524.
- $C_{36}H_{36}O_4$ 1) Dibenzoat d. Dithymoläthan. Sm. 190° (B. 11, 288). — II, 1152.
C 55,8 — H 4,9 — O 39,3 — M. G. 774.
- $C_{36}H_{38}O_{19}$ 1) d-Galaktose-Phloroglucid. Zers. bei 210° (B. 28, 26).
2) d-Mannose-Phloroglucid (B. 28, 26).
- $C_{36}H_{40}O_{16}$ 1) Pikrotoxin, siehe $C_{15}H_{15}O_8$. — III, 643.
 $C_{36}H_{42}O_8$ C 75,8 — H 7,4 — O 16,8 — M. G. 570.
- 1) Helleborin (oder $C_8H_{10}O$). Sm. oberh. 250° u. Zers. (A. 135, 61; C. 1897 [2] 764). — III, 593.
C 61,4 — H 6,8 — O 31,8 — M. G. 704.
- $C_{36}H_{46}O_{14}$ 1) Anhydrid d. Betulinamarsäure. Sm. 181° (A. 182, 375). — III, 621.
C 49,0 — H 5,6 — O 45,4 — M. G. 882.
- $C_{36}H_{50}O_{26}$ 1) Caramelen. Ba(O), PbO (A. ch. [3] 52, 365). — I, 1106.
C 86,9 — H 10,3 — N 2,8 — M. G. 497.
- $C_{36}H_{51}N$ 1) Cholesteryl-1-Naphtylamin. Sm. 202° (J. r. 10, 356). — II, 600.
C 83,7 — H 10,1 — O 6,2 — M. G. 516.
- $C_{36}H_{53}O_7$ 1) Cinnamylat d. Cholesterin. Sm. 149° (H. 22, 403).
C 58,4 — H 7,0 — O 34,6 — M. G. 740.
- $C_{36}H_{58}O_{10}$ 1) Betulinamarsäure. Ca₃, Pb₃, Cu₃ (A. 182, 375). — III, 621.
C 83,4 — H 10,4 — O 6,2 — M. G. 518.
- $C_{36}H_{54}O_2$ 1) Cinnamylat d. Koprosterin. Sm. 169° (H. 22, 401).
C 74,2 — H 9,3 — O 16,5 — M. G. 582.
- $C_{36}H_{54}O_6$ 1) Betulinsäure. Sm. 195°. Pb₂ (A. 182, 375). — III, 621.
2) Triacetat d. Gentiol. Sm. 175—180° (M. 12, 483). — III, 633.
C 53,6 — H 6,7 — O 39,7 — M. G. 806.
- $C_{36}H_{54}O_{30}$ 1) Dekäthylester d. Hexan- $\alpha\beta\gamma\delta\epsilon\zeta$ -Dekacarbonsäure. Fl. (B. 21, 2115). — I, 873.
- $C_{36}H_{54}S$ 1) Verbindung (aus Asphalt). Sd. 265°. — III, 565.
 $C_{36}H_{55}Br_2$ 1) Verbindung (aus Sterosin) (A. 189, 356). — III, 562.
 $C_{36}H_{56}O_8$ C 74,0 — H 9,6 — O 16,4 — M. G. 584.
- 1) Diäthylester d. Chinovasäure. Sm. 127—130° (B. 17, 869). — II, 1860.
C 55,7 — H 7,2 — O 37,1 — M. G. 776.
- $C_{36}H_{56}O_{18}$ 1) Cyclamin, siehe $C_{36}H_{54}O_{10}$. — III, 579.
C 54,5 — H 7,1 — O 38,4 — M. G. 792.
- $C_{36}H_{56}O_{19}$ 1) Cyclamsäure (J. 1867, 2305). — III, 579.
- $C_{36}H_{56}S$ 1) Verbindung (aus Asphalt). Sd. 233°. — III, 565.
 $C_{36}H_{58}O_2$ C 82,8 — H 11,1 — O 6,1 — M. G. 522.
- 1) Desoxyphoronpinakon. Sm. 194—195° (A. 296, 323).
2) Anhydrid d. Betulin. — III, 621.

- $C_{30}H_{30}O_3$ C 80,3 — H 10,8 — O 8,9 — M. G. 538.
 1) α -Storesin. Sm. 160—168°. K (A. 188, 208; 189, 356; B. 15, 2624). — III, 562.
 2) β -Storesin. Sm. 140—145°. K (A. 188, 209, 210). — III, 562.
- $C_{30}H_{30}O_{15}$ C 59,2 — H 7,9 — O 32,9 — M. G. 730.
 1) Verbindung (aus Caicin) (Z. 1867, 538). — III, 573.
- $C_{30}H_{30}O_{19}$ C 45,3 — H 6,1 — O 48,6 — M. G. 954.
 1) Flohsamenschleim (A. 51, 48; 175, 219; 248, 143). — I, 1103.
- $C_{30}H_{30}S$ 1) Verbindung (aus Asphalt). Sd. 221°. — III, 565.
- $C_{30}H_{30}O_3$ C 82,4 — H 11,4 — O 6,2 — M. G. 524.
 1) α -Lactucerosol + 2H₂O. Sm. 166—181° (A. 234, 243; 244, 270). — II, 1067.
 2) β -Lactucerosol + 2H₂O (A. 234, 249). — II, 1068.
 C 80,0 — H 11,1 — O 8,9 — M. G. 540.
- $C_{30}H_{30}O_5$ 1) Caperin. Sm. 243° (B. 30, 365; J. pr. [2] 57, 431).
 C 75,5 — H 10,5 — O 14,0 — M. G. 572.
- $C_{30}H_{30}O_{30}$ 1) Verbindung (aus Dammarharz). K₃. — III, 555.
 C 44,4 — H 6,2 — O 49,4 — M. G. 972.
- $C_{30}H_{30}O_{31}$ 1) Fongose (Bl. [3] 17, 926).
 C 43,7 — H 6,1 — O 50,2 — M. G. 988.
- $C_{30}H_{30}O_7$ 1) Oxycellulose (A. 267, 368; siehe auch A. 272, 289; Soc. 43, 22).
 C 71,3 — H 10,2 — O 18,5 — M. G. 606.
- $C_{30}H_{30}O_{31}$ 1) Verbindung (aus Dammarharz). — III, 555.
 C 43,6 — H 6,3 — O 50,1 — M. G. 970.
- 1) Achroodextrin (oder C₆H₁₀O₅) (H. 2, 188; B. 26, 2537, 2545). — I, 1090.
 2) Amylodextrin + H₂O (Z. 1869, 446; 1870, 340; J. 1874, 881; H. 2, 188; J. pr. [2] 28, 497; A. 210, 299; B. 26, 2537, 2544). — I, 1089.
 3) Cyclamose (C. 1897 [1] 230).
 4) Inulin. + 3BaO (B. 26 [2] 233).
 5) Laktosin + H₂O (B. 17, 686). — I, 1104.
 6) α -Maltodextrin (Soc. 71, 514).
- $C_{30}H_{31}O_8$ C 69,2 — H 10,2 — O 20,5 — M. G. 624.
 1) Phyllinsäure (Bl. 28, 148). — II, 2112.
- $C_{30}H_{30}O_5$ C 74,7 — H 11,4 — O 13,8 — M. G. 578.
 1) Betuloretinsäure. Sm. 94°. Ag. — I, 778.
 2) einbas. Diricininsäure (Bl. [3] 11, 280; B. 24 [2] 72).
 3) zweibas. Diricininsäure. Fl. (Bl. [3] 11, 282).
 C 43,5 — H 6,6 — O 49,9 — M. G. 994.
- $C_{30}H_{30}O_{31}$ 1) Gentianose. Sm. 210° (207—209°) (H. 6, 137; Bl. [3] 19, 200). — I, 1071.
- $C_{30}H_{30}O_5$ C 74,5 — H 11,7 — O 13,8 — M. G. 580.
 1) Ceropinsäure? Ba + H₂O (J. 1853, 570). — I, 772.
 C 76,3 — H 12,4 — O 11,3 — M. G. 566.
- $C_{30}H_{70}O_4$ 1) Dicotylester d. Bernsteinsäure. Sm. 58° (J. 1859, 406). — I, 656.
 C 74,2 — H 12,0 — O 13,7 — M. G. 582.
- $C_{30}H_{70}O_5$ 1) Anhydrid d. β -Oxyheptadekan- α -Carbonsäure. Fl. (J. r. 18, 47). — I, 579.
 C 70,4 — H 11,4 — O 18,2 — M. G. 614.
- $C_{30}H_{70}O_7$ 1) Anhydrodioxystearinsäure. Sm. 50—55° (Bl. [3] 13, 240).
 2) Verbindung (aus Dioxystearinsäure u. Ricinusöl). Sm. 70—73° (Bl. [3] 11, 283).
 C 83,1 — H 13,8 — O 3,1 — M. G. 520.
- $C_{34}H_{77}O$ 1) Alkohol (aus Cochenillefett). Sm. 66,6° (M. 6, 893). — I, 256.

C₃₆-Gruppe mit drei Elementen.

- $C_{36}H_6O_{27}N_4$ C 40,5 — H 0,6 — O 40,5 — N 18,4 — M. G. 1066.
 1) Salpetersaures Tetrazoresorufin (A. 162, 283, siehe auch B. 17, 1865; 18, 587). — II, 934.
- $C_{36}H_{10}O_7N_4$ C 69,7 — H 3,2 — O 18,1 — N 9,0 — M. G. 620.
 1) Verbindung (aus 1,4-Dioxybenzol-2,3,5,6-Tetracarbonsäureanhydrodi-phenylhydrazid). Sm. 140° (A. 258, 280). — IV, 733.
- $C_{36}H_{21}O_7Cl_{13}$ 1) Tridekachlorälvulosephloroglucid (C. 1896 [2] 485).
- $C_{36}H_{21}O_7Br_{11}$ 1) Undekabromlävulosephloroglucid (C. 1896 [2] 485).

- $C_{26}H_{24}O_2N_6$ C 75,5 — H 4,2 — O 5,6 — N 14,7 — M. G. 572.
 1) β -Naphtholazo-p-Benzolazo- α -Naphthalinazo- β -Naphthol. Sm. oberh. 295° (Soe. 43, 437). — IV, 1439.
- $C_{26}H_{24}O_{10}S_2$ 1) Verbindung (aus Rubbadin) (B. 25, 1892). — II, 658.
 $C_{28}H_{22}O_{10}N_3$ C 65,5 — H 3,8 — O 24,3 — N 6,4 — M. G. 659.
 1) Triphenylamidoformiat d. Quercetin. Sm. 200—205° (B. 18, 2609). — III, 605.
- $C_{16}H_{26}O_2N_4$ C 74,7 — H 4,5 — O 11,1 — N 9,7 — M. G. 578.
 1) Diacetat d. 1,1'-Dioxy-4,4'-Diphenylazo-2,2'-Binaphthyl. Sm. 264 bis 265° (B. 30, 2661). — IV, 1428.
 C 83,5 — H 5,2 — O 3,1 — N 8,1 — M. G. 517.
- $C_{30}H_{27}ON_3$ 1) Phtalylidiphenylaspartid (2 Modifik.). α -Modif. Sm. 273°; β -Modif. Sm. 285—286° (G. 16, 19). — II, 1812.
- $C_{28}H_{27}O_2Cl_2$ 1) Tetrabenzosäure d. Chloralose. Sm. 138° (Bl. [3] 11, 38). — II, 1143.
 2) Tetrabenzosäure d. Parachloralose (Bl. [3] 11, 41).
 C 83,1 — H 5,4 — O 6,1 — N 5,4 — M. G. 520.
- $C_{28}H_{28}O_2N_2$ 1) α - β -Di[Benzoyl-2-Naphtylamido]äthan. Sm. 202—203° (B. 25, 3270). — II, 1169.
 C 76,1 — H 4,9 — O 14,1 — N 4,9 — M. G. 568.
- $C_{28}H_{28}O_2N_2$ 1) Benzosäure d. α -Dibenzoylamido- β -[Benzoyl-2-Oxyphenylamido]äthan. Sm. 63—65° (B. 27, 932). — II, 1176.
- $C_{28}H_{27}O_4N_4$ C 70,6 — H 4,6 — O 15,7 — N 9,1 — M. G. 612.
 1) Verbindung (aus Benzoylamidoessigsäureäthylester). Ca, Ba (B. 22, 1961; 25, 1570). — II, 1186.
- $C_{38}H_{28}O_7N_{14}$ C 54,0 — H 3,5 — O 18,0 — N 24,5 — M. G. 800.
 1) Hydrimidotetracososorufin + H₂O (A. 162, 287, siehe auch B. 18, 588). — II, 934.
- $C_{38}H_{29}O_7N_{14}$ C 76,2 — H 5,1 — O 11,3 — N 7,4 — M. G. 567.
 1) 1,1,1-Trinaphthylamid d. Citronensäure. Sm. 129° (B. 19, 2617). — II, 612.
 2) 2,2,2-Trinaphthylamid d. Citronensäure. Sm. 215° (B. 19, 2615). — II, 621.
- $C_{28}H_{29}O_{10}N_3$ C 65,2 — H 4,4 — O 24,1 — N 6,3 — M. G. 663.
 1) Tetrabenzoyldisuccinimidodihydroxamsäure. Sm. 123° (B. 24, 3437). — II, 1210.
- $C_{28}H_{30}ON_4$ C 80,9 — H 5,6 — O 3,0 — N 10,5 — M. G. 534.
 1) Acetylderivat d. $\alpha\delta$ -Di[Phenylhydrason] $\alpha\beta\delta$ -Triphenyl- β -Buten. Sm. 110—120° u. Zers. (A. 269, 127). — IV, 786.
- $C_{28}H_{30}OP_7$ 1) Oxyd (aus Triphenyloxyphosphoniumhydrat). Sm. 153,5°; Sd. oberh. 360° (B. 15, 803; 18, 2120; A. 229, 305). — IV, 1659.
- $C_{38}H_{30}O_2N_4$ C 78,5 — H 5,4 — O 5,8 — N 10,2 — M. G. 550.
 1) 2,2'-Di[2-Oxy-1-Naphtylazo]-3,5,3',5'-Tetramethylbiphenyl (B. 28, 2802). — IV, 1439.
- $C_{38}H_{30}O_4N_4$ C 78,0 — H 5,4 — O 11,5 — N 5,1 — M. G. 554.
 1) 2-Nitrophenyl-di[β -Benzoyl- α -Phenyläthyl]amin (Dibenzalacetophenon-2-Nitranilin). Sm. 243° (B. 31, 351).
 2) 3-Nitrophenyl-di[β -Benzoyl- α -Phenyläthyl]amin. Sm. 238—240° u. Zers. (B. 31, 351).
 3) 4-Nitrophenyl-di[β -Benzoyl- α -Phenyläthyl]amin. Sm. 251—252° (B. 31, 351).
- $C_{38}H_{30}O_4N_4$ 1) Isatinblau? Zers. bei 230° (B. 24, 1369). — IV, 16.
 $C_{38}H_{30}O_4N_4$ C 71,7 — H 5,0 — O 18,6 — N 4,6 — M. G. 602.
 1) Benzylidenechininoxinsäure. Sm. 270°. Ag₂ (A. 276, 280). — IV, 362.
- $C_{38}H_{30}O_6N_4$ C 65,2 — H 4,5 — O 21,8 — N 8,5 — M. G. 662.
 1) Hydrodiacososorufin. 3HCl (A. 162, 279).
- $C_{38}H_{31}O_{12}N_3$ C 61,8 — H 4,7 — O 27,5 — N 6,0 — M. G. 466.
 1) Triäthylester d. Tricarbanilidophloroglucintricarbonsäure. Zers. bei 155° (Sm. 195°) (B. 23, 271). — II, 2089.
 C 73,0 — H 6,1 — O 16,2 — N 4,7 — M. G. 592.
- $C_{38}H_{36}O_6N_7$ 1) Tetraäthylbensidindiphtalsäure. Ag₂ (A. 258, 365). — IV, 967.
 C 66,7 — H 5,6 — O 14,8 — N 12,9 — M. G. 648.
- $C_{38}H_{36}O_6N_8$ 1) Tri[Phthalylpiperazin] (J. pr. [2] 53, 22).
 C 71,3 — H 6,3 — O 13,2 — N 9,2 — M. G. 606.
- $C_{38}H_{38}O_6N_4$ 1) Tetracetylderivat d. Base C₂₈H₁₈ON₄ (aus Benzylenimid) (B. 28, 1652).

- $C_{16}H_{18}O_4N_2$ C 56,2 — H 5,1 — O 33,3 — N 5,4 — M. G. 769.
1) Säure (aus *Polyporus igniarius*) (A. 275, 91).
- $C_{16}H_{10}O_6N_2$ C 72,5 — H 6,7 — O 16,1 — N 4,7 — M. G. 596.
1) Dimorphinäthylenäther. Sm. 188° (C. 1899 [1] 705).
2) Diodäthin (Aethylenäther d. Morphin). Zers. oberh. 200° (A. ch. [5] 27, 281). — III, 908.
- $C_{16}H_{16}O_7N_2$ C 70,6 — H 6,5 — O 18,3 — N 4,6 — M. G. 612.
1) Acetyldimorphin. (2HCl, PtCl₄) (Soc. 27, 1038). — III, 899.
- $C_{16}H_{14}O_6N_2$ C 72,2 — H 7,0 — O 16,0 — N 4,7 — M. G. 598.
1) Dicoceïn + 2H₂O. 2HCl + 6H₂O (Soc. 25, 506; 28, 312, 696; A. 77, 357). — III, 906.
- $C_{16}H_{14}O_{10}N_7$ C 58,9 — H 5,8 — O 21,8 — N 13,4 — M. G. 733.
1) Uromelanin (J. 1868, 828; H. 8, 89; Bt. 51, 159). — III, 666.
- $C_{16}H_{14}O_4S_2$ 1) Verbindung (aus Thiophenol u. Dehydrocholsäure). Sm. bei 220° (B. 20, 1980). — II, 1969.
- $C_{16}H_{14}O_6N_2$ C 68,3 — H 7,0 — O 20,2 — N 4,4 — M. G. 632.
1) Methypseudomorphin (B. 13, 93). — III, 911.
- $C_{16}H_{16}O_6N_1$ C 68,6 — H 7,3 — O 15,2 — N 8,9 — M. G. 630.
1) Di(Phenylhydrazid) d. Biliänsäure (B. 20, 1985). — IV, 731.
- $C_{16}H_{17}O_{11}N$ C 64,6 — H 7,0 — O 26,3 — N 2,1 — M. G. 669.
1) Apopsudoaconitin + H₂O. Sm. 102–103° (wasserfrei). (HCl, AuCl₃), HNO₃ (Soc. 33, 151). — III, 775.
- $C_{16}H_{19}O_{17}N$ C 62,9 — H 7,1 — O 28,0 — N 2,0 — M. G. 687.
1) Pseudoaconitin + H₂O (Acetylveratrylpseudoaconin). Sm. 210–212° (104–105°). (HCl, AuCl₃), HBr + 2H₂O, HJ, (HJ, HgJ₂), HNO₃ + 3H₂O. CHNS (Soc. 33, 151; 71, 351; B. 20, 854; C. 1895 [1] 1185; 1895 [2] 536). — III, 775.
- $C_{16}H_{15}O_6N$ C 72,8 — H 8,6 — O 16,2 — N 2,4 — M. G. 593.
1) Diacetat d. Glycyrrhetin. Sm. 217° (J. 1880, 1030). — III, 592.
- $C_{16}H_{19}O_7Br_4$ 1) $\alpha\beta$ -Dibrom- β -Phenylpropionat d. Dibromcholesterin. Sm. 139° (H. 22, 403).
- $C_{16}H_{14}O_7Br_2$ 1) $\alpha\beta$ -Dibrom- β -Phenylpropionat d. Koprosterin. Sm. 165–166° (H. 22, 402).
- $C_{16}H_{15}O_6N_1$ C 70,8 — H 8,8 — O 15,7 — N 4,6 — M. G. 610.
1) Triäthylester d. Phenylhydrazoncholensäure (H. 25, 315).
- $C_{16}H_{14}O_{10}N_2$ C 51,8 — H 6,5 — O 38,4 — N 3,3 — M. G. 834.
1) Verbindung (aus Milchzucker u. Amidobenzol) (B. 4, 836). — II, 448.
- $C_{16}H_{15}O_{11}N_2$ C 59,5 — H 7,9 — O 29,2 — N 2,0 — M. G. 711.
1) Cynoctonin. Sm. 137° (C. 1895 [1] 1185).
- $C_{16}H_{17}O_{11}N$ C 60,8 — H 7,9 — O 29,2 — N 2,0 — M. G. 711.
1) Glycyrrhizinbitter (J. 1880, 1031). — III, 592.
- $C_{16}H_{19}O_1Cl$ 1) Verbindung (aus Dammarharz). — III, 555.
- $C_{16}H_{19}O_{17}S_5$ 1) Säure (aus β -Chlorcampher). Ba₂ (Bt. [3] 4, 722). — III, 499.
- $C_{16}H_{19}O_7N_1$ C 49,1 — H 7,8 — O 12,7 — N 30,3 — M. G. 879.
1) Sturin. 4 + 11H₂SO₄ (C. 1898 [1] 1061; H. 25, 173).
- $C_{16}H_{17}O_7N_2$ C 76,6 — H 12,8 — O 5,7 — N 4,9 — M. G. 564.
1) aym. Septdekylstearylharnstoff. Sm. 112° (B. 15, 761). — I, 1304.

C₃₆-Gruppe mit vier Elementen.

- $C_{36}H_{70}O_{17}Br_2S_2$ 1) Verbindung (aus Rubbadin) (B. 25, 1892). — II, 658.
- $C_{36}H_{84}O_8N_4Br_2$ 1) Verbindung (aus C₃₆H₈₂O₈N₄). Sm. 240–241° (B. 25, 1186). — II, 1186.
- $C_{36}H_{11}O_{16}N_4Br$ 1) Verbindung (aus 1,3-Dioxybenzol) (B. 17, 1873). — II, 915.
- $C_{36}H_{87}O_8NS$ 1) Trisulfonylbiphenyletickoxyd. Sm. 178° (B. 13, 389). — II, 226.
- $C_{36}H_{10}O_7N_3P$ 1) 2-Naphtylamid d. Phosphorsäuretri(Oxyessigsäure). Sm. 192 bis 196° (A. 279, 69).
- $C_{36}H_{15}O_{11}N_7Cl$ 1) Pentachloruromelanin (J. 1868, 829). — III, 666.
- $C_{36}H_{44}O_8N_2J_2$ 1) Dijodmethylat d. Pseudomorphin + 4H₂O (B. 13, 93). — III, 911.
- $C_{36}H_{43}O_8N_{14}Cl$ 1) Salzsaures Hydramidotetrazoresorufin (A. 162, 286; siehe auch B. 18, 587). — II, 934.
- $C_{36}H_{52}O_{11}N_7Br$ 1) Tribromcynoctonin (C. 1895 [1] 1185).

- C₃₆H₈₀O₁₆N₂Br₂ 1) Verbindung (aus Horn) (*J.* 1879, 871). — IV, 1585.
 C₃₆H₆₁O₁₃N₂Br₂ 1) Verbindung (aus Fleisch) (*J.* 1879, 870). — IV, 1585.
 C₃₄H₇₄O₇N₂Fe 1) Imidoferrocyanwasserstoffisocamyläther. 2HCl (*B.* 21, 935). — I, 1489.

C₃₇-Gruppe mit zwei Elementen.

- C₃₇H₇₆O₆ C 74,2 — H 4,3 — O 21,4 — M. G. 598.
 1) Tribenzoat d. Di[4,6-Dioxy-2-Methylphenyl]essigsäurelaktone. Zers. bei 200° (*Soc.* 73, 401).
 C₃₇H₇₇N₅ C 82,1 — H 5,0 — N 12,9 — M. G. 541.
 1) Benzylidenamidophenylindulin. Sm. 261—262° (*A.* 266, 201). — IV, 1326.
 C₃₇H₇₉N₃ C 86,2 — H 5,6 — N 8,2 — M. G. 515.
 1) Triphenylmauvanilin (*Z.* 1867, 237). — III, 678.
 C₃₇H₁₆N₂ C 88,4 — H 6,0 — N 5,6 — M. G. 502.
 1) Benzylidendi[7-Methyl-2-Phenylindol]. Sm. 255—256° (*B.* 25, 2871). — IV, 417.
 C₃₇H₃₁O₁₀ C 69,6 — H 5,3 — O 25,1 — M. G. 638.
 1) Tetrabenzooat d. Anhydro-*αγδ*-Trioxy- $\beta\beta\delta\delta$ -Tetra[Oxymethyl]pentan. Sm. 153—154° (*B.* 27, 1089; *A.* 289, 50). — II, 1143.
 C₃₇H₃₄O₁₁ C 67,9 — H 5,2 — O 26,9 — M. G. 654.
 1) Tribenzoat d. Coniferin. Sm. 80° (*H.* 14, 367). — III, 577.
 C₃₇H₃₆O C 89,5 — H 7,3 — O 3,2 — M. G. 496.
 1) Verbindung (aus Benzolcarbonsäureäthylester). Sd. über 350° (*J. pr.* [2] 4, 448). — II, 1139.
 C₃₇H₃₉N₇ C 87,1 — H 7,4 — N 5,5 — M. G. 510.
 1) 4',4'-Di[Aethylbenzylamido]triphenylmethan. Sm. 115—116° (*B.* 22, 589). — IV, 1044.
 2) Base (aus Benzaldehyd u. Aethylphenylhydrazin u. Benzylchlorid). (2HCl. PtCl₄) (*A.* 252, 276). — IV, 1044.
 C₃₇H₄₀O₁₇ C 58,7 — H 5,3 — O 36,0 — M. G. 756.
 1) Hexacetylnataloin (*B.* 18, 182). — III, 618.
 C₃₇H₅₀O₂₅ C 49,7 — H 5,6 — O 44,7 — M. G. 894.
 1) Farbstoff (aus d. Weichselkirsche) (*J.* 1870, 879). — III, 615.
 C₃₇H₅₂O₄ C 79,3 — H 9,3 — O 11,4 — M. G. 560.
 1) Benzoat d. Urson. Sm. 214° (*M.* 14, 261). — III, 649.
 C₃₇H₅₄O₂ C 83,8 — H 10,2 — O 6,0 — M. G. 530.
 1) Benzoat d. α -Amyrin. Sm. 192° (*B.* 20, 1244; 23, 3189). — III, 556.
 2) Benzoat d. β -Amyrin. Sm. 230° (*B.* 20, 1245; 23, 3189; *A.* 271, 218). — III, 556.
 C₃₇H₅₆O₁₅ C 56,3 — H 7,1 — O 36,5 — M. G. 788.
 1) Helleborin, siehe auch C₃₆H₄₄O₁₃ (*C.* 1897 [2] 764).
 C₃₇H₆₀O₂ C 81,9 — H 12,2 — O 5,9 — M. G. 542.
 1) Myricylester d. Benzolcarbonsäure. Sm. 70° (*B.* [3] 11, 186).
 C₃₇H₆₀O₄ C 77,3 — H 11,5 — O 11,1 — M. G. 574.
 1) Dimyricylester d. Oxalsäure. Sm. 91° (*B.* [3] 11, 186).
 C₃₇H₆₀O₁₈ C 55,5 — H 8,5 — O 36,0 — M. G. 800.
 1) Bryoresin (*B.* [3] 9, 1055). — III, 573.

C₃₇-Gruppe mit drei Elementen.

- C₃₇H₂₅ON₃ C 84,3 — H 4,7 — O 3,0 — N 8,0 — M. G. 527.
 1) Carbasolblau. K₂ (*B.* 12, 1403; 20, 1903). — IV, 393.
 C₃₇H₂₅O₁₀Cl₃ 1) Tribenzoat d. Trichlorbarbaloin (*C.* 1898 [2] 582).
 C₃₇H₂₆ON₂ C 86,4 — H 5,1 — O 3,1 — N 5,4 — M. G. 514.
 1) Phenyl-2,2,2-Trinaphtylharnstoff. Sm. 168° (*B.* 24, 2924). — II, 618.
 C₃₇H₃₆O₂N₆ C 71,8 — H 4,2 — O 10,4 — N 13,6 — M. G. 618.
 1) Verbindung (aus Benzaldehyd u. Isatamidobenzol-3-Carbonsäureamid) (*A.* 218, 193). — II, 1605.

- C₃₇H₂₇ON₅ C 79,7 — H 4,8 — O 2,9 — N 12,6 — M. G. 557.
- C₃₇H₁₈O₂N₄ 1) **2-Oxybenzylidenamidophenylindulin** (A. 286, 201). — IV, 1326.
C 79,3 — H 5,0 — O 5,7 — N 10,0 — M. G. 560.
- 1) **α -Phenyl- α -Di[5-Keto-1,3-Diphenyl-4,5-Dihydropyrazolyl-4-]methan**. Sm 220° (B. 20, 2548). — IV, 1305.
- C₃₇H₂₅N₃Cl 1) **4-Chlorphenylat d. 6-[4-Methylphenyl]amido-2,3-Diphenyl-1,4-Naphthosodiazin** (B. 25, 2005). — IV, 1218.
- C₃₇H₂₀O₂N₂ C 80,7 — H 5,4 — O 8,7 — N 5,1 — M. G. 550.
- 1) **Cinnimabensil**. Sm. 188° (Soc. 49, 470). — III, 286.
- C₃₇H₃₀N₃Cl 1) **Tri[4-Phenylamidophenyl]chlormethan** (Diphenylaminblau) (B. 23, 1963). — IV, 1196.
- C₃₇H₁₉O₂N₂ C 78,2 — H 5,6 — O 11,3 — N 4,9 — M. G. 568.
- 1) **4-Nitro-2-Methylphenylidi[β -Benzoyl- α -Phenyläthyl]amin** (Dibenzalacetophenonnitrotoluidin). Sm. 203° (B. 31, 350).
- C₃₇H₁₇O₂N₄ C 74,5 — H 5,4 — O 10,7 — N 9,4 — M. G. 596.
- 1) **Diacylderivat d. Verb. C₃₅H₂₅O₂N₄**. Sm. 257° (G. 22 [2] 239). — IV, 751.
- C₃₇H₁₂J₂P₂ 1) **Methylenhexaphenyldiphosphoniumdijodid**. Sm. 230—231° u. Zera. (B. 15, 804; A. 229, 318). — IV, 1661.
- C₃₇H₁₃O₂N₃ C 76,1 — H 5,7 — O 11,0 — N 7,2 — M. G. 583.
- 1) **3'-Nitro-2',2'-Di[Benzoylamido]-3',5',3',5'-Tetramethyltriphenylmethan** P Sm. 185—186° (B. 21, 3217). — IV, 1048.
- 2) **4'-Nitro-2',2'-Di[Benzoylamido]-3',5',3',5'-Tetramethyltriphenylmethan** P Sm. 191—192° (B. 21, 3216). — IV, 1049.
- C₃₇H₁₄O₂N₄ C 78,4 — H 6,0 — O 5,6 — N 9,9 — M. G. 566.
- 1) **α -[4-Dibenzoylamidophenyl]imidodi[4-Dimethylamidophenyl]methan**. Sm. 180—181° (J. pr. [2] 50, 416). — IV, 1174.
- C₃₇H₁₆O₉N₂ C 68,1 — H 5,5 — O 22,1 — N 4,3 — M. G. 652.
- 1) **Xanthalin**. Sm. 206°. 2HCl + 4H₂O (B. 26 [2] 592). — III, 923.
- C₃₇H₁₅O₉N₂ C 67,9 — H 5,8 — O 22,0 — N 4,3 — M. G. 654.
- 1) **Hydroxanthalin**. Sm. 137° (B. 26 [2] 593). — III, 923.
- C₃₇H₁₇O₁₁N C 62,3 — H 6,6 — O 29,2 — N 1,9 — M. G. 713.
- 1) **Triacetylpyroaconitin**. Sm. 204° (Soc. 67, 463). — III, 774.
- C₃₇H₁₉O₁₁N C 60,7 — H 6,7 — O 30,6 — N 1,9 — M. G. 731.
- 1) **Triacetylbenzoylaconin**. Sm. 255—256° (Soc. 67, 460; B. 27, 732). — III, 774.
- 2) **isom. Triacetylbenzoylaconin**. Sm. 162° (Soc. 67, 461).
- C₃₇H₂₇O₁₀N 1) **Taxin**. Sm. 82°. HCl, (2HCl, PtCl₄), (HCl, AuCl₃), H₂SO₄ (J. 1856, 550; B. 26, 417; R. 3, 279; B. 23, 464). — III, 948.
- C₃₇H₁₇O₁₁N C 64,6 — H 7,7 — O 25,6 — N 2,0 — M. G. 687.
- 1) **Veratrin**. Sm. 180° (150—155°). (HCl, AuCl₃), H₂SO₄ + 10H₂O (Soc. 33, 338; J. 1883, 1351). — III, 949.

C₃₇-Gruppe mit vier Elementen.

- C₃₇H₂₉O₄N₃Cl 1) **Tribenzoylderivat d. Verb. C₁₂H₁₄ONCl** (B. 31, 1414).
- C₃₇H₁₉O₂N₃S 1) **Thioharnstoff d. 8-[4-Amidophenyl]amido-5-Oxy-1,2,3,4-Tetrahydronaphthalin-5-Aethyläther**. Sm. 201° (B. 31, 905).
- C₃₇H₁₇O₆N₃J₂ 1) **Di[Jodmethylat] d. Pseudomorphinmonomethyläther + 4H₂O** (A. 294, 213).
- C₃₇H₁₅O₂N₂J 1) **Jodmethylat d. Pseudomorphinmonomethyläthermethyloxyhydrat + 4H₂O** (A. 294, 213).

C₃₅-Gruppe mit zwei Elementen.

- C₃₅H₉O₁₁ C 69,5 — H 3,6 — O 26,8 — M. G. 656.
- 1) **Pyrogallolbenzein + 5H₂O** (A. 257, 61). — II, 1043.
- C₃₅H₇N₂ C 89,7 — H 4,7 — N 5,5 — M. G. 508.
- 1) **Hydrophenylcarbazokridin**. Sm. 172° (G. 20, 414). — IV, 472.
- C₃₅H₂₆O C 76,8 — H 4,4 — O 18,8 — M. G. 594.
- 1) **Verbindung** (aus Resorcinbenzein) (A. 217, 235). — II, 1123.

- $C_{25}H_{26}O_9$. C 72,8 — H 4,1 — O 23,0 — M. G. 626.
 1) **Rhizocarpinsäure**. Sm. 170° (*B. 30*, 363).
 $C_{25}H_{26}O_{10}$. C 71,0 — H 4,0 — O 24,9 — M. G. 642.
 1) **Tribenzoat d. Quercetindimethyläther**. Sm. 204—205° (*Soc. 67*, 498). — III, 604.
 $C_{25}H_{24}O_{17}$. C 60,5 — H 3,4 — O 36,1 — M. G. 754.
 1) **Eichenroth**. K_4 (*A. 240*, 339, 340). — III, 587.
 $C_{25}H_{76}N_4$. C 84,8 — H 4,8 — N 10,4 — M. G. 538.
 1) **α - β -Anilidophenyl-naphtindulin** (Naphtylblau). HCl (*A. 262*, 238; 272, 334). — IV, 1303.
 $C_{25}H_{30}O_6$. C 78,3 — H 5,2 — O 16,5 — M. G. 582.
 $C_{25}H_{30}O_9$. 1) **Triacetat d. $\alpha\beta\beta$ -Tri[1-Oxynaphtyläthan** (*A. 243*, 167). — II, 1029.
 C 72,4 — H 4,7 — O 22,9 — M. G. 630.
 $C_{25}H_{30}N_8$. 1) **Resorcinbenzoin** (*A. 217*, 234; *J. pr. [2]* 48, 387). — II, 1123.
 C 76,2 — H 5,0 — N 18,7 — M. G. 598.
 $C_{25}H_{32}O_3$. 1) **Diformazybenzol**. Sm. 185—190° (*A. 300*, 256). — IV, 1403.
 C 85,1 — H 6,0 — O 8,9 — M. G. 536.
 1) **$\alpha\gamma\epsilon$ -Tribenzoyl- $\beta\delta$ -Diphenylpentan**. α -Modif. Sm. 198°; β -Modif. Sm. 256° (*B. 29*, 1493, 1494, 1495, 2246 Anm.). — III, 322.
 $C_{25}H_{31}O_{12}$. C 67,1 — H 4,7 — O 28,2 — M. G. 680.
 $C_{25}H_{33}N_3$. 1) **Hexacetat d. Verb. $C_{25}H_{30}O_6$** (*Ann. 9*, 132). — III, 11.
 C 85,9 — H 6,2 — N 7,9 — M. G. 531.
 1) **4', 4'', 4'''-Tri[Phenylamido]- β -Methyltriphenylmethan** (Triphenyl-leukanilin) (*J. 1863*, 418). — IV, 1198.
 $C_{25}H_{31}O_{11}$. C 68,5 — H 5,1 — O 26,4 — M. G. 666.
 1) **Tetracetat d. Chrysarobin**. Sm. 228—230° (*A. 212*, 34; *B. 21*, 438). — III, 453.
 $C_{25}H_{31}O_{12}$. C 66,9 — H 5,0 — O 28,1 — M. G. 682.
 1) **Diäthylester d. Tetrabenzoylschleimsäure**. Sm. 124° (*M. 14*, 487). — II, 1155.
 $C_{25}H_{36}O_6$. C 77,5 — H 6,1 — O 16,3 — M. G. 588.
 1) **Aethyl ester d. Isobutylanhydrodibenzylacetessigsäure**. Sm. 202° (*Soc. 69*, 740).
 $C_{25}H_{40}O_{17}$. C 59,4 — H 5,2 — O 35,4 — M. G. 768.
 $C_{25}H_{41}N_5$. 1) **Leprarin** (*A. 297*, 310).
 C 84,6 — H 7,6 — N 7,8 — M. G. 539.
 1) **4', 4''-Di[Dimethylamido]-5'-Dibenzylamido-2'-Methyltriphenylmethan**. Sm. 120° (*B. 24*, 3129). — IV, 1198.
 $C_{25}H_{41}O_4$. C 81,1 — H 7,5 — O 11,4 — M. G. 562.
 1) **Diacetat d. $\alpha\alpha$ -Di[3-Oxy-4-Isopropyl-1-Methylphenyl]- $\beta\beta$ -Diphenyläthan**. Sm. 152° (*A. 279*, 332). — II, 1008.
 $C_{25}H_{41}O_4$. C 80,8 — H 7,8 — O 11,4 — M. G. 564.
 1) **Tetrapropyläther d. $\alpha\alpha\beta\beta$ -Tetra[4-Oxyphenyl]äthen**. Sm. 139—140° (*B. 28*, 2875).
 2) **Tetraäthyläther d. $\alpha\alpha\beta\beta$ -Tetra[β -Oxy- β -Methylphenyl]äthen**. Sm. 214° (*B. 28*, 2875).
 $C_{25}H_{53}N_4$. C 80,8 — H 9,2 — N 9,9 — M. G. 564.
 $C_{25}H_{57}O_3$. 1) **Diphenylhydrason d. Onoketon** (*B. 29*, 2988). — IV, 784.
 C 80,6 — H 11,0 — O 8,4 — M. G. 566.
 $C_{25}H_{59}O_{11}$. 1) **Monacetat d. α -Lactucerosol**. Sm. 202—207° (*A. 244*, 270). — II, 1068.
 C 65,7 — H 8,9 — O 25,4 — M. G. 694.
 $C_{25}H_{61}O_3$. 1) **Chinovin**, siehe $C_{30}H_{46}O_6$.
 C 80,3 — H 11,3 — O 8,4 — M. G. 568.
 1) **Verbindung** (aus *Gentiana verna*). Sm. 115—117° (*M. 12*, 484). — III, 633.
 $C_{25}H_{61}O_{13}$. C 56,4 — H 7,9 — O 35,6 — M. G. 808.
 1) **Parlathyphnin** (*J. 1860*, 543). — III, 599.
 $C_{25}H_{64}O_4$. C 77,8 — H 11,3 — O 10,9 — M. G. 586.
 1) **Monomyricylester d. Benzol-1,2-Dicarbonensäure**. Sm. 79° (*Bl. [3]* 11, 186). — II, 1793.
 $C_{25}H_{66}O_{17}$. C 57,4 — H 8,3 — O 34,2 — M. G. 794.
 $C_{25}H_{66}S$. 1) **Pikrocrocin**. Sm. 75° (*B. 17*, 233). — III, 602.
 1) **Verbindung** (aus Asphalt). Sd. 170°. — III, 565.

- C₂₈H₁₇N** C 84,3 — H 13,1 — N 2,6 — M. G. 541.
 1) **Dicetylamidobenzol.** (2HCl, PtCl₄) (A. 83, 31). — II, 336.
 C 71,3 — H 11,2 — O 17,5 — M. G. 640.
C₂₈H₁₇O₇ 1) **Mannitandipalmitat** (A. ch. [3] 47, 323). — I, 444.
C₂₈H₁₄O₄ C 76,8 — H 12,4 — O 10,8 — M. G. 594.
 1) $\alpha\delta$ -Dicetylbutan- $\alpha\delta$ -Dicarbonsäure. Sm. 41—43° (Soc. 65, 1016).
 2) isom. $\alpha\delta$ -Dicetylbutan- $\alpha\delta$ -Dicarbonsäure. Sm. 32—34° (Soc. 65, 1017).
 3) **Distearat d. $\alpha\beta$ -Dioxyäthan.** Sm. 76° (A. ch. [3] 55, 436). — I, 445.

C₃₈-Gruppe mit drei Elementen.

- C₃₈H₁₆O₁₇Br₁₀** 1) **Dekabromeichenroth** (A. 240, 342). — III, 588.
C₃₈H₁₇O₁₇Br₆ 1) **Hexabromeichenroth** (A. 240, 341). — III, 587.
C₃₈H₁₄O₁₀N₂ C 79,7 — H 4,2 — O 11,2 — N 4,9 — M. G. 572.
 1) **Diphenylmaleinsäure-1,3-Phenylenimid.** Sm. 236° (B. 26, 2479). — IV, 578.
C₃₈H₂₈O₂N₄ C 77,5 — H 4,8 — O 8,2 — N 9,5 — M. G. 588.
 1) **Verbindung** (aus d. Diazoderivat d. Diamidopheynlnaphtoläthyläther). Sm. 153—154° (Soc. 55, 605). — IV, 1440.
C₃₈H₃₀O₂S 1) **Di[4-Diphenylmethylphenyl]sulfon.** Sm. 68° (Bl. [3] 11, 506). — II, 1089.
C₃₈H₃₀O₁S 1) **Sulfon d. α -Oxytriphenylmethan.** Sm. 78° (Bl. [3] 11, 507). — II, 1112.
C₃₈H₃₁ON₃ C 83,4 — H 6,0 — O 2,9 — N 7,7 — M. G. 547.
 1) **Triphenylrosanilin.** Sm. 100°. Chlorid, Sulfat (A. 132, 162; B. 10, 1847; J. 1862, 696; 1863, 417; 1867, 963). — II, 1092.
 2) **Benzoylderivat d. α -[2-Methyl-6-Chinoly]— $\alpha\alpha$ -Di[2-Methyl-1,2-Dihydro-6-Chinoly]methan** (B. 24, 1705). — IV, 1219.
C₃₈H₃₁O₁N₂ C 76,1 — H 5,7 — O 13,4 — N 4,7 — M. G. 598.
 1) **Diäthylester d. Benzylidencinchosinsäure.** Sm. 120° (A. 270, 344). — IV, 347.
C₃₈H₃₄Br₂P₂ 1) **Aethylenhexaphenyldiphosphoniumdibromid.** Sm. oberh. 300° (B. 15, 804). — IV, 1661.
C₃₈H₃₆N₂Cl₂ 1) **Verbindung** (aus Acetanilid). Sm. 227—229° (Am. 9, 217). — II, 362.
C₃₈H₃₀ON₃ C 73,1 — H 6,4 — O 2,6 — N 17,9 — M. G. 624.
 1) **Phenylhydrazonderivat d. Filixsäure.** Sm. 198° (B. 21, 2965). — IV, 719.
C₃₈H₃₁O₂N₄ C 77,5 — H 7,5 — O 5,4 — N 9,5 — M. G. 588.
 1) **Dicinchonin.** Sm. 40°. 2HCl, (2HCl, PtCl₄ + 4H₂O), Rhodanat (A. 227, 154). — III, 861.
C₃₈H₃₄O₁₇N₂ C 63,3 — H 6,1 — O 26,7 — N 3,9 — M. G. 720.
 1) **Hellicoidindianilid** (A. 154, 37). — III, 69.
C₃₈H₃₄O₁₆Cl₁₁ 1) **Verbindung** (aus Hauf) (Soc. 43, 19; 55, 204). — I, 1080.
C₃₈H₃₆O₂N₄ C 77,3 — H 7,8 — O 5,4 — N 9,5 — M. G. 590.
 1) **Dihydrocinchonin.** Sm. 257—258°. H₂SO₄ (J. pr. [2] 8, 293; A. 108, 348; B. 11, 312; Soc. 26, 1179; M. 16, 325). — III, 835.
C₃₈H₃₇O₁₇N C 64,3 — H 6,6 — O 27,1 — N 2,0 — M. G. 709.
 1) **Dibenzylaconin.** Sm. 265°. (HCl, AuCl₃), HBr (C. 1896 [1] 208). — III, 774.
C₃₈H₃₉O₁₇N C 64,1 — H 6,9 — O 27,0 — N 2,0 — M. G. 711.
 1) **Acetylapocseudoaconitin + H₂O.** Sm. 115° (Soc. 33, 151). — III, 775.
C₃₈H₃₁O₁₃N C 62,6 — H 7,0 — O 28,5 — N 1,9 — M. G. 729.
 1) **Diacetylaconitin** (oder C₄₇H₄₆O₁₁N). Sm. 158°. (HCl, AuCl₃) (Soc. 67, 462). — III, 773.
C₃₈H₃₆O₂N 1) **Verbindung** (aus Micrococcus prodigiosus) (B. 25 [2] 759). — III, 669.

C₃₈-Gruppe mit vier Elementen.

- C₃₈H₃₄O₁₁N₂S** 1) **Sulfon d. Trinitrotriphenylmethan** (Bl. [3] 11, 508).
C₃₈H₃₄O₁₁N₂S 1) **Sulfon d. α -Oxytrinitrotriphenylmethan.** Sm. 100—110° (Bl. [3] 11, 508). — II, 1112.

- $C_{28}H_{20}ON_2Cl_2$ 1. Tri-2-Chlorphenylrosanilin (B. 19, 1992. — II, 1062.
2. Tri-3-Chlorphenylrosanilin (B. 19, 1993. — II, 1062.
3. Tri-4-Chlorphenylrosanilin (B. 19, 1995. — II, 1063.
 $C_{28}H_{21}O_2N_2S$ 1. Anilinblaumonosulfonsäure. Na (B. 5, 419. — II, 1063.
 $C_{28}H_{21}O_2N_2S_2$ 1. Anilinblaudisulfonsäure. Na (B. 5, 419. — II, 1063.
 $C_{28}H_{21}O_2N_2S_3$ 1. Anilinblautrisulfonsäure (B. 5, 420). — II, 1063.
 $C_{28}H_{21}O_2N_2S_4$ 1. Anilinblautetrasulfonsäure. Pb (B. 5, 420). — II, 1063.
 $C_{28}H_{24}O_2N_2S$ 1. Sulfon d. Triamidotriphenylmethan (B. 5, 111. — II, 994.
 $C_{28}H_{24}O_2N_2S_2$ 1. Cinchoninsulfonsäure. Ba (A. 109, 374. — III, 535.
 $C_{28}H_{24}O_2N_2S_3$ 1. Verbindung (aus 4,4'-D. Dimethylamido diphenylthioketon) (B. 20, 324). — III, 192.
 $C_{28}H_{24}O_2N_2Cl_2$ 1. Dicoeisinäthylenchlorid + 4H₂O. 2 + PrCl₃ (B. 27 [2], 509. — III, 905.
 $C_{28}H_{24}O_2N_2Br_2$ 1. Dicoeisinäthylenbromid + 4H₂O. Sm. 177—179° (B. 27 [2], 509. — III, 905.

C₂₉-Gruppe mit zwei Elementen.

- $C_{29}H_{20}O_2$ C 69,0 — H 4,6 — O 6,1 — M. G. 526.
1) Verbindung (aus Dibiphenyläthen) Sm. 250—252° (A. 290, 244).
 $C_{29}H_{20}O_3$ C 53,1 — H 3,4 — O 43,5 — M. G. 582.
1) polym. Sordidin. Sm. 236—237° (G. 24 [2], 324. — II, 2059.
 $C_{29}H_{20}N_2$ C 69,0 — H 5,7 — N 5,3 — M. G. 526.
1) Phenylhydrazonderivat d. Verb. C₁₁H₁₁O. Sm. 250° (See. 51, 526). — III, 252.
 $C_{29}H_{20}N_4$ C 60,4 — H 5,2 — N 14,4 — M. G. 582.
1) Hexaphenylmelamin. Sm. oberh. 300° (B. 18, 3219). — II, 452.
 $C_{29}H_{21}O_{11}$ C 69,9 — H 5,0 — O 26,0 — M. G. 678.
1) Dibenzoylsupittonsäure. Sm. 232° (B. 12, 2219). — II, 2092.
 $C_{29}H_{21}N_3$ C 83,9 — H 6,1 — N 10,0 — M. G. 558.
1) Verbindung (aus un-Phenylbenzylhydrazin u. Harnstoff). Sm. 108—109° (G. 27 [2], 243). — IV, 811.
 $C_{29}H_{25}N_{11}$ C 71,2 — H 5,3 — N 23,4 — M. G. 657.
1) Verbindung (Base aus Acetamid u. Phenylcyanamid). Sm. 222°. 2HCl (M. 5, 457). — II, 450.
 $C_{29}H_{25}O_{16}$ C 60,9 — H 7,2 — O 32,5 — M. G. 780.
1) Tetraacetylstrophanthin (oder C₆H₁₀O₂₀). Sm. 236—238° (M. 19, 397).
 $C_{29}H_{26}O_4$ 1) Verbindung (aus Lärchenschwammharz) = (C₇H₁₃O₄)₄ (J. 1875, 862). — III, 560.
 $C_{29}H_{26}O_7$ C 62,9 — H 11,3 — O 5,7 — M. G. 564.
1) Diacetyllicen. Sm. 219,5° (B. 28 [2], 236).
 $C_{29}H_{27}S$ 1) Verbindung (aus Asphalt). Sd. 178°. — III, 565.
 $C_{29}H_{27}O_5$ C 75,5 — H 11,6 — O 12,9 — M. G. 620.
1) Glycerindioleïn (A. ch. 3] 41, 250). — I, 526.
 $C_{29}H_{27}O_7$ C 71,8 — H 11,0 — O 17,2 — M. G. 652.
1) Glycerintricelaïn. Sm. 43° (45°) (A. 60, 322; 85, 282; J. 1855, 523). — I, 613.
 $C_{29}H_{27}O_8$ C 73,4 — H 11,6 — O 15,0 — M. G. 638.
1) Glycerintrilaurin (Laurostearin). Sm. 45° (A. 41, 330; 53, 390; 66, 260; J. pr. [2] 42, 375; A. ch. [6] 11, 226). — I, 441.
 $C_{29}H_{28}O_4$ C 67,2 — H 12,2 — O 10,6 — M. G. 608.
1) Diäthylester d. Dicoethylmalonsäure (A. 206, 363).
 $C_{29}H_{28}O_5$ C 75,2 — H 11,9 — O 12,9 — M. G. 624.
1) Glycerindistearin. Sm. 76,4° (58°) NH₃ (A. ch. 3] 41, 226; J. pr. [2] 28, 227). — I, 445.

C₃₀-Gruppe mit drei Elementen.

- $C_{30}H_{20}O_4N_2$ C 76,0 — H 4,5 — O 10,4 — N 9,1 — M. G. 616.
1) Verbindung (aus Benzaldehyd u. 1-Phenylazo-2,4-Dioxynaphthalin) (B. 17, 1812; 21, 2207). — IV, 1449.

- $C_{35}H_{79}N_{11}Br_6$ 1) Verbindung (aus d. Base $C_{35}H_{35}N_{11}$) (*M.* 5, 453). — II, 450.
 $C_{35}H_{17}ON_6$ C 78,0 — H 5,3 — O 2,7 — N 14,0 — M. G. 600.
- $C_{35}H_{33}O_2N_4$ 1) α -Benzoyl- α -Phenyl- β -Di[Phenylimidophenylamidomethyl]hydrazin. Sm. 149° (*B.* 26, 1187). — IV, 1224.
 C 71,8 — H 4,9 — O 14,7 — N 8,6 — M. G. 652.
- $C_{35}H_{39}N_2S$ 1) Diacetylderivat d. Verb. $C_{35}H_{36}O_2N_4$. Sm. 220° u. Zers. (*A.* 218, 191; *B.* 16, 1232). — III, 74.
- $C_{35}H_{33}O_2N_3$ 1) Thioharnstoffderivat d. 4-Amidotriphenylmethan. Sm. 123° (*A.* 241, 368). — II, 641.
- $C_{35}H_{35}O_2Br_{11}$ 1) Verbindung (aus Strophantidin). Sm. 160° (*B.* 31, 541).
 $C_{35}H_{35}O_2P$ 1) Phosphat d. 4-Oxydiphenylmethan. Sm. 93—94° (*J.* 1873, 440). — II, 897.
- $C_{35}H_{35}O_2N_3$ C 78,9 — H 5,9 — O 8,1 — N 7,1 — M. G. 593.
 1) Julolviolebase. HCl, (2HCl, PtCl₄) (*B.* 25, 121). — IV, 194.
- $C_{35}H_{40}O_2N_4$ C 78,5 — H 6,7 — O 5,4 — N 9,4 — M. G. 596.
 1) Phenyl-di(4-Oxy-5-Isopropyl-2-Methylazobenzol)methan (Triphenylmethandisazothymol). Sm. 170° (*G.* 15, 46). — IV, 1425.
 2) Phenyl-di(4-Oxy-6-Isopropyl-3-Methylazobenzol)methan. Sm. 130°. *Ag₂* (*G.* 15, 307). — IV, 1426.
- $C_{35}H_{40}O_{11}N_2$ C 65,7 — H 5,6 — O 24,7 — N 3,9 — M. G. 712.
 1) Triacetylphloridsinanilid (*A.* 156, 10). — III, 601.
- $C_{35}H_{40}O_2N_4$ C 75,7 — H 7,4 — O 7,8 — N 9,1 — M. G. 618.
 1) Cuprein-Chinin + 4H₂O. Sm. 177° (wasserfrei). (4HCl, 2PtCl₄), H₂SO₄ + 6H₂O, Tartrat + 2H₂O (*A.* 225, 98; 226, 242; 230, 72; *Sec.* 41, 61). — III, 823.
- $C_{35}H_{48}O_2N_4$ C 73,6 — H 7,5 — O 10,1 — N 8,8 — M. G. 636.
 1) Cupreinhydrochinin + 2H₂O (*A.* 241, 259). — III, 860.
- $C_{35}H_{31}O_{10}Br_5$ 1) Verbindung (aus Strophantidin). Sm. 126° (*B.* 31, 541).
 $C_{35}H_{31}O_{15}N$ C 60,5 — H 6,6 — O 31,0 — N 1,8 — M. G. 773.
 1) Tetraacetylbenzoylaconin. Sm. 211° (HCl, AuCl₃) (*Sec.* 67, 461). — III, 774.
- $C_{35}H_{33}O_{10}N$ C 67,3 — H 7,6 — O 23,0 — N 2,0 — M. G. 695.
 1) Benzoylcavadin + 1½H₂O. Sm. 170—180°. (HCl, AuCl₃) (*Sec.* 33, 338). — III, 949.
- $C_{35}H_{41}O_{10}Br_2$ 1) Verbindung (aus Strophantidin). Sm. 163° (*B.* 31, 541).
 $C_{35}H_{70}O_8$ 1) Verbindung (aus Ricinusöl) (*Bl.* [3] 6, 640).
 $C_{35}H_{71}O_2P$ 1) Distearylglycerinphosphorsäure. Sm. 62,5°. (NH₄)₂, Na₂ (*J. pr.* [2] 28, 233). — I, 446.

C₃₉-Gruppe mit vier Elementen.

- $C_{39}H_{36}O_4N_3P$ 1) Tri[4-Benzoylamidophenyl]phosphinoxyd + H₂O. Sm. 166—168° (wasserfrei) (*A.* 229, 331). — IV, 1660.
- $C_{39}H_{13}O_4N_6P$ 1) Triphosphat d. 4'-Oxy-2-Methylazobenzol. Sm. 116° (*B.* 24, 368). — IV, 1413.
 2) Triphosphat d. 4'-Oxy-4-Methylazobenzol. Sm. 140° (*B.* 24, 365). — IV, 1413.
- $C_{39}H_{44}O_2N_2Cl$ 1) Julolviole. 2 + PtCl₄ (*B.* 25, 121). — IV, 194.
- $C_{39}H_{36}O_2N_5P$ 1) 1-Naphtylamid d. Phosphorsäuretri[α -Oxypropionsäure]. Sm. 166 bis 169° (*A.* 279, 98).
- $C_{39}H_{37}O_{10}NJ$ 1) Jodäthylat d. Taxin (*B.* 23, 467). — III, 948.
- $C_{39}H_{73}O_4Cl_2P$ 1) Chlorid d. Distearylglycerinphosphorsäure. Sm. 24° (*J. pr.* [2] 28, 233). — I, 446.

C₄₀-Gruppe mit einem Element.

- $C_{40}H_{36}$ C 94,9 — H 5,1 — M. G. 506.
 1) Kohlenwasserstoff (aus Picensäure). Sm. 235° (*A.* 284, 76).
- $C_{40}H_{44}$ C 88,2 — H 11,8 — M. G. 544.
 1) Tetraterebenten (aus Terpentingöl). Sm. oberh. 100° (*A. ch.* [5] 6, 42). — III, 540.

$C_{40}H_7O$ C 87,3 — H 12,7 — M. G. 550.
1) Fichtelit. Sm. 46° (A. 37, 304; 103, 236).

C_{40} -Gruppe mit zwei Elementen.

- $C_{40}H_{32}O$ C 78,2 — H 3,6 — O 18,2 — M. G. 614.
1) Verbindung (aus 1-Oxynaphtalin u. Benzol-1,2,4,5-Tetracarbonsäure) (B. 6, 1069). — II, 2073.
- $C_{40}H_{24}J$ 1) Verbindung (aus Naphtalin) (C. r. 94, 534).
 $C_{40}H_{24}O$ C 75,9 — H 3,8 — O 20,2 — M. G. 632.
1) Verbindung (aus 1-Oxynaphtalin u. Benzol-1,2,4,5-Tetracarbonsäure) Sm. 245° (B. 6, 1068). — II, 2073.
- $C_{40}H_{26}O$ C 77,7 — H 4,2 — O 18,1 — M. G. 618.
1) Verbindung (aus d. $\alpha,2'$ -Lakton d. α -Oxy- α -[2,4-Dioxyphenyl]- α -Di-phenylmethan-2'-Carbonsäure). Sm. 285° (B. 14, 1862). — II, 1986.
- $C_{40}H_{28}O$ C 75,7 — H 4,1 — O 20,2 — M. G. 634.
1) Tetrabenzoat d. 1,3,1',3',-Tetraoxybiphenyl. Sm. 199° (M. 10, 722). — II, 1153.
- $C_{40}H_{28}O_2$ C 79,5 — H 4,6 — O 15,9 — M. G. 604.
1) Tribenzoat d. s-Trioxotriphenylmethan (A. 166, 288). — II, 1152.
- $C_{40}H_{30}O_{11}$ C 65,4 — H 4,1 — O 30,5 — M. G. 734.
1) Hämatoxylinphtalein (B. 12, 1652). — III, 665.
- $C_{40}H_{30}O_{17}$ C 61,4 — H 3,8 — O 34,8 — M. G. 782.
1) Hemlockroth (B. 17, 1125). — III, 684.
- $C_{40}H_{32}O_2$ C 70,9 — H 5,1 — O 18,0 — M. G. 624.
1) Dipiperonaltriacetophenon. Sm. 253–257° (B. 29, 1894).
- $C_{40}H_{32}O_{14}$ C 65,2 — H 4,3 — O 30,4 — M. G. 736.
1) Anhydrid d. Eichengerbsäure $C_{20}H_{16}O_7$ (M. 4, 527). — III, 589.
C 63,7 — H 4,5 — O 31,8 — M. G. 754.
- $C_{40}H_{34}O_{15}$ 1) Anhydrid d. Eichengerbsäure $C_{20}H_{16}O_8$ (M. 4, 527). — III, 589.
2) Verbindung (aus Phloroglucinvanillein) (M. 3, 641). — II, 1046.
3) Verbindung (aus Pyrogallolvanillein) (M. 3, 640). — II, 1046.
- $C_{40}H_{36}O_{16}$ C 62,2 — H 4,7 — O 33,1 — M. G. 772.
1) Anhydrid d. Eichengerbsäure $C_{20}H_{16}O_9$ (M. 4, 527). — III, 589.
- $C_{40}H_{36}O_{21}$ C 56,3 — H 4,2 — O 39,4 — M. G. 852.
1) Anhydrokateacetylcarminsäure. Sm 155–165° (B. 30, 1761, 1765).
- $C_{40}H_{38}O_{16}$ C 62,0 — H 4,9 — O 33,1 — M. G. 774.
1) α -Katechin + H_2O (Bl. 30, 567). — III, 682.
- $C_{40}H_{40}O_{17}$ C 60,8 — H 4,8 — O 34,4 — M. G. 790.
1) Anhydrid d. Eichengerbsäure $C_{20}H_{16}O_{10}$ (M. 4, 526). — III, 589.
- $C_{40}H_{40}O_{18}$ 1) α -Katechin + $2H_2O$. Sm. 204–205° (Bl. 30, 567). — III, 682.
C 59,6 — H 4,7 — O 35,7 — M. G. 806.
- $C_{40}H_{40}O_2$ 1) Säure (aus Phenylessigsäure). Sd. über 360° (A. 221, 49).
C 70,6 — H 5,9 — O 23,5 — M. G. 680.
- $C_{40}H_{40}O_{10}$ 1) Erythroresinotannol (C. 1897 [1] 422).
C 79,0 — H 7,2 — N 13,8 — M. G. 608.
- $C_{40}H_{44}N_8$ 1) 1,2-Phenylendiauramin. Sm. 305° (J. pr. [2] 50, 429). — IV, 1175.
2) 1,4-Phenylendiauramin. Sm. 311–312° (J. pr. [2] 50, 421). — IV, 1175.
- $C_{40}H_{50}O_{14}$ C 63,7 — H 6,6 — O 29,7 — M. G. 754.
1) Harz (aus Opponax) (A. 44, 335). — III, 560.
- $C_{40}H_{52}O_2$ C 80,5 — H 8,7 — O 10,7 — M. G. 596.
1) Dibenzoat d. Onocol. Sm. 175–190° (L. 29, 2986).
C 49,7 — H 5,6 — O 44,7 — M. G. 966.
- $C_{40}H_{54}O_{27}$ 1) Hendekaacetylmelesitose. Sm. 117° (J. r. 21, 420). — I, 1071.
2) Hendekaacetylraffinose. Sm. 99–101° (L. 23, 1443). — II, 1072.
3) Hendekaacetyltriglykose. Sm. 212° (B. 12, 1942). — I, 1077.
- $C_{40}H_{56}O_2$ C 77,9 — H 9,1 — O 13,0 — M. G. 616.
1) Harz (aus Muskatnussöl) (B. 6, 147). — III, 543.
- $C_{40}H_{58}O_3$ C 81,9 — H 9,9 — O 8,2 — M. G. 586.
1) Anhydrid d. Isosylvininsäure. Fest; Sd. 248–250° (B. 23, 1921). — II, 1438.

- $C_{40}H_{34}O_5$ C 77,7 — H 9,4 — O 12,9 — M. G. 618.
 1) Anhydrid d. Säure $C_{30}H_{26}O_3$, (aus Colophonium). Sm. 143° (*J. r.* 20, 477). — II, 1674.
 2) Säureanhydrid (aus Colophonium). Sm. 159—160° (*J. r.* 20, 477). — II, 1674.
- $C_{40}H_{30}O_6$ C 70,4 — H 8,5 — O 21,1 — M. G. 682.
 1) Harz (aus Sagapenum) (*A.* 44, 336). — III, 561.
- $C_{40}H_{30}O_7$ C 83,9 — H 10,5 — O 5,6 — M. G. 572.
 1) Succinoabietinol. Sm. 124° (*C.* 1895 [1] 556).
 2) Verbindung (aus Santelöl). Sd. oberh. 350° (*Bt.* 37, 303). — III, 549.
- $C_{40}H_{30}O_8$ C 75,5 — H 9,4 — O 15,1 — M. G. 636.
 1) Harz (aus Sandarak) (*A.* 44, 331). — III, 561.
- $C_{40}H_{30}O_9$ C 83,6 — H 10,8 — O 5,6 — M. G. 574.
 1) Harz (aus Copal) (*Berz. J.* 11, 265). — III, 555.
 2) Harz (aus Mastix) (*A.* 44, 328). — III, 560.
- $C_{40}H_{30}O_{10}$ C 81,4 — H 10,5 — O 8,1 — M. G. 590.
 1) Harz (aus Copal) (*Berz. J.* 11, 265). — III, 555.
 2) Verbindung (aus Santelöl). Sd. 340° (*Bt.* 37, 303). — III, 549.
- $C_{40}H_{30}O_{11}$ C 79,2 — H 10,2 — O 10,6 — M. G. 606.
 1) Harz (aus Mastix) (*A.* 44, 328). — III, 560.
- $C_{40}H_{30}O_{12}$ C 77,2 — H 10,0 — O 12,8 — M. G. 622.
 1) Harz (aus Copal) (*Berz. J.* 11, 265). — III, 554.
 2) Harz (aus Sandarak) (*A.* 44, 330). — III, 561.
- $C_{40}H_{30}O_{13}$ C 75,2 — H 9,7 — O 15,1 — M. G. 638.
 1) Dammaran (aus Kanriecopal) (*A.* 47, 353). — III, 555.
 2) Harz (aus Euphorbium) (*A.* 44, 338). — III, 558.
 3) Harz (aus Sandarak) (*A.* 44, 331). — III, 561.
- $C_{40}H_{30}O_{14}$ C 73,4 — H 9,5 — O 17,1 — M. G. 654.
 1) Dammarsäure (*A.* 47, 354). — III, 555.
- $C_{40}H_{30}O_{15}$ C 79,0 — H 10,5 — O 10,5 — M. G. 608.
 1) Diacetat d. α -Lactucerol. Sm. 196—210° (*A.* 234, 248; 244, 270). — II, 1068.
 2) Diacetat d. β -Lactucerol. Sm. 230° (*A.* 234, 250). — II, 1068.
- $C_{40}H_{34}O_5$ C 76,9 — H 10,3 — O 12,8 — M. G. 624.
 1) Diacetat d. Betulin. Sm. 217° (*A.* 182, 372). — III, 621.
- $C_{40}H_{34}O_{11}$ C 57,7 — H 7,7 — O 34,6 — M. G. 832.
 1) Caincin (Caincensäure). Ph_2 (*Berz. J.* 11, 223; *Z.* 1867, 537; *J.* 1850, 387; 1862, 488, 538). — III, 573.
- $C_{40}H_{30}Cl$ 1) Tetraterebentenhydrochlorid (*A. ch.* [5] 6, 47). — III, 541.
 $C_{40}H_{30}O$ C 58,7 — H 8,1 — O 33,2 — M. G. 658.
 1) Harz (aus Cistus creticus) (*A.* 44, 334). — III, 559.
- $C_{40}H_{30}Cl_2$ 1) Tetraterebentendihydrochlorid (*A. ch.* [5] 6, 46). — III, 541.
 $C_{40}H_{30}Cl_2$ 1) Tetrachlorfichtelit (*A.* 103, 246).
 $C_{40}H_{30}Br_2$ 1) Tetraterebentendihydrobromid (*A. ch.* [5] 6, 47). — III, 541.
 $C_{40}H_{30}O_{11}$ C 58,5 — H 8,3 — O 33,2 — M. G. 820.
 1) Gratiololetin (*J.* 1858, 518). — III, 592.
- $C_{40}H_{30}Cl_2$ 1) Dichlorfichtelit (*A.* 103, 246).
 $C_{40}H_{30}Br_2$ 1) Dibromfichtelit (*A.* 103, 247).
 $C_{40}H_{30}S$ 1) Verbindung (aus Asphalt). Sd. 188°. — III, 565.
 $C_{40}H_{30}Br$ 1) Bromfichtelit (*A.* 103, 247).
 $C_{40}H_{30}O$ C 84,8 — H 12,4 — O 2,8 — M. G. 566.
 1) Quassol + H_2O . Sm. 149—151° (*C.* 1895 [1] 435).
 C 78,2 — H 11,4 — O 10,4 — M. G. 614.
 1) Dicytylester d. Benzol-1,2-Dicarbonensäure. Sm. 42—43° (*B.* 30, 783).
 C 57,3 — H 8,3 — O 34,4 — M. G. 838.
 1) Parillin + xH_2O . Sm. 210° u. *Zers.* (*J.* 1877, 906). — III, 599.
 C 48,1 — H 7,0 — O 44,9 — M. G. 998.
 1) Crocin (*B.* 17, 2230; *A.* 278, 357).
 C 70,4 — H 10,8 — O 18,8 — M. G. 682.
 1) $\alpha\delta$ -Dicytylbutan- $\alpha\alpha\delta\delta$ -Tetracarbonensäure. Ca, Ag, (*Soc.* 65, 1114).

C₄₀-Gruppe mit drei Elementen.

- C₄₀H₁₅O₁₀Br, 1) Verbindung (aus Tetrabromfluorescein) (*A.* 183, 60). — II, 2064.
- C₄₀H₂₆O₁₁S₄, 1) Di[2-Naphtylester-6-Sulfonsäure] d. 2,2-Dinaphtyläther-6,6-Disulfonsäure. *K.* (B. 14, 1481). — II, 891.
- C₄₀H₂₆O₁₆N₈, 1) Verbindung (aus Chinoxalindicarbonsäure). *Zers.* bei 170° (*B.* 27, 2186).
C 54,9 — H 3,0 — O 29,3 — N 12,8 — M. G. 874.
- C₄₀H₂₇ON₅, 1) 4-[1-Naphtyl]imido-2,3-Di[1-Naphtyl]amido-1-Keto-1,4-Dihydro-naphtalin. *Sm.* 212° (*A.* 272, 354). — IV, 1166.
C 84,5 — H 4,9 — O 5,6 — N 4,9 — M. G. 568.
- C₄₀H₂₆O₇N₇, 1) 1,3-Di[Benzoyl-2-Naphtylamido]benzol. *Sm.* 215° (*B.* 26, 981). — IV, 574.
2) 1,4-Di[Benzoyl-2-Naphtylamido]benzol. *Sm.* 220° (*B.* 22, 1082). — IV, 594.
3) Verbindung (aus Flavindulin u. Desoxybenzoin) (*B.* 31, 3076).
C 80,0 — H 4,7 — O 10,6 — N 4,7 — M. G. 600.
- C₄₀H₂₆O₄N₄, 1) 1,4-Di[2,5-Diphenyl-1-Pyrryl]benzol-1,4'-Dicarbonsäure. *Sm.* oberh. 300° (*B.* 22, 3095). — IV, 450.
- C₄₀H₂₆O₈Si, 1) 1-Tetranaphtylester d. Kieselsäure. *Sd.* 425–430°₁₃₀ (*B.* 18, 1696). — II, 858.
2) 2-Tetranaphtylester d. Kieselsäure. *Sd.* 430°₁₃₃ (*B.* 18, 1697). — II, 877.
- C₄₀H₁₈N₂S, 1) Thio-β-Tetranaphtyldiamin. *Sm.* 287° (u. 303°) u. *Zers.* (*B.* 21, 2811). — II, 869.
- C₄₀H₃₀O₆N₄, 1) Dibenzoat d. 4,4'-Di[2,5-Dioxyphenylazo]-3,3'-Dimethylbiphenyl (*B.* 26, 1911). — IV, 1447.
C 77,3 — H 5,0 — O 15,5 — N 2,2 — M. G. 621.
- C₄₀H₃₁O₆N, 1) Verbindung (aus d. Verb. C₃₀H₁₅O₃Cl). *Sm.* 267° u. *Zers.* (*See.* 59, 22). — II, 1908.
- C₄₀H₃₂O₈N₄, 1) C 69,0 — H 4,6 — O 18,4 — N 8,0 — M. G. 696.
2) Diacetylderivat d. Verb. C₃₀H₁₅O₃N₄. *Sm.* 201–202° (*B.* 25, 1569). — II, 1186.
- C₄₀H₂₃N₃Si, 1) 1-Naphtylamid d. Kieselsäure (*Soc.* 55, 482). — II, 605.
2) 2-Naphtylamid d. Kieselsäure (*Soc.* 55, 481). — II, 615.
- C₄₀H₂₃O₂N, 1) C 85,9 — H 5,9 — O 5,7 — N 2,5 — M. G. 559.
- C₄₀H₂₁O₁₂N₄, 1) 1-Naphtylid[β-Benzoyl-α-Phenyläthyl]amin. *Sm.* 180° (*B.* 31, 352).
C 83,0 — H 4,5 — O 25,2 — N 7,3 — M. G. 762.
- C₄₀H₂₁O₁₂N₄, 1) Diäthylester d. Tetracarphenylamidobenzol-1,4-Dicarbonsäure. *Sm.* 258–260° (*B.* 23, 267). — II, 2065.
C 79,0 — H 5,9 — O 10,5 — N 4,6 — M. G. 608.
- C₄₀H₂₀O₄N₂, 1) Diäthylester d. 4,4'-Di[2-Methyl-5-Phenyl-1-Pyrazolyl]biphenyl-4',4''-Dicarbonsäure. *Sm.* 178–179° (*B.* 19, 3161). — IV, 357.
- C₄₀H₂₀O₂P₄, 1) Phosphorsellinsäure (*G.* 14, 462). — II, 1753.
- C₄₀H₂₀N₄S, 1) Thiotetraphenyl[3-Methylphenyl]diguandin. *Sm.* 106° (*B.* 20, 675). — II, 821.
- C₄₀H₂₀ON₄, 1) C 81,4 — H 6,4 — O 2,7 — N 9,5 — M. G. 590.
- C₄₀H₂₀O₆N₆, 1) Oxyd (aus d. Base C₃₀H₁₅NCl) + 4H₂O. *Sm.* 130° (220° wasserfrei).
4H₂SO₄ + 8H₂O (*Bl.* [3] 11, 1034). — IV, 1046.
C 68,4 — H 5,4 — O 18,2 — N 8,0 — M. G. 702.
- C₄₀H₂₀O₆N₄, 1) p-Tetra[Diacylamido]-1,3,5-Triphenylbenzol. *Sm.* 156–158° (*B.* 23, 2535). — IV, 1304.
2) isom. p-Tetra[Diacylamido]-1,3,5-Triphenylbenzol. *Sm.* 142–143° (*B.* 23, 2536). — IV, 1304.
C 68,6 — H 5,7 — O 13,7 — N 12,0 — M. G. 700.
- C₄₀H₂₀O₆N₆, 1) Phylotaonin (*A.* 278, 341; 284, 92; 288, 210; *Soc.* 56, 279). — III, 658.
C 67,9 — H 5,8 — O 20,4 — N 5,9 — M. G. 707.
- C₄₀H₂₁O₈N₃, 1) p-Aethoxylglauconinsäure. *Na.* (*B.* 31, 693). — IV, 1220.
C 61,7 — H 5,4 — O 18,5 — N 14,4 — M. G. 778.
- C₄₀H₂₁O₈N₅, 1) Tetraspartidtetraamild. *Zers.* oberh. 235° (*A.* 303, 212).
- C₄₀H₂₁O₄Cl, 1) Verbindung (aus Chekenon). *Sm.* 180–181° (*B.* 21 [2] 841).

- $C_{40}H_{40}O_2N_4$ C 76,2 — H 7,3 — O 7,6 — N 8,9 — M. G. 630.
- $C_{40}H_{40}O_2N_2$ 1) **Diconchinin**. $2(2HCl, PtCl_4) + 4H_2O$ (B. 10, 2155; 18, 59, 60). — III, 861.
C 70,4 — H 6,7 — O 11,8 — N 4,1 — M. G. 682.
2) **Diacetyldicodain** (Soc. 25, 507). — III, 906.
- $C_{40}H_{40}O_2N_{12}$ 2) **Acetylbutyryldimorphin**. $2HCl + 8H_2O$ (Soc. 28, 20). — III, 899.
C 57,3 — H 5,5 — O 17,2 — N 20,0 — M. G. 838.
- $C_{40}H_{41}O_4N_{11}$ 1) **Tetraspartotetraphenylhydrazid** (A. 303, 201).
C 61,8 — H 6,0 — O 12,3 — N 19,8 — M. G. 777.
- 1) **4-Nitroso-1-Dimethylamidobenzolhydrocyanid + Nitrobenzol** (M. 6, 537). — II, 330.
- $C_{40}H_{41}O_{12}N$ C 65,5 — H 6,4 — O 26,2 — N 1,9 — M. G. 733.
1) **Benzoylpaconitin**. Sm. bei 130° (Soc. 33, 324). — III, 773.
- $C_{40}H_{41}O_{23}Br_4$ 1) **Säure** (aus 3-Brom-4-Oxybenzylmethyläther-1-Carbonsäureäthylester). Sm. $149-150^\circ$. $Ba_3 + 21H_2O$ (G. 11, 406). — II, 1537.
- $C_{40}H_{40}O_4N_4$ C 74,1 — H 7,4 — O 9,9 — N 8,6 — M. G. 648.
- 1) **Chinin-Conchinin + $2\frac{1}{2}(3)H_2O + C_6H_6$** (A. 243, 146; J. 1883, 1347). — III, 824.
- $C_{40}H_{40}O_6N_6$ C 71,0 — H 7,1 — O 9,5 — N 12,4 — M. G. 676.
1) **1,3-Dinitrobenzol + 2 Molec. Di[4-Dimethylamidophenyl]methan**. Sm. 74° (R. 7, 227). — IV, 974.
- $C_{40}H_{40}O_4N_{10}$ C 65,6 — H 6,5 — O 8,7 — N 19,1 — M. G. 732.
1) **4-Nitroso-1-Dimethylamidobenzolhydrocyanid + Benzol** (M. 6, 537). — II, 330.
- $C_{40}H_{40}O_4N_{11}$ C 64,3 — H 6,6 — O 8,6 — N 20,5 — M. G. 747.
1) **4-Nitroso-1-Dimethylamidobenzolhydrocyanid + Amidobenzol** (M. 6, 537). — II, 330.
- $C_{40}H_{40}O_4N_4$ C 73,9 — H 7,7 — O 9,8 — N 8,6 — M. G. 650.
1) **Conchininhydrochinin + $2\frac{1}{2}H_2O$** (A. 241, 259). — III, 860.
- $C_{40}H_{39}O_8Si$ 1) **Tetra[4-tert. Butylphenylester] d. Kieselsäure**. Sd. 380^{100} (B. 18, 1692). — II, 765.
2) **Tetra[2-Methyl-5-Isopropylphenylester] d. Kieselsäure**. Sd. 380 bis 390^{115} (B. 18, 1694). — II, 767.
3) **Tetra[3-Methyl-6-Isopropylphenylester] d. Kieselsäure**. Sm. 47 bis 48° ; Sd. 450° (B. 18, 1693). — II, 770.
- $C_{40}H_{39}O_6N_2$ C 75,0 — H 8,1 — O 12,5 — N 4,4 — M. G. 640.
1) **Thymolchroin** (B. 7, 1100; 21, 252). — II, 774.
- $C_{40}H_{39}O_{11}N$ C 62,3 — H 6,9 — O 29,0 — N 1,8 — M. G. 771.
1) **Triacetylpaconitin (oder $C_{20}H_{31}O_{15}N$)**. Sm. 207° (Soc. 67, 462). — III, 773.
- $C_{40}H_{39}O_4N_4$ C 66,8 — H 7,5 — O 17,8 — N 7,8 — M. G. 718.
- $C_{40}H_{39}O_{13}N_2$ 1) **Nitrocampherchinin + H_2O** . Sm. 131° u. Zers. (B. 49, 97). — III, 813.
C 63,5 — H 7,4 — O 25,4 — N 3,7 — M. G. 756.
- $C_{40}H_{38}O_{21}N_4$ 1) **Myocotonin**. Sm. $143,6^\circ$ (C. 1895 [1] 1184).
C 51,7 — H 6,0 — O 36,2 — N 6,0 — M. G. 928.
1) **Kolamin** (C. 1898 [2] 217).
- $C_{40}H_{41}O_2N$ C 81,8 — H 10,4 — O 5,4 — N 2,4 — M. G. 587.
1) **Solanidin (oder $C_{26}H_{41}O_2N$)**. Sm. 191° ; subl. $HCl + H_2O$, $H_2SO_4 + 8H_2O$ (A. 118, 140; M. 10, 552; Fr. 21, 620). — III, 612.
- $C_{40}H_{43}O_5Cl_2$ 1) **Verbindung (aus Caryophyllin)** (B. 13, 800). — III, 626.
- $C_{40}H_{40}O_4Cl$ 1) **Verbindung (aus Caryophyllin)** (B. 13, 800). — III, 626.
- $C_{40}H_{44}O_4N_2$ C 75,5 — H 10,0 — O 10,0 — N 4,4 — M. G. 636.
1) **Chlorophyll (aus Spinat)** (C. 1895 [1] 656).
- $C_{40}H_{66}O_4Cl_4$ 1) **Dicetylester d. 3,4,5,6-Tetrachlorbenzol-1,2-Dicarbonsäure**. Sm. $49-50^\circ$ (B. 30, 786).
- $C_{40}H_{76}O_4Si$ 1) **Tetramethylester d. Kieselsäure**. Sm. 82° ; Sd. 350^{155} (B. 18, 1695). — III, 466.

C_{40} -Gruppe mit vier Elementen.

- $C_{40}H_{37}ON_7Cl$ 1) **Chlorid d. Verbindung $C_{40}H_{39}O_2N_7$** . 2 isom. Formen (B. 31, 3075).
- $C_{40}H_{40}O_4N_8S$ 1) **Chininsulfonsäure?** Ba (A. 108, 353, 354). — III, 816.
- $C_{40}H_{34}O_7N_{14}P_4$ 1) **Salmonucleinsäure** (C. 1896 [2] 102; H. 23, 404, 409). — IV, 1623.

C₄₁-Gruppe mit zwei Elementen.

- C₄₁H₃₀N₂ C 89,4 — H 5,4 — N 5,1 — M. G. 550.
 1) **2,4,5-Triphenyl-1,3-Di[1-Naphtyl]-2,3-Dihydroimidazol** (*B. 27*, 571).
 C 83,7 — H 5,4 — O 10,9 — M. G. 588.
- C₄₁H₃₀O₂ 1) **Dibenzoat d. β,β-Di[*p*-Oxyphenyl]-*α*-*γ*-Diphenylpropan** (*B. 25*, 1275). — II, 1152.
 C 70,3 — H 4,6 — O 25,1 — M. G. 700.
 1) **Tetrabenzoylhelicin** (*A. 154*, 26). — III, 69.
 2) **Pentabenzooat d. Galaktose**. Sm. 165° (*M. 10*, 397; *J. r. 23*, 377). — II, 1143.
 3) **Pentabenzooat d. Glykose**. Sm. 179° (*M. 10*, 396; *H. 14*, 337). — II, 1143.
 4) **Pentabenzooat d. Lävulose**. Sm. 78—79° (*J. r. 23*, 375). — II, 1143.
- C₄₁H₃₀O₁₁ C 70,1 — H 4,8 — O 25,1 — M. G. 702.
 1) **Tetrabenzooat d. Salicin** (*A. 154*, 8). — III, 609.
- C₄₁H₃₀O₁₅ C 64,2 — H 4,4 — O 31,3 — M. G. 766.
 1) **Ratanhiatannoform** (*C. 1896* [1] 560).
- C₄₁H₃₀O₃ C 85,1 — H 6,6 — O 8,3 — M. G. 578.
 1) **β,β-Diketo-*ε*-Aethanoyl-*γ*δ ϵ ; η -Pentaphenylnonan?** Sm. 175° (*M. 19*, 416).
 2) ***α*-*γ*-Tri[4-Methylbenzoyl]-β δ -Diphenylpentan** (Dibenzaltri-Methyl-p-Tolyketon). Sm. 228° (*B. 29*, 2247).
 C 83,1 — H 11,5 — O 5,4 — M. G. 592.
 1) **Dipropionyllicien**. Sm. 209° (*B. 28* [2] 236).
 C 78,8 — H 10,9 — O 10,3 — M. G. 624.
- C₄₁H₃₀O₃₇ 1) ***α*-Copal-Resen**. Sm. 75—77° (*C. 1896* [2] 796).
 C 42,7 — H 5,9 — O 51,4 — M. G. 1152.
 1) **Arabinose** (*Soc. 45*, 54). — I, 1101.
 C 82,3 — H 12,4 — O 5,3 — M. G. 598.
- C₄₁H₄O₂ 1) **Benzoat d. Verbindung C₄₀H₄O** (aus Hummelwachs). Sm. 53° (*H. 26*, 59).
 C 73,9 — H 11,7 — O 14,4 — M. G. 666.
- C₄₁H₇O₆ 1) **Glycerinacetotidistearin**. Sm. 28—30° (*J. pr.* [2] 28, 230). — I, 446.

C₄₁-Gruppe mit drei Elementen.

- C₄₁H₂₆ON₂ C 87,2 — H 5,0 — O 2,8 — N 5,0 — M. G. 564.
 1) **2-Tetranaphtylharnstoff**. Sm. 287—288° (294—295°) (*B. 23*, 1542, 2162). — II, 618.
- C₄₁H₂₇O₂N₂ C 79,9 — H 5,2 — O 10,4 — N 4,5 — M. G. 616.
 1) **Benzoat d. 3,5-Di[4-Methylphenylbenzoylamido]-1-Oxybenzol**. Sm. 262—264° (*G. 20*, 335). — II, 1178.
- C₄₁H₃₃O₁₀N₂ C 70,4 — H 4,7 — O 22,9 — N 2,0 — M. G. 699.
 1) **Pentabenzoylglykosamin**. Sm. 203° (*M. 12*, 436; siehe auch *B. 19*, 320; *H. 14*, 359). — II, 1195.
- C₄₁H₃₅O₁₀N₅ C 65,0 — H 4,6 — O 21,1 — N 9,2 — M. G. 757.
 1) **Phenylcarbamidsaccharin**. Sm. 230—240° u. Zers. (*B. 18*, 2607). — II, 372.
- C₄₁H₃₇O₁₀N₅ C 64,8 — H 4,8 — O 21,1 — N 9,2 — M. G. 759.
 1) **Phenylamidoformiat d. Quercit**. Sm. 120—140° (*B. 18*, 2606). — II, 372.
- C₄₁H₃₉ON₃ C 83,5 — H 6,6 — O 2,8 — N 7,1 — M. G. 589.
 1) **Tri[4-Methylphenyl]rosanilin**. Chlorid (*A. 132*, 290). — II, 1093.
- C₄₁H₃₉O₁₁N₃ C 63,3 — H 5,0 — O 22,6 — N 9,0 — M. G. 777.
 1) **Phenylamidoformiat d. Mannit**. Sm. 260° u. Zers. (*B. 18*, 970). — II, 372.
 2) **Phenylamidoformiat d. Dulcitol**. Sm. 250—252° (*B. 18*, 971). — II, 372.
 C 77,0 — H 6,4 — O 10,0 — N 6,6 — M. G. 639.
- C₄₁H₄₁O₁N₃ 1) **3'-Nitro-5',5'-Di[Benzoylamido]-2',2'-Diisobuthyltriphenylmethan**. Sm. 113—114° (*B. 21*, 3215). — IV, 1049.
 2) **4'-Nitro-5',5'-Di[Benzoylamido]-2',2'-Diisobuthyltriphenylmethan**. Sm. 125—126° (*B. 21*, 3214). — IV, 1049.

- $C_{41}H_{41}O_6N_6$ C 68,9 — H 5,9 — O 13,4 — N 11,8 — M. G. 714.
 1) **Methyläther d. Phylloaonin.** Sm. 210° (A. 278, 337). — III, 658.
- $C_{41}H_{41}O_6N_2$ C 69,5 — H 6,2 — O 20,3 — N 4,0 — M. G. 708.
 1) **Triacetat d. Pseudomorphinmonomethyläther.** (2HCl, PtCl₄) (A. 294, 217).
- $C_{41}H_{47}O_6N$ C 69,0 — H 6,6 — O 22,5 — N 1,9 — M. G. 713.
 1) **Dibenzoylpapousoeconin** (Sec. 33, 330). — III, 776.
- $C_{41}H_{50}O_6N_{10}$ C 65,9 — H 6,7 — O 8,6 — N 18,8 — M. G. 746.
 1) **4-Nitroso-1-Dimethylamidobenzolhydrocyanid + Methylbenzol** (M. 6, 537). — II, 330.
- $C_{41}H_{49}O_6N_{11}$ C 59,1 — H 9,1 — O 11,5 — N 20,2 — M. G. 832.
 1) **Benzylidentetraönanthohehexaureid** (A. 151, 197). — III, 33.
- $C_{41}H_{51}O_6N$ C 67,3 — H 11,1 — O 19,7 — N 1,9 — M. G. 731.
 1) **Phrenosinhydrat** (J. pr. [2] 25, 27). — III, 574.
- $C_{41}H_{54}O_6N_{11}$ C 58,5 — H 10,0 — O 11,4 — N 20,0 — M. G. 840.
 1) **Oenanthohehexaureid.** Sm. 150° (A. 151, 190). — I, 1314.

C₄₁-Gruppe mit vier Elementen.

- $C_{41}H_{71}ON_8S$ 1) **Dithio-β-Tetranaphtylharnstoff.** Sm. oberh. 350° (B. 24, 2918). — II, 870.

C₄₃-Gruppe mit zwei Elementen.

- $C_{43}H_{73}O_{12}$ C 70,2 — H 3,1 — O 26,7 — M. G. 718.
 1) **Tetrabenzoyllellagsäure** (M. 13, 54). — II, 2085.
- $C_{43}H_{76}O_{13}$ C 67,9 — H 4,0 — O 28,0 — M. G. 742.
 1) **Katechuretine + 6H₂O** (A. 128, 291; 186, 337). — III, 686.
- $C_{43}H_{77}O_8$ C 79,8 — H 5,0 — O 15,2 — M. G. 632.
 1) **Benzilbenzoin.** Sm. 134—135° (B. 19, 1866). — III, 281.
- $C_{43}H_{77}N_6$ C 81,3 — H 5,2 — N 13,5 — M. G. 620.
 1) **Base** (aus Phenosafranin), siehe auch $C_{28}H_{27}N_3$. HCl, HBr (B. 29, 371). — IV, 1327.
- $C_{43}H_{73}N_5$ C 83,0 — H 5,4 — N 11,5 — M. G. 607.
 1) **Azobenzoläther** (A. 38, 331). — III, 27.
- $C_{43}H_{74}O_{10}$ C 72,2 — H 4,9 — O 22,9 — M. G. 698.
 1) **Tribenzoylguajacinsäure.** Sm. 155—158° (C. 1897 [1] 167).
- $C_{43}H_{74}O_{15}$ C 64,8 — H 4,4 — O 30,8 — M. G. 778.
 1) **Katechinanhydrat** (A. 186, 336). — III, 686.
- $C_{43}H_{74}O_{16}$ C 63,5 — H 4,3 — O 32,2 — M. G. 794.
 1) **Katechin** (aus Acajouholz). Sm. 164—165° (Bl. 30, 568). — III, 687.
- $C_{43}H_{74}O_{17}$ C 62,2 — H 4,2 — O 33,6 — M. G. 810.
 1) **Fichtenroth** (B. 17, 1128). — III, 681.
- $C_{43}H_{76}O_{10}$ C 72,0 — H 5,1 — O 22,9 — M. G. 700.
 1) **Pentabenzoyl d. Alkohols C₇H₁₆O₂** (aus Diallylcarbinol). Fl. (J. pr. [2] 41, 62). — II, 1142.
- $C_{43}H_{76}O_{15}$ C 67,4 — H 4,8 — O 27,8 — M. G. 748.
 1) **Tribenzoylphloridzin** (A. 156, 11). — III, 600.
- $C_{43}H_{76}O_{16}$ C 63,3 — H 4,5 — O 32,2 — M. G. 796.
 1) **Katechin** (aus braunem Katechu). Sm. 140° (Bl. 28, 146). — III, 687.
 2) **Katechin** (aus gelbem Katechu). Sm. 188—190° (Bl. 28, 146). — III, 687.
- $C_{43}H_{76}N_4$ C 84,6 — H 6,0 — N 9,4 — M. G. 596.
 1) **Verbindung** (Base aus d. Phenylamid d. Benzolcarbonsäure). Sm. 217° (B. 10, 1720). — II, 1162.
- $C_{43}H_{78}O_{13}$ C 67,2 — H 5,1 — O 27,7 — M. G. 750.
 1) **Acetylderivat d. Chrysophanhydranthron.** Sm. 230—231° (B. 21, 437). — III, 453.
- $C_{43}H_{78}O_{16}$ C 63,3 — H 4,7 — O 32,1 — M. G. 798.
 1) **b-Katechin + H₂O.** Sm. 176—177° (Bl. 30, 567). — III, 682.

- C₄₇H₄₀O₅** C 80,8 — H 6,4 — O 12,8 — M. G. 624.
 1) Diäthyläther d. 2,2'-Dioxydibenzylidetriacetophenon. Sm. 190 bis 192° (B. 29, 1893).
 2) Diäthyläther d. 3,3'-Dioxydibenzylidetriacetophenon. Sm. 225° (B. 29, 1894).
 3) Diäthyläther d. 4,4'-Dioxydibenzylidetriacetophenon. Sm. 253 bis 257° (B. 29, 1894).
- C₄₇H₄₄O₂₂** C 56,0 — H 4,9 — O 39,1 — M. G. 900.
- C₄₇H₄₆O₂₃** C 54,9 — H 5,0 — O 40,1 — M. G. 918.
 1) Oktacetat d. 2-Oxybenzol-1-Carbonsäureglykosid. Sm. 110—111° (Am. 5, 173). — II, 1493.
- C₄₇H₄₈O₁₆** C 62,4 — H 5,9 — O 31,7 — M. G. 808.
 1) Hexacetat d. Coriamyrtin + 3H₂O. Sm. unter 100° (Z. 1866, 665). — III, 579.
- C₄₇H₄₈O₂₇** C 51,2 — H 4,9 — O 43,9 — M. G. 984.
 1) Lokaonsäure. NH₂, (NH₄)₂, K₂, Ba, Pb (B. 18, 3419). — III, 597.
- C₄₇H₅₀O₂₂** C 55,6 — H 5,5 — O 38,9 — M. G. 906.
 1) Oktacetylhellicoidin. Sm. 80° (A. 164, 29). — III, 69.
- C₄₇H₅₁N₅** C 80,6 — H 8,2 — N 11,2 — M. G. 625.
 1) αααββ-Penta[4-Dimethylamidophenyl]äthan + H₂O (A. 206, 121). — IV, 1327.
- C₄₇H₅₄O₁₅** C 63,0 — H 7,0 — O 30,0 — M. G. 800.
 1) Cnicin (A. 44, 298). — III, 628.
- C₄₇H₅₄O₁₀** C 69,2 — H 8,8 — O 22,0 — M. G. 728.
 1) Myroxofluorin (C. 1897 [1] 421).
- C₄₇H₅₆O₁₃** C 66,1 — H 8,6 — O 25,2 — M. G. 762.
 1) Hexaisoamylester d. Benzolhexacarbonsäure. Fl. (J. 1862, 281). — II, 2105.
- C₄₇H₅₈O₄** C 79,2 — H 10,7 — O 10,1 — M. G. 636.
 1) Dipropionat d. α-Luctaeerol. Sm. 182° (A. 234, 249). — II, 1068.
- C₄₇H₆₀O₂** C 83,1 — H 11,6 — O 5,3 — M. G. 606.
 1) Echitein. Sm. 195° (A. 178, 69). — III, 630.
- C₄₇H₇₀O₇** C 82,6 — H 12,1 — O 5,2 — M. G. 610.
 1) Palmitat d. Cholesterin. Sm. 78° (H. 21, 342).
 2) Palmitat d. Phytosterin. Sm. 82° (B. 29 [2] 38).
- C₄₇H₇₆O₇** C 72,8 — H 11,0 — O 16,2 — M. G. 692.
 1) Mannitandioleïn (A. ch. [3] 47, 326). — I, 526.
- C₄₇H₇₆O₇** C 72,6 — H 11,2 — O 16,1 — M. G. 694.
 1) Glykosedistearat (A. ch. [3] 60, 96). — I, 1049.
- C₄₇H₈₀O₇** C 72,4 — H 11,5 — O 16,1 — M. G. 696.
 1) Dulcitantdistearat (BERTHELOT, Chim. org. synth. 2, 210). — I, 447.
 2) Pinidtdistearat (BERTHELOT, Chim. org. synth. 2, 216). — I, 446.
 3) Quercidtdistearat (BERTHELOT, Chim. org. synth. 2, 219). — I, 446.
- C₄₇H₈₄O₇** C 81,3 — H 13,5 — O 5,2 — M. G. 620.
 1) Myricylester d. Laurinsäure. Sm. 69—70° (Bl. [3] 11, 186).

C₄₂-Gruppe mit drei Elementen.

- C₄₁H₇₁O₉N** C 85,9 — H 3,6 — O 8,2 — N 2,3 — M. G. 587.
 1) Phenylamidodianhydrobisdiketohydroindon (B. 31, 2089).
- C₄₁H₇₁O₁₇Br₁₀** 1) Bromfichtenroth (B. 17, 1129). — III, 681.
- C₄₁H₇₈O₇N₆** C 77,8 — H 4,3 — O 4,9 — N 13,0 — M. G. 648.
 1) Verbindung (aus o-Dinitrodibenzyl-p-Toluidin) (B. 25, 3579). — IV, 1355.
- C₄₁H₇₉O₇N₇** C 69,3 — H 4,0 — O 13,2 — N 13,5 — M. G. 727.
 1) Tri[4-Nitrobenzyliden]hydrocyanrosanilin. Sm. 144—145° (B. 28, 210). — III, 16.
- C₄₁H₈₀O₆S₃** 1) Tribenzoat d. β-Trithio-2-Oxybenzaldehyd. Sm. 218° (A. 277, 346). — III, 71.
 2) Tribenzoat d. β-Trithio-3-Oxybenzaldehyd. Sm. 146° (A. 277, 347). — III, 81.

- $C_{13}H_{20}O_8S_3$ 3) Tribenzoat d. β -Trithio-4-Oxybenzaldehyd. Sm. 225° (A. 277, 350; B. 29, 141). — III, 84.
- $C_{13}H_{19}N_4S_3$ 1) Disulfid d. 2-Merkapto-1,4,5-Triphenylimidazol (A. 284, 31). — III, 225.
- $C_{13}H_{22}O_8N_2$ C 76,4 — H 4,8 — O 14,5 — N 4,2 — M. G. 660.
- 1) Dibenzoat d. $\alpha\beta$ -Di[Benzoylamido]- $\alpha\beta$ -Di[2-Oxyphenyl]äthan. Sm. 246—248° (Soc. 45, 682; B. 17, 2408). — II, 594; III, 287.
- $C_{13}H_{21}O_4N_4$ C 76,6 — H 5,2 — O 9,7 — N 8,5 — M. G. 658.
- 1) Verbindung (aus Dibenzaldiphenylhydrotetrazon). Sm. 165—168° (G. 27 [2] 289). — IV, 749.
- $C_{13}H_{21}O_8N_4$ C 69,8 — H 4,7 — O 17,7 — N 7,8 — M. G. 722.
- 1) Tetracetat d. Verb. $C_{13}H_{21}O_8N_4$. Sm. 190—191° (B. 15, 1971). — II, 394.
- $C_{13}H_{20}O_8S_3$ 1) Tribenzyläther d. α -Trithio-4-Oxybenzaldehyd. Sm. 127° (B. 29, 142). — III, 84.
- 2) Tribenzyläther d. β -Trithio-4-Oxybenzaldehyd. Sm. 198—199° + 2C₆H₆ (B. 29, 143). — III, 84.
- $C_{13}H_{16}N_4S_3$ 1) Azobenzoylschwefelwasserstoff? (A. 38, 327). — III, 28.
- $C_{13}H_{17}O_4N_3$ C 82,0 — H 6,0 — O 5,2 — N 6,8 — M. G. 615.
- 1) Benzalimid. Sm. 247° (B. 22, 1598). — III, 28.
- $C_{13}H_{16}N_6S_2$ 1) Dithiodiphenyltetraolyldiganidin. Sm. 118—119° (B. 20, 674). — II, 821.
- $C_{13}H_{16}O_8S_3$ 1) Tetraäthyläther d. 2,3,5,6-Tetramerkapto-1,4-Benzochinondibenzoyldithiobenzoylacetat. Sm. 131—132° (Am. 19, 293).
- $C_{13}H_{16}O_{17}N_{10}$ C 52,7 — H 4,2 — O 28,4 — N 14,6 — M. G. 956.
- 1) Oktaspartoanilid (B. 30, 2452).
- $C_{13}H_{10}N_4J$ 1) Jodmethylat d. Tribenzylrosanilin (B. 6, 264). — II, 1093.
- $C_{13}H_{19}O_7N_6$ C 67,9 — H 5,7 — O 15,1 — N 11,3 — M. G. 742.
- 1) Acetat d. Phyllotaonin (A. 278, 342). — III, 658.
- $C_{13}H_{14}O_6N_6$ C 69,2 — H 6,0 — O 13,2 — N 11,5 — M. G. 728.
- 1) Äthyläther d. Phyllotaonin. Sm. bei 200° (A. 278, 339; 288, 210). — III, 658.
- $C_{13}H_{16}O_5N_4$ C 73,5 — H 6,7 — O 11,7 — N 8,1 — M. G. 686.
- 1) Verbindung (aus d. Base $C_{13}H_{14}N_4$) (J. pr. [2] 36, 234). — II, 510.
- $C_{13}H_{16}O_7N_4$ C 70,2 — H 6,4 — O 15,6 — N 7,8 — M. G. 718.
- 1) Apovellosol. 4HBr + 5H₂O, 4HJ + 5H₂O (A. 282, 261). — III, 924.
- $C_{13}H_{18}O_{10}N_{10}$ C 59,1 — H 5,6 — O 18,8 — N 16,4 — M. G. 852.
- 1) Phenylhydrazonderivat d. Glykuronsäure. Sm. 114—115° (H. 11, 395). — IV, 726.
- $C_{13}H_{17}O_8N_4$ C 68,1 — H 7,0 — O 17,3 — N 7,6 — M. G. 740.
- 1) Phenylhydrasinderivat d. Quassin. Zers. bei 250° (G. 18, 169). — III, 647.
- $C_{13}H_{14}O_6N_4$ C 71,0 — H 7,6 — O 13,5 — N 7,8 — M. G. 710.
- 1) Apovellosidin. Sm. 154°. (4HCl, PtCl₄), 3HBr + 6H₂O (A. 282, 262). — III, 924.
- $C_{13}H_{20}O_{11}N$ C 62,6 — H 7,8 — O 27,8 — N 1,7 — M. G. 805.
- 1) β -Medicagophyll + 3H₂O (C. 1895 [1] 655).
- $C_{13}H_{27}O_2Br_3$ 1) Tribromechitein. Sm. 150° (A. 178, 72). — III, 630.
- $C_{13}H_{20}O_7N_2$ C 70,8 — H 9,6 — O 15,7 — N 3,9 — M. G. 712.
- 1) Delphinoidin. 2HCl, (2HCl, 2AuCl₃), 2HNO₃, H₂SO₄, Acetat (J. 1877, 896; Fr. 12, 219; 20, 118). — III, 880.
- $C_{13}H_{18}O_{16}S$ 1) Dioxycinnolsäureglycerinsulfat (B. 16, 2455; siehe auch M. 8, 214). — I, 761.

C₁₂-Gruppe mit vier Elementen.

- $C_{12}H_{20}O_5N_4Br_{11}$ 1) Verbindung (aus Amidobenzol u. Xanthogallol). Sm. 204—205° (A. 245, 336). — II, 1014.
- $C_{12}H_{14}O_2N_2Cl$ 1) Dibenzoylderivat d. Verb. $C_{12}H_{14}O_2N_2Cl$ (B. 31, 1411).
- $C_{12}H_{16}O_4N_4S$ 1) Sulfon d. Pararosanilinetat (Bl. [3] 11, 509).
- $C_{12}H_{17}O_4N_7Br$ 1) Verbindung (aus Nackenband) (J. 1879, 870). — IV, 1585.
- $C_{12}H_{17}O_4NP$ 1) Cephalin (B. 9, 950). — I, 343.
- $C_{12}H_{17}O_4NP$ 1) Lecithin. (2HCl, PtCl₄) (A. 148, 77). — I, 343.

RUCHTER, Lex. d. Kohlenstoffverl.

C₄₃-Gruppe mit zwei Elementen.

- C₄₃H₇₆O₁₀ C 73,5 — H 3,7 — O 22,8 — M. G. 702.
 1) Tetrabenzooat d. Fisetin. Sm. 184—185° (180—181°) (B. 19, 1745; C. 1898 [2] 741; Soc. 71, 1195). — III, 584.
 2) Tetrabenzooat d. Luteolin. Sm. 200—201° (Soc. 69, 210). — III, 585.
 C₄₃H₃₀N₂ C 89,9 — H 5,2 — N 4,9 — M. G. 574.
 1) 1,1'-Benzylidendi[2- α -Naphthylindol]. Sm. 246° (A. 272, 205). — IV, 465.
 C₄₃H₃₈O₁₀ C 72,3 — H 5,3 — O 22,4 — M. G. 714.
 1) Tribenzooat d. Kosin (C. 1897 [2] 1077).
 C 71,5 — H 6,4 — O 22,1 — M. G. 722.
 C₄₃H₄₆O₁₀ 1) Xanthoresinotannol (C. 1897 [1] 421).
 C 62,8 — H 6,1 — O 31,1 — M. G. 822.
 C₄₃H₅₀O₁₆ 1) Hexaacetat d. Kosin (J. 1874, 900). — III, 634.
 C 78,7 — H 11,6 — O 9,6 — M. G. 656.
 C₄₃H₇₆O₄ 1) Distearat d. 3,5-Dioxy-1-Methylbenzol (A. 112, 362). — II, 961.
 C₄₃H₇₆O₁₃ C 64,5 — H 9,5 — O 26,0 — M. G. 800.
 1) Lichenstearinsäure, siehe C₄₁H₇₄O₈.
 C₄₃H₈₄O₅ C 75,9 — H 12,3 — O 11,8 — M. G. 680.
 1) Glycerindiarachin. Sm. 75° (A. ch. [3] 47, 358). — I, 447.
 C₄₃H₈₈O₂ C 81,4 — H 13,6 — O 5,0 — M. G. 634.
 1) Cerylester d. Palmitinsäure. Sm. 79° (B. 3, 639). — I, 443.

C₄₃-Gruppe mit drei Elementen.

- C₄₃H₃₁N₄Cl 1) 5-[Chlor-1-Naphtylat] d. 7,8-Di[1-Naphtylamido]-2-Methyl-5,10-Naphtdiazin (B. 31, 1788 Anm.). — IV, 1287.
 C₄₃H₃₁O₁₁N C 66,7 — H 6,6 — O 34,8 — N 1,8 — M. G. 773.
 1) Benzoylapseudoaconitin + H₂O. (HCl, AuCl₃), HNO₃ (Soc. 33, 151). — III, 775.
 C₄₃H₇₄O₁₁Cl 1) Chlorid d. Lichenstearinsäure. Fl. (B. 23, 463). — I, 625.

C₄₃-Gruppe mit vier Elementen.

- C₄₃H₃₇O₁₀N₄P 1) bas. Chininglycerophosphat + 7 H₂O (C. 1898 [1] 782).
 C₄₃H₈₉O₁₁N₁S 1) Oxyproteinsäure. Ba₄ (C. 1897 [2] 619, 957). — IV, 1603.

C₄₁-Gruppe mit einem Element.

- C₄₁H₅₀ C 91,3 — H 8,7 — M. G. 578.
 1) γ -Abietin (Z. 1866, 35). — II, 1436.
 C₄₁H₅₂ C 91,0 — H 10,0 — M. G. 580.
 1) ϵ -Abietin (Z. 1866, 35). — II, 1436.
 C₄₁H₅₄ C 90,7 — H 9,3 — M. G. 582.
 1) β -Abietin (Z. 1866, 35). — II, 1436.
 C₄₁H₅₆ C 90,4 — H 9,6 — M. G. 584.
 1) γ -Abietin (Z. 1866, 35). — II, 1436.
 C₄₁H₅₈ C 90,1 — H 9,9 — M. G. 586.
 1) β -Abietin (Z. 1866, 35). — II, 1436.
 C₄₁H₆₀ C 89,8 — H 10,2 — M. G. 588.
 1) α -Abietin. Sd. 295—303° (Z. 1866, 35). — II, 1436.

C₄₁-Gruppe mit zwei Elementen.

- C₄₁H₇₈O₉ C 75,4 — H 4,0 — O 20,6 — M. G. 700.
 1) 2-[2,3-Dibenzoxyphenyl]äther d. 2-Oxy-1,4-Dibenzoxylnaphtalin. Sm. 203—205° (B. 30, 2566).

- $C_{11}H_{30}O_9$ C 75,2 — H 4,3 — O 20,5 — M. G. 702.
- $C_{11}H_{30}O_{15}$ 1) Diacetat d. Verbindung $C_{10}H_{22}O_7$. Sm. 245° (B. 14, 1863). — II, 1986.
C 66,1 — H 3,8 — O 30,1 — M. G. 798.
- $C_{11}H_{34}O_8$ 1) Säure (aus Phenol) (G. 14, 103). — II, 649.
C 76,5 — H 4,9 — O 18,5 — M. G. 690.
- $C_{11}H_{34}O_9$ 1) Tetrabenzyloxyester d. 1-Phenylbenzol-2,3,5,6-Tetracarbonsäure. Sm. 114—118° (Ann. 30, 106).
C 74,8 — H 4,8 — O 20,4 — M. G. 706.
- $C_{11}H_{36}O_7$ 1) Verbindung (aus Phenanthroxylenacetessigsäureäthylester). Sm. 227° (Soc. 59, 14). — II, 1908.
C 86,0 — H 6,2 — O 7,8 — M. G. 614.
- $C_{11}H_{36}O_8$ 1) Äthylester d. β -Acetyl- $\alpha\alpha\alpha\gamma\gamma$ -Hexaphenylpropan- β -Carbon-säure. Sm. 159,5—160,5° (A. 227, 111). — II, 1730.
C 65,5 — H 4,7 — O 29,8 — M. G. 806.
- $C_{11}H_{40}O_{15}$ 1) Sacculmin (G. 10, 121, 240, 355). — I, 1109.
C 65,3 — H 4,9 — O 29,7 — M. G. 808.
- $C_{11}H_{40}O_1$ 1) Benzoylderivat d. Pikrotoxinin. Sm. 237—238° (A. 222, 343). — III, 643.
C 90,1 — H 7,2 — O 2,7 — M. G. 586.
- $C_{11}H_{42}O$ 1) Aether d. β -Oxy- $\alpha\alpha\alpha$ -Triphenyl- β -Methylpropan. Sd. 256° (J. pr. [2] 41, 525). — II, 904.
C 81,7 — H 8,4 — O 9,9 — M. G. 646.
- $C_{11}H_{44}O_1$ 1) Dithymoläthylenchinhydrin. Sm. 214—215° (B. 7, 1199; Soc. 31, 263). — II, 999.
- $C_{11}H_5Br_3$ 1) Tribrom- α -Abietin (Z. 1866, 35). — II, 1436.
C 60,4 — H 6,6 — O 33,0 — M. G. 874.
- $C_{11}H_{36}O_{15}$ 1) Heptaacetat d. Ouabain. Sm. 310° (Bl. [3] 19, 939).
- $C_{11}H_{38}Br_2$ 1) Dibrom- α -Abietin (Z. 1866, 35). — II, 1436.
C 59,2 — H 6,7 — O 34,1 — M. G. 892.
- $C_{11}H_{36}O_{19}$ 1) Heptaacetat d. Ouabain. Sm. 270—275° (C. 1898 [1] 512).
C 80,4 — H 9,8 — O 9,8 — M. G. 656.
- $C_{11}H_{34}O_4$ 1) Diacetat d. Succinoabietinol. Sm. 92° (C. 1895 [1] 556).
- $C_{11}H_{34}O_{18}$ 1) Colocynthein (J. 1858, 532; 1861, 757; Fr. 24, 154). — III, 577.
C 78,1 — H 10,1 — O 11,8 — M. G. 676.
- $C_{11}H_{36}O_5$ 1) Hydroabietinsäure. Sm. 140—145°. $N_2 + 3H_2O$, Ca, Pb, Ag_2 (Z. 1866, 34). — II, 1978.
C 62,0 — H 8,0 — O 30,0 — M. G. 852.
- $C_{11}H_{36}O_{16}$ 1) Tetraäthylester d. Betulinamarsäure. Sm. 117° (A. 182, 378). — III, 621.
C 79,8 — H 10,6 — O 9,6 — M. G. 662.
- $C_{11}H_{37}O_4$ 1) Dibenzolat d. Coccerylalkohol. Sm. 60—62° (B. 20, 961). — II, 1142.
C 50,5 — H 6,7 — O 42,8 — M. G. 1046.
- $C_{11}H_{37}O_{18}$ 1) Crocin (aus Safran) (B. 17, 2230; 21, 988; A. 278, 357). — III, 602.
C 83,0 — H 11,9 — O 5,0 — M. G. 636.
- $C_{11}H_{37}O_2$ 1) Oleat d. Cholesterin. Sm. 42° (H. 21, 332, 340).
C 82,8 — H 12,2 — O 5,0 — M. G. 638.
- $C_{11}H_{37}O$ 1) Stearat d. Cholesterin. Sm. 82° (65°) (A. ch. [3] 56, 57; H. 21, 345). — II, 1073.
2) Stearat d. Isocholesterin. Sm. 72° (J. pr. [2] 7, 174). — II, 1075.
C 80,2 — H 12,5 — O 7,3 — M. G. 658.
- $C_{11}H_{37}O_3$ 1) Anhydrid d. Brassidinsäure. Sm. 28—29° (B. 19, 3325). — I, 529.
2) Anhydrid d. Erukasäure (B. 19, 3325). — I, 528.

C_{11} -Gruppe mit drei Elementen.

- $C_{11}H_{39}O_1S_4$ 1) Galleintetrabenzolsulfonat. Sm. 187—188°. — II, 2088.
- $C_{11}H_{39}O_{17}N_3$ C 69,6 — H 3,8 — O 21,1 — N 5,5 — M. G. 759.
1) Verbindung (aus 5-Amidonaphthalin-1-Carbonsäure). Sm. 285° (B. 19, 1983). — II, 1451.
- $C_{11}H_{39}O_7N_4$ C 81,7 — H 4,6 — O 4,9 — N 8,7 — M. G. 646.
1) 1,1'-Binaphtyl-3,4,3',4'-Dihiontetraamid. Sm. 248—250°. 211Cl (B. 17, 3022). — III, 397.

- C₁₄H₁₀O₁₆S₁** 1) Verbindung (aus Resorcin u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) + 4H₂O (*Am.* 16, 520; 17, 568).
- C₁₄H₁₀O₁₆S₁** 1) Verbindung (aus Pyrogallol u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) (*Am.* 16, 527).
- C₁₄H₁₀O₇N₂** C 85,1 — H 5,2 — O 5,2 — N 4,5 — M. G. 620.
1) Verbindung (aus Desyllessigsäure u. Anilin). Sm. noch nicht bei 300° (*A.* 269, 141). — **IV**, 443.
- C₁₄H₁₁O₈S₁** 1) Rubbadin. Zers. bei 160° (*B.* 25, 1877). — **II**, 657.
C₁₄H₁₁O₇N₁ C 81,3 — H 5,2 — O 4,9 — N 8,6 — M. G. 650.
1) Verbindung (aus 1-Phenylamido 2-Keto-4,5-Diphenyl-2,3-Dihydropyrrrol). Sm. 238—243° (*A.* 269, 138). — **IV**, 699.
- C₁₄H₁₁O₈S₁** 1) Verbindung (aus Rubbadin) (*B.* 25, 1884). — **II**, 658.
C₁₄H₁₀O₈N₂ C 80,6 — H 5,5 — O 9,8 — N 4,3 — M. G. 656.
1) Diäthylester d. 1,4-Di[2,6-Diphenyl-1-Pyrryl]benzol-1²,4²-Dicarbonsäure. Sm. 249—250° (*B.* 22, 3095). — **IV**, 450.
C 80,4 — H 5,9 — O 7,3 — N 6,4 — M. G. 657.
- C₁₄H₁₀O₃N₂** 1) Acetylbenzalimid. Sm. 178° (*B.* 22, 1599). — **III**, 28.
C 81,4 — H 7,2 — O 4,9 — N 6,5 — M. G. 649.
- C₁₄H₁₁O₂N₂** 1) Verbindung (aus d. Chlorid d. ?-Diäthylamidonaphtalin-2-Carbonsäure). Sm. 130° (*Soc.* 41, 185). — **II**, 1459.
- C₁₄H₁₁O₈N₂** C 70,2 — H 6,9 — O 19,1 — N 3,7 — M. G. 752.
1) Aethylpapaveriniumoxyd. Sm. 175—180° (wasserfrei) (*M.* 9, 752; 10, 678). — **IV**, 441.
- C₁₄H₁₀O₁₀Si** 1) Tetra[4-(tert.) Amylphenylester] d. Kieselsäure. Sd. 390—397°₁₁₀ (*B.* 18, 1692). — **II**, 775.
C 65,3 — H 7,4 — O 23,8 — N 3,5 — M. G. 808.
- C₁₄H₁₀O₁₃N₂** 1) Lycaconitin. Sm. 116,4° (*C.* 1895 [1] 1184).
C 59,1 — H 7,0 — O 32,2 — N 1,6 — M. G. 893.
- C₁₄H₁₀O₁₈N** 1) Glycyrrhizinsäure. NH₄, (NH₄)₂, K, K₂, Ba₂, Pb₂ (*A.* 48, 347; 59, 224; 118, 236; 197, 116; *J.* 1878, 930; 1879, 921; 1885, 1772; *B.* 9, 1158). — **III**, 591.
- C₁₄H₁₀O₄N** C 78,8 — H 9,7 — O 9,5 — N 2,0 — M. G. 671.
1) Diacetylolanidin. Sm. 203° (*A.* 195, 322; *M.* 10, 558). — **III**, 613.
- C₁₄H₁₁O₄N₂** C 75,0 — H 11,9 — O 9,1 — N 4,0 — M. G. 704.
1) Hydrazid d. Oxybrassicinsäure. Sm. 56° (*B.* 26, 1872).

C₁₄-Gruppe mit vier Elementen.

- C₁₄H₁₀O₁₇N₄S₃** 1) Hexanitrorubbadin (*B.* 25, 1886). — **II**, 658.
C₁₄H₁₀O₁₇N₄S₃ 1) Tetranitrodiamidorubbadin (*B.* 25, 1887). — **II**, 658.
C₁₄H₁₀O₈N₂S₃ 1) Dehydrocorydalinwasserstoffhexasulfid (*C.* 1898 [2] 115).
C₁₄H₁₀O₈N₂J₂ 1) Di[Jodmethylat] d. Apovellosidin. Sm. 262° (*A.* 282, 264). — **III**, 924.

C₁₅-Gruppe mit einem Element.

- C₁₅H₁₁** C 88,3 — H 11,7 — M. G. 612.
1) Dammaryl. Sm. 190° (*J.* 1847/48, 741). — **III**, 555.

C₁₅-Gruppe mit zwei Elementen.

- C₁₅H₁₁O₂** C 89,4 — H 5,3 — O 5,3 — M. G. 604.
1) Verbindung (aus Isobiphenylenketon). Sm. 79—80° (*B.* 21, 2007). — **III**, 242.
C₁₅H₁₀O C 86,8 — H 10,6 — O 2,6 — M. G. 622.
1) Verbindung (Keton aus Isovaleriansäure). Sd. über 360° (*A.* 202, 329).
C₁₅H₁₀O₂ C 75,2 — H 9,2 — O 15,6 — M. G. 718.
1) Sandarakolsäure. Sm. 140° (152°). Cu, Ag (*B.* 29 [2] 687; *C.* 1896 [2] 184). — **III**, 561.

- $C_{45}H_{71}O_5$ C 81,8 — H 10,9 — O 7,3 — M. G. 660.
 1) **Dammarylsäure.** Sm. 60° (J. 1847/48, 741). — III, 555.
 $C_{45}H_{71}O_{13}$ C 63,4 — H 8,4 — O 28,2 — M. G. 852.
 1) **Diacetat d. Rottlerin.** Sm. 130—135° (Soc. 63, 979). — III, 671.
 $C_{45}H_{71}O_4$ C 79,6 — H 10,9 — O 9,4 — M. G. 678.
 1) **Dammarylsäurehydrat.** Sm. 56° (J. 1847/48, 741). — III, 555.
 $C_{45}H_{96}O_{19}$ C 50,6 — H 7,5 — O 41,9 — M. G. 1068.
 1) **Convolvulinsäure.** Sm. 150—155°. Ba + 2H₂O (C. 1897 [1] 419).
 $C_{45}H_{94}O_6$ C 74,8 — H 11,9 — O 13,3 — M. G. 722.
 1) **Glycerintrimyrustin.** Sm. 55° (A. 37, 153; 91, 369; 202, 173; J. 1859, 366; B. 18, 1982, 2013; 19, 1433; J. pr. [2] 31, 306; A. ch. [6] 11, 227). — I, 441.

C_{45} -Gruppe mit drei Elementen.

- $C_{45}H_{29}N_7Br_6$ 1) **9-Phenylhydrason-β-Dibromfluoren + 2 Molec. β-Dibromfluoren.** Sm. 134—144° (M. 16, 815). — IV, 778.
 $C_{45}H_{31}O_3N_3$ C 81,4 — H 5,0 — O 7,2 — N 6,3 — M. G. 663.
 1) **1,3,5-Tri[Phenylbenzoylamido]benzol.** Sm. oberh. 300° (G. 20, 341). — IV, 1125.
 $C_{45}H_{31}O_9N_{16}$ C 55,7 — H 3,5 — O 14,8 — N 26,0 — M. G. 970.
 1) **Tribenzoat d. Verb. C₂₁H₂₇O₉N₁₆.** Sm. 193—195° (B. 27, 942).
 $C_{45}H_{36}O_9S_3$ 1) **4-Tribenzoat d. Trithio-3-Methoxyl-4-Oxybenzol-1-Carbonsäurealdehyd (Trithiobenzoylvanillin).** Sm. 164° (B. 29, 144). — III, 104.
 $C_{45}H_{44}O_2N_6$ C 77,1 — H 6,3 — O 4,6 — N 12,0 — M. G. 700.
 1) **Verbindung (aus Carvakrolbidiazotriphenylmethan)** (G. 15, 311). — IV, 1426.
 $C_{45}H_{48}O_{16}N_6$ C 62,8 — H 5,6 — O 18,6 — N 13,0 — M. G. 860.
 1) **Phenylosazon d. Kaffeegerbsäure C₂₁H₂₉O₁₆.** Sm. 180° (C. 1897 [2] 351).
 $C_{45}H_{53}O_{18}N_5$ C 56,8 — H 5,6 — O 30,3 — N 7,3 — M. G. 951.
 1) **2,4,6-Trinitro-3-Pseudobutyl-1-Methylbenzol + Amidobenzol.** Sm. 64° (B. 24, 2838). — II, 313.

C_{45} -Gruppe mit vier Elementen.

- $C_{45}H_{36}O_8N_6S_3$ 1) **Verbindung (aus d. Chlorid C₁₇H₂₉O₈N₆Cl₃S₃).** Sm. 196° (Am. 9, 346). — II, 1175.
 $C_{45}H_{51}O_{10}Cl_2P$ 1) **Santonensäureverbindung.** Sm. 198° (J. 1880, 805). — II, 1789.

C_{46} -Gruppe mit zwei Elementen.

- $C_{46}H_8O_5$ C 86,5 — H 0,9 — O 12,5 — M. G. 638.
 1) **Pyrographitoxyd** (A. ch. [6] 20, 23). — II, 2021.
 $C_{46}H_{21}O_{13}$ C 67,0 — H 3,9 — O 29,1 — M. G. 824.
 1) **Tetracetat d. Pyrogallolbenzein.** Sm. 208° (A. 257, 63). — II, 1044.
 $C_{46}H_{34}N_6$ C 82,4 — H 5,1 — N 12,5 — M. G. 670.
 1) **Base (aus Mandelsäure u. 1,2-Diamidonaphtalin).** Sm. noch nicht bei 360° (B. 25, 955). — IV, 1333.
 $C_{46}H_{44}O_7$ C 77,7 — H 6,5 — O 15,8 — M. G. 710.
 1) **Verbindung (aus Tri[2-Oxy-1-Methylphenyl]äthan)** (A. 257, 327). — II, 1029.
 2) **Verbindung (aus Tri[3-Oxy-1-Methylphenyl]äthan)** (A. 257, 328). — II, 1029.
 3) **Verbindung (aus Tri[4-Oxy-1-Methylphenyl]äthan)** (A. 257, 329). — II, 1029.
 $C_{46}H_{51}O_{15}$ C 64,9 — H 6,8 — O 28,2 — M. G. 850.
 1) **Tribenzoylpurginsäure** (C. 1897 [1] 419).
 $C_{46}H_{58}O_{14}$ C 55,1 — H 6,6 — O 38,3 — M. G. 1002.
 1) **Acetylderivat d. Saponin.** Sm. 159—162° (A. 218, 250). — III, 610.

- C₄₆H₄₆O₁₁** C 70,8 — H 5,7 — O 20,5 — M. G. 750.
 1) **Myroxol** (C. 1897 [1] 421).
- C₄₆H₅₁O₁₁** C 67,7 — H 5,5 — O 23,5 — M. G. 516.
 1) **Verbindung** (aus Schellack). Mg₂ (M. 9, 158). — III, 559.
- C₄₆H₇₄O** C 85,7 — H 11,8 — O 2,5 — M. G. 644.
 1) **Iocain** (oder C₂₁H₁₈O). Sm. 175° (A. 180, 256; 192, 181). — III, 557.
- C₄₆H₈₀O₂** C 83,1 — H 12,1 — O 4,8 — M. G. 664.
 1) **Palmitat d. β-Amyrin**. Sm. 75° (A. 271, 216). — III, 556.
- C₄₆H₈₀O₇** C 74,2 — H 10,8 — O 15,0 — M. G. 744.
 1) **Distearylalicylsäureglycerid** (C. 1899 [1] 369).
- C₄₆H₈₁O₂₁** C 53,3 — H 8,1 — O 38,6 — M. G. 1036.
 1) **Gratiolin** (J. 1858, 518). — III, 592.
- C₄₆H₉₇O₇** C 81,7 — H 13,6 — O 4,7 — M. G. 676.
 1) **Myricylester d. Palmitinsäure**. Sm. 72° (75°) (A. 71, 190; Bl. [3] 11, 189). — I, 443.

C₄₆-Gruppe mit drei Elementen.

- C₄₆H₃₀O₈N₃** C 76,1 — H 4,8 — O 13,2 — N 5,5 — M. G. 725.
 1) **β-Naphtogluconinsäure** + $\frac{1}{2}$ H₂O. Na + 8H₂O, K + 8H₂O (B. 31, 695). — IV, 1221.
- C₄₆H₃₄O₈S₂** 1) **Dimethylrubbadin**. Zers. oberh. 210° (B. 25, 1884). — II, 657.
- C₄₆H₃₇O₈N₃** C 75,9 — H 5,1 — O 13,2 — N 5,8 — M. G. 727.
 1) **Hydro-β-Naphtogluconinsäure** + 5H₂O. Sm. 231° u. Zers. (wasserfrei) (B. 31, 694). — IV, 1221.
- C₄₆H₄₁O₁₇P₄** 1) **Triacetylphosphorsellinsäure** (G. 14, 462). — II, 1753.
- C₄₆H₄₅O₉N₇** C 74,3 — H 6,0 — O 6,5 — N 13,2 — M. G. 743.
 1) **Triäthylidenrosanilin** (A. 140, 112). — II, 1693.
- C₄₆H₄₆O₉N₈** C 64,6 — H 5,4 — O 16,9 — N 13,1 — M. G. 854.
 1) **Phenyltetraspartotetraanilid**. Sm. 130° u. Zers. (A. 303, 213).
- C₄₆H₄₈O₇N₄** C 71,3 — H 7,0 — O 14,5 — N 7,2 — M. G. 774.
 1) **Apovellosin**. Sm. 60–70°. 4HBr. 4HJ + 4H₂O (A. 282, 256; B. 26, 1085). — III, 923.
- C₄₆H₅₀O₉N₄** C 77,1 — H 8,4 — O 6,7 — N 7,8 — M. G. 716.
 1) **Diäthylidencinchoxin**. Sm. bei 95°. (2HCl, PtCl₄) (A. 269, 292). — III, 834.
- C₄₆H₅₇O₄N₂** C 76,9 — H 10,3 — O 8,9 — N 3,9 — M. G. 718.
 1) **Atisin** (siehe auch C₂₇H₃₁O₇N) (C. 1895 [1] 1185).
- C₄₆H₅₉O₁₃N** C 62,1 — H 9,3 — O 27,0 — N 1,6 — M. G. 889.
 1) **Diäthylsolanin?** (J. 1858, 547; A. 110, 175). — III, 612.

C₄₆-Gruppe mit vier Elementen.

- C₄₆H₃₀O₈N₄Br₁** 1) **Verbindung** (aus 4-Amido-1-Methylbenzol u. Xanthogallol) (A. 245, 336). — II, 1014.
- C₄₆H₃₀O₈N₄J₂** 1) **Sesquijodäthylat d. Cinchotenin**. Sm. 183° u. Zers. (M. 15, 792). — III, 841.

C₄₇-Gruppe mit zwei Elementen.

- C₄₇H₃₀O₁₁** C 73,2 — H 3,9 — O 22,9 — M. G. 770.
 1) **Pentabenzoat d. Maklurin** (P. d. 2,4,6,3'4'-Pentaoxydiphenylketon). Sm. 155–156° (B. 27, 1996). — III, 207.
- C₄₇H₃₆O₁₁** C 71,2 — H 4,5 — O 24,2 — M. G. 792.
 1) **Pentabenzoylarbutin**. Sm. 159–165° (A. 154, 241; H. 14, 369). — III, 571.
- C₄₇H₃₈N₄** C 86,0 — H 5,5 — N 8,5 — M. G. 656.
 1) **Verbindung** (aus Benzoinphenylhydrazon). Sm. 215–216° (Ann. 18, 114). — IV, 777.

- $C_{47}H_{11}O_{16}$ C 65,4 — H 4,9 — O 29,7 — M. G. 862.
 1) **Pentabenzosäure d. Rohrzucker.** Sm. 106° (*H.* 14, 348). — II, 1143.
- $C_{47}H_{11}O_8$ C 74,2 — H 8,9 — O 16,8 — M. G. 760.
 1) **Acetylsandaraksäure (C. 1896 [2] 184).**
 C 77,0 — H 12,0 — O 10,9 — M. G. 732.
- $C_{47}H_{11}O_8$ 1) **Glycerindisuccin.** Sm. 47° (*B.* 19, 3322; *J. pr.* [2] 42, 370). — I, 528.
 2) **Glycerindibromsuccin.** Sm. 65° (67°) (*B.* 19, 3324; *J. pr.* [2] 42, 370). — I, 528.

C_{47} -Gruppe mit drei Elementen.

- $C_{47}H_{11}O_8N_4$ C 78,3 — H 6,0 — O 8,8 — N 7,8 — M. G. 720.
 1) **Verbindung** (aus d. Verb. $C_{39}H_{25}O_8N_4$). Sm. 168° (*G.* 22 [2] 241). — IV, 751.
- $C_{47}H_{11}O_8N_6$ C 76,2 — H 5,9 — O 6,5 — N 11,3 — M. G. 740.
 1) **Verbindung** (aus Isocarbopyrotitar-äureäthylester u. uns-Diphenylhydrazin). Sm. 187° (*B.* 27, 1163). — IV, 722.
- $C_{47}H_{17}O_{12}N_4$ C 56,7 — H 7,0 — O 30,6 — N 5,6 — M. G. 994.
 1) **Hemicollin.** Cu (*H.* 2, 299). — IV, 1626.

C_{48} -Gruppe mit zwei Elementen.

- $C_{48}H_{18}O$ C 94,4 — H 2,9 — O 2,6 — M. G. 610.
 1) **Aldehydharz** (*A. ch.* [6] 9, 423). — I, 921.
- $C_{48}H_{18}O_{11}$ C 73,8 — H 3,6 — O 22,6 — M. G. 780.
 1) **Tetrabenzosäure d. Hydrogallein.** Sm. 231° (*A.* 209, 264; *B.* 14, 1327). — II, 2093.
- $C_{48}H_{30}O_{10}$ C 75,2 — H 3,9 — O 20,9 — M. G. 766.
 1) **Tetrabenzosäure d. Brenkatechinphthalin.** Sm. 201–202° (*B.* 22, 2197). — II, 2065.
- $C_{48}H_{11}Br_2$ 1) **Verbindung** (aus 1,3-Dibrombenzol) (*M.* 7, 45). — II, 57.
 2) **Verbindung** (aus 1,4-Dibrombenzol) (*M.* 7, 42). — II, 58.
- $C_{48}H_{30}O_{12}$ C 71,6 — H 4,5 — O 23,9 — M. G. 804.
 1) **Hexabenzosäure d. Inosit.** Sm. 258° (*A. ch.* [6] 12, 103). — II, 1143.
 2) **Hexabenzosäure d. r-Inosit.** Sm. 253° (*A. ch.* [6] 22, 277). — II, 1143.
- $C_{48}H_{30}O_{13}$ C 71,4 — H 4,7 — O 23,8 — M. G. 806.
 1) **Hexabenzosäure d. Dulcit.** Sm. 147° (*A. ch.* [4] 27, 163). — II, 1142.
 2) **Hexabenzosäure d. Mannitan.** Sm. 124–125° (149°) (*J. pr.* [2] 36, 354; *M.* 10, 394). — II, 1142.
- $C_{48}H_{30}O_{14}$ C 62,7 — H 4,1 — O 33,1 — M. G. 918.
 1) **Capranid** (*J. pr.* [2] 57, 426).
- $C_{48}H_{38}N_6$ C 82,5 — H 5,4 — N 12,0 — M. G. 698.
 1) **Base** (aus Phenyl- β -Milchsäure u. 1,2-Diamidonaphthalin). Sm. noch nicht bei 360° (*B.* 25, 956). — IV, 1333.
- $C_{48}H_{34}O_8$ C 81,1 — H 7,6 — O 11,3 — M. G. 710.
 1) **Aldehydharz** (*A. ch.* [6] 9, 423). — I, 921.
- $C_{48}H_{30}O_{16}$ C 62,3 — H 6,5 — O 31,2 — M. G. 924.
 1) **Polychroit** (*Z.* 1867, 555). — III, 602.
- $C_{48}H_{34}O_{10}$ C 72,0 — H 8,0 — O 20,0 — M. G. 800.
 1) **Aldehydharz** (*A. ch.* [6] 9, 423). — I, 921.
- $C_{48}H_{34}O_{12}$ C 69,2 — H 7,7 — O 23,1 — M. G. 832.
 1) **Aldehydharz** (*A. ch.* [6] 9, 423). — I, 921.
- $C_{48}H_{30}O_8$ C 83,5 — H 9,6 — O 6,9 — M. G. 690.
 1) **Verbindung** (aus Cholsäure). Fl. (*H.* 10, 197). — I, 783.
- $C_{48}H_{36}O_{20}$ C 52,1 — H 5,9 — O 41,9 — M. G. 1106.
 1) **Xanthorhammin** + x H_2O (α -Rhamnegin). + 2 C_3H_5O , K, Pb₃ (*Berz. J.* 24, 505; *J.* 1858, 474; 1868, 775; *A.* 198, 310). — III, 615.
- $C_{48}H_{36}O_{25}$ C 55,2 — H 6,5 — O 38,3 — M. G. 1044.
 1) **Acetylderivat d. Saponin.** α -Verb. Sm. 97–100°; β -Verb. Sm. 142 bis 145° (*A.* 218, 251). — III, 610.

- $C_{48}H_{10}O_{17}$ C 62,8 — H 7,6 — O 29,6 — M. G. 918.
 1) **Theveresin** + $2H_2O$. Sm. 140° (J. 1868. 769). — III, 613.
 $C_{48}H_{17}O_{17}$ C 46,4 — H 5,9 — O 47,7 — M. G. 1242.
 1) **Pyrodextrin**. + BaO . + PbO (J. 1857. 494). — I, 1107.
 $C_{48}H_{13}O_3$ C 82,0 — H 11,1 — O 6,8 — M. G. 702.
 1) **Anhydrid d. Cholsäure**. Sm. 75–80° (M. 19, 3; C. 1898 [2] 495).
 $C_{48}H_{80}O_{19}$ C 60,0 — H 8,3 — O 31,7 — M. G. 960.
 1) **Bryonin** (oder $C_{34}H_{46}O_9$) (J. 1858. 521; Bl. [3] 9, 1054). — III, 573.
 $C_{48}H_{91}O_{11}$ C 43,8 — H 6,2 — O 49,9 — M. G. 1314.
 1) **Synanthrin**. Sm. 170° (B. 26 [2] 691).
 $C_{48}H_{70}O_8$ C 72,5 — H 11,3 — O 16,1 — M. G. 794.
 1) **Tetraäthylester d. α - β -Dicetylbutan- α - α - β -Tetracarbonsäure**. Sm. 69,5° (Soc. 65, 1114).
 $C_{48}H_9O_3$ C 82,0 — H 13,4 — O 4,6 — M. G. 702.
 1) **Myricylester d. Oelsäure**. Sm. 65° (Bl. [3] 11, 186).
 $C_{48}H_{34}O_3$ C 81,8 — H 13,6 — O 4,5 — M. G. 704.
 1) **Myricylester d. Stearinsäure**. Sm. 78° (Bl. [3] 11, 186).
 $C_{48}H_{77}N$ C 83,6 — H 14,4 — N 2,0 — M. G. 689.
 1) **Tricetylamin**. Sm. 39°. ($2HCl$, $PrCl_4$) (A. 83, 25). — I, 1139.

C_{48} -Gruppe mit drei Elementen.

- $C_{48}H_{31}O_{19}N_6$ C 57,8 — H 3,2 — O 30,5 — N 8,4 — M. G. 996.
 1) **Säure** (aus 2,4-Dinitrophenylacetessigsäureäthylester). $Ag_3 + 3H_2O$ (A. 220, 142). — II, 1659.
 $C_{48}H_{90}O_{10}S_4$ 1) **Diacetylrubbadin** (B. 25, 1882). — II, 657.
 $C_{48}H_{34}O_{11}S$ 1) **bas. Isohämateinsulfat** (B. 15, 2340). — III, 666.
 $C_{48}H_{30}O_{12}S_3$ 1) **Verbindung** (aus Isobrasileinsulfat) (B. 15, 2344). — III, 655.
 $C_{48}H_{35}O_5N_4$ C 76,8 — H 5,1 — O 10,7 — N 7,4 — M. G. 750.
 1) **Verbindung** (aus Anhydroacetonebenzoesäure u. Phenylhydrazin). Zers. oberh. 200° u. Zers. (Soc. 71, 144). — IV, 712.
 $C_{48}H_{95}O_9N_3$ C 81,7 — H 5,5 — O 6,8 — N 6,0 — M. G. 705.
 1) **1,3,5-Tri[4-Methylphenylbenzoylamido]benzol**. Sm. 281—282° (G. 20, 327). — IV, 1125.
 $C_{48}H_{39}O_9N_{11}$ C 63,1 — H 4,3 — O 15,8 — N 16,8 — M. G. 913.
 1) **Amisatin** (J. pr. [1] 35, 125). — II, 1609.
 $C_{48}H_{33}O_{10}N$ C 73,0 — H 4,9 — O 20,3 — N 1,8 — M. G. 789.
 1) **Tetrabenzoylhelicintoluid** (A. 154, 36). — III, 69.
 $C_{48}H_{39}O_{12}N$ C 62,8 — H 4,3 — O 31,4 — N 1,5 — M. G. 917.
 1) **Hämatein**, siehe $C_{16}H_{17}O_4$ (A. 178, 92). — III, 665.
 $C_{48}H_{41}O_{17}N_4$ C 52,1 — H 3,8 — O 39,0 — N 5,1 — M. G. 1106.
 1) **Tannon** (C. 1898 [1] 216).
 $C_{48}H_{11}O_2N_3$ C 74,2 — H 5,7 — O 16,5 — N 3,6 — M. G. 776.
 1) **Dibenzoat d. Pseudomorphin**. ($2HCl$, $PrCl_4$) (A. 294, 216).
 $C_{48}H_{43}O_2N_4$ C 80,9 — H 6,7 — O 4,5 — N 7,9 — M. G. 712.
 1) **p-Tetramethyldiamidodiphenyltetramethyldiamidoanthranol**. Sm. 275°. + C_2H_6 (C. 1897 [2] 591).
 $C_{48}H_{34}O_{12}N_{10}$ C 54,0 — H 5,4 — O 19,5 — N 21,0 — M. G. 533.
 1) **Amidohydroazoresorufinäther**. $12HCl$ (B. 18, 587).
 $C_{48}H_{60}O_9N_7$ C 71,3 — H 7,4 — O 17,8 — N 3,5 — M. G. 808.
 1) **Tetracetylthymolechroin** (B. 21, 253). — II, 774.
 $C_{48}H_{30}O_{40}J$ 1) **Jodstärke** (Bl. [3] 7, 678). — I, 1085.

C_{48} -Gruppe mit vier Elementen.

- $C_{48}H_{13}O_{18}N_4Cl$ 1) **Hexacetyltetraazoresorufinchlorid?** (A. 162, 250). — II, 934.
 $C_{48}H_{39}O_{10}Br_4S_4$ 1) **Hexabromdiacetylrubbadin**. Zers. oberhalb 300° (B. 25, 1882). — II, 658.
 $C_{48}H_{33}O_{12}N_3Br$ 1) **Anhydrid d. Brom- α -Tetra[1,3-Dioxybenzol]dichroinäther** (B. 21, 2482). — II, 931.

- $C_{46}H_{95}O_1N_2Br$ 1) Brom- α -Tetra[1,3-Dioxybenzol]dichroinäther (*B.* 21, 2480). — II, 931.
- $C_{46}H_{94}O_{18}N_2S_4$ 1) Verbindung (aus Rubbadin) (*B.* 25, 1888). — II, 658.
- $C_{46}H_{94}ON_4P_4$ 1) Verbindung (aus Amidobenzol u. PCl_5). Sm. 208° (*Am.* 6, 95). — II, 356.
- $C_{46}H_{94}O_2N_4S_2$ 1) Verbindung (aus d. Verb. $C_{26}H_{44}O_2S_2$). Zers. bei 210—220° (*B.* 20, 1981). — IV, 719.
- $C_{46}H_{90}O_2N_4J_2$ 1) Jodmethylat d. Apovellosin. Sm. 265° (*A.* 282, 260). — III, 924.

C_{49} -Gruppe mit zwei Elementen.

- $C_{49}H_{91}O_{14}$ C 69,5 — H 4,0 — O 26,5 — M. G. 846.
- $C_{49}H_{88}O_{10}$ 1) Pentabenzoesat d. Hamamelitannin. Sm. 125—132° (*C.* 1898 [2] 375).
C 73,9 — H 6,0 — O 20,1 — M. G. 796.
- 1) Verbindung (aus Oxybenzol u. Kohlensäure). Sm. 37° (27°) (*A.* 148, 49; *J. pr.* [2] 25, 464). — II, 662.
- $C_{49}H_{88}O_7$ C 85,5 — H 9,9 — O 4,6 — M. G. 688.
- 1) Dibenzoyllilicen. Sm. 188° (*B.* 28 [2] 236).

C_{49} -Gruppe mit drei Elementen.

- $C_{49}H_{96}N_3Cl$ 1) 4',4'',4'''-Tri[1-Naphtylamido]triphenylchlormethan (*B.* 23, 1965). — IV, 1196.
- $C_{49}H_{97}O_8N_7$ C 71,8 — H 4,5 — O 11,7 — N 12,0 — M. G. 819.
- 1) Verbindung (aus Benzylenimid u. 4-Nitrobenzol-1-Carbonsäurealdehyd). Sm. 175° (*B.* 28, 1654). — IV, 187.
- 2) Verbindung + H_2O (aus Benzylenimid u. 4-Nitrobenzol-1-Carbonsäurealdehyd). Sm. bei 150° (*B.* 28, 1654). — IV, 187.

C_{50} -Gruppe.

- $C_{50}H_{46}$ C 92,9 — H 7,1 — M. G. 646.
- 1) Kohlenwasserstoff (aus Phtalsäureanhydrid u. Benzylchlorid). Sm. 72 bis 73° (*A.* 248, 68). — II, 305.
- $C_{50}H_{40}O_6$ C 83,1 — H 3,6 — O 13,3 — M. G. 722.
- 1) Verbindung (aus 1-Oxynaphtalin u. Benzol-1,2,4,5-Tetracarbonsäure). Sm. oberh. 360° u. Zers. (*B.* 6, 1066). — II, 2074.
- $C_{50}H_{38}O_7$ C 81,1 — H 3,8 — O 15,1 — M. G. 740.
- 1) Verbindung (aus 1-Oxynaphtalin u. Benzol-1,2,4,5-Tetracarbonsäure). 3 Modif.; α -Modif. Sm. oberh. 360°; β -Modif. Sm. oberh. 360°; γ -Modif. Sm. 265° (*B.* 6, 1067). — II, 2074.
- $C_{50}H_{35}O_{14}$ C 69,8 — H 4,2 — O 26,0 — M. G. 860.
- 1) Pentabenzoesat d. Aeskulin. Sm. 130° (*A.* 161, 75; *B.* 13, 1953). — III, 567.
- $C_{50}H_{30}O_{11}$ C 72,6 — H 6,0 — O 21,3 — M. G. 826.
- 1) Benzoesat d. Xanthoresinotannol (*C.* 1897 [1] 421).
- $C_{50}H_{26}O_4$ C 82,0 — H 9,3 — O 8,7 — M. G. 732.
- 1) Dibenzoesat d. α -Lactucerosol. Sm. 156° (*A.* 244, 271). — II, 1068.
- $C_{50}H_{24}O_{28}$ C 53,5 — H 6,6 — O 39,9 — M. G. 1122.
- 1) Tetradekathylester d. Oktan- $\alpha\beta\gamma\delta\epsilon\zeta\eta\theta$ -Tetradekacarbonsäure. Fl. (*B.* 21, 2116). — I, 873.
- $C_{50}H_{22}O_7$ C 75,6 — H 10,3 — O 14,1 — M. G. 794.
- 1) Anhydrid d. Choleinsäure (*B.* 20, 1050). — I, 735.
- $C_{50}H_{21}O_9$ C 72,6 — H 9,9 — O 17,4 — M. G. 826.
- 1) Verbindung (aus Cholsäure) (*B.* 20, 1050). — I, 783.
- $C_{50}H_{100}O_2$ C 88,0 — H 7,3 — O 4,7 — M. G. 732.
- 1) Myricylester d. Arachinsäure. Sm. 84° (*B.* [3] 11, 186).
- $C_{50}H_{101}O$ C 89,5 — H 7,8 — O 2,4 — M. G. 718.
- 1) Tarchonylalkohol. Sm. 82° (*G.* 12, 227).

- $C_{50}H_{22}O_2N_8$ C 81,6 — H 4,5 — O 4,3 — N 9,5 — M. G. 735.
 1) Verbindung (aus 1-Diazonaphthalinchlorid) (*Soe.* 37, 747). — IV, 1540.
 $C_{50}H_{47}O_{17}N_{11}$ C 55,9 — H 4,4 — O 25,3 — N 14,3 — M. G. 1073.
 1) Oktaspardidotrianiolid. Zers. oberh. 245° (*A.* 303, 203).
 $C_{50}H_{90}O_9N_4$ C 75,4 — H 7,5 — O 10,0 — N 7,0 — M. G. 796.
 1) Anetholechinin + 2H₂O (*A.* 123, 382). — III, 813.
 $C_{51}H_{84}O_5N_4$ C 75,0 — H 8,0 — O 10,0 — N 7,0 — M. G. 800.
 1) Anetholhydrochinin + 2H₂O (*A.* 241, 261). — III, 860.

C₅₁-Gruppe.

- $C_{51}H_{76}O_6$ C 75,9 — H 12,2 — O 11,9 — M. G. 804.
 1) Glycerintripalmitin. Sm. 61,5° (*A.* 36, 54; *J.* 1855, 519; *B.* 15, 253; *Am.* 6, 230; *A. ch.* [3] 41, 240). — I, 444.
 $C_{51}H_{104}O_4N_8$ C 72,8 — H 5,7 — O 11,4 — N 10,0 — M. G. 840.
 1) Phenylhydrazon d. Rottlerin (*G.* 24 [1] 6). — III, 671.
 $C_{51}H_{87}O_5N_8$ C 71,6 — H 6,7 — O 16,8 — N 4,9 — M. G. 855.
 1) Trimorphin = (C₁₇H₁₉O₅N)₃. HCl (*Soe.* 28, 221). — III, 900.

C₅₂-Gruppe.

- $C_{52}H_{10}O_{14}$ C 59,5 — H 3,8 — O 36,6 — M. G. 1048.
 1) Heptacetylphlobaphen (*A.* 240, 588). — III, 588.
 $C_{52}H_{14}O$ C 91,5 — H 6,2 — O 2,3 — M. G. 682.
 1) Verbindung (aus α -Benzpinakolin) = C₂₄H₂₂ + C₆H₆. Sm. 208°.
 + 2C₆H₆ (*B.* 29, 2159). — III, 265.
 $C_{52}H_{16}O_{23}$ C 60,1 — H 4,4 — O 35,5 — M. G. 1038.
 1) Verbindung (aus Kastaniengerbsäure). — III, 685.
 $C_{52}H_{17}O_8$ C 75,9 — H 8,5 — O 15,6 — M. G. 822.
 1) Benzoylsandaraksäure (*C.* 1898 [2] 184).
 $C_{52}H_{19}O_{23}$ C 58,1 — H 7,6 — O 34,3 — M. G. 1074.
 1) Aphrodisäcin. Ba + 5H₂O (*J.* 1862, 491). — III, 671.
 $C_{52}H_{11}O_2$ C 84,3 — H 11,3 — O 4,3 — M. G. 740.
 1) Zeorinin + 2H₂O. Sm. 159—161° (182—184° wasserfrei) (*J. pr.* [2] 58, 484).
 2) Isozeorinin. Sm. 184—185° (*J. pr.* [2] 58, 485).
 $C_{52}H_{25}Cl$ 1) Verbindung (aus Cholesterylchlorid). Zers. oberh. 230° (*J. r.* 8, 236). — II, 1073.
 $C_{52}H_{104}O_2$ C 82,1 — H 13,7 — O 4,2 — M. G. 760.
 1) Cerylester d. Cerotinsäure (oder C₃₄H₁₀₈O₂). Sm. 81,5° (*B.* 30, 1415).
 $C_{52}H_{29}O_{17}N$ C 72,6 — H 3,4 — O 22,4 — N 1,6 — M. G. 859.
 1) Pentabenzoeat d. Alizarinindigblau. Sm. 175° (*A.* 276, 30). — IV, 463.
 $C_{52}H_{24}O_{14}Br_8$ 1) Heptacetat d. Hexabromeichenroth (*A.* 240, 341). — III, 588.
 $C_{52}H_{27}O_2N_7$ C 70,0 — H 6,4 — O 12,5 — N 11,0 — M. G. 891.
 1) Alkachlorophyll (Chlorophyllinsäure) (*Soe.* 45, 60; *A.* 278, 336; 284, 81, 91). — III, 657.
 $C_{52}H_{29}O_{13}N$ C 67,2 — H 8,9 — O 22,4 — N 1,5 — M. G. 929.
 1) Solanein + 3 $\frac{1}{2}$ H₂O. Sm. 208° (*M.* 10, 546). — III, 612.
 $C_{52}H_{29}O_2Br_2$ 1) Verbindung (aus Cholesterin u. Cholesterindibromid). Sm. 112° (*C.* 1897 [1] 1128).
 $C_{52}H_{29}O_{18}N$ C 61,2 — H 9,1 — O 28,3 — N 1,4 — M. G. 1019.
 1) Solanin + 4 $\frac{1}{2}$ H₂O (oder C₄₃H₇₅O₁₈N). Sm. 244°. HCl, (2HCl, PtCl₄), H₂SO₄, Oxalat + 7H₂O (*Berz. J.* 2, 114; 6, 259; *A. ch.* [2] 31, 109; *J.* 1863, 450; 1873, 817; *A.* 26, 232; 118, 130; *B.* 9, 83; 15, 2633; *M.* 10, 543; *Fr.* 21, 620; 23, 239). — III, 611.
 $C_{52}H_{26}O_{12}N$ C 64,1 — H 9,8 — O 24,6 — N 1,4 — M. G. 973.
 1) Diisoamylolanin? (*J.* 1856, 547). — III, 612.
 $C_{52}H_{18}O_{23}N_4P_4$ 1) Phenylamid d. Phosphororsellinsäure (*G.* 14, 462). — II, 1753.

C₅₃-Gruppe.

- C₅₃H₂₆O₁₁ C 74,0 — H 5,6 — O 20,4 — M. G. 860.
- C₅₃H₃₀O₁₉ 1) Tribenzoat d. Pinoresinotannol (M. 18, 497).
C 64,2 — H 5,0 — O 30,7 — M. G. 990.
- C₅₃H₃₁O₂₀ 1) Quebrachotannoform (C. 1896 [1] 560).
- C₅₃H₃₁O₂₀ 1) Verbindung (aus Absinth) oder C₅₃H₃₁O₂₀. Sm. 165° (Bl. [3] 19, 1014).
C₅₃H₃₁O₁₉ C 62,1 — H 8,2 — O 29,7 — M. G. 1024.
- C₅₃H₁₀₄O₃ 1) Camellin (J. 1878, 977). — III, 573.
C 77,5 — H 12,7 — O 9,8 — M. G. 820.
- C₅₃H₁₀₆O 1) Glycerindicerotin. Sm. 79,5° (C. 1896 [1] 642).
C 83,9 — H 14,0 — O 2,1 — M. G. 758.
- C₅₃H₁₀₆O 1) Cerotinon. Sm. 92° (A. 224, 237). — I, 1006.
2) β-Cerotinon. Sm. 66° (62°) (J. pr. [1] 57, 17; A. 271, 220). — I, 1006.
- C₅₃H₃₀O₆N₁ C 77,0 — H 4,6 — O 11,6 — N 6,8 — M. G. 826.
- C₅₃H₄₁O₉N₁ 1) Benzoat d. 3,5-Di[Dibenzoylphenylhydrazido]-1-Oxybenzol. Sm. 176° (B. 22, 2192). — IV, 1506.
C 74,8 — H 4,9 — O 16,9 — N 3,3 — M. G. 850.
- 1) Tetrabenzoylhelicindianilid (A. 154, 36). — III, 69.

C₅₄-Gruppe.

- C₅₄H₄ C 88,5 — H 11,5 — M. G. 732.
- C₅₄H₂₈O₅ 1) γ-Cholesterilen. Sm. 127° (A. 66, 9; M. 17, 31). — II, 177.
C 84,6 — H 5,0 — O 10,4 — M. G. 766.
- 1) 1-Naphtolbenzoin (A. 257, 58). — II, 1122.
- 2) Tetra[2-Naphtyläther] d. Di[αα-Dioxybenzyl]äther. Sm. oberh. 350° (A. 257, 59). — II, 1149.
- C₅₄H₄₁O₂₂ C 62,1 — H 4,2 — O 33,7 — M. G. 1044.
- C₅₄H₄₁O₂₄ 1) Verbindung (aus Fichtenroth) (B. 17, 1129). — III, 681.
C 60,2 — H 4,1 — O 35,7 — M. G. 1076.
- C₅₄H₁₀O₁₇ 1) Heptacetat d. Hemlockroth (B. 17, 1126). — III, 685.
C 67,1 — H 4,8 — O 28,1 — M. G. 966.
- 1) Hexabenzosäure d. Maltose. Sm. 120° (H. 14, 349). — II, 1143.
- 2) Hexabenzosäure d. Milchsäure. Sm. 130–136° (M. 10, 398). — II, 1143.
- 3) Hexabenzosäure d. Rohrzucker. Sm. bei 109° (M. 10, 398). — II, 1143.
- C₅₄H₁₀O₁₈ C 65,8 — H 4,9 — O 29,2 — M. G. 984.
- C₅₄H₃₀O₂₁ 1) Tetrabenzoylfraxinusgerbsäure (M. 3, 754). — III, 682.
C 62,7 — H 4,8 — O 32,5 — M. G. 1034.
- C₅₄H₃₁N₅ 1) Verbindung, siehe C₁₉H₁₁O₇, α-Umsäure.
C 84,3 — H 6,6 — N 9,1 — M. G. 769.
- C₅₄H₄₁O₂₄ 1) Verbindung (aus Zimmtaldehyd) oder C₅₄H₄₁N₅ + 1/2 H₂O. Sm. 106 bis 108° (B. 17, 2110; Bl. [3] 19, 270). — III, 60.
- C₅₄H₄₁O₂₄ C 58,1 — H 7,5 — O 34,4 — M. G. 1116.
- C₅₄H₃₀O 1) Thevetin + 3H₂O. Sm. 170° (J. 1888, 768; B. 15, 253). — III, 613.
C 86,4 — H 11,5 — O 2,1 — M. G. 750.
- C₅₄H₃₀O₇ 1) Cholesteryläther. Sm. 195° (M. 17, 38).
C 76,6 — H 10,2 — O 13,2 — M. G. 846.
- C₅₄H₃₀O₄ 1) Verbindung (aus Scymnol) (H. 24, 346).
C 80,8 — H 11,1 — O 8,0 — M. G. 802.
- C₅₄H₃₀O₆ 1) Fabianol. Sd. 275° (C. 1899 [1] 689).
C 77,7 — H 10,8 — O 11,5 — M. G. 834.
- C₅₄H₃₀O₂₇ 1) Fabianaresen. Sm. bei 280°; subl. (C. 1899 [1] 689).
C 55,1 — H 8,2 — O 36,7 — M. G. 1176.
- C₅₄H₃₀O₂ 1) Convolvulin, siehe auch C₅₁H₂₉O₁₀. Sm. 150–155° (C. 1897 [1] 418).
C 83,3 — H 12,6 — O 4,1 — M. G. 778.
- C₅₄H₁₀₆O₂ 1) Dioxhydrofabianaresen (C. 1899 [1] 690).
C 82,2 — H 13,7 — O 4,1 — M. G. 788.
- 1) Cerylester d. Cerotinsäure. Sm. 82° (A. 67, 213; B. 3, 638). — I, 449.

- $C_{24}H_{34}O_6N_2$ C 74.0 — H 6.4 — O 16.4 — N 3.2 — M. G. 876.
 1) **Benzylpapaveriniumoxyd.** Sm. 195° (M. 9, 333, 756; J. pr. [2] 56, 327). — IV, 441.
- $C_{24}H_{30}O_{13}N$ C 67.4 — H 6.1 — O 25.0 — N 1.4 — M. G. 961.
 1) **Tetrabenzoylpapaconin.** HNO₃ (See. 35, 387). — III, 776.
 C 72.2 — H 7.0 — O 15.0 — N 4.7 — M. G. 897.
- $C_{24}H_{28}O_2N_2$ 1) **Tricodein** (See. 25, 507; 27, 101). — III, 906.
 C 43.1 — H 5.2 — O 47.9 — N 3.7 — M. G. 1502.
- $C_{24}H_{28}O_{15}N_2$ 1) **Galaktin.** 23PbO (J. 1879, 1136). — III, 894.
- $C_{24}H_{24}O_8Br_2$ 1) **Hexabromfabianaresen** (C. 1899 [1] 639).
- $C_{24}H_{24}O_8Br_2$ 1) **Cholesteryläthertetrabromid.** Sm. 164–166° u. Zers. (M. 17, 40).
 C 59.7 — H 8.0 — O 31.0 — N 1.2 — M. G. 1955.
- $C_{24}H_{22}O_{11}N$ 1) **Hexacetylsolanin?** (A. 195, 321). — III, 612.
- $C_{24}H_{20}O_7Br_2$ 1) **Tribromconvolvulin** (C. 1897 [1] 418).
- $C_{24}H_{18}O_2N_3Cl_2$ 1) **Verbindung** (aus Cholesterylehlrid). Sm. 116° (M. 15, 108). — II, 1074.
- $C_{24}H_{18}O_2N_3Cl_2$ 1) **Verbindung** (aus Cholesterylehlrid). Sm. 147° (M. 15, 108). — II, 1074.

C₂₄-Gruppe.

- $C_{25}H_{40}N_2Cl$ 1) ***o*-Chlortri[4-Diphenylamidophenyl]methan** (B. 19, 758). — IV, 1089.
- $C_{25}H_{38}ON_2$ C 85.7 — H 5.6 — O 2.1 — N 5.5 — M. G. 761.
 1) ***o*-Oxytri[4-Diphenylamidophenyl]methan.** Chlorid (B. 19, 758). — II, 1089.
 C 75.2 — H 5.2 — O 16.4 — N 3.2 — M. G. 878.
- $C_{25}H_{38}O_2N_2$ 1) **Tetrabenzoylhellicinditoluid** (A. 154, 39). — III, 69.
- $C_{25}H_{36}O_2N$ 1) **Verbindung** (aus 2-Amidobenzolcarbonsäureamid u. Oxalsäurediäthylester). Sm. 140–141° (J. pr. [2] 43, 228). — II, 1253.
 C 49.4 — H 6.4 — O 26.4 — N 17.8 — M. G. 1335.
- $C_{25}H_{34}O_{11}N_{17}$ 1) **Semiglutin.** Cu, Pt (H. 2, 266). — IV, 1626.
 C 63.7 — H 8.9 — O 24.7 — N 2.7 — M. G. 1036.
- $C_{25}H_{32}O_4N_2$ 1) **Verin** (Veratroin). Sm. 143–148° (J. 1883, 1351). — III, 949.
- $C_{25}H_{30}O_{10}N_2$ C 52.9 — H 8.7 — O 28.2 — N 10.1 — M. G. 1247.
 1) **Verbindung** (Säure aus Blut). Ba₂ (B. 25 [2] 476).

C₂₆-Gruppe.

- $C_{26}H_{34}O_{17}$ C 68.7 — H 3.5 — O 27.8 — M. G. 978
 1) **Heptasaccharosaccharinsäure** (A. 87, 159; 115, 196; 150, 17). — II, 1498.
 2) **Verbindung** (aus 3 Oxybenzol-1-Carbonsäure). Sm. 160–165° (B. 15, 2588). — II, 1518.
- $C_{26}H_{32}O_{24}$ C 60.9 — H 4.3 — O 34.8 — M. G. 1104.
 1) **Verbindung** (aus Fichteuroth) (B. 17, 1129). — III, 681.
- $C_{26}H_{28}O_{29}$ C 55.4 — H 6.3 — O 38.3 — M. G. 1212.
 1) **Acetylderivat d. Saponin.** Sm. 135–138° (A. 218, 251). — III, 619.
- $C_{26}H_{26}O_8$ C 76.4 — H 9.1 — O 14.5 — M. G. 880.
 1) **Dammarsäure** (C. 1897 [1] 166).
- $C_{26}H_{24}O_{23}$ C 59.8 — H 7.5 — O 32.7 — M. G. 1124.
 1) **Colocynthin** (J. 1858, 831; 1861, 757). — III, 577.
- $C_{26}H_{22}O_8$ C 75.6 — H 10.0 — O 14.4 — M. G. 888.
 1) **Trachylsäure.** Sm. 165° (168°). K₂, Cu (C. 1896 [2] 795).
 C 85.7 — H 12.2 — O 2.0 — M. G. 784.
 1) **Verbindung** (aus Bisabol-Myrribalöl). Sch. 230–231° (C. 1897 [2] 428).
 2) **Verbindung** (aus Opopanax) (C. 1895 [2] 240).
- $C_{26}H_{20}O_{13}S$ 1) **Verbindung** (aus Brenzkatechin u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) + 3 $\frac{1}{2}$ H₂O (Am. 16, 519).
- $C_{26}H_{20}O_{16}S$ 1) **Verbindung** (aus Resorcin u. 1-Methylbenzol-4-Carbonsäure-3-Sulfonsäure) (Am. 16, 523).
- $C_{26}H_{18}O_4N_2$ C 81.5 — H 5.7 — O 7.7 — N 5.1 — M. G. 825.
 1) **Verbindung** (aus Isobidesyl). Sm. 110–112° (B. 21, 1360). — III, 310.

- $C_{26}H_{44}N_4S_2$ 1) Verbindung (aus dithiocarbamins. Dibenzylidenammonium) (A. 71, 17). — III, 34.
C 57,6 — H 4,6 — O 23,3 — N 14,4 — M. G. 1166.
- $C_{26}H_{84}O_{17}N_{12}$ 1) Oktaspartotetraanilid. Zers. bei 230–240° (B. 30, 2452; A. 303, 203).
C 54,6 — H 4,4 — O 27,3 — N 13,7 — M. G. 1230.
- $C_{26}H_{84}O_{21}N_{12}$ 1) Tetraanilidooktaspartsäure (A. 303, 204).
C 72,1 — H 6,0 — O 18,9 — N 3,0 — M. G. 932.
- $C_{26}H_{86}O_{11}N_2$ 1) Oxyd d. Papaverinphenacyloxyhydrat. Sm. 186–187° (M. 9, 1042). — IV, 441.
C 65,3 — H 10,0 — O 23,3 — N 1,3 — M. G. 1029.
- $C_{26}H_{100}O_{15}N$ 1) DiäthylidisoamylsolaninP (J. 1856, 547). — III, 612.
- $C_{26}H_{34}O_{16}Br_{17}S$ 1) Bromderivat d. Verb. $C_{26}H_{14}O_{16}S$ (Am. 18, 524).
- $C_{26}H_{20}O_{16}Br_{11}S$ 1) Bromderivat d. Verb. $C_{26}H_{14}O_{16}S$ (Am. 18, 523).
- $C_{26}H_{51}O_{12}N_2Br$ 1) Verbindung (aus Brom- α -Örcindichroit) (B. 21, 2484). — II, 966.
- $C_{26}H_{66}N_2Cl_4S_2$ 1) Verbindung (aus Diisoamylcyaninnitrat). + 2PtCl₄ (Z. 1867, 343). — IV, 315.
- $C_{25}H_{87}O_{20}N_{19}JS_2$ 1) Jodoospongin (H. 24, 418). — IV, 1633.

C₂₇-Gruppe.

- $C_{27}H_{54}O_{14}$ C 72,6 — H 3,6 — O 23,8 — M. G. 942.
- $C_{27}H_{72}O_{23}$ 1) Hexabenzoesat d. Myricetin (Soc. 69, 1291). — III, 606.
C 53,3 — H 5,6 — O 41,1 — M. G. 1284.
- 1) Bitterstoff (aus Plumiera acutifolia) + 2H₂O. Sm. 157–158° (C. 1896 [1] 561).
C 77,9 — H 11,2 — O 10,9 — M. G. 878.
- $C_{27}H_{96}O_6$ 1) Triglycerid d. Taririnsäure (B. 25 [2] 109; 27 [2] 20).
C 77,3 — H 11,7 — O 10,9 — M. G. 884.
- $C_{27}H_{104}O_6$ 1) Glycerintriolein. 2 + 3H₂SO₄ (A. ch. [3] 41, 251; B. 15, 253; J. pr. [2] 37, 68). — I, 526.
- 2) Glycerintrielaidin. Sm. 32° (38°) (A. 35, 177; J. 1852, 511). — I, 527.
C 77,0 — H 12,1 — O 10,8 — M. G. 888.
- $C_{27}H_{108}O_6$ 1) Glycerinoleindistearin. Sm. 45–46° (B. 32, 388).
2) Glycerinoleindistearin. Sm. 61° (B. 32, 393).
C 76,8 — H 12,4 — O 10,8 — M. G. 890.
- $C_{27}H_{110}O_6$ 1) Glycerintristearin. Sm. 71,5° (55°) (J. 1852, 507; 1854, 447; A. ch. [3] 41, 228). — I, 446.
C 82,4 — H 13,7 — O 3,9 — M. G. 830.
- $C_{27}H_{111}O_2$ 1) Myricylester d. Cerotinsäure. Sm. 87° (Bl. [3] 11, 186).
- $C_{27}H_{96}O_2Br_{14}$ 1) Verbindung (aus Leinöl) (C. 1899 [1] 383).
- $C_{27}H_{106}O_{11}S$ 1) Glycerinester d. α -Sulfooxystearinsäure. Ba, Cu (J. pr. [2] 37, 86). — I, 904.
- $C_{27}H_{110}O_{15}N_2$ C 64,4 — H 10,4 — O 22,6 — N 2,6 — M. G. 1062.
- $C_{27}H_{106}O_6ClJ$ 1) Pyosin. Sm. 238° (H. 17, 453). — III, 602.
- 1) Glycerinoleindistearinchloridjodid. Sm. 44,5–45,5° (B. 32, 390).
2) Glycerinoleindistearinchloridjodid. Sm. 57–58° (B. 32, 393).

C₂₈-Gruppe.

- $C_{28}H_{46}O_{23}$ C 62,7 — H 4,1 — O 33,2 — M. G. 1110.
- $C_{28}H_{54}O_{14}$ 1) Fustin. Sm. 218–219° u. Zers. (B. 19, 1735). — III, 583.
C 71,5 — H 5,5 — O 23,0 — M. G. 974.
- $C_{28}H_{50}O_{13}$ 1) Tetraisovalerat d. Pyrogallolbenzein. Sm. 227–228° (A. 257, 64). — II, 1044.
C 72,3 — H 6,0 — O 21,6 — M. G. 962.
- $C_{28}H_{86}O_{21}$ 1) Hexacetat d. o-Verbindung $C_{28}H_{46}O$, (A. 257, 329) — II, 1029.
2) Hexacetat d. p-Verbindung $C_{28}H_{46}O$, (A. 257, 329) — II, 1029.
- $C_{28}H_{86}O_{21}$ C 54,5 — H 6,7 — O 38,8 — M. G. 1278.
- 1) Crocin (J. 1854, 663; 1858, 475). — III, 579.

- $C_{28}H_{18}O_8$ C 80,6 — H 10,2 — O 9,2 — M. G. 864.
 1) **Isotrachylsäure.** Sm. 105—107° (C. 1896 [2] 796).
 $C_{15}H_{25}O_2N_2S_3$ 1) **Verbindung** (aus Diisoamylcyaninnitrat) (Z. 1867, 343). — IV, 315.

C₆₀-Gruppe.

- $C_{60}H_{100}$ C 87,8 — H 12,2 — M. G. 820.
 1) **Pertusaren.** Sm. 286° (J. pr. [2] 58, 505).
 $C_{60}H_{173}$ C 85,5 — H 14,5 — M. G. 842.
 1) **Kohlenwasserstoff** (aus Myricyljodid). Sm. 101—102° (B. 22, 504). — I, 107.
 $C_{60}H_{34}O_{17}$ C 59,7 — H 4,5 — O 35,8 — M. G. 1206.
 1) **Humussäure.** Ag. (J. 1873, 844). — I, 1108.
 $C_{60}H_{98}O_9$ C 75,0 — H 10,0 — O 15,0 — M. G. 960.
 1) **Triacetat d. Fabianaresen.** Sm. 234° (C. 1899 [1] 690).
 $C_{60}H_{98}O_{12}$ C 61,6 — H 8,2 — O 30,1 — M. G. 1168.
 1) **Saurer Pentaäthylester d. Cholecamphersäure.** Sm. 150—170°; Ba₃, Ag₅ (B. 19, 1525). — I, 727.
 $C_{60}H_{98}O$ C 86,3 — H 11,8 — O 1,9 — M. G. 834.
 1) **Copaivaölhydrat.** Sd. 252—260° (M. 2, 512). — III, 540.
 $C_{60}H_{104}O_{12}$ C 43,5 — H 6,3 — O 50,2 — M. G. 1656.
 1) **Inulinin** (B. 26 [2] 233).
 $C_{60}H_{120}O_2$ C 82,6 — H 13,7 — O 3,7 — M. G. 872.
 1) **Myricylester d. Melissinsäure.** Sm. 92° (Bl. [3] 11, 186).
 2) **Verbindung** (aus Kentuckytabak). Sm. 51° (B. 16, 2433). — I, 457.
 $C_{60}H_{122}N$ C 84,0 — H 14,3 — N 1,6 — M. G. 857.
 1) **Dimyrcylamin.** Sm. 78° (A. 183, 351). — I, 1139.
 $C_{60}H_{45}O_{11}N_9$ C 67,3 — H 4,5 — O 16,4 — N 11,8 — M. G. 1070.
 1) **Conchiolin** (J. 1854, 710; 1860, 570; B. 18, 989). — IV, 1633.
 $C_{60}H_{80}O_{15}N_4$ C 65,3 — H 7,8 — O 21,8 — N 5,1 — M. G. 1102.
 1) **Cacaonin** (C. 1898 [2] 217).
 $C_{60}H_{17}O_{19}N_7Br$ 1) **Hexacetat d. Brom- α -Tetra[1,3-Dioxybenzol]dichroinäther.** Sm. 120° (B. 21, 2481). — II, 931.
 $C_{60}H_{98}O_{20}N_3Br_1$ 1) **Verbindung** (aus Casein) (J. 1879, 870). — IV, 1585.
 $C_{60}H_{97}O_{24}N_11Br_5$ 1) **Verbindung** (aus Eiweiss) (J. 1879, 870). — IV, 1585.

C₆₁-Gruppe.

- $C_{61}H_{50}O_{15}$ C 68,4 — H 4,7 — O 26,9 — M. G. 1070.
 1) **Heptabenzosäat d. Maltose.** Sm. 109—115° (J. r. 23, 375). — II, 1143.
 2) **Heptabenzosäat d. Milchsucker.** Sm. 200° (J. r. 23, 378). — II, 1143.
 $C_{61}H_{71}N_6$ C 82,3 — H 8,3 — N 9,4 — M. G. 890.
 1) **Triönanthylidendirosanilin.** (2HCl, PtCl₄), (4HCl, 2PtCl₄), H₃AsO₄, Acetat (Z. 1865, 550; 1867, 176; A. 140, 105). — II, 1093.
 $C_{61}H_{95}O_{26}$ C 52,1 — H 6,8 — O 41,0 — M. G. 1404.
 1) **Oktacetylconvulvulinsäure** (C. 1897 [1] 419).

C₆₂-Gruppe.

- $C_{62}H_{44}O_{12}$ C 71,3 — H 4,2 — O 24,5 — M. G. 1044.
 1) **Hexabenzosäat d. Scoparin.** Sm. 148—150° (M. 15, 327). — III, 648.
 $C_{62}H_{85}O_{15}$ 1) **Verbindung** (aus Saponin). Sm. 82—84° (A. 218, 252). — III, 610.
 $C_{62}H_{94}O_4$ C 82,5 — H 10,4 — O 7,1 — M. G. 902.
 1) **Dicholerinester d. Benzol-1,2-Dicarbonensäure.** Sm. 182,5° (H. 15, 43). — II, 1794.

C₆₃-Gruppe.

- $C_{63}H_{71}O_{27}$ C 60,0 — H 5,7 — O 34,3 — M. G. 1290.
 1) **Verbindung** (aus Fraxinusgerbsäure) (M. 3, 759, 760). — III, 682.

- $C_{63}H_{111}O_6$ C 79,6 — H 12,8 — O 7,6 — M. G. 974.
 1) Glycerintriarachin (*A. ch.* [3] 47, 358). — I, 447.
 $C_{63}H_{114}O_5$ C 78,8 — H 12,9 — O 8,3 — M. G. 960.
 1) Glycerindimelissin. Sm. 93° (*C.* 1896 [1] 642).
 $C_{63}H_{60}O_{30}N_2Fe$ 1) Blauer Weintraubenfarbstoff (*Bl.* 32, 103). — III, 673.

C₆₄-Gruppe.

- $C_{64}H_{99}S_3$ 1) Verbindung (aus Asphalt). — III, 665.
 $C_{64}H_{100}O_{20}N_{16}$ C 54,4 — H 7,1 — O 22,7 — N 15,8 — M. G. 1412.
 1) Eiweiss (*J.* 1879, 870). — IV, 1585.

C₆₅-Gruppe.

- $C_{65}H_{11}O_{17}$ C 71,3 — H 3,8 — O 24,9 — M. G. 1094.
 1) Benzoylderivat d. Podophylloquercetin. Sm. 239° (*B.* 24 [2] 646). — III, 645.
 $C_{65}H_{45}O_{22}$ C 66,1 — H 4,0 — O 20,8 — M. G. 1180.
 1) Säure (aus Phenol) (*G.* 14, 103). — II, 649.
 $C_{65}H_{31}O_8$ C 78,6 — H 8,5 — O 12,9 — M. G. 992.
 1) Callitriolsäure. Sm. 248°. Cu (*B.* 29 [2] 687; *C.* 1896 [2] 184). — III, 561.
 $C_{65}H_{125}O_{15}N_7$ C 62,9 — H 10,3 — O 24,5 — N 2,3 — M. G. 1240.
 1) Pyogenin. Sm. 221–222° (*H.* 17, 453). — III, 602.

C₆₆-Gruppe.

- $C_{66}H_4O_{11}$ C 81,5 — H 0,4 — O 18,1 — M. G. 972.
 1) Verbindung (aus Graphit) (*A.* 114, 20). — II, 2021.
 $C_{66}H_{40}O_{15}$ C 73,9 — H 3,7 — O 22,4 — M. G. 1072.
 1) Tetrabenzoat d. Pyrogallobenzein. Sm. 251° (*A.* 257, 64). — II, 1044.
 $C_{66}H_{111}O_2$ C 82,9 — H 13,8 — O 3,3 — M. G. 956.
 1) Aether d. Peyllostearylalkohol. Sm. 96° (*H.* 17, 425; 25, 116).
 $C_{66}H_{51}O_{21}N$ C 66,4 — H 4,3 — O 28,2 — N 1,1 — M. G. 1193.
 1) Verbindung (aus Brasilin) (*A.* 178, 101). — III, 652.
 $C_{66}H_{38}O_{21}N_7$ C 63,7 — H 7,1 — O 27,0 — N 2,2 — M. G. 1244.
 1) Japaconitin. Sm. 184–186°. 2HBr + 5H₂O, HNO₃ (*Soc.* 35, 387). — III, 776.
 $C_{66}H_{45}O_5N_5Cl$ 1) Chlor- α -Penta[1,3-Dioxybenzol]dichroinäther (*B.* 21, 2479). — II, 931.
 $C_{66}H_{83}O_9N_5Br_{11}$ 1) Verbindung (aus Amidobenzol u. Xantogalolsäure) (*A.* 245, 346). — II, 1015.
 $C_{66}H_{97}O_{18}N_7Cl_2$ 1) Chloralhydroveratrin. Sm. 220° (*Am.* 20, 367).
 $C_{66}H_{116}O_{34}N_{20}S$ 1) Uropotsäure + xH₂O. Ba (*C.* 1897 [2] 1154). — IV, 1603.

C₆₇-Gruppe.

- $C_{67}H_{60}O_{23}$ C 65,3 — H 4,9 — O 29,8 — M. G. 1232.
 1) Heptabenzoat d. löslichen Stärke $C_{15}H_{33}O_{16}$. Sm. oberh. 120° (*B.* 31, 1793).
 $C_{67}H_{86}O_9$ C 79,1 — H 6,7 — O 14,2 — M. G. 1016.
 1) Acetylcallitriolsäure (*C.* 1896 [2] 184).

C₆₈-Gruppe.

- $C_{68}H_{55}O_{10}$ C 68,7 — H 4,4 — O 26,9 — M. G. 1188.
 1) Hexabenzoylruberthrynsäure (*Soc.* 65, 187). — III, 607.

- $C_{68}H_{170}O_4$ C 81,1 — H 12,5 — O 6,4 — M. G. 1006.
 1) Dimyricylester d. Benzol-1,2-Dicarbonensäure. Sm. 79° (*Bl.* [3] 11, 186). — II, 1794.
- $C_{68}H_{66}O_{17}N_{14}$ C 60,3 — H 5,0 — O 20,1 — N 14,5 — M. G. 1352.
 1) Oktoaspartidohexaanilid. Zers. bei 125° (*A.* 303, 205).
- $C_{68}H_{76}O_{12}N_4$ C 71,6 — H 6,7 — O 16,8 — N 4,9 — M. G. 1140.
 1) Tetramorphin = $(C_{17}H_{19}O_3N)_4 \cdot 2H_2SO_4$ (*Soc.* 26, 221; 28, 314; *A.* 55, 96; 68, 359). — III, 900.
- $C_{68}H_{79}O_7N_6$ C 73,0 — H 7,0 — O 10,0 — N 10,0 — M. G. 1118.
 1) Hämatolin (*H.* 17, 2272). — IV, 1620.
- $C_{68}H_{80}O_{10}N_4$ C 73,4 — H 7,2 — O 14,4 — N 5,0 — M. G. 1112.
 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.
- $C_{68}H_{88}O_{10}N_4$ C 72,9 — H 7,8 — O 14,3 — N 5,0 — M. G. 1120.
 1) Verbindung (aus Codein) (*J.* 1871, 780). — III, 907.
 1) Melanin + $\frac{1}{2}H_2O$ (*C.* 1897 [1] 1063).
- $C_{68}H_{84}O_{12}N_{10}S$ 1) Sarkomelaninsäure + $2\frac{1}{2}H_2O$ (*C.* 1897 [1] 1063).
- $C_{68}H_{87}O_{12}N_{10}S$ 1) Sarkomelaninsäure + $3\frac{1}{2}H_2O$ (*C.* 1897 [1] 1063).
- $C_{68}H_{75}O_{12}N_8Br$ 1) Bromtetramorphin (*J.* 1871, 779). — III, 907.
- $C_{68}H_{81}O_{10}N_8J$ 1) Verbindung (aus Codein) (*J.* 1871, 780). — III, 907.
- $C_{68}H_{82}O_{10}N_8J_2$ 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.
- $C_{68}H_{83}O_{10}N_8J_2$ 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.
- $C_{68}H_{85}O_{10}N_8J_2$ 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.
- $C_{68}H_{86}O_{10}N_8J_2$ 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.
- $C_{68}H_{88}O_{10}N_8J_2$ 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.
- $C_{68}H_{107}O_{22}N_4J_3$ 1) Verbindung (aus Codein). 4HJ (*J.* 1871, 780). — III, 907.

C₆₉-Gruppe.

- $C_{69}H_{170}O_4$ C 78,7 — H 12,2 — O 9,1 — M. G. 1052.
 1) Glycerintrirucin. Sm. 31° (*B.* 20, 2386; *J. pr.* [2] 42, 371). — I, 528.
 2) Glycerintribrassinidin. Sm. 47° (*B.* 19, 3321; *J. pr.* [2] 42, 372). — I, 528.

C₇₀-Gruppe.

- $C_{70}H_{146}O_2$ C 83,0 — H 13,8 — O 3,2 — M. G. 1012.
 1) Verbindung (aus Kentuckytabak). Sm. 63° (*B.* 16, 2433). — I, 457.
- $C_{70}H_{138}O_{13}N_2$ C 70,1 — H 11,5 — O 16,0 — N 2,3 — M. G. 1198.
 1) Kerasin (Homocerebrin). Sm. 156° (155°) (*J. pr.* [2] 24, 326, 333; [2] 25, 37; *H.* 17, 443). — III, 574.
- $C_{70}H_{146}O_{12}N_2$ C 69,1 — H 11,5 — O 17,1 — N 2,3 — M. G. 1216.
 1) Cerebrin. Sm. 176° (*J. pr.* [2] 24, 325, 328; [2] 25, 19; [2] 53, 49, 80; *H.* 17, 441). — III, 574.
- $C_{70}H_{50}O_7N_2Cl$ 1) Hexabenzoylderivat d. Verb. $C_{18}H_{20}O_2N_2Cl$ (*B.* 31, 1411).
- $C_{70}H_{50}O_7N_2Br$ 1) Hexabenzoylderivat d. Verb. $C_{18}H_{20}O_2N_2Br$ (*B.* 31, 1413).
- $C_{70}H_{84}O_{10}N_2Fe_2$ 1) Häminsäure (*J. pr.* [2] 29, 342). — IV, 1617.
- $C_{70}H_{79}O_{12}N_2Cl$ 1) Verbindung (aus Brontetramorphin). 4HCl (*J.* 1871, 779). — III, 907.
- $C_{70}H_{111}O_{23}N_{31}P_1$ 1) Salmonucleinsäures Protamin (*H.* 23, 409). — IV, 1623.
- $C_{70}H_{181}O_{19}N_2Br_3$ 1) Tribromkerasin (*H.* 17, 448).
- $C_{70}H_{187}O_{19}N_2Br_3$ 1) Tribromcerebrin (*H.* 17, 448).

C₇₁-Gruppe.

- $C_{71}H_{112}O_{29}$ C 44,6 — H 5,9 — O 49,4 — M. G. 1908.
 1) Arabinose (*Soc.* 45, 54). — I, 1101.

C₇₂-Gruppe.

- $C_{72}H_{62}O_{31}$ C 60,8 — H 4,3 — O 34,9 — M. G. 1422.
 1) Anhydrid d. Sorbinosephloroglucid (*C.* 1896 [2] 486).

- $C_{72}H_{66}O_{33}$ C 59,3 — H 4,5 — O 36,2 — M. G. 1458.
 1) Anhydrid d. Lävulosephloroglucid (C. 1896 [2] 486).
 $C_{72}H_{90}O_{41}$ C 53,7 — H 5,6 — O 40,7 — M. G. 1610.
 1) Acetyl-xanthorhamnin (J. 1868, 776). — III, 615.
 $C_{72}H_{111}O_{40}$ C 53,5 — H 6,9 — O 39,6 — M. G. 1616.
 1) Saporubrin (C. 1897 [1] 302).
 $C_{72}H_{111}O_{26}$ C 55,6 — H 7,3 — O 37,1 — M. G. 1554.
 1) Nonacetat d. Convolvulin. Sm. 112—115° (C. 1897 [1] 418).
 $C_{72}H_{130}O_6$ C 80,0 — H 11,1 — O 8,9 — M. G. 1080.
 1) Dicaperin + H_2O . Sm. 227—228° (248—250° wasserfrei) (J. pr. [2] 57, 433).
 $C_{72}H_{126}O_{63}$ C 43,2 — H 6,3 — O 50,5 — M. G. 1998.
 1) Helianthenin. Sm. 176° (B. 26 [2] 691).
 $C_{72}H_{84}O_{11}N_4$ C 72,2 — H 7,0 — O 16,1 — N 4,7 — M. G. 1196.
 1) Tetracodein (Soc. 25, 506; 27, 107; 28, 324). — III, 906.
 $C_{72}H_{111}O_{15}P_2$ 1) Cholphosphinsäure (A. 157, 282). — I, 783.
 $C_{72}H_{93}O_{12}N_4Cl$ 1) Chlortetracodein. 4HCl (J. 1871, 778). — III, 907.
 $C_{72}H_{93}O_{12}N_4Br$ 1) Bromtetracodein. 4HBr (J. 1871, 778). — III, 907.
 $C_{72}H_{105}O_{89}N_{15}S$ 1) Oxytrinitroalbumin (J. pr. [2] 5, 436). — IV, 1593.
 $C_{72}H_{105}O_{87}N_{14}S_2$ 1) Hexanitroalbuminsulfonsäure (J. pr. [2] 3, 183). — IV, 1594.
 $C_{72}H_{105}O_{23}N_{11}S$ 1) Trinitroalbumin (J. pr. [2] 5, 434). — IV, 1593.
 $C_{72}H_{115}O_{22}N_{11}S$ 1) Albumin. Lit. bedeutend. — IV, 1589.
 2) Pepton. Az_2 (J. Th. 1883, 24). — IV, 1639.
 $C_{72}H_{115}O_{25}N_{11}S_2$ 1) Albuminsulfonsäure (J. pr. [2] 3, 184). — IV, 1593.
 $C_{72}H_{118}O_{25}N_{11}S_3$ 1) Hexaamidoalbuminsulfonsäure (J. pr. [2] 3, 184). — IV, 1594.
 $C_{72}H_{115}O_{89}N_{11}S$ 1) Oxyprotsulfonsäure (M. 6, 111). — II, 2111.

C₇₃-Gruppe.

- $C_{73}H_{100}O_{32}$ C 58,9 — H 6,7 — O 34,4 — M. G. 1488.
 1) Tetrabenzoyleconvolvulinsäure. Sm. 115—118° (C. 1897 [1] 419).

C₇₄-Gruppe.

- $C_{74}H_9O_9N_2Br_{11}$ 1) Verbindung (aus 4-Amido-1-Methylbenzol u. Xanthogallolsäure) (A. 245, 346). — II, 1015.
 $C_{74}H_{112}O_{27}N_{20}S$ 1) Albumincyanid + $3H_2O$ (J. pr. [2] 16, 65). — IV, 1593.

C₇₅-Gruppe.

- $C_{75}H_{14}O_{15}$ C 75,4 — H 4,5 — O 20,1 — M. G. 1194.
 1) Dibenzolat d. Rottlerin (G. 24 [1] 6). — III, 671
 $C_{75}H_{26}O_{21}$ C 68,7 — H 4,3 — O 27,0 — M. G. 1292.
 1) Heptabenzoyletruberythrinsäure (Soc. 65, 187). — III, 607.
 $C_{75}H_{102}O_9$ C 78,5 — H 8,9 — O 13,6 — M. G. 1146.
 1) Tribenzolat d. Fabianaresen. Sm. 61° (C. 1899 [1] 690).
 $C_{75}H_{108}O_{30}$ C 60,5 — H 7,3 — O 32,2 — M. G. 1488.
 1) Tribenzolat d. Convolvulin. Sm. 125—131° (C. 1897 [1] 418).

C₇₆-Gruppe.

- $C_{76}H_{124}O_{29}N_{24}$ C 49,7 — H 6,8 — O 25,3 — N 18,2 — M. G. 1836.
 1) Leim. — IV, 1626.
 $C_{76}H_{112}O_{22}N_{22}S$ 1) Cyalbidin (J. pr. [2] 16, 66). — IV, 1593.
 $C_{76}H_{104}O_{14}N_3P$ 1) Verbindung + $2CdCl_2$ (B. 9, 948). — IV, 1619.

C₇₈-Gruppe.

- $C_{78}H_{53}Br_2$ 1) Verbindung (aus 1,2-Dibrombenzol). Sm. 280—290° (M. 14, 328). — II, 57.
 2) Verbindung (aus 1,3-Dibrombenzol) (M. 7, 45; 14, 332). — II, 57.
 3) Verbindung (aus 1,4-Dibrombenzol) (M. 7, 42; 14, 332). — II, 58.

- $C_{75}H_{146}O_8$ C 76,2 — H 12,1 — O 11,7 — M. G. 1223.
 1) Dulcitantetrastearat (BEAUMELOT, Chim. org. synth. 2, 210).
 2) Mannitantetrastearat (A. ch. [3] 47, 324). — I, 446.
 3) Pinnittetrastearat (BEAUMELOT, Chim. org. synth. 2, 216). — I, 446.
- $C_{78}H_{152}O_8$ C 79,0 — H 12,8 — O 8,1 — M. G. 1184.
 1) Glycerintricerotin. Sm. 76,5—77° (C. 1896 [1] 642).
 C 47,6 — H 9,2 — O 26,1 — N 17,1 — M. G. 1964.
- $C_{78}H_{180}O_{23}N_{74}$ 1) Gelatine (C. 1895 [1] 962).
- $C_{78}H_{177}O_{23}N_{70}S$ 1) Serumalbumin (aus Pferdeblut) (C. 1897 [1] 1063). — IV, 1594.

C₈₀-Gruppe.

- $C_{80}H_{16}O_6$ C 83,5 — H 4,0 — O 12,5 — M. G. 1150.
 1) Verbindung (aus Idrialin) (J. 1879, 367). — II, 279.
- $C_{80}H_{26}O_{10}$ C 82,3 — H 3,9 — O 13,7 — M. G. 1166.
 1) Oxydrialin (B. 11, 1589). — II, 279.
 C 91,8 — H 5,1 — O 3,1 — M. G. 1046.
- $C_{80}H_{34}O_7$ 1) Idrialin (A. 6, 16; 24, 336; 52, 100; A. ch. [2] 66, 143; J. 1879, 366; B. 11, 1579). — II, 279.
 C 80,5 — H 8,7 — O 10,7 — M. G. 1192.
- $C_{80}H_{104}O_8$ 1) β -Naphtholcampher. Fl. (Bl. [3] 4, 726). — III, 487.
 C 82,8 — H 10,3 — O 6,9 — M. G. 1160.
- $C_{80}H_{120}O_5$ 1) Succinoabietinsäure. Sm. 145°. Pb, Ag₂ (B. 28 [2] 611; C. 1895 [1] 555).
 C 62,0 — H 8,0 — O 30,0 — M. G. 1548.
- $C_{80}H_{124}O_{29}$ 1) Butyrylderivat d. Saponin. Sm. 68—72° (A. 218, 253). — III, 610.
 C 53,5 — H 1,9 — O 32,1 — N 12,5 — M. G. 1794.
- $C_{80}H_{31}O_{26}N_{16}$ 1) Hexadekanitroidrialin (J. 1879, 366). — II, 279.
- $C_{80}H_{39}O_7Br_{18}$ 1) Oktadekabromidrialin (J. 1879, 366). — II, 279.
- $C_{80}H_{47}O_7Br_{12}$ 1) Dodekabromidrialin (J. 1879, 366). — II, 279.
- $C_{80}H_{55}O_7N_{11}$ C 62,3 — H 2,8 — O 24,9 — N 10,0 — M. G. 1541.
 1) Undekanitroidrialin (J. 1879, 366). — II, 279.
- $C_{80}H_{63}O_{17}N_{16}$ C 62,4 — H 5,3 — O 17,7 — N 14,6 — M. G. 1538.
 1) Oktoaspartooktoanilid. Zers. bei 130° (A. 303, 205).
- $C_{80}H_{80}O_{17}N_{20}$ C 60,1 — H 5,4 — O 17,0 — N 17,5 — M. G. 1598.
 1) Oktoaspartotetraanilidtetraphenylhydrazid. Sm. 210° u. Zers. (B. 30, 2452; A. 303, 204). — IV, 704.
- $C_{80}H_{88}O_{17}N_{24}$ C 57,9 — H 5,4 — O 16,4 — N 20,3 — M. G. 1658.
 1) Oktoaspartophenylhydrazid. Sm. 200—205° u. Zers. (B. 30, 2452; A. 303, 199). — IV, 704.
- $C_{80}H_{97}O_{15}N_4$ C 70,4 — H 6,7 — O 18,8 — N 4,1 — M. G. 1364.
 1) Acetyltetraacodein (Soc. 25, 506; 28, 324). — III, 906.
- $C_{80}H_{111}O_{27}N_{78}S$ 1) Albumincyamid (J. pr. [2] 16, 68). — IV, 1593.
- $C_{80}H_{127}O_{27}N_{70}S$ 1) Eieralbumin + H₂O (C. 1897 [1] 1063). — IV, 1591.
- $C_{80}H_{127}O_{27}N_{70}S$ 1) Oxyprotsulfonsäure + 2 $\frac{1}{2}$ H₂O (C. 1897 [1] 1063).

C₈₂-Gruppe.

- $C_{82}H_{100}O_{46}$ C 54,1 — H 5,5 — O 40,4 — M. G. 1820.
 1) Acetylderivat d. Xanthorhammin (B. 20, 2245). — III, 616.
- $C_{82}H_{84}O_{26}N_4Cl$ 1) Okacetat d. Chlor-*o*-Penta[1,3-Dioxybenzol]dichroinäther (B. 21, 2480). — II, 931.

C₈₄-Gruppe.

- $C_{84}H_{64}O_{33}$ C 63,6 — H 4,0 — O 32,3 — M. G. 1584.
 1) Triacetylävosin. Sm. 80° (Bl. [3] 5, 724).

C₈₆-Gruppe.

- $C_{86}H_{46}O_{25}$ C 69,8 — H 3,1 — O 27,1 — M. G. 1478.
 1) Verbindung (aus Trioxyfluorondicarbonsäure). Sm. 250,5—252,5° (B. 31, 270).

C₈₉-Gruppe.

- C₈₉H₁₄₃O₇₄** C 44,6 — H 6,0 — O 49,4 — M. G. 2394.
1) **Arabinsäure.** CaO, BaO (Soc. 45, 54). — I, 1101.

C₉₀-Gruppe.

- C₉₀H₁₅₀O₂₉N₂₂S** 1) **Albumin.** 2HCl + H₂O, 2HBr + H₂O, 2HNO₃, H₂SO₄, 2H₃PO₄ (J. r. 27, 169; 29, 402; 30, 312). — IV, 1593.

C₉₂-Gruppe.

- C₉₂H₁₈₉O₆** C 79,9 — H 13,2 — O 6,9 — M. G. 1382.
1) **Cocerylester d. Cocerinsäure.** Sm. 106° (B. 18, 1879). — I, 580.

C₉₃-Gruppe.

- C₉₃H₁₉₅O₆** C 80,1 — H 13,0 — O 6,9 — M. G. 1394.
1) **Glycerintrimelissin.** Sm. 89° (C. 1896 [1] 642).

C₉₆-Gruppe.

- C₉₆H₁₀₁O₅₁** C 55,7 — H 4,9 — O 39,4 — M. G. 2070.
1) **Verbindung (aus Caramel).** BaO, 2BaO, PbO (A. ch. [3] 52, 371). — I, 1106.
C₉₆H₁₀₁O₅₁ C 50,3 — H 7,1 — O 42,6 — M. G. 2290.
1) **Pseudoinulin.** + 6BaO, + 8BaO, + 19PbO (B. 26 [2] 233).
C₉₆H₁₀₀O₆₀J₅ 1) **Jodstärke** (B. 26 [2] 696).
C₉₆H₁₀₁O₃₀J₅ 1) **Blaue Jodcholsäure.** K + xH₂O (B. 20, 686; 28, 385, 783).
C₉₆H₁₀₁O₃₀J₅ 1) **Jodstärke** (B. 20, 691; 26 [2] 696; 27 [2] 603; J. Th. 1888, 211). — I, 1085.
C₉₆H₁₁₉O₃₁N₇S 1) **Proteinochromogen** (B. 28, 560; 31, 1608). — IV, 1640.
C₉₆H₁₁₀O₃₁N₇Cl₃S 1) **Chloroproteinochromogen** (B. 31, 1604). — IV, 1640.

C₉₈-Gruppe.

- C₉₈H₉₄O₁₇N₁₆** C 66,6 — H 5,3 — O 15,4 — N 12,7 — M. G. 1766.
1) **Triphenylktoaspartoanilid.** Sm. 120–125° (A. 303, 208).

C₁₀₀—C₈₀₇-Gruppen.

- C₁₀₁H₁₄₉O₃₈N₃₁** C 50,7 — H 6,2 — O 25,2 — N 17,9 — M. G. 2415.
1) **Collagen** (H. 2, 299). — IV, 1624.
C₁₀₂H₁₅₁O₃₉N₃₁ C 50,3 — H 6,2 — O 25,6 — N 17,8 — M. G. 2433.
1) **Leim.** — IV, 1626.
C₁₀₂H₂₉₀O₁₉N₄ C 68,4 — H 11,5 — O 17,0 — N 3,1 — M. G. 1790.
1) **Enkephalin** (J. pr. [2] 24, 327, 337; [2] 25, 37). — III, 574.
C₁₀₂H₁₅₀O₅₁N₃₀S 1) **Deuteroalbumose + 5H₂O** (C. 1897 [1] 1063).
2) **Hemialbumose** (C. 1897 [1] 1063).
3) **Heterofibrinose + 5H₂O** (C. 1897 [1] 1063).
4) **Protofibrinose + 5H₂O** (C. 1897 [1] 1062).
C₁₀₂H₉₉O₁₃N₁₃S₄Fe 1) **Echinochrom** (B. 25 [2] 867).
C₁₀₄H₉₀O₁₇N₁₆ C 67,8 — H 5,3 — O 14,8 — N 12,1 — M. G. 1842.
1) **Tetraphenylktoaspartoooktoanilid.** Sm. bei 170° (A. 303, 209).
C₁₀₅H₉₀O₃₃ C 66,9 — H 5,1 — O 28,0 — M. G. 1884.
1) **Hexabenzosäure d. Verb. C₆₃H₇₂O₂₇** (aus Fraxinusgerbsäure) (M. 3, 760). — III, 682.
C₁₀₅H₁₅₆O₃₃N₃₀S 1) **Dysfibrinose + 4H₂O** (C. 1897 [1] 1063).
C₁₀₅H₁₇₄O₁₆N₃₀S 1) **Deuteroalbumose** (aus Myosin) (C. 1897 [1] 1063). — IV, 1596.
C₁₀₅H₁₈₅O₁₆N₅SP₃Na₅ 1) **Jekorin** (J. pr. [2] 33, 425; J. Th. 1887, 284; H. 20, 481). — IV, 1624.
C₁₀₅H₁₇₄O₈N 1) **Verbindung (aus Dammarharz).** — III, 555.
C₁₀₅H₁₉₄O₁₉N₂₅ C 55,2 — H 8,3 — O 19,8 — N 16,7 — M. G. 2346.
1) **Casein.** Salze siehe (Z. 1865, 415, 641). — IV, 1604.

- C₁₀₈H₁₄₆O₄₃N₂₉S
 C₁₀₈H₁₄₆O₄₃N₃₀S
 C₁₀₈H₁₇₀O₃₃N₃₀S
 C₁₀₈H₁₇₁O₃₄N₃₀S
 C₁₀₈H₁₇₀O₄₃N₃₀S
 C₁₁₆H₁₆₉O₁₇N₁₆
 C₁₁₁H₁₆₆O₃₅N₃₀S
 C₁₁₁H₁₇₀O₃₈N₃₀S
 C₁₁₁H₁₇₀O₄₄N₃₀S
 C₁₁₁H₂₁₈O₁₁
 C₁₁₁H₁₇₁O₂₆N₃₀S
 C₁₁₁H₁₇₀O₂₇N₃₀S
 C₁₁₁H₁₇₀O₃₆N₃₀S
 C₁₁₁H₁₈₉O₃₈N₃₀S
 C₁₁₇H₁₈₇O₃₇N₃₀S
 C₁₃₆H₁₈₄O₁₆N₉
 C₁₃₅H₁₈₄O₂₂N₉
 C₁₃₅H₂₃₀O₈Si
 C₁₃₅H₁₄₅O₂₀N₈Cl
 C₁₃₅H₁₅₀O₂₄N₈Cl
 C₁₃₅H₁₄₆O₂₇N₁₆Fe₄
 C₁₄₁H₂₄₆O₁₂J
 C₁₄₁H₂₂₁O₄₅N₃₀S
 C₁₄₄H₂₇₀O₁₆N₃₄S
 C₁₅₀H₂₉₉O₆₅N₄₈S₃P
 C₁₅₄H₁₄₀O₃₃
 C₁₆₀H₂₃₀O₄₅N₃₇S₄
 C₁₆₀H₂₃₀O₅₀N₃₇S
 C₁₆₀H₂₃₀O₃₀N₃P
 C₁₈₂H₂₈₆O₅₈N₅₀S
 C₂₀₁H₃₁₉O₆₆N₅₂S₃
 C₂₀₁H₃₁₈O₇₇N₆₀S
 C₂₁₀H₃₆₀O₁₄₀
 C₂₂₈H₁₈₀O₇₅N₅₈S₃
 C₂₂₇H₃₇₀O₇₂N₅₈J₂S₂
 C₂₁₇H₃₆₈O₇₁N₅₈S₂
 C₂₄₆H₂₃₁O₅₈N₁₇S₄
 C₄₂₀H₄₃₀O₁₅₈N₁₀₃S₃Fe
 C₄₂₇H₄₂₁O₁₅₃N₁₀₅S₃Fe
 C₄₅₀H₄₉₃O₁₃₂N₁₁₆J₁S₄
 C₅₅₅H₄₅₉O₁₄₉N₁₁₉S₃Fe
 C₅₆₀H₄₄₁O₁₆₇N₁₄₁S₃Fe
 C₆₂₀H₄₁₁O₁₆₉N₁₇₇S₃
 C₆₁₈H₁₆₂₁O₁₇₀N₁₆₁S₃Fe
 C₆₄₅H₁₆₄₀O₁₇₇N₁₇₈S₃Fe
 C₆₅₀H₁₇₉₂O₁₅₃N₁₈₅S
 C₇₁₈H₁₁₅₀O₄₅N₃₁S₃Fe
 C₇₂₁H₉₁₀O₁₈₃N₁₈₁S
 C₇₄₁H₉₀₀O₂₁₁N₁₇₁S₃Mn
 C₇₅₀H₁₂₀₄O₃₁₉N₂₀₅S₃Fe
 C₆₈₇H₁₂₀₃O₂₅₈N₂₂₃S₃Cu
 1) Säure (aus Pepton). Ba, (M. 19, 213). — IV, 1639.
 1) Fibrin (C. 1897 [1] 1062). — IV, 1601.
 1) Myosin (C. 1897 [1] 1063). — IV, 1596.
 1) Protalbumose (aus Myosin) (C. 1897 [1] 1063). — IV, 1596.
 1) Amphopepton (C. 1897 [1] 1063). — IV, 1640.
 2) Antipepton + 1 1/2 H₂O (C. 1897 [1] 1063) — IV, 1640.
 C 68,8 — H 5,3 — O 14,2 — N 11,7 — M. G. 1918.
 1) Pentaphenylktoospartooktoanilid. Sm. bei 160° (A. 303, 209).
 1) Fibrinogen (C. 1897 [1] 1062). — IV, 1600.
 1) Deuteroalbumose + H₂O (C. 1897 [1] 1063).
 2) Protalbumose + 1 1/2 H₂O (C. 1897 [1] 1063).
 1) Hemipecton (aus Serumalbumin) + 1 1/2 H₂O (C. 1897 [1] 1063).
 C 77,7 — H 12,3 — O 10,0 — M. G. 1760.
 1) Mannitanhexastearat (A. ch. [3] 47, 326). — I, 447.
 1) Myoglobulin + 1 1/2 H₂O (C. 1897 [1] 1063). — IV, 1596.
 1) Fibrinoglobulin (C. 1897 [1] 1062).
 1) Heteroalbumose + 1 1/2 H₂O (C. 1897 [1] 1063).
 1) Paroglobulin + 1 1/2 H₂O (C. 1897 [1] 1062). — IV, 1596.
 1) Antialbumid (C. 1897 [1] 1063).
 C 76,4 — H 6,4 — O 11,9 — N 5,2 — M. G. 2136.
 1) Base (aus Morphin) (Soc. 26, 215). — III, 901.
 C 72,7 — H 6,6 — O 15,7 — N 5,0 — M. G. 2244.
 1) Diapotetramorphin (Soc. 25, 653). — III, 901.
 1) Kiesel säure ester (aus Bettfedern). Sm. bei 52° (C. 1897 [2] 699).
 1) Base (aus Morphin) (Soc. 26, 215). — III, 901.
 1) Base (aus Morphin) (Soc. 26, 215). — III, 901.
 1) Verbindung (aus Oxyhämglobin) (B. 29, 821). — IV, 1619.
 1) Jodstärke (J. Th. 1888, 21). — I, 1085.
 1) Syntonin (Parapepton) (A. 73, 125; 111, 201; 144, 68; J. Th. 1877, 10; J. 1864, 617; 1869, 803; H. 5, 158; B. 14, 2698; J. pr. [2] 44, 345; M. 4, 105). — IV, 1634.
 1) Albumin (aus Algen). — IV, 1589.
 1) Opalin (H. 26, 308). — IV, 1606.
 C 65,4 — H 5,8 — O 29,0 — M. G. 2864.
 1) Tribenzoat d. Saporubrin. Sm. 208—210° (C. 1897 [1] 302).
 1) Desamidoalbuminsäure (C. 1897 [1] 1063).
 1) Mucin (aus Rindschnecken). K₂ (H. 10, 66). — IV, 1610.
 1) Protagon. Sm. bei 200° (B. 12, 1229; H. 9, 169). — I, 343.
 1) Artolin. 2HCl (C. 1898 [2] 1102). — IV, 1603.
 1) Albumin. Cu, Cu₂ (H. 5, 206). — IV, 1589.
 1) Glutolin (C. 1898 [2] 1105). — IV, 1626.
 C 45,1 — H 6,1 — O 48,8 — M. G. 5896.
 1) Erythro dextrin + H₂O (B. 26, 2537, 2544).
 1) Serumalbumin (oder C₄₄₇H₇₁₉O₁₂₉N₁₁₅S₆) (H. 26, 479).
 1) Jodalbumin (H. 24, 171). — IV, 1593.
 1) Albumin (H. 14, 165; 15, 457; 16, 190; 24, 170; C. 1898 [2] 436). — IV, 1590.
 1) Melanoidinsäure (C. 1897 [1] 1063). — IV, 1594.
 1) Aeolosomin (C. 1898 [2] 928).
 1) Hermerythrin (B. 25 [2] 915).
 1) Jodserumalbumin (H. 26, 479).
 1) Oxyhämglobin + 28H₂O (aus Pferdeblut) (H. 8, 361). — IV, 1613.
 1) Chlorocruorin (B. 25 [2] 590).
 1) Globulin (aus Blut) (B. 25 [2] 867).
 1) Hämglobin (aus Hundeblood). — IV, 1612.
 1) Oxyhämglobin (C. 1895 [2] 683).
 1) β-Achroglobulin (B. 26 [2] 502).
 1) Oxyhämglobin (aus Pferdeblut) (H. 10, 33). — IV, 1613.
 1) γ-Achroglobulin (B. 25 [2] 915).
 1) Pinnaglobin (Bl. [3] 7, 397). — IV, 1597.
 1) Hämglobin (aus Hundeblood) (H. 14, 292). — IV, 1612.
 1) Hämcyanin (B. 25 [2] 345, 951).

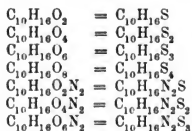
Procenttabellen.

Einer Anregung des Herrn Geheimrath Prof. BEILSTEIN zufolge ist die in der ersten Auflage befindliche, damals nur die Kohlenwasserstoffe umfassende Procent-tabelle auf die Formen **CHO**, **CHN** und **CHON** ausgedehnt worden.

Sollte es sich als wünschenswerth oder nothwendig herausstellen, auch für weitere Formen, z. B. **CHCl**, **CHBr**, **CHONS** u. s. f., solche Ausrechnungen zu besitzen, so möge diese, die Kräfte des Einzelnen übersteigende, rein mechanische Arbeit jüngeren Fachgenossen vorbehalten bleiben, — waren doch schon allein 90,000 Einzelrechnungen zur Ausführung obiger Arbeit erforderlich. Zunächst wird das gesammelte Zahlenmaterial vollauf genügen, und zwar nicht nur für obige Formen selbst, sondern auch für solche, welche andere Elemente enthalten.

Einige Beispiele werden diese Thatsache veranschaulichen.

Die Relation $O_2 : S = 32 : 32$ zeigt, dass die Tafeln der **CHO**- und **CHON**-Formen ohne Weiteres auch für die **CHS**- und **CHNS**-Verbindungen benutzbar sind, indem an Stelle von zwei Atomen Sauerstoff ein Atom Schwefel gesetzt wird. So besitzen beispielsweise gleiches Molekulargewicht und Zusammensetzung die Verbindungen:



On Prof. BEILSTEIN's suggestion the table of percentages which in the first edition only comprised the hydrocarbons has been extended to the forms **CHO**, **CHN** and **CHON**.

Were it desirable or necessary to possess such calculations for other forms, e. g. **CHCl**, **CHBr**, **CHONS** etc., this purely mechanical task, which is beyond the power of a single man, must be reserved for younger men, since 90,000 independent calculations had to be made to accomplish the above task. For the present the collected numerical material will fully suffice not only for the above forms, but also for those containing other elements.

Some examples will illustrate this fact.

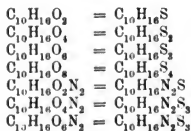
The relation $O_2 : S = 32 : 32$ indicates that the tables of the **CHO**- and **CHON**-forms can also be used for the compounds of the forms **CHS** and **CHNS** by substituting one atom of sulphur for two atoms of oxygen. Thus for example the following compounds possess equal molecular weights;

Suivant le désir de M^r le Prof BELLSTEIN, les tables de la composition centésimale qui, dans la 1^{re} édition de cet ouvrage, ne comprenaient que les hydrocarbures, ont été étendues aux formes **CHO**, **CHN** et **CHON**.

Si le besoin se faisait sentir de l'adopter à de nouveaux types tels que **CHCl**, **CHBr**, **CHONS**, l'activité d'un homme serait alors insuffisante, car l'exécution du travail supplémentaire auquel j'ai dû me livrer, a exigé à lui seul plus de 90,000 calculs. Ce travail purement mécanique, doit être réservé à des collègues plus jeunes. Le matériel numérique peut en tous cas suffire actuellement non seulement pour les formes mentionnées, mais aussi pour celles qui renferment d'autres éléments.

Quelques exemples éclairciront la question:

La relation $O_2 : S = 32 : 32$ montre que les tables correspondant aux types **CHO** et **CHON**, peuvent également servir pour **CHS** et **CHNS** en remplaçant deux atomes d'oxygène par un atome de soufre. Ainsi les combinaisons suivantes ont le même poids moléculaire et les mêmes compositions:



Per consiglio dell' illustre Prof. BELLSTEIN, venne estesa la tabella delle composizioni centesimali, che nella prima edizione comprendeva solo gli idrocarburi, anche alle forme **CHO**, **CHN** e **CHON**.

Ove dovesse sembrare desiderabile o necessario il possedere tali calcoli, anche per altre forme, quali **CHCl**, **CHBr**, **CHONS**, il lavoro occorrente, puramente meccanico, ma tale da superare la potenzialità di un solo individuo, viene lasciato a colleghi più giovani. Già per la compilazione, delle tabelle percentuali contenute in quest'opera si richiesero circa 90,000 singole operazioni. Del resto i valori numerici qui raccolti saranno sufficienti non solo per le forme stesse per cui furono calcolati; ma anche per altre contenenti elementi diversi.

Alcuni esempi faranno comprendere questo fatto.

La relazione $O_2 : S = 32 : 32$ mostra che le tavole delle forme **CHO** e **CHON** si possono senz'altro adoperare anche per le forme **CHS** e **CHNS**, sostituendo al posto di due atomi d'ossigeno uno di solfo. Così p. es. posseggono un ugual peso molecolare, ed un' identica composizione centesimale i composti:

Aus dieser Darlegung wird nunmehr auch ersichtlich, warum in den Procenttabellen auch die auf den ersten Blick überflüssig erscheinenden Sauerstoffprocente wiedergegeben sind — es war dies im Interesse der Schwefelverbindungen nothwendig.

Aber auch die procentuale Zusammensetzung der Formeln **CHONS** ist man im Stande, aus den Formeln **CHON** mittelst einer kleinen Rechnung, nämlich durch Theilung der Sauerstoffprocente nach Verhältniss, leicht zu erfahren, z. B. Verhältniss **O : S = 1 : 1**

| | |
|--|---|
| $\begin{array}{r} \text{C}_{10}\text{H}_{12}\text{O}_4\text{N}_2 \\ \text{C}_{10} \quad 53,6 \text{ } \frac{\text{v}}{\text{o}} \\ \text{H}_{12} \quad 5,3 \text{ } \frac{\text{v}}{\text{o}} \\ \text{O}_4 \quad \mathbf{28,6} \text{ } \frac{\text{v}}{\text{o}} \\ \text{N}_2 \quad 12,5 \text{ } \frac{\text{v}}{\text{o}} \\ \hline 100,0 \text{ } \frac{\text{v}}{\text{o}} \end{array}$ | $\begin{array}{r} \text{C}_{10}\text{H}_{12}\text{O}_2\text{N}_2\text{S} \\ \text{C}_{10} \quad 53,6 \text{ } \frac{\text{v}}{\text{o}} \\ \text{H}_{12} \quad 5,3 \text{ } \frac{\text{v}}{\text{o}} \\ \text{O}_2 \quad \mathbf{14,3} \text{ } \frac{\text{v}}{\text{o}} \\ \text{N}_2 \quad 12,5 \text{ } \frac{\text{v}}{\text{o}} \\ \text{S} \quad \mathbf{14,3} \text{ } \frac{\text{v}}{\text{o}} \\ \hline 100,0 \text{ } \frac{\text{v}}{\text{o}} \end{array}$ |
|--|---|

oder Verhältniss **O : S = 3 : 2**

| | |
|--|---|
| $\begin{array}{r} \text{C}_6\text{H}_6\text{O}_3\text{N}_2 \\ \text{C}_6 \quad 38,7 \text{ } \frac{\text{v}}{\text{o}} \\ \text{H}_6 \quad 3,2 \text{ } \frac{\text{v}}{\text{o}} \\ \text{O}_3 \quad \mathbf{43,0} \text{ } \frac{\text{v}}{\text{o}} \\ \text{N}_2 \quad 15,1 \text{ } \frac{\text{v}}{\text{o}} \\ \hline 100,0 \text{ } \frac{\text{v}}{\text{o}} \end{array}$ | $\begin{array}{r} \text{C}_6\text{H}_6\text{O}_2\text{N}_2\text{S} \\ \text{C}_6 \quad 38,7 \text{ } \frac{\text{v}}{\text{o}} \\ \text{H}_6 \quad 3,2 \text{ } \frac{\text{v}}{\text{o}} \\ \text{O}_2 \quad \mathbf{25,8} \text{ } \frac{\text{v}}{\text{o}} \\ \text{N}_2 \quad 15,1 \text{ } \frac{\text{v}}{\text{o}} \\ \text{S} \quad \mathbf{17,2} \text{ } \frac{\text{v}}{\text{o}} \\ \hline 100,0 \text{ } \frac{\text{v}}{\text{o}} \end{array}$ |
|--|---|

In gleichem Sinne können für **Cl**, **Br**, **J** u. s. f. enthaltene Formeln die Tafeln der **CHO**- und **CHN**-Formen benutzt werden, wenn es sich um annähernde Werthe handelt. Es verhalten sich nämlich:

$$\begin{aligned} \text{O}_6 : \text{Br} &= 80 : 80 \\ \text{O}_5 : \text{Se} &= 80 : 79 \\ \text{O}_8 : \text{J} &= 128 : 127 \\ \text{N}_5 : \text{Cl}_2 &= 70 : 71 \end{aligned}$$

und entsprechen sich in ihrer procentualen Zusammensetzung die Verbindungen:

| | |
|---|---|
| $\begin{array}{l} \text{C}_5\text{H}_9\text{Br} \\ \text{C}_8\text{H}_{10}\text{Se} \\ \text{C}_{10}\text{H}_{15}\text{J} \\ \text{C}_{12}\text{H}_{20}\text{Cl}_2 \end{array}$ | $\begin{array}{l} \text{wie } \text{C}_5\text{H}_8\text{O}_5 \\ \text{,, } \text{C}_8\text{H}_{10}\text{O}_5 \\ \text{,, } \text{C}_{10}\text{H}_{14}\text{O}_8 \\ \text{,, } \text{C}_{12}\text{H}_{21}\text{N}_5 \end{array}$ |
|---|---|

allerdings nicht genau, zumeist aber nur mit einer bei Analysenzahlen selbstver-

These remarks indicate why in the tables the percentages of oxygen are given which on first sight would seem to be superfluous; this was necessary for the sake of the sulphur compounds.

But also the percentage compositions of the formulae **CHONS** many readily be derived from the formulae **CHON** by means of a simple calculation, namely by proportionally dividing the percentages of oxygen, viz. the ratio **O : S = 1 : 1**

Similarly for the compounds containing **Cl**, **Br**, **J** etc. the tables of the **CHO**- and **CHN**-forms can be used if approximate values suffice. For the following relations exist:

and the following compounds agree in their percentage composition:

The agreement is not close, but in most cases lies within the limits of ex-

C'est donc dans l'intérêt des corps soufrés que les quantités centésimales d'oxygène ont été maintenues dans les tables.

On pourra aussi, par une simple division de la quantité d'oxygène, calculer la forme **CHONS** au moyen de **CHON**. Par exemple avec le rapport **O : S = 1 : 1**

| | |
|--|---|
| $\begin{array}{l} C_{10}H_{12}O_4N_2 \\ C_{10} \quad 53,6 \text{ ‰} \\ H_{12} \quad 5,3 \text{ ‰} \\ O_4 \quad 28,6 \text{ ‰} \\ N_2 \quad 12,5 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ | $\begin{array}{l} C_{10}H_{12}O_2N_2S \\ C_{10} \quad 53,6 \text{ ‰} \\ H_{12} \quad 5,3 \text{ ‰} \\ O_2 \quad 14,3 \text{ ‰} \\ N_2 \quad 12,5 \text{ ‰} \\ S \quad 14,3 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ |
|--|---|

ou avec le rapport **O : S = 3 : 2**

| | |
|--|---|
| $\begin{array}{l} C_6H_6O_3N_2 \\ C_6 \quad 38,7 \text{ ‰} \\ H_6 \quad 3,2 \text{ ‰} \\ O_3 \quad 43,0 \text{ ‰} \\ N_2 \quad 15,1 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ | $\begin{array}{l} C_6H_6O_3N_2S \\ C_6 \quad 38,7 \text{ ‰} \\ H_6 \quad 3,2 \text{ ‰} \\ O_3 \quad 25,8 \text{ ‰} \\ N_2 \quad 15,1 \text{ ‰} \\ S \quad 17,2 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ |
|--|---|

D'une manière analogue, les formules des tables **CHO** et **CHN**, pourront être appliquées pour le **Cl**, **Br**, **S** etc. autant qu'il ne s'agira que de valeurs approximatives. En effet, les rapports

$$\begin{aligned} O_5 : Br &= 80 : 80 \\ O_5 : Se &= 80 : 79 \\ O_8 : J &= 128 : 127 \\ N_5 : Cl_2 &= 70 : 71 \end{aligned}$$

atomiques et les compositions centésimales des combinaisons suivantes correspondent presque rigoureusement:

| | |
|---|---|
| $\begin{array}{l} C_5H_6Br \\ C_8H_{10}Se \\ C_{10}H_{16}J \\ C_{12}H_{20}Cl_2 \end{array}$ | $\begin{array}{l} \text{wie } C_5H_6O_5 \\ \text{,, } C_8H_{10}O_5 \\ \text{,, } C_{10}H_{14}O_5 \\ \text{,, } C_{12}H_{21}N_5 \end{array}$ |
|---|---|

Les erreurs d'analyse ne dépasseront pas $\frac{1}{10}$ — $\frac{3}{10}$ pour cent. Les compositions

Con ciò riesce pure evidente la ragione per cui nelle tabelle trovansi anche le percentuali dell'ossigeno, che a prima vista potrebbero sembrare inutili; ciò fu fatto per facilitare i calcoli relativi ai composti solforati.

Dai valori delle forme **CHON** si possono inoltre calcolare molto semplicemente quelli relativi alla forme **CHONS**; basta per ciò ripartire la percentuale dell'ossigeno secondo il rapporto tra ossigeno e solfo; per esempio:

Rapporto **O : S = 1 : 1**

| | |
|--|---|
| $\begin{array}{l} C_{10}H_{12}O_4N_2 \\ C_{10} \quad 53,6 \text{ ‰} \\ H_{12} \quad 5,3 \text{ ‰} \\ O_4 \quad 28,6 \text{ ‰} \\ N_2 \quad 12,5 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ | $\begin{array}{l} C_{10}H_{12}O_2N_2S \\ C_{10} \quad 53,6 \text{ ‰} \\ H_{12} \quad 5,3 \text{ ‰} \\ O_2 \quad 14,3 \text{ ‰} \\ N_2 \quad 12,5 \text{ ‰} \\ S \quad 14,3 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ |
|--|---|

ou avec le rapport **O : S = 3 : 2**

| | |
|--|---|
| $\begin{array}{l} C_6H_6O_3N_2 \\ C_6 \quad 38,7 \text{ ‰} \\ H_6 \quad 3,2 \text{ ‰} \\ O_3 \quad 43,0 \text{ ‰} \\ N_2 \quad 15,1 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ | $\begin{array}{l} C_6H_6O_3N_2S \\ C_6 \quad 38,7 \text{ ‰} \\ H_6 \quad 3,2 \text{ ‰} \\ O_3 \quad 25,8 \text{ ‰} \\ N_2 \quad 15,1 \text{ ‰} \\ S \quad 17,2 \text{ ‰} \\ \hline 100,0 \text{ ‰} \end{array}$ |
|--|---|

In modo uguale, quando non si esigano che valori approssimativi, si possono impiegare le tavole delle forme **CHO** e **CHN** pel calcolo delle percentuali relative alle forme contenenti **Cl**, **Br**, **S** etc. Esistono infatti i seguenti rapporti:

$$\begin{aligned} O_5 : Br &= 80 : 80 \\ O_5 : Se &= 80 : 79 \\ O_8 : J &= 128 : 127 \\ N_5 : Cl_2 &= 70 : 71 \end{aligned}$$

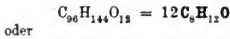
ed i composti seguenti si corrispondono nelle loro percentuali.

| | |
|---|---|
| $\begin{array}{l} C_5H_6Br \\ C_8H_{10}Se \\ C_{10}H_{16}J \\ C_{12}H_{20}Cl_2 \end{array}$ | $\begin{array}{l} \text{wie } C_5H_6O_5 \\ \text{,, } C_8H_{10}O_5 \\ \text{,, } C_{10}H_{14}O_5 \\ \text{,, } C_{12}H_{21}N_5 \end{array}$ |
|---|---|

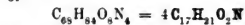
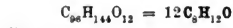
La corrispondenza non è veramente esatta; essa però non presenta per lo più che

ständlichen Abweichung von $\frac{1}{10}$ bis höchstens $\frac{3}{10}$ Procent. Dass auch die procentuale Zusammensetzung hochmolekularer Formeln, sofern sie Multipla vorhandener Formeln sind, z. B.:

perimental errors which amount to 1—3 tenths of a per cent. It need not be mentioned that also the percentage compositions of polymeric compounds may be read off at sight, e. g.:



ohne Weiteres abgelesen werden kann, bedarf wohl nicht besonderer Erklärung. Den Rechnungen sind zu Grunde gelegt die abgerundeten Atomgewichte:



The calculations are based on the round numbers of the atomic weights:

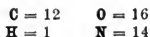
centésimales de corps à poids moléculaire élevé, peuvent facilement se déduire de celles des formules simples, lorsqu'il s'agit de multiples exacts de ces dernières. Exemple:



ou



Tous les calculs effectués ont eu pour base les poids atomiques arrondis:



deviazioni da $\frac{1}{10}$ a $\frac{3}{10}$ per cento; contenute quindi nei limiti d'errori delle analisi. Non occorre poi una speciale spiegazione per intendere che la composizione centesimale di forme molecolari molto complesse può senz'altro esser dedotta, purchè le forme ricercate siano multiple di qualche forma già calcolata; p. es:



oppure:



Nei calcoli si sono presi per base i pesi atomici seguenti, ridotti in cifra tonda:

| C-H | C% | H% | M.G. | C-H | C% | H% | M.G. | C-H | C% | H% | M.G. |
|--------------------|------|------|-------------------|------|------|------|------|-------|------|------|------|
| 1-1 _a | 92.3 | 7.7 | (13) _a | 8-18 | 85.7 | 14.3 | 112 | 12-18 | 88.9 | 11.1 | 162 |
| (1-2) _a | 85.7 | 14.3 | (14) _a | 18 | 84.2 | 15.8 | 114 | 20 | 87.8 | 12.2 | 164 |
| 1-4 | 75.0 | 25.0 | 16 | 9-2 | 98.2 | 1.8 | 110 | 22 | 86.8 | 13.2 | 166 |
| 2-2 | 92.3 | 7.7 | 26 | 4 | 96.4 | 3.6 | 112 | 24 | 85.7 | 14.3 | 168 |
| 4 | 85.7 | 14.3 | 28 | 6 | 94.7 | 5.3 | 114 | 26 | 84.7 | 15.3 | 170 |
| 6 | 80.0 | 20.0 | 30 | 8 | 93.1 | 6.9 | 116 | 13-2 | 98.7 | 1.3 | 158 |
| 3-2 | 91.7 | 5.3 | 38 | 10 | 91.5 | 8.5 | 118 | 4 | 97.5 | 2.5 | 160 |
| 4 | 90.0 | 10.0 | 40 | 12 | 90.0 | 10.0 | 120 | 6 | 96.3 | 3.7 | 162 |
| 6 | 85.7 | 14.3 | 42 | 14 | 88.5 | 11.5 | 122 | 8 | 95.1 | 4.9 | 164 |
| 8 | 81.8 | 18.2 | 44 | 16 | 87.1 | 12.9 | 124 | 10 | 94.0 | 6.0 | 166 |
| 4-2 | 96.0 | 4.0 | 50 | 18 | 85.7 | 14.3 | 126 | 12 | 92.8 | 7.2 | 168 |
| 4 | 92.3 | 7.7 | 52 | 20 | 84.4 | 15.6 | 128 | 14 | 91.8 | 8.2 | 170 |
| 6 | 88.9 | 11.1 | 54 | 10-2 | 98.4 | 1.6 | 122 | 16 | 90.7 | 9.3 | 172 |
| 8 | 85.7 | 14.3 | 56 | 4 | 96.8 | 3.2 | 124 | 18 | 89.6 | 10.4 | 174 |
| 10 | 82.8 | 17.2 | 58 | 6 | 95.2 | 4.8 | 126 | 20 | 88.6 | 11.4 | 176 |
| 5-2 | 96.8 | 3.2 | 62 | 8 | 93.8 | 6.2 | 128 | 22 | 87.7 | 12.3 | 178 |
| 4 | 93.8 | 6.2 | 64 | 10 | 92.3 | 7.7 | 130 | 24 | 86.7 | 13.3 | 180 |
| 6 | 90.9 | 9.1 | 66 | 12 | 90.9 | 9.1 | 132 | 26 | 85.7 | 14.3 | 182 |
| 8 | 88.2 | 11.8 | 68 | 14 | 89.6 | 10.4 | 134 | 28 | 84.8 | 15.2 | 184 |
| 10 | 85.7 | 14.3 | 70 | 16 | 88.2 | 11.8 | 136 | 14-2 | 98.8 | 1.2 | 170 |
| 12 | 83.3 | 16.7 | 72 | 18 | 87.0 | 13.0 | 138 | 4 | 97.7 | 2.3 | 172 |
| 6-2 | 97.3 | 2.7 | 74 | 20 | 85.7 | 14.3 | 140 | 6 | 96.5 | 3.5 | 174 |
| 4 | 94.7 | 5.3 | 76 | 22 | 84.5 | 15.5 | 142 | 8 | 95.5 | 4.5 | 176 |
| 6 | 92.3 | 7.7 | 78 | 11-2 | 98.5 | 1.5 | 134 | 10 | 94.5 | 4.5 | 178 |
| 8 | 90.0 | 10.0 | 80 | 4 | 97.1 | 2.9 | 136 | 12 | 93.3 | 6.7 | 180 |
| 10 | 87.8 | 12.2 | 82 | 6 | 95.6 | 4.4 | 138 | 14 | 92.3 | 7.7 | 182 |
| 12 | 85.7 | 14.3 | 84 | 8 | 94.3 | 5.7 | 140 | 16 | 91.3 | 8.7 | 184 |
| 14 | 83.7 | 16.3 | 86 | 10 | 92.9 | 7.1 | 142 | 18 | 90.3 | 9.7 | 186 |
| 7-2 | 97.7 | 2.3 | 86 | 12 | 91.7 | 8.3 | 144 | 20 | 89.4 | 10.6 | 188 |
| 4 | 95.5 | 4.5 | 88 | 14 | 90.4 | 9.6 | 146 | 22 | 88.5 | 11.5 | 190 |
| 6 | 93.3 | 6.7 | 90 | 16 | 89.2 | 10.8 | 148 | 24 | 87.5 | 12.5 | 192 |
| 8 | 91.3 | 8.7 | 92 | 18 | 88.0 | 12.0 | 150 | 26 | 86.6 | 13.4 | 194 |
| 10 | 89.4 | 10.6 | 94 | 20 | 86.8 | 13.2 | 152 | 28 | 85.7 | 14.3 | 196 |
| 12 | 87.5 | 12.5 | 96 | 22 | 85.7 | 14.3 | 154 | 30 | 84.8 | 15.2 | 198 |
| 14 | 85.7 | 14.3 | 98 | 24 | 84.6 | 15.4 | 156 | 15-2 | 98.9 | 1.1 | 182 |
| 16 | 84.0 | 16.0 | 100 | 12-2 | 98.6 | 1.4 | 146 | 4 | 97.8 | 2.2 | 184 |
| 8-2 | 98.0 | 2.0 | 98 | 4 | 97.3 | 2.7 | 148 | 6 | 96.8 | 3.2 | 186 |
| 4 | 96.0 | 4.0 | 100 | 6 | 96.0 | 4.0 | 150 | 8 | 95.8 | 4.2 | 188 |
| 6 | 94.1 | 5.9 | 102 | 8 | 94.7 | 5.3 | 152 | 10 | 94.7 | 5.3 | 190 |
| 8 | 92.3 | 7.7 | 104 | 10 | 93.5 | 6.5 | 154 | 12 | 93.8 | 6.2 | 192 |
| 10 | 90.6 | 9.4 | 106 | 12 | 92.3 | 7.7 | 156 | 14 | 92.8 | 7.2 | 194 |
| 12 | 88.9 | 11.1 | 108 | 14 | 91.1 | 8.9 | 158 | 16 | 91.8 | 8.2 | 196 |
| 14 | 87.3 | 12.7 | 110 | 16 | 90.0 | 10.0 | 160 | 18 | 90.9 | 9.1 | 198 |

| C-H | C% | H% | M. G. | C-H | C% | H% | M. G. | C-H | C% | H% | M. G. |
|-------|------|------|-------|-------|------|------|-------|-------|------|------|-------|
| 15-20 | 90,0 | 10,0 | 200 | 18-36 | 85,7 | 14,3 | 252 | 21-34 | 88,1 | 11,9 | 286 |
| 22 | 89,1 | 10,9 | 202 | 38 | 85,0 | 15,0 | 254 | 36 | 87,5 | 12,5 | 288 |
| 24 | 88,2 | 11,8 | 204 | 19-2 | 99,1 | 0,9 | 230 | 38 | 86,9 | 13,1 | 290 |
| 26 | 87,4 | 12,6 | 206 | 4 | 98,3 | 1,7 | 232 | 40 | 86,3 | 13,7 | 292 |
| 28 | 86,5 | 13,5 | 208 | 6 | 97,4 | 2,6 | 234 | 42 | 85,7 | 14,3 | 294 |
| 30 | 85,7 | 14,3 | 210 | 8 | 96,6 | 3,4 | 236 | 44 | 85,1 | 14,9 | 296 |
| 32 | 84,9 | 15,1 | 212 | 10 | 95,8 | 4,2 | 238 | 22-2 | 99,8 | 0,8 | 266 |
| 10-2 | 99,0 | 1,0 | 194 | 12 | 95,0 | 5,0 | 240 | 4 | 98,5 | 1,5 | 268 |
| 4 | 98,0 | 2,0 | 196 | 14 | 94,2 | 5,8 | 242 | 6 | 97,8 | 2,2 | 270 |
| 6 | 97,0 | 3,0 | 198 | 16 | 93,4 | 6,6 | 244 | 8 | 97,1 | 2,9 | 272 |
| 8 | 96,0 | 4,0 | 200 | 18 | 92,7 | 7,3 | 246 | 10 | 96,4 | 3,6 | 274 |
| 10 | 95,0 | 5,0 | 202 | 20 | 91,9 | 8,1 | 248 | 12 | 95,6 | 4,4 | 276 |
| 12 | 94,1 | 5,9 | 204 | 22 | 91,2 | 8,8 | 250 | 14 | 95,0 | 5,0 | 278 |
| 14 | 93,2 | 6,8 | 206 | 24 | 90,5 | 9,5 | 252 | 16 | 94,3 | 5,7 | 280 |
| 16 | 92,3 | 7,7 | 208 | 26 | 89,8 | 10,2 | 254 | 18 | 93,6 | 6,4 | 282 |
| 18 | 91,4 | 8,6 | 210 | 28 | 89,1 | 10,9 | 256 | 20 | 92,9 | 7,1 | 284 |
| 20 | 90,6 | 9,4 | 212 | 30 | 88,4 | 11,6 | 258 | 22 | 92,3 | 7,7 | 286 |
| 22 | 89,7 | 10,3 | 214 | 32 | 87,7 | 12,3 | 260 | 24 | 91,7 | 8,3 | 288 |
| 24 | 88,9 | 11,1 | 216 | 34 | 87,0 | 13,0 | 262 | 26 | 91,0 | 10,0 | 290 |
| 26 | 88,1 | 11,9 | 218 | 36 | 86,4 | 13,6 | 264 | 28 | 90,4 | 9,6 | 292 |
| 28 | 87,3 | 12,7 | 220 | 38 | 85,7 | 14,3 | 266 | 30 | 89,8 | 10,2 | 294 |
| 30 | 86,5 | 13,5 | 222 | 40 | 85,1 | 14,9 | 268 | 32 | 89,2 | 10,8 | 296 |
| 32 | 85,7 | 14,3 | 224 | 20-2 | 99,2 | 0,8 | 242 | 34 | 88,6 | 11,4 | 298 |
| 34 | 85,0 | 15,0 | 226 | 4 | 98,4 | 1,6 | 244 | 36 | 88,0 | 12,0 | 300 |
| 17-2 | 99,0 | 1,0 | 206 | 6 | 97,6 | 2,4 | 246 | 38 | 87,4 | 12,6 | 302 |
| 4 | 98,1 | 1,9 | 208 | 8 | 96,8 | 3,2 | 248 | 40 | 86,8 | 13,2 | 304 |
| 6 | 97,1 | 2,9 | 210 | 10 | 96,0 | 4,0 | 250 | 42 | 86,3 | 13,7 | 306 |
| 8 | 96,2 | 3,8 | 212 | 12 | 95,2 | 4,8 | 252 | 44 | 85,7 | 14,3 | 308 |
| 10 | 95,3 | 4,7 | 214 | 14 | 94,5 | 5,5 | 254 | 46 | 85,2 | 14,8 | 310 |
| 12 | 94,4 | 5,6 | 216 | 16 | 93,8 | 6,2 | 256 | 23-2 | 99,3 | 0,7 | 278 |
| 14 | 93,6 | 6,4 | 218 | 18 | 93,0 | 7,0 | 258 | 4 | 98,6 | 1,4 | 280 |
| 16 | 92,7 | 7,3 | 220 | 20 | 92,3 | 7,7 | 260 | 6 | 97,9 | 2,1 | 282 |
| 18 | 91,9 | 8,1 | 222 | 22 | 91,6 | 8,4 | 262 | 8 | 97,2 | 2,8 | 284 |
| 20 | 91,1 | 8,9 | 224 | 24 | 90,9 | 9,1 | 264 | 10 | 96,5 | 3,5 | 286 |
| 22 | 90,3 | 9,7 | 226 | 26 | 90,2 | 9,8 | 266 | 12 | 95,8 | 4,2 | 288 |
| 24 | 89,5 | 10,5 | 228 | 28 | 89,6 | 10,4 | 268 | 14 | 95,2 | 4,8 | 290 |
| 26 | 88,7 | 11,3 | 230 | 30 | 88,9 | 11,1 | 270 | 16 | 94,5 | 5,5 | 292 |
| 28 | 87,9 | 12,1 | 232 | 32 | 88,2 | 11,8 | 272 | 18 | 93,9 | 6,1 | 294 |
| 30 | 87,2 | 12,8 | 234 | 34 | 87,6 | 12,4 | 274 | 20 | 93,2 | 6,8 | 296 |
| 32 | 86,4 | 13,6 | 236 | 36 | 87,0 | 13,0 | 276 | 22 | 92,6 | 7,4 | 298 |
| 34 | 85,7 | 14,3 | 238 | 38 | 86,3 | 13,7 | 278 | 24 | 92,0 | 8,0 | 300 |
| 36 | 85,0 | 15,0 | 240 | 40 | 85,7 | 14,3 | 280 | 26 | 91,4 | 8,6 | 302 |
| 18-2 | 99,1 | 0,9 | 218 | 42 | 85,1 | 14,9 | 282 | 28 | 90,8 | 9,2 | 304 |
| 4 | 98,2 | 1,8 | 220 | 21-2 | 99,2 | 0,8 | 251 | 30 | 90,2 | 9,8 | 306 |
| 6 | 97,3 | 2,7 | 222 | 4 | 98,4 | 1,6 | 256 | 32 | 89,6 | 10,4 | 308 |
| 8 | 96,4 | 3,6 | 224 | 6 | 97,7 | 2,3 | 258 | 34 | 89,0 | 11,0 | 310 |
| 10 | 95,6 | 4,4 | 226 | 8 | 96,9 | 3,1 | 260 | 36 | 88,5 | 11,5 | 312 |
| 12 | 94,7 | 5,3 | 228 | 10 | 96,2 | 3,8 | 262 | 38 | 87,9 | 12,1 | 314 |
| 14 | 93,9 | 6,1 | 230 | 12 | 95,5 | 4,5 | 264 | 40 | 87,3 | 12,7 | 316 |
| 16 | 93,1 | 6,9 | 232 | 14 | 94,7 | 5,3 | 266 | 42 | 86,8 | 13,2 | 318 |
| 18 | 92,3 | 7,7 | 234 | 16 | 94,0 | 6,0 | 268 | 44 | 86,3 | 13,7 | 320 |
| 20 | 91,5 | 8,5 | 236 | 18 | 93,3 | 6,7 | 270 | 46 | 85,7 | 14,3 | 322 |
| 22 | 90,8 | 9,2 | 238 | 20 | 92,7 | 7,3 | 272 | 48 | 85,2 | 14,8 | 324 |
| 24 | 90,0 | 10,0 | 240 | 22 | 92,0 | 8,0 | 274 | 24-2 | 99,7 | 0,7 | 290 |
| 26 | 89,2 | 10,8 | 242 | 24 | 91,3 | 8,7 | 276 | 4 | 98,6 | 1,4 | 292 |
| 28 | 88,5 | 11,5 | 244 | 26 | 90,6 | 9,4 | 278 | 6 | 98,0 | 2,0 | 294 |
| 30 | 87,8 | 12,2 | 246 | 28 | 90,0 | 10,0 | 280 | 8 | 97,3 | 2,7 | 296 |
| 32 | 87,1 | 12,9 | 248 | 30 | 89,4 | 10,6 | 282 | 10 | 96,6 | 3,4 | 298 |
| 34 | 86,4 | 13,6 | 250 | 32 | 88,7 | 11,3 | 284 | 12 | 96,0 | 4,0 | 300 |

| 34 | | | | 35 | | | | 36 | | | | 37 | | | | | | | | |
|----|------|------|------|------|-----|-----|------|----|------|-----|------|-----|-----|------|-----|-----|------|-----|------|------|
| O | H | O% | H% | M.G. | O | H | O% | H% | M.G. | O | H | O% | H% | M.G. | O | H | O% | H% | M.G. | |
| 14 | 10.4 | 10.4 | 4.6 | 302 | 30 | 39 | 31.9 | 2 | 34 | 39 | 38.8 | 39 | 38 | 38.4 | 39 | 38 | 38.8 | 39 | 38 | 38.4 |
| 16 | 11.1 | 11.1 | 5.0 | 304 | 32 | 42 | 31.5 | 3 | 36 | 46 | 38.5 | 40 | 49 | 39.1 | 40 | 49 | 40.6 | 49 | 40 | 39.4 |
| 18 | 11.7 | 11.7 | 5.3 | 306 | 34 | 45 | 32.0 | 3 | 38 | 49 | 38.6 | 42 | 52 | 39.2 | 42 | 52 | 41.1 | 52 | 42 | 40.1 |
| 20 | 12.3 | 12.3 | 5.6 | 308 | 36 | 48 | 32.5 | 3 | 40 | 52 | 38.7 | 44 | 55 | 39.3 | 44 | 55 | 42.0 | 55 | 44 | 40.2 |
| 22 | 12.9 | 12.9 | 5.9 | 310 | 38 | 51 | 33.0 | 3 | 42 | 55 | 38.8 | 46 | 58 | 39.4 | 46 | 58 | 42.9 | 58 | 46 | 40.3 |
| 24 | 13.5 | 13.5 | 6.2 | 312 | 40 | 54 | 33.5 | 3 | 44 | 58 | 38.9 | 48 | 61 | 39.5 | 48 | 61 | 43.8 | 61 | 48 | 40.4 |
| 26 | 14.1 | 14.1 | 6.5 | 314 | 42 | 57 | 34.0 | 3 | 46 | 61 | 39.0 | 50 | 64 | 39.6 | 50 | 64 | 44.7 | 64 | 50 | 40.5 |
| 28 | 14.7 | 14.7 | 6.8 | 316 | 44 | 60 | 34.5 | 3 | 48 | 64 | 39.1 | 52 | 67 | 39.7 | 52 | 67 | 45.6 | 67 | 52 | 40.6 |
| 30 | 15.3 | 15.3 | 7.1 | 318 | 46 | 63 | 35.0 | 3 | 50 | 67 | 39.2 | 54 | 70 | 39.8 | 54 | 70 | 46.5 | 70 | 54 | 40.7 |
| 32 | 15.9 | 15.9 | 7.4 | 320 | 48 | 66 | 35.5 | 3 | 52 | 70 | 39.3 | 56 | 73 | 39.9 | 56 | 73 | 47.4 | 73 | 56 | 40.8 |
| 34 | 16.5 | 16.5 | 7.7 | 322 | 50 | 69 | 36.0 | 3 | 54 | 73 | 39.4 | 58 | 76 | 40.0 | 58 | 76 | 48.3 | 76 | 58 | 40.9 |
| 36 | 17.1 | 17.1 | 8.0 | 324 | 52 | 72 | 36.5 | 3 | 56 | 76 | 39.5 | 60 | 79 | 40.1 | 60 | 79 | 49.2 | 79 | 60 | 41.0 |
| 38 | 17.7 | 17.7 | 8.3 | 326 | 54 | 75 | 37.0 | 3 | 58 | 79 | 39.6 | 62 | 82 | 40.2 | 62 | 82 | 50.1 | 82 | 62 | 41.1 |
| 40 | 18.3 | 18.3 | 8.6 | 328 | 56 | 78 | 37.5 | 3 | 60 | 82 | 39.7 | 64 | 85 | 40.3 | 64 | 85 | 51.0 | 85 | 64 | 41.2 |
| 42 | 18.9 | 18.9 | 8.9 | 330 | 58 | 81 | 38.0 | 3 | 62 | 85 | 39.8 | 66 | 88 | 40.4 | 66 | 88 | 51.9 | 88 | 66 | 41.3 |
| 44 | 19.5 | 19.5 | 9.2 | 332 | 60 | 84 | 38.5 | 3 | 64 | 88 | 39.9 | 68 | 91 | 40.5 | 68 | 91 | 52.8 | 91 | 68 | 41.4 |
| 46 | 20.1 | 20.1 | 9.5 | 334 | 62 | 87 | 39.0 | 3 | 66 | 91 | 40.0 | 70 | 94 | 40.6 | 70 | 94 | 53.7 | 94 | 70 | 41.5 |
| 48 | 20.7 | 20.7 | 9.8 | 336 | 64 | 90 | 39.5 | 3 | 68 | 94 | 40.1 | 72 | 97 | 40.7 | 72 | 97 | 54.6 | 97 | 72 | 41.6 |
| 50 | 21.3 | 21.3 | 10.1 | 338 | 66 | 93 | 40.0 | 3 | 70 | 97 | 40.2 | 74 | 100 | 40.8 | 74 | 100 | 55.5 | 100 | 74 | 41.7 |
| 52 | 21.9 | 21.9 | 10.4 | 340 | 68 | 96 | 40.5 | 3 | 72 | 100 | 40.3 | 76 | 103 | 40.9 | 76 | 103 | 56.4 | 103 | 76 | 41.8 |
| 54 | 22.5 | 22.5 | 10.7 | 342 | 70 | 99 | 41.0 | 3 | 74 | 103 | 40.4 | 78 | 106 | 41.0 | 78 | 106 | 57.3 | 106 | 78 | 41.9 |
| 56 | 23.1 | 23.1 | 11.0 | 344 | 72 | 102 | 41.5 | 3 | 76 | 106 | 40.5 | 80 | 109 | 41.1 | 80 | 109 | 58.2 | 109 | 80 | 42.0 |
| 58 | 23.7 | 23.7 | 11.3 | 346 | 74 | 105 | 42.0 | 3 | 78 | 109 | 40.6 | 82 | 112 | 41.2 | 82 | 112 | 59.1 | 112 | 82 | 42.1 |
| 60 | 24.3 | 24.3 | 11.6 | 348 | 76 | 108 | 42.5 | 3 | 80 | 112 | 40.7 | 84 | 115 | 41.3 | 84 | 115 | 60.0 | 115 | 84 | 42.2 |
| 62 | 24.9 | 24.9 | 11.9 | 350 | 78 | 111 | 43.0 | 3 | 82 | 115 | 40.8 | 86 | 118 | 41.4 | 86 | 118 | 60.9 | 118 | 86 | 42.3 |
| 64 | 25.5 | 25.5 | 12.2 | 352 | 80 | 114 | 43.5 | 3 | 84 | 118 | 40.9 | 88 | 121 | 41.5 | 88 | 121 | 61.8 | 121 | 88 | 42.4 |
| 66 | 26.1 | 26.1 | 12.5 | 354 | 82 | 117 | 44.0 | 3 | 86 | 121 | 41.0 | 90 | 124 | 41.6 | 90 | 124 | 62.7 | 124 | 90 | 42.5 |
| 68 | 26.7 | 26.7 | 12.8 | 356 | 84 | 120 | 44.5 | 3 | 88 | 124 | 41.1 | 92 | 127 | 41.7 | 92 | 127 | 63.6 | 127 | 92 | 42.6 |
| 70 | 27.3 | 27.3 | 13.1 | 358 | 86 | 123 | 45.0 | 3 | 90 | 127 | 41.2 | 94 | 130 | 41.8 | 94 | 130 | 64.5 | 130 | 94 | 42.7 |
| 72 | 27.9 | 27.9 | 13.4 | 360 | 88 | 126 | 45.5 | 3 | 92 | 130 | 41.3 | 96 | 133 | 41.9 | 96 | 133 | 65.4 | 133 | 96 | 42.8 |
| 74 | 28.5 | 28.5 | 13.7 | 362 | 90 | 129 | 46.0 | 3 | 94 | 133 | 41.4 | 98 | 136 | 42.0 | 98 | 136 | 66.3 | 136 | 98 | 42.9 |
| 76 | 29.1 | 29.1 | 14.0 | 364 | 92 | 132 | 46.5 | 3 | 96 | 136 | 41.5 | 100 | 139 | 42.1 | 100 | 139 | 67.2 | 139 | 100 | 43.0 |
| 78 | 29.7 | 29.7 | 14.3 | 366 | 94 | 135 | 47.0 | 3 | 98 | 139 | 41.6 | 102 | 142 | 42.2 | 102 | 142 | 68.1 | 142 | 102 | 43.1 |
| 80 | 30.3 | 30.3 | 14.6 | 368 | 96 | 138 | 47.5 | 3 | 100 | 142 | 41.7 | 104 | 145 | 42.3 | 104 | 145 | 69.0 | 145 | 104 | 43.2 |
| 82 | 30.9 | 30.9 | 14.9 | 370 | 98 | 141 | 48.0 | 3 | 102 | 145 | 41.8 | 106 | 148 | 42.4 | 106 | 148 | 69.9 | 148 | 106 | 43.3 |
| 84 | 31.5 | 31.5 | 15.2 | 372 | 100 | 144 | 48.5 | 3 | 104 | 148 | 41.9 | 108 | 151 | 42.5 | 108 | 151 | 70.8 | 151 | 108 | 43.4 |

| C-H | C % | H % | M.G. | C-H | C % | H % | M.G. | C-H | C % | H % | M.G. |
|-------|------|------|------|-------|------|------|------|--------|------|------|------|
| 30-38 | 90.4 | 9.6 | 398 | 34-84 | 86.4 | 13.6 | 472 | 43-86 | 85.7 | 14.3 | 602 |
| 40 | 90.0 | 10.0 | 400 | 88 | 86.1 | 13.9 | 474 | 88 | 85.4 | 14.6 | 604 |
| 42 | 89.6 | 10.4 | 402 | 88 | 85.7 | 14.3 | 476 | 44-50 | 91.3 | 8.7 | 578 |
| 44 | 89.1 | 10.9 | 404 | 70 | 85.4 | 14.6 | 478 | 52 | 91.0 | 10.0 | 580 |
| 46 | 88.7 | 11.3 | 406 | 35-40 | 91.3 | 8.7 | 460 | 54 | 90.7 | 9.3 | 582 |
| 48 | 88.2 | 11.8 | 408 | 50 | 89.4 | 10.6 | 470 | 56 | 90.4 | 9.6 | 584 |
| 50 | 87.8 | 12.2 | 410 | 60 | 87.5 | 12.5 | 480 | 58 | 90.1 | 9.9 | 586 |
| 52 | 87.4 | 12.6 | 412 | 62 | 87.1 | 12.9 | 482 | 60 | 89.8 | 10.2 | 588 |
| 54 | 87.0 | 13.0 | 414 | 64 | 86.8 | 13.2 | 484 | 70 | 88.3 | 11.7 | 598 |
| 56 | 86.5 | 13.5 | 416 | 66 | 86.4 | 13.6 | 486 | 80 | 86.8 | 13.2 | 608 |
| 58 | 86.1 | 13.9 | 418 | 68 | 86.1 | 13.9 | 488 | 88 | 85.7 | 14.3 | 616 |
| 60 | 85.7 | 14.3 | 420 | 70 | 85.7 | 14.3 | 490 | 90 | 85.4 | 14.6 | 618 |
| 62 | 85.3 | 14.7 | 422 | 72 | 85.4 | 14.6 | 492 | 45-72 | 88.3 | 11.7 | 612 |
| 31-50 | 88.2 | 11.8 | 422 | 36-36 | 92.3 | 7.7 | 468 | 80 | 87.1 | 12.9 | 620 |
| 52 | 87.8 | 12.2 | 424 | 40 | 91.5 | 8.5 | 472 | 90 | 85.7 | 14.3 | 630 |
| 54 | 87.3 | 12.7 | 426 | 50 | 89.6 | 10.4 | 482 | 92 | 85.4 | 14.6 | 632 |
| 56 | 86.9 | 13.1 | 428 | 60 | 87.8 | 12.2 | 492 | 46-90 | 86.0 | 14.0 | 642 |
| 58 | 86.5 | 13.5 | 430 | 70 | 86.1 | 13.9 | 502 | 92 | 85.7 | 14.3 | 644 |
| 60 | 86.1 | 13.1 | 432 | 72 | 85.7 | 14.3 | 504 | 94 | 85.5 | 14.5 | 646 |
| 62 | 85.7 | 14.3 | 434 | 74 | 85.4 | 14.6 | 506 | 47-92 | 86.0 | 14.0 | 656 |
| 64 | 85.3 | 14.7 | 436 | 37-50 | 89.9 | 10.1 | 494 | 94 | 85.7 | 14.3 | 658 |
| 32-24 | 94.1 | 5.9 | 408 | 60 | 88.1 | 11.9 | 504 | 96 | 85.5 | 14.5 | 660 |
| 26 | 93.7 | 6.3 | 410 | 70 | 86.4 | 13.6 | 514 | 48-94 | 86.0 | 14.0 | 670 |
| 28 | 93.2 | 6.8 | 412 | 72 | 86.0 | 14.0 | 516 | 98 | 85.7 | 14.3 | 672 |
| 30 | 92.8 | 7.2 | 414 | 74 | 85.7 | 14.3 | 518 | 98 | 85.4 | 15.6 | 674 |
| 32 | 92.3 | 7.7 | 416 | 76 | 85.4 | 14.6 | 520 | 50-46 | 92.9 | 7.1 | 646 |
| 40 | 90.6 | 9.4 | 424 | 38-40 | 91.9 | 8.1 | 496 | 50 | 92.3 | 7.7 | 650 |
| 50 | 88.5 | 11.5 | 434 | 50 | 90.1 | 9.9 | 506 | 60 | 90.9 | 9.1 | 660 |
| 52 | 88.1 | 11.9 | 436 | 60 | 88.4 | 11.6 | 516 | 70 | 89.6 | 10.4 | 670 |
| 54 | 87.7 | 12.3 | 438 | 70 | 86.7 | 13.3 | 526 | 80 | 88.2 | 11.8 | 680 |
| 56 | 87.3 | 12.7 | 440 | 72 | 86.4 | 13.6 | 528 | 90 | 87.0 | 13.0 | 690 |
| 58 | 86.9 | 13.1 | 442 | 74 | 86.0 | 14.0 | 530 | 100 | 85.7 | 14.3 | 700 |
| 60 | 86.5 | 13.5 | 444 | 76 | 85.7 | 14.3 | 532 | 102 | 85.5 | 14.5 | 702 |
| 62 | 86.1 | 13.9 | 446 | 78 | 85.4 | 14.6 | 534 | 51-102 | 85.7 | 14.3 | 714 |
| 64 | 85.7 | 14.3 | 448 | 39-60 | 88.6 | 11.4 | 528 | 104 | 85.5 | 14.5 | 716 |
| 66 | 85.3 | 14.7 | 450 | 70 | 87.0 | 13.0 | 538 | 52-108 | 85.5 | 14.5 | 730 |
| 33-50 | 88.8 | 11.2 | 416 | 78 | 85.7 | 14.3 | 546 | 53-108 | 85.7 | 14.3 | 742 |
| 52 | 88.4 | 11.6 | 418 | 80 | 85.4 | 14.6 | 548 | 108 | 85.5 | 14.5 | 744 |
| 54 | 88.0 | 12.0 | 420 | 40-26 | 94.9 | 5.1 | 506 | 54-84 | 88.5 | 11.5 | 732 |
| 56 | 87.6 | 12.4 | 422 | 40 | 92.3 | 7.7 | 520 | 108 | 85.7 | 14.3 | 756 |
| 58 | 87.2 | 12.8 | 424 | 50 | 90.6 | 9.4 | 530 | 110 | 85.5 | 14.5 | 758 |
| 60 | 86.8 | 13.2 | 426 | 60 | 88.9 | 11.1 | 540 | 55-110 | 85.7 | 14.3 | 770 |
| 62 | 86.5 | 13.5 | 428 | 64 | 88.2 | 11.8 | 544 | 112 | 85.5 | 14.5 | 772 |
| 64 | 86.1 | 13.9 | 430 | 70 | 87.3 | 12.7 | 550 | 56-112 | 85.7 | 14.3 | 784 |
| 66 | 85.7 | 14.3 | 432 | 80 | 85.7 | 14.3 | 560 | 114 | 85.5 | 14.5 | 786 |
| 68 | 85.4 | 14.6 | 434 | 82 | 85.4 | 14.6 | 562 | 57-114 | 85.7 | 14.3 | 798 |
| 34-36 | 91.9 | 8.1 | 444 | 41-80 | 86.0 | 14.0 | 572 | 116 | 85.5 | 14.5 | 800 |
| 38 | 91.5 | 8.5 | 446 | 82 | 85.7 | 14.3 | 574 | 58-116 | 85.7 | 14.3 | 812 |
| 40 | 91.1 | 8.9 | 448 | 84 | 85.4 | 14.6 | 576 | 118 | 85.5 | 14.5 | 814 |
| 50 | 89.1 | 10.9 | 458 | 42-80 | 86.3 | 13.7 | 584 | 59-118 | 85.7 | 14.3 | 826 |
| 56 | 87.9 | 12.1 | 464 | 82 | 86.0 | 14.0 | 586 | 120 | 85.5 | 14.5 | 828 |
| 58 | 88.3 | 11.7 | 466 | 84 | 85.7 | 14.3 | 588 | 60-100 | 87.8 | 12.2 | 820 |
| 60 | 87.2 | 12.8 | 468 | 86 | 85.4 | 14.6 | 590 | 120 | 85.7 | 14.3 | 840 |
| 62 | 86.8 | 13.2 | 470 | 43-80 | 86.6 | 13.4 | 596 | 122 | 85.5 | 14.5 | 842 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|-------|------|------|------|------|--------|------|------|------|------|
| 1-2-1 | 40,0 | 6,7 | 53,3 | 30 | 6 | 32,9 | 1,4 | 65,7 | 146 |
| 2 | 26,1 | 4,3 | 69,6 | 46 | 4-4-1 | 70,6 | 5,9 | 23,5 | 68 |
| 3 | 19,4 | 3,2 | 77,4 | 62 | 2 | 57,1 | 4,8 | 38,1 | 84 |
| 1-4-1 | 37,5 | 12,5 | 50,0 | 32 | 3 | 48,0 | 4,0 | 48,0 | 100 |
| 2 | 25,0 | 8,3 | 66,7 | 48 | 4 | 41,4 | 3,4 | 55,2 | 116 |
| 2-2-1 | 57,1 | 4,8 | 38,1 | 42 | 5 | 36,4 | 3,0 | 60,6 | 132 |
| 2 | 41,4 | 3,4 | 55,2 | 58 | 6 | 32,4 | 2,7 | 64,9 | 148 |
| 3 | 32,4 | 2,7 | 64,9 | 74 | 7 | 29,3 | 2,4 | 68,3 | 164 |
| 4 | 26,7 | 2,2 | 71,1 | 90 | 4-6-1 | 68,6 | 8,6 | 22,8 | 70 |
| 5 | 22,6 | 1,9 | 75,5 | 106 | 2 | 55,8 | 7,0 | 37,2 | 86 |
| 6 | 19,7 | 1,6 | 78,7 | 122 | 3 | 47,1 | 5,9 | 47,0 | 102 |
| 2-4-1 | 54,5 | 9,1 | 36,4 | 44 | 4 | 40,7 | 5,1 | 54,2 | 118 |
| 2 | 40,0 | 6,7 | 53,3 | 60 | 5 | 35,8 | 4,5 | 59,7 | 134 |
| 3 | 31,6 | 5,2 | 63,2 | 76 | 6 | 32,0 | 4,0 | 64,0 | 150 |
| 4 | 26,1 | 4,3 | 69,6 | 92 | 8 | 26,4 | 3,3 | 70,3 | 182 |
| 5 | 22,2 | 3,7 | 74,1 | 108 | 4-8-1 | 66,7 | 11,1 | 22,2 | 72 |
| 2-6-1 | 52,2 | 13,0 | 34,8 | 46 | 2 | 54,5 | 9,1 | 36,4 | 88 |
| 2 | 38,7 | 9,7 | 51,6 | 62 | 3 | 46,2 | 7,7 | 46,1 | 104 |
| 3-2-1 | 66,7 | 3,7 | 29,6 | 54 | 4 | 40,0 | 6,7 | 53,3 | 120 |
| 2 | 51,4 | 2,9 | 45,7 | 70 | 5 | 35,3 | 5,9 | 58,8 | 136 |
| 3 | 41,9 | 2,3 | 55,8 | 86 | 4-10-1 | 64,9 | 13,5 | 21,6 | 74 |
| 4 | 35,3 | 1,9 | 62,8 | 102 | 2 | 53,3 | 11,1 | 35,6 | 90 |
| 5 | 30,5 | 1,7 | 67,8 | 118 | 3 | 45,3 | 9,4 | 45,3 | 106 |
| 3-4-1 | 64,3 | 7,1 | 28,6 | 56 | 4 | 39,3 | 8,2 | 52,5 | 122 |
| 2 | 50,0 | 5,6 | 44,4 | 72 | 5-2-1 | 76,9 | 2,6 | 20,5 | 78 |
| 3 | 40,9 | 4,5 | 54,6 | 88 | 2 | 63,8 | 2,1 | 34,1 | 94 |
| 4 | 34,6 | 3,8 | 61,6 | 104 | 3 | 54,6 | 1,8 | 43,6 | 110 |
| 5 | 30,0 | 3,3 | 66,7 | 120 | 4 | 47,6 | 1,6 | 50,8 | 126 |
| 6 | 26,5 | 2,9 | 70,6 | 136 | 5 | 42,3 | 1,4 | 56,3 | 142 |
| 3-6-1 | 62,1 | 10,3 | 27,6 | 58 | 6 | 38,0 | 1,2 | 60,8 | 158 |
| 2 | 48,7 | 8,1 | 43,2 | 74 | 7 | 34,5 | 1,1 | 64,4 | 174 |
| 3 | 40,0 | 6,7 | 53,3 | 90 | 5-4-1 | 75,0 | 5,0 | 20,0 | 80 |
| 4 | 34,0 | 5,6 | 60,4 | 106 | 2 | 62,5 | 4,2 | 33,3 | 96 |
| 5 | 29,5 | 4,9 | 65,6 | 122 | 3 | 53,6 | 3,6 | 42,8 | 112 |
| 3-8-1 | 60,0 | 13,3 | 26,7 | 60 | 4 | 46,9 | 3,1 | 50,0 | 128 |
| 2 | 47,4 | 10,5 | 42,1 | 76 | 5 | 41,7 | 2,8 | 55,5 | 144 |
| 3 | 39,1 | 8,7 | 52,2 | 92 | 6 | 37,5 | 2,5 | 60,0 | 160 |
| 4 | 33,3 | 7,4 | 59,3 | 108 | 7 | 34,0 | 2,4 | 63,6 | 176 |
| 4-2-1 | 72,7 | 3,0 | 24,3 | 66 | 8 | 31,2 | 2,1 | 66,7 | 192 |
| 2 | 58,6 | 2,4 | 39,0 | 82 | 5-6-1 | 73,2 | 7,3 | 19,5 | 82 |
| 3 | 49,0 | 2,0 | 49,0 | 98 | 2 | 61,2 | 6,1 | 32,7 | 98 |
| 4-2-4 | 42,1 | 1,7 | 56,2 | 114 | 3 | 52,6 | 5,3 | 42,1 | 114 |
| 5 | 36,9 | 1,5 | 61,6 | 130 | 4 | 46,2 | 4,6 | 49,2 | 130 |

| C—H—O | C % | H % | O % | M.G. | C—H—O | C % | H % | O % | M.G. |
|--------|------|------|------|------|---------|------|------|------|------|
| 5-6-5 | 41,1 | 4,1 | 54,8 | 146 | 6-8-8 | 34,6 | 3,8 | 61,6 | 208 |
| 6 | 37,0 | 3,7 | 59,3 | 162 | 9 | 32,1 | 3,6 | 64,3 | 224 |
| 7 | 33,7 | 3,4 | 62,9 | 178 | 6-10-1 | 73,5 | 10,2 | 16,3 | 98 |
| 8 | 30,9 | 3,1 | 66,0 | 194 | 2 | 63,2 | 8,8 | 28,0 | 114 |
| 5-8-1 | 71,4 | 9,5 | 19,1 | 84 | 3 | 55,4 | 7,7 | 36,9 | 130 |
| 2 | 60,0 | 8,0 | 32,0 | 100 | 4 | 49,3 | 6,9 | 43,8 | 146 |
| 3 | 51,7 | 6,9 | 41,4 | 116 | 5 | 44,4 | 6,2 | 49,4 | 162 |
| 4 | 45,4 | 6,1 | 48,5 | 132 | 6 | 40,5 | 5,6 | 53,9 | 178 |
| 5 | 40,5 | 5,4 | 54,1 | 148 | 7 | 37,1 | 5,2 | 57,7 | 194 |
| 6 | 36,6 | 4,9 | 58,5 | 164 | 8 | 34,3 | 4,7 | 61,0 | 210 |
| 7 | 33,3 | 4,5 | 62,2 | 180 | 9 | 31,9 | 4,4 | 63,7 | 226 |
| 8 | 30,6 | 4,1 | 65,3 | 196 | 6-12-1 | 72,0 | 12,0 | 16,0 | 100 |
| 9 | 28,3 | 3,8 | 67,9 | 212 | 2 | 62,1 | 10,3 | 27,6 | 116 |
| 5-10-1 | 69,8 | 11,6 | 18,6 | 86 | 3 | 54,5 | 9,1 | 36,4 | 132 |
| 2 | 58,8 | 9,8 | 31,4 | 102 | 4 | 48,7 | 8,1 | 43,2 | 148 |
| 3 | 50,8 | 8,5 | 40,7 | 118 | 5 | 43,9 | 7,3 | 48,8 | 164 |
| 4 | 44,8 | 7,4 | 47,8 | 134 | 6 | 40,0 | 6,7 | 53,3 | 180 |
| 5 | 40,0 | 6,7 | 53,3 | 150 | 7 | 36,7 | 6,1 | 57,1 | 196 |
| 6 | 36,2 | 6,0 | 57,8 | 166 | 8 | 34,0 | 5,6 | 60,4 | 212 |
| 5-12-1 | 68,2 | 13,6 | 18,2 | 88 | 9 | 31,6 | 5,3 | 63,1 | 228 |
| 2 | 57,7 | 11,5 | 30,8 | 104 | 6-14-1 | 70,6 | 13,7 | 15,7 | 102 |
| 3 | 50,0 | 10,0 | 40,0 | 120 | 2 | 61,0 | 11,8 | 27,2 | 118 |
| 4 | 44,1 | 8,8 | 47,1 | 136 | 3 | 53,8 | 10,4 | 35,8 | 134 |
| 5 | 39,5 | 7,9 | 52,6 | 152 | 4 | 48,0 | 9,3 | 42,7 | 150 |
| 6-2-1 | 80,0 | 2,2 | 17,8 | 90 | 5 | 43,4 | 8,4 | 48,2 | 166 |
| 2 | 67,9 | 1,9 | 30,2 | 106 | 6 | 39,6 | 7,7 | 52,7 | 182 |
| 3 | 59,0 | 1,6 | 39,4 | 122 | 7 | 36,4 | 7,1 | 56,5 | 198 |
| 4 | 52,2 | 1,4 | 46,4 | 138 | 6-16-14 | 23,1 | 5,1 | 71,8 | 312 |
| 5 | 46,8 | 1,3 | 51,9 | 154 | 7-2-1 | 82,4 | 1,9 | 15,7 | 102 |
| 6 | 42,3 | 1,2 | 56,5 | 170 | 2 | 71,2 | 1,7 | 27,1 | 118 |
| 7 | 38,7 | 1,1 | 60,2 | 186 | 3 | 62,7 | 1,5 | 35,8 | 134 |
| 8 | 35,6 | 1,0 | 63,4 | 202 | 4 | 56,0 | 1,3 | 42,7 | 150 |
| 6-4-1 | 78,3 | 4,3 | 17,4 | 92 | 5 | 50,6 | 1,2 | 48,2 | 166 |
| 2 | 66,7 | 3,7 | 29,6 | 108 | 6 | 46,2 | 1,1 | 52,7 | 182 |
| 3 | 58,1 | 3,2 | 38,7 | 124 | 7 | 42,4 | 1,0 | 56,6 | 198 |
| 4 | 51,4 | 2,9 | 45,7 | 140 | 8 | 39,3 | 0,9 | 59,8 | 214 |
| 5 | 46,1 | 2,6 | 51,3 | 156 | 9 | 36,5 | 0,9 | 62,6 | 230 |
| 6 | 41,9 | 2,3 | 55,8 | 172 | 7-4-1 | 80,8 | 3,8 | 15,4 | 104 |
| 7 | 38,3 | 2,1 | 59,6 | 188 | 2 | 70,0 | 3,3 | 26,7 | 120 |
| 8 | 35,3 | 1,9 | 62,8 | 204 | 3 | 61,8 | 2,9 | 35,3 | 136 |
| 9 | 32,7 | 1,8 | 65,5 | 220 | 4 | 55,3 | 2,6 | 42,1 | 152 |
| 6-6-1 | 76,6 | 6,4 | 17,0 | 94 | 5 | 50,0 | 2,4 | 47,6 | 168 |
| 2 | 65,5 | 5,4 | 29,1 | 110 | 6 | 45,6 | 2,2 | 52,2 | 184 |
| 3 | 57,1 | 4,8 | 38,1 | 126 | 7 | 42,0 | 2,0 | 56,0 | 200 |
| 4 | 50,7 | 4,2 | 45,1 | 142 | 8 | 38,9 | 1,8 | 59,3 | 216 |
| 5 | 45,6 | 3,8 | 50,6 | 158 | 9 | 36,2 | 1,7 | 62,1 | 232 |
| 6 | 41,4 | 3,4 | 55,2 | 174 | 10 | 33,9 | 1,6 | 64,5 | 248 |
| 7 | 37,9 | 3,1 | 59,0 | 190 | 7-6-1 | 79,3 | 5,6 | 15,1 | 106 |
| 8 | 35,0 | 2,9 | 62,1 | 206 | 2 | 68,8 | 4,9 | 26,2 | 122 |
| 9 | 32,4 | 2,7 | 64,9 | 222 | 3 | 60,9 | 4,3 | 34,8 | 138 |
| 10 | 30,3 | 2,5 | 67,2 | 238 | 4 | 54,5 | 3,9 | 41,6 | 154 |
| 12 | 26,7 | 2,2 | 71,1 | 270 | 5 | 49,4 | 3,5 | 47,0 | 170 |
| 6-8-1 | 75,0 | 8,3 | 16,7 | 96 | 6 | 45,2 | 3,2 | 51,6 | 186 |
| 2 | 64,3 | 7,1 | 28,6 | 112 | 7 | 41,6 | 3,0 | 55,4 | 202 |
| 3 | 56,3 | 6,2 | 37,5 | 128 | 8 | 38,5 | 2,7 | 58,7 | 218 |
| 4 | 50,0 | 5,6 | 44,4 | 144 | 9 | 35,9 | 2,6 | 61,5 | 234 |
| 5 | 45,0 | 5,0 | 50,0 | 160 | 10 | 33,6 | 2,4 | 64,0 | 250 |
| 6 | 40,9 | 4,5 | 54,6 | 176 | 11 | 31,6 | 2,2 | 66,2 | 266 |
| 7 | 37,5 | 4,2 | 58,3 | 192 | 7-8-1 | 77,8 | 7,4 | 14,8 | 108 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|--------|------|------|------|------|--------|------|------|------|------|
| 7-8-2 | 67.8 | 6.4 | 25.8 | 124 | 8-4-6 | 49.0 | 2.0 | 49.0 | 196 |
| 3 | 60.0 | 5.7 | 34.3 | 140 | 7 | 45.3 | 1.9 | 52.8 | 212 |
| 4 | 53.8 | 5.1 | 41.0 | 156 | 8 | 42.1 | 1.7 | 56.2 | 228 |
| 5 | 48.8 | 4.6 | 46.5 | 172 | 9 | 39.4 | 1.6 | 59.0 | 244 |
| 6 | 44.7 | 4.2 | 51.1 | 188 | 10 | 36.9 | 1.5 | 61.6 | 260 |
| 7 | 41.2 | 3.9 | 54.9 | 204 | 11 | 34.8 | 1.5 | 63.7 | 276 |
| 8 | 38.2 | 3.6 | 58.2 | 220 | 8-6-1 | 81.4 | 5.1 | 13.5 | 118 |
| 9 | 35.6 | 3.4 | 61.0 | 236 | 2 | 71.6 | 4.5 | 23.9 | 134 |
| 10 | 33.3 | 3.2 | 63.5 | 252 | 3 | 64.0 | 4.0 | 32.0 | 150 |
| 11 | 31.3 | 3.0 | 65.7 | 268 | 4 | 57.8 | 3.6 | 38.6 | 166 |
| 7-10-1 | 76.4 | 9.1 | 14.5 | 110 | 5 | 52.7 | 3.3 | 44.0 | 182 |
| 2 | 66.7 | 7.9 | 25.4 | 126 | 6 | 48.5 | 3.0 | 48.5 | 198 |
| 3 | 59.1 | 7.0 | 33.8 | 142 | 7 | 44.8 | 2.8 | 42.4 | 214 |
| 4 | 53.2 | 6.3 | 40.5 | 158 | 8 | 41.7 | 2.6 | 55.7 | 230 |
| 5 | 48.3 | 5.7 | 46.0 | 174 | 9 | 39.0 | 2.4 | 58.5 | 246 |
| 6 | 44.2 | 5.3 | 50.5 | 190 | 10 | 36.6 | 2.3 | 61.1 | 262 |
| 7 | 40.8 | 4.8 | 54.4 | 206 | 11 | 34.5 | 2.2 | 63.3 | 278 |
| 8 | 37.8 | 4.5 | 57.7 | 222 | 12 | 32.6 | 2.0 | 65.3 | 294 |
| 9 | 35.3 | 4.2 | 60.5 | 238 | 8-8-1 | 80.0 | 6.7 | 13.3 | 120 |
| 10 | 33.1 | 3.9 | 63.0 | 254 | 2 | 70.6 | 5.9 | 23.5 | 136 |
| 7-12-1 | 75.0 | 10.7 | 14.3 | 112 | 3 | 63.2 | 5.2 | 31.6 | 152 |
| 2 | 65.6 | 9.4 | 25.0 | 128 | 4 | 57.1 | 4.8 | 38.1 | 168 |
| 3 | 58.3 | 8.3 | 33.4 | 144 | 5 | 52.2 | 4.3 | 43.5 | 184 |
| 4 | 52.5 | 7.5 | 40.0 | 160 | 6 | 48.0 | 4.0 | 48.0 | 200 |
| 5 | 47.8 | 6.8 | 45.4 | 176 | 7 | 44.5 | 3.7 | 51.8 | 216 |
| 6 | 43.8 | 6.2 | 50.0 | 192 | 8 | 41.4 | 3.4 | 55.2 | 232 |
| 7 | 40.4 | 5.8 | 53.8 | 208 | 9 | 38.7 | 3.2 | 58.1 | 248 |
| 8 | 37.5 | 5.4 | 57.1 | 224 | 10 | 36.4 | 3.0 | 60.6 | 264 |
| 9 | 35.0 | 5.0 | 60.0 | 240 | 11 | 34.3 | 2.8 | 62.9 | 280 |
| 7-14-1 | 73.7 | 12.3 | 14.0 | 114 | 12 | 32.4 | 2.7 | 64.9 | 296 |
| 2 | 64.6 | 10.8 | 24.6 | 130 | 13 | 30.8 | 2.5 | 66.7 | 312 |
| 3 | 57.5 | 9.6 | 32.9 | 146 | 8-10-1 | 78.7 | 8.2 | 13.1 | 122 |
| 4 | 51.9 | 8.6 | 39.5 | 162 | 2 | 69.5 | 7.2 | 23.2 | 138 |
| 5 | 47.2 | 7.8 | 45.0 | 178 | 3 | 62.3 | 6.5 | 31.2 | 154 |
| 6 | 43.3 | 7.2 | 49.5 | 194 | 4 | 56.4 | 5.9 | 37.6 | 170 |
| 7 | 40.0 | 6.7 | 53.3 | 210 | 5 | 51.6 | 5.4 | 43.0 | 186 |
| 8 | 37.2 | 6.2 | 56.4 | 226 | 6 | 47.5 | 4.9 | 47.5 | 202 |
| 7-16-1 | 72.4 | 13.8 | 13.8 | 116 | 7 | 44.0 | 4.6 | 51.4 | 218 |
| 2 | 63.6 | 12.1 | 24.2 | 132 | 8 | 41.0 | 4.3 | 54.7 | 234 |
| 3 | 56.7 | 10.8 | 32.4 | 148 | 9 | 38.4 | 4.0 | 57.6 | 250 |
| 4 | 51.2 | 9.7 | 39.0 | 164 | 10 | 36.1 | 3.7 | 60.2 | 266 |
| 5 | 46.7 | 8.9 | 44.4 | 180 | 11 | 34.0 | 3.5 | 62.4 | 282 |
| 6 | 42.8 | 8.1 | 49.0 | 196 | 12 | 32.2 | 3.3 | 64.4 | 298 |
| 7 | 39.6 | 7.5 | 52.8 | 212 | 8-12-1 | 77.4 | 9.7 | 12.9 | 124 |
| 8-2-1 | 84.2 | 1.7 | 14.0 | 114 | 2 | 68.6 | 8.6 | 22.8 | 140 |
| 2 | 73.9 | 1.5 | 24.6 | 130 | 3 | 61.5 | 7.7 | 30.8 | 156 |
| 3 | 65.7 | 1.4 | 32.9 | 146 | 4 | 55.8 | 7.0 | 37.2 | 172 |
| 4 | 59.3 | 1.2 | 39.5 | 162 | 5 | 51.1 | 6.4 | 42.5 | 188 |
| 5 | 53.9 | 1.2 | 44.9 | 178 | 6 | 47.1 | 5.9 | 47.0 | 204 |
| 6 | 49.5 | 1.0 | 49.5 | 194 | 7 | 43.6 | 5.4 | 51.0 | 220 |
| 7 | 45.7 | 0.9 | 53.3 | 210 | 8 | 40.7 | 5.1 | 54.2 | 236 |
| 8 | 42.5 | 0.9 | 56.6 | 226 | 9 | 38.1 | 4.7 | 57.1 | 252 |
| 9 | 39.7 | 0.8 | 59.5 | 242 | 10 | 35.8 | 4.5 | 59.7 | 268 |
| 10 | 37.2 | 0.8 | 62.0 | 258 | 11 | 33.8 | 4.2 | 62.0 | 284 |
| 8-4-1 | 82.7 | 3.4 | 13.8 | 116 | 8-14-1 | 76.2 | 11.1 | 12.7 | 126 |
| 2 | 72.7 | 3.0 | 24.3 | 132 | 2 | 67.6 | 9.8 | 22.5 | 142 |
| 3 | 64.8 | 2.7 | 32.4 | 148 | 3 | 60.8 | 8.8 | 30.4 | 158 |
| 4 | 58.6 | 2.4 | 39.0 | 164 | 4 | 55.1 | 8.0 | 36.8 | 174 |
| 5 | 53.3 | 2.2 | 44.4 | 180 | 5 | 50.5 | 7.4 | 42.1 | 190 |

| C-H-O | C% | H% | O% | M. G. | C-H-O | C% | H% | O% | M. G. |
|--------|------|------|------|-------|--------|------|------|------|-------|
| 8-14-8 | 46.6 | 6.8 | 46.6 | 206 | 9-6-13 | 33.5 | 1.8 | 64.6 | 322 |
| 7 | 43.6 | 6.4 | 50.9 | 222 | 9-8-1 | 81.8 | 6.0 | 12.1 | 132 |
| 8 | 40.3 | 5.9 | 53.8 | 238 | 2 | 72.9 | 5.4 | 21.6 | 148 |
| 9 | 37.8 | 5.5 | 56.7 | 254 | 3 | 65.8 | 4.9 | 29.2 | 164 |
| 10 | 35.5 | 5.2 | 59.3 | 270 | 4 | 60.0 | 4.4 | 35.6 | 180 |
| 8-16-1 | 75.0 | 12.5 | 12.5 | 128 | 5 | 55.1 | 4.1 | 40.8 | 196 |
| 2 | 66.7 | 11.1 | 22.2 | 144 | 6 | 50.9 | 3.8 | 45.3 | 212 |
| 3 | 60.0 | 10.0 | 30.0 | 160 | 7 | 47.4 | 3.5 | 49.1 | 228 |
| 4 | 54.5 | 9.1 | 36.4 | 176 | 8 | 44.2 | 3.3 | 52.5 | 244 |
| 5 | 50.0 | 8.3 | 41.7 | 192 | 9 | 41.5 | 3.1 | 55.4 | 260 |
| 6 | 46.2 | 7.7 | 46.1 | 208 | 10 | 39.1 | 2.9 | 58.0 | 276 |
| 7 | 42.9 | 7.1 | 50.0 | 224 | 11 | 37.0 | 2.7 | 60.3 | 292 |
| 8 | 40.0 | 6.7 | 53.3 | 240 | 12 | 35.0 | 2.6 | 62.3 | 308 |
| 9 | 37.5 | 6.2 | 56.2 | 256 | 13 | 33.3 | 2.4 | 64.2 | 324 |
| 8-18-1 | 73.8 | 13.8 | 12.3 | 130 | 14 | 31.7 | 2.3 | 65.9 | 340 |
| 2 | 65.7 | 12.3 | 21.9 | 146 | 9-10-1 | 80.6 | 7.4 | 11.9 | 134 |
| 3 | 59.3 | 11.1 | 29.6 | 162 | 2 | 72.0 | 6.7 | 21.3 | 150 |
| 4 | 53.9 | 10.1 | 36.0 | 178 | 3 | 65.1 | 6.0 | 28.9 | 166 |
| 5 | 49.5 | 9.3 | 41.2 | 194 | 4 | 59.3 | 5.5 | 35.2 | 182 |
| 6 | 45.7 | 8.6 | 45.7 | 210 | 5 | 54.5 | 5.0 | 40.4 | 198 |
| 7 | 42.5 | 7.9 | 49.6 | 226 | 6 | 50.5 | 4.7 | 44.8 | 214 |
| 8 | 39.7 | 7.4 | 52.9 | 242 | 7 | 46.9 | 4.3 | 48.7 | 230 |
| 9 | 37.2 | 7.0 | 55.8 | 258 | 8 | 43.9 | 4.0 | 52.0 | 246 |
| 8-20-3 | 58.5 | 12.2 | 29.3 | 164 | 9 | 41.2 | 3.8 | 55.0 | 262 |
| 9-2-1 | 85.7 | 1.6 | 12.7 | 126 | 10 | 38.8 | 3.6 | 57.5 | 278 |
| 2 | 76.0 | 1.4 | 22.5 | 142 | 11 | 36.7 | 3.4 | 59.8 | 294 |
| 3 | 68.3 | 1.2 | 30.4 | 158 | 12 | 34.8 | 3.2 | 61.9 | 310 |
| 4 | 62.0 | 1.1 | 36.8 | 174 | 13 | 33.1 | 3.0 | 63.8 | 326 |
| 5 | 56.8 | 1.0 | 42.1 | 190 | 14 | 31.6 | 2.9 | 65.5 | 342 |
| 6 | 52.4 | 1.0 | 46.6 | 206 | 9-12-1 | 79.4 | 8.8 | 11.8 | 136 |
| 7 | 48.6 | 0.9 | 50.4 | 222 | 2 | 71.1 | 7.9 | 21.0 | 152 |
| 8 | 45.4 | 0.8 | 53.8 | 238 | 3 | 64.3 | 7.1 | 28.6 | 168 |
| 9 | 42.5 | 0.8 | 56.7 | 254 | 4 | 58.7 | 6.5 | 34.8 | 184 |
| 10 | 40.0 | 0.7 | 59.3 | 270 | 5 | 54.0 | 6.0 | 40.0 | 200 |
| 11 | 37.8 | 0.7 | 61.5 | 286 | 6 | 50.0 | 5.6 | 44.4 | 216 |
| 9-4-1 | 84.4 | 3.1 | 12.5 | 128 | 7 | 46.5 | 5.2 | 48.3 | 232 |
| 2 | 75.0 | 2.8 | 22.2 | 144 | 8 | 43.5 | 4.8 | 51.6 | 248 |
| 3 | 67.5 | 2.5 | 30.0 | 160 | 9 | 40.9 | 4.5 | 54.6 | 264 |
| 4 | 61.3 | 2.3 | 36.4 | 176 | 10 | 38.6 | 4.3 | 57.1 | 280 |
| 5 | 56.3 | 2.0 | 41.7 | 192 | 11 | 36.5 | 4.0 | 59.5 | 296 |
| 6 | 51.9 | 1.9 | 46.1 | 208 | 12 | 34.6 | 3.8 | 61.6 | 312 |
| 7 | 48.2 | 1.8 | 50.0 | 224 | 13 | 32.9 | 3.6 | 63.4 | 328 |
| 8 | 45.0 | 1.7 | 53.3 | 240 | 9-14-1 | 78.2 | 10.1 | 11.6 | 138 |
| 9 | 42.2 | 1.5 | 56.2 | 256 | 2 | 70.1 | 9.1 | 20.8 | 154 |
| 10 | 39.7 | 1.5 | 58.8 | 272 | 3 | 63.5 | 8.2 | 28.2 | 170 |
| 11 | 37.5 | 1.4 | 61.1 | 288 | 4 | 58.0 | 7.5 | 35.4 | 186 |
| 12 | 35.5 | 1.3 | 63.2 | 304 | 5 | 53.5 | 6.9 | 39.6 | 202 |
| 9-6-1 | 83.1 | 4.6 | 12.3 | 130 | 6 | 49.5 | 6.4 | 44.0 | 218 |
| 2 | 74.0 | 4.1 | 21.9 | 146 | 7 | 46.1 | 6.0 | 47.9 | 234 |
| 3 | 66.7 | 3.7 | 29.6 | 162 | 8 | 43.2 | 5.6 | 51.2 | 250 |
| 4 | 60.7 | 3.3 | 36.0 | 178 | 9 | 40.6 | 5.2 | 54.1 | 266 |
| 5 | 55.7 | 3.1 | 41.2 | 194 | 10 | 38.3 | 4.9 | 56.7 | 282 |
| 6 | 51.4 | 2.9 | 45.7 | 210 | 11 | 36.2 | 4.7 | 59.1 | 298 |
| 7 | 47.8 | 2.6 | 49.6 | 226 | 12 | 34.4 | 4.4 | 61.1 | 314 |
| 8 | 44.6 | 2.5 | 52.9 | 242 | 9-16-1 | 77.1 | 11.4 | 11.4 | 140 |
| 9 | 41.9 | 2.3 | 55.8 | 258 | 2 | 69.2 | 10.2 | 20.5 | 156 |
| 10 | 39.4 | 2.2 | 58.4 | 274 | 3 | 62.8 | 9.3 | 27.9 | 172 |
| 11 | 37.2 | 2.0 | 60.7 | 290 | 4 | 57.4 | 8.5 | 34.0 | 188 |
| 12 | 35.3 | 1.9 | 62.8 | 306 | 5 | 52.9 | 7.8 | 39.2 | 204 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|--------|------|------|------|------|---------|------|-----|------|------|
| 9-16-6 | 49.1 | 7.3 | 43.6 | 220 | 10-6-10 | 41.9 | 2.1 | 55.9 | 280 |
| 7 | 45.7 | 6.8 | 47.4 | 236 | 11 | 39.7 | 2.0 | 58.3 | 302 |
| 8 | 42.8 | 6.3 | 50.8 | 252 | 12 | 37.7 | 1.9 | 60.4 | 318 |
| 9 | 40.3 | 5.9 | 53.7 | 268 | 13 | 35.9 | 1.8 | 62.3 | 334 |
| 10 | 38.0 | 5.6 | 56.3 | 284 | 14 | 34.3 | 1.7 | 64.0 | 350 |
| 11 | 36.0 | 5.3 | 58.7 | 300 | 10-8-1 | 83.3 | 5.5 | 11.1 | 144 |
| 9-18-1 | 76.0 | 12.7 | 11.3 | 142 | 2 | 75.0 | 5.0 | 20.0 | 160 |
| 2 | 68.3 | 11.4 | 20.3 | 158 | 3 | 68.1 | 4.5 | 27.3 | 176 |
| 3 | 62.1 | 10.3 | 27.6 | 174 | 4 | 62.5 | 4.2 | 33.3 | 192 |
| 4 | 56.8 | 9.5 | 33.7 | 190 | 5 | 57.7 | 3.8 | 38.5 | 208 |
| 5 | 52.4 | 8.7 | 38.8 | 206 | 6 | 53.6 | 3.6 | 42.8 | 224 |
| 6 | 48.7 | 8.1 | 43.2 | 222 | 7 | 50.0 | 3.3 | 46.7 | 240 |
| 7 | 45.4 | 7.5 | 47.1 | 238 | 8 | 46.9 | 3.1 | 50.0 | 256 |
| 8 | 42.5 | 7.1 | 50.4 | 254 | 9 | 44.1 | 2.9 | 52.9 | 272 |
| 9 | 40.0 | 6.7 | 53.3 | 270 | 10 | 41.7 | 2.8 | 55.5 | 288 |
| 10 | 37.7 | 6.3 | 55.9 | 286 | 11 | 39.5 | 2.6 | 57.9 | 304 |
| 9-20-1 | 75.0 | 13.9 | 11.1 | 144 | 12 | 37.5 | 2.5 | 60.0 | 320 |
| 2 | 67.5 | 12.5 | 20.0 | 160 | 13 | 35.7 | 2.4 | 61.9 | 336 |
| 3 | 61.3 | 11.3 | 27.3 | 176 | 14 | 34.0 | 2.4 | 63.6 | 352 |
| 4 | 56.3 | 10.4 | 33.3 | 192 | 15 | 32.6 | 2.2 | 65.2 | 368 |
| 5 | 51.9 | 9.6 | 38.4 | 208 | 10-10-1 | 82.2 | 6.8 | 10.9 | 146 |
| 6 | 48.2 | 8.9 | 42.8 | 224 | 2 | 74.1 | 6.2 | 19.7 | 162 |
| 7 | 45.0 | 8.3 | 46.7 | 240 | 3 | 67.4 | 5.6 | 27.0 | 178 |
| 8 | 42.2 | 7.8 | 50.0 | 256 | 4 | 61.8 | 5.1 | 33.0 | 194 |
| 9 | 39.7 | 7.3 | 52.9 | 272 | 5 | 57.1 | 4.8 | 38.1 | 210 |
| 10-2-1 | 86.9 | 1.4 | 11.6 | 138 | 6 | 53.1 | 4.4 | 42.5 | 226 |
| 2 | 77.9 | 1.3 | 20.8 | 154 | 7 | 49.6 | 4.1 | 46.3 | 242 |
| 3 | 70.5 | 1.2 | 28.2 | 170 | 8 | 46.5 | 3.9 | 49.6 | 258 |
| 4 | 64.5 | 1.1 | 34.4 | 186 | 9 | 43.8 | 3.6 | 52.5 | 274 |
| 5 | 59.4 | 1.0 | 39.6 | 202 | 10 | 41.4 | 3.4 | 55.2 | 290 |
| 6 | 55.0 | 0.9 | 44.0 | 218 | 11 | 39.2 | 3.2 | 57.5 | 306 |
| 7 | 51.3 | 0.8 | 47.9 | 234 | 12 | 37.3 | 3.1 | 59.6 | 322 |
| 8 | 48.0 | 0.8 | 51.2 | 250 | 13 | 35.5 | 2.9 | 61.5 | 338 |
| 9 | 45.1 | 0.7 | 54.1 | 266 | 14 | 33.9 | 2.8 | 63.3 | 354 |
| 10 | 42.5 | 0.7 | 56.7 | 282 | 15 | 32.4 | 2.7 | 64.9 | 370 |
| 11 | 40.2 | 0.7 | 59.1 | 298 | 16 | 31.1 | 2.6 | 66.3 | 386 |
| 12 | 38.2 | 0.6 | 61.1 | 314 | 10-12-1 | 81.0 | 8.1 | 10.8 | 148 |
| 10-4-1 | 85.7 | 2.8 | 11.4 | 140 | 2 | 73.2 | 7.3 | 19.5 | 164 |
| 2 | 76.9 | 2.6 | 20.5 | 156 | 3 | 66.7 | 6.7 | 26.6 | 180 |
| 3 | 69.8 | 2.3 | 27.9 | 172 | 4 | 61.2 | 6.1 | 32.7 | 196 |
| 4 | 63.8 | 2.1 | 34.1 | 188 | 5 | 56.6 | 5.6 | 37.7 | 212 |
| 5 | 58.8 | 1.9 | 39.2 | 204 | 6 | 52.6 | 5.3 | 42.1 | 228 |
| 6 | 54.6 | 1.8 | 43.6 | 220 | 7 | 49.2 | 4.9 | 45.9 | 244 |
| 7 | 50.8 | 1.7 | 47.4 | 236 | 8 | 46.2 | 4.6 | 49.2 | 260 |
| 8 | 47.6 | 1.6 | 50.8 | 252 | 9 | 43.5 | 4.3 | 52.2 | 276 |
| 9 | 44.7 | 1.5 | 53.7 | 268 | 10 | 41.1 | 4.1 | 54.8 | 292 |
| 10 | 42.3 | 1.4 | 56.3 | 284 | 11 | 38.9 | 3.9 | 57.1 | 308 |
| 11 | 40.0 | 1.3 | 58.6 | 300 | 12 | 37.0 | 3.7 | 59.3 | 324 |
| 12 | 38.0 | 1.2 | 60.8 | 316 | 13 | 35.3 | 3.5 | 61.2 | 340 |
| 13 | 36.1 | 1.2 | 62.7 | 332 | 14 | 33.7 | 3.1 | 66.0 | 356 |
| 10-6-1 | 84.5 | 4.2 | 11.3 | 142 | 15 | 32.3 | 3.2 | 64.5 | 372 |
| 2 | 75.9 | 3.8 | 20.2 | 158 | 10-14-1 | 80.0 | 9.3 | 10.7 | 150 |
| 3 | 68.9 | 3.4 | 27.6 | 174 | 2 | 72.3 | 8.4 | 19.3 | 166 |
| 4 | 63.2 | 3.1 | 33.7 | 190 | 3 | 65.9 | 7.7 | 26.4 | 182 |
| 5 | 58.2 | 2.9 | 38.8 | 206 | 4 | 60.6 | 7.1 | 32.3 | 198 |
| 6 | 54.0 | 2.7 | 43.2 | 222 | 5 | 56.1 | 6.5 | 37.4 | 214 |
| 7 | 50.4 | 2.5 | 47.0 | 238 | 6 | 52.2 | 6.1 | 41.7 | 230 |
| 8 | 47.2 | 2.3 | 50.4 | 254 | 7 | 48.8 | 5.7 | 55.5 | 246 |
| 9 | 44.4 | 2.2 | 53.3 | 270 | 8 | 45.8 | 5.3 | 48.9 | 262 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|---------|------|-----|------|------|
| 10-14-9 | 43.2 | 5.0 | 51.8 | 278 | 11-2-5 | 61.7 | 0.9 | 37.4 | 214 |
| 10 | 40.8 | 4.7 | 54.4 | 294 | 6 | 57.4 | 0.8 | 41.7 | 230 |
| 11 | 38.7 | 4.5 | 56.8 | 310 | 7 | 53.7 | 0.8 | 45.5 | 246 |
| 12 | 36.8 | 4.3 | 58.9 | 326 | 8 | 50.4 | 0.7 | 48.8 | 262 |
| 13 | 35.1 | 4.1 | 60.8 | 342 | 9 | 47.5 | 0.7 | 51.8 | 278 |
| 14 | 33.5 | 3.9 | 62.6 | 358 | 10 | 44.9 | 0.7 | 54.4 | 294 |
| 10-16-1 | 79.0 | 10.4 | 10.5 | 152 | 11 | 42.6 | 0.7 | 56.8 | 310 |
| 2 | 71.4 | 9.5 | 19.1 | 168 | 12 | 40.5 | 0.6 | 58.9 | 326 |
| 3 | 65.2 | 8.7 | 26.1 | 184 | 13 | 38.6 | 0.6 | 60.8 | 342 |
| 4 | 60.0 | 8.0 | 32.0 | 200 | 11-4-1 | 86.8 | 2.6 | 10.5 | 152 |
| 5 | 55.5 | 7.4 | 37.0 | 216 | 2 | 78.5 | 2.4 | 19.0 | 168 |
| 6 | 51.7 | 6.9 | 41.4 | 232 | 3 | 71.7 | 2.2 | 26.1 | 184 |
| 7 | 48.4 | 6.4 | 44.1 | 248 | 4 | 66.0 | 2.0 | 32.0 | 200 |
| 8 | 45.4 | 6.1 | 48.5 | 264 | 5 | 61.1 | 1.8 | 37.0 | 216 |
| 9 | 42.8 | 5.7 | 51.4 | 280 | 6 | 56.9 | 1.7 | 41.4 | 232 |
| 10 | 40.5 | 5.4 | 54.1 | 296 | 7 | 53.2 | 1.6 | 45.1 | 248 |
| 11 | 38.4 | 5.1 | 56.4 | 312 | 8 | 50.0 | 1.5 | 48.5 | 264 |
| 12 | 36.6 | 4.9 | 58.5 | 328 | 9 | 47.1 | 1.4 | 51.4 | 280 |
| 13 | 34.9 | 4.6 | 60.5 | 344 | 10 | 44.6 | 1.3 | 54.1 | 296 |
| 10-18-1 | 77.9 | 11.7 | 10.4 | 154 | 11 | 42.3 | 1.3 | 56.4 | 312 |
| 2 | 70.6 | 10.6 | 18.8 | 170 | 12 | 40.2 | 1.2 | 58.5 | 328 |
| 3 | 64.5 | 9.7 | 25.8 | 186 | 13 | 38.4 | 1.1 | 60.5 | 344 |
| 4 | 59.4 | 8.9 | 31.7 | 202 | 14 | 36.7 | 1.1 | 62.2 | 360 |
| 5 | 55.0 | 8.3 | 36.7 | 218 | 11-6-1 | 85.7 | 3.9 | 10.4 | 154 |
| 6 | 51.3 | 7.7 | 41.0 | 234 | 2 | 77.6 | 3.5 | 18.8 | 170 |
| 7 | 48.0 | 7.2 | 44.8 | 250 | 3 | 70.9 | 3.2 | 25.8 | 186 |
| 8 | 45.1 | 6.7 | 48.1 | 266 | 4 | 65.3 | 3.0 | 31.7 | 202 |
| 9 | 42.5 | 6.4 | 51.0 | 282 | 5 | 60.5 | 2.7 | 36.7 | 218 |
| 10 | 40.3 | 6.0 | 53.7 | 298 | 6 | 56.4 | 2.5 | 41.0 | 234 |
| 11 | 38.2 | 5.7 | 56.1 | 314 | 7 | 52.8 | 2.4 | 44.8 | 250 |
| 12 | 36.4 | 5.4 | 58.2 | 330 | 8 | 49.6 | 2.2 | 48.2 | 266 |
| 10-20-1 | 76.9 | 12.8 | 10.3 | 156 | 9 | 46.8 | 2.1 | 51.1 | 282 |
| 2 | 69.8 | 11.6 | 18.6 | 172 | 10 | 44.3 | 2.0 | 53.7 | 298 |
| 3 | 63.8 | 10.6 | 25.5 | 188 | 11 | 42.0 | 1.9 | 56.1 | 314 |
| 4 | 58.8 | 9.8 | 31.4 | 204 | 12 | 40.0 | 1.8 | 58.2 | 330 |
| 5 | 54.5 | 9.1 | 36.4 | 220 | 13 | 38.1 | 1.7 | 60.1 | 346 |
| 6 | 50.8 | 8.5 | 40.7 | 236 | 14 | 36.4 | 1.6 | 61.9 | 362 |
| 7 | 47.6 | 7.9 | 44.5 | 252 | 15 | 34.8 | 1.6 | 63.5 | 378 |
| 8 | 44.8 | 7.4 | 47.8 | 268 | 11-8-1 | 84.6 | 5.1 | 10.3 | 156 |
| 9 | 42.2 | 7.0 | 50.7 | 284 | 2 | 76.8 | 4.6 | 18.6 | 172 |
| 10 | 40.0 | 6.7 | 53.3 | 300 | 3 | 70.2 | 4.2 | 25.5 | 188 |
| 11 | 38.0 | 6.7 | 55.7 | 316 | 4 | 64.7 | 3.9 | 31.4 | 204 |
| 10-22-1 | 76.0 | 13.9 | 10.1 | 158 | 5 | 60.0 | 3.6 | 36.4 | 220 |
| 2 | 68.9 | 12.6 | 18.4 | 174 | 6 | 55.9 | 3.4 | 40.7 | 236 |
| 3 | 63.2 | 11.6 | 25.2 | 190 | 7 | 52.4 | 3.2 | 44.4 | 252 |
| 4 | 58.2 | 10.7 | 31.1 | 206 | 8 | 49.2 | 3.0 | 47.7 | 268 |
| 5 | 54.0 | 10.0 | 36.0 | 222 | 9 | 46.5 | 2.8 | 50.7 | 284 |
| 6 | 50.4 | 9.2 | 40.3 | 238 | 10 | 44.0 | 2.6 | 53.3 | 300 |
| 7 | 47.2 | 8.6 | 44.1 | 254 | 11 | 41.8 | 2.5 | 55.7 | 316 |
| 8 | 44.8 | 8.1 | 47.4 | 270 | 12 | 39.7 | 2.4 | 57.8 | 332 |
| 9 | 42.0 | 7.7 | 50.3 | 286 | 13 | 37.9 | 2.3 | 59.8 | 348 |
| 10 | 39.7 | 7.3 | 53.0 | 302 | 14 | 36.3 | 2.2 | 61.5 | 364 |
| 10-24-4 | 57.7 | 11.5 | 30.8 | 208 | 15 | 34.7 | 2.1 | 63.2 | 380 |
| 14 | 32.6 | 6.5 | 60.9 | 368 | 16 | 33.3 | 2.0 | 64.6 | 396 |
| 10-26-13 | 33.9 | 7.4 | 58.7 | 354 | 11-10-1 | 83.6 | 6.3 | 10.1 | 158 |
| 11-2-1 | 88.0 | 1.3 | 10.7 | 150 | 2 | 75.8 | 5.7 | 18.4 | 174 |
| 2 | 79.5 | 1.2 | 19.3 | 166 | 3 | 69.5 | 5.2 | 25.3 | 190 |
| 3 | 72.5 | 1.1 | 26.4 | 182 | 4 | 64.1 | 4.8 | 31.1 | 206 |
| 4 | 66.7 | 1.0 | 32.3 | 198 | 5 | 59.5 | 4.5 | 36.0 | 222 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|----------|------|------|------|------|
| 11-10-6 | 55.4 | 4.2 | 40.3 | 238 | 11-16-15 | 34.0 | 4.1 | 61.8 | 388 |
| 7 | 52.0 | 3.9 | 44.1 | 254 | 11-18-1 | 79.5 | 10.8 | 9.6 | 166 |
| 8 | 48.9 | 3.7 | 47.4 | 270 | 2 | 72.5 | 9.9 | 17.6 | 182 |
| 9 | 46.2 | 3.5 | 50.3 | 286 | 3 | 66.7 | 9.1 | 24.2 | 198 |
| 10 | 43.7 | 3.3 | 53.0 | 302 | 4 | 61.7 | 8.4 | 29.9 | 214 |
| 11 | 41.5 | 3.1 | 55.3 | 318 | 5 | 57.4 | 7.8 | 34.8 | 230 |
| 12 | 39.5 | 3.0 | 57.4 | 334 | 6 | 53.7 | 7.3 | 39.0 | 246 |
| 13 | 37.7 | 2.8 | 59.4 | 350 | 7 | 50.4 | 6.9 | 42.6 | 262 |
| 14 | 36.1 | 2.7 | 61.2 | 366 | 8 | 47.5 | 6.5 | 46.0 | 278 |
| 15 | 34.6 | 2.6 | 62.8 | 382 | 9 | 44.9 | 6.1 | 49.0 | 294 |
| 16 | 33.2 | 2.5 | 64.3 | 398 | 10 | 42.6 | 5.8 | 51.6 | 310 |
| 17 | 31.9 | 2.4 | 65.7 | 414 | 11 | 40.5 | 5.5 | 54.0 | 326 |
| 11-12-1 | 82.5 | 7.5 | 10.0 | 160 | 12 | 38.6 | 5.2 | 56.1 | 342 |
| 2 | 75.0 | 6.8 | 18.2 | 176 | 13 | 36.8 | 5.0 | 58.1 | 358 |
| 3 | 68.8 | 6.2 | 25.0 | 192 | 14 | 35.3 | 4.8 | 59.8 | 374 |
| 4 | 63.5 | 5.8 | 30.7 | 208 | 11-20-1 | 78.5 | 11.9 | 9.5 | 168 |
| 5 | 58.9 | 5.3 | 35.7 | 224 | 2 | 71.7 | 10.9 | 17.4 | 184 |
| 6 | 55.0 | 5.0 | 40.0 | 240 | 3 | 66.0 | 10.0 | 24.0 | 200 |
| 7 | 51.5 | 4.7 | 43.7 | 256 | 4 | 61.1 | 9.2 | 29.6 | 216 |
| 8 | 48.5 | 4.4 | 47.1 | 272 | 5 | 56.9 | 8.6 | 34.5 | 232 |
| 9 | 45.9 | 4.1 | 50.0 | 288 | 6 | 53.2 | 8.0 | 38.7 | 248 |
| 10 | 43.4 | 3.9 | 52.6 | 304 | 7 | 50.0 | 7.6 | 42.4 | 264 |
| 11 | 41.2 | 3.7 | 55.0 | 320 | 8 | 47.1 | 7.1 | 45.7 | 280 |
| 12 | 39.3 | 3.6 | 57.1 | 336 | 9 | 44.6 | 6.7 | 48.6 | 296 |
| 13 | 37.5 | 3.4 | 59.1 | 352 | 10 | 42.3 | 6.4 | 51.3 | 312 |
| 14 | 35.9 | 3.2 | 60.9 | 368 | 11 | 40.2 | 6.1 | 53.7 | 328 |
| 15 | 34.4 | 3.1 | 62.5 | 384 | 12 | 38.4 | 5.8 | 55.8 | 344 |
| 16 | 33.0 | 3.0 | 64.0 | 400 | 13 | 36.7 | 5.5 | 57.8 | 360 |
| 17 | 31.7 | 2.9 | 65.4 | 416 | 11-22-1 | 77.6 | 12.9 | 9.4 | 170 |
| 11-14-1 | 81.5 | 8.6 | 9.9 | 162 | 2 | 70.9 | 11.8 | 17.2 | 186 |
| 2 | 74.2 | 7.8 | 18.0 | 178 | 3 | 65.3 | 10.9 | 23.8 | 202 |
| 3 | 68.0 | 7.2 | 24.7 | 194 | 4 | 60.6 | 10.1 | 29.3 | 218 |
| 4 | 62.8 | 6.7 | 30.5 | 210 | 5 | 56.4 | 9.4 | 34.2 | 234 |
| 5 | 58.4 | 6.2 | 35.4 | 226 | 6 | 52.8 | 8.8 | 38.4 | 250 |
| 6 | 54.5 | 5.8 | 39.7 | 242 | 7 | 49.6 | 8.3 | 42.1 | 266 |
| 7 | 51.2 | 5.4 | 43.3 | 258 | 8 | 46.8 | 7.8 | 45.4 | 282 |
| 8 | 48.2 | 5.1 | 46.7 | 274 | 9 | 44.3 | 7.4 | 48.3 | 298 |
| 9 | 45.5 | 4.8 | 49.7 | 290 | 10 | 42.0 | 7.0 | 51.0 | 314 |
| 10 | 43.1 | 4.6 | 52.3 | 306 | 11 | 40.0 | 6.7 | 53.3 | 330 |
| 11 | 41.0 | 4.3 | 54.7 | 322 | 12 | 38.1 | 6.3 | 55.5 | 346 |
| 12 | 39.0 | 4.1 | 56.8 | 338 | 11-24-1 | 76.7 | 13.9 | 9.3 | 172 |
| 13 | 37.3 | 3.9 | 58.8 | 354 | 2 | 70.2 | 12.8 | 17.0 | 188 |
| 14 | 35.7 | 3.8 | 60.5 | 370 | 3 | 64.7 | 11.7 | 23.5 | 204 |
| 15 | 34.2 | 3.6 | 62.2 | 386 | 4 | 60.0 | 10.9 | 29.1 | 220 |
| 16 | 32.8 | 3.5 | 63.7 | 402 | 5 | 55.9 | 10.2 | 33.9 | 236 |
| 11-16-1 | 80.4 | 9.8 | 9.8 | 164 | 6 | 52.4 | 9.5 | 38.1 | 252 |
| 2 | 73.3 | 8.9 | 17.8 | 180 | 7 | 49.2 | 8.9 | 41.8 | 268 |
| 3 | 67.3 | 8.1 | 24.5 | 196 | 8 | 46.5 | 8.4 | 45.1 | 284 |
| 4 | 62.3 | 7.5 | 30.2 | 212 | 9 | 44.0 | 8.0 | 48.0 | 300 |
| 5 | 57.9 | 7.0 | 35.1 | 228 | 10 | 41.8 | 7.6 | 50.6 | 316 |
| 6 | 54.1 | 6.5 | 39.3 | 244 | 11 | 39.7 | 7.2 | 53.0 | 332 |
| 7 | 50.7 | 6.1 | 43.1 | 260 | 12-2-1 | 88.9 | 1.2 | 9.9 | 162 |
| 8 | 47.8 | 5.8 | 46.4 | 276 | 2 | 80.9 | 1.1 | 18.0 | 178 |
| 9 | 45.2 | 5.5 | 49.3 | 292 | 3 | 74.2 | 1.0 | 24.7 | 194 |
| 10 | 42.8 | 5.2 | 51.9 | 308 | 4 | 68.6 | 0.9 | 30.5 | 210 |
| 11 | 40.7 | 4.9 | 54.3 | 324 | 5 | 63.7 | 0.9 | 35.4 | 226 |
| 12 | 38.8 | 4.7 | 56.5 | 340 | 6 | 59.5 | 0.8 | 39.7 | 242 |
| 13 | 37.1 | 4.5 | 58.4 | 356 | 7 | 55.8 | 0.7 | 43.4 | 258 |
| 14 | 35.5 | 4.3 | 60.2 | 372 | 8 | 52.6 | 0.7 | 46.7 | 274 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|---------|------|-----|------|------|
| 12-2-9 | 49,6 | 0,7 | 49,6 | 290 | 12-10-6 | 57,6 | 4,0 | 38,4 | 250 |
| 10 | 47,0 | 0,6 | 52,3 | 306 | 7 | 54,1 | 3,7 | 42,1 | 266 |
| 11 | 44,7 | 0,6 | 54,6 | 322 | 8 | 51,1 | 3,5 | 45,4 | 282 |
| 12 | 42,6 | 0,6 | 56,8 | 338 | 9 | 48,3 | 3,3 | 48,3 | 298 |
| 13 | 40,7 | 0,6 | 58,7 | 354 | 10 | 45,8 | 3,2 | 50,9 | 314 |
| 14 | 38,9 | 0,5 | 60,5 | 370 | 11 | 43,6 | 3,0 | 53,3 | 330 |
| 12-4-1 | 87,8 | 2,4 | 9,7 | 164 | 12 | 41,6 | 2,9 | 55,5 | 346 |
| 2 | 80,0 | 2,2 | 17,8 | 180 | 13 | 39,8 | 2,7 | 57,4 | 362 |
| 3 | 73,4 | 2,0 | 24,5 | 196 | 14 | 38,1 | 2,6 | 59,2 | 378 |
| 4 | 67,9 | 1,9 | 30,2 | 212 | 15 | 36,5 | 2,5 | 60,9 | 394 |
| 5 | 63,2 | 1,7 | 35,1 | 228 | 16 | 35,1 | 2,4 | 62,4 | 410 |
| 6 | 59,0 | 1,6 | 39,4 | 244 | 17 | 33,8 | 2,3 | 63,9 | 426 |
| 7 | 55,4 | 1,5 | 43,1 | 260 | 18 | 32,6 | 2,2 | 65,2 | 442 |
| 8 | 52,2 | 1,4 | 46,4 | 276 | 12-12-1 | 83,7 | 6,9 | 9,3 | 172 |
| 9 | 49,3 | 1,4 | 49,3 | 292 | 2 | 76,6 | 6,4 | 17,0 | 188 |
| 10 | 46,8 | 1,3 | 51,9 | 308 | 3 | 70,6 | 5,9 | 23,5 | 204 |
| 11 | 44,4 | 1,2 | 54,3 | 324 | 4 | 65,5 | 5,4 | 29,1 | 220 |
| 12 | 42,3 | 1,2 | 56,5 | 340 | 5 | 61,0 | 5,1 | 33,9 | 236 |
| 13 | 40,4 | 1,1 | 58,4 | 356 | 6 | 57,1 | 4,8 | 38,1 | 252 |
| 14 | 38,7 | 1,1 | 60,2 | 372 | 7 | 53,7 | 4,4 | 41,8 | 268 |
| 15 | 37,1 | 1,0 | 61,9 | 388 | 8 | 50,7 | 4,2 | 45,1 | 284 |
| 12-6-1 | 86,7 | 3,6 | 9,6 | 166 | 9 | 48,0 | 4,0 | 48,0 | 300 |
| 2 | 79,1 | 3,3 | 17,6 | 182 | 10 | 45,6 | 3,8 | 50,6 | 316 |
| 3 | 72,7 | 3,0 | 24,3 | 198 | 11 | 43,4 | 3,6 | 53,0 | 332 |
| 4 | 67,3 | 2,8 | 29,9 | 214 | 12 | 41,4 | 3,4 | 55,2 | 348 |
| 5 | 62,6 | 2,6 | 34,8 | 230 | 13 | 39,5 | 3,3 | 57,1 | 364 |
| 6 | 58,8 | 2,4 | 39,0 | 246 | 14 | 37,9 | 3,1 | 59,0 | 380 |
| 7 | 55,0 | 2,3 | 42,7 | 262 | 15 | 36,4 | 3,0 | 60,6 | 396 |
| 8 | 51,8 | 2,1 | 46,1 | 278 | 16 | 35,0 | 2,9 | 62,1 | 412 |
| 9 | 49,0 | 2,0 | 49,0 | 294 | 17 | 33,6 | 2,8 | 63,5 | 428 |
| 10 | 46,4 | 1,9 | 51,6 | 310 | 18 | 32,4 | 2,7 | 64,9 | 444 |
| 11 | 44,2 | 1,8 | 54,0 | 326 | 19 | 31,3 | 2,6 | 66,1 | 460 |
| 12 | 42,1 | 1,7 | 56,2 | 342 | 12-14-1 | 82,7 | 8,0 | 9,2 | 174 |
| 13 | 40,2 | 1,7 | 58,1 | 358 | 2 | 75,8 | 7,4 | 16,8 | 190 |
| 14 | 38,5 | 1,6 | 59,9 | 374 | 3 | 69,9 | 6,8 | 23,3 | 206 |
| 15 | 36,9 | 1,5 | 61,6 | 390 | 4 | 64,8 | 6,3 | 28,8 | 222 |
| 16 | 35,5 | 1,5 | 63,0 | 406 | 5 | 60,5 | 5,9 | 33,6 | 238 |
| 12-8-1 | 85,7 | 4,7 | 9,5 | 168 | 6 | 56,7 | 5,5 | 37,8 | 254 |
| 2 | 78,3 | 4,3 | 17,4 | 184 | 7 | 53,3 | 5,2 | 41,5 | 270 |
| 3 | 72,0 | 4,0 | 24,0 | 200 | 8 | 50,3 | 4,9 | 44,7 | 286 |
| 4 | 66,7 | 3,7 | 29,6 | 216 | 9 | 47,7 | 4,6 | 47,7 | 302 |
| 5 | 62,1 | 3,4 | 34,5 | 232 | 10 | 45,3 | 4,4 | 50,3 | 318 |
| 6 | 58,1 | 3,2 | 38,7 | 248 | 11 | 43,1 | 4,2 | 52,7 | 334 |
| 7 | 54,5 | 3,0 | 42,4 | 264 | 12 | 41,1 | 4,0 | 54,8 | 350 |
| 8 | 51,4 | 2,9 | 45,7 | 280 | 13 | 39,3 | 3,8 | 56,8 | 366 |
| 9 | 48,6 | 2,7 | 48,6 | 296 | 14 | 37,7 | 3,6 | 57,6 | 382 |
| 10 | 46,1 | 2,6 | 51,3 | 312 | 15 | 36,2 | 3,5 | 60,3 | 398 |
| 11 | 43,9 | 2,4 | 53,6 | 328 | 16 | 34,8 | 3,4 | 61,8 | 414 |
| 12 | 41,9 | 2,3 | 55,8 | 344 | 17 | 33,5 | 3,2 | 63,3 | 430 |
| 13 | 40,0 | 2,2 | 57,8 | 360 | 18 | 32,3 | 3,1 | 64,6 | 446 |
| 14 | 38,3 | 2,1 | 59,6 | 376 | 12-16-1 | 81,8 | 9,1 | 9,1 | 176 |
| 15 | 36,7 | 2,0 | 61,2 | 392 | 2 | 75,0 | 8,3 | 16,7 | 192 |
| 16 | 35,3 | 1,9 | 62,8 | 408 | 3 | 69,2 | 7,7 | 23,1 | 208 |
| 17 | 34,0 | 1,9 | 64,1 | 424 | 4 | 64,3 | 7,1 | 28,6 | 224 |
| 12-10-1 | 84,7 | 5,9 | 9,4 | 170 | 5 | 60,0 | 6,7 | 33,3 | 240 |
| 2 | 77,4 | 5,4 | 17,2 | 186 | 6 | 56,3 | 6,2 | 37,5 | 256 |
| 3 | 71,3 | 4,9 | 23,8 | 202 | 7 | 52,9 | 5,9 | 41,2 | 272 |
| 4 | 66,1 | 4,6 | 29,3 | 218 | 8 | 50,0 | 5,6 | 44,4 | 288 |
| 5 | 61,5 | 4,3 | 34,2 | 234 | 9 | 47,4 | 5,2 | 47,4 | 304 |

| C-H-O | C % | H % | O % | M. G | C-H-O | C % | H % | O % | M. G. |
|----------|------|------|------|------|---------|------|------|------|-------|
| 12-16-10 | 45.0 | 5.0 | 50.0 | 320 | 12-24-6 | 54.5 | 9.1 | 36.4 | 264 |
| 11 | 42.8 | 4.7 | 52.4 | 336 | 7 | 51.4 | 8.6 | 40.0 | 280 |
| 12 | 40.9 | 4.5 | 54.6 | 352 | 8 | 48.7 | 8.1 | 43.2 | 296 |
| 13 | 39.1 | 4.3 | 56.5 | 368 | 9 | 46.2 | 7.7 | 46.1 | 312 |
| 14 | 37.5 | 4.2 | 58.3 | 384 | 10 | 43.9 | 7.3 | 48.8 | 328 |
| 15 | 36.0 | 4.0 | 60.0 | 400 | 11 | 41.8 | 7.0 | 51.2 | 344 |
| 16 | 34.6 | 3.8 | 61.6 | 416 | 12 | 40.0 | 6.7 | 53.3 | 360 |
| 17 | 33.3 | 3.7 | 63.0 | 432 | 13 | 38.3 | 6.4 | 55.3 | 376 |
| 12-18-1 | 80.9 | 10.1 | 9.0 | 178 | 12-26-1 | 77.4 | 14.0 | 8.6 | 186 |
| 2 | 74.2 | 9.3 | 16.5 | 194 | 2 | 71.3 | 12.9 | 15.8 | 202 |
| 3 | 68.6 | 8.6 | 22.8 | 210 | 3 | 66.1 | 11.9 | 22.0 | 218 |
| 4 | 63.7 | 7.9 | 28.3 | 226 | 4 | 61.5 | 11.1 | 37.4 | 234 |
| 5 | 59.5 | 7.4 | 33.1 | 242 | 5 | 57.6 | 10.4 | 32.0 | 250 |
| 6 | 55.8 | 7.0 | 37.2 | 258 | 6 | 54.1 | 9.8 | 36.1 | 266 |
| 7 | 52.5 | 6.5 | 40.9 | 274 | 7 | 51.1 | 9.2 | 39.7 | 282 |
| 8 | 49.7 | 6.2 | 44.1 | 290 | 8 | 48.3 | 8.7 | 42.9 | 298 |
| 9 | 47.1 | 5.9 | 47.0 | 306 | 9 | 45.8 | 8.3 | 45.8 | 314 |
| 10 | 44.7 | 5.6 | 49.7 | 322 | 10 | 43.6 | 7.9 | 48.5 | 330 |
| 11 | 42.6 | 5.3 | 52.1 | 338 | 11 | 41.6 | 7.5 | 50.9 | 346 |
| 12 | 40.7 | 5.1 | 54.2 | 354 | 12 | 39.8 | 7.2 | 53.0 | 362 |
| 13 | 38.9 | 4.8 | 56.2 | 370 | 13-2-1 | 89.6 | 1.1 | 9.2 | 174 |
| 14 | 37.3 | 4.6 | 58.0 | 386 | 2 | 82.1 | 1.0 | 16.8 | 190 |
| 15 | 35.8 | 4.5 | 59.7 | 402 | 3 | 75.7 | 1.0 | 23.3 | 206 |
| 16 | 34.4 | 4.3 | 61.2 | 418 | 4 | 70.3 | 0.9 | 28.8 | 222 |
| 12-20-1 | 80.0 | 11.1 | 8.9 | 180 | 5 | 65.5 | 0.8 | 33.6 | 238 |
| 2 | 73.5 | 10.2 | 16.3 | 196 | 6 | 61.4 | 0.8 | 37.8 | 254 |
| 3 | 67.9 | 9.4 | 22.6 | 212 | 7 | 57.8 | 0.7 | 41.5 | 270 |
| 4 | 63.2 | 8.8 | 28.0 | 228 | 8 | 54.5 | 0.7 | 44.8 | 286 |
| 5 | 59.0 | 8.2 | 32.8 | 244 | 9 | 51.6 | 0.7 | 47.7 | 302 |
| 6 | 55.4 | 7.7 | 36.9 | 260 | 10 | 49.0 | 0.6 | 50.3 | 318 |
| 7 | 52.2 | 7.2 | 40.6 | 276 | 11 | 46.7 | 0.6 | 52.7 | 334 |
| 8 | 49.3 | 6.9 | 43.8 | 292 | 12 | 44.6 | 0.6 | 54.8 | 350 |
| 9 | 46.7 | 6.5 | 46.7 | 308 | 13 | 42.6 | 0.5 | 56.8 | 366 |
| 10 | 44.4 | 6.2 | 49.4 | 324 | 14 | 40.8 | 0.5 | 58.6 | 382 |
| 11 | 42.3 | 5.9 | 51.8 | 340 | 15 | 39.2 | 0.5 | 60.2 | 398 |
| 12 | 40.5 | 5.6 | 53.9 | 356 | 13-4-1 | 88.6 | 2.3 | 9.1 | 176 |
| 13 | 38.7 | 5.4 | 55.9 | 372 | 2 | 81.3 | 2.1 | 16.6 | 192 |
| 14 | 37.1 | 5.2 | 57.7 | 388 | 3 | 75.0 | 1.9 | 23.1 | 208 |
| 15 | 35.6 | 4.9 | 59.4 | 404 | 4 | 69.6 | 1.8 | 28.6 | 224 |
| 16 | 34.3 | 4.7 | 61.0 | 420 | 5 | 65.0 | 1.7 | 33.3 | 240 |
| 12-22-1 | 79.1 | 12.1 | 8.8 | 182 | 6 | 60.9 | 1.5 | 37.5 | 256 |
| 2 | 72.7 | 11.1 | 16.1 | 198 | 7 | 57.3 | 1.5 | 41.2 | 272 |
| 3 | 67.3 | 10.3 | 22.4 | 214 | 8 | 54.2 | 1.4 | 44.4 | 288 |
| 4 | 62.6 | 9.5 | 27.8 | 230 | 9 | 51.3 | 1.3 | 47.4 | 304 |
| 5 | 58.5 | 8.9 | 32.5 | 246 | 10 | 48.7 | 1.2 | 50.0 | 320 |
| 6 | 54.9 | 8.4 | 36.6 | 262 | 11 | 46.4 | 1.2 | 52.4 | 336 |
| 7 | 51.8 | 7.9 | 40.3 | 278 | 12 | 44.3 | 1.1 | 54.5 | 352 |
| 8 | 49.0 | 7.5 | 43.5 | 294 | 13 | 42.4 | 1.1 | 56.5 | 368 |
| 9 | 46.4 | 7.1 | 46.4 | 310 | 14 | 40.6 | 1.0 | 58.3 | 384 |
| 10 | 44.2 | 6.7 | 49.1 | 326 | 15 | 39.0 | 1.0 | 60.0 | 400 |
| 11 | 42.1 | 6.4 | 51.5 | 342 | 16 | 37.5 | 1.0 | 61.5 | 416 |
| 12 | 40.2 | 6.1 | 53.6 | 358 | 13-6-1 | 87.7 | 3.3 | 9.0 | 178 |
| 13 | 38.5 | 5.8 | 55.6 | 374 | 2 | 80.4 | 3.1 | 16.5 | 194 |
| 14 | 36.9 | 5.6 | 57.4 | 390 | 3 | 74.3 | 2.8 | 22.8 | 210 |
| 12-24-1 | 78.3 | 13.0 | 8.7 | 184 | 4 | 69.0 | 2.6 | 28.3 | 226 |
| 2 | 72.0 | 12.0 | 16.0 | 200 | 5 | 64.5 | 2.5 | 33.0 | 242 |
| 3 | 66.7 | 11.1 | 22.2 | 216 | 6 | 60.4 | 2.3 | 37.2 | 258 |
| 4 | 62.1 | 10.3 | 27.6 | 232 | 7 | 56.9 | 2.2 | 40.9 | 274 |
| 5 | 58.1 | 9.7 | 32.2 | 248 | 8 | 53.8 | 2.0 | 44.1 | 290 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|----------|------|-----|------|------|
| 13-6-9 | 51,0 | 1,9 | 47,1 | 306 | 13-12-14 | 39,8 | 3,1 | 57,1 | 392 |
| 10 | 48,4 | 1,8 | 49,7 | 322 | 15 | 38,2 | 2,9 | 58,8 | 408 |
| 11 | 46,1 | 1,8 | 52,1 | 338 | 16 | 36,8 | 2,8 | 60,4 | 424 |
| 12 | 44,1 | 1,7 | 54,2 | 354 | 17 | 35,4 | 2,7 | 61,8 | 440 |
| 13 | 42,1 | 1,6 | 56,2 | 370 | 18 | 34,2 | 2,6 | 63,1 | 456 |
| 14 | 40,4 | 1,5 | 58,0 | 386 | 19 | 33,0 | 2,5 | 64,4 | 472 |
| 15 | 38,8 | 1,5 | 59,7 | 402 | 20 | 32,0 | 2,4 | 65,5 | 488 |
| 16 | 37,3 | 1,4 | 61,2 | 418 | 13-14-1 | 83,8 | 7,5 | 8,6 | 186 |
| 17 | 35,9 | 1,4 | 62,7 | 434 | 2 | 77,2 | 6,9 | 15,8 | 202 |
| 13-8-1 | 86,7 | 4,4 | 8,9 | 180 | 3 | 71,5 | 6,4 | 22,0 | 218 |
| 2 | 79,6 | 4,1 | 16,3 | 196 | 4 | 66,7 | 6,0 | 27,3 | 234 |
| 3 | 73,6 | 3,8 | 22,6 | 212 | 5 | 62,4 | 5,6 | 32,0 | 250 |
| 4 | 68,4 | 3,5 | 28,1 | 228 | 6 | 58,6 | 5,2 | 36,1 | 266 |
| 5 | 63,9 | 3,3 | 32,8 | 244 | 7 | 55,3 | 4,9 | 39,7 | 282 |
| 6 | 60,0 | 3,1 | 36,9 | 260 | 8 | 52,3 | 4,7 | 42,9 | 298 |
| 7 | 56,5 | 2,9 | 40,6 | 276 | 9 | 49,7 | 4,4 | 45,8 | 314 |
| 8 | 53,4 | 2,7 | 43,8 | 292 | 10 | 47,3 | 4,2 | 48,5 | 330 |
| 9 | 50,6 | 2,6 | 46,7 | 308 | 11 | 45,1 | 4,0 | 50,9 | 346 |
| 10 | 48,1 | 2,5 | 43,4 | 324 | 12 | 43,1 | 3,8 | 53,0 | 362 |
| 11 | 45,9 | 2,3 | 51,8 | 340 | 13 | 41,3 | 3,7 | 55,0 | 378 |
| 12 | 43,8 | 2,2 | 53,9 | 356 | 14 | 39,6 | 3,5 | 56,8 | 394 |
| 13 | 41,9 | 2,1 | 55,9 | 372 | 15 | 38,1 | 3,4 | 58,4 | 410 |
| 14 | 40,2 | 2,0 | 57,7 | 388 | 16 | 36,6 | 3,3 | 60,1 | 426 |
| 15 | 38,6 | 2,0 | 59,4 | 404 | 17 | 35,3 | 3,2 | 61,5 | 442 |
| 16 | 37,1 | 1,9 | 61,0 | 420 | 18 | 34,1 | 3,0 | 62,9 | 458 |
| 17 | 35,8 | 1,8 | 62,4 | 436 | 19 | 32,9 | 2,9 | 64,1 | 474 |
| 18 | 34,5 | 1,7 | 63,7 | 452 | 20 | 31,8 | 2,8 | 65,3 | 490 |
| 13-10-1 | 85,7 | 5,5 | 8,8 | 182 | 13-16-1 | 83,0 | 8,5 | 8,5 | 188 |
| 2 | 78,8 | 5,1 | 16,1 | 198 | 2 | 76,5 | 7,8 | 15,7 | 204 |
| 3 | 72,9 | 4,6 | 22,5 | 214 | 3 | 70,9 | 7,3 | 21,8 | 220 |
| 4 | 67,8 | 4,3 | 27,8 | 230 | 4 | 66,1 | 6,8 | 27,1 | 236 |
| 5 | 63,4 | 4,0 | 32,5 | 246 | 5 | 61,9 | 6,3 | 31,7 | 252 |
| 6 | 59,5 | 3,8 | 36,6 | 262 | 6 | 58,2 | 5,9 | 35,8 | 268 |
| 7 | 56,1 | 3,6 | 40,3 | 278 | 7 | 54,9 | 5,6 | 39,4 | 284 |
| 8 | 53,1 | 3,4 | 43,5 | 294 | 8 | 52,0 | 5,3 | 42,7 | 300 |
| 9 | 50,3 | 3,2 | 46,4 | 310 | 9 | 49,4 | 5,0 | 45,6 | 316 |
| 10 | 47,8 | 3,0 | 49,1 | 326 | 10 | 47,0 | 4,8 | 48,2 | 332 |
| 11 | 45,6 | 2,9 | 41,5 | 342 | 11 | 44,8 | 4,6 | 50,6 | 348 |
| 12 | 43,6 | 2,8 | 53,6 | 358 | 12 | 42,8 | 4,4 | 52,7 | 364 |
| 13 | 41,7 | 2,7 | 55,5 | 374 | 13 | 41,1 | 4,2 | 54,7 | 380 |
| 14 | 40,0 | 2,5 | 57,4 | 390 | 14 | 39,4 | 4,0 | 56,6 | 396 |
| 15 | 38,4 | 2,4 | 59,1 | 406 | 15 | 37,9 | 3,9 | 58,2 | 412 |
| 16 | 36,9 | 2,3 | 60,7 | 422 | 16 | 36,4 | 3,7 | 59,8 | 428 |
| 17 | 35,6 | 2,3 | 62,1 | 438 | 17 | 35,1 | 3,6 | 61,3 | 444 |
| 18 | 34,3 | 2,2 | 63,4 | 454 | 18 | 33,9 | 3,5 | 62,6 | 460 |
| 19 | 33,2 | 2,1 | 64,6 | 470 | 19 | 32,8 | 3,4 | 63,8 | 476 |
| 13-12-1 | 84,8 | 6,5 | 8,7 | 184 | 13-18-1 | 82,1 | 9,5 | 8,4 | 190 |
| 2 | 78,0 | 6,0 | 16,0 | 200 | 2 | 75,7 | 8,7 | 15,5 | 206 |
| 3 | 72,2 | 5,5 | 22,2 | 216 | 3 | 70,3 | 8,1 | 21,6 | 222 |
| 4 | 67,2 | 5,2 | 27,6 | 232 | 4 | 65,5 | 7,5 | 26,9 | 238 |
| 5 | 62,9 | 4,8 | 32,2 | 248 | 5 | 61,4 | 7,1 | 31,5 | 254 |
| 6 | 59,1 | 4,5 | 36,4 | 264 | 6 | 57,8 | 6,6 | 35,5 | 270 |
| 7 | 55,7 | 4,2 | 40,0 | 280 | 7 | 54,5 | 6,3 | 39,2 | 286 |
| 8 | 52,7 | 4,0 | 43,2 | 296 | 8 | 51,6 | 5,9 | 42,4 | 302 |
| 9 | 50,0 | 3,8 | 46,1 | 312 | 9 | 49,1 | 5,6 | 45,3 | 318 |
| 10 | 47,5 | 3,6 | 48,8 | 328 | 10 | 46,7 | 5,4 | 47,9 | 334 |
| 11 | 45,3 | 3,5 | 51,2 | 344 | 11 | 44,6 | 5,1 | 50,3 | 350 |
| 12 | 43,3 | 3,3 | 53,3 | 360 | 12 | 42,6 | 4,9 | 52,4 | 366 |
| 13 | 41,5 | 3,2 | 55,3 | 376 | 13 | 40,8 | 4,7 | 54,4 | 382 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|---------|------|------|------|------|
| 13-18-14 | 39,2 | 4,5 | 56,3 | 398 | 13-26-7 | 53,1 | 8,8 | 38,1 | 294 |
| 15 | 37,7 | 4,3 | 58,0 | 414 | 8 | 50,3 | 8,4 | 41,3 | 310 |
| 16 | 36,3 | 4,2 | 59,5 | 430 | 9 | 47,8 | 8,0 | 44,2 | 326 |
| 17 | 35,0 | 4,0 | 61,0 | 446 | 10 | 45,6 | 7,6 | 46,8 | 342 |
| 18 | 33,8 | 3,9 | 62,3 | 462 | 11 | 43,6 | 7,2 | 49,2 | 358 |
| 13-20-1 | 81,3 | 10,4 | 8,3 | 192 | 12 | 41,7 | 6,9 | 51,3 | 374 |
| 2 | 75,0 | 9,6 | 15,4 | 208 | 13 | 40,0 | 6,7 | 53,3 | 390 |
| 3 | 69,6 | 8,9 | 21,4 | 224 | 14 | 38,4 | 6,4 | 55,2 | 406 |
| 4 | 65,0 | 8,3 | 26,7 | 240 | 13-28-1 | 78,0 | 14,0 | 8,0 | 200 |
| 5 | 60,9 | 7,8 | 31,3 | 256 | 2 | 72,2 | 13,0 | 14,8 | 216 |
| 6 | 57,3 | 7,3 | 35,3 | 272 | 3 | 67,2 | 12,1 | 20,7 | 232 |
| 7 | 54,2 | 6,9 | 38,9 | 288 | 4 | 62,9 | 11,3 | 25,8 | 248 |
| 8 | 51,3 | 6,6 | 42,1 | 304 | 5 | 59,1 | 10,6 | 30,3 | 264 |
| 9 | 48,7 | 6,2 | 45,0 | 320 | 6 | 55,7 | 10,0 | 34,3 | 280 |
| 10 | 46,4 | 5,9 | 47,6 | 336 | 7 | 52,7 | 9,5 | 37,8 | 296 |
| 11 | 44,3 | 5,7 | 50,0 | 352 | 8 | 50,0 | 9,0 | 41,0 | 312 |
| 12 | 42,4 | 5,4 | 52,2 | 368 | 9 | 47,6 | 8,5 | 43,9 | 328 |
| 13 | 40,6 | 5,2 | 54,2 | 384 | 10 | 45,3 | 8,1 | 46,5 | 344 |
| 14 | 39,0 | 5,0 | 56,0 | 400 | 11 | 43,3 | 7,8 | 48,9 | 360 |
| 15 | 37,5 | 4,8 | 57,7 | 416 | 12 | 41,5 | 7,4 | 51,0 | 376 |
| 16 | 36,1 | 4,6 | 59,3 | 432 | 13 | 39,8 | 7,1 | 53,1 | 392 |
| 17 | 34,8 | 4,5 | 60,7 | 448 | 14-2-1 | 90,3 | 1,1 | 8,6 | 186 |
| 13-22-1 | 80,4 | 11,3 | 8,2 | 194 | 2 | 83,2 | 1,0 | 15,8 | 202 |
| 2 | 74,3 | 10,5 | 15,2 | 210 | 3 | 77,1 | 0,9 | 22,0 | 218 |
| 3 | 69,0 | 9,7 | 21,2 | 226 | 4 | 71,8 | 0,8 | 27,4 | 234 |
| 4 | 64,4 | 9,1 | 26,4 | 242 | 5 | 67,2 | 0,8 | 32,0 | 250 |
| 5 | 60,5 | 8,5 | 31,0 | 258 | 6 | 63,2 | 0,7 | 36,1 | 266 |
| 6 | 56,9 | 8,0 | 35,0 | 274 | 7 | 59,6 | 0,7 | 39,7 | 282 |
| 7 | 53,7 | 7,6 | 38,6 | 290 | 8 | 56,4 | 0,7 | 42,9 | 298 |
| 8 | 51,0 | 7,2 | 41,8 | 306 | 9 | 53,5 | 0,6 | 45,9 | 314 |
| 9 | 48,4 | 6,8 | 44,7 | 322 | 10 | 50,9 | 0,6 | 48,5 | 330 |
| 10 | 46,2 | 6,5 | 47,3 | 338 | 11 | 48,6 | 0,6 | 50,8 | 346 |
| 11 | 44,1 | 6,2 | 49,7 | 354 | 12 | 46,4 | 0,5 | 53,0 | 362 |
| 12 | 42,1 | 5,9 | 51,9 | 370 | 13 | 44,4 | 0,5 | 55,0 | 378 |
| 13 | 40,4 | 5,7 | 53,9 | 386 | 14 | 42,6 | 0,5 | 56,8 | 394 |
| 14 | 38,8 | 5,5 | 55,7 | 402 | 15 | 41,0 | 0,5 | 58,5 | 410 |
| 15 | 37,3 | 5,3 | 57,4 | 418 | 16 | 39,4 | 0,5 | 60,1 | 426 |
| 16 | 35,9 | 5,0 | 59,0 | 434 | 14-4-1 | 89,4 | 2,1 | 8,5 | 188 |
| 13-24-1 | 79,6 | 12,2 | 8,2 | 196 | 2 | 82,4 | 1,9 | 15,7 | 204 |
| 2 | 73,6 | 11,3 | 15,1 | 212 | 3 | 76,4 | 1,8 | 21,8 | 220 |
| 3 | 68,4 | 10,5 | 21,1 | 228 | 4 | 71,2 | 1,7 | 27,1 | 236 |
| 4 | 63,9 | 9,8 | 26,2 | 244 | 5 | 66,7 | 1,6 | 31,7 | 252 |
| 5 | 60,0 | 9,2 | 30,8 | 260 | 6 | 62,7 | 1,5 | 35,8 | 268 |
| 6 | 56,5 | 8,7 | 34,8 | 276 | 7 | 59,2 | 1,4 | 39,4 | 284 |
| 7 | 53,4 | 8,2 | 38,3 | 292 | 8 | 56,0 | 1,3 | 42,7 | 300 |
| 8 | 50,7 | 7,8 | 41,5 | 308 | 9 | 53,2 | 1,3 | 45,5 | 316 |
| 9 | 48,2 | 7,4 | 44,4 | 324 | 10 | 50,6 | 1,2 | 48,2 | 332 |
| 10 | 45,9 | 7,0 | 47,1 | 340 | 11 | 48,3 | 1,1 | 50,6 | 348 |
| 11 | 43,8 | 6,7 | 49,4 | 356 | 12 | 46,2 | 1,1 | 52,7 | 364 |
| 12 | 41,9 | 6,4 | 51,6 | 372 | 13 | 44,2 | 1,1 | 54,7 | 380 |
| 13 | 40,2 | 6,2 | 53,6 | 388 | 14 | 42,4 | 1,0 | 56,6 | 396 |
| 14 | 38,6 | 5,9 | 55,4 | 404 | 15 | 40,8 | 1,0 | 58,2 | 412 |
| 15 | 37,1 | 5,7 | 57,1 | 420 | 16 | 39,3 | 0,9 | 59,8 | 428 |
| 13-26-1 | 78,8 | 13,1 | 8,1 | 198 | 17 | 37,8 | 0,9 | 61,2 | 444 |
| 2 | 72,9 | 12,2 | 14,9 | 214 | 14-6-1 | 88,4 | 3,2 | 8,4 | 190 |
| 3 | 67,8 | 11,3 | 20,9 | 230 | 2 | 81,6 | 2,9 | 15,5 | 206 |
| 4 | 63,4 | 10,6 | 26,0 | 246 | 3 | 75,7 | 2,7 | 21,6 | 222 |
| 5 | 59,6 | 9,9 | 30,5 | 262 | 4 | 70,6 | 2,5 | 26,9 | 238 |
| 6 | 56,1 | 9,3 | 34,5 | 278 | 5 | 66,1 | 2,4 | 31,5 | 254 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|---------|------|-----|------|------|
| 14-6-8 | 62.2 | 2.2 | 35.6 | 270 | 14-12-8 | 54.5 | 3.9 | 41.6 | 308 |
| 7 | 58.7 | 2.1 | 39.2 | 286 | 9 | 51.8 | 3.7 | 44.4 | 324 |
| 8 | 55.6 | 2.0 | 42.4 | 302 | 10 | 49.4 | 3.5 | 47.0 | 340 |
| 9 | 52.8 | 1.9 | 45.3 | 318 | 11 | 47.2 | 3.4 | 49.4 | 356 |
| 10 | 50.3 | 1.8 | 47.9 | 334 | 12 | 45.2 | 3.2 | 51.6 | 372 |
| 11 | 48.0 | 1.7 | 50.3 | 350 | 13 | 43.3 | 3.1 | 53.6 | 388 |
| 12 | 45.9 | 1.6 | 52.4 | 366 | 14 | 41.6 | 3.0 | 55.4 | 404 |
| 13 | 44.0 | 1.6 | 54.4 | 382 | 15 | 40.0 | 2.8 | 57.2 | 420 |
| 14 | 42.2 | 1.5 | 56.3 | 398 | 16 | 38.5 | 2.7 | 58.7 | 436 |
| 15 | 40.6 | 1.5 | 57.9 | 414 | 17 | 37.2 | 2.6 | 60.2 | 452 |
| 16 | 39.1 | 1.4 | 59.5 | 430 | 18 | 35.9 | 2.6 | 61.5 | 468 |
| 17 | 37.7 | 1.3 | 61.0 | 446 | 19 | 34.7 | 2.5 | 62.8 | 484 |
| 18 | 36.4 | 1.3 | 62.3 | 462 | 20 | 33.6 | 2.4 | 64.0 | 500 |
| 14-8-1 | 87.5 | 4.2 | 8.3 | 192 | 21 | 32.6 | 2.3 | 65.1 | 516 |
| 2 | 80.8 | 3.8 | 15.4 | 208 | 14-14-1 | 84.8 | 7.1 | 8.1 | 198 |
| 3 | 75.0 | 3.5 | 21.4 | 224 | 2 | 78.5 | 6.5 | 15.0 | 214 |
| 4 | 70.0 | 3.3 | 26.7 | 240 | 3 | 73.1 | 6.1 | 20.8 | 230 |
| 5 | 65.6 | 3.1 | 31.2 | 256 | 4 | 68.3 | 5.7 | 26.0 | 246 |
| 6 | 61.8 | 2.9 | 35.3 | 272 | 5 | 64.1 | 5.3 | 30.5 | 262 |
| 7 | 58.3 | 2.8 | 38.9 | 288 | 6 | 60.4 | 5.0 | 34.5 | 278 |
| 8 | 55.3 | 2.6 | 42.1 | 304 | 7 | 57.1 | 4.8 | 38.1 | 294 |
| 9 | 52.5 | 2.5 | 45.0 | 320 | 8 | 54.2 | 4.5 | 41.3 | 310 |
| 10 | 50.0 | 2.4 | 47.6 | 336 | 9 | 51.5 | 4.3 | 44.2 | 326 |
| 11 | 47.7 | 2.3 | 50.0 | 352 | 10 | 49.1 | 4.1 | 46.8 | 342 |
| 12 | 45.6 | 2.2 | 52.2 | 368 | 11 | 46.9 | 3.9 | 49.2 | 358 |
| 13 | 43.7 | 2.1 | 54.2 | 384 | 12 | 44.9 | 3.7 | 51.3 | 374 |
| 14 | 42.0 | 2.0 | 56.0 | 400 | 13 | 43.1 | 3.6 | 53.3 | 390 |
| 15 | 40.4 | 1.9 | 57.7 | 416 | 14 | 41.4 | 3.4 | 55.2 | 406 |
| 16 | 38.9 | 1.8 | 59.3 | 432 | 15 | 39.8 | 3.3 | 56.9 | 422 |
| 17 | 37.5 | 1.8 | 60.7 | 448 | 16 | 38.4 | 3.2 | 58.4 | 438 |
| 18 | 36.2 | 1.7 | 62.1 | 464 | 17 | 37.0 | 3.1 | 59.9 | 454 |
| 19 | 35.0 | 1.7 | 63.3 | 480 | 18 | 35.7 | 3.0 | 61.3 | 470 |
| 14-10-1 | 86.6 | 5.1 | 8.2 | 194 | 19 | 34.6 | 2.9 | 62.5 | 486 |
| 2 | 80.0 | 4.8 | 15.2 | 210 | 20 | 33.5 | 2.8 | 63.7 | 502 |
| 3 | 74.3 | 4.4 | 21.2 | 226 | 21 | 32.4 | 2.7 | 64.9 | 518 |
| 4 | 69.4 | 4.1 | 26.4 | 242 | 22 | 31.5 | 2.6 | 65.9 | 534 |
| 5 | 65.1 | 3.9 | 31.0 | 258 | 14-16-1 | 84.0 | 8.0 | 8.0 | 200 |
| 6 | 61.3 | 3.6 | 35.1 | 274 | 2 | 77.8 | 7.4 | 14.8 | 216 |
| 7 | 57.9 | 3.4 | 38.6 | 290 | 3 | 72.4 | 6.8 | 20.7 | 232 |
| 8 | 54.9 | 3.3 | 41.8 | 306 | 4 | 67.8 | 6.4 | 25.8 | 248 |
| 9 | 52.2 | 3.1 | 44.7 | 322 | 5 | 63.6 | 6.1 | 30.3 | 264 |
| 10 | 49.7 | 2.9 | 47.3 | 338 | 6 | 60.0 | 5.7 | 34.3 | 280 |
| 11 | 47.5 | 2.8 | 49.7 | 354 | 7 | 56.8 | 5.4 | 37.8 | 296 |
| 12 | 45.4 | 2.7 | 51.9 | 370 | 8 | 53.8 | 5.1 | 41.0 | 312 |
| 13 | 43.5 | 2.6 | 53.9 | 386 | 9 | 51.2 | 4.9 | 43.9 | 328 |
| 14 | 41.8 | 2.5 | 55.7 | 402 | 10 | 48.8 | 4.6 | 46.5 | 344 |
| 15 | 40.2 | 2.4 | 57.4 | 418 | 11 | 46.7 | 4.4 | 48.9 | 360 |
| 16 | 38.7 | 2.3 | 59.0 | 434 | 12 | 44.7 | 4.2 | 51.1 | 376 |
| 17 | 37.3 | 2.2 | 60.4 | 450 | 13 | 42.9 | 4.1 | 53.0 | 392 |
| 18 | 36.1 | 2.1 | 61.8 | 466 | 14 | 41.2 | 3.9 | 54.9 | 408 |
| 19 | 34.8 | 2.1 | 63.0 | 482 | 15 | 39.6 | 3.8 | 56.6 | 424 |
| 20 | 33.7 | 2.0 | 64.2 | 498 | 16 | 38.2 | 3.6 | 58.2 | 440 |
| 14-12-1 | 85.7 | 6.1 | 8.2 | 196 | 17 | 36.8 | 3.5 | 59.7 | 456 |
| 2 | 79.3 | 5.6 | 15.1 | 212 | 18 | 35.6 | 3.4 | 61.0 | 472 |
| 3 | 73.7 | 5.3 | 21.0 | 228 | 19 | 34.4 | 3.3 | 62.3 | 488 |
| 4 | 68.8 | 4.9 | 26.2 | 244 | 20 | 33.3 | 3.2 | 63.5 | 504 |
| 5 | 64.6 | 4.6 | 30.8 | 260 | 21 | 32.3 | 3.1 | 64.6 | 520 |
| 6 | 60.9 | 4.3 | 34.8 | 276 | 14-18-1 | 83.2 | 8.9 | 7.9 | 202 |
| 7 | 57.5 | 4.1 | 38.4 | 292 | 2 | 77.1 | 8.2 | 14.7 | 218 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 14-18-3 | 71.8 | 7.7 | 20.5 | 234 | 14-24-5 | 61.7 | 8.8 | 29.4 | 272 |
| 4 | 67.2 | 7.2 | 25.6 | 250 | 6 | 58.3 | 8.3 | 33.4 | 288 |
| 5 | 63.1 | 6.8 | 30.1 | 266 | 7 | 55.2 | 7.9 | 36.8 | 304 |
| 6 | 59.6 | 6.4 | 34.0 | 282 | 8 | 52.5 | 7.5 | 40.0 | 320 |
| 7 | 56.4 | 6.0 | 37.6 | 298 | 9 | 50.0 | 7.1 | 42.9 | 336 |
| 8 | 53.5 | 5.7 | 40.8 | 314 | 10 | 47.8 | 6.8 | 45.4 | 352 |
| 9 | 50.9 | 5.4 | 43.6 | 330 | 11 | 45.6 | 6.5 | 47.8 | 368 |
| 10 | 48.6 | 5.2 | 46.2 | 346 | 12 | 43.8 | 6.2 | 50.0 | 384 |
| 11 | 46.4 | 5.0 | 48.6 | 362 | 13 | 42.0 | 6.0 | 52.0 | 400 |
| 12 | 44.5 | 4.7 | 50.8 | 378 | 14 | 40.4 | 5.8 | 53.8 | 416 |
| 13 | 42.6 | 4.5 | 52.8 | 394 | 15 | 38.9 | 5.5 | 55.5 | 432 |
| 14 | 41.0 | 4.4 | 54.6 | 410 | 16 | 37.5 | 5.4 | 57.1 | 448 |
| 15 | 39.4 | 4.2 | 56.3 | 426 | 17 | 36.2 | 5.2 | 58.6 | 464 |
| 16 | 38.0 | 4.1 | 57.9 | 442 | 14-26-1 | 80.0 | 12.4 | 7.6 | 210 |
| 17 | 36.7 | 3.9 | 59.4 | 458 | 2 | 74.3 | 11.5 | 14.2 | 226 |
| 18 | 35.4 | 3.8 | 60.8 | 474 | 3 | 69.4 | 10.7 | 18.8 | 242 |
| 19 | 34.3 | 3.7 | 62.0 | 490 | 4 | 65.1 | 10.1 | 24.8 | 258 |
| 20 | 33.2 | 3.5 | 63.3 | 506 | 5 | 61.3 | 9.5 | 29.2 | 274 |
| 14-20-1 | 82.4 | 9.8 | 7.8 | 204 | 6 | 57.9 | 8.9 | 33.1 | 290 |
| 2 | 76.4 | 9.1 | 14.5 | 220 | 7 | 54.9 | 8.5 | 36.6 | 306 |
| 3 | 71.2 | 8.5 | 20.3 | 236 | 8 | 52.2 | 8.1 | 39.7 | 322 |
| 4 | 66.7 | 7.9 | 25.4 | 252 | 9 | 49.7 | 7.7 | 42.6 | 338 |
| 5 | 62.7 | 7.4 | 29.8 | 268 | 10 | 47.5 | 7.3 | 45.2 | 354 |
| 6 | 59.1 | 7.0 | 33.8 | 284 | 11 | 45.4 | 7.0 | 47.6 | 370 |
| 7 | 56.0 | 6.7 | 37.3 | 300 | 12 | 43.5 | 6.7 | 49.7 | 386 |
| 8 | 53.2 | 6.3 | 40.5 | 316 | 13 | 41.8 | 6.4 | 51.7 | 402 |
| 9 | 50.6 | 6.0 | 43.4 | 332 | 14 | 40.2 | 6.2 | 53.5 | 418 |
| 10 | 48.3 | 5.7 | 46.0 | 348 | 15 | 38.6 | 6.0 | 55.3 | 434 |
| 11 | 46.2 | 5.5 | 48.3 | 364 | 16 | 37.3 | 5.8 | 56.9 | 450 |
| 12 | 44.2 | 5.3 | 50.5 | 380 | 14-28-1 | 79.2 | 13.2 | 7.5 | 212 |
| 13 | 42.4 | 5.0 | 52.5 | 396 | 2 | 73.7 | 12.3 | 14.0 | 228 |
| 14 | 40.8 | 4.8 | 54.4 | 412 | 3 | 68.8 | 11.5 | 19.7 | 244 |
| 15 | 39.2 | 4.7 | 56.1 | 428 | 4 | 64.6 | 10.8 | 24.6 | 260 |
| 16 | 37.8 | 4.5 | 57.7 | 444 | 5 | 60.9 | 10.1 | 29.0 | 276 |
| 17 | 36.5 | 4.3 | 59.1 | 460 | 6 | 57.5 | 9.6 | 32.9 | 292 |
| 18 | 35.3 | 4.2 | 60.5 | 476 | 7 | 54.5 | 9.1 | 36.4 | 308 |
| 19 | 34.1 | 4.0 | 61.8 | 492 | 8 | 51.9 | 8.6 | 39.5 | 324 |
| 14-22-1 | 81.6 | 10.7 | 7.7 | 206 | 9 | 49.4 | 8.2 | 42.4 | 340 |
| 2 | 75.6 | 10.0 | 14.4 | 222 | 10 | 47.2 | 7.8 | 45.0 | 356 |
| 3 | 70.6 | 9.2 | 20.2 | 238 | 11 | 45.2 | 7.5 | 47.3 | 372 |
| 4 | 66.1 | 8.6 | 25.2 | 254 | 12 | 43.3 | 7.2 | 49.5 | 388 |
| 5 | 62.2 | 8.1 | 29.6 | 270 | 13 | 41.6 | 6.9 | 51.5 | 404 |
| 6 | 58.7 | 7.7 | 33.6 | 286 | 14 | 40.0 | 6.7 | 53.2 | 420 |
| 7 | 55.6 | 7.3 | 37.1 | 302 | 15 | 38.5 | 6.4 | 55.0 | 436 |
| 8 | 52.8 | 6.9 | 40.2 | 318 | 14-30-1 | 78.5 | 14.0 | 7.5 | 214 |
| 9 | 50.3 | 6.5 | 43.1 | 334 | 2 | 73.0 | 13.0 | 13.0 | 230 |
| 10 | 48.0 | 6.3 | 45.7 | 350 | 3 | 68.3 | 12.2 | 19.5 | 246 |
| 11 | 45.9 | 6.0 | 48.1 | 366 | 4 | 64.1 | 11.4 | 24.4 | 262 |
| 12 | 43.9 | 5.7 | 50.3 | 382 | 5 | 60.4 | 10.8 | 28.8 | 278 |
| 13 | 42.2 | 5.5 | 52.2 | 398 | 6 | 57.1 | 10.2 | 32.7 | 294 |
| 14 | 40.6 | 5.3 | 54.1 | 414 | 7 | 54.2 | 9.7 | 36.1 | 310 |
| 15 | 39.1 | 5.1 | 55.8 | 430 | 8 | 51.5 | 9.2 | 39.3 | 326 |
| 16 | 37.6 | 4.9 | 57.4 | 446 | 9 | 49.1 | 8.8 | 42.1 | 342 |
| 17 | 36.4 | 4.7 | 58.9 | 462 | 10 | 46.9 | 8.4 | 44.7 | 358 |
| 18 | 35.1 | 4.6 | 60.2 | 478 | 11 | 44.9 | 8.0 | 47.1 | 374 |
| 14-24-1 | 80.7 | 11.5 | 7.7 | 208 | 12 | 43.1 | 7.7 | 49.2 | 390 |
| 2 | 75.0 | 10.7 | 14.3 | 224 | 13 | 41.4 | 7.4 | 51.2 | 406 |
| 3 | 70.0 | 10.0 | 20.0 | 240 | 14 | 39.8 | 7.1 | 53.1 | 422 |
| 4 | 65.6 | 9.4 | 25.0 | 256 | 15-2-1 | 90.9 | 1.0 | 8.1 | 198 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|--------|------|-----|------|------|---------|------|-----|------|------|
| 15-2-2 | 84.1 | 0.9 | 15.0 | 214 | 15-8-7 | 60.0 | 2.7 | 37.3 | 300 |
| 3 | 78.2 | 0.8 | 20.9 | 230 | 8 | 56.9 | 2.5 | 40.5 | 316 |
| 4 | 73.2 | 0.8 | 26.0 | 246 | 9 | 54.2 | 2.4 | 43.4 | 332 |
| 5 | 68.7 | 0.7 | 30.5 | 262 | 10 | 51.7 | 2.3 | 46.0 | 348 |
| 6 | 64.7 | 0.7 | 34.5 | 278 | 11 | 49.4 | 2.2 | 48.4 | 364 |
| 7 | 61.2 | 0.7 | 38.1 | 294 | 12 | 47.4 | 2.1 | 50.5 | 380 |
| 8 | 58.1 | 0.6 | 41.3 | 310 | 13 | 45.4 | 2.0 | 52.5 | 396 |
| 9 | 55.2 | 0.6 | 44.2 | 326 | 14 | 43.7 | 1.9 | 54.3 | 412 |
| 10 | 52.6 | 0.6 | 46.8 | 342 | 15 | 42.0 | 1.8 | 56.1 | 428 |
| 11 | 50.3 | 0.5 | 49.2 | 358 | 16 | 40.5 | 1.8 | 57.7 | 444 |
| 12 | 48.1 | 0.5 | 51.3 | 374 | 17 | 39.1 | 1.7 | 59.1 | 460 |
| 13 | 46.1 | 0.5 | 53.3 | 390 | 18 | 37.8 | 1.7 | 60.5 | 476 |
| 14 | 44.3 | 0.5 | 55.2 | 406 | 19 | 36.6 | 1.6 | 61.8 | 492 |
| 15 | 42.6 | 0.5 | 56.9 | 422 | 20 | 35.4 | 1.5 | 63.0 | 508 |
| 16 | 41.1 | 0.4 | 58.4 | 438 | 15-10-1 | 87.4 | 4.8 | 7.8 | 206 |
| 17 | 39.6 | 0.4 | 59.9 | 454 | 2 | 81.1 | 4.5 | 14.4 | 222 |
| 15-4-1 | 90.0 | 2.0 | 8.0 | 200 | 3 | 75.6 | 4.2 | 20.2 | 238 |
| 2 | 83.3 | 1.8 | 14.8 | 216 | 4 | 70.9 | 3.9 | 25.2 | 254 |
| 3 | 77.6 | 1.7 | 20.7 | 232 | 5 | 66.7 | 3.7 | 29.6 | 270 |
| 4 | 72.6 | 1.6 | 25.8 | 248 | 6 | 62.9 | 3.5 | 33.5 | 286 |
| 5 | 68.2 | 1.5 | 30.3 | 264 | 7 | 59.6 | 3.3 | 37.1 | 302 |
| 6 | 64.3 | 1.4 | 34.3 | 280 | 8 | 56.6 | 3.1 | 40.2 | 318 |
| 7 | 60.8 | 1.3 | 37.8 | 296 | 9 | 53.9 | 3.0 | 43.1 | 334 |
| 8 | 57.7 | 1.3 | 41.0 | 312 | 10 | 51.4 | 2.9 | 45.7 | 350 |
| 9 | 54.9 | 1.2 | 43.9 | 328 | 11 | 49.2 | 2.7 | 48.1 | 366 |
| 10 | 52.3 | 1.2 | 46.5 | 344 | 12 | 47.1 | 2.6 | 50.3 | 382 |
| 11 | 50.0 | 1.1 | 48.9 | 360 | 13 | 45.2 | 2.5 | 52.3 | 398 |
| 12 | 47.9 | 1.0 | 51.1 | 376 | 14 | 43.5 | 2.4 | 54.1 | 414 |
| 13 | 45.9 | 1.0 | 53.1 | 392 | 15 | 41.9 | 2.3 | 55.8 | 430 |
| 14 | 44.1 | 1.0 | 54.9 | 408 | 16 | 40.3 | 2.2 | 57.4 | 446 |
| 15 | 42.4 | 0.9 | 56.6 | 424 | 17 | 39.0 | 2.1 | 58.9 | 462 |
| 16 | 40.9 | 0.9 | 58.2 | 440 | 18 | 37.6 | 2.1 | 60.3 | 478 |
| 17 | 39.5 | 0.9 | 59.6 | 456 | 19 | 36.4 | 2.0 | 61.5 | 494 |
| 18 | 38.1 | 0.8 | 61.0 | 472 | 20 | 35.3 | 1.9 | 62.8 | 510 |
| 15-6-1 | 89.1 | 3.0 | 7.9 | 202 | 21 | 34.2 | 1.9 | 63.9 | 526 |
| 2 | 82.6 | 2.7 | 14.7 | 218 | 15-12-1 | 86.5 | 5.7 | 7.7 | 208 |
| 3 | 76.9 | 2.6 | 20.5 | 234 | 2 | 80.3 | 5.3 | 14.3 | 224 |
| 4 | 72.0 | 2.4 | 25.6 | 250 | 3 | 75.0 | 5.0 | 20.0 | 240 |
| 5 | 67.7 | 2.2 | 30.1 | 266 | 4 | 70.3 | 4.7 | 25.0 | 256 |
| 6 | 63.8 | 2.1 | 34.1 | 282 | 5 | 66.2 | 4.4 | 29.4 | 272 |
| 7 | 60.4 | 2.0 | 37.5 | 298 | 6 | 62.5 | 4.2 | 33.3 | 288 |
| 8 | 57.3 | 1.9 | 40.8 | 314 | 7 | 59.2 | 3.9 | 36.8 | 304 |
| 9 | 54.6 | 1.8 | 43.6 | 330 | 8 | 56.2 | 3.7 | 40.0 | 320 |
| 10 | 52.0 | 1.7 | 46.2 | 346 | 9 | 53.6 | 3.6 | 42.8 | 336 |
| 11 | 49.7 | 1.6 | 48.6 | 362 | 10 | 51.1 | 3.4 | 45.5 | 352 |
| 12 | 47.6 | 1.6 | 50.8 | 378 | 11 | 48.9 | 3.2 | 47.8 | 368 |
| 13 | 45.7 | 1.5 | 52.8 | 394 | 12 | 46.9 | 3.1 | 50.0 | 384 |
| 14 | 43.9 | 1.4 | 54.6 | 410 | 13 | 45.0 | 3.0 | 52.0 | 400 |
| 15 | 42.3 | 1.4 | 56.3 | 426 | 14 | 43.3 | 2.9 | 53.8 | 416 |
| 16 | 40.7 | 1.3 | 57.9 | 442 | 15 | 41.7 | 2.8 | 55.5 | 432 |
| 17 | 39.3 | 1.3 | 59.4 | 458 | 16 | 40.2 | 2.7 | 57.1 | 448 |
| 18 | 38.0 | 1.2 | 60.8 | 474 | 17 | 38.8 | 2.6 | 58.6 | 464 |
| 19 | 36.7 | 1.2 | 62.0 | 490 | 18 | 37.5 | 2.5 | 60.0 | 480 |
| 15-8-1 | 88.2 | 3.9 | 7.8 | 204 | 19 | 36.3 | 2.4 | 61.3 | 496 |
| 2 | 81.8 | 3.6 | 14.5 | 220 | 20 | 35.1 | 2.3 | 62.5 | 512 |
| 3 | 76.3 | 3.4 | 20.3 | 236 | 21 | 34.0 | 2.4 | 63.6 | 528 |
| 4 | 71.4 | 3.2 | 25.4 | 252 | 22 | 33.1 | 2.2 | 64.7 | 544 |
| 5 | 67.1 | 3.0 | 29.8 | 268 | 15-14-1 | 85.7 | 6.6 | 7.6 | 210 |
| 6 | 63.4 | 2.8 | 33.8 | 284 | 2 | 79.6 | 6.2 | 14.2 | 226 |

| C—H—O | C % | H % | O % | M.G. | C—H—O | C % | H % | O % | M.G. |
|---------|------|-----|------|------|----------|------|------|------|------|
| 15-14-3 | 74.4 | 5.8 | 19.8 | 242 | 15-18-16 | 39.6 | 3.9 | 56.4 | 454 |
| 4 | 69.8 | 5.4 | 24.8 | 258 | 17 | 38.3 | 3.8 | 57.9 | 470 |
| 5 | 65.7 | 5.1 | 29.2 | 274 | 18 | 37.0 | 3.7 | 59.3 | 486 |
| 6 | 62.1 | 4.8 | 33.1 | 290 | 19 | 35.9 | 3.6 | 60.5 | 502 |
| 7 | 58.8 | 4.6 | 36.6 | 306 | 20 | 34.7 | 3.5 | 61.8 | 518 |
| 8 | 55.9 | 4.3 | 39.7 | 322 | 21 | 33.7 | 3.4 | 62.9 | 534 |
| 9 | 53.2 | 4.1 | 42.6 | 338 | 22 | 32.7 | 3.3 | 64.0 | 550 |
| 10 | 50.8 | 3.9 | 45.2 | 354 | 15-20-1 | 83.3 | 9.2 | 7.4 | 216 |
| 11 | 48.6 | 3.8 | 47.5 | 370 | 2 | 77.6 | 8.6 | 13.8 | 232 |
| 12 | 46.6 | 3.6 | 49.7 | 386 | 3 | 72.6 | 8.0 | 19.4 | 248 |
| 13 | 44.8 | 3.5 | 51.7 | 402 | 4 | 68.2 | 7.5 | 24.2 | 264 |
| 14 | 43.1 | 3.3 | 53.6 | 418 | 5 | 64.3 | 7.1 | 28.6 | 280 |
| 15 | 41.5 | 3.2 | 55.3 | 434 | 6 | 60.8 | 6.7 | 32.4 | 296 |
| 16 | 40.0 | 3.1 | 56.9 | 450 | 7 | 57.7 | 6.4 | 35.9 | 312 |
| 17 | 38.6 | 3.0 | 58.4 | 466 | 8 | 54.9 | 6.1 | 39.0 | 328 |
| 18 | 37.3 | 2.9 | 59.7 | 482 | 9 | 52.3 | 5.8 | 41.9 | 344 |
| 19 | 36.1 | 2.8 | 61.0 | 498 | 10 | 50.0 | 5.6 | 44.4 | 360 |
| 20 | 35.0 | 2.7 | 62.3 | 514 | 11 | 47.9 | 5.3 | 46.8 | 376 |
| 21 | 34.0 | 2.6 | 63.4 | 530 | 12 | 45.9 | 5.1 | 49.0 | 392 |
| 22 | 33.0 | 2.5 | 64.5 | 546 | 13 | 44.1 | 4.9 | 51.0 | 408 |
| 23 | 32.0 | 2.5 | 65.5 | 562 | 14 | 42.4 | 4.7 | 52.8 | 424 |
| 15-16-1 | 84.9 | 7.5 | 7.5 | 212 | 15 | 40.9 | 4.5 | 54.6 | 440 |
| 2 | 78.9 | 7.0 | 14.0 | 228 | 16 | 39.5 | 4.4 | 56.1 | 456 |
| 3 | 73.8 | 6.5 | 19.7 | 244 | 17 | 38.1 | 4.2 | 57.6 | 472 |
| 4 | 69.2 | 6.1 | 24.6 | 260 | 18 | 36.9 | 4.1 | 59.0 | 488 |
| 5 | 65.1 | 5.8 | 29.0 | 276 | 19 | 35.7 | 3.9 | 60.3 | 504 |
| 6 | 61.6 | 5.5 | 32.9 | 292 | 20 | 34.6 | 3.8 | 61.6 | 520 |
| 7 | 58.4 | 5.2 | 36.4 | 308 | 21 | 33.6 | 3.7 | 62.7 | 536 |
| 8 | 55.5 | 4.9 | 39.5 | 324 | 15-22-1 | 82.6 | 10.1 | 7.3 | 218 |
| 9 | 52.9 | 4.7 | 42.3 | 340 | 2 | 76.9 | 9.4 | 13.7 | 234 |
| 10 | 50.5 | 4.5 | 44.9 | 356 | 3 | 72.0 | 8.8 | 19.2 | 250 |
| 11 | 48.4 | 4.3 | 47.3 | 372 | 4 | 67.7 | 8.3 | 24.0 | 266 |
| 12 | 46.4 | 4.1 | 49.5 | 388 | 5 | 63.8 | 7.8 | 28.4 | 282 |
| 13 | 44.5 | 4.0 | 51.5 | 404 | 6 | 60.4 | 7.4 | 32.2 | 298 |
| 14 | 42.8 | 3.8 | 52.4 | 420 | 7 | 57.3 | 7.0 | 35.7 | 314 |
| 15 | 41.3 | 3.7 | 55.0 | 436 | 8 | 54.5 | 6.6 | 38.8 | 330 |
| 16 | 39.8 | 3.5 | 56.6 | 452 | 9 | 52.0 | 6.4 | 41.6 | 346 |
| 17 | 38.5 | 3.4 | 58.1 | 468 | 10 | 49.7 | 6.1 | 44.2 | 362 |
| 18 | 37.2 | 3.3 | 59.5 | 484 | 11 | 47.6 | 5.8 | 46.6 | 378 |
| 19 | 36.0 | 3.2 | 60.8 | 500 | 12 | 45.7 | 5.6 | 48.7 | 394 |
| 20 | 34.9 | 3.1 | 62.0 | 516 | 13 | 43.9 | 5.4 | 50.7 | 410 |
| 21 | 33.8 | 3.0 | 63.2 | 532 | 14 | 42.2 | 5.2 | 52.6 | 426 |
| 22 | 32.9 | 2.9 | 64.2 | 548 | 15 | 40.7 | 5.0 | 54.3 | 442 |
| 23 | 31.9 | 2.8 | 65.3 | 564 | 16 | 39.3 | 4.8 | 55.9 | 458 |
| 15-18-1 | 84.1 | 8.4 | 7.5 | 214 | 17 | 38.0 | 4.6 | 57.4 | 474 |
| 2 | 78.3 | 7.8 | 13.9 | 230 | 18 | 36.7 | 4.5 | 58.8 | 490 |
| 3 | 73.2 | 7.3 | 19.5 | 246 | 19 | 35.6 | 4.3 | 60.1 | 506 |
| 4 | 68.7 | 6.9 | 24.4 | 262 | 20 | 34.5 | 4.2 | 61.3 | 522 |
| 5 | 64.7 | 6.5 | 28.8 | 278 | 15-24-1 | 81.8 | 10.9 | 7.3 | 220 |
| 6 | 61.2 | 6.1 | 32.7 | 294 | 2 | 76.3 | 10.2 | 13.5 | 236 |
| 7 | 58.1 | 5.8 | 36.1 | 310 | 3 | 71.4 | 9.5 | 19.1 | 252 |
| 8 | 55.2 | 5.5 | 39.3 | 326 | 4 | 67.1 | 8.9 | 23.9 | 268 |
| 9 | 52.6 | 5.3 | 42.1 | 342 | 5 | 63.4 | 8.4 | 28.2 | 284 |
| 10 | 50.3 | 5.0 | 44.7 | 358 | 6 | 60.0 | 8.0 | 32.0 | 300 |
| 11 | 48.1 | 4.8 | 47.1 | 374 | 7 | 56.9 | 7.6 | 35.4 | 316 |
| 12 | 46.2 | 4.6 | 49.2 | 390 | 8 | 54.2 | 7.2 | 38.6 | 332 |
| 13 | 44.3 | 4.4 | 51.2 | 406 | 9 | 51.7 | 6.9 | 41.4 | 348 |
| 14 | 42.6 | 4.3 | 53.1 | 422 | 10 | 49.4 | 6.6 | 44.0 | 364 |
| 15 | 41.1 | 4.1 | 54.8 | 438 | 11 | 47.4 | 6.3 | 46.3 | 380 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|----------|------|------|------|------|---------|------|------|------|------|
| 15-24-12 | 45.4 | 6.1 | 48.5 | 396 | 15-32-1 | 79.0 | 14.0 | 7.0 | 228 |
| 13 | 43.7 | 5.8 | 50.5 | 412 | 2 | 73.8 | 13.1 | 13.1 | 244 |
| 14 | 42.1 | 5.6 | 52.3 | 428 | 3 | 69.2 | 12.3 | 18.5 | 260 |
| 15 | 40.5 | 5.4 | 54.1 | 444 | 4 | 65.1 | 11.6 | 23.2 | 276 |
| 16 | 39.1 | 5.2 | 55.6 | 460 | 5 | 61.6 | 11.0 | 27.4 | 292 |
| 17 | 37.8 | 5.0 | 57.2 | 476 | 6 | 58.4 | 10.4 | 31.2 | 308 |
| 18 | 36.6 | 4.9 | 58.5 | 492 | 7 | 55.5 | 9.9 | 34.6 | 324 |
| 19 | 35.4 | 4.7 | 59.8 | 508 | 8 | 52.9 | 9.4 | 37.6 | 340 |
| 15-26-1 | 81.1 | 11.7 | 7.2 | 222 | 9 | 50.5 | 9.0 | 40.4 | 356 |
| 2 | 75.6 | 10.9 | 13.4 | 238 | 10 | 48.4 | 8.6 | 43.0 | 372 |
| 3 | 70.9 | 10.2 | 18.9 | 254 | 11 | 46.4 | 8.2 | 45.3 | 388 |
| 4 | 66.7 | 9.6 | 23.7 | 270 | 12 | 44.5 | 7.9 | 47.5 | 404 |
| 5 | 62.9 | 9.1 | 28.0 | 286 | 13 | 42.9 | 7.6 | 49.5 | 420 |
| 6 | 59.6 | 8.6 | 31.8 | 302 | 14 | 41.3 | 7.3 | 51.4 | 436 |
| 7 | 56.6 | 8.2 | 35.2 | 318 | 15 | 39.8 | 7.1 | 53.1 | 452 |
| 8 | 53.9 | 7.7 | 38.3 | 334 | 15-34-2 | 73.2 | 13.8 | 13.0 | 246 |
| 9 | 51.4 | 7.4 | 41.1 | 350 | 16-2-1 | 91.4 | 0.9 | 7.6 | 210 |
| 10 | 49.2 | 7.1 | 43.7 | 366 | 2 | 85.0 | 0.9 | 14.1 | 226 |
| 11 | 47.1 | 6.8 | 46.1 | 382 | 3 | 79.3 | 0.8 | 19.8 | 242 |
| 12 | 45.2 | 6.5 | 48.2 | 398 | 4 | 74.4 | 0.8 | 24.8 | 258 |
| 13 | 43.5 | 6.3 | 50.2 | 414 | 5 | 70.1 | 0.7 | 29.2 | 274 |
| 14 | 41.8 | 6.1 | 52.1 | 430 | 6 | 66.2 | 0.7 | 33.1 | 290 |
| 15 | 40.4 | 5.8 | 53.8 | 446 | 7 | 62.8 | 0.6 | 36.6 | 306 |
| 16 | 39.0 | 5.6 | 55.4 | 462 | 8 | 59.6 | 0.6 | 39.7 | 322 |
| 17 | 37.6 | 5.4 | 56.9 | 478 | 9 | 56.8 | 0.6 | 42.6 | 338 |
| 18 | 36.4 | 5.3 | 58.3 | 494 | 10 | 54.2 | 0.6 | 45.2 | 354 |
| 15-28-1 | 80.4 | 12.5 | 7.1 | 224 | 11 | 51.9 | 0.5 | 47.6 | 370 |
| 2 | 75.0 | 11.7 | 13.3 | 240 | 12 | 49.7 | 0.5 | 49.7 | 386 |
| 3 | 70.3 | 10.9 | 18.7 | 256 | 13 | 47.7 | 0.5 | 51.7 | 402 |
| 4 | 66.2 | 10.3 | 23.5 | 272 | 14 | 45.9 | 0.5 | 53.6 | 418 |
| 5 | 62.5 | 9.7 | 27.8 | 288 | 15 | 44.2 | 0.5 | 55.3 | 434 |
| 6 | 59.2 | 9.2 | 31.6 | 304 | 16 | 42.7 | 0.4 | 56.9 | 450 |
| 7 | 56.3 | 8.7 | 35.0 | 320 | 17 | 41.2 | 0.4 | 58.4 | 466 |
| 8 | 53.6 | 8.3 | 38.1 | 336 | 18 | 39.8 | 0.4 | 59.8 | 482 |
| 9 | 51.1 | 7.9 | 40.9 | 352 | 16-4-1 | 90.6 | 1.9 | 7.5 | 212 |
| 10 | 48.9 | 7.6 | 43.5 | 368 | 2 | 84.2 | 1.7 | 14.0 | 228 |
| 11 | 46.9 | 7.3 | 45.8 | 384 | 3 | 78.7 | 1.6 | 19.7 | 244 |
| 12 | 45.0 | 7.0 | 48.0 | 400 | 4 | 73.9 | 1.5 | 24.6 | 260 |
| 13 | 43.3 | 6.7 | 50.0 | 416 | 5 | 69.5 | 1.4 | 29.0 | 276 |
| 14 | 41.7 | 6.5 | 51.8 | 432 | 6 | 65.7 | 1.4 | 32.9 | 292 |
| 15 | 40.2 | 6.2 | 53.6 | 448 | 7 | 62.3 | 1.3 | 36.4 | 308 |
| 16 | 38.8 | 6.0 | 55.2 | 464 | 8 | 59.3 | 1.2 | 39.5 | 324 |
| 17 | 37.5 | 5.8 | 56.7 | 480 | 9 | 56.5 | 1.1 | 42.3 | 340 |
| 15-30-1 | 79.6 | 13.2 | 7.1 | 226 | 10 | 53.9 | 1.2 | 44.9 | 356 |
| 2 | 74.4 | 12.4 | 13.2 | 242 | 11 | 51.6 | 1.1 | 47.3 | 372 |
| 3 | 69.8 | 11.6 | 18.6 | 258 | 12 | 49.5 | 1.0 | 49.5 | 388 |
| 4 | 65.7 | 11.9 | 23.3 | 274 | 13 | 47.5 | 1.0 | 51.5 | 404 |
| 5 | 62.1 | 10.3 | 27.6 | 290 | 14 | 45.7 | 0.9 | 53.3 | 420 |
| 6 | 58.8 | 9.8 | 31.4 | 306 | 15 | 44.0 | 0.9 | 55.0 | 436 |
| 7 | 55.9 | 9.3 | 34.8 | 322 | 16 | 42.5 | 0.9 | 56.6 | 452 |
| 8 | 53.2 | 8.9 | 37.9 | 338 | 17 | 41.0 | 0.9 | 58.1 | 468 |
| 9 | 50.8 | 8.5 | 40.7 | 354 | 18 | 39.7 | 0.8 | 59.5 | 484 |
| 10 | 48.7 | 8.1 | 43.2 | 370 | 19 | 38.4 | 0.8 | 60.8 | 500 |
| 11 | 46.6 | 7.8 | 45.6 | 386 | 16-6-1 | 89.7 | 2.8 | 7.5 | 214 |
| 12 | 44.8 | 7.4 | 47.8 | 402 | 2 | 83.5 | 2.6 | 13.9 | 230 |
| 13 | 43.1 | 7.2 | 49.7 | 418 | 3 | 78.1 | 2.4 | 19.5 | 246 |
| 14 | 41.5 | 6.9 | 51.6 | 434 | 4 | 73.3 | 2.3 | 24.4 | 262 |
| 15 | 40.0 | 6.7 | 53.3 | 450 | 5 | 69.1 | 2.1 | 28.8 | 278 |
| 16 | 38.6 | 6.4 | 54.9 | 466 | 6 | 65.3 | 2.0 | 32.7 | 294 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|---------|------|-----|------|------|
| 16-6-7 | 62.0 | 1.9 | 36.1 | 310 | 16-12-3 | 76.2 | 4.7 | 19.0 | 252 |
| 8 | 58.9 | 1.8 | 39.3 | 326 | 4 | 71.6 | 4.5 | 23.9 | 268 |
| 9 | 56.1 | 1.7 | 42.1 | 342 | 5 | 67.6 | 4.2 | 28.2 | 284 |
| 10 | 53.6 | 1.7 | 44.7 | 358 | 6 | 64.0 | 4.0 | 32.0 | 300 |
| 11 | 51.3 | 1.6 | 47.1 | 374 | 7 | 60.7 | 3.8 | 35.4 | 316 |
| 12 | 49.2 | 1.5 | 49.2 | 390 | 8 | 57.8 | 3.6 | 38.6 | 332 |
| 13 | 47.3 | 1.5 | 51.2 | 406 | 9 | 55.2 | 3.4 | 41.4 | 348 |
| 14 | 45.5 | 1.4 | 53.1 | 422 | 10 | 52.7 | 3.3 | 44.0 | 364 |
| 15 | 43.8 | 1.4 | 54.8 | 438 | 11 | 50.5 | 3.1 | 46.3 | 380 |
| 16 | 42.2 | 1.3 | 56.4 | 454 | 12 | 48.5 | 3.0 | 48.5 | 396 |
| 17 | 40.9 | 1.3 | 57.8 | 470 | 13 | 46.6 | 2.9 | 50.5 | 412 |
| 18 | 39.5 | 1.2 | 59.3 | 486 | 14 | 44.8 | 2.8 | 42.4 | 428 |
| 19 | 38.3 | 1.2 | 60.5 | 502 | 15 | 43.2 | 2.7 | 54.1 | 444 |
| 20 | 37.1 | 1.1 | 61.8 | 518 | 16 | 41.7 | 2.6 | 55.7 | 460 |
| 16-8-1 | 88.9 | 3.7 | 7.4 | 216 | 17 | 40.3 | 2.5 | 57.2 | 476 |
| 2 | 82.7 | 3.4 | 13.8 | 232 | 18 | 39.0 | 2.4 | 58.5 | 492 |
| 3 | 77.4 | 3.2 | 19.4 | 248 | 19 | 37.8 | 2.3 | 59.8 | 508 |
| 4 | 72.7 | 3.0 | 24.3 | 264 | 20 | 36.6 | 2.3 | 61.1 | 524 |
| 5 | 68.6 | 2.8 | 28.6 | 280 | 21 | 35.6 | 2.2 | 62.2 | 540 |
| 6 | 64.8 | 2.7 | 32.4 | 296 | 22 | 34.5 | 2.2 | 63.3 | 556 |
| 7 | 61.5 | 2.6 | 35.9 | 312 | 23 | 33.6 | 2.1 | 64.3 | 572 |
| 8 | 58.6 | 2.4 | 39.0 | 328 | 16-14-1 | 86.5 | 6.3 | 7.2 | 222 |
| 9 | 55.8 | 2.3 | 41.9 | 344 | 2 | 80.7 | 5.9 | 13.4 | 238 |
| 10 | 53.3 | 2.2 | 44.4 | 360 | 3 | 75.6 | 5.5 | 18.9 | 254 |
| 11 | 51.1 | 2.1 | 46.8 | 376 | 4 | 71.1 | 5.2 | 23.7 | 270 |
| 12 | 49.0 | 2.0 | 49.0 | 392 | 5 | 67.1 | 4.9 | 28.0 | 286 |
| 13 | 47.0 | 2.0 | 51.0 | 408 | 6 | 63.6 | 4.6 | 31.8 | 302 |
| 14 | 45.3 | 1.9 | 52.8 | 424 | 7 | 60.4 | 4.4 | 35.2 | 318 |
| 15 | 43.6 | 1.8 | 54.6 | 440 | 8 | 57.5 | 4.2 | 38.3 | 334 |
| 16 | 42.1 | 1.7 | 56.2 | 456 | 9 | 54.8 | 4.0 | 41.1 | 350 |
| 17 | 40.7 | 1.7 | 57.6 | 472 | 10 | 52.5 | 3.8 | 43.7 | 366 |
| 18 | 39.4 | 1.6 | 59.0 | 488 | 11 | 50.3 | 3.6 | 46.1 | 382 |
| 19 | 38.1 | 1.6 | 60.3 | 504 | 12 | 48.2 | 3.5 | 48.2 | 398 |
| 20 | 36.9 | 1.5 | 61.6 | 520 | 13 | 46.4 | 3.4 | 50.2 | 414 |
| 21 | 35.8 | 1.5 | 62.7 | 536 | 14 | 44.6 | 3.2 | 52.1 | 430 |
| 16-10-1 | 88.1 | 4.6 | 7.3 | 218 | 15 | 43.1 | 3.1 | 53.8 | 446 |
| 2 | 82.0 | 4.3 | 13.7 | 234 | 16 | 41.6 | 3.0 | 55.4 | 462 |
| 3 | 76.8 | 4.0 | 19.2 | 250 | 17 | 40.2 | 2.9 | 56.9 | 478 |
| 4 | 72.2 | 3.8 | 24.0 | 266 | 18 | 38.9 | 2.8 | 58.3 | 494 |
| 5 | 68.1 | 3.5 | 28.4 | 282 | 19 | 37.7 | 2.7 | 59.6 | 510 |
| 6 | 64.4 | 3.3 | 32.2 | 298 | 20 | 36.5 | 2.7 | 60.8 | 526 |
| 7 | 61.1 | 3.2 | 35.7 | 314 | 21 | 35.4 | 2.6 | 62.0 | 542 |
| 8 | 58.2 | 3.0 | 38.8 | 330 | 22 | 34.4 | 2.5 | 63.1 | 558 |
| 9 | 55.5 | 2.9 | 41.6 | 346 | 23 | 33.4 | 2.4 | 64.1 | 574 |
| 10 | 53.0 | 2.7 | 44.2 | 362 | 24 | 32.5 | 2.4 | 65.1 | 590 |
| 11 | 50.8 | 2.6 | 46.6 | 378 | 16-16-1 | 85.7 | 7.1 | 7.1 | 224 |
| 12 | 48.7 | 2.5 | 48.7 | 394 | 2 | 80.0 | 6.7 | 13.3 | 240 |
| 13 | 46.9 | 2.4 | 50.7 | 410 | 3 | 75.0 | 6.2 | 18.7 | 256 |
| 14 | 45.1 | 2.3 | 52.6 | 426 | 4 | 70.6 | 5.9 | 23.5 | 272 |
| 15 | 43.4 | 2.2 | 54.3 | 442 | 5 | 66.7 | 5.5 | 27.8 | 288 |
| 16 | 41.9 | 2.2 | 55.9 | 458 | 6 | 63.2 | 5.2 | 31.6 | 304 |
| 17 | 40.5 | 2.1 | 57.4 | 474 | 7 | 60.0 | 5.0 | 35.0 | 320 |
| 18 | 39.2 | 2.0 | 58.8 | 490 | 8 | 57.1 | 4.8 | 38.1 | 336 |
| 19 | 38.0 | 2.0 | 60.0 | 506 | 9 | 54.6 | 4.5 | 40.9 | 352 |
| 20 | 36.8 | 1.9 | 61.3 | 522 | 10 | 52.2 | 4.3 | 43.5 | 368 |
| 21 | 35.7 | 1.8 | 62.4 | 538 | 11 | 50.0 | 4.2 | 45.8 | 384 |
| 22 | 34.7 | 1.8 | 63.5 | 554 | 12 | 48.0 | 4.0 | 48.0 | 400 |
| 16-12-1 | 87.4 | 5.4 | 7.2 | 220 | 13 | 46.2 | 3.8 | 50.0 | 416 |
| 2 | 81.4 | 5.1 | 13.5 | 236 | 14 | 44.5 | 3.7 | 51.8 | 432 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|-----|------|------|---------|------|------|------|------|
| 16-16-15 | 42,8 | 3,6 | 53,6 | 448 | 16-22-2 | 78,1 | 8,9 | 13,0 | 246 |
| 16 | 41,4 | 3,4 | 55,2 | 464 | 3 | 73,3 | 8,4 | 18,3 | 262 |
| 17 | 40,0 | 3,3 | 56,7 | 480 | 4 | 69,1 | 7,9 | 23,0 | 278 |
| 18 | 38,7 | 3,2 | 58,1 | 496 | 5 | 65,3 | 7,5 | 27,2 | 294 |
| 19 | 37,5 | 3,1 | 59,4 | 512 | 6 | 61,9 | 7,1 | 31,0 | 310 |
| 20 | 36,4 | 3,0 | 60,6 | 528 | 7 | 58,9 | 6,7 | 34,4 | 326 |
| 21 | 35,3 | 2,9 | 61,8 | 544 | 8 | 56,1 | 6,4 | 37,4 | 342 |
| 22 | 34,3 | 2,8 | 62,9 | 560 | 9 | 53,6 | 6,1 | 40,2 | 358 |
| 23 | 33,3 | 2,8 | 63,9 | 576 | 10 | 51,3 | 5,9 | 42,8 | 374 |
| 24 | 32,4 | 2,7 | 64,9 | 592 | 11 | 49,2 | 5,6 | 45,1 | 390 |
| 25 | 31,6 | 2,6 | 65,8 | 608 | 12 | 47,3 | 5,4 | 47,3 | 406 |
| 16-18-1 | 85,0 | 7,9 | 7,1 | 226 | 13 | 45,5 | 5,2 | 49,3 | 422 |
| 2 | 79,3 | 7,4 | 13,2 | 242 | 14 | 43,8 | 5,0 | 51,1 | 438 |
| 3 | 74,4 | 7,0 | 18,6 | 258 | 15 | 42,3 | 4,8 | 52,9 | 454 |
| 4 | 70,1 | 6,5 | 23,4 | 274 | 16 | 40,9 | 4,7 | 54,4 | 470 |
| 5 | 66,2 | 6,2 | 27,6 | 290 | 17 | 39,5 | 4,5 | 56,0 | 486 |
| 6 | 62,7 | 5,9 | 31,4 | 306 | 18 | 38,3 | 4,4 | 57,3 | 502 |
| 7 | 59,6 | 5,6 | 34,8 | 322 | 19 | 37,1 | 4,2 | 58,7 | 518 |
| 8 | 56,8 | 5,3 | 37,9 | 338 | 20 | 36,0 | 4,1 | 59,9 | 534 |
| 9 | 54,2 | 5,1 | 40,7 | 354 | 21 | 34,9 | 4,0 | 61,1 | 550 |
| 10 | 51,9 | 4,8 | 43,2 | 370 | 22 | 33,9 | 3,9 | 62,2 | 566 |
| 11 | 49,7 | 4,7 | 45,6 | 386 | 16-24-1 | 82,8 | 10,3 | 6,9 | 232 |
| 12 | 47,7 | 4,5 | 47,7 | 402 | 2 | 77,4 | 9,7 | 12,9 | 248 |
| 13 | 45,9 | 4,3 | 49,8 | 418 | 3 | 72,7 | 9,1 | 18,2 | 264 |
| 14 | 44,2 | 4,1 | 51,6 | 434 | 4 | 68,6 | 8,6 | 22,8 | 280 |
| 15 | 42,7 | 4,0 | 53,3 | 450 | 5 | 64,9 | 8,1 | 27,0 | 296 |
| 16 | 41,2 | 3,9 | 54,9 | 466 | 6 | 61,5 | 7,7 | 30,8 | 312 |
| 17 | 39,8 | 3,7 | 56,4 | 482 | 7 | 58,5 | 7,3 | 34,2 | 328 |
| 18 | 38,6 | 3,6 | 57,8 | 498 | 8 | 55,8 | 7,0 | 37,2 | 344 |
| 19 | 37,3 | 3,5 | 59,1 | 514 | 9 | 53,3 | 6,7 | 40,0 | 360 |
| 20 | 36,2 | 3,4 | 60,4 | 530 | 10 | 51,1 | 6,4 | 42,5 | 376 |
| 21 | 35,2 | 3,3 | 61,5 | 546 | 11 | 49,0 | 6,1 | 44,9 | 392 |
| 22 | 34,2 | 3,2 | 62,6 | 562 | 12 | 47,1 | 5,9 | 47,0 | 408 |
| 23 | 33,2 | 3,1 | 63,7 | 578 | 13 | 45,3 | 5,7 | 49,0 | 424 |
| 24 | 32,3 | 3,0 | 64,6 | 594 | 14 | 43,6 | 5,4 | 51,0 | 440 |
| 16-20-1 | 84,2 | 8,8 | 7,0 | 228 | 15 | 42,1 | 5,2 | 52,6 | 456 |
| 2 | 78,7 | 8,2 | 13,1 | 244 | 16 | 40,7 | 5,1 | 54,2 | 472 |
| 3 | 73,8 | 7,7 | 18,5 | 260 | 17 | 39,3 | 4,9 | 55,7 | 488 |
| 4 | 69,5 | 7,2 | 23,2 | 276 | 18 | 38,1 | 4,7 | 57,1 | 504 |
| 5 | 65,8 | 6,8 | 27,4 | 292 | 19 | 36,9 | 4,6 | 58,5 | 520 |
| 6 | 62,3 | 6,5 | 31,2 | 308 | 20 | 35,8 | 4,5 | 59,7 | 536 |
| 7 | 59,2 | 6,2 | 34,0 | 324 | 21 | 34,8 | 4,3 | 60,8 | 552 |
| 8 | 56,4 | 5,9 | 37,6 | 340 | 16-26-1 | 82,1 | 11,1 | 6,8 | 234 |
| 9 | 53,9 | 5,6 | 40,5 | 356 | 2 | 76,8 | 10,4 | 12,8 | 250 |
| 10 | 51,6 | 5,4 | 43,0 | 372 | 3 | 72,2 | 9,8 | 18,0 | 266 |
| 11 | 49,5 | 5,1 | 45,4 | 388 | 4 | 68,1 | 9,2 | 22,7 | 282 |
| 12 | 47,5 | 4,9 | 47,5 | 404 | 5 | 64,4 | 8,7 | 26,8 | 298 |
| 13 | 45,7 | 4,7 | 49,5 | 420 | 6 | 61,1 | 8,3 | 30,6 | 314 |
| 14 | 44,0 | 4,6 | 51,4 | 436 | 7 | 58,2 | 7,9 | 33,9 | 330 |
| 15 | 42,5 | 4,4 | 53,1 | 452 | 8 | 55,5 | 7,5 | 37,0 | 346 |
| 16 | 41,0 | 4,3 | 54,7 | 468 | 9 | 53,0 | 7,2 | 39,8 | 362 |
| 17 | 39,7 | 4,1 | 56,2 | 484 | 10 | 50,8 | 6,9 | 42,3 | 378 |
| 18 | 38,4 | 4,0 | 57,6 | 500 | 11 | 48,7 | 6,6 | 44,7 | 394 |
| 19 | 37,2 | 3,9 | 58,9 | 516 | 12 | 46,8 | 6,3 | 46,8 | 410 |
| 20 | 36,1 | 3,7 | 60,2 | 532 | 13 | 45,1 | 6,1 | 48,8 | 426 |
| 21 | 35,0 | 3,6 | 61,3 | 548 | 14 | 43,4 | 5,9 | 50,8 | 442 |
| 22 | 34,0 | 3,5 | 62,4 | 564 | 15 | 41,9 | 5,6 | 52,4 | 458 |
| 23 | 33,1 | 3,4 | 63,4 | 580 | 16 | 40,5 | 5,5 | 54,0 | 474 |
| 16-22-1 | 83,5 | 9,6 | 6,9 | 230 | 17 | 39,2 | 5,3 | 55,5 | 490 |

| C—H—O | C % | H % | O % | M.G. | C—H—O | C % | H % | O % | M.G. |
|----------|------|------|------|------|---------|------|------|------|------|
| 16-26-18 | 38.0 | 5.1 | 56.9 | 506 | 16-34-3 | 70.1 | 12.4 | 17.5 | 274 |
| 19 | 36.8 | 5.0 | 58.2 | 522 | 4 | 66.2 | 11.7 | 22.1 | 290 |
| 20 | 35.7 | 4.8 | 59.5 | 538 | 5 | 62.7 | 11.1 | 26.1 | 306 |
| 16-28-1 | 81.4 | 11.8 | 6.8 | 236 | 6 | 59.6 | 10.6 | 29.8 | 322 |
| 2 | 76.2 | 11.1 | 12.7 | 252 | 7 | 56.8 | 10.0 | 33.1 | 338 |
| 3 | 71.6 | 10.4 | 17.9 | 268 | 8 | 54.2 | 9.6 | 36.2 | 354 |
| 4 | 67.6 | 9.8 | 22.5 | 284 | 9 | 51.9 | 9.2 | 38.9 | 370 |
| 5 | 64.0 | 9.3 | 26.7 | 300 | 10 | 49.7 | 8.8 | 41.4 | 386 |
| 6 | 60.8 | 8.8 | 30.4 | 316 | 11 | 47.7 | 8.4 | 43.8 | 402 |
| 7 | 57.8 | 8.4 | 33.7 | 332 | 12 | 45.9 | 8.1 | 45.9 | 418 |
| 8 | 55.1 | 8.0 | 36.8 | 348 | 13 | 44.2 | 7.8 | 47.9 | 434 |
| 9 | 52.7 | 7.7 | 39.6 | 364 | 14 | 42.7 | 7.6 | 49.7 | 450 |
| 10 | 50.5 | 7.4 | 42.1 | 380 | 15 | 41.2 | 7.3 | 51.5 | 466 |
| 11 | 48.5 | 7.1 | 44.4 | 396 | 16 | 39.8 | 7.0 | 53.1 | 482 |
| 12 | 46.6 | 6.8 | 46.6 | 412 | 17-2-1 | 91.9 | 0.9 | 7.2 | 222 |
| 13 | 44.9 | 6.5 | 48.6 | 428 | 2 | 85.7 | 0.8 | 13.4 | 238 |
| 14 | 43.6 | 6.4 | 50.9 | 444 | 3 | 80.3 | 0.8 | 18.9 | 254 |
| 15 | 41.7 | 6.1 | 52.2 | 460 | 4 | 75.5 | 0.7 | 23.7 | 270 |
| 16 | 40.3 | 5.9 | 53.8 | 476 | 5 | 71.3 | 0.7 | 28.0 | 286 |
| 17 | 39.0 | 5.7 | 55.3 | 492 | 6 | 67.6 | 0.6 | 31.8 | 302 |
| 18 | 37.8 | 5.5 | 56.7 | 508 | 7 | 64.2 | 0.6 | 35.2 | 318 |
| 19 | 36.6 | 5.3 | 58.0 | 524 | 8 | 61.1 | 0.6 | 38.3 | 334 |
| 16-30-1 | 80.7 | 12.6 | 6.7 | 238 | 9 | 58.3 | 0.6 | 41.1 | 350 |
| 2 | 75.6 | 8.3 | 8.3 | 251 | 10 | 55.7 | 0.5 | 43.7 | 366 |
| 3 | 71.1 | 11.1 | 17.8 | 270 | 11 | 53.4 | 0.5 | 46.1 | 382 |
| 4 | 67.1 | 10.5 | 22.4 | 286 | 12 | 51.3 | 0.5 | 48.2 | 398 |
| 5 | 63.6 | 9.9 | 26.5 | 302 | 13 | 49.3 | 0.5 | 50.2 | 414 |
| 6 | 60.4 | 9.4 | 30.2 | 318 | 14 | 47.4 | 0.5 | 52.1 | 430 |
| 7 | 57.5 | 9.0 | 33.5 | 334 | 15 | 45.7 | 0.4 | 53.8 | 446 |
| 8 | 54.8 | 8.6 | 36.6 | 350 | 16 | 44.2 | 0.4 | 55.4 | 462 |
| 9 | 52.4 | 8.2 | 39.3 | 366 | 17 | 42.7 | 0.4 | 56.9 | 478 |
| 10 | 50.3 | 7.8 | 41.9 | 382 | 18 | 41.3 | 0.4 | 58.3 | 494 |
| 11 | 48.2 | 7.5 | 44.2 | 398 | 19 | 40.0 | 0.4 | 59.6 | 510 |
| 12 | 46.4 | 7.2 | 46.4 | 414 | 17-4-1 | 91.1 | 1.8 | 7.1 | 224 |
| 13 | 44.6 | 7.0 | 48.4 | 430 | 2 | 85.0 | 1.7 | 13.3 | 240 |
| 14 | 43.0 | 6.7 | 50.2 | 446 | 3 | 79.7 | 1.6 | 18.7 | 256 |
| 15 | 41.6 | 6.5 | 51.9 | 462 | 4 | 75.0 | 1.5 | 23.5 | 272 |
| 16 | 40.2 | 6.3 | 53.5 | 478 | 5 | 70.8 | 1.4 | 27.8 | 288 |
| 17 | 38.9 | 6.0 | 55.1 | 494 | 6 | 67.1 | 1.3 | 31.6 | 304 |
| 18 | 37.6 | 5.9 | 56.5 | 510 | 7 | 63.8 | 1.2 | 35.0 | 320 |
| 16-32-1 | 80.3 | 13.3 | 6.7 | 240 | 8 | 60.7 | 1.2 | 38.1 | 336 |
| 2 | 75.0 | 12.5 | 12.5 | 256 | 9 | 58.0 | 1.1 | 40.9 | 352 |
| 3 | 70.6 | 11.7 | 17.7 | 272 | 10 | 55.4 | 1.1 | 43.5 | 368 |
| 4 | 66.7 | 11.1 | 22.2 | 288 | 11 | 53.1 | 1.0 | 45.8 | 384 |
| 5 | 63.2 | 10.5 | 26.3 | 304 | 12 | 51.1 | 1.0 | 48.0 | 400 |
| 6 | 60.0 | 10.0 | 30.0 | 320 | 13 | 49.0 | 0.9 | 50.0 | 416 |
| 7 | 57.1 | 9.5 | 33.3 | 336 | 14 | 47.2 | 0.9 | 51.8 | 432 |
| 8 | 54.5 | 9.1 | 36.4 | 352 | 15 | 45.5 | 0.9 | 53.6 | 448 |
| 9 | 52.2 | 8.7 | 39.1 | 368 | 16 | 44.0 | 0.8 | 45.2 | 464 |
| 10 | 50.0 | 8.3 | 41.7 | 384 | 17 | 42.5 | 0.8 | 56.7 | 480 |
| 11 | 48.0 | 8.0 | 44.0 | 400 | 18 | 41.1 | 0.8 | 58.1 | 496 |
| 12 | 46.2 | 7.7 | 46.1 | 416 | 19 | 39.8 | 0.8 | 59.4 | 512 |
| 13 | 44.4 | 7.4 | 48.2 | 432 | 20 | 38.6 | 0.8 | 60.6 | 528 |
| 14 | 42.9 | 7.1 | 50.0 | 448 | 17-6-1 | 90.3 | 2.6 | 7.1 | 226 |
| 15 | 41.4 | 6.9 | 51.7 | 464 | 2 | 84.3 | 2.5 | 13.2 | 242 |
| 16 | 40.0 | 6.7 | 53.3 | 480 | 3 | 79.1 | 2.3 | 18.6 | 258 |
| 17 | 38.7 | 6.5 | 54.8 | 496 | 4 | 74.5 | 2.2 | 23.3 | 274 |
| 16-34-1 | 79.3 | 14.0 | 6.6 | 242 | 5 | 70.4 | 2.0 | 27.6 | 290 |
| 2 | 74.4 | 13.2 | 12.4 | 258 | 6 | 66.7 | 1.9 | 31.4 | 306 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|----------|------|-----|------|------|
| 17-6-7 | 63.3 | 1.8 | 34.8 | 322 | 17-10-23 | 35.1 | 1.7 | 63.2 | 582 |
| 8 | 60.3 | 1.8 | 37.9 | 338 | 17-12-1 | 88.0 | 5.1 | 6.9 | 232 |
| 9 | 57.6 | 1.7 | 40.7 | 354 | 2 | 82.2 | 4.8 | 12.9 | 248 |
| 10 | 55.1 | 1.6 | 43.2 | 370 | 3 | 77.3 | 4.5 | 18.2 | 264 |
| 11 | 52.8 | 1.5 | 45.6 | 386 | 4 | 72.9 | 4.3 | 22.8 | 280 |
| 12 | 50.7 | 1.5 | 47.7 | 402 | 5 | 68.9 | 4.0 | 27.0 | 296 |
| 13 | 48.8 | 1.4 | 49.8 | 418 | 6 | 65.4 | 3.8 | 30.8 | 312 |
| 14 | 47.0 | 1.4 | 51.6 | 434 | 7 | 62.2 | 3.6 | 34.2 | 328 |
| 15 | 45.3 | 1.3 | 53.3 | 450 | 8 | 59.3 | 3.5 | 37.2 | 344 |
| 16 | 43.8 | 1.3 | 54.9 | 466 | 9 | 56.7 | 3.3 | 40.0 | 360 |
| 17 | 42.3 | 1.2 | 56.4 | 482 | 10 | 54.3 | 3.2 | 42.5 | 376 |
| 18 | 41.0 | 1.2 | 57.8 | 498 | 11 | 52.0 | 3.1 | 44.9 | 392 |
| 19 | 39.7 | 1.1 | 59.1 | 514 | 12 | 50.0 | 2.9 | 47.1 | 408 |
| 20 | 38.5 | 1.1 | 60.4 | 530 | 13 | 48.1 | 2.8 | 49.1 | 424 |
| 21 | 37.4 | 1.1 | 61.5 | 546 | 14 | 46.4 | 2.7 | 50.9 | 440 |
| 17-8-1 | 89.5 | 3.5 | 7.0 | 228 | 15 | 44.7 | 2.6 | 52.6 | 456 |
| 2 | 83.6 | 3.2 | 13.1 | 244 | 16 | 43.2 | 2.5 | 54.2 | 472 |
| 3 | 78.5 | 3.0 | 18.5 | 260 | 17 | 41.8 | 2.4 | 55.7 | 488 |
| 4 | 73.9 | 2.9 | 23.2 | 276 | 18 | 40.5 | 2.4 | 57.1 | 504 |
| 5 | 69.8 | 2.7 | 27.4 | 292 | 19 | 39.2 | 2.3 | 58.5 | 520 |
| 6 | 66.2 | 2.5 | 31.2 | 308 | 20 | 38.1 | 2.2 | 59.7 | 536 |
| 7 | 63.0 | 2.5 | 34.5 | 324 | 21 | 37.0 | 2.1 | 60.9 | 552 |
| 8 | 60.0 | 2.3 | 37.6 | 340 | 22 | 35.9 | 2.1 | 62.0 | 568 |
| 9 | 57.3 | 2.2 | 40.5 | 356 | 23 | 34.9 | 2.0 | 63.0 | 584 |
| 10 | 54.8 | 2.1 | 43.0 | 372 | 24 | 34.0 | 2.0 | 64.0 | 600 |
| 11 | 52.6 | 2.0 | 42.4 | 388 | 17-14-1 | 87.2 | 6.0 | 6.8 | 234 |
| 12 | 50.5 | 2.0 | 47.5 | 404 | 2 | 81.6 | 5.6 | 12.8 | 250 |
| 13 | 48.6 | 1.9 | 49.5 | 420 | 3 | 76.7 | 5.2 | 18.1 | 266 |
| 14 | 46.8 | 1.8 | 51.4 | 436 | 4 | 72.3 | 4.9 | 22.7 | 282 |
| 15 | 45.1 | 1.7 | 53.1 | 452 | 5 | 68.4 | 4.7 | 26.8 | 298 |
| 16 | 43.6 | 1.7 | 54.7 | 468 | 6 | 65.0 | 4.4 | 30.6 | 314 |
| 17 | 42.1 | 1.6 | 56.2 | 484 | 7 | 61.8 | 4.2 | 33.9 | 330 |
| 18 | 40.8 | 1.6 | 57.6 | 500 | 8 | 59.0 | 4.0 | 37.0 | 346 |
| 19 | 39.5 | 1.5 | 58.9 | 516 | 9 | 56.3 | 3.8 | 39.8 | 362 |
| 20 | 38.3 | 1.5 | 60.1 | 532 | 10 | 54.0 | 3.7 | 42.3 | 378 |
| 21 | 37.2 | 1.5 | 61.3 | 548 | 11 | 51.8 | 3.5 | 44.7 | 394 |
| 22 | 36.2 | 1.4 | 62.4 | 564 | 12 | 49.7 | 3.4 | 46.8 | 410 |
| 17-10-1 | 88.7 | 4.3 | 6.9 | 230 | 13 | 47.9 | 3.3 | 48.8 | 426 |
| 2 | 82.9 | 4.0 | 13.0 | 246 | 14 | 46.1 | 3.2 | 50.7 | 442 |
| 3 | 77.9 | 3.8 | 18.3 | 262 | 15 | 44.5 | 3.1 | 52.4 | 458 |
| 4 | 73.4 | 3.6 | 23.0 | 278 | 16 | 43.0 | 3.0 | 54.0 | 474 |
| 5 | 69.4 | 3.4 | 27.2 | 294 | 17 | 41.6 | 2.8 | 55.5 | 490 |
| 6 | 65.8 | 3.2 | 31.0 | 310 | 18 | 40.3 | 2.7 | 56.9 | 506 |
| 7 | 62.6 | 3.0 | 34.3 | 326 | 19 | 39.1 | 2.7 | 58.2 | 522 |
| 8 | 59.6 | 2.9 | 37.4 | 342 | 20 | 37.9 | 2.6 | 59.5 | 538 |
| 9 | 57.0 | 2.8 | 40.2 | 358 | 21 | 36.8 | 2.5 | 60.6 | 554 |
| 10 | 54.5 | 2.7 | 42.8 | 374 | 22 | 35.8 | 2.4 | 61.7 | 570 |
| 11 | 52.3 | 2.6 | 45.1 | 390 | 23 | 34.8 | 2.4 | 62.8 | 586 |
| 12 | 50.3 | 2.4 | 47.3 | 406 | 24 | 33.9 | 2.3 | 63.8 | 602 |
| 13 | 48.3 | 2.3 | 49.3 | 422 | 25 | 33.0 | 2.3 | 64.7 | 618 |
| 14 | 46.6 | 2.3 | 51.1 | 438 | 17-16-1 | 86.4 | 6.8 | 6.8 | 236 |
| 15 | 44.9 | 2.2 | 52.9 | 454 | 2 | 81.0 | 6.3 | 12.7 | 252 |
| 16 | 43.4 | 2.1 | 54.5 | 470 | 3 | 76.1 | 6.0 | 17.9 | 268 |
| 17 | 42.0 | 2.0 | 56.0 | 486 | 4 | 71.8 | 5.6 | 22.5 | 284 |
| 18 | 40.6 | 2.0 | 57.4 | 502 | 5 | 68.0 | 5.3 | 26.7 | 300 |
| 19 | 39.4 | 1.9 | 58.7 | 518 | 6 | 64.5 | 5.0 | 30.4 | 316 |
| 20 | 38.2 | 1.9 | 59.9 | 534 | 7 | 61.4 | 4.8 | 33.7 | 332 |
| 21 | 37.1 | 1.8 | 61.1 | 550 | 8 | 58.6 | 4.6 | 36.8 | 348 |
| 22 | 36.0 | 1.8 | 62.2 | 566 | 9 | 56.0 | 4.4 | 39.6 | 364 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|----------|------|-----|------|------|----------|------|------|------|------|
| 17-16-10 | 53.7 | 4.2 | 42.1 | 380 | 17-20-17 | 41.1 | 4.0 | 54.8 | 496 |
| 11 | 51.5 | 4.0 | 44.4 | 396 | 18 | 39.8 | 3.9 | 56.2 | 512 |
| 12 | 49.5 | 3.9 | 46.6 | 412 | 19 | 38.6 | 3.8 | 57.6 | 528 |
| 13 | 47.7 | 3.7 | 48.6 | 428 | 20 | 37.5 | 3.7 | 58.8 | 544 |
| 14 | 45.9 | 3.6 | 50.5 | 444 | 21 | 36.4 | 3.6 | 60.0 | 560 |
| 15 | 44.3 | 3.5 | 52.2 | 460 | 22 | 35.4 | 3.5 | 61.1 | 576 |
| 16 | 42.8 | 3.3 | 53.8 | 476 | 23 | 34.4 | 3.4 | 62.2 | 592 |
| 17 | 41.5 | 3.2 | 55.3 | 492 | 24 | 33.5 | 3.3 | 63.1 | 608 |
| 18 | 40.2 | 3.1 | 56.7 | 508 | 25 | 32.7 | 3.2 | 64.1 | 624 |
| 19 | 38.9 | 3.0 | 58.0 | 524 | 17-22-1 | 84.3 | 9.1 | 6.6 | 242 |
| 20 | 37.8 | 2.9 | 59.2 | 540 | 2 | 79.1 | 8.5 | 12.4 | 258 |
| 21 | 36.7 | 2.9 | 60.4 | 556 | 3 | 74.4 | 8.0 | 17.5 | 274 |
| 22 | 35.7 | 2.8 | 61.6 | 572 | 4 | 70.3 | 7.6 | 22.1 | 290 |
| 23 | 34.7 | 2.7 | 62.6 | 588 | 5 | 66.7 | 7.2 | 26.1 | 306 |
| 24 | 33.8 | 2.6 | 63.6 | 604 | 6 | 63.3 | 6.8 | 29.8 | 322 |
| 25 | 32.9 | 2.6 | 64.4 | 620 | 7 | 60.4 | 6.5 | 33.1 | 338 |
| 26 | 32.1 | 2.5 | 65.4 | 636 | 8 | 57.6 | 6.2 | 36.2 | 354 |
| 17-18-1 | 89.7 | 7.5 | 6.7 | 238 | 9 | 55.1 | 5.9 | 38.9 | 370 |
| 2 | 80.3 | 7.1 | 12.6 | 254 | 10 | 52.8 | 5.7 | 41.4 | 386 |
| 3 | 75.6 | 6.6 | 17.8 | 270 | 11 | 50.7 | 5.5 | 43.8 | 402 |
| 4 | 71.3 | 6.3 | 22.4 | 286 | 12 | 48.8 | 5.2 | 45.9 | 418 |
| 5 | 67.6 | 5.9 | 26.5 | 302 | 13 | 47.0 | 5.0 | 47.9 | 434 |
| 6 | 64.2 | 5.6 | 30.2 | 318 | 14 | 45.3 | 4.9 | 49.8 | 450 |
| 7 | 61.1 | 5.4 | 33.5 | 334 | 15 | 43.8 | 4.7 | 51.5 | 466 |
| 8 | 58.3 | 5.1 | 36.6 | 350 | 16 | 42.3 | 4.5 | 53.1 | 482 |
| 9 | 55.7 | 4.9 | 39.3 | 366 | 17 | 41.0 | 4.4 | 54.6 | 498 |
| 10 | 53.4 | 4.7 | 41.9 | 382 | 18 | 39.7 | 4.3 | 56.0 | 514 |
| 11 | 51.2 | 4.5 | 44.2 | 398 | 19 | 38.5 | 4.1 | 57.3 | 530 |
| 12 | 49.3 | 4.3 | 46.4 | 414 | 20 | 37.4 | 4.0 | 58.6 | 546 |
| 13 | 47.4 | 4.2 | 48.4 | 430 | 21 | 36.3 | 3.9 | 59.8 | 562 |
| 14 | 45.7 | 4.0 | 50.2 | 446 | 22 | 35.3 | 3.8 | 60.9 | 578 |
| 15 | 44.2 | 3.9 | 51.9 | 462 | 23 | 34.3 | 3.7 | 62.0 | 594 |
| 16 | 42.7 | 3.7 | 53.5 | 478 | 24 | 33.4 | 3.6 | 62.9 | 610 |
| 17 | 41.3 | 3.6 | 55.1 | 494 | 17-24-1 | 83.6 | 9.8 | 6.5 | 244 |
| 18 | 40.0 | 3.5 | 56.5 | 510 | 2 | 78.5 | 9.2 | 12.3 | 260 |
| 19 | 38.8 | 3.4 | 57.8 | 526 | 3 | 73.9 | 8.7 | 17.4 | 276 |
| 20 | 37.6 | 3.3 | 59.0 | 542 | 4 | 69.9 | 8.2 | 21.9 | 292 |
| 21 | 36.6 | 3.2 | 60.2 | 558 | 5 | 66.2 | 7.8 | 26.0 | 308 |
| 22 | 35.5 | 3.1 | 61.3 | 574 | 6 | 62.9 | 7.4 | 29.6 | 324 |
| 23 | 34.6 | 3.0 | 62.4 | 590 | 7 | 60.0 | 7.1 | 32.9 | 340 |
| 24 | 33.7 | 3.0 | 63.3 | 606 | 8 | 57.3 | 6.7 | 36.0 | 356 |
| 25 | 32.8 | 2.9 | 64.3 | 622 | 9 | 54.8 | 6.4 | 38.7 | 372 |
| 26 | 32.0 | 2.8 | 65.2 | 638 | 10 | 52.6 | 6.2 | 41.2 | 388 |
| 17-20-1 | 85.0 | 8.3 | 6.7 | 240 | 11 | 50.5 | 5.9 | 43.6 | 404 |
| 2 | 79.7 | 7.8 | 12.5 | 256 | 12 | 48.6 | 5.7 | 45.7 | 420 |
| 3 | 75.0 | 7.3 | 17.7 | 272 | 13 | 46.8 | 5.5 | 47.7 | 436 |
| 4 | 70.8 | 6.9 | 22.2 | 288 | 14 | 45.1 | 5.3 | 49.6 | 452 |
| 5 | 67.1 | 6.6 | 26.3 | 304 | 15 | 43.6 | 5.1 | 51.3 | 468 |
| 6 | 63.7 | 6.2 | 30.0 | 320 | 16 | 42.1 | 4.9 | 53.0 | 484 |
| 7 | 60.7 | 5.9 | 33.3 | 336 | 17 | 40.8 | 4.8 | 54.4 | 500 |
| 8 | 58.0 | 5.7 | 36.3 | 352 | 18 | 39.5 | 4.6 | 55.8 | 516 |
| 9 | 55.4 | 5.4 | 39.1 | 368 | 19 | 38.3 | 4.5 | 57.1 | 532 |
| 10 | 53.1 | 5.2 | 41.7 | 384 | 20 | 37.2 | 4.4 | 58.4 | 548 |
| 11 | 51.0 | 5.0 | 44.0 | 400 | 21 | 36.2 | 4.2 | 59.6 | 564 |
| 12 | 49.0 | 4.8 | 46.2 | 416 | 22 | 35.2 | 4.1 | 60.7 | 580 |
| 13 | 47.2 | 4.6 | 48.2 | 432 | 23 | 34.2 | 4.0 | 61.8 | 596 |
| 14 | 45.5 | 4.4 | 50.0 | 448 | 17-26-1 | 82.9 | 10.6 | 6.5 | 246 |
| 15 | 44.0 | 4.3 | 51.7 | 464 | 2 | 77.9 | 9.9 | 12.2 | 262 |
| 16 | 42.5 | 4.2 | 53.3 | 480 | 3 | 73.4 | 9.3 | 17.3 | 278 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|---------|------|------|------|------|----------|------|------|------|------|
| 17-26-4 | 69.4 | 8.8 | 21.8 | 294 | 17-30-20 | 36.8 | 5.4 | 57.8 | 554 |
| 5 | 65.8 | 8.4 | 25.8 | 310 | 17-32-1 | 81.0 | 12.7 | 6.3 | 252 |
| 6 | 62.6 | 8.0 | 29.4 | 326 | 2 | 76.1 | 11.9 | 11.9 | 268 |
| 7 | 59.6 | 7.6 | 32.8 | 342 | 3 | 71.8 | 11.6 | 16.9 | 284 |
| 8 | 57.0 | 7.2 | 35.8 | 358 | 4 | 68.0 | 10.7 | 21.3 | 300 |
| 9 | 54.6 | 6.9 | 38.5 | 374 | 5 | 64.6 | 10.1 | 25.3 | 316 |
| 10 | 52.3 | 6.7 | 41.0 | 390 | 6 | 61.4 | 9.6 | 28.9 | 332 |
| 11 | 50.2 | 6.4 | 43.3 | 406 | 7 | 58.6 | 9.2 | 32.2 | 348 |
| 12 | 48.3 | 6.2 | 45.5 | 422 | 8 | 56.0 | 8.8 | 35.2 | 364 |
| 13 | 46.6 | 5.9 | 47.5 | 438 | 9 | 53.7 | 8.4 | 37.9 | 380 |
| 14 | 44.9 | 5.7 | 49.3 | 454 | 10 | 51.5 | 8.1 | 40.4 | 396 |
| 15 | 43.4 | 5.5 | 51.0 | 470 | 11 | 49.5 | 7.7 | 42.7 | 412 |
| 16 | 42.0 | 5.3 | 52.7 | 486 | 12 | 47.7 | 7.5 | 44.8 | 428 |
| 17 | 40.6 | 5.2 | 54.2 | 502 | 13 | 45.9 | 7.2 | 46.9 | 444 |
| 18 | 39.4 | 5.0 | 55.6 | 518 | 14 | 44.3 | 6.9 | 48.7 | 460 |
| 19 | 38.2 | 4.9 | 56.9 | 534 | 15 | 42.8 | 6.7 | 50.4 | 476 |
| 20 | 37.1 | 4.7 | 58.2 | 550 | 16 | 41.4 | 6.5 | 52.0 | 492 |
| 21 | 36.0 | 4.6 | 59.4 | 566 | 17 | 40.2 | 6.3 | 53.5 | 508 |
| 22 | 35.0 | 4.5 | 60.5 | 582 | 18 | 39.0 | 6.1 | 54.9 | 524 |
| 17-28-1 | 82.2 | 11.3 | 6.4 | 248 | 19 | 37.8 | 5.9 | 56.3 | 540 |
| 2 | 77.3 | 10.6 | 12.1 | 264 | 17-34-1 | 80.3 | 13.4 | 6.3 | 254 |
| 3 | 72.8 | 10.0 | 17.2 | 280 | 2 | 75.6 | 12.6 | 11.8 | 270 |
| 4 | 68.9 | 9.5 | 21.6 | 296 | 3 | 71.3 | 11.9 | 16.8 | 286 |
| 5 | 65.4 | 9.0 | 25.6 | 312 | 4 | 67.6 | 11.2 | 21.2 | 302 |
| 6 | 62.2 | 8.5 | 29.3 | 328 | 5 | 64.2 | 10.7 | 25.1 | 318 |
| 7 | 59.3 | 8.1 | 32.6 | 344 | 6 | 61.1 | 10.2 | 28.7 | 334 |
| 8 | 56.7 | 7.8 | 35.5 | 360 | 7 | 58.3 | 9.7 | 32.0 | 350 |
| 9 | 54.2 | 7.4 | 38.3 | 376 | 8 | 55.7 | 9.3 | 35.0 | 366 |
| 10 | 52.0 | 7.1 | 40.8 | 392 | 9 | 53.4 | 8.9 | 37.7 | 382 |
| 11 | 50.0 | 6.9 | 43.1 | 408 | 10 | 51.3 | 8.5 | 40.2 | 398 |
| 12 | 48.1 | 6.6 | 45.3 | 424 | 11 | 49.3 | 8.2 | 42.5 | 414 |
| 13 | 46.4 | 6.3 | 47.3 | 440 | 12 | 47.4 | 7.9 | 44.7 | 430 |
| 14 | 44.7 | 6.1 | 49.1 | 456 | 13 | 45.7 | 7.6 | 46.6 | 446 |
| 15 | 43.2 | 5.9 | 50.9 | 472 | 14 | 44.2 | 7.3 | 48.5 | 462 |
| 16 | 41.8 | 5.7 | 52.4 | 488 | 15 | 42.7 | 7.1 | 50.2 | 478 |
| 17 | 40.5 | 5.6 | 53.9 | 504 | 16 | 41.3 | 6.9 | 51.8 | 494 |
| 18 | 39.2 | 5.4 | 55.4 | 520 | 17 | 40.0 | 6.7 | 53.3 | 510 |
| 19 | 38.1 | 5.2 | 56.7 | 536 | 18 | 38.8 | 6.5 | 54.7 | 526 |
| 20 | 37.0 | 5.0 | 58.0 | 552 | 17-36-1 | 79.7 | 14.1 | 6.2 | 256 |
| 21 | 35.9 | 4.9 | 59.2 | 568 | 2 | 75.0 | 13.2 | 11.8 | 272 |
| 17-30-1 | 81.6 | 12.0 | 6.4 | 250 | 3 | 70.8 | 12.5 | 16.7 | 288 |
| 2 | 76.7 | 11.3 | 12.0 | 266 | 4 | 67.2 | 11.8 | 21.0 | 304 |
| 3 | 72.3 | 10.6 | 17.0 | 282 | 5 | 63.8 | 11.2 | 25.0 | 320 |
| 4 | 68.5 | 10.0 | 21.5 | 298 | 6 | 60.7 | 10.7 | 28.6 | 336 |
| 5 | 65.0 | 9.5 | 25.5 | 314 | 7 | 58.0 | 10.2 | 31.8 | 352 |
| 6 | 61.8 | 9.1 | 29.1 | 330 | 8 | 55.4 | 9.8 | 34.8 | 368 |
| 7 | 59.0 | 8.7 | 32.3 | 346 | 9 | 53.1 | 9.4 | 37.5 | 384 |
| 8 | 56.4 | 8.3 | 35.3 | 362 | 10 | 51.0 | 9.0 | 40.0 | 400 |
| 9 | 54.0 | 7.9 | 38.1 | 378 | 11 | 49.0 | 8.6 | 42.3 | 416 |
| 10 | 51.8 | 7.6 | 40.6 | 394 | 12 | 47.2 | 8.3 | 44.5 | 432 |
| 11 | 49.8 | 7.3 | 42.9 | 410 | 13 | 45.5 | 8.0 | 46.4 | 448 |
| 12 | 47.9 | 7.0 | 45.1 | 426 | 14 | 44.0 | 7.8 | 48.2 | 464 |
| 13 | 46.1 | 6.8 | 47.1 | 442 | 15 | 42.5 | 7.5 | 50.0 | 480 |
| 14 | 44.5 | 6.5 | 48.9 | 458 | 16 | 41.1 | 7.2 | 51.6 | 496 |
| 15 | 43.0 | 6.3 | 50.6 | 474 | 17 | 39.8 | 7.0 | 53.2 | 512 |
| 16 | 41.6 | 6.1 | 52.2 | 490 | 18-2-1 | 92.3 | 0.8 | 6.8 | 234 |
| 17 | 40.3 | 5.9 | 53.8 | 506 | 2 | 86.4 | 0.8 | 12.8 | 250 |
| 18 | 39.1 | 5.7 | 55.2 | 522 | 3 | 81.2 | 0.7 | 18.1 | 266 |
| 19 | 37.9 | 5.6 | 56.5 | 538 | 4 | 76.6 | 0.7 | 22.7 | 282 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|--------|------|-----|------|------|---------|------|-----|------|------|
| 18-2-5 | 72.5 | 0.7 | 26.8 | 296 | 18-6-21 | 38.7 | 1.1 | 60.2 | 558 |
| 6 | 68.8 | 0.6 | 30.6 | 314 | 22 | 37.6 | 1.0 | 61.3 | 574 |
| 7 | 65.5 | 0.6 | 33.9 | 330 | 18-8-1 | 90.0 | 3.3 | 6.7 | 240 |
| 8 | 62.4 | 0.6 | 37.0 | 346 | 2 | 84.4 | 3.1 | 12.5 | 256 |
| 9 | 59.7 | 0.5 | 39.8 | 362 | 3 | 79.4 | 2.9 | 17.7 | 272 |
| 10 | 57.2 | 0.5 | 42.3 | 378 | 4 | 75.0 | 2.8 | 22.2 | 288 |
| 11 | 54.8 | 0.5 | 44.7 | 394 | 5 | 71.0 | 2.6 | 26.3 | 304 |
| 12 | 52.7 | 0.5 | 46.8 | 410 | 6 | 67.5 | 2.5 | 30.0 | 320 |
| 13 | 50.7 | 0.5 | 48.8 | 426 | 7 | 64.3 | 2.4 | 33.3 | 336 |
| 14 | 48.8 | 0.5 | 50.7 | 442 | 8 | 61.3 | 2.3 | 36.4 | 352 |
| 15 | 47.2 | 0.4 | 52.4 | 458 | 9 | 58.7 | 2.2 | 39.1 | 368 |
| 16 | 45.5 | 0.4 | 54.0 | 474 | 10 | 56.3 | 2.0 | 41.7 | 384 |
| 17 | 44.1 | 0.4 | 55.5 | 490 | 11 | 54.0 | 2.0 | 44.0 | 400 |
| 18 | 42.7 | 0.4 | 56.9 | 506 | 12 | 51.9 | 1.9 | 46.1 | 416 |
| 19 | 41.4 | 0.4 | 58.2 | 522 | 13 | 50.0 | 1.8 | 48.2 | 432 |
| 20 | 40.1 | 0.4 | 59.5 | 538 | 14 | 48.2 | 1.8 | 50.0 | 448 |
| 21 | 39.0 | 0.4 | 60.6 | 554 | 15 | 46.6 | 1.7 | 51.7 | 464 |
| 22 | 37.9 | 0.3 | 61.7 | 570 | 16 | 45.0 | 1.7 | 53.3 | 480 |
| 18-4-1 | 91.5 | 1.7 | 6.8 | 236 | 17 | 43.5 | 1.6 | 54.8 | 496 |
| 2 | 85.7 | 1.6 | 12.7 | 252 | 18 | 42.2 | 1.5 | 56.2 | 512 |
| 3 | 80.6 | 1.5 | 17.9 | 268 | 19 | 40.9 | 1.5 | 57.6 | 528 |
| 4 | 76.0 | 1.4 | 22.5 | 284 | 20 | 39.7 | 1.5 | 58.8 | 544 |
| 5 | 72.0 | 1.3 | 26.7 | 300 | 21 | 38.6 | 1.4 | 60.0 | 560 |
| 6 | 68.3 | 1.2 | 30.4 | 316 | 22 | 37.5 | 1.4 | 61.1 | 576 |
| 7 | 65.1 | 1.2 | 33.7 | 332 | 23 | 36.5 | 1.4 | 62.1 | 592 |
| 8 | 62.0 | 1.1 | 36.8 | 348 | 18-10-1 | 89.3 | 4.1 | 6.6 | 242 |
| 9 | 59.4 | 1.1 | 39.5 | 364 | 2 | 83.7 | 3.9 | 12.4 | 258 |
| 10 | 56.8 | 1.0 | 42.1 | 380 | 3 | 78.8 | 3.6 | 17.5 | 274 |
| 11 | 54.5 | 1.0 | 44.4 | 396 | 4 | 74.5 | 3.4 | 22.1 | 290 |
| 12 | 52.4 | 1.0 | 46.6 | 412 | 5 | 70.6 | 3.2 | 26.1 | 306 |
| 13 | 50.5 | 0.9 | 48.6 | 428 | 6 | 67.1 | 3.1 | 29.8 | 322 |
| 14 | 48.6 | 0.9 | 50.4 | 444 | 7 | 63.9 | 2.9 | 33.1 | 338 |
| 15 | 47.0 | 0.8 | 52.2 | 460 | 8 | 61.0 | 2.8 | 36.2 | 354 |
| 16 | 45.4 | 0.8 | 53.8 | 476 | 9 | 58.4 | 2.7 | 38.9 | 370 |
| 17 | 43.9 | 0.8 | 55.3 | 492 | 10 | 56.0 | 2.6 | 41.4 | 386 |
| 18 | 42.5 | 0.8 | 56.7 | 508 | 11 | 53.7 | 2.5 | 43.8 | 402 |
| 19 | 41.2 | 0.7 | 58.0 | 524 | 12 | 51.7 | 2.4 | 45.9 | 418 |
| 20 | 40.0 | 0.7 | 59.3 | 540 | 13 | 49.7 | 2.3 | 47.9 | 434 |
| 21 | 38.9 | 0.7 | 60.4 | 556 | 14 | 48.0 | 2.2 | 49.8 | 450 |
| 18-6-1 | 90.8 | 2.5 | 6.7 | 238 | 15 | 46.4 | 2.1 | 51.5 | 466 |
| 2 | 85.0 | 2.3 | 12.6 | 254 | 16 | 44.8 | 2.1 | 53.1 | 482 |
| 3 | 80.0 | 2.2 | 17.8 | 270 | 17 | 43.4 | 2.0 | 54.6 | 498 |
| 4 | 75.5 | 2.1 | 22.4 | 286 | 18 | 42.1 | 1.9 | 56.0 | 514 |
| 5 | 71.5 | 2.0 | 26.5 | 302 | 19 | 40.7 | 1.9 | 57.4 | 530 |
| 6 | 67.9 | 1.9 | 30.2 | 318 | 20 | 39.6 | 1.8 | 58.6 | 546 |
| 7 | 64.7 | 1.8 | 33.5 | 334 | 21 | 38.4 | 1.8 | 59.8 | 562 |
| 8 | 61.7 | 1.7 | 36.5 | 350 | 22 | 37.4 | 1.7 | 60.9 | 578 |
| 9 | 59.0 | 1.6 | 39.4 | 366 | 23 | 36.4 | 1.7 | 61.9 | 594 |
| 10 | 56.5 | 1.6 | 41.9 | 382 | 24 | 35.4 | 1.6 | 62.9 | 610 |
| 11 | 54.3 | 1.5 | 44.2 | 398 | 18-12-1 | 88.5 | 4.9 | 6.5 | 244 |
| 12 | 52.2 | 1.4 | 46.4 | 414 | 2 | 83.1 | 4.6 | 12.3 | 260 |
| 13 | 50.2 | 1.4 | 48.4 | 430 | 3 | 78.3 | 4.3 | 17.4 | 276 |
| 14 | 48.4 | 1.3 | 50.2 | 446 | 4 | 74.0 | 4.1 | 21.9 | 292 |
| 15 | 46.8 | 1.3 | 51.9 | 462 | 5 | 70.1 | 3.9 | 26.0 | 308 |
| 16 | 45.2 | 1.2 | 53.6 | 478 | 6 | 66.7 | 3.7 | 29.6 | 324 |
| 17 | 43.7 | 1.2 | 55.1 | 494 | 7 | 63.5 | 3.5 | 32.9 | 340 |
| 18 | 42.3 | 1.2 | 56.5 | 510 | 8 | 60.7 | 3.3 | 36.0 | 356 |
| 19 | 41.1 | 1.1 | 57.8 | 526 | 9 | 58.1 | 3.2 | 38.7 | 372 |
| 20 | 39.9 | 1.1 | 59.0 | 542 | 10 | 55.7 | 3.1 | 41.2 | 388 |

| C—H—O | C% | H% | O% | M.G. | C—H—O | C% | H% | O% | M.G. |
|-----------------|------|-----|------|------|-----------------|------|-----|------|------|
| 18-12-11 | 53,4 | 3,0 | 43,6 | 404 | 18-16-19 | 40,3 | 3,0 | 56,7 | 536 |
| 12 | 51,4 | 2,9 | 45,7 | 420 | 20 | 39,1 | 2,9 | 58,0 | 552 |
| 13 | 49,5 | 2,7 | 47,7 | 436 | 21 | 38,0 | 2,8 | 59,2 | 568 |
| 14 | 47,8 | 2,6 | 49,6 | 452 | 22 | 37,0 | 2,7 | 60,3 | 584 |
| 15 | 46,1 | 2,6 | 51,3 | 468 | 23 | 36,0 | 2,7 | 61,3 | 600 |
| 16 | 44,6 | 2,5 | 52,9 | 484 | 24 | 35,0 | 2,6 | 62,3 | 616 |
| 17 | 43,2 | 2,4 | 54,4 | 500 | 25 | 34,2 | 2,5 | 63,3 | 632 |
| 18 | 41,9 | 2,3 | 55,8 | 516 | 26 | 33,3 | 2,4 | 64,2 | 648 |
| 19 | 40,6 | 2,2 | 57,1 | 532 | 27 | 32,5 | 2,4 | 65,1 | 664 |
| 20 | 39,4 | 2,2 | 58,4 | 548 | 18-18-1 | 86,4 | 7,2 | 6,4 | 250 |
| 21 | 38,3 | 2,1 | 59,6 | 564 | 2 | 81,2 | 6,7 | 12,0 | 266 |
| 22 | 37,2 | 2,0 | 60,7 | 580 | 3 | 76,6 | 6,4 | 17,0 | 282 |
| 23 | 36,2 | 2,0 | 61,8 | 596 | 4 | 72,5 | 6,0 | 21,5 | 298 |
| 24 | 35,3 | 1,9 | 62,8 | 612 | 5 | 68,8 | 5,7 | 25,5 | 314 |
| 25 | 34,4 | 1,9 | 63,7 | 628 | 6 | 65,5 | 5,4 | 29,1 | 330 |
| 18-14-1 | 87,8 | 5,7 | 6,5 | 246 | 7 | 62,4 | 5,2 | 32,4 | 346 |
| 2 | 82,4 | 5,3 | 12,2 | 262 | 8 | 59,7 | 5,0 | 35,3 | 362 |
| 3 | 77,7 | 5,0 | 17,3 | 278 | 9 | 57,1 | 4,8 | 38,1 | 378 |
| 4 | 73,5 | 4,7 | 21,8 | 294 | 10 | 54,8 | 4,5 | 40,6 | 394 |
| 5 | 69,7 | 4,5 | 25,8 | 310 | 11 | 52,7 | 4,4 | 42,9 | 410 |
| 6 | 66,3 | 4,3 | 29,4 | 326 | 12 | 50,7 | 4,2 | 45,1 | 426 |
| 7 | 63,2 | 4,1 | 32,7 | 342 | 13 | 48,9 | 4,1 | 47,0 | 442 |
| 8 | 60,3 | 3,9 | 35,8 | 358 | 14 | 47,1 | 3,9 | 48,9 | 458 |
| 9 | 57,8 | 3,7 | 35,5 | 374 | 15 | 45,6 | 3,8 | 50,6 | 474 |
| 10 | 55,4 | 3,6 | 41,0 | 390 | 16 | 44,1 | 3,7 | 52,2 | 490 |
| 11 | 53,2 | 3,4 | 43,4 | 406 | 17 | 42,7 | 3,5 | 53,8 | 506 |
| 12 | 51,2 | 3,3 | 45,5 | 422 | 18 | 41,4 | 3,4 | 55,2 | 522 |
| 13 | 49,3 | 3,2 | 47,5 | 438 | 19 | 40,1 | 3,3 | 56,5 | 538 |
| 14 | 47,6 | 3,1 | 49,3 | 454 | 20 | 39,0 | 3,2 | 57,8 | 554 |
| 15 | 45,9 | 3,0 | 51,1 | 470 | 21 | 37,9 | 3,1 | 59,0 | 570 |
| 16 | 44,4 | 2,9 | 52,7 | 486 | 22 | 36,8 | 3,1 | 60,1 | 586 |
| 17 | 43,1 | 2,8 | 54,1 | 502 | 23 | 35,9 | 3,0 | 61,1 | 602 |
| 18 | 41,7 | 2,7 | 55,6 | 518 | 24 | 35,0 | 2,9 | 62,1 | 618 |
| 19 | 40,4 | 2,6 | 56,9 | 534 | 25 | 34,1 | 2,8 | 63,1 | 634 |
| 20 | 39,3 | 2,5 | 58,2 | 550 | 26 | 33,2 | 2,7 | 64,0 | 650 |
| 21 | 38,2 | 2,4 | 59,4 | 566 | 27 | 32,4 | 2,7 | 64,9 | 666 |
| 22 | 37,1 | 2,4 | 60,5 | 582 | 28 | 31,7 | 2,6 | 65,7 | 682 |
| 23 | 36,1 | 2,3 | 61,5 | 598 | 18-20-1 | 85,7 | 7,9 | 6,3 | 252 |
| 24 | 35,2 | 2,3 | 62,5 | 614 | 2 | 80,6 | 7,4 | 11,9 | 268 |
| 25 | 34,3 | 2,2 | 63,5 | 630 | 3 | 76,1 | 7,0 | 16,9 | 284 |
| 26 | 33,4 | 2,1 | 64,4 | 646 | 4 | 72,0 | 6,7 | 21,3 | 300 |
| 18-16-1 | 87,1 | 6,4 | 6,4 | 248 | 5 | 68,4 | 6,3 | 25,3 | 316 |
| 2 | 81,8 | 6,0 | 12,1 | 264 | 6 | 65,1 | 6,0 | 28,9 | 332 |
| 3 | 77,1 | 5,7 | 17,1 | 280 | 7 | 62,1 | 5,7 | 32,2 | 348 |
| 4 | 72,9 | 5,4 | 21,6 | 296 | 8 | 59,3 | 5,5 | 35,2 | 364 |
| 5 | 69,2 | 5,1 | 25,6 | 312 | 9 | 56,8 | 5,2 | 37,9 | 380 |
| 6 | 65,8 | 4,9 | 29,2 | 328 | 10 | 54,5 | 5,0 | 40,4 | 396 |
| 7 | 62,8 | 4,6 | 32,6 | 344 | 11 | 52,4 | 4,8 | 42,7 | 412 |
| 8 | 60,0 | 4,4 | 35,6 | 360 | 12 | 50,5 | 4,7 | 44,8 | 428 |
| 9 | 57,4 | 4,2 | 38,3 | 376 | 13 | 48,6 | 4,5 | 46,8 | 444 |
| 10 | 55,1 | 4,1 | 40,8 | 392 | 14 | 46,9 | 4,3 | 48,7 | 460 |
| 11 | 52,9 | 3,9 | 43,1 | 408 | 15 | 45,4 | 4,2 | 50,4 | 476 |
| 12 | 50,9 | 3,8 | 45,3 | 424 | 16 | 43,9 | 4,0 | 52,0 | 492 |
| 13 | 49,1 | 3,6 | 47,3 | 440 | 17 | 42,5 | 3,9 | 53,5 | 508 |
| 14 | 47,4 | 3,5 | 49,1 | 456 | 18 | 41,2 | 3,8 | 55,0 | 524 |
| 15 | 45,8 | 3,4 | 50,8 | 472 | 19 | 40,0 | 3,7 | 56,3 | 540 |
| 16 | 44,2 | 3,3 | 52,5 | 488 | 20 | 38,8 | 3,6 | 57,5 | 556 |
| 17 | 42,9 | 3,2 | 53,9 | 504 | 21 | 37,8 | 3,5 | 58,7 | 572 |
| 18 | 41,5 | 3,1 | 55,4 | 520 | 22 | 36,7 | 3,4 | 59,8 | 588 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|---------|------|------|------|------|
| 18-20-23 | 35.8 | 3.3 | 60.9 | 604 | 18-26-4 | 70.6 | 8.5 | 20.9 | 306 |
| 24 | 34.8 | 3.2 | 61.9 | 620 | 5 | 67.1 | 8.0 | 24.8 | 322 |
| 25 | 34.0 | 3.1 | 62.9 | 636 | 6 | 63.9 | 7.7 | 28.4 | 338 |
| 26 | 33.1 | 3.0 | 63.8 | 652 | 7 | 61.0 | 7.3 | 31.6 | 354 |
| 27 | 32.3 | 3.0 | 64.7 | 668 | 8 | 58.4 | 7.0 | 34.6 | 370 |
| 18-22-1 | 85.0 | 8.6 | 6.3 | 254 | 9 | 56.0 | 6.7 | 37.3 | 386 |
| 2 | 80.0 | 8.1 | 11.9 | 270 | 10 | 53.7 | 6.5 | 39.8 | 402 |
| 3 | 75.5 | 7.7 | 16.8 | 286 | 11 | 51.7 | 6.2 | 42.1 | 418 |
| 4 | 71.5 | 7.3 | 21.2 | 302 | 12 | 49.8 | 6.0 | 44.2 | 434 |
| 5 | 67.9 | 6.9 | 25.2 | 318 | 13 | 48.0 | 5.8 | 46.2 | 450 |
| 6 | 64.7 | 6.6 | 28.7 | 334 | 14 | 46.4 | 5.6 | 48.0 | 466 |
| 7 | 61.7 | 6.3 | 32.0 | 350 | 15 | 44.8 | 5.4 | 49.8 | 482 |
| 8 | 59.0 | 6.0 | 35.0 | 366 | 16 | 43.4 | 5.2 | 51.4 | 498 |
| 9 | 56.5 | 5.7 | 37.7 | 382 | 17 | 42.0 | 5.0 | 52.9 | 514 |
| 10 | 54.3 | 5.5 | 40.2 | 398 | 18 | 40.8 | 4.9 | 54.3 | 530 |
| 11 | 52.2 | 5.3 | 42.5 | 414 | 19 | 39.6 | 4.7 | 55.7 | 546 |
| 12 | 50.2 | 5.1 | 44.7 | 430 | 20 | 38.4 | 4.6 | 56.9 | 562 |
| 13 | 48.4 | 4.9 | 46.6 | 446 | 21 | 37.4 | 4.5 | 58.1 | 578 |
| 14 | 46.8 | 4.7 | 48.5 | 462 | 22 | 36.4 | 4.4 | 59.2 | 594 |
| 15 | 45.2 | 4.6 | 50.2 | 478 | 23 | 35.4 | 4.2 | 60.3 | 610 |
| 16 | 43.7 | 4.4 | 51.8 | 494 | 24 | 34.5 | 4.1 | 61.4 | 626 |
| 17 | 42.3 | 4.3 | 53.3 | 510 | 18-28-1 | 83.1 | 10.8 | 6.1 | 260 |
| 18 | 41.1 | 4.2 | 54.7 | 526 | 2 | 78.2 | 10.1 | 11.6 | 276 |
| 19 | 39.8 | 4.0 | 56.1 | 542 | 3 | 74.0 | 9.6 | 16.4 | 292 |
| 20 | 38.7 | 3.9 | 57.3 | 558 | 4 | 70.1 | 9.1 | 20.8 | 308 |
| 21 | 37.6 | 3.8 | 58.5 | 574 | 5 | 66.7 | 8.6 | 24.7 | 324 |
| 22 | 36.6 | 3.7 | 59.7 | 590 | 6 | 63.5 | 8.2 | 28.2 | 340 |
| 23 | 35.6 | 3.6 | 60.8 | 606 | 7 | 60.7 | 7.8 | 31.4 | 356 |
| 24 | 34.7 | 3.5 | 61.7 | 622 | 8 | 58.0 | 7.5 | 35.4 | 372 |
| 25 | 33.9 | 3.4 | 62.7 | 638 | 9 | 55.7 | 7.2 | 37.1 | 388 |
| 26 | 33.0 | 3.3 | 63.6 | 654 | 10 | 53.5 | 6.9 | 39.6 | 404 |
| 18-24-1 | 84.4 | 9.4 | 6.2 | 256 | 11 | 51.4 | 6.7 | 41.9 | 420 |
| 2 | 79.4 | 8.8 | 11.8 | 272 | 12 | 49.5 | 6.4 | 44.0 | 436 |
| 3 | 75.0 | 8.3 | 16.7 | 288 | 13 | 47.8 | 6.2 | 46.0 | 452 |
| 4 | 71.1 | 7.9 | 21.0 | 304 | 14 | 46.1 | 6.0 | 47.9 | 468 |
| 5 | 67.5 | 7.5 | 25.0 | 320 | 15 | 44.6 | 5.8 | 49.6 | 484 |
| 6 | 64.3 | 7.1 | 28.6 | 336 | 16 | 43.2 | 5.6 | 51.2 | 500 |
| 7 | 61.4 | 6.8 | 31.8 | 352 | 17 | 41.9 | 5.4 | 52.7 | 516 |
| 8 | 58.7 | 6.5 | 34.8 | 368 | 18 | 40.6 | 5.2 | 54.1 | 532 |
| 9 | 56.3 | 6.2 | 37.5 | 384 | 19 | 39.4 | 5.1 | 55.5 | 548 |
| 10 | 54.0 | 6.0 | 40.0 | 400 | 20 | 38.3 | 4.9 | 56.7 | 564 |
| 11 | 51.9 | 5.8 | 42.3 | 416 | 21 | 37.2 | 4.8 | 57.9 | 580 |
| 12 | 50.0 | 5.6 | 44.4 | 432 | 22 | 36.2 | 4.7 | 59.1 | 596 |
| 13 | 48.2 | 5.3 | 46.4 | 448 | 23 | 35.3 | 4.6 | 60.1 | 612 |
| 14 | 46.5 | 5.2 | 48.3 | 464 | 18-30-1 | 82.4 | 11.4 | 6.2 | 262 |
| 15 | 45.0 | 5.0 | 50.0 | 480 | 2 | 77.7 | 10.8 | 11.5 | 278 |
| 16 | 43.5 | 4.8 | 51.6 | 496 | 3 | 73.5 | 10.2 | 16.3 | 294 |
| 17 | 42.2 | 4.7 | 53.1 | 512 | 4 | 69.7 | 9.7 | 20.6 | 310 |
| 18 | 40.9 | 4.5 | 54.6 | 528 | 5 | 66.3 | 9.2 | 24.5 | 326 |
| 19 | 39.7 | 4.4 | 55.9 | 544 | 6 | 63.2 | 8.8 | 28.0 | 342 |
| 20 | 38.6 | 4.3 | 57.1 | 560 | 7 | 60.3 | 8.4 | 31.3 | 358 |
| 21 | 37.5 | 4.2 | 58.3 | 576 | 8 | 57.8 | 8.0 | 34.2 | 374 |
| 22 | 36.5 | 4.0 | 59.5 | 592 | 9 | 55.4 | 7.7 | 36.9 | 390 |
| 23 | 35.5 | 3.9 | 60.5 | 608 | 10 | 53.2 | 7.4 | 39.4 | 406 |
| 24 | 34.6 | 3.8 | 61.6 | 624 | 11 | 51.2 | 7.1 | 41.7 | 422 |
| 25 | 33.7 | 3.7 | 62.5 | 640 | 12 | 49.3 | 6.9 | 43.8 | 438 |
| 18-26-1 | 83.7 | 10.1 | 6.2 | 258 | 13 | 47.6 | 6.6 | 45.8 | 454 |
| 2 | 78.8 | 9.5 | 11.7 | 274 | 14 | 45.9 | 6.4 | 47.6 | 470 |
| 3 | 74.5 | 8.9 | 16.6 | 290 | 15 | 44.4 | 6.2 | 49.4 | 486 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 18-30-16 | 43.0 | 6.0 | 51.0 | 502 | 18-36-12 | 48.7 | 8.1 | 43.2 | 444 |
| 17 | 41.7 | 5.8 | 52.5 | 518 | 13 | 47.0 | 7.8 | 45.2 | 460 |
| 18 | 40.5 | 5.6 | 53.0 | 534 | 14 | 45.4 | 7.5 | 47.1 | 476 |
| 19 | 39.3 | 5.4 | 55.3 | 550 | 15 | 43.9 | 7.3 | 48.8 | 492 |
| 20 | 38.2 | 5.3 | 56.5 | 566 | 16 | 42.5 | 7.1 | 50.4 | 508 |
| 21 | 37.1 | 5.2 | 57.7 | 582 | 17 | 41.2 | 6.9 | 51.9 | 524 |
| 22 | 36.1 | 5.0 | 68.8 | 598 | 18 | 40.0 | 6.7 | 53.3 | 540 |
| 18-32-1 | 81.8 | 12.1 | 6.1 | 264 | 19 | 38.8 | 6.5 | 54.7 | 556 |
| 2 | 77.1 | 11.4 | 11.4 | 280 | 18-38-1 | 80.0 | 14.1 | 5.9 | 270 |
| 3 | 73.0 | 10.8 | 16.2 | 296 | 2 | 75.5 | 13.3 | 11.2 | 286 |
| 4 | 69.2 | 10.2 | 20.5 | 312 | 3 | 71.5 | 12.6 | 15.9 | 302 |
| 5 | 65.8 | 9.7 | 24.4 | 328 | 4 | 67.9 | 11.9 | 20.1 | 318 |
| 6 | 62.8 | 9.3 | 27.9 | 344 | 5 | 64.7 | 11.4 | 23.9 | 334 |
| 7 | 60.0 | 8.9 | 31.1 | 360 | 6 | 61.7 | 10.9 | 27.4 | 350 |
| 8 | 57.4 | 8.5 | 34.0 | 376 | 7 | 59.0 | 10.4 | 30.6 | 366 |
| 9 | 55.1 | 8.2 | 36.7 | 392 | 8 | 56.5 | 10.0 | 33.5 | 382 |
| 10 | 52.9 | 7.8 | 39.2 | 408 | 9 | 54.3 | 9.5 | 36.2 | 398 |
| 11 | 50.9 | 7.5 | 41.5 | 424 | 10 | 52.2 | 9.2 | 38.6 | 414 |
| 12 | 49.1 | 7.3 | 43.6 | 440 | 11 | 50.2 | 8.8 | 40.9 | 430 |
| 13 | 47.4 | 7.0 | 45.6 | 456 | 12 | 48.4 | 8.5 | 43.0 | 446 |
| 14 | 45.7 | 6.8 | 47.4 | 472 | 13 | 46.8 | 8.2 | 45.0 | 462 |
| 15 | 44.3 | 6.5 | 49.2 | 488 | 14 | 45.2 | 7.9 | 46.9 | 478 |
| 16 | 42.8 | 6.3 | 50.8 | 504 | 15 | 43.7 | 7.7 | 48.6 | 494 |
| 17 | 41.5 | 6.1 | 52.3 | 520 | 16 | 42.3 | 7.5 | 50.2 | 510 |
| 18 | 40.3 | 5.9 | 53.7 | 536 | 17 | 41.1 | 7.2 | 51.7 | 526 |
| 19 | 39.1 | 5.8 | 55.1 | 552 | 18 | 39.8 | 7.0 | 53.1 | 542 |
| 20 | 38.0 | 5.6 | 56.3 | 568 | 19-2-1 | 92.7 | 0.8 | 6.5 | 246 |
| 21 | 37.0 | 5.5 | 67.5 | 584 | 2 | 87.0 | 0.8 | 12.2 | 262 |
| 18-34-1 | 81.2 | 12.8 | 6.0 | 266 | 3 | 82.0 | 0.7 | 17.2 | 278 |
| 2 | 76.6 | 12.1 | 11.3 | 282 | 4 | 77.6 | 0.7 | 21.7 | 294 |
| 3 | 72.5 | 11.4 | 16.1 | 298 | 5 | 73.6 | 0.6 | 25.8 | 310 |
| 4 | 68.8 | 10.8 | 20.4 | 314 | 6 | 70.0 | 0.6 | 29.4 | 326 |
| 5 | 65.4 | 10.3 | 24.2 | 330 | 7 | 66.7 | 0.6 | 32.7 | 342 |
| 6 | 62.4 | 9.8 | 27.8 | 346 | 8 | 63.7 | 0.5 | 35.8 | 358 |
| 7 | 59.7 | 9.4 | 30.9 | 362 | 9 | 61.0 | 0.5 | 38.5 | 374 |
| 8 | 57.1 | 9.0 | 33.9 | 378 | 10 | 58.5 | 0.5 | 41.0 | 390 |
| 9 | 54.8 | 8.6 | 36.5 | 394 | 11 | 56.2 | 0.5 | 43.3 | 406 |
| 10 | 52.7 | 8.3 | 39.0 | 410 | 12 | 54.0 | 0.5 | 45.5 | 422 |
| 11 | 50.7 | 8.0 | 41.1 | 426 | 13 | 52.1 | 0.4 | 47.5 | 438 |
| 12 | 48.9 | 7.7 | 43.4 | 442 | 14 | 50.2 | 0.4 | 49.3 | 454 |
| 13 | 47.2 | 7.4 | 45.4 | 458 | 15 | 48.5 | 0.4 | 51.0 | 470 |
| 14 | 45.6 | 7.2 | 47.2 | 474 | 16 | 46.9 | 0.4 | 52.7 | 486 |
| 15 | 44.1 | 6.9 | 49.0 | 490 | 17 | 45.4 | 0.4 | 54.2 | 502 |
| 16 | 42.7 | 6.7 | 50.6 | 506 | 18 | 44.0 | 0.4 | 55.6 | 518 |
| 17 | 41.4 | 6.5 | 52.1 | 522 | 19 | 42.7 | 0.4 | 56.9 | 534 |
| 18 | 40.1 | 6.3 | 53.5 | 538 | 20 | 41.4 | 0.4 | 58.2 | 550 |
| 19 | 39.0 | 6.1 | 54.9 | 554 | 21 | 40.3 | 0.3 | 59.4 | 566 |
| 20 | 37.9 | 5.9 | 56.1 | 570 | 19-4-1 | 91.9 | 1.6 | 6.4 | 248 |
| 18-36-1 | 80.6 | 13.4 | 6.0 | 268 | 2 | 86.3 | 1.5 | 12.1 | 264 |
| 2 | 76.0 | 12.7 | 11.3 | 284 | 3 | 81.4 | 1.4 | 17.2 | 280 |
| 3 | 72.0 | 12.0 | 16.0 | 300 | 4 | 77.0 | 1.3 | 21.6 | 296 |
| 4 | 68.3 | 11.4 | 20.3 | 316 | 5 | 73.1 | 1.3 | 25.6 | 312 |
| 5 | 65.1 | 10.8 | 24.1 | 332 | 6 | 69.5 | 1.2 | 29.3 | 328 |
| 6 | 62.1 | 10.3 | 27.6 | 348 | 7 | 66.3 | 1.1 | 32.6 | 344 |
| 7 | 59.3 | 9.9 | 30.8 | 364 | 8 | 63.3 | 1.1 | 35.6 | 360 |
| 8 | 56.8 | 9.5 | 33.7 | 380 | 9 | 60.6 | 1.0 | 38.3 | 376 |
| 9 | 54.5 | 9.1 | 36.4 | 396 | 10 | 58.2 | 1.0 | 40.8 | 392 |
| 10 | 52.4 | 8.7 | 38.8 | 412 | 11 | 56.0 | 0.9 | 43.1 | 408 |
| 11 | 50.5 | 8.4 | 41.1 | 428 | 12 | 53.8 | 0.9 | 45.3 | 424 |

| C—H—O | C% | H% | O% | M.G. | C—H—O | C% | H% | O% | M.G. |
|---------|------|-----|------|------|---------|------|-----|------|------|
| 19-4-13 | 51,8 | 0,9 | 47,3 | 440 | 19-10-3 | 79,7 | 3,5 | 16,8 | 286 |
| 14 | 50,0 | 0,9 | 49,1 | 456 | 4 | 75,5 | 3,3 | 21,2 | 302 |
| 15 | 48,3 | 0,8 | 50,9 | 472 | 5 | 71,7 | 3,1 | 25,2 | 318 |
| 16 | 46,7 | 0,8 | 52,4 | 488 | 6 | 68,3 | 3,0 | 28,7 | 334 |
| 17 | 45,2 | 0,8 | 54,0 | 504 | 7 | 65,1 | 2,8 | 32,0 | 350 |
| 18 | 43,8 | 0,8 | 55,4 | 520 | 8 | 62,3 | 2,7 | 35,0 | 366 |
| 19 | 42,5 | 0,7 | 56,7 | 536 | 9 | 59,7 | 2,6 | 37,7 | 382 |
| 20 | 41,3 | 0,7 | 58,0 | 552 | 10 | 57,3 | 2,5 | 40,2 | 398 |
| 21 | 40,1 | 0,7 | 59,2 | 568 | 11 | 55,1 | 2,4 | 42,5 | 414 |
| 22 | 39,0 | 0,7 | 60,3 | 584 | 12 | 53,0 | 2,3 | 44,6 | 430 |
| 19-6-1 | 91,2 | 2,4 | 64,0 | 250 | 13 | 51,1 | 2,2 | 46,6 | 446 |
| 2 | 85,7 | 2,2 | 12,0 | 266 | 14 | 49,3 | 2,2 | 48,5 | 462 |
| 3 | 80,9 | 2,1 | 17,0 | 282 | 15 | 47,7 | 2,1 | 50,2 | 478 |
| 4 | 76,5 | 2,0 | 21,5 | 298 | 16 | 46,2 | 2,0 | 51,8 | 494 |
| 5 | 72,6 | 1,9 | 25,5 | 314 | 17 | 44,7 | 2,0 | 53,3 | 510 |
| 6 | 69,1 | 1,8 | 29,1 | 330 | 18 | 43,3 | 1,9 | 54,8 | 526 |
| 7 | 65,9 | 1,7 | 32,4 | 346 | 19 | 42,1 | 1,8 | 56,1 | 542 |
| 8 | 63,0 | 1,6 | 35,4 | 362 | 20 | 40,9 | 1,8 | 57,3 | 558 |
| 9 | 60,3 | 1,6 | 38,1 | 378 | 21 | 39,7 | 1,7 | 58,5 | 574 |
| 10 | 57,9 | 1,5 | 40,6 | 394 | 22 | 38,6 | 1,7 | 59,7 | 590 |
| 11 | 55,6 | 1,4 | 42,9 | 410 | 23 | 37,6 | 1,6 | 60,7 | 606 |
| 12 | 53,5 | 1,4 | 45,1 | 426 | 24 | 36,6 | 1,6 | 61,7 | 622 |
| 13 | 51,6 | 1,3 | 47,1 | 442 | 25 | 35,7 | 1,6 | 62,7 | 638 |
| 14 | 49,8 | 1,3 | 48,9 | 458 | 19-12-1 | 89,1 | 4,7 | 6,2 | 256 |
| 15 | 48,1 | 1,2 | 50,6 | 474 | 2 | 83,8 | 4,4 | 11,8 | 272 |
| 16 | 46,5 | 1,2 | 52,2 | 490 | 3 | 79,2 | 4,1 | 16,7 | 288 |
| 17 | 45,1 | 1,2 | 53,7 | 506 | 4 | 75,0 | 3,9 | 21,1 | 304 |
| 18 | 43,7 | 1,1 | 55,2 | 522 | 5 | 71,2 | 3,7 | 25,0 | 320 |
| 19 | 42,4 | 1,1 | 56,5 | 538 | 6 | 67,8 | 3,6 | 28,6 | 336 |
| 20 | 41,2 | 1,1 | 57,7 | 554 | 7 | 64,8 | 3,4 | 31,8 | 352 |
| 21 | 40,0 | 1,0 | 58,9 | 570 | 8 | 62,0 | 3,2 | 34,8 | 368 |
| 22 | 38,9 | 1,0 | 60,1 | 586 | 9 | 59,4 | 3,1 | 37,5 | 384 |
| 23 | 37,9 | 1,0 | 61,1 | 602 | 10 | 57,0 | 3,0 | 40,0 | 400 |
| 19-8-1 | 90,5 | 3,2 | 6,3 | 252 | 11 | 54,8 | 2,9 | 42,3 | 416 |
| 2 | 85,1 | 3,0 | 11,9 | 268 | 12 | 52,8 | 2,8 | 44,4 | 432 |
| 3 | 80,3 | 2,8 | 16,9 | 284 | 13 | 50,9 | 2,7 | 46,4 | 448 |
| 4 | 76,0 | 2,7 | 21,3 | 300 | 14 | 49,1 | 2,6 | 48,3 | 464 |
| 5 | 72,2 | 2,5 | 25,3 | 316 | 15 | 47,5 | 2,5 | 50,0 | 480 |
| 6 | 68,7 | 2,4 | 28,9 | 332 | 16 | 46,0 | 2,4 | 51,6 | 496 |
| 7 | 65,5 | 2,3 | 32,2 | 348 | 17 | 44,5 | 2,3 | 53,1 | 512 |
| 8 | 62,6 | 2,2 | 35,2 | 364 | 18 | 43,2 | 2,3 | 54,5 | 528 |
| 9 | 60,0 | 2,1 | 37,9 | 380 | 19 | 41,9 | 2,2 | 55,9 | 544 |
| 10 | 57,6 | 2,0 | 40,4 | 396 | 20 | 40,7 | 2,1 | 57,1 | 560 |
| 11 | 55,3 | 1,9 | 42,7 | 412 | 21 | 39,6 | 2,1 | 58,3 | 576 |
| 12 | 53,3 | 1,9 | 44,8 | 428 | 22 | 38,5 | 2,0 | 59,5 | 592 |
| 13 | 51,3 | 1,8 | 46,9 | 444 | 23 | 37,5 | 2,0 | 60,5 | 608 |
| 14 | 49,6 | 1,7 | 48,7 | 460 | 24 | 36,5 | 1,9 | 61,5 | 624 |
| 15 | 47,9 | 1,7 | 50,4 | 476 | 25 | 35,6 | 1,9 | 62,5 | 640 |
| 16 | 46,3 | 1,6 | 52,0 | 492 | 26 | 34,8 | 1,8 | 63,4 | 656 |
| 17 | 44,9 | 1,6 | 53,5 | 508 | 19-14-1 | 88,4 | 5,4 | 6,2 | 268 |
| 18 | 43,5 | 1,5 | 55,0 | 524 | 2 | 83,2 | 5,1 | 11,7 | 274 |
| 19 | 42,2 | 1,5 | 56,3 | 540 | 3 | 78,6 | 4,8 | 16,5 | 290 |
| 20 | 41,0 | 1,4 | 57,6 | 556 | 4 | 74,5 | 4,6 | 20,9 | 306 |
| 21 | 39,9 | 1,4 | 58,7 | 572 | 5 | 70,8 | 4,3 | 24,8 | 322 |
| 22 | 38,8 | 1,4 | 59,8 | 588 | 6 | 67,4 | 4,1 | 28,5 | 338 |
| 23 | 37,7 | 1,3 | 60,9 | 604 | 7 | 64,4 | 3,9 | 31,6 | 354 |
| 24 | 36,8 | 1,3 | 61,9 | 620 | 8 | 61,6 | 3,8 | 34,6 | 370 |
| 19-10-1 | 89,8 | 3,9 | 6,3 | 254 | 9 | 59,1 | 3,6 | 37,3 | 386 |
| 2 | 84,4 | 3,7 | 11,9 | 270 | 10 | 56,7 | 3,5 | 39,8 | 402 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|-----|------|------|----------|------|-----|------|------|
| 19-14-11 | 54.6 | 3.3 | 42.1 | 418 | 19-18-15 | 46.9 | 3.7 | 49.4 | 486 |
| 12 | 52.5 | 3.2 | 44.2 | 434 | 16 | 45.4 | 3.6 | 51.0 | 502 |
| 13 | 50.7 | 3.1 | 46.2 | 450 | 17 | 44.0 | 3.5 | 52.5 | 518 |
| 14 | 48.9 | 3.0 | 48.1 | 466 | 18 | 42.7 | 3.4 | 53.9 | 534 |
| 15 | 47.3 | 2.9 | 49.8 | 482 | 19 | 41.4 | 3.3 | 55.3 | 550 |
| 16 | 45.8 | 2.8 | 51.4 | 498 | 20 | 40.3 | 3.2 | 56.5 | 566 |
| 17 | 44.4 | 2.7 | 52.9 | 514 | 21 | 39.2 | 3.1 | 57.7 | 582 |
| 18 | 43.0 | 2.6 | 54.4 | 530 | 22 | 38.1 | 3.0 | 58.8 | 598 |
| 19 | 41.7 | 2.5 | 55.8 | 546 | 23 | 37.1 | 2.9 | 59.9 | 614 |
| 20 | 40.6 | 2.5 | 56.9 | 562 | 24 | 36.2 | 2.8 | 61.0 | 630 |
| 21 | 39.4 | 2.4 | 58.1 | 578 | 25 | 35.3 | 2.8 | 61.9 | 646 |
| 22 | 38.4 | 2.3 | 59.2 | 594 | 26 | 34.4 | 2.7 | 62.8 | 662 |
| 23 | 37.4 | 2.3 | 60.3 | 610 | 27 | 33.6 | 2.6 | 63.7 | 678 |
| 24 | 36.4 | 2.2 | 61.4 | 626 | 28 | 32.9 | 2.6 | 64.5 | 694 |
| 25 | 35.5 | 2.2 | 62.3 | 642 | 29 | 32.1 | 2.5 | 65.4 | 710 |
| 26 | 34.6 | 2.1 | 63.3 | 658 | 19-20-1 | 86.4 | 7.6 | 6.0 | 264 |
| 27 | 33.8 | 2.1 | 64.1 | 674 | 2 | 81.4 | 7.1 | 11.4 | 280 |
| 19-16-1 | 87.7 | 6.1 | 6.1 | 260 | 3 | 77.0 | 6.7 | 16.2 | 296 |
| 2 | 82.6 | 5.8 | 11.6 | 276 | 4 | 73.1 | 6.4 | 20.5 | 312 |
| 3 | 78.1 | 5.5 | 16.4 | 292 | 5 | 69.5 | 6.0 | 24.4 | 328 |
| 4 | 74.0 | 5.2 | 20.8 | 308 | 6 | 66.3 | 5.8 | 27.9 | 344 |
| 5 | 70.4 | 4.9 | 24.7 | 324 | 7 | 63.3 | 5.5 | 31.1 | 360 |
| 6 | 67.1 | 4.7 | 28.2 | 340 | 8 | 60.6 | 5.3 | 34.0 | 376 |
| 7 | 64.0 | 4.5 | 31.4 | 356 | 9 | 58.1 | 5.1 | 36.7 | 392 |
| 8 | 61.3 | 4.3 | 34.4 | 372 | 10 | 55.9 | 4.9 | 39.2 | 408 |
| 9 | 58.8 | 4.1 | 37.1 | 388 | 11 | 53.8 | 4.7 | 41.5 | 424 |
| 10 | 56.4 | 3.9 | 39.6 | 404 | 12 | 51.8 | 4.5 | 43.6 | 440 |
| 11 | 54.3 | 3.8 | 41.9 | 420 | 13 | 50.0 | 4.4 | 45.6 | 456 |
| 12 | 52.3 | 3.7 | 44.0 | 436 | 14 | 48.3 | 4.2 | 47.5 | 472 |
| 13 | 50.4 | 3.5 | 46.0 | 452 | 15 | 46.7 | 4.1 | 49.2 | 488 |
| 14 | 48.7 | 3.4 | 47.9 | 468 | 16 | 45.1 | 4.0 | 50.8 | 504 |
| 15 | 47.0 | 3.3 | 49.7 | 484 | 17 | 43.8 | 3.8 | 52.3 | 520 |
| 16 | 45.6 | 3.2 | 51.2 | 500 | 18 | 42.5 | 3.7 | 53.7 | 536 |
| 17 | 44.2 | 3.1 | 52.7 | 516 | 19 | 41.3 | 3.6 | 55.1 | 552 |
| 18 | 42.8 | 3.0 | 54.1 | 532 | 20 | 40.1 | 3.5 | 56.3 | 568 |
| 19 | 41.6 | 2.9 | 55.5 | 548 | 21 | 39.0 | 3.4 | 57.5 | 584 |
| 20 | 40.4 | 2.8 | 56.7 | 564 | 22 | 38.0 | 3.3 | 58.7 | 600 |
| 21 | 39.3 | 2.7 | 57.9 | 580 | 23 | 37.0 | 3.2 | 59.7 | 616 |
| 22 | 38.2 | 2.7 | 59.1 | 596 | 24 | 36.1 | 3.1 | 60.8 | 632 |
| 23 | 37.2 | 2.6 | 60.1 | 612 | 25 | 35.2 | 3.1 | 61.7 | 648 |
| 24 | 36.3 | 2.5 | 61.1 | 628 | 26 | 34.3 | 3.0 | 62.7 | 664 |
| 25 | 35.4 | 2.5 | 62.1 | 644 | 27 | 33.5 | 2.9 | 63.5 | 680 |
| 26 | 34.6 | 2.4 | 63.0 | 660 | 28 | 32.7 | 2.9 | 64.4 | 696 |
| 27 | 33.7 | 2.3 | 63.9 | 676 | 29 | 32.0 | 2.8 | 65.2 | 712 |
| 28 | 32.9 | 2.3 | 64.7 | 692 | 19-22-1 | 85.7 | 8.3 | 6.0 | 266 |
| 19-18-1 | 87.0 | 6.9 | 6.1 | 262 | 2 | 80.8 | 7.8 | 11.4 | 282 |
| 2 | 82.0 | 6.5 | 11.5 | 278 | 3 | 76.5 | 7.4 | 16.1 | 298 |
| 3 | 77.5 | 6.1 | 16.3 | 294 | 4 | 72.6 | 7.0 | 20.4 | 314 |
| 4 | 73.6 | 5.8 | 20.6 | 310 | 5 | 69.1 | 6.7 | 24.2 | 330 |
| 5 | 69.6 | 5.5 | 24.5 | 326 | 6 | 65.9 | 6.3 | 27.7 | 346 |
| 6 | 66.7 | 5.2 | 28.1 | 342 | 7 | 63.0 | 6.1 | 30.9 | 362 |
| 7 | 63.7 | 5.0 | 31.3 | 358 | 8 | 60.3 | 5.8 | 33.9 | 378 |
| 8 | 61.0 | 4.8 | 34.2 | 374 | 9 | 57.9 | 5.6 | 36.5 | 394 |
| 9 | 58.5 | 4.6 | 36.9 | 390 | 10 | 55.6 | 5.3 | 39.0 | 410 |
| 10 | 56.2 | 4.4 | 39.4 | 406 | 11 | 53.5 | 5.1 | 41.3 | 426 |
| 11 | 54.0 | 4.3 | 41.7 | 422 | 12 | 51.6 | 5.0 | 43.4 | 442 |
| 12 | 52.0 | 4.1 | 43.8 | 438 | 13 | 49.8 | 4.8 | 45.4 | 458 |
| 13 | 50.2 | 3.9 | 45.8 | 454 | 14 | 48.1 | 4.6 | 47.2 | 474 |
| 14 | 48.5 | 3.8 | 47.7 | 470 | 15 | 46.5 | 4.5 | 49.0 | 490 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|-----|------|------|----------|------|------|------|------|
| 19-22-16 | 45.1 | 4.3 | 50.6 | 506 | 19-26-20 | 39.7 | 4.5 | 55.7 | 574 |
| 17 | 43.7 | 4.2 | 52.1 | 522 | 21 | 38.6 | 4.4 | 57.0 | 590 |
| 18 | 42.4 | 4.1 | 53.5 | 538 | 22 | 37.6 | 4.3 | 58.1 | 606 |
| 19 | 41.1 | 4.0 | 54.9 | 554 | 23 | 36.7 | 4.2 | 59.1 | 622 |
| 20 | 40.0 | 3.9 | 56.1 | 570 | 24 | 35.7 | 4.1 | 60.2 | 638 |
| 21 | 38.9 | 3.7 | 57.3 | 586 | 25 | 34.8 | 4.0 | 61.2 | 654 |
| 22 | 37.9 | 3.6 | 58.5 | 602 | 26 | 34.0 | 3.9 | 62.1 | 670 |
| 23 | 36.9 | 3.5 | 59.5 | 618 | 19-28-1 | 83.8 | 10.3 | 5.9 | 272 |
| 24 | 36.0 | 3.5 | 60.5 | 634 | 2 | 79.1 | 9.7 | 11.1 | 288 |
| 25 | 35.1 | 3.4 | 61.5 | 650 | 3 | 75.0 | 9.2 | 15.8 | 304 |
| 26 | 34.2 | 3.3 | 62.5 | 666 | 4 | 71.2 | 8.7 | 20.0 | 320 |
| 27 | 33.4 | 3.2 | 63.4 | 682 | 5 | 67.8 | 8.3 | 23.8 | 336 |
| 28 | 32.7 | 3.1 | 64.2 | 698 | 6 | 64.8 | 7.9 | 27.3 | 352 |
| 19-24-1 | 85.1 | 8.9 | 6.0 | 268 | 7 | 61.9 | 7.6 | 30.4 | 368 |
| 2 | 80.3 | 8.4 | 11.3 | 284 | 8 | 59.4 | 7.3 | 33.3 | 384 |
| 3 | 76.0 | 8.0 | 16.0 | 300 | 9 | 57.0 | 7.0 | 36.0 | 400 |
| 4 | 72.2 | 7.6 | 20.2 | 316 | 10 | 54.8 | 6.7 | 38.5 | 416 |
| 5 | 68.7 | 7.2 | 24.1 | 332 | 11 | 52.8 | 6.5 | 40.7 | 432 |
| 6 | 65.5 | 6.9 | 27.6 | 348 | 12 | 50.9 | 6.3 | 42.8 | 448 |
| 7 | 62.6 | 6.6 | 30.8 | 364 | 13 | 49.1 | 6.0 | 44.8 | 464 |
| 8 | 60.0 | 6.3 | 33.7 | 380 | 14 | 47.5 | 5.8 | 46.7 | 480 |
| 9 | 57.6 | 6.0 | 36.4 | 396 | 15 | 46.0 | 5.6 | 48.4 | 496 |
| 10 | 55.3 | 5.8 | 38.8 | 412 | 16 | 44.5 | 5.5 | 50.0 | 512 |
| 11 | 53.3 | 5.6 | 41.1 | 428 | 17 | 43.2 | 5.3 | 51.5 | 528 |
| 12 | 51.3 | 5.4 | 43.2 | 444 | 18 | 41.9 | 5.1 | 52.9 | 544 |
| 13 | 49.5 | 5.2 | 45.2 | 460 | 19 | 40.7 | 5.0 | 54.3 | 560 |
| 14 | 47.9 | 5.0 | 47.1 | 476 | 20 | 39.6 | 4.8 | 55.5 | 576 |
| 15 | 46.3 | 4.9 | 48.8 | 492 | 21 | 38.5 | 4.7 | 56.8 | 592 |
| 16 | 44.9 | 4.7 | 50.4 | 508 | 22 | 37.5 | 4.6 | 57.9 | 608 |
| 17 | 43.5 | 4.6 | 51.9 | 524 | 23 | 36.5 | 4.5 | 59.0 | 624 |
| 18 | 42.2 | 4.4 | 53.3 | 540 | 24 | 35.6 | 4.4 | 60.0 | 640 |
| 19 | 41.0 | 4.3 | 54.7 | 556 | 25 | 34.7 | 4.3 | 61.0 | 656 |
| 20 | 39.9 | 4.2 | 55.9 | 572 | 10-30-1 | 83.2 | 10.9 | 5.8 | 274 |
| 21 | 38.8 | 4.1 | 57.1 | 588 | 2 | 78.6 | 10.3 | 11.0 | 290 |
| 22 | 37.7 | 4.0 | 58.3 | 604 | 3 | 74.5 | 9.8 | 15.7 | 306 |
| 23 | 36.8 | 3.9 | 59.3 | 620 | 4 | 70.8 | 9.3 | 19.9 | 322 |
| 24 | 35.9 | 3.7 | 60.4 | 636 | 5 | 67.4 | 8.9 | 23.7 | 338 |
| 25 | 35.0 | 3.7 | 61.3 | 652 | 6 | 64.4 | 8.5 | 27.1 | 354 |
| 26 | 34.1 | 3.6 | 62.3 | 668 | 7 | 61.6 | 8.1 | 30.3 | 370 |
| 27 | 33.3 | 3.5 | 63.2 | 684 | 8 | 59.1 | 7.8 | 33.1 | 386 |
| 19-26-1 | 84.4 | 9.6 | 5.9 | 270 | 9 | 56.7 | 7.4 | 35.8 | 402 |
| 2 | 79.7 | 9.1 | 11.2 | 286 | 10 | 54.5 | 7.2 | 38.3 | 418 |
| 3 | 75.5 | 8.6 | 15.9 | 302 | 11 | 52.5 | 6.9 | 40.5 | 434 |
| 4 | 71.7 | 8.2 | 20.1 | 318 | 12 | 50.7 | 6.7 | 42.6 | 450 |
| 5 | 68.3 | 7.8 | 23.9 | 334 | 13 | 48.9 | 6.4 | 44.6 | 466 |
| 6 | 65.1 | 7.4 | 27.4 | 350 | 14 | 47.3 | 6.2 | 46.4 | 482 |
| 7 | 62.3 | 7.1 | 30.6 | 366 | 15 | 45.8 | 6.0 | 48.2 | 498 |
| 8 | 59.7 | 6.8 | 33.5 | 382 | 16 | 44.3 | 5.8 | 49.8 | 514 |
| 9 | 57.3 | 6.5 | 36.2 | 398 | 17 | 43.0 | 5.6 | 51.3 | 530 |
| 10 | 55.1 | 6.3 | 38.6 | 414 | 18 | 41.7 | 5.5 | 52.7 | 546 |
| 11 | 53.0 | 6.0 | 40.9 | 430 | 19 | 40.6 | 5.3 | 54.1 | 562 |
| 12 | 51.1 | 5.8 | 43.1 | 446 | 20 | 39.4 | 5.2 | 55.3 | 578 |
| 13 | 49.4 | 5.6 | 45.0 | 462 | 21 | 38.4 | 5.0 | 56.6 | 594 |
| 14 | 47.7 | 5.4 | 46.9 | 478 | 22 | 37.4 | 4.9 | 57.7 | 610 |
| 15 | 46.2 | 5.2 | 48.6 | 494 | 23 | 36.4 | 4.8 | 58.8 | 626 |
| 16 | 44.7 | 5.1 | 50.2 | 510 | 24 | 35.5 | 4.7 | 59.8 | 642 |
| 17 | 43.3 | 4.9 | 51.7 | 526 | 19-32-1 | 82.6 | 11.6 | 5.8 | 276 |
| 18 | 42.1 | 4.8 | 53.1 | 542 | 2 | 78.1 | 10.9 | 10.9 | 292 |
| 19 | 40.9 | 4.6 | 54.5 | 558 | 3 | 74.0 | 10.4 | 15.6 | 308 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|------|------|------|----------|------|------|------|------|
| 19-32-4 | 70,4 | 9,9 | 19,7 | 324 | 19-36-18 | 41,3 | 6,5 | 52,2 | 552 |
| 5 | 67,1 | 9,4 | 23,5 | 340 | 19 | 40,1 | 6,3 | 53,5 | 568 |
| 6 | 64,0 | 9,0 | 27,0 | 356 | 20 | 39,0 | 6,1 | 54,8 | 584 |
| 7 | 61,3 | 8,6 | 30,1 | 372 | 21 | 38,0 | 6,0 | 56,0 | 600 |
| 8 | 58,8 | 8,2 | 33,0 | 388 | 19-38-1 | 80,8 | 13,5 | 5,7 | 282 |
| 9 | 56,4 | 7,9 | 35,6 | 404 | 2 | 76,5 | 12,7 | 10,7 | 298 |
| 10 | 54,3 | 7,6 | 38,1 | 420 | 3 | 72,6 | 12,1 | 15,3 | 314 |
| 11 | 52,4 | 7,3 | 40,3 | 436 | 4 | 69,1 | 11,5 | 19,4 | 330 |
| 12 | 50,4 | 7,1 | 42,5 | 452 | 5 | 65,9 | 11,0 | 23,1 | 346 |
| 13 | 48,7 | 6,8 | 44,4 | 468 | 6 | 63,0 | 10,5 | 26,5 | 362 |
| 14 | 47,1 | 6,6 | 46,3 | 484 | 7 | 60,3 | 10,0 | 29,6 | 378 |
| 15 | 45,6 | 6,4 | 48,0 | 500 | 8 | 57,9 | 9,6 | 32,5 | 394 |
| 16 | 44,2 | 6,2 | 49,6 | 516 | 9 | 55,6 | 9,3 | 35,1 | 410 |
| 17 | 42,8 | 6,0 | 51,1 | 532 | 10 | 53,5 | 8,9 | 37,6 | 426 |
| 18 | 41,6 | 5,8 | 52,6 | 548 | 11 | 51,6 | 8,6 | 39,8 | 442 |
| 19 | 40,4 | 5,7 | 53,9 | 564 | 12 | 49,8 | 8,3 | 41,9 | 458 |
| 20 | 39,3 | 5,5 | 55,2 | 580 | 13 | 48,1 | 8,0 | 43,9 | 474 |
| 21 | 38,2 | 5,4 | 56,4 | 596 | 14 | 46,5 | 7,7 | 45,7 | 490 |
| 22 | 37,2 | 5,2 | 57,5 | 612 | 15 | 45,0 | 7,5 | 47,4 | 506 |
| 23 | 36,3 | 5,1 | 58,6 | 628 | 16 | 43,7 | 7,3 | 49,0 | 522 |
| 19-34-1 | 82,0 | 12,2 | 5,7 | 278. | 17 | 42,4 | 7,1 | 50,5 | 538 |
| 2 | 77,5 | 11,5 | 10,9 | 294 | 18 | 41,2 | 6,8 | 52,0 | 554 |
| 3 | 73,5 | 11,0 | 15,5 | 310 | 19 | 40,0 | 6,7 | 53,3 | 570 |
| 4 | 69,9 | 10,4 | 19,6 | 326 | 20 | 38,9 | 6,5 | 54,6 | 586 |
| 5 | 66,7 | 9,9 | 23,4 | 342 | 19-40-1 | 80,3 | 14,1 | 5,6 | 284 |
| 6 | 63,7 | 9,5 | 26,8 | 358 | 2 | 76,0 | 13,3 | 10,7 | 300 |
| 7 | 60,9 | 9,1 | 29,9 | 374 | 3 | 72,2 | 12,6 | 15,2 | 316 |
| 8 | 58,5 | 8,7 | 32,8 | 390 | 4 | 68,7 | 12,0 | 19,3 | 332 |
| 9 | 56,1 | 8,4 | 35,5 | 406 | 5 | 65,5 | 11,5 | 23,0 | 348 |
| 10 | 54,0 | 8,0 | 37,9 | 422 | 6 | 62,6 | 11,0 | 26,4 | 364 |
| 11 | 52,1 | 7,7 | 40,2 | 438 | 7 | 60,0 | 10,5 | 29,5 | 380 |
| 12 | 50,2 | 7,5 | 42,3 | 454 | 8 | 57,6 | 10,1 | 32,3 | 396 |
| 13 | 48,5 | 7,2 | 44,3 | 470 | 9 | 55,3 | 9,7 | 34,9 | 412 |
| 14 | 46,9 | 7,0 | 46,1 | 486 | 10 | 53,3 | 9,3 | 37,4 | 428 |
| 15 | 45,4 | 6,8 | 47,8 | 502 | 11 | 51,3 | 9,0 | 39,6 | 444 |
| 16 | 44,0 | 6,6 | 49,4 | 518 | 12 | 49,6 | 8,7 | 41,7 | 460 |
| 17 | 42,7 | 6,4 | 50,9 | 534 | 13 | 47,9 | 8,4 | 43,7 | 476 |
| 18 | 41,5 | 6,2 | 52,3 | 550 | 14 | 46,3 | 8,1 | 45,5 | 492 |
| 19 | 40,3 | 6,0 | 53,7 | 566 | 15 | 44,9 | 7,9 | 47,2 | 508 |
| 20 | 39,2 | 5,8 | 55,0 | 582 | 16 | 43,5 | 7,6 | 48,8 | 524 |
| 21 | 38,1 | 5,7 | 56,2 | 598 | 17 | 42,2 | 7,4 | 50,4 | 540 |
| 22 | 37,1 | 5,5 | 57,3 | 614 | 18 | 41,0 | 7,2 | 51,8 | 556 |
| 19-36-1 | 81,4 | 12,8 | 5,7 | 280 | 19 | 39,8 | 7,0 | 53,1 | 572 |
| 2 | 77,0 | 12,2 | 10,8 | 296 | 20-2-1 | 93,0 | 0,8 | 6,2 | 258 |
| 3 | 73,1 | 11,5 | 15,4 | 312 | 2 | 87,6 | 0,7 | 11,7 | 274 |
| 4 | 69,5 | 11,0 | 19,5 | 328 | 3 | 82,7 | 0,7 | 16,5 | 290 |
| 5 | 66,3 | 10,5 | 23,2 | 344 | 4 | 78,4 | 0,6 | 20,9 | 306 |
| 6 | 63,3 | 10,0 | 26,7 | 360 | 5 | 74,5 | 0,6 | 24,8 | 322 |
| 7 | 60,6 | 9,6 | 29,8 | 376 | 6 | 71,0 | 0,6 | 28,4 | 338 |
| 8 | 58,2 | 9,2 | 32,6 | 392 | 7 | 67,8 | 0,6 | 31,6 | 354 |
| 9 | 55,9 | 8,8 | 35,3 | 408 | 8 | 64,9 | 0,5 | 34,6 | 370 |
| 10 | 53,8 | 8,5 | 37,7 | 424 | 9 | 62,2 | 0,5 | 37,3 | 386 |
| 11 | 51,8 | 8,2 | 40,0 | 440 | 10 | 59,7 | 0,5 | 39,8 | 402 |
| 12 | 50,0 | 7,9 | 42,1 | 456 | 11 | 57,4 | 0,5 | 42,1 | 418 |
| 13 | 48,3 | 7,6 | 44,0 | 472 | 12 | 55,3 | 0,5 | 44,2 | 434 |
| 14 | 46,7 | 7,4 | 45,9 | 488 | 13 | 53,3 | 0,4 | 46,2 | 450 |
| 15 | 45,2 | 7,1 | 47,6 | 504 | 14 | 51,5 | 0,4 | 48,1 | 466 |
| 16 | 43,8 | 6,9 | 50,2 | 520 | 15 | 49,8 | 0,4 | 49,8 | 482 |
| 17 | 42,5 | 6,7 | 50,7 | 536 | 16 | 48,2 | 0,4 | 51,4 | 498 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|---------|------|-----|------|-------|---------|------|-----|------|-------|
| 20-2-17 | 46.7 | 0.4 | 52.9 | 514 | 20-8-7 | 66.7 | 2.2 | 31.1 | 360 |
| 18 | 45.3 | 0.4 | 54.3 | 530 | 8 | 63.8 | 2.1 | 34.1 | 376 |
| 19 | 43.9 | 0.4 | 55.7 | 546 | 9 | 61.2 | 2.0 | 36.7 | 392 |
| 20 | 42.7 | 0.4 | 56.9 | 562 | 10 | 58.8 | 1.9 | 39.2 | 408 |
| 21 | 41.5 | 0.3 | 58.1 | 578 | 11 | 56.6 | 1.9 | 41.5 | 424 |
| 22 | 40.4 | 0.3 | 59.3 | 594 | 12 | 54.6 | 1.8 | 43.6 | 440 |
| 20-4-1 | 92.3 | 1.5 | 6.1 | 260 | 13 | 52.6 | 1.7 | 45.6 | 456 |
| 2 | 86.9 | 1.4 | 11.6 | 276 | 14 | 50.8 | 1.7 | 47.4 | 472 |
| 3 | 82.2 | 1.4 | 16.4 | 292 | 15 | 49.2 | 1.6 | 49.2 | 488 |
| 4 | 77.9 | 1.3 | 20.8 | 308 | 16 | 47.6 | 1.6 | 50.8 | 504 |
| 5 | 74.1 | 1.2 | 24.7 | 324 | 17 | 46.1 | 1.5 | 52.3 | 520 |
| 6 | 70.5 | 1.2 | 28.2 | 340 | 18 | 44.7 | 1.5 | 53.7 | 536 |
| 7 | 67.4 | 1.1 | 31.5 | 356 | 19 | 43.5 | 1.5 | 55.0 | 552 |
| 8 | 64.5 | 1.1 | 34.4 | 372 | 20 | 42.3 | 1.4 | 56.3 | 568 |
| 9 | 61.8 | 1.0 | 37.1 | 388 | 21 | 41.1 | 1.4 | 57.5 | 584 |
| 10 | 59.4 | 1.0 | 39.6 | 404 | 22 | 40.0 | 1.3 | 58.6 | 600 |
| 11 | 57.1 | 0.9 | 41.9 | 420 | 23 | 38.9 | 1.3 | 59.8 | 616 |
| 12 | 55.0 | 0.9 | 44.0 | 436 | 24 | 38.0 | 1.2 | 60.8 | 632 |
| 13 | 53.1 | 0.9 | 46.0 | 452 | 25 | 37.0 | 1.2 | 61.7 | 648 |
| 14 | 51.3 | 0.8 | 47.9 | 468 | 20-10-1 | 90.2 | 3.7 | 6.0 | 266 |
| 15 | 49.6 | 0.8 | 49.6 | 484 | 2 | 85.1 | 3.5 | 11.4 | 282 |
| 16 | 48.0 | 0.8 | 51.2 | 500 | 3 | 80.5 | 3.3 | 16.1 | 298 |
| 17 | 46.5 | 0.8 | 52.7 | 516 | 4 | 76.4 | 3.2 | 20.4 | 314 |
| 18 | 45.1 | 0.7 | 54.1 | 532 | 5 | 72.7 | 3.0 | 24.3 | 330 |
| 19 | 43.8 | 0.7 | 55.5 | 548 | 6 | 69.3 | 2.9 | 27.7 | 346 |
| 20 | 42.5 | 0.7 | 56.7 | 564 | 7 | 66.3 | 2.8 | 30.9 | 362 |
| 21 | 41.4 | 0.7 | 57.9 | 580 | 8 | 63.5 | 2.6 | 33.9 | 378 |
| 22 | 40.2 | 0.7 | 59.1 | 596 | 9 | 60.9 | 2.5 | 36.5 | 394 |
| 23 | 39.2 | 0.6 | 60.1 | 612 | 10 | 58.6 | 2.4 | 39.0 | 410 |
| 20-6-1 | 91.6 | 2.3 | 6.1 | 262 | 11 | 56.3 | 2.3 | 41.3 | 426 |
| 2 | 86.3 | 2.1 | 11.5 | 278 | 12 | 54.3 | 2.3 | 43.4 | 442 |
| 3 | 81.6 | 2.0 | 16.3 | 294 | 13 | 52.4 | 2.2 | 45.4 | 458 |
| 4 | 77.4 | 1.9 | 20.6 | 310 | 14 | 50.6 | 2.1 | 47.2 | 474 |
| 5 | 73.6 | 1.8 | 24.5 | 326 | 15 | 49.0 | 2.0 | 49.0 | 490 |
| 6 | 70.2 | 1.7 | 28.1 | 342 | 16 | 47.4 | 2.0 | 50.6 | 506 |
| 7 | 67.0 | 1.7 | 31.3 | 358 | 17 | 46.0 | 1.9 | 52.0 | 522 |
| 8 | 64.2 | 1.6 | 34.2 | 374 | 18 | 44.6 | 1.8 | 53.5 | 538 |
| 9 | 61.5 | 1.5 | 36.9 | 390 | 19 | 43.3 | 1.8 | 54.9 | 554 |
| 10 | 59.1 | 1.5 | 39.4 | 406 | 20 | 42.1 | 1.7 | 56.2 | 570 |
| 11 | 56.9 | 1.4 | 41.7 | 422 | 21 | 41.0 | 1.7 | 57.3 | 586 |
| 12 | 54.8 | 1.4 | 43.8 | 438 | 22 | 39.9 | 1.7 | 58.4 | 602 |
| 13 | 52.9 | 1.3 | 45.8 | 454 | 23 | 38.8 | 1.6 | 59.5 | 618 |
| 14 | 51.1 | 1.3 | 47.6 | 470 | 24 | 37.8 | 1.6 | 60.6 | 634 |
| 15 | 49.4 | 1.2 | 49.4 | 486 | 25 | 36.9 | 1.5 | 61.6 | 650 |
| 16 | 47.8 | 1.2 | 51.0 | 502 | 26 | 36.0 | 1.5 | 62.4 | 666 |
| 17 | 46.3 | 1.1 | 52.5 | 518 | 20-12-1 | 89.5 | 4.5 | 6.0 | 268 |
| 18 | 44.9 | 1.1 | 53.9 | 534 | 2 | 84.5 | 4.2 | 11.3 | 284 |
| 19 | 43.6 | 1.1 | 55.3 | 550 | 3 | 80.0 | 4.0 | 16.0 | 300 |
| 20 | 42.4 | 1.1 | 56.5 | 566 | 4 | 75.9 | 3.8 | 20.2 | 316 |
| 21 | 41.2 | 1.0 | 57.7 | 582 | 5 | 72.3 | 3.6 | 24.1 | 332 |
| 22 | 40.1 | 1.0 | 58.8 | 598 | 6 | 68.9 | 3.4 | 27.6 | 348 |
| 23 | 39.1 | 1.0 | 59.9 | 614 | 7 | 65.9 | 3.3 | 30.8 | 364 |
| 24 | 38.1 | 0.9 | 60.9 | 630 | 8 | 63.2 | 3.1 | 33.7 | 380 |
| 20-8-1 | 90.9 | 3.0 | 6.1 | 264 | 9 | 60.6 | 3.0 | 36.4 | 396 |
| 2 | 85.7 | 2.8 | 11.4 | 280 | 10 | 58.2 | 2.9 | 38.8 | 412 |
| 3 | 81.1 | 2.7 | 16.2 | 296 | 11 | 56.1 | 2.8 | 41.1 | 428 |
| 4 | 76.9 | 2.6 | 20.5 | 312 | 12 | 54.0 | 2.7 | 43.2 | 444 |
| 5 | 73.2 | 2.4 | 24.4 | 328 | 13 | 52.2 | 2.6 | 45.2 | 460 |
| 6 | 69.8 | 2.3 | 27.9 | 344 | 14 | 50.4 | 2.5 | 47.0 | 476 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|----------|------|-----|------|-------|----------|------|-----|------|-------|
| 20-12-15 | 48,8 | 2,4 | 48,8 | 492 | 20-16-19 | 42,9 | 2,8 | 54,3 | 560 |
| 16 | 47,2 | 2,3 | 50,4 | 508 | 20 | 41,7 | 2,8 | 55,5 | 576 |
| 17 | 45,8 | 2,3 | 51,9 | 524 | 21 | 40,5 | 2,7 | 56,8 | 592 |
| 18 | 44,4 | 2,2 | 53,3 | 540 | 22 | 39,5 | 2,6 | 57,9 | 608 |
| 19 | 43,1 | 2,2 | 54,7 | 556 | 23 | 38,5 | 2,5 | 59,0 | 624 |
| 20 | 41,9 | 2,1 | 55,9 | 572 | 24 | 37,6 | 2,5 | 60,0 | 640 |
| 21 | 40,8 | 2,0 | 57,1 | 588 | 25 | 36,6 | 2,4 | 61,0 | 656 |
| 22 | 39,7 | 2,0 | 58,3 | 604 | 26 | 35,7 | 2,4 | 61,9 | 672 |
| 23 | 38,7 | 1,9 | 59,4 | 620 | 27 | 34,9 | 2,3 | 62,8 | 688 |
| 24 | 37,7 | 1,9 | 60,4 | 636 | 28 | 34,0 | 2,3 | 63,6 | 704 |
| 25 | 36,8 | 1,8 | 61,4 | 652 | 29 | 33,3 | 2,2 | 64,4 | 720 |
| 26 | 35,9 | 1,8 | 62,3 | 668 | 20-18-1 | 87,0 | 6,6 | 5,8 | 274 |
| 27 | 35,1 | 1,7 | 63,2 | 684 | 2 | 82,8 | 6,2 | 11,0 | 290 |
| 20-14-1 | 88,9 | 5,2 | 5,9 | 270 | 3 | 78,4 | 5,9 | 15,7 | 306 |
| 2 | 83,9 | 4,9 | 11,2 | 286 | 4 | 74,5 | 5,6 | 19,9 | 322 |
| 3 | 79,5 | 4,6 | 15,9 | 302 | 5 | 71,0 | 5,3 | 23,7 | 338 |
| 4 | 75,4 | 4,4 | 20,1 | 318 | 6 | 67,8 | 5,1 | 27,1 | 354 |
| 5 | 71,8 | 4,2 | 23,9 | 334 | 7 | 64,9 | 4,8 | 30,3 | 370 |
| 6 | 68,6 | 4,0 | 27,4 | 350 | 8 | 62,2 | 4,7 | 33,1 | 386 |
| 7 | 65,6 | 3,8 | 30,6 | 366 | 9 | 59,7 | 4,5 | 35,8 | 402 |
| 8 | 62,8 | 3,7 | 33,5 | 382 | 10 | 57,4 | 4,3 | 38,3 | 418 |
| 9 | 60,3 | 3,5 | 36,2 | 398 | 11 | 55,3 | 4,1 | 40,5 | 434 |
| 10 | 58,0 | 3,4 | 38,6 | 414 | 12 | 53,3 | 4,0 | 42,7 | 450 |
| 11 | 55,8 | 3,2 | 40,9 | 430 | 13 | 51,5 | 3,8 | 44,6 | 466 |
| 12 | 53,8 | 3,1 | 43,1 | 446 | 14 | 49,8 | 3,7 | 46,5 | 482 |
| 13 | 52,0 | 3,0 | 45,0 | 462 | 15 | 48,2 | 3,6 | 48,2 | 498 |
| 14 | 50,2 | 2,9 | 46,9 | 478 | 16 | 46,7 | 3,5 | 49,8 | 514 |
| 15 | 48,6 | 2,8 | 48,6 | 494 | 17 | 45,3 | 3,4 | 51,3 | 530 |
| 16 | 47,1 | 2,7 | 50,2 | 510 | 18 | 43,9 | 3,3 | 52,7 | 546 |
| 17 | 45,6 | 2,7 | 51,7 | 526 | 19 | 42,7 | 3,2 | 54,1 | 562 |
| 18 | 44,3 | 2,6 | 53,1 | 542 | 20 | 41,5 | 3,1 | 55,4 | 578 |
| 19 | 43,0 | 2,5 | 54,5 | 558 | 21 | 40,4 | 3,0 | 56,5 | 594 |
| 20 | 41,8 | 2,4 | 55,7 | 574 | 22 | 39,3 | 2,9 | 57,7 | 610 |
| 21 | 40,7 | 2,4 | 56,9 | 590 | 23 | 38,3 | 2,9 | 58,8 | 626 |
| 22 | 36,9 | 2,3 | 58,1 | 606 | 24 | 37,4 | 2,8 | 59,8 | 642 |
| 23 | 38,6 | 2,2 | 59,2 | 622 | 25 | 36,5 | 2,7 | 60,8 | 658 |
| 24 | 37,6 | 2,2 | 60,2 | 638 | 26 | 35,6 | 2,7 | 61,7 | 674 |
| 25 | 36,7 | 2,1 | 61,1 | 654 | 27 | 34,8 | 2,6 | 62,6 | 690 |
| 26 | 35,8 | 2,1 | 62,1 | 670 | 28 | 34,0 | 2,5 | 63,5 | 706 |
| 27 | 35,0 | 2,0 | 63,0 | 686 | 29 | 33,2 | 2,5 | 64,3 | 722 |
| 28 | 34,2 | 2,0 | 63,8 | 702 | 30 | 32,5 | 2,4 | 65,0 | 738 |
| 20-16-1 | 88,2 | 5,9 | 5,9 | 272 | 20-20-1 | 86,9 | 7,2 | 5,8 | 276 |
| 2 | 83,3 | 5,5 | 11,1 | 288 | 2 | 82,2 | 6,8 | 10,9 | 292 |
| 3 | 78,9 | 5,2 | 15,8 | 304 | 3 | 77,9 | 6,4 | 15,6 | 308 |
| 4 | 75,0 | 5,0 | 20,0 | 320 | 4 | 74,1 | 6,2 | 19,7 | 324 |
| 5 | 71,4 | 4,8 | 23,8 | 336 | 5 | 70,6 | 5,9 | 23,5 | 340 |
| 6 | 68,1 | 4,5 | 27,3 | 352 | 6 | 67,4 | 5,6 | 27,0 | 356 |
| 7 | 65,2 | 4,3 | 30,4 | 368 | 7 | 64,5 | 5,3 | 30,1 | 372 |
| 8 | 62,5 | 4,2 | 33,3 | 384 | 8 | 61,8 | 5,1 | 33,0 | 388 |
| 9 | 60,0 | 4,0 | 36,0 | 400 | 9 | 59,4 | 4,9 | 35,6 | 404 |
| 10 | 57,7 | 3,8 | 38,5 | 416 | 10 | 57,1 | 4,8 | 38,1 | 420 |
| 11 | 55,6 | 3,7 | 40,7 | 432 | 11 | 55,0 | 4,6 | 40,4 | 436 |
| 12 | 53,6 | 3,6 | 42,8 | 448 | 12 | 53,1 | 4,4 | 42,5 | 452 |
| 13 | 51,7 | 3,4 | 44,8 | 464 | 13 | 51,3 | 4,3 | 44,4 | 468 |
| 14 | 50,0 | 3,3 | 46,7 | 480 | 14 | 49,6 | 4,1 | 46,3 | 484 |
| 15 | 48,4 | 3,2 | 48,4 | 496 | 15 | 48,0 | 4,0 | 48,0 | 500 |
| 16 | 46,9 | 3,1 | 50,0 | 512 | 16 | 46,5 | 3,9 | 49,6 | 516 |
| 17 | 45,4 | 3,0 | 51,5 | 528 | 17 | 45,1 | 3,8 | 51,1 | 532 |
| 18 | 44,1 | 2,9 | 52,9 | 544 | 18 | 43,8 | 3,6 | 52,5 | 548 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|-----------------|------|-----|------|-------|-----------------|------|-----|------|-------|
| 20-20-19 | 42.6 | 3.5 | 53.9 | 564 | 20-24-17 | 44.8 | 4.5 | 50.7 | 536 |
| 20 | 41.4 | 3.4 | 55.2 | 580 | 18 | 43.5 | 4.3 | 52.2 | 552 |
| 21 | 40.3 | 3.3 | 56.4 | 596 | 19 | 42.3 | 4.2 | 53.5 | 568 |
| 22 | 39.2 | 3.2 | 57.5 | 612 | 20 | 41.1 | 4.1 | 54.8 | 584 |
| 23 | 38.2 | 3.2 | 58.6 | 628 | 21 | 40.0 | 4.0 | 56.0 | 600 |
| 24 | 37.3 | 3.1 | 59.6 | 644 | 22 | 38.9 | 3.9 | 57.1 | 616 |
| 25 | 36.4 | 3.0 | 60.6 | 660 | 23 | 38.0 | 3.8 | 58.2 | 632 |
| 26 | 35.5 | 2.9 | 61.5 | 676 | 24 | 37.0 | 3.7 | 59.3 | 648 |
| 27 | 34.7 | 2.9 | 62.4 | 692 | 25 | 36.1 | 3.6 | 60.2 | 664 |
| 28 | 33.9 | 2.8 | 63.3 | 708 | 26 | 35.3 | 3.5 | 61.2 | 680 |
| 29 | 33.1 | 2.7 | 64.1 | 724 | 27 | 34.5 | 3.4 | 62.1 | 696 |
| 30 | 32.4 | 2.7 | 64.9 | 740 | 28 | 33.7 | 3.4 | 62.9 | 712 |
| 31 | 31.7 | 2.6 | 65.6 | 756 | 29 | 33.0 | 3.3 | 63.7 | 728 |
| 20-22-1 | 86.3 | 7.9 | 5.7 | 278 | 20-26-1 | 85.1 | 9.2 | 5.7 | 282 |
| 2 | 81.6 | 7.5 | 10.9 | 294 | 2 | 80.5 | 8.7 | 10.7 | 298 |
| 3 | 77.4 | 7.1 | 15.5 | 310 | 3 | 76.4 | 8.3 | 15.3 | 314 |
| 4 | 73.6 | 6.7 | 19.6 | 326 | 4 | 72.7 | 7.9 | 19.4 | 330 |
| 5 | 70.2 | 6.4 | 23.4 | 342 | 5 | 69.3 | 7.5 | 23.1 | 346 |
| 6 | 67.0 | 6.1 | 26.8 | 358 | 6 | 66.3 | 7.2 | 26.5 | 362 |
| 7 | 64.2 | 5.9 | 29.9 | 374 | 7 | 63.5 | 6.9 | 29.6 | 378 |
| 8 | 61.5 | 5.6 | 32.8 | 390 | 8 | 60.9 | 6.6 | 32.5 | 394 |
| 9 | 59.1 | 5.4 | 35.5 | 406 | 9 | 58.5 | 6.3 | 35.1 | 410 |
| 10 | 56.9 | 5.2 | 37.9 | 422 | 10 | 56.3 | 6.1 | 37.6 | 426 |
| 11 | 54.8 | 5.0 | 40.2 | 438 | 11 | 54.3 | 5.8 | 39.8 | 442 |
| 12 | 52.9 | 4.8 | 42.3 | 454 | 12 | 52.4 | 5.7 | 41.9 | 458 |
| 13 | 51.1 | 4.7 | 44.2 | 470 | 13 | 50.6 | 5.5 | 43.9 | 474 |
| 14 | 49.4 | 4.5 | 46.1 | 486 | 14 | 49.0 | 5.3 | 45.7 | 490 |
| 15 | 47.8 | 4.4 | 47.8 | 502 | 15 | 47.4 | 5.1 | 47.4 | 506 |
| 16 | 46.3 | 4.2 | 49.4 | 518 | 16 | 46.0 | 5.0 | 49.0 | 522 |
| 17 | 44.9 | 4.1 | 50.9 | 534 | 17 | 44.6 | 4.8 | 50.6 | 538 |
| 18 | 43.6 | 4.0 | 52.4 | 550 | 18 | 43.3 | 4.7 | 52.0 | 554 |
| 19 | 42.4 | 3.9 | 53.7 | 566 | 19 | 42.1 | 4.6 | 53.3 | 570 |
| 20 | 41.2 | 3.8 | 55.0 | 582 | 20 | 41.0 | 4.4 | 54.6 | 586 |
| 21 | 40.1 | 3.7 | 56.2 | 598 | 21 | 39.9 | 4.3 | 55.8 | 602 |
| 22 | 39.1 | 3.6 | 57.3 | 614 | 22 | 38.8 | 4.2 | 67.0 | 618 |
| 23 | 38.1 | 3.5 | 58.4 | 630 | 23 | 37.9 | 4.1 | 58.0 | 634 |
| 24 | 37.1 | 3.4 | 59.4 | 646 | 24 | 36.9 | 4.0 | 59.1 | 650 |
| 25 | 36.2 | 3.3 | 60.4 | 662 | 25 | 36.0 | 3.9 | 60.1 | 666 |
| 26 | 35.4 | 3.2 | 61.4 | 678 | 26 | 35.2 | 3.8 | 61.0 | 682 |
| 27 | 34.5 | 3.2 | 62.2 | 694 | 27 | 34.3 | 3.7 | 62.0 | 698 |
| 28 | 33.8 | 3.1 | 63.1 | 710 | 28 | 33.6 | 3.6 | 62.7 | 714 |
| 29 | 33.1 | 3.0 | 63.9 | 726 | 20-28-1 | 84.5 | 9.9 | 5.6 | 284 |
| 30 | 32.3 | 3.0 | 64.7 | 742 | 2 | 80.0 | 9.3 | 10.7 | 300 |
| 20-24-1 | 85.7 | 8.6 | 5.7 | 280 | 3 | 76.0 | 8.8 | 15.2 | 316 |
| 2 | 81.0 | 8.1 | 10.8 | 296 | 4 | 72.3 | 8.4 | 19.3 | 332 |
| 3 | 76.9 | 7.7 | 15.4 | 312 | 5 | 69.0 | 8.0 | 23.0 | 348 |
| 4 | 73.2 | 7.3 | 19.5 | 328 | 6 | 65.9 | 7.7 | 26.4 | 364 |
| 5 | 69.8 | 7.0 | 23.2 | 344 | 7 | 63.2 | 7.3 | 29.5 | 380 |
| 6 | 66.7 | 6.7 | 26.6 | 360 | 8 | 60.6 | 7.1 | 32.3 | 396 |
| 7 | 63.8 | 6.4 | 29.8 | 376 | 9 | 58.2 | 6.8 | 35.0 | 412 |
| 8 | 61.2 | 6.1 | 32.7 | 392 | 10 | 56.1 | 6.5 | 37.4 | 428 |
| 9 | 58.8 | 5.9 | 35.3 | 408 | 11 | 54.1 | 6.3 | 39.6 | 444 |
| 10 | 56.6 | 5.6 | 37.7 | 424 | 12 | 52.2 | 6.1 | 41.7 | 460 |
| 11 | 54.5 | 5.4 | 40.0 | 440 | 13 | 50.4 | 5.8 | 43.7 | 476 |
| 12 | 52.6 | 5.3 | 42.1 | 456 | 14 | 48.8 | 5.7 | 55.5 | 492 |
| 13 | 50.9 | 5.1 | 44.0 | 472 | 15 | 47.2 | 5.4 | 47.2 | 508 |
| 14 | 49.2 | 4.9 | 45.9 | 488 | 16 | 45.8 | 5.3 | 48.9 | 524 |
| 15 | 47.6 | 4.8 | 47.6 | 504 | 17 | 44.4 | 5.2 | 50.4 | 540 |
| 16 | 46.2 | 4.6 | 49.2 | 520 | 18 | 43.2 | 5.0 | 51.8 | 556 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|----------|------|------|------|-------|----------|------|------|------|-------|
| 20-28-19 | 42.0 | 4.9 | 53.1 | 572 | 20-32-25 | 35.7 | 4.8 | 59.5 | 672 |
| 20 | 40.8 | 4.7 | 54.4 | 588 | 20-34-1 | 11.7 | 5.5 | 29.0 | 290 |
| 21 | 39.7 | 4.6 | 55.6 | 604 | 2 | 78.4 | 11.1 | 10.5 | 306 |
| 22 | 38.7 | 4.5 | 56.8 | 620 | 3 | 74.5 | 10.6 | 14.9 | 322 |
| 23 | 37.7 | 4.4 | 57.9 | 636 | 4 | 71.0 | 10.0 | 18.9 | 338 |
| 24 | 36.8 | 4.3 | 58.9 | 652 | 5 | 67.8 | 9.6 | 22.6 | 354 |
| 25 | 35.9 | 4.2 | 59.9 | 668 | 6 | 64.9 | 9.2 | 25.9 | 370 |
| 26 | 35.1 | 4.1 | 60.8 | 684 | 7 | 62.2 | 8.8 | 29.0 | 386 |
| 27 | 34.3 | 4.0 | 61.7 | 700 | 8 | 59.7 | 8.4 | 31.8 | 402 |
| 20-30-1 | 83.9 | 10.5 | 5.6 | 286 | 9 | 57.4 | 8.1 | 34.5 | 418 |
| 2 | 79.5 | 9.9 | 10.6 | 302 | 10 | 55.3 | 7.8 | 36.9 | 434 |
| 3 | 75.5 | 9.4 | 15.1 | 318 | 11 | 53.3 | 7.5 | 39.1 | 450 |
| 4 | 71.8 | 9.0 | 19.2 | 334 | 12 | 51.5 | 7.3 | 41.2 | 466 |
| 5 | 68.6 | 8.6 | 22.8 | 350 | 13 | 49.8 | 7.1 | 43.2 | 482 |
| 6 | 65.6 | 8.2 | 26.2 | 366 | 14 | 48.2 | 6.8 | 45.0 | 498 |
| 7 | 62.8 | 7.9 | 29.3 | 382 | 15 | 46.7 | 6.6 | 46.7 | 514 |
| 8 | 60.2 | 7.5 | 32.2 | 398 | 16 | 45.3 | 6.4 | 48.3 | 530 |
| 9 | 58.0 | 7.2 | 34.8 | 414 | 17 | 44.0 | 6.2 | 49.8 | 546 |
| 10 | 55.8 | 7.0 | 37.2 | 430 | 18 | 42.7 | 6.0 | 51.2 | 562 |
| 11 | 53.8 | 6.7 | 39.5 | 446 | 19 | 41.5 | 5.9 | 52.6 | 578 |
| 12 | 52.0 | 6.5 | 41.5 | 462 | 20 | 40.4 | 5.7 | 53.9 | 594 |
| 13 | 50.2 | 6.3 | 43.5 | 478 | 21 | 39.3 | 5.6 | 55.1 | 610 |
| 14 | 48.6 | 6.1 | 45.3 | 494 | 22 | 38.4 | 5.4 | 56.2 | 626 |
| 15 | 47.1 | 5.9 | 47.0 | 510 | 23 | 37.4 | 5.3 | 57.3 | 642 |
| 16 | 45.6 | 5.7 | 48.7 | 526 | 24 | 36.5 | 5.2 | 58.3 | 658 |
| 17 | 44.3 | 5.5 | 50.2 | 542 | 20-36-1 | 82.2 | 12.3 | 5.5 | 292 |
| 18 | 43.0 | 5.4 | 51.6 | 558 | 2 | 77.9 | 11.7 | 10.4 | 308 |
| 19 | 41.8 | 5.2 | 54.0 | 574 | 3 | 74.1 | 11.1 | 14.8 | 324 |
| 20 | 40.7 | 5.1 | 54.2 | 590 | 4 | 70.5 | 10.6 | 18.8 | 340 |
| 21 | 39.6 | 5.0 | 55.4 | 606 | 5 | 67.4 | 10.1 | 22.5 | 356 |
| 22 | 38.6 | 4.8 | 56.6 | 622 | 6 | 64.5 | 9.7 | 25.8 | 372 |
| 23 | 37.6 | 4.7 | 57.7 | 638 | 7 | 61.9 | 9.3 | 28.8 | 388 |
| 24 | 36.7 | 4.6 | 58.7 | 654 | 8 | 59.4 | 8.9 | 31.7 | 404 |
| 25 | 35.8 | 4.5 | 59.7 | 670 | 9 | 57.1 | 8.6 | 34.3 | 420 |
| 26 | 35.0 | 4.4 | 60.6 | 686 | 10 | 55.0 | 8.3 | 36.7 | 436 |
| 20-32-1 | 83.3 | 11.1 | 5.6 | 288 | 11 | 53.1 | 8.0 | 38.9 | 452 |
| 2 | 79.0 | 10.5 | 10.5 | 304 | 12 | 51.3 | 7.7 | 41.0 | 468 |
| 3 | 75.0 | 10.0 | 15.0 | 320 | 13 | 49.6 | 7.4 | 43.0 | 484 |
| 4 | 71.4 | 9.5 | 19.1 | 336 | 14 | 48.0 | 7.2 | 44.8 | 500 |
| 5 | 68.2 | 9.0 | 22.7 | 352 | 15 | 46.5 | 7.0 | 46.5 | 516 |
| 6 | 65.2 | 8.7 | 26.1 | 368 | 16 | 45.1 | 6.7 | 48.1 | 532 |
| 7 | 62.5 | 8.3 | 29.2 | 384 | 17 | 43.8 | 6.6 | 49.6 | 548 |
| 8 | 60.0 | 8.0 | 32.0 | 400 | 18 | 42.5 | 6.4 | 51.0 | 564 |
| 9 | 57.7 | 7.7 | 34.6 | 416 | 19 | 41.4 | 6.2 | 52.4 | 580 |
| 10 | 55.5 | 7.4 | 37.0 | 432 | 20 | 40.3 | 6.0 | 53.7 | 596 |
| 11 | 53.6 | 7.1 | 39.3 | 448 | 21 | 39.2 | 5.9 | 54.9 | 612 |
| 12 | 51.7 | 6.9 | 41.4 | 464 | 22 | 38.2 | 5.7 | 56.1 | 628 |
| 13 | 50.0 | 6.7 | 43.3 | 480 | 23 | 37.3 | 5.6 | 57.1 | 644 |
| 14 | 48.4 | 6.4 | 45.1 | 496 | 20-38-1 | 81.6 | 12.9 | 5.4 | 294 |
| 15 | 46.9 | 6.2 | 46.9 | 512 | 2 | 77.4 | 12.3 | 10.3 | 310 |
| 16 | 45.4 | 6.1 | 48.5 | 528 | 3 | 73.6 | 11.6 | 14.7 | 326 |
| 17 | 44.1 | 5.9 | 50.0 | 544 | 4 | 70.2 | 11.1 | 18.7 | 342 |
| 18 | 42.8 | 5.7 | 51.4 | 560 | 5 | 67.0 | 10.6 | 22.4 | 358 |
| 19 | 41.7 | 5.5 | 52.8 | 576 | 6 | 64.2 | 10.1 | 25.7 | 374 |
| 20 | 40.5 | 5.4 | 54.1 | 592 | 7 | 61.5 | 9.8 | 28.7 | 390 |
| 21 | 39.5 | 5.2 | 55.3 | 608 | 8 | 59.1 | 9.4 | 31.5 | 406 |
| 22 | 38.4 | 5.1 | 56.4 | 624 | 9 | 56.9 | 9.0 | 34.1 | 422 |
| 23 | 37.5 | 5.0 | 57.5 | 640 | 10 | 54.8 | 8.7 | 36.5 | 438 |
| 24 | 36.6 | 4.9 | 58.5 | 656 | 11 | 52.9 | 8.4 | 38.7 | 454 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. | |
|----------|------|------|------|-------|---------|------|------|------|-------|-----|
| 20-38-12 | 50.9 | 8.1 | 40.9 | 470 | 21-10-3 | 81.3 | 3.2 | 15.5 | 310 | |
| 13 | 49.4 | 7.8 | 42.8 | 486 | 4 | 77.3 | 3.0 | 19.7 | 326 | |
| 14 | 47.8 | 7.6 | 44.6 | 502 | 6 | 75.4 | 2.8 | 26.8 | 358 | |
| 15 | 46.3 | 7.3 | 46.3 | 518 | 21-12-1 | 90.0 | 4.3 | 5.7 | 280 | |
| 16 | 44.9 | 7.1 | 47.9 | 534 | 2 | 85.1 | 4.0 | 10.8 | 296 | |
| 17 | 43.6 | 6.9 | 49.5 | 550 | 3 | 80.8 | 3.8 | 15.4 | 312 | |
| 18 | 42.4 | 6.7 | 50.9 | 566 | 4 | 76.8 | 3.6 | 19.5 | 328 | |
| 19 | 41.2 | 6.5 | 53.2 | 582 | 5 | 73.3 | 3.5 | 23.2 | 344 | |
| 20 | 40.1 | 6.4 | 53.5 | 598 | 6 | 70.0 | 3.3 | 26.7 | 360 | |
| 21 | 39.1 | 6.2 | 54.7 | 614 | 7 | 67.0 | 3.2 | 29.8 | 376 | |
| 22 | 38.1 | 6.0 | 55.9 | 630 | 21-14-1 | 89.4 | 4.9 | 5.7 | 282 | |
| 20-40 | 1 | 81.1 | 13.5 | 5.4 | 296 | 2 | 84.6 | 4.7 | 10.7 | 298 |
| 2 | 76.9 | 12.8 | 10.3 | 312 | 3 | 80.3 | 4.4 | 15.3 | 314 | |
| 3 | 73.2 | 12.2 | 14.6 | 328 | 4 | 76.4 | 4.2 | 19.4 | 330 | |
| 4 | 69.8 | 11.6 | 18.6 | 344 | 5 | 72.8 | 4.0 | 23.1 | 346 | |
| 5 | 66.7 | 11.1 | 22.2 | 360 | 6 | 69.6 | 3.8 | 26.5 | 362 | |
| 6 | 63.8 | 10.6 | 25.5 | 376 | 7 | 66.7 | 3.7 | 29.6 | 378 | |
| 7 | 61.2 | 10.2 | 28.6 | 392 | 8 | 64.0 | 3.5 | 32.5 | 394 | |
| 8 | 58.8 | 9.8 | 31.4 | 408 | 9 | 61.4 | 3.4 | 35.1 | 410 | |
| 9 | 56.6 | 9.4 | 34.0 | 424 | 10 | 59.2 | 3.3 | 37.5 | 426 | |
| 10 | 54.5 | 9.1 | 36.4 | 440 | 11 | 57.0 | 3.2 | 39.8 | 442 | |
| 11 | 52.6 | 8.8 | 38.6 | 456 | 12 | 55.0 | 3.1 | 41.9 | 458 | |
| 12 | 50.8 | 8.5 | 40.7 | 472 | 13 | 53.2 | 2.9 | 43.9 | 474 | |
| 13 | 49.2 | 8.2 | 42.6 | 488 | 21-16-1 | 88.7 | 5.6 | 5.6 | 284 | |
| 14 | 47.6 | 7.9 | 44.5 | 504 | 2 | 84.0 | 5.3 | 10.7 | 300 | |
| 15 | 46.2 | 7.7 | 46.1 | 520 | 3 | 79.8 | 5.0 | 15.2 | 316 | |
| 16 | 44.8 | 7.4 | 47.8 | 536 | 4 | 75.9 | 4.8 | 19.3 | 332 | |
| 17 | 43.5 | 7.2 | 49.3 | 552 | 5 | 72.4 | 4.6 | 23.0 | 348 | |
| 18 | 42.2 | 7.0 | 50.7 | 568 | 6 | 69.1 | 4.4 | 26.4 | 364 | |
| 19 | 41.1 | 6.8 | 52.1 | 584 | 7 | 66.3 | 4.2 | 29.5 | 380 | |
| 20 | 40.0 | 6.7 | 53.3 | 600 | 8 | 63.6 | 4.0 | 32.3 | 396 | |
| 21 | 39.0 | 6.5 | 54.5 | 616 | 9 | 61.2 | 3.9 | 34.9 | 412 | |
| 20-42-1 | 80.5 | 14.1 | 5.4 | 298 | 10 | 58.9 | 3.7 | 37.4 | 428 | |
| 2 | 76.4 | 13.4 | 10.2 | 314 | 11 | 56.8 | 3.6 | 39.6 | 444 | |
| 3 | 72.7 | 12.8 | 14.5 | 330 | 12 | 54.8 | 3.4 | 41.8 | 460 | |
| 4 | 69.4 | 12.1 | 18.5 | 346 | 21-18-1 | 88.1 | 6.3 | 5.6 | 286 | |
| 5 | 66.3 | 11.6 | 22.1 | 362 | 2 | 83.5 | 5.9 | 10.6 | 302 | |
| 6 | 63.5 | 11.1 | 25.4 | 378 | 3 | 79.3 | 5.6 | 15.1 | 318 | |
| 7 | 60.9 | 10.7 | 28.4 | 394 | 4 | 75.4 | 5.4 | 19.2 | 334 | |
| 8 | 58.5 | 10.2 | 31.2 | 410 | 5 | 72.0 | 5.1 | 22.9 | 350 | |
| 9 | 56.4 | 9.7 | 33.8 | 426 | 6 | 68.8 | 4.9 | 26.2 | 366 | |
| 10 | 54.3 | 9.5 | 36.2 | 442 | 7 | 66.0 | 4.7 | 29.3 | 382 | |
| 11 | 52.4 | 9.2 | 38.4 | 458 | 8 | 63.3 | 4.5 | 32.2 | 398 | |
| 12 | 50.6 | 8.9 | 40.5 | 474 | 9 | 60.9 | 4.3 | 34.8 | 414 | |
| 13 | 49.0 | 8.6 | 42.4 | 490 | 10 | 58.6 | 4.2 | 37.2 | 430 | |
| 14 | 47.4 | 8.3 | 44.3 | 506 | 11 | 56.5 | 4.0 | 39.5 | 446 | |
| 15 | 46.0 | 8.0 | 46.0 | 522 | 12 | 54.5 | 3.9 | 41.6 | 462 | |
| 16 | 44.6 | 7.8 | 47.6 | 538 | 13 | 52.7 | 3.7 | 43.5 | 478 | |
| 17 | 43.3 | 7.6 | 49.1 | 554 | 14 | 51.0 | 3.6 | 45.4 | 494 | |
| 18 | 42.1 | 7.4 | 50.5 | 570 | 15 | 49.4 | 3.5 | 47.0 | 510 | |
| 19 | 41.0 | 7.1 | 51.9 | 586 | 21-20-1 | 87.4 | 6.9 | 5.6 | 288 | |
| 20 | 39.9 | 7.0 | 53.1 | 602 | 2 | 82.9 | 6.6 | 10.5 | 304 | |
| 20-44-29 | 32.1 | 5.9 | 62.0 | 748 | 3 | 78.8 | 6.2 | 15.0 | 320 | |
| 21-6-1 | 92.0 | 2.2 | 5.8 | 274 | 4 | 75.0 | 6.0 | 19.0 | 336 | |
| 2 | 86.9 | 2.0 | 11.0 | 290 | 5 | 71.6 | 5.7 | 22.7 | 352 | |
| 21-8-1 | 91.3 | 2.9 | 5.8 | 276 | 6 | 68.5 | 5.4 | 26.1 | 368 | |
| 2 | 86.3 | 2.7 | 11.0 | 292 | 7 | 65.6 | 5.2 | 29.2 | 384 | |
| 21-10-1 | 90.6 | 3.6 | 5.8 | 278 | 8 | 63.0 | 5.0 | 32.0 | 400 | |
| 2 | 85.7 | 3.4 | 10.9 | 294 | 9 | 60.6 | 4.8 | 34.6 | 416 | |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. | | |
|-------|-----|------|------|-------|-------|---------|------|------|-------|------|-----|
| 21-20 | 10 | 58.3 | 4.6 | 37.0 | 432 | 21-30-4 | 72.8 | 8.7 | 18.5 | 346 | |
| | 11 | 56.2 | 4.4 | 39.3 | 448 | | 5 | 69.6 | 8.3 | 22.1 | 362 |
| | 12 | 54.3 | 4.3 | 41.4 | 464 | | 6 | 66.7 | 7.9 | 25.4 | 378 |
| 21-22 | -1 | 86.9 | 7.6 | 5.5 | 290 | | 7 | 64.0 | 7.6 | 28.4 | 394 |
| | 2 | 82.4 | 7.2 | 10.4 | 306 | | 9 | 59.1 | 7.0 | 33.8 | 426 |
| | 3 | 78.3 | 6.8 | 14.9 | 322 | | 14 | 49.8 | 5.9 | 44.3 | 506 |
| | 4 | 74.6 | 6.5 | 18.9 | 338 | 21-32 | -1 | 84.0 | 10.7 | 5.3 | 300 |
| | 5 | 71.2 | 6.2 | 22.6 | 354 | | 2 | 79.8 | 10.1 | 10.1 | 316 |
| | 6 | 68.1 | 5.9 | 26.0 | 370 | | 3 | 75.9 | 9.6 | 14.5 | 332 |
| | 7 | 65.3 | 5.7 | 29.0 | 386 | | 4 | 72.4 | 9.2 | 18.4 | 348 |
| | 8 | 62.7 | 5.5 | 31.8 | 402 | | 5 | 69.2 | 8.8 | 22.0 | 364 |
| | 9 | 60.3 | 5.3 | 34.4 | 418 | | 6 | 66.3 | 8.4 | 25.3 | 380 |
| | 10 | 58.1 | 5.0 | 36.9 | 434 | | 7 | 63.6 | 8.1 | 28.3 | 396 |
| | 11 | 56.0 | 4.9 | 39.1 | 450 | | 8 | 61.2 | 7.8 | 31.0 | 412 |
| | 12 | 54.1 | 4.7 | 41.2 | 466 | | 12 | 52.9 | 6.7 | 41.3 | 476 |
| | 13 | 52.3 | 4.5 | 43.2 | 482 | 21-34 | -1 | 83.5 | 11.2 | 5.3 | 302 |
| | 14 | 50.6 | 4.4 | 45.0 | 498 | | 2 | 79.2 | 10.7 | 10.1 | 318 |
| 21-24 | -1 | 86.3 | 8.2 | 5.5 | 292 | | 3 | 75.4 | 10.2 | 14.4 | 334 |
| | 2 | 81.7 | 7.8 | 10.4 | 308 | | 4 | 72.0 | 9.7 | 18.3 | 350 |
| | 3 | 77.8 | 7.4 | 14.8 | 324 | | 5 | 68.9 | 9.3 | 21.8 | 366 |
| | 4 | 74.1 | 7.1 | 18.8 | 340 | | 6 | 66.0 | 8.9 | 25.1 | 382 |
| | 5 | 70.8 | 6.7 | 22.5 | 356 | | 7 | 63.3 | 8.5 | 28.1 | 398 |
| | 6 | 67.8 | 6.4 | 25.8 | 372 | 21-36 | -1 | 82.9 | 11.8 | 5.3 | 304 |
| | 7 | 65.0 | 6.2 | 28.8 | 388 | | 2 | 78.8 | 11.2 | 10.0 | 320 |
| | 8 | 62.4 | 5.9 | 31.7 | 404 | | 3 | 75.0 | 10.7 | 14.3 | 336 |
| | 9 | 60.0 | 5.7 | 34.3 | 420 | | 4 | 71.6 | 10.2 | 18.2 | 352 |
| | 10 | 57.8 | 5.5 | 36.7 | 436 | | 5 | 68.5 | 9.8 | 21.7 | 368 |
| | 11 | 55.8 | 5.3 | 38.9 | 452 | | 6 | 65.6 | 9.4 | 25.0 | 384 |
| | 12 | 53.8 | 5.1 | 41.0 | 468 | | 8 | 60.6 | 8.6 | 30.8 | 416 |
| 21-26 | -1 | 85.7 | 8.8 | 5.4 | 294 | 21-38 | -1 | 82.4 | 12.4 | 5.2 | 306 |
| | 2 | 81.3 | 8.4 | 10.3 | 310 | | 2 | 78.3 | 11.8 | 9.9 | 322 |
| | 3 | 77.3 | 8.0 | 14.7 | 326 | | 3 | 74.6 | 11.2 | 14.2 | 338 |
| | 4 | 73.7 | 7.6 | 18.7 | 342 | | 4 | 71.2 | 10.7 | 18.1 | 354 |
| | 5 | 70.4 | 7.3 | 22.3 | 358 | | 5 | 68.1 | 10.3 | 21.6 | 370 |
| | 6 | 67.4 | 6.9 | 25.7 | 374 | | 6 | 65.3 | 9.8 | 24.9 | 386 |
| | 7 | 64.6 | 6.7 | 28.7 | 390 | 21-40 | -1 | 81.8 | 13.0 | 5.2 | 308 |
| | 8 | 62.1 | 6.4 | 31.5 | 406 | | 2 | 77.8 | 12.3 | 9.9 | 324 |
| | 9 | 59.7 | 6.2 | 34.1 | 422 | | 3 | 74.1 | 11.8 | 14.1 | 340 |
| | 10 | 57.5 | 5.9 | 36.5 | 438 | | 4 | 70.8 | 11.2 | 18.0 | 356 |
| | 11 | 55.5 | 5.7 | 38.8 | 454 | | 5 | 67.7 | 10.8 | 21.5 | 372 |
| | 12 | 53.6 | 5.5 | 40.9 | 470 | | 6 | 65.0 | 10.3 | 24.7 | 388 |
| 21-28 | -1 | 85.1 | 9.5 | 5.4 | 296 | 21-42 | -1 | 81.3 | 13.5 | 5.2 | 310 |
| | 2 | 80.8 | 9.0 | 10.2 | 312 | | 2 | 77.3 | 12.9 | 9.8 | 326 |
| | 3 | 76.8 | 8.5 | 14.6 | 328 | | 3 | 73.7 | 12.3 | 14.0 | 342 |
| | 4 | 73.3 | 8.1 | 18.6 | 344 | | 4 | 70.4 | 11.7 | 17.9 | 358 |
| | 5 | 70.0 | 7.8 | 22.2 | 360 | | 5 | 67.4 | 11.2 | 21.4 | 374 |
| | 6 | 67.0 | 7.4 | 25.5 | 376 | | 6 | 64.6 | 10.8 | 24.6 | 390 |
| | 7 | 64.3 | 7.1 | 28.6 | 392 | 21-44 | -1 | 80.8 | 14.1 | 5.1 | 312 |
| | 8 | 61.8 | 6.8 | 31.4 | 408 | | 2 | 76.8 | 13.4 | 9.8 | 328 |
| | 9 | 59.4 | 6.6 | 34.0 | 424 | | 3 | 73.3 | 12.8 | 13.9 | 344 |
| | 10 | 57.3 | 6.3 | 36.4 | 440 | 22-2 | -4 | 80.0 | 0.6 | 19.4 | 330 |
| | 11 | 55.3 | 6.1 | 38.6 | 456 | 22-10 | -1 | 91.0 | 3.4 | 5.5 | 290 |
| | 12 | 53.2 | 5.9 | 40.9 | 472 | | 2 | 86.3 | 3.3 | 10.4 | 306 |
| | 15 | 48.5 | 5.4 | 46.1 | 520 | | 3 | 82.0 | 3.1 | 14.9 | 322 |
| | 20 | 42.0 | 4.7 | 53.3 | 600 | | 4 | 78.1 | 2.9 | 18.9 | 338 |
| | 23 | 38.9 | 4.3 | 56.8 | 648 | | 5 | 74.6 | 2.8 | 22.6 | 354 |
| 21-30 | -1 | 84.6 | 10.1 | 5.3 | 298 | | 6 | 71.3 | 2.7 | 25.9 | 370 |
| | 2 | 80.2 | 9.6 | 10.2 | 314 | | 13 | 54.8 | 2.0 | 43.2 | 482 |
| | 3 | 76.4 | 9.1 | 14.5 | 330 | 22-12 | -1 | 90.4 | 4.1 | 5.5 | 292 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|---------|------|-----|------|-------|---------|------|------|------|-------|
| 22-12-2 | 85.7 | 3.9 | 10.4 | 308 | 22-24-4 | 75.0 | 6.8 | 18.2 | 352 |
| 3 | 81.5 | 3.7 | 14.8 | 324 | 5 | 71.7 | 6.5 | 21.7 | 368 |
| 4 | 77.6 | 3.5 | 18.8 | 340 | 6 | 68.8 | 6.2 | 25.0 | 384 |
| 5 | 74.2 | 3.4 | 22.4 | 356 | 7 | 66.0 | 6.0 | 28.0 | 400 |
| 6 | 70.9 | 3.2 | 25.8 | 372 | 8 | 63.5 | 5.8 | 30.7 | 416 |
| 22-14-1 | 89.8 | 4.8 | 5.4 | 294 | 9 | 61.1 | 5.6 | 33.3 | 432 |
| 2 | 85.2 | 4.5 | 10.3 | 310 | 10 | 58.9 | 5.3 | 35.7 | 448 |
| 3 | 81.0 | 4.3 | 14.7 | 326 | 22-26-1 | 86.3 | 8.5 | 5.2 | 306 |
| 4 | 77.2 | 4.1 | 18.7 | 342 | 2 | 82.0 | 8.1 | 9.9 | 322 |
| 5 | 73.8 | 3.9 | 22.3 | 358 | 3 | 78.1 | 7.7 | 14.2 | 338 |
| 6 | 70.6 | 3.7 | 25.7 | 374 | 4 | 74.6 | 7.3 | 18.1 | 354 |
| 7 | 67.7 | 3.6 | 28.7 | 390 | 5 | 71.3 | 7.0 | 21.6 | 370 |
| 8 | 65.0 | 3.4 | 31.5 | 406 | 6 | 68.4 | 6.7 | 24.9 | 386 |
| 9 | 62.6 | 3.3 | 34.1 | 422 | 7 | 65.7 | 6.5 | 27.8 | 402 |
| 10 | 60.3 | 3.2 | 36.5 | 438 | 8 | 63.2 | 6.2 | 30.6 | 418 |
| 11 | 58.1 | 3.1 | 38.8 | 454 | 9 | 60.8 | 6.0 | 33.2 | 434 |
| 12 | 56.2 | 3.0 | 40.8 | 470 | 10 | 58.7 | 5.8 | 35.5 | 450 |
| 13 | 54.3 | 2.9 | 42.8 | 486 | 11 | 56.6 | 5.6 | 37.8 | 466 |
| 15 | 51.0 | 2.7 | 46.3 | 518 | 12 | 54.8 | 5.4 | 39.8 | 482 |
| 22-16-1 | 89.2 | 5.4 | 5.4 | 296 | 13 | 53.0 | 5.2 | 41.8 | 498 |
| 2 | 84.6 | 5.1 | 10.3 | 312 | 25 | 38.3 | 3.7 | 58.0 | 690 |
| 3 | 80.5 | 4.9 | 14.6 | 328 | 22-28-1 | 85.7 | 9.1 | 5.2 | 308 |
| 4 | 76.8 | 4.6 | 18.6 | 344 | 2 | 81.5 | 8.6 | 9.9 | 324 |
| 5 | 73.3 | 4.4 | 22.2 | 360 | 3 | 77.6 | 8.2 | 14.1 | 340 |
| 6 | 70.2 | 4.2 | 25.5 | 376 | 4 | 74.2 | 7.8 | 18.0 | 356 |
| 7 | 67.3 | 4.1 | 28.6 | 392 | 5 | 71.0 | 7.5 | 21.5 | 372 |
| 8 | 64.7 | 3.9 | 31.4 | 408 | 6 | 68.0 | 7.2 | 24.7 | 388 |
| 10 | 60.0 | 3.6 | 36.4 | 440 | 7 | 65.3 | 6.9 | 27.7 | 404 |
| 22-18-1 | 88.6 | 6.0 | 5.4 | 298 | 8 | 62.8 | 6.7 | 30.5 | 420 |
| 2 | 84.1 | 5.7 | 10.2 | 314 | 9 | 60.6 | 6.4 | 33.0 | 436 |
| 3 | 80.0 | 5.4 | 14.5 | 330 | 10 | 58.4 | 6.2 | 35.4 | 452 |
| 4 | 76.3 | 5.2 | 18.5 | 346 | 12 | 54.5 | 5.8 | 39.7 | 484 |
| 5 | 72.9 | 5.0 | 22.1 | 362 | 15 | 49.6 | 5.3 | 45.1 | 532 |
| 6 | 69.8 | 4.8 | 25.4 | 378 | 22-30-1 | 85.2 | 9.7 | 5.1 | 310 |
| 7 | 67.0 | 4.5 | 28.4 | 394 | 2 | 81.0 | 9.2 | 9.8 | 326 |
| 8 | 64.4 | 4.4 | 31.2 | 410 | 3 | 77.2 | 8.8 | 14.0 | 342 |
| 22-20-1 | 88.0 | 6.7 | 5.3 | 300 | 4 | 73.7 | 8.4 | 17.9 | 358 |
| 2 | 83.6 | 6.3 | 10.1 | 316 | 5 | 70.6 | 8.0 | 21.4 | 374 |
| 3 | 79.5 | 6.0 | 14.5 | 332 | 6 | 67.7 | 7.7 | 24.6 | 390 |
| 4 | 75.8 | 5.7 | 18.4 | 348 | 7 | 65.0 | 7.4 | 27.6 | 406 |
| 5 | 72.5 | 5.5 | 22.0 | 364 | 8 | 62.6 | 7.1 | 30.3 | 422 |
| 6 | 69.5 | 5.2 | 25.3 | 380 | 9 | 60.3 | 6.8 | 32.9 | 438 |
| 7 | 66.7 | 5.0 | 28.3 | 396 | 10 | 58.1 | 6.6 | 35.2 | 454 |
| 8 | 64.1 | 4.8 | 31.1 | 412 | 15 | 49.4 | 5.6 | 44.9 | 534 |
| 9 | 61.7 | 4.7 | 33.6 | 428 | 22-32-1 | 84.6 | 10.2 | 5.1 | 312 |
| 10 | 59.5 | 4.5 | 36.0 | 444 | 2 | 80.4 | 9.8 | 9.8 | 328 |
| 22-22-1 | 87.4 | 7.3 | 5.3 | 302 | 3 | 76.7 | 9.3 | 14.0 | 344 |
| 2 | 83.0 | 6.9 | 10.1 | 318 | 4 | 73.3 | 8.9 | 17.8 | 360 |
| 3 | 79.0 | 6.6 | 14.4 | 334 | 5 | 70.2 | 8.5 | 21.3 | 376 |
| 4 | 75.4 | 6.3 | 18.3 | 350 | 6 | 67.3 | 8.1 | 24.5 | 392 |
| 5 | 72.1 | 6.0 | 21.9 | 366 | 7 | 64.7 | 7.8 | 27.5 | 408 |
| 6 | 69.1 | 5.8 | 25.1 | 382 | 8 | 62.3 | 7.5 | 30.2 | 424 |
| 7 | 66.3 | 5.5 | 28.1 | 398 | 12 | 54.1 | 6.5 | 39.3 | 440 |
| 8 | 63.8 | 5.3 | 30.9 | 414 | 22-34-1 | 84.1 | 10.8 | 5.1 | 314 |
| 9 | 61.4 | 5.1 | 33.5 | 430 | 2 | 80.0 | 10.3 | 9.7 | 330 |
| 10 | 59.2 | 4.9 | 35.9 | 446 | 3 | 76.3 | 9.8 | 13.9 | 346 |
| 22-24-1 | 86.8 | 7.9 | 5.2 | 304 | 4 | 72.9 | 9.4 | 17.7 | 362 |
| 2 | 82.5 | 7.5 | 10.0 | 320 | 5 | 69.8 | 9.0 | 21.2 | 378 |
| 3 | 78.6 | 7.1 | 14.3 | 336 | 6 | 67.0 | 8.6 | 24.4 | 394 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|---------|------|------|------|------|---------|------|-----|------|------|
| 22-34-7 | 64.4 | 8.3 | 27.3 | 410 | 23-12-4 | 78.4 | 3.4 | 18.2 | 352 |
| 8 | 62.0 | 8.0 | 30.0 | 426 | 7 | 69.0 | 3.0 | 28.0 | 400 |
| 9 | 59.7 | 7.7 | 32.6 | 442 | 23-14-1 | 90.2 | 4.6 | 5.2 | 306 |
| 10 | 57.6 | 7.4 | 34.9 | 458 | 2 | 85.7 | 4.3 | 9.9 | 322 |
| 11 | 55.6 | 7.2 | 37.1 | 474 | 3 | 81.7 | 4.1 | 14.2 | 338 |
| 12 | 53.9 | 6.9 | 39.2 | 490 | 4 | 78.0 | 3.9 | 18.1 | 354 |
| 22-36-1 | 83.6 | 11.4 | 5.0 | 316 | 5 | 74.6 | 3.8 | 21.6 | 370 |
| 2 | 79.5 | 10.8 | 9.6 | 332 | 6 | 71.5 | 3.6 | 24.9 | 386 |
| 3 | 75.9 | 10.3 | 13.8 | 348 | 23-16-1 | 89.6 | 5.2 | 5.2 | 308 |
| 4 | 72.5 | 9.9 | 17.6 | 364 | 2 | 85.2 | 4.9 | 9.9 | 324 |
| 5 | 69.5 | 9.5 | 21.0 | 380 | 3 | 81.2 | 4.7 | 14.1 | 340 |
| 6 | 66.7 | 9.1 | 24.2 | 396 | 4 | 77.5 | 4.5 | 18.0 | 356 |
| 7 | 64.1 | 8.7 | 27.2 | 412 | 5 | 74.2 | 4.3 | 21.5 | 372 |
| 8 | 61.7 | 8.4 | 29.9 | 428 | 6 | 71.1 | 4.1 | 24.7 | 388 |
| 9 | 59.5 | 8.1 | 32.3 | 444 | 7 | 68.3 | 3.9 | 27.7 | 404 |
| 10 | 57.4 | 7.8 | 34.8 | 460 | 8 | 65.7 | 3.8 | 30.5 | 420 |
| 11 | 55.5 | 7.6 | 36.9 | 476 | 9 | 63.3 | 3.7 | 33.0 | 436 |
| 12 | 53.7 | 7.3 | 39.0 | 492 | 10 | 61.1 | 3.5 | 35.4 | 452 |
| 22-38-1 | 83.0 | 11.9 | 5.0 | 318 | 23-18-1 | 89.0 | 5.8 | 5.2 | 310 |
| 2 | 79.0 | 11.4 | 9.6 | 334 | 2 | 84.7 | 5.5 | 9.8 | 326 |
| 3 | 75.4 | 10.9 | 13.7 | 350 | 3 | 80.7 | 5.3 | 14.0 | 342 |
| 4 | 72.1 | 10.4 | 17.5 | 366 | 4 | 77.1 | 5.0 | 17.9 | 358 |
| 5 | 69.1 | 9.9 | 20.9 | 382 | 5 | 73.8 | 4.8 | 21.4 | 374 |
| 6 | 66.3 | 9.5 | 24.1 | 398 | 6 | 70.8 | 4.6 | 24.6 | 390 |
| 7 | 63.7 | 9.2 | 27.1 | 414 | 10 | 68.0 | 4.0 | 28.2 | 406 |
| 8 | 61.4 | 8.8 | 29.8 | 430 | 23-20-1 | 88.5 | 6.4 | 5.1 | 312 |
| 9 | 59.2 | 8.5 | 32.3 | 446 | 2 | 84.2 | 6.1 | 9.7 | 328 |
| 10 | 57.2 | 8.2 | 34.6 | 462 | 3 | 80.2 | 5.8 | 14.0 | 344 |
| 22-40-1 | 82.5 | 12.5 | 5.0 | 320 | 4 | 76.7 | 5.5 | 17.8 | 360 |
| 2 | 78.5 | 11.9 | 9.5 | 336 | 5 | 73.4 | 5.3 | 21.3 | 376 |
| 3 | 75.0 | 11.4 | 13.6 | 352 | 6 | 70.4 | 5.1 | 24.5 | 392 |
| 4 | 71.7 | 10.9 | 17.4 | 368 | 8 | 65.1 | 4.7 | 28.2 | 408 |
| 5 | 68.7 | 10.4 | 20.8 | 384 | 10 | 60.5 | 4.4 | 31.1 | 424 |
| 6 | 66.0 | 10.0 | 24.0 | 400 | 11 | 58.5 | 4.2 | 33.3 | 440 |
| 7 | 63.5 | 9.6 | 26.9 | 416 | 23-22-1 | 87.9 | 7.0 | 5.1 | 314 |
| 8 | 61.1 | 9.2 | 29.6 | 432 | 2 | 83.6 | 6.7 | 9.7 | 330 |
| 22-42-1 | 82.0 | 13.0 | 5.0 | 322 | 3 | 79.8 | 6.3 | 13.9 | 346 |
| 2 | 78.1 | 12.4 | 9.5 | 338 | 4 | 76.2 | 6.1 | 17.7 | 362 |
| 3 | 74.6 | 11.9 | 13.5 | 354 | 5 | 73.0 | 5.8 | 21.2 | 378 |
| 4 | 71.3 | 11.3 | 17.3 | 370 | 6 | 70.1 | 5.6 | 24.3 | 394 |
| 5 | 68.4 | 10.9 | 20.7 | 386 | 7 | 67.3 | 5.4 | 27.3 | 410 |
| 6 | 65.7 | 10.4 | 23.9 | 402 | 8 | 64.8 | 5.2 | 30.0 | 426 |
| 7 | 63.2 | 10.0 | 26.8 | 418 | 9 | 62.4 | 5.0 | 32.6 | 442 |
| 8 | 60.8 | 9.7 | 29.5 | 434 | 10 | 60.3 | 4.8 | 34.9 | 458 |
| 28 | 35.0 | 5.6 | 50.4 | 754 | 23-24-1 | 87.3 | 7.6 | 5.1 | 316 |
| 23-44-1 | 81.5 | 13.6 | 4.9 | 324 | 2 | 83.1 | 7.2 | 9.6 | 332 |
| 2 | 77.6 | 12.9 | 9.4 | 340 | 3 | 79.3 | 6.9 | 13.8 | 348 |
| 3 | 74.1 | 12.4 | 13.5 | 356 | 4 | 75.8 | 6.6 | 17.6 | 364 |
| 4 | 70.9 | 11.8 | 17.2 | 372 | 5 | 72.6 | 6.3 | 21.1 | 380 |
| 5 | 68.0 | 11.3 | 20.6 | 388 | 6 | 69.7 | 6.1 | 24.2 | 396 |
| 6 | 65.3 | 10.9 | 23.8 | 404 | 7 | 67.0 | 5.8 | 27.2 | 412 |
| 7 | 62.8 | 10.5 | 26.7 | 420 | 8 | 64.5 | 5.6 | 29.9 | 428 |
| 8 | 60.6 | 10.1 | 29.3 | 436 | 9 | 62.2 | 5.4 | 32.4 | 444 |
| 9 | 58.4 | 9.7 | 31.8 | 452 | 10 | 61.0 | 5.2 | 34.8 | 460 |
| 22-46-1 | 81.0 | 14.1 | 4.9 | 326 | 23-26-1 | 86.8 | 8.2 | 5.0 | 318 |
| 2 | 77.2 | 13.4 | 9.3 | 342 | 2 | 85.6 | 7.8 | 9.6 | 334 |
| 3 | 73.8 | 12.8 | 13.4 | 358 | 3 | 82.9 | 7.4 | 13.7 | 350 |
| 4 | 70.6 | 12.3 | 17.1 | 374 | 4 | 79.4 | 7.1 | 17.5 | 366 |
| 5 | 67.7 | 11.8 | 20.5 | 390 | 5 | 72.3 | 6.8 | 20.9 | 382 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 23-26-6 | 69.3 | 6.5 | 24.1 | 398 | 23-42-2 | 78.9 | 12.0 | 9.1 | 350 |
| 7 | 66.7 | 6.3 | 27.0 | 414 | 3 | 75.4 | 11.5 | 13.1 | 366 |
| 8 | 64.2 | 6.0 | 29.8 | 430 | 4 | 72.3 | 11.0 | 16.7 | 382 |
| 9 | 61.9 | 5.8 | 32.3 | 446 | 5 | 69.3 | 10.5 | 20.1 | 398 |
| 10 | 59.8 | 5.6 | 34.6 | 462 | 6 | 66.7 | 10.1 | 23.2 | 414 |
| 11 | 57.7 | 5.4 | 36.8 | 478 | 23-44-1 | 82.1 | 13.1 | 4.8 | 336 |
| 12 | 55.9 | 5.2 | 38.9 | 494 | 2 | 78.4 | 12.5 | 9.1 | 352 |
| 23-28-1 | 86.2 | 8.8 | 5.0 | 320 | 3 | 75.0 | 12.0 | 13.0 | 368 |
| 2 | 82.1 | 8.3 | 9.5 | 336 | 4 | 71.9 | 11.5 | 16.6 | 384 |
| 3 | 78.4 | 8.0 | 13.6 | 352 | 5 | 69.0 | 11.0 | 20.0 | 400 |
| 4 | 75.0 | 7.6 | 17.4 | 368 | 6 | 66.3 | 10.6 | 23.1 | 416 |
| 5 | 71.9 | 7.3 | 20.8 | 384 | 12 | 53.9 | 8.6 | 37.5 | 512 |
| 6 | 69.0 | 7.0 | 24.0 | 400 | 23-46-1 | 81.7 | 13.6 | 4.7 | 338 |
| 8 | 63.9 | 6.5 | 29.6 | 432 | 2 | 78.0 | 13.0 | 9.0 | 354 |
| 23-30-1 | 85.7 | 9.3 | 5.0 | 322 | 3 | 74.6 | 12.4 | 13.0 | 370 |
| 2 | 81.6 | 8.9 | 9.5 | 338 | 4 | 71.5 | 11.9 | 16.6 | 386 |
| 3 | 78.0 | 8.5 | 13.5 | 354 | 5 | 68.7 | 11.4 | 19.9 | 402 |
| 4 | 74.6 | 8.1 | 17.3 | 370 | 6 | 66.0 | 11.0 | 23.0 | 418 |
| 5 | 71.5 | 7.8 | 20.7 | 386 | 23-48-1 | 81.2 | 14.1 | 4.7 | 340 |
| 6 | 68.7 | 7.4 | 23.9 | 402 | 2 | 77.5 | 13.5 | 9.0 | 356 |
| 7 | 66.0 | 7.2 | 26.8 | 418 | 3 | 74.2 | 12.9 | 12.9 | 372 |
| 12 | 55.4 | 6.0 | 38.6 | 498 | 4 | 71.1 | 12.4 | 16.5 | 388 |
| 23-32-1 | 85.2 | 9.9 | 4.9 | 324 | 5 | 68.3 | 11.9 | 19.8 | 404 |
| 2 | 81.2 | 9.4 | 9.4 | 340 | 24-8-6 | 73.4 | 2.0 | 24.5 | 392 |
| 3 | 77.5 | 9.0 | 13.5 | 356 | 24-10-8 | 67.6 | 2.3 | 30.1 | 426 |
| 4 | 74.2 | 8.6 | 17.1 | 372 | 9 | 65.2 | 2.2 | 32.6 | 442 |
| 5 | 71.1 | 8.2 | 20.6 | 388 | 10 | 62.9 | 2.2 | 34.9 | 458 |
| 6 | 68.3 | 7.9 | 23.8 | 404 | 24-12-1 | 91.1 | 3.8 | 5.1 | 316 |
| 7 | 65.7 | 7.6 | 26.7 | 420 | 2 | 86.7 | 3.6 | 9.6 | 332 |
| 23-34-1 | 84.7 | 10.4 | 4.9 | 326 | 3 | 82.7 | 3.4 | 13.8 | 348 |
| 2 | 80.7 | 9.9 | 9.4 | 342 | 4 | 79.1 | 3.3 | 17.6 | 364 |
| 3 | 77.1 | 9.5 | 13.4 | 358 | 24-14-1 | 90.6 | 4.4 | 5.0 | 318 |
| 4 | 73.8 | 9.1 | 17.1 | 374 | 2 | 86.2 | 4.2 | 9.6 | 334 |
| 5 | 70.8 | 8.7 | 20.5 | 390 | 3 | 82.3 | 4.0 | 13.7 | 350 |
| 6 | 68.0 | 8.4 | 23.6 | 406 | 4 | 78.7 | 3.8 | 17.5 | 366 |
| 9 | 60.8 | 7.5 | 31.7 | 454 | 5 | 75.4 | 3.7 | 20.9 | 382 |
| 23-36-1 | 84.1 | 11.0 | 4.9 | 328 | 6 | 72.4 | 3.5 | 24.1 | 398 |
| 2 | 80.2 | 10.4 | 9.3 | 344 | 7 | 69.6 | 3.4 | 27.0 | 414 |
| 3 | 76.7 | 10.0 | 13.3 | 360 | 22 | 44.0 | 2.1 | 53.8 | 654 |
| 4 | 73.4 | 9.6 | 17.0 | 376 | 24-16-1 | 90.0 | 5.0 | 5.0 | 320 |
| 5 | 70.4 | 9.2 | 20.4 | 392 | 2 | 85.7 | 4.7 | 9.5 | 336 |
| 6 | 67.7 | 8.8 | 23.5 | 408 | 3 | 81.8 | 4.5 | 13.6 | 352 |
| 7 | 65.1 | 8.5 | 26.4 | 424 | 4 | 78.3 | 4.3 | 17.4 | 368 |
| 8 | 62.7 | 8.2 | 29.1 | 440 | 5 | 75.0 | 4.2 | 20.8 | 384 |
| 10 | 58.5 | 7.6 | 33.9 | 472 | 6 | 72.0 | 4.0 | 24.0 | 400 |
| 23-38-1 | 83.6 | 11.5 | 4.8 | 330 | 7 | 69.2 | 3.8 | 26.9 | 416 |
| 2 | 79.8 | 11.0 | 9.2 | 346 | 8 | 66.7 | 3.7 | 29.6 | 432 |
| 3 | 76.2 | 10.5 | 13.3 | 362 | 9 | 64.3 | 3.6 | 32.1 | 448 |
| 4 | 73.0 | 10.1 | 16.9 | 378 | 10 | 62.1 | 3.4 | 34.5 | 464 |
| 5 | 70.1 | 9.6 | 20.3 | 394 | 11 | 60.0 | 3.3 | 36.7 | 480 |
| 6 | 67.3 | 9.3 | 23.4 | 410 | 12 | 58.1 | 3.2 | 38.7 | 496 |
| 22 | 41.4 | 5.7 | 52.8 | 666 | 13 | 56.2 | 3.1 | 40.6 | 512 |
| 23-40-1 | 83.1 | 12.1 | 4.8 | 332 | 24-18-1 | 89.4 | 5.6 | 5.0 | 322 |
| 2 | 79.3 | 11.5 | 9.2 | 348 | 2 | 85.2 | 5.3 | 9.5 | 338 |
| 3 | 75.8 | 11.0 | 13.2 | 364 | 3 | 81.4 | 5.1 | 13.5 | 354 |
| 4 | 72.6 | 10.5 | 16.8 | 380 | 4 | 77.8 | 4.8 | 17.3 | 370 |
| 5 | 69.7 | 10.1 | 20.2 | 396 | 5 | 74.6 | 4.7 | 20.7 | 386 |
| 8 | 62.2 | 9.0 | 28.8 | 444 | 6 | 71.6 | 4.5 | 23.9 | 402 |
| 23-42-1 | 82.6 | 12.6 | 4.8 | 334 | 7 | 68.9 | 4.3 | 26.8 | 418 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|---------|------|-----|------|-------|---------|------|------|------|-------|
| 24-18-8 | 66,4 | 4,1 | 29,5 | 434 | 24-30-2 | 82,3 | 8,6 | 9,1 | 350 |
| 9 | 64,0 | 4,0 | 32,0 | 450 | 3 | 78,7 | 8,2 | 13,1 | 366 |
| 10 | 61,8 | 3,9 | 34,3 | 466 | 4 | 75,4 | 7,8 | 16,8 | 382 |
| 11 | 59,8 | 3,7 | 36,5 | 482 | 5 | 72,4 | 7,5 | 20,1 | 398 |
| 12 | 57,8 | 3,6 | 38,6 | 498 | 6 | 69,5 | 7,2 | 23,2 | 414 |
| 24-20-1 | 88,9 | 6,2 | 4,9 | 324 | 7 | 67,0 | 7,0 | 26,0 | 430 |
| 2 | 84,7 | 5,9 | 9,4 | 340 | 8 | 64,6 | 6,7 | 28,7 | 446 |
| 3 | 80,9 | 5,6 | 13,5 | 356 | 12 | 56,4 | 5,9 | 37,6 | 510 |
| 4 | 77,4 | 5,4 | 17,2 | 372 | 15 | 51,6 | 5,4 | 43,0 | 558 |
| 5 | 74,2 | 5,1 | 20,6 | 388 | 17 | 48,8 | 5,1 | 46,0 | 590 |
| 6 | 71,3 | 4,9 | 23,8 | 404 | 24-32-1 | 85,7 | 9,5 | 4,8 | 336 |
| 7 | 68,6 | 4,7 | 26,7 | 420 | 2 | 81,8 | 9,1 | 9,1 | 352 |
| 8 | 66,1 | 4,6 | 29,3 | 436 | 3 | 78,3 | 8,7 | 13,0 | 368 |
| 9 | 63,7 | 4,4 | 31,9 | 452 | 4 | 75,0 | 8,3 | 16,7 | 384 |
| 10 | 61,5 | 4,3 | 34,2 | 468 | 5 | 72,0 | 8,0 | 20,0 | 400 |
| 11 | 59,5 | 4,1 | 36,4 | 484 | 6 | 69,2 | 7,7 | 23,1 | 416 |
| 12 | 57,6 | 4,0 | 38,4 | 500 | 12 | 56,3 | 6,2 | 37,5 | 512 |
| 13 | 55,8 | 3,9 | 40,3 | 516 | 16 | 50,0 | 5,6 | 44,4 | 576 |
| 14 | 54,1 | 3,7 | 42,1 | 532 | 24-34-1 | 85,2 | 10,1 | 4,7 | 338 |
| 15 | 52,6 | 3,6 | 43,8 | 548 | 2 | 81,4 | 9,6 | 9,0 | 354 |
| 24-22-1 | 88,3 | 6,8 | 4,9 | 326 | 3 | 77,8 | 9,2 | 13,0 | 370 |
| 2 | 84,2 | 6,4 | 9,4 | 342 | 4 | 74,6 | 8,8 | 16,6 | 386 |
| 3 | 80,4 | 6,1 | 13,4 | 358 | 5 | 71,6 | 8,5 | 19,9 | 402 |
| 4 | 77,0 | 5,9 | 17,1 | 374 | 6 | 68,9 | 8,1 | 23,0 | 418 |
| 5 | 73,8 | 5,6 | 20,5 | 390 | 7 | 66,4 | 7,8 | 25,8 | 434 |
| 6 | 70,9 | 5,4 | 23,6 | 406 | 8 | 64,0 | 7,5 | 28,4 | 450 |
| 7 | 68,3 | 5,2 | 26,5 | 422 | 17 | 48,5 | 5,7 | 45,8 | 594 |
| 8 | 65,7 | 5,0 | 29,2 | 438 | 23 | 41,8 | 4,9 | 53,3 | 690 |
| 9 | 63,4 | 4,8 | 31,7 | 454 | 24-36-1 | 84,7 | 10,6 | 4,7 | 340 |
| 10 | 61,3 | 4,7 | 34,0 | 470 | 2 | 80,9 | 10,1 | 9,0 | 356 |
| 11 | 59,3 | 4,5 | 36,2 | 486 | 3 | 77,4 | 9,7 | 12,9 | 372 |
| 12 | 57,4 | 4,4 | 38,2 | 502 | 4 | 74,2 | 9,3 | 16,5 | 388 |
| 24-24-1 | 87,8 | 7,3 | 4,9 | 328 | 5 | 71,3 | 8,9 | 19,8 | 404 |
| 2 | 83,7 | 6,9 | 9,3 | 344 | 6 | 68,6 | 8,6 | 22,8 | 420 |
| 3 | 80,0 | 6,7 | 13,3 | 360 | 7 | 66,0 | 8,3 | 25,7 | 436 |
| 4 | 76,6 | 6,4 | 17,0 | 376 | 8 | 63,7 | 7,9 | 28,3 | 452 |
| 5 | 73,5 | 6,1 | 20,4 | 392 | 12 | 55,8 | 7,0 | 37,2 | 516 |
| 6 | 70,6 | 5,9 | 23,5 | 408 | 16 | 49,7 | 6,2 | 44,1 | 580 |
| 9 | 63,2 | 5,2 | 31,6 | 456 | 24-38-1 | 84,2 | 11,1 | 4,7 | 342 |
| 24-26-1 | 87,3 | 7,9 | 4,8 | 330 | 2 | 80,5 | 10,6 | 8,9 | 358 |
| 2 | 83,2 | 7,5 | 9,3 | 346 | 3 | 77,0 | 10,2 | 12,8 | 374 |
| 3 | 79,6 | 7,2 | 13,2 | 362 | 4 | 73,8 | 9,7 | 16,4 | 390 |
| 4 | 76,2 | 6,9 | 16,9 | 378 | 5 | 70,9 | 9,4 | 19,7 | 406 |
| 5 | 73,1 | 6,6 | 20,3 | 394 | 6 | 68,3 | 9,0 | 22,7 | 422 |
| 6 | 70,2 | 6,3 | 23,4 | 410 | 7 | 65,7 | 8,7 | 25,6 | 438 |
| 8 | 65,1 | 5,9 | 28,9 | 442 | 8 | 63,4 | 8,4 | 28,2 | 454 |
| 10 | 60,8 | 5,5 | 33,7 | 474 | 19 | 45,7 | 6,0 | 48,3 | 630 |
| 12 | 56,9 | 5,1 | 37,9 | 506 | 21 | 43,5 | 5,7 | 50,8 | 662 |
| 13 | 55,2 | 5,0 | 39,8 | 522 | 24-40-1 | 83,7 | 11,6 | 4,6 | 344 |
| 24-28-1 | 86,8 | 8,4 | 4,8 | 332 | 2 | 80,0 | 11,1 | 8,9 | 360 |
| 2 | 82,7 | 8,0 | 9,2 | 348 | 3 | 76,6 | 10,6 | 12,8 | 376 |
| 3 | 79,1 | 7,7 | 13,2 | 364 | 4 | 73,5 | 10,2 | 16,3 | 392 |
| 4 | 75,8 | 7,4 | 16,8 | 380 | 5 | 70,6 | 9,8 | 19,6 | 408 |
| 5 | 72,7 | 7,1 | 20,2 | 396 | 6 | 67,9 | 9,4 | 22,6 | 424 |
| 6 | 69,9 | 6,8 | 23,3 | 412 | 9 | 61,0 | 8,5 | 30,5 | 472 |
| 7 | 67,3 | 6,5 | 26,2 | 428 | 10 | 59,0 | 8,2 | 32,8 | 488 |
| 8 | 64,8 | 6,3 | 28,8 | 444 | 12 | 55,4 | 7,7 | 36,9 | 520 |
| 12 | 56,7 | 5,5 | 37,8 | 508 | 20 | 44,4 | 6,2 | 49,4 | 648 |
| 24-30-1 | 86,2 | 9,0 | 4,8 | 334 | 24-42-1 | 83,2 | 12,1 | 4,6 | 346 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 24-42-2 | 79.6 | 11.6 | 8.8 | 362 | 25-24-5 | 74.3 | 5.9 | 19.8 | 404 |
| 3 | 76.2 | 11.1 | 12.7 | 378 | 6 | 71.4 | 5.7 | 22.9 | 420 |
| 4 | 73.1 | 10.7 | 16.2 | 394 | 7 | 68.8 | 5.5 | 25.7 | 436 |
| 5 | 70.2 | 10.2 | 19.5 | 410 | 8 | 66.4 | 5.3 | 28.3 | 452 |
| 6 | 67.6 | 9.8 | 22.5 | 426 | 11 | 60.0 | 4.8 | 35.2 | 500 |
| 8 | 64.9 | 9.2 | 27.9 | 458 | 12 | 58.1 | 4.6 | 37.2 | 516 |
| 21 | 43.6 | 6.4 | 50.9 | 696 | 13 | 56.4 | 4.5 | 39.1 | 532 |
| 24-44-1 | 82.7 | 12.6 | 4.6 | 348 | 25-26-1 | 87.7 | 7.6 | 4.7 | 342 |
| 2 | 79.1 | 12.1 | 8.8 | 364 | 2 | 83.8 | 7.2 | 8.9 | 358 |
| 3 | 75.8 | 11.6 | 12.6 | 380 | 3 | 80.2 | 6.9 | 12.8 | 374 |
| 4 | 72.7 | 11.1 | 16.1 | 396 | 4 | 76.9 | 6.6 | 16.4 | 390 |
| 24-46-1 | 82.3 | 13.1 | 4.6 | 350 | 5 | 73.9 | 6.4 | 19.7 | 406 |
| 2 | 78.7 | 12.6 | 8.7 | 366 | 6 | 71.1 | 6.2 | 22.7 | 422 |
| 3 | 75.4 | 12.0 | 12.6 | 382 | 9 | 63.8 | 5.5 | 30.6 | 470 |
| 4 | 72.4 | 11.5 | 16.1 | 398 | 10 | 61.7 | 5.4 | 32.9 | 486 |
| 5 | 69.6 | 11.1 | 19.3 | 414 | 14 | 54.5 | 4.7 | 40.7 | 550 |
| 6 | 67.0 | 10.7 | 22.3 | 430 | 25-28-1 | 87.2 | 8.1 | 4.6 | 344 |
| 19 | 45.1 | 7.2 | 47.6 | 638 | 2 | 83.3 | 7.8 | 8.9 | 360 |
| 24-48-1 | 81.8 | 13.6 | 4.5 | 352 | 3 | 79.8 | 7.4 | 12.8 | 376 |
| 2 | 78.3 | 13.0 | 8.7 | 368 | 4 | 76.5 | 7.1 | 16.3 | 392 |
| 3 | 75.0 | 12.5 | 12.5 | 384 | 5 | 73.5 | 6.9 | 19.6 | 408 |
| 4 | 72.0 | 12.0 | 16.0 | 400 | 6 | 70.8 | 6.6 | 22.6 | 424 |
| 5 | 69.2 | 11.5 | 19.2 | 416 | 8 | 65.8 | 6.1 | 28.1 | 456 |
| 6 | 66.7 | 11.1 | 22.2 | 432 | 11 | 59.5 | 5.5 | 34.9 | 504 |
| 24-50-1 | 81.4 | 14.1 | 4.5 | 354 | 13 | 56.0 | 5.2 | 38.8 | 536 |
| 2 | 77.8 | 13.5 | 8.6 | 370 | 15 | 52.8 | 4.9 | 42.2 | 568 |
| 25-14-5 | 76.1 | 3.6 | 20.3 | 394 | 25-30-1 | 86.7 | 5.7 | 4.6 | 346 |
| 25-16-6 | 72.8 | 3.9 | 23.3 | 412 | 2 | 82.9 | 8.3 | 8.8 | 362 |
| 9 | 65.2 | 3.5 | 31.3 | 460 | 3 | 79.4 | 7.9 | 12.7 | 378 |
| 14 | 55.6 | 2.9 | 41.5 | 540 | 4 | 76.1 | 7.6 | 16.2 | 394 |
| 25-18-1 | 89.8 | 5.4 | 4.8 | 334 | 12 | 57.5 | 5.7 | 36.8 | 522 |
| 2 | 85.7 | 5.1 | 9.1 | 350 | 16 | 51.2 | 5.1 | 43.7 | 586 |
| 3 | 82.0 | 4.9 | 13.1 | 366 | 25-32-1 | 86.2 | 9.2 | 4.6 | 348 |
| 5 | 75.4 | 4.5 | 20.1 | 398 | 2 | 82.4 | 8.8 | 8.8 | 364 |
| 7 | 69.8 | 4.2 | 26.0 | 430 | 3 | 78.9 | 8.4 | 12.6 | 380 |
| 8 | 67.3 | 4.0 | 28.7 | 446 | 4 | 75.7 | 8.1 | 16.2 | 396 |
| 25-20-1 | 89.3 | 5.9 | 4.8 | 336 | 10 | 61.0 | 6.5 | 32.5 | 492 |
| 2 | 85.2 | 5.7 | 9.1 | 352 | 14 | 54.0 | 5.7 | 40.3 | 556 |
| 3 | 81.5 | 5.4 | 13.0 | 368 | 25-34-1 | 85.7 | 9.7 | 4.6 | 350 |
| 4 | 78.1 | 5.2 | 16.6 | 384 | 2 | 82.0 | 9.3 | 8.7 | 366 |
| 5 | 75.0 | 5.0 | 20.0 | 400 | 3 | 78.5 | 8.9 | 13.6 | 382 |
| 6 | 72.1 | 4.8 | 23.1 | 416 | 4 | 75.4 | 8.5 | 16.1 | 398 |
| 7 | 69.4 | 4.6 | 25.9 | 432 | 14 | 53.8 | 6.1 | 40.1 | 558 |
| 9 | 64.6 | 4.3 | 31.0 | 464 | 25-36-1 | 85.2 | 10.2 | 4.5 | 352 |
| 12 | 58.6 | 3.9 | 37.5 | 512 | 2 | 81.5 | 9.8 | 8.7 | 368 |
| 25-22-1 | 88.8 | 6.5 | 4.7 | 338 | 3 | 78.1 | 9.4 | 12.5 | 384 |
| 2 | 84.8 | 6.2 | 9.0 | 354 | 4 | 75.0 | 9.0 | 16.0 | 400 |
| 3 | 81.1 | 5.9 | 13.0 | 370 | 5 | 72.1 | 8.6 | 19.2 | 416 |
| 4 | 77.7 | 5.7 | 16.6 | 386 | 8 | 64.6 | 7.8 | 27.6 | 464 |
| 5 | 74.6 | 5.5 | 19.9 | 402 | 9 | 62.5 | 7.5 | 30.0 | 480 |
| 6 | 71.8 | 5.3 | 22.9 | 418 | 10 | 60.5 | 7.3 | 32.2 | 496 |
| 7 | 69.1 | 5.1 | 25.8 | 434 | 25-38-1 | 84.7 | 10.7 | 4.5 | 354 |
| 8 | 66.7 | 4.9 | 28.4 | 450 | 2 | 81.1 | 10.3 | 8.6 | 370 |
| 10 | 62.2 | 4.6 | 33.2 | 482 | 3 | 77.7 | 9.8 | 12.4 | 386 |
| 14 | 54.9 | 4.0 | 41.0 | 546 | 4 | 74.6 | 9.4 | 15.9 | 402 |
| 25-24-1 | 88.2 | 7.0 | 4.7 | 340 | 5 | 71.8 | 9.1 | 19.1 | 418 |
| 2 | 84.3 | 6.7 | 9.0 | 356 | 6 | 69.1 | 8.8 | 22.1 | 434 |
| 3 | 80.6 | 6.4 | 12.9 | 372 | 7 | 66.7 | 8.4 | 24.9 | 450 |
| 4 | 77.3 | 6.2 | 16.5 | 388 | 14 | 53.4 | 6.8 | 39.8 | 562 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|----------|------|------|------|------|---------|------|-----|------|------|
| 25-40-1 | 84.3 | 11.2 | 4.5 | 356 | 26-20-4 | 78.8 | 5.1 | 16.1 | 396 |
| 2 | 80.6 | 10.7 | 8.6 | 372 | 5 | 75.7 | 4.8 | 19.4 | 412 |
| 3 | 77.3 | 10.3 | 12.4 | 388 | 6 | 72.0 | 4.6 | 22.5 | 428 |
| 4 | 74.3 | 9.9 | 15.8 | 404 | 7 | 70.3 | 4.5 | 25.2 | 444 |
| 5 | 71.4 | 9.5 | 19.1 | 420 | 8 | 67.8 | 4.3 | 27.8 | 460 |
| 6 | 68.8 | 9.2 | 22.0 | 436 | 9 | 65.6 | 4.2 | 30.2 | 476 |
| 7 | 66.4 | 8.8 | 24.8 | 452 | 12 | 59.5 | 3.8 | 36.6 | 524 |
| 8 | 64.1 | 8.5 | 27.3 | 468 | 14 | 56.1 | 3.6 | 40.3 | 556 |
| 10 | 60.0 | 8.0 | 32.0 | 500 | 26-22-1 | 89.1 | 6.3 | 4.6 | 350 |
| 25-42-1 | 83.8 | 11.7 | 4.5 | 358 | 2 | 85.2 | 6.0 | 8.7 | 366 |
| 2 | 80.2 | 11.2 | 8.6 | 374 | 3 | 81.7 | 5.7 | 12.0 | 382 |
| 3 | 76.9 | 10.8 | 12.3 | 390 | 4 | 78.4 | 5.5 | 16.1 | 398 |
| 4 | 73.9 | 10.3 | 15.8 | 406 | 5 | 75.4 | 5.3 | 19.3 | 414 |
| 5 | 71.1 | 9.9 | 19.0 | 422 | 6 | 72.6 | 5.1 | 22.3 | 430 |
| 6 | 68.5 | 9.6 | 21.9 | 438 | 7 | 70.0 | 4.9 | 25.1 | 446 |
| 25-44-1 | 83.3 | 12.2 | 4.4 | 360 | 8 | 67.6 | 4.7 | 27.7 | 462 |
| 2 | 79.8 | 11.7 | 8.5 | 376 | 9 | 65.3 | 4.6 | 30.1 | 478 |
| 3 | 76.5 | 11.2 | 12.2 | 392 | 10 | 63.1 | 4.5 | 32.4 | 494 |
| 4 | 73.5 | 10.8 | 15.7 | 408 | 11 | 61.2 | 4.3 | 34.5 | 510 |
| 8 | 63.6 | 9.3 | 27.1 | 472 | 13 | 57.6 | 4.0 | 38.4 | 542 |
| 25-46-1 | 82.9 | 12.7 | 4.4 | 362 | 26-24-1 | 88.6 | 6.8 | 4.5 | 352 |
| 2 | 79.3 | 12.2 | 8.5 | 378 | 2 | 84.7 | 6.5 | 8.7 | 368 |
| 3 | 76.1 | 11.7 | 12.2 | 394 | 3 | 81.2 | 6.2 | 12.5 | 384 |
| 4 | 73.2 | 11.2 | 15.6 | 410 | 4 | 78.0 | 6.0 | 16.0 | 400 |
| 12 | 55.8 | 8.5 | 35.7 | 538 | 5 | 75.0 | 5.8 | 19.2 | 416 |
| 25-48-1 | 82.4 | 13.2 | 4.4 | 364 | 6 | 72.2 | 5.5 | 22.2 | 432 |
| 2 | 78.9 | 12.6 | 8.4 | 380 | 8 | 67.2 | 5.2 | 27.6 | 464 |
| 3 | 75.7 | 12.1 | 12.1 | 396 | 10 | 62.0 | 4.8 | 32.2 | 496 |
| 4 | 72.8 | 11.7 | 15.5 | 412 | 11 | 60.9 | 4.7 | 34.4 | 512 |
| 25-50-1 | 82.0 | 13.6 | 4.4 | 366 | 12 | 59.1 | 4.5 | 36.4 | 528 |
| 2 | 78.5 | 13.1 | 8.4 | 382 | 13 | 57.3 | 4.4 | 38.2 | 544 |
| 3 | 75.4 | 12.6 | 12.0 | 398 | 16 | 52.7 | 4.0 | 43.2 | 592 |
| 4 | 72.5 | 12.1 | 15.4 | 414 | 26-26-1 | 88.1 | 7.4 | 4.5 | 354 |
| 25-52-1 | 81.5 | 14.1 | 4.3 | 368 | 2 | 84.3 | 7.0 | 8.6 | 370 |
| 2 | 78.1 | 13.5 | 8.3 | 384 | 3 | 80.8 | 6.7 | 12.4 | 386 |
| 23-14-15 | 55.1 | 2.5 | 42.4 | 566 | 4 | 77.6 | 6.4 | 15.9 | 402 |
| 26-16-1 | 90.7 | 4.6 | 4.6 | 344 | 5 | 74.6 | 6.2 | 19.1 | 418 |
| 2 | 86.7 | 4.4 | 8.9 | 360 | 6 | 71.0 | 6.0 | 22.1 | 434 |
| 3 | 83.0 | 4.2 | 12.8 | 376 | 8 | 67.0 | 5.6 | 27.4 | 466 |
| 6 | 73.6 | 3.8 | 22.6 | 414 | 14 | 55.5 | 4.6 | 49.9 | 562 |
| 7 | 70.9 | 3.6 | 25.4 | 440 | 26-28-1 | 87.6 | 7.9 | 4.5 | 356 |
| 9 | 66.1 | 3.4 | 30.5 | 472 | 2 | 83.8 | 7.5 | 8.6 | 372 |
| 11 | 61.9 | 3.2 | 34.9 | 504 | 3 | 80.4 | 7.2 | 12.4 | 388 |
| 20-18-1 | 90.2 | 5.2 | 4.6 | 346 | 4 | 77.2 | 6.9 | 15.8 | 404 |
| 2 | 86.2 | 5.0 | 8.8 | 362 | 6 | 71.5 | 6.4 | 22.0 | 436 |
| 3 | 82.5 | 4.8 | 12.7 | 378 | 14 | 55.3 | 4.9 | 39.7 | 564 |
| 4 | 79.1 | 4.6 | 16.2 | 394 | 16 | 52.3 | 4.7 | 42.9 | 596 |
| 5 | 76.0 | 4.4 | 19.5 | 410 | 26-30-1 | 87.1 | 8.4 | 4.5 | 358 |
| 6 | 73.3 | 4.2 | 32.5 | 426 | 2 | 83.4 | 8.0 | 8.6 | 374 |
| 7 | 70.6 | 4.1 | 25.3 | 442 | 3 | 80.0 | 7.7 | 12.3 | 390 |
| 8 | 68.1 | 3.9 | 27.9 | 458 | 4 | 76.8 | 7.4 | 15.8 | 406 |
| 9 | 65.8 | 3.8 | 30.4 | 474 | 7 | 68.7 | 6.6 | 24.7 | 454 |
| 10 | 63.7 | 3.7 | 32.6 | 490 | 8 | 66.4 | 6.4 | 27.2 | 470 |
| 11 | 61.7 | 3.5 | 34.8 | 506 | 9 | 64.2 | 6.2 | 29.6 | 486 |
| 12 | 59.8 | 3.4 | 36.8 | 522 | 12 | 58.4 | 5.6 | 36.0 | 534 |
| 14 | 56.3 | 3.2 | 40.5 | 554 | 13 | 56.7 | 5.4 | 37.8 | 550 |
| 26-20-1 | 89.7 | 5.7 | 4.6 | 348 | 15 | 53.6 | 5.1 | 41.2 | 582 |
| 2 | 85.7 | 5.5 | 8.8 | 364 | 26-32-1 | 86.7 | 8.9 | 4.4 | 360 |
| 3 | 82.1 | 5.3 | 12.6 | 380 | 2 | 83.0 | 8.5 | 8.5 | 376 |

| C-H-O | C % | H % | O % | M. G. | C-H-O | C % | H % | O % | M. G. |
|---------|------|------|------|-------|---------|------|------|------|-------|
| 26-32-3 | 79.6 | 8.2 | 12.2 | 392 | 26-50-1 | 82.5 | 13.2 | 4.2 | 378 |
| 4 | 76.5 | 7.8 | 15.7 | 408 | 2 | 79.2 | 12.7 | 8.1 | 394 |
| 8 | 66.1 | 6.8 | 27.1 | 472 | 3 | 76.1 | 12.2 | 11.7 | 410 |
| 9 | 63.9 | 6.6 | 29.5 | 488 | 4 | 73.2 | 11.7 | 15.0 | 426 |
| 11 | 60.0 | 6.2 | 33.8 | 520 | 7 | 65.8 | 10.5 | 23.6 | 474 |
| 14 | 54.9 | 5.6 | 39.4 | 568 | 26-52-1 | 82.1 | 13.7 | 4.2 | 380 |
| 16 | 52.0 | 5.3 | 42.7 | 600 | 2 | 78.8 | 13.1 | 8.1 | 396 |
| 26-34-1 | 86.2 | 9.4 | 4.4 | 362 | 3 | 75.7 | 12.6 | 11.7 | 412 |
| 2 | 82.5 | 9.0 | 8.5 | 378 | 4 | 72.9 | 12.2 | 14.9 | 428 |
| 3 | 79.2 | 8.6 | 12.2 | 394 | 26-54-1 | 81.7 | 14.1 | 4.2 | 382 |
| 4 | 76.1 | 8.3 | 15.6 | 410 | 2 | 78.4 | 13.6 | 8.0 | 398 |
| 5 | 73.2 | 8.0 | 18.8 | 426 | 3 | 75.4 | 13.0 | 11.6 | 414 |
| 10 | 61.6 | 6.7 | 31.6 | 506 | 27-12-3 | 84.4 | 3.1 | 12.5 | 384 |
| 14 | 54.7 | 5.9 | 39.3 | 570 | 27-14-5 | 77.5 | 3.3 | 19.1 | 418 |
| 16 | 51.8 | 5.6 | 42.5 | 602 | 27-16-6 | 74.3 | 3.7 | 12.0 | 436 |
| 17 | 50.5 | 5.5 | 34.0 | 618 | 8 | 69.2 | 3.4 | 27.4 | 468 |
| 26-36-1 | 85.7 | 9.9 | 4.4 | 364 | 27-18-1 | 90.5 | 5.0 | 4.5 | 358 |
| 2 | 82.1 | 9.5 | 8.4 | 380 | 2 | 86.6 | 4.8 | 8.6 | 374 |
| 3 | 78.8 | 9.1 | 12.1 | 396 | 3 | 83.1 | 4.6 | 12.3 | 390 |
| 4 | 75.7 | 8.7 | 15.5 | 412 | 4 | 79.8 | 4.4 | 15.8 | 406 |
| 18 | 49.1 | 5.6 | 45.3 | 636 | 5 | 76.8 | 4.3 | 18.9 | 422 |
| 26-38-1 | 85.2 | 10.4 | 4.4 | 366 | 6 | 74.0 | 4.1 | 21.9 | 438 |
| 2 | 81.7 | 9.9 | 8.4 | 382 | 27-20-1 | 90.0 | 5.5 | 4.4 | 360 |
| 3 | 78.4 | 9.5 | 12.1 | 398 | 2 | 86.2 | 5.3 | 8.5 | 376 |
| 4 | 75.4 | 9.2 | 15.4 | 414 | 3 | 83.7 | 5.1 | 12.2 | 392 |
| 5 | 72.6 | 8.8 | 18.6 | 430 | 4 | 79.4 | 4.9 | 15.7 | 408 |
| 6 | 70.0 | 8.5 | 21.5 | 446 | 27-22-1 | 89.5 | 6.1 | 4.4 | 362 |
| 7 | 67.5 | 8.2 | 24.2 | 462 | 2 | 85.7 | 5.8 | 8.5 | 378 |
| 26-40-1 | 84.8 | 10.9 | 4.3 | 368 | 3 | 82.2 | 5.6 | 12.2 | 394 |
| 2 | 81.3 | 10.4 | 8.3 | 384 | 8 | 68.4 | 4.6 | 27.0 | 474 |
| 3 | 78.0 | 10.0 | 12.0 | 400 | 13 | 58.5 | 4.0 | 37.5 | 534 |
| 4 | 75.0 | 9.6 | 15.4 | 416 | 14 | 56.9 | 3.8 | 39.3 | 570 |
| 7 | 67.2 | 8.6 | 24.1 | 464 | 17 | 52.4 | 3.6 | 44.0 | 620 |
| 26-42-1 | 84.3 | 11.3 | 4.3 | 370 | 27-24-1 | 89.0 | 6.6 | 4.4 | 364 |
| 2 | 80.8 | 10.9 | 8.3 | 386 | 2 | 85.3 | 6.3 | 8.4 | 380 |
| 3 | 77.6 | 10.4 | 11.9 | 402 | 3 | 81.8 | 6.0 | 12.1 | 396 |
| 4 | 74.6 | 10.0 | 15.3 | 418 | 4 | 78.6 | 5.8 | 15.5 | 412 |
| 5 | 71.9 | 9.7 | 18.4 | 434 | 5 | 75.7 | 5.6 | 18.7 | 428 |
| 7 | 67.0 | 9.0 | 24.0 | 466 | 6 | 72.9 | 5.4 | 21.6 | 444 |
| 10 | 60.7 | 8.2 | 31.1 | 514 | 7 | 70.4 | 5.2 | 24.4 | 460 |
| 26-44-1 | 83.8 | 11.8 | 4.3 | 372 | 8 | 68.1 | 5.0 | 26.9 | 476 |
| 2 | 80.4 | 11.3 | 8.2 | 388 | 9 | 65.8 | 4.9 | 29.2 | 492 |
| 3 | 77.2 | 10.9 | 11.9 | 404 | 10 | 63.8 | 4.7 | 31.5 | 508 |
| 4 | 74.3 | 10.5 | 15.2 | 420 | 27-26-1 | 88.5 | 7.1 | 4.4 | 366 |
| 5 | 71.5 | 10.1 | 8.3 | 436 | 3 | 81.4 | 6.5 | 12.1 | 396 |
| 6 | 69.0 | 9.7 | 21.2 | 452 | 4 | 78.2 | 6.3 | 15.5 | 414 |
| 10 | 60.5 | 8.5 | 31.0 | 516 | 6 | 72.6 | 5.8 | 21.5 | 446 |
| 15 | 52.3 | 7.4 | 40.3 | 596 | 7 | 70.1 | 5.6 | 24.3 | 462 |
| 26-46-1 | 83.4 | 12.3 | 4.3 | 374 | 8 | 67.8 | 5.4 | 26.8 | 478 |
| 2 | 80.0 | 11.8 | 8.2 | 390 | 9 | 65.6 | 5.3 | 29.1 | 494 |
| 3 | 76.8 | 11.3 | 11.8 | 406 | 10 | 63.5 | 5.1 | 31.4 | 510 |
| 4 | 73.9 | 10.9 | 15.2 | 422 | 11 | 61.6 | 4.9 | 33.5 | 526 |
| 5 | 71.2 | 10.5 | 18.3 | 438 | 12 | 59.8 | 4.8 | 35.4 | 542 |
| 9 | 62.2 | 9.1 | 28.7 | 502 | 15 | 54.9 | 4.4 | 40.7 | 590 |
| 26-48-1 | 83.0 | 12.8 | 4.2 | 376 | 27-28-4 | 77.9 | 6.7 | 15.4 | 416 |
| 2 | 79.6 | 12.2 | 8.2 | 392 | 5 | 74.0 | 6.5 | 18.5 | 432 |
| 3 | 76.5 | 11.7 | 11.7 | 408 | 8 | 67.5 | 5.8 | 26.7 | 480 |
| 4 | 73.6 | 11.3 | 15.1 | 424 | 9 | 65.3 | 5.6 | 29.0 | 496 |
| 15 | 52.0 | 8.0 | 40.0 | 600 | 10 | 63.3 | 5.4 | 31.2 | 512 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|----------|------|------|------|------|---------|------|-----|------|------|
| 27-28-11 | 61.4 | 5.3 | 33.3 | 528 | 28-18-6 | 74.7 | 4.0 | 21.3 | 450 |
| 16 | 53.3 | 4.6 | 42.1 | 608 | 7 | 72.1 | 3.8 | 24.0 | 466 |
| 27-30-9 | 65.1 | 6.0 | 28.9 | 498 | 6 | 69.7 | 3.7 | 26.6 | 482 |
| 13 | 57.6 | 5.3 | 37.0 | 562 | 9 | 67.5 | 3.6 | 28.9 | 498 |
| 14 | 56.1 | 5.2 | 38.7 | 578 | 13 | 59.8 | 3.2 | 37.0 | 562 |
| 17 | 51.7 | 4.8 | 43.5 | 626 | 28-20-1 | 90.3 | 5.4 | 4.3 | 372 |
| 27-32-2 | 83.5 | 8.2 | 8.2 | 388 | 2 | 86.8 | 5.1 | 8.2 | 388 |
| 16 | 52.9 | 5.2 | 41.8 | 610 | 3 | 83.2 | 4.9 | 11.9 | 404 |
| 27-34-11 | 60.7 | 6.3 | 33.0 | 534 | 4 | 80.0 | 4.8 | 15.2 | 420 |
| 27-36-10 | 62.3 | 6.9 | 30.8 | 520 | 5 | 77.1 | 4.6 | 18.3 | 436 |
| 27-38-5 | 73.3 | 8.6 | 18.1 | 442 | 6 | 74.3 | 4.4 | 21.2 | 452 |
| 7 | 68.4 | 8.0 | 23.6 | 474 | 7 | 71.7 | 4.3 | 23.9 | 468 |
| 10 | 62.0 | 7.3 | 30.7 | 522 | 10 | 65.1 | 3.9 | 31.0 | 516 |
| 13 | 56.9 | 6.6 | 36.5 | 570 | 11 | 63.2 | 3.7 | 33.1 | 532 |
| 27-40-1 | 85.3 | 10.5 | 4.2 | 380 | 13 | 59.6 | 3.5 | 36.9 | 564 |
| 2 | 81.8 | 10.1 | 8.1 | 396 | 28-22-1 | 90.8 | 5.9 | 4.3 | 374 |
| 5 | 73.0 | 9.0 | 18.0 | 444 | 2 | 86.1 | 5.6 | 38.2 | 390 |
| 8 | 65.9 | 8.1 | 26.0 | 492 | 3 | 82.7 | 5.4 | 11.8 | 406 |
| 10 | 61.8 | 7.6 | 30.5 | 524 | 4 | 79.6 | 5.2 | 15.2 | 422 |
| 27-42-2 | 81.4 | 10.5 | 8.0 | 398 | 5 | 76.7 | 5.0 | 18.3 | 438 |
| 3 | 78.2 | 10.1 | 11.6 | 414 | 6 | 74.0 | 4.8 | 21.1 | 454 |
| 5 | 72.6 | 9.4 | 17.9 | 446 | 7 | 71.5 | 4.7 | 23.8 | 470 |
| 7 | 67.8 | 8.8 | 23.4 | 478 | 8 | 69.1 | 4.5 | 26.3 | 486 |
| 10 | 61.6 | 8.0 | 30.4 | 526 | 9 | 66.9 | 4.4 | 28.7 | 502 |
| 12 | 58.0 | 7.5 | 35.4 | 558 | 11 | 62.9 | 4.1 | 33.0 | 534 |
| 27-44-1 | 84.4 | 11.4 | 4.2 | 384 | 13 | 59.4 | 3.9 | 36.7 | 566 |
| 2 | 81.0 | 11.0 | 8.0 | 400 | 14 | 57.7 | 3.8 | 38.5 | 582 |
| 3 | 77.9 | 10.6 | 11.5 | 416 | 28-24-1 | 89.4 | 6.4 | 4.2 | 376 |
| 4 | 75.0 | 10.2 | 14.8 | 432 | 2 | 85.7 | 6.1 | 8.2 | 392 |
| 15 | 53.3 | 7.2 | 39.5 | 608 | 8 | 68.8 | 4.9 | 26.2 | 488 |
| 27-46-1 | 83.9 | 11.9 | 4.1 | 386 | 9 | 66.7 | 4.7 | 28.6 | 504 |
| 2 | 80.6 | 11.4 | 8.0 | 402 | 12 | 60.9 | 4.3 | 34.8 | 552 |
| 3 | 77.5 | 11.0 | 11.5 | 418 | 13 | 59.2 | 4.2 | 36.6 | 568 |
| 5 | 72.0 | 10.2 | 17.8 | 450 | 19 | 50.6 | 3.6 | 45.8 | 664 |
| 14 | 54.5 | 7.7 | 37.7 | 594 | 28-26-1 | 88.9 | 6.9 | 4.2 | 378 |
| 27-48-1 | 83.5 | 12.4 | 4.1 | 388 | 2 | 85.3 | 6.6 | 8.1 | 394 |
| 2 | 80.2 | 11.9 | 7.9 | 404 | 3 | 82.0 | 6.3 | 11.7 | 410 |
| 27-50-1 | 83.1 | 12.8 | 4.1 | 390 | 4 | 78.9 | 6.1 | 15.0 | 426 |
| 2 | 79.8 | 12.3 | 7.9 | 406 | 5 | 76.0 | 5.9 | 18.1 | 442 |
| 27-52-1 | 82.6 | 13.3 | 4.1 | 392 | 7 | 70.9 | 5.5 | 23.6 | 474 |
| 2 | 79.4 | 12.7 | 7.8 | 408 | 12 | 60.7 | 4.7 | 34.6 | 554 |
| 27-54-1 | 82.2 | 13.7 | 4.1 | 394 | 28-28-1 | 88.4 | 7.3 | 4.2 | 380 |
| 2 | 79.0 | 13.2 | 7.8 | 410 | 2 | 84.8 | 7.1 | 8.1 | 396 |
| 3 | 76.0 | 12.7 | 11.3 | 426 | 6 | 73.1 | 6.1 | 20.8 | 460 |
| 27-56-1 | 81.8 | 14.1 | 4.0 | 396 | 13 | 58.7 | 4.9 | 36.4 | 572 |
| 2 | 78.6 | 13.6 | 7.8 | 412 | 14 | 57.1 | 4.8 | 38.1 | 588 |
| 28-10-15 | 57.3 | 1.7 | 40.9 | 586 | 28-30-2 | 84.4 | 7.6 | 8.0 | 398 |
| 28-14-5 | 78.2 | 3.2 | 18.6 | 430 | 4 | 78.1 | 7.0 | 14.9 | 430 |
| 6 | 75.3 | 3.1 | 21.5 | 446 | 5 | 75.3 | 6.7 | 17.9 | 446 |
| 7 | 72.7 | 3.0 | 24.3 | 462 | 7 | 70.3 | 6.3 | 23.4 | 478 |
| 28-16-1 | 91.3 | 4.3 | 4.3 | 368 | 9 | 65.9 | 5.9 | 28.2 | 510 |
| 3 | 84.0 | 4.0 | 12.0 | 400 | 15 | 55.4 | 4.9 | 39.6 | 606 |
| 6 | 75.0 | 3.6 | 21.4 | 448 | 28-32-8 | 67.8 | 6.4 | 25.8 | 496 |
| 7 | 72.4 | 3.4 | 24.1 | 464 | 10 | 63.6 | 6.1 | 30.3 | 528 |
| 8 | 70.0 | 3.3 | 26.7 | 480 | 28-34-1 | 87.1 | 8.8 | 4.1 | 386 |
| 28-18-1 | 90.8 | 4.9 | 4.3 | 370 | 5 | 72.1 | 7.3 | 20.6 | 450 |
| 3 | 83.6 | 4.5 | 11.9 | 402 | 17 | 52.3 | 5.3 | 42.4 | 642 |
| 4 | 80.4 | 4.3 | 15.3 | 418 | 28-36-4 | 77.1 | 8.2 | 14.7 | 436 |
| 5 | 77.4 | 4.1 | 18.4 | 434 | 7 | 69.4 | 7.4 | 23.1 | 484 |

| C-H-O | C % | H % | O % | M.G. | C-H-O | C % | H % | O % | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 28-36-17 | 52.2 | 5.6 | 42.2 | 644 | 29-44-3 | 79.1 | 10.0 | 10.9 | 440 |
| 28-38-4 | 76.7 | 8.7 | 14.6 | 438 | 8 | 66.9 | 8.5 | 24.6 | 520 |
| 19 | 49.6 | 5.6 | 44.8 | 678 | 10 | 63.0 | 8.0 | 29.0 | 552 |
| 28-40-1 | 85.7 | 10.2 | 4.1 | 392 | 11 | 61.3 | 7.7 | 31.0 | 568 |
| 2 | 82.4 | 9.8 | 7.8 | 408 | 18 | 53.7 | 6.8 | 39.5 | 648 |
| 4 | 76.4 | 9.1 | 14.5 | 440 | 29-46-2 | 81.7 | 10.8 | 7.5 | 426 |
| 7 | 68.9 | 8.2 | 22.9 | 488 | 4 | 76.0 | 10.0 | 14.0 | 458 |
| 28-42-2 | 81.9 | 10.3 | 7.8 | 410 | 5 | 73.4 | 9.7 | 16.9 | 474 |
| 4 | 76.0 | 9.5 | 14.5 | 442 | 7 | 68.8 | 9.1 | 22.1 | 506 |
| 8 | 66.4 | 8.3 | 25.3 | 506 | 29-48-4 | 75.7 | 10.4 | 13.9 | 460 |
| 24 | 44.1 | 5.5 | 50.4 | 762 | 27 | 42.0 | 5.8 | 52.2 | 828 |
| 28-44-2 | 81.6 | 10.7 | 7.7 | 412 | 29-50-2 | 80.9 | 11.6 | 7.4 | 430 |
| 4 | 75.6 | 10.0 | 14.4 | 444 | 5 | 72.7 | 10.5 | 16.7 | 478 |
| 7 | 68.3 | 8.9 | 22.8 | 492 | 29-52-20 | 48.3 | 7.2 | 44.5 | 720 |
| 28-46-1 | 81.4 | 11.6 | 4.0 | 398 | 29-56-4 | 74.4 | 11.9 | 13.7 | 468 |
| 2 | 81.2 | 11.1 | 7.7 | 414 | 29-58-1 | 82.5 | 13.7 | 3.8 | 422 |
| 10 | 62.0 | 8.5 | 29.5 | 542 | 2 | 79.4 | 13.2 | 7.3 | 438 |
| 28-48-1 | 84.0 | 12.0 | 4.0 | 400 | 4 | 74.0 | 12.3 | 13.6 | 470 |
| 2 | 80.7 | 11.5 | 7.7 | 416 | 29-60-1 | 82.1 | 14.1 | 3.8 | 424 |
| 3 | 77.8 | 11.1 | 11.1 | 432 | 2 | 79.1 | 13.6 | 7.3 | 440 |
| 4 | 75.0 | 10.7 | 14.3 | 448 | 30-18-4 | 81.4 | 4.1 | 14.5 | 442 |
| 28-50-1 | 83.6 | 12.4 | 4.0 | 402 | 8 | 71.1 | 3.6 | 25.3 | 506 |
| 2 | 80.4 | 12.0 | 7.6 | 418 | 18 | 54.0 | 2.7 | 43.2 | 696 |
| 13 | 56.6 | 8.4 | 35.0 | 594 | 30-20-3 | 84.1 | 4.7 | 11.2 | 428 |
| 28-52-1 | 83.2 | 12.9 | 3.9 | 404 | 6 | 75.6 | 4.2 | 20.2 | 476 |
| 2 | 80.0 | 12.4 | 7.6 | 420 | 7 | 73.2 | 4.1 | 22.7 | 492 |
| 28-54-1 | 82.8 | 13.3 | 3.9 | 406 | 8 | 70.9 | 3.9 | 25.2 | 508 |
| 2 | 79.6 | 12.8 | 7.6 | 422 | 30-22-1 | 90.5 | 5.5 | 4.0 | 398 |
| 3 | 76.7 | 12.3 | 11.0 | 438 | 2 | 87.0 | 5.3 | 7.7 | 414 |
| 28-56-1 | 82.4 | 13.7 | 3.9 | 408 | 4 | 80.7 | 4.9 | 14.3 | 446 |
| 2 | 79.2 | 13.2 | 7.5 | 424 | 6 | 75.3 | 4.6 | 20.1 | 478 |
| 4 | 73.7 | 12.3 | 14.0 | 456 | 15 | 57.9 | 3.5 | 38.6 | 622 |
| 28-58-1 | 82.0 | 14.1 | 3.9 | 410 | 19 | 52.5 | 3.2 | 44.3 | 686 |
| 2 | 79.6 | 13.7 | 7.6 | 426 | 30-24-2 | 86.5 | 5.7 | 7.7 | 416 |
| 20-18-6 | 75.3 | 3.9 | 20.8 | 462 | 3 | 83.3 | 5.6 | 11.1 | 432 |
| 29-20-4 | 70.6 | 4.6 | 14.8 | 432 | 4 | 80.3 | 5.3 | 14.3 | 448 |
| 8 | 70.2 | 4.0 | 25.8 | 496 | 6 | 75.0 | 5.0 | 20.0 | 480 |
| 18 | 53.0 | 3.0 | 43.9 | 656 | 8 | 70.3 | 4.7 | 25.0 | 512 |
| 29-24-1 | 89.7 | 6.2 | 4.1 | 388 | 9 | 68.1 | 4.5 | 27.3 | 528 |
| 2 | 86.1 | 5.9 | 7.9 | 404 | 30-26-1 | 89.5 | 6.5 | 4.0 | 402 |
| 4 | 79.8 | 5.5 | 14.7 | 436 | 2 | 86.1 | 6.2 | 7.6 | 418 |
| 6 | 74.4 | 5.1 | 20.5 | 468 | 3 | 82.9 | 6.0 | 11.1 | 434 |
| 8 | 69.6 | 4.8 | 25.6 | 500 | 4 | 80.0 | 5.8 | 14.2 | 450 |
| 29-26-2 | 85.7 | 6.4 | 7.9 | 406 | 5 | 77.2 | 5.6 | 17.2 | 466 |
| 6 | 74.1 | 5.5 | 20.4 | 470 | 6 | 74.7 | 5.4 | 19.9 | 482 |
| 9 | 67.2 | 5.0 | 27.8 | 518 | 7 | 72.3 | 5.2 | 22.5 | 498 |
| 12 | 61.5 | 4.6 | 33.9 | 566 | 8 | 70.0 | 5.1 | 24.9 | 514 |
| 29-28-6 | 73.7 | 5.9 | 20.3 | 472 | 9 | 67.9 | 4.9 | 27.2 | 530 |
| 14 | 58.0 | 4.7 | 37.3 | 600 | 11 | 64.0 | 4.6 | 31.3 | 562 |
| 29-30-4 | 78.7 | 6.8 | 14.5 | 442 | 30-28-1 | 89.1 | 6.9 | 4.0 | 404 |
| 6 | 73.4 | 6.3 | 20.3 | 474 | 2 | 85.7 | 6.6 | 7.6 | 420 |
| 10 | 64.7 | 5.6 | 29.7 | 538 | 4 | 79.6 | 6.2 | 14.2 | 452 |
| 11 | 62.8 | 5.4 | 31.8 | 554 | 5 | 76.9 | 6.0 | 17.1 | 468 |
| 29-32-16 | 54.7 | 5.0 | 40.3 | 636 | 6 | 74.4 | 5.8 | 19.8 | 484 |
| 29-34-9 | 66.2 | 6.4 | 27.4 | 526 | 14 | 58.8 | 4.6 | 36.6 | 612 |
| 12 | 60.6 | 5.9 | 33.4 | 574 | 30-30-1 | 88.7 | 7.4 | 3.9 | 406 |
| 13 | 59.0 | 5.8 | 35.2 | 590 | 2 | 85.3 | 7.1 | 7.6 | 422 |
| 29-36-8 | 68.0 | 7.0 | 25.0 | 512 | 5 | 76.6 | 6.4 | 17.0 | 470 |
| 29-42-2 | 82.4 | 9.9 | 7.6 | 422 | 30-32-4 | 78.9 | 7.0 | 14.0 | 456 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 30-34-4 | 78.6 | 7.4 | 14.0 | 458 | 31-38-9 | 67.1 | 6.8 | 26.0 | 554 |
| 10 | 65.0 | 6.1 | 28.9 | 554 | 10 | 65.3 | 6.6 | 28.1 | 570 |
| 12 | 61.4 | 5.8 | 32.8 | 586 | 31-40-8 | 68.9 | 7.4 | 23.7 | 540 |
| 13 | 59.8 | 5.6 | 34.5 | 602 | 31-42-9 | 66.7 | 7.5 | 25.8 | 558 |
| 15 | 56.8 | 5.3 | 37.9 | 634 | 31-44-6 | 72.7 | 8.6 | 18.7 | 512 |
| 30-36-10 | 64.7 | 6.5 | 28.8 | 556 | 31-48-4 | 76.9 | 9.9 | 13.2 | 484 |
| 35 | 37.6 | 3.8 | 58.6 | 956 | 8 | 67.9 | 8.7 | 23.4 | 548 |
| 30-38-2 | 83.7 | 8.8 | 7.4 | 430 | 12 | 60.8 | 7.8 | 31.4 | 612 |
| 3 | 80.7 | 8.5 | 10.8 | 446 | 31-50-7 | 69.7 | 9.4 | 20.9 | 534 |
| 4 | 77.9 | 8.2 | 13.9 | 462 | 10 | 63.9 | 8.6 | 27.5 | 582 |
| 6 | 72.9 | 7.7 | 19.4 | 494 | 31-52-17 | 53.4 | 7.5 | 39.1 | 696 |
| 8 | 68.4 | 7.2 | 24.3 | 526 | 31-62-1 | 82.7 | 13.8 | 3.5 | 450 |
| 10 | 64.5 | 6.8 | 28.7 | 558 | 2 | 79.8 | 13.3 | 6.9 | 466 |
| 30-44-1 | 85.7 | 10.5 | 3.8 | 420 | 3 | 77.2 | 12.9 | 9.9 | 482 |
| 14 | 57.3 | 7.0 | 35.7 | 628 | 4 | 74.7 | 12.4 | 12.9 | 498 |
| 30-46-1 | 85.3 | 10.9 | 3.8 | 422 | 31-64-1 | 82.3 | 14.1 | 3.5 | 452 |
| 2 | 82.2 | 10.5 | 7.3 | 438 | 2 | 79.5 | 13.7 | 6.8 | 468 |
| 3 | 79.3 | 10.1 | 10.6 | 454 | 32-14-5 | 80.3 | 2.9 | 16.7 | 478 |
| 4 | 76.6 | 9.8 | 13.6 | 470 | 32-18-6 | 77.1 | 3.6 | 19.3 | 498 |
| 12 | 69.2 | 7.7 | 32.1 | 598 | 32-18-13 | 62.9 | 2.9 | 34.1 | 610 |
| 14 | 57.2 | 7.3 | 35.5 | 630 | 32-20-13 | 62.7 | 3.2 | 34.0 | 612 |
| 21 | 48.5 | 6.2 | 45.3 | 742 | 14 | 61.1 | 3.2 | 35.7 | 628 |
| 30-48-1 | 84.9 | 11.3 | 3.8 | 424 | 32-22-2 | 87.7 | 5.0 | 7.3 | 438 |
| 2 | 81.8 | 10.9 | 7.3 | 440 | 3 | 84.6 | 4.8 | 10.6 | 454 |
| 3 | 78.9 | 10.5 | 10.5 | 456 | 4 | 81.7 | 4.7 | 13.6 | 470 |
| 4 | 76.3 | 10.2 | 13.5 | 472 | 5 | 79.0 | 4.5 | 16.4 | 486 |
| 8 | 67.1 | 8.9 | 23.9 | 536 | 10 | 67.8 | 3.9 | 28.3 | 594 |
| 12 | 60.0 | 8.0 | 32.0 | 600 | 32-24-1 | 90.5 | 5.7 | 3.8 | 424 |
| 13 | 58.4 | 7.8 | 33.8 | 616 | 2 | 87.4 | 5.4 | 7.2 | 440 |
| 14 | 56.9 | 7.6 | 35.4 | 632 | 3 | 84.2 | 5.3 | 10.5 | 456 |
| 38 | 35.4 | 4.7 | 59.8 | 1016 | 4 | 81.4 | 5.1 | 13.5 | 472 |
| 30-50-1 | 84.5 | 11.7 | 3.8 | 426 | 8 | 71.6 | 4.5 | 23.9 | 536 |
| 2 | 81.5 | 11.3 | 7.2 | 442 | 10 | 67.6 | 4.2 | 28.2 | 568 |
| 30-52-2 | 81.1 | 11.7 | 7.2 | 444 | 16 | 57.8 | 3.6 | 38.6 | 664 |
| 8 | 66.7 | 9.6 | 23.7 | 540 | 32-26-1 | 90.1 | 6.1 | 3.8 | 426 |
| 10 | 62.9 | 9.1 | 28.0 | 572 | 2 | 86.9 | 5.9 | 7.2 | 442 |
| 14 | 56.6 | 8.2 | 35.2 | 636 | 3 | 83.8 | 5.7 | 10.5 | 458 |
| 30-58-3 | 77.3 | 12.4 | 10.3 | 466 | 4 | 81.0 | 5.5 | 13.5 | 474 |
| 6 | 70.0 | 11.3 | 18.7 | 514 | 5 | 78.4 | 5.3 | 16.3 | 490 |
| 30-60-1 | 82.6 | 13.7 | 3.7 | 436 | 6 | 75.9 | 5.1 | 19.0 | 506 |
| 2 | 79.6 | 13.2 | 7.1 | 452 | 7 | 73.5 | 5.0 | 21.5 | 522 |
| 3 | 76.9 | 12.8 | 10.3 | 468 | 8 | 71.4 | 4.8 | 23.8 | 538 |
| 4 | 74.4 | 12.4 | 13.2 | 484 | 32-28-1 | 89.7 | 6.5 | 3.7 | 428 |
| 30-62-1 | 82.2 | 14.1 | 3.6 | 438 | 2 | 86.5 | 6.3 | 7.2 | 444 |
| 2 | 79.3 | 13.6 | 7.0 | 454 | 5 | 78.0 | 5.7 | 16.3 | 492 |
| 31-20-6 | 76.2 | 4.1 | 19.7 | 488 | 8 | 71.1 | 5.2 | 23.7 | 540 |
| 31-22-1 | 90.7 | 5.4 | 3.9 | 410 | 12 | 63.6 | 4.6 | 31.8 | 604 |
| 2 | 87.4 | 5.1 | 7.5 | 426 | 32-30-4 | 80.3 | 6.3 | 13.4 | 478 |
| 5 | 78.5 | 4.6 | 16.9 | 474 | 12 | 63.4 | 4.9 | 31.7 | 606 |
| 31-24-4 | 80.9 | 5.2 | 13.9 | 460 | 32-32-8 | 70.6 | 5.9 | 23.5 | 544 |
| 31-28-4 | 80.2 | 6.0 | 13.8 | 464 | 12 | 63.2 | 5.2 | 31.6 | 608 |
| 8 | 70.5 | 5.3 | 24.2 | 528 | 16 | 57.1 | 4.8 | 38.1 | 672 |
| 31-30-2 | 85.7 | 6.9 | 7.4 | 434 | 32-34-1 | 88.5 | 7.8 | 3.7 | 434 |
| 9 | 68.1 | 5.5 | 29.4 | 516 | 2 | 85.3 | 7.6 | 7.1 | 450 |
| 14 | 59.4 | 4.8 | 35.8 | 626 | 13 | 64.0 | 5.7 | 30.3 | 600 |
| 31-32-16 | 56.3 | 4.8 | 38.8 | 660 | 19 | 53.2 | 4.7 | 42.1 | 722 |
| 31-34-12 | 62.2 | 5.7 | 32.1 | 598 | 32-36-8 | 70.1 | 6.5 | 33.4 | 548 |
| 15 | 57.6 | 5.2 | 37.2 | 616 | 32-38-8 | 69.8 | 6.9 | 23.3 | 550 |
| 31-36-4 | 78.8 | 7.6 | 13.6 | 472 | 13 | 61.0 | 6.0 | 33.0 | 630 |

| C—H—O | C% | H% | O% | M. G. | C—H—O | C% | H% | O% | M. G. |
|----------|------|------|------|-------|----------|------|------|------|-------|
| 32-38-15 | 58.0 | 5.7 | 36.2 | 662 | 34-22-3 | 85.4 | 4.6 | 10.0 | 478 |
| 32-40-2 | 81.2 | 8.8 | 7.0 | 456 | 4 | 82.6 | 4.4 | 13.0 | 494 |
| 9 | 67.6 | 7.0 | 25.4 | 568 | 5 | 80.0 | 4.3 | 15.7 | 510 |
| 32-42-10 | 65.5 | 7.2 | 27.3 | 586 | 6 | 77.6 | 4.2 | 18.2 | 526 |
| 31 | 41.6 | 4.5 | 53.8 | 922 | 34-24-1 | 91.1 | 5.3 | 3.6 | 448 |
| 32-44-32 | 40.9 | 4.7 | 54.4 | 940 | 2 | 88.0 | 5.1 | 6.9 | 464 |
| 32-46-23 | 48.1 | 5.8 | 46.1 | 798 | 34-26-2 | 87.6 | 5.6 | 6.8 | 466 |
| 31 | 41.5 | 5.0 | 53.5 | 926 | 3 | 84.6 | 5.4 | 10.4 | 482 |
| 32-48-6 | 72.7 | 9.1 | 18.2 | 528 | 4 | 81.9 | 5.2 | 12.9 | 498 |
| 16 | 55.8 | 7.0 | 37.2 | 688 | 8 | 74.7 | 4.8 | 20.5 | 546 |
| 32 | 40.7 | 5.1 | 54.2 | 944 | 15 | 60.5 | 3.8 | 35.6 | 674 |
| 32-50-3 | 79.7 | 10.4 | 9.9 | 482 | 34-28-4 | 81.6 | 5.6 | 12.8 | 506 |
| 4 | 77.1 | 10.0 | 12.9 | 498 | 5 | 79.1 | 5.4 | 15.5 | 516 |
| 33 | 39.9 | 5.2 | 54.9 | 962 | 6 | 76.7 | 5.2 | 18.1 | 532 |
| 32-52-2 | 82.1 | 11.1 | 6.8 | 468 | 9 | 72.3 | 4.9 | 22.7 | 564 |
| 4 | 76.8 | 10.4 | 12.8 | 500 | 9 | 70.3 | 4.8 | 24.8 | 580 |
| 5 | 74.4 | 10.1 | 15.5 | 516 | 10 | 68.4 | 4.7 | 26.8 | 596 |
| 17 | 54.2 | 7.3 | 38.4 | 708 | 13 | 59.0 | 4.0 | 37.0 | 692 |
| 32-54-1 | 84.6 | 11.9 | 3.5 | 454 | 22 | 51.8 | 3.5 | 44.7 | 788 |
| 4 | 76.5 | 10.8 | 12.7 | 502 | 34-30-4 | 81.3 | 6.0 | 12.7 | 502 |
| 11 | 62.5 | 8.8 | 28.7 | 614 | 8 | 72.1 | 5.3 | 22.6 | 566 |
| 18 | 52.9 | 7.4 | 39.7 | 726 | 17 | 57.5 | 4.2 | 38.3 | 710 |
| 32-62-3 | 77.7 | 12.5 | 9.7 | 494 | 34-32-6 | 76.1 | 6.0 | 17.9 | 536 |
| 5 | 73.0 | 11.8 | 15.2 | 526 | 7 | 73.9 | 5.8 | 20.3 | 552 |
| 7 | 68.8 | 11.1 | 20.1 | 558 | 10 | 68.0 | 5.3 | 26.7 | 600 |
| 9 | 65.1 | 10.5 | 24.4 | 590 | 12 | 64.5 | 5.0 | 30.4 | 632 |
| 16 | 54.7 | 8.8 | 36.5 | 702 | 14 | 61.4 | 4.8 | 33.7 | 664 |
| 32-64-1 | 82.8 | 13.8 | 3.4 | 464 | 34-34-4 | 80.6 | 6.7 | 12.7 | 506 |
| 2 | 80.3 | 13.3 | 6.7 | 480 | 6 | 75.8 | 6.3 | 17.8 | 538 |
| 3 | 77.4 | 12.9 | 9.7 | 496 | 34-36-4 | 80.3 | 7.1 | 12.6 | 508 |
| 32-66-1 | 82.4 | 14.2 | 3.4 | 466 | 34-38-2 | 85.4 | 7.9 | 6.7 | 478 |
| 2 | 79.7 | 13.7 | 6.6 | 482 | 4 | 80.0 | 7.4 | 12.6 | 510 |
| 33-22-4 | 83.6 | 4.6 | 11.8 | 474 | 9 | 69.2 | 6.4 | 24.4 | 590 |
| 7 | 76.7 | 4.3 | 19.0 | 516 | 15 | 59.5 | 5.5 | 35.0 | 686 |
| 33-24-1 | 91.2 | 5.6 | 3.2 | 434 | 34-40-8 | 79.8 | 6.9 | 22.2 | 576 |
| 4 | 83.2 | 5.1 | 11.7 | 476 | 18 | 55.4 | 5.4 | 39.1 | 736 |
| 8 | 73.9 | 5.2 | 20.9 | 536 | 34-42-5 | 77.0 | 7.9 | 15.1 | 539 |
| 33-30-5 | 79.8 | 6.0 | 14.1 | 496 | 20 | 53.0 | 5.4 | 41.6 | 770 |
| 9 | 69.5 | 5.2 | 25.3 | 570 | 34-46-6 | 74.2 | 8.4 | 17.4 | 550 |
| 33-32-4 | 81.8 | 6.6 | 11.6 | 484 | 9 | 68.2 | 7.7 | 24.1 | 598 |
| 14 | 60.7 | 4.9 | 34.4 | 652 | 11 | 64.8 | 7.3 | 27.9 | 630 |
| 33-34-13 | 64.7 | 5.6 | 29.7 | 612 | 23 | 49.6 | 5.6 | 44.8 | 822 |
| 20 | 52.8 | 4.5 | 42.7 | 750 | 34-48-2 | 83.6 | 9.8 | 6.5 | 488 |
| 33-36-9 | 68.8 | 6.2 | 25.0 | 576 | 9 | 68.0 | 8.0 | 24.0 | 600 |
| 12 | 63.5 | 5.8 | 30.7 | 624 | 34-50-8 | 69.6 | 8.5 | 21.8 | 586 |
| 33-46-2 | 83.6 | 9.7 | 6.7 | 474 | 16 | 57.1 | 7.0 | 35.9 | 714 |
| 33-48-2 | 83.2 | 10.1 | 6.7 | 476 | 34-52-1 | 85.7 | 10.9 | 3.4 | 476 |
| 6 | 73.3 | 8.9 | 17.8 | 540 | 2 | 82.9 | 10.6 | 6.5 | 492 |
| 33-62-1 | 83.5 | 13.1 | 3.4 | 474 | 9 | 67.5 | 8.6 | 23.8 | 604 |
| 33-66-1 | 82.9 | 13.8 | 3.3 | 478 | 34-54-9 | 67.3 | 8.9 | 23.8 | 606 |
| 2 | 80.2 | 13.3 | 6.5 | 494 | 11 | 63.9 | 8.5 | 27.6 | 638 |
| 3 | 77.6 | 12.9 | 9.4 | 510 | 14 | 59.5 | 7.9 | 32.6 | 686 |
| 4 | 75.3 | 12.5 | 12.2 | 526 | 34-56-2 | 82.2 | 11.3 | 6.4 | 496 |
| 33-68-1 | 82.5 | 14.2 | 3.3 | 480 | 11 | 63.8 | 8.7 | 27.5 | 640 |
| 2 | 79.8 | 13.7 | 6.5 | 496 | 16 | 56.7 | 7.8 | 35.5 | 720 |
| 3 | 77.3 | 13.3 | 9.4 | 512 | 21 | 51.0 | 7.0 | 42.0 | 800 |
| 34-20-4 | 82.9 | 4.0 | 13.0 | 492 | 34-60-17 | 55.1 | 8.1 | 36.8 | 740 |
| 7 | 75.6 | 3.7 | 20.7 | 540 | 18 | 54.0 | 7.9 | 38.1 | 756 |
| 10 | 69.4 | 3.4 | 27.2 | 588 | 34-62-9 | 69.4 | 10.1 | 23.5 | 614 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 34-62-11 | 63.2 | 9.6 | 27.2 | 646 | 36-38-4 | 80.9 | 7.1 | 12.0 | 521 |
| 34-66-4 | 75.8 | 12.2 | 11.9 | 538 | 36-38-19 | 55.8 | 4.9 | 39.3 | 774 |
| 34-69-1 | 82.9 | 13.8 | 3.2 | 492 | 20 | 54.7 | 4.8 | 40.5 | 790 |
| 34-70-1 | 80.3 | 13.4 | 6.3 | 508 | 36-40-16 | 59.3 | 5.5 | 35.2 | 728 |
| 2 | 82.6 | 14.2 | 3.2 | 494 | 36-42-6 | 75.8 | 7.4 | 16.8 | 570 |
| 35-20-8 | 80.0 | 13.7 | 6.3 | 510 | 36-48-14 | 61.4 | 6.8 | 31.8 | 704 |
| 35-22-8 | 73.9 | 3.5 | 22.5 | 568 | 36-50-25 | 49.0 | 5.6 | 45.4 | 882 |
| 9 | 73.7 | 3.9 | 22.4 | 570 | 36-52-2 | 83.7 | 10.1 | 6.2 | 516 |
| 35-24-1 | 71.7 | 3.7 | 24.6 | 586 | 16 | 58.4 | 7.0 | 34.6 | 740 |
| 4 | 91.3 | 5.2 | 3.5 | 460 | 36-54-2 | 83.4 | 10.4 | 6.2 | 518 |
| 8 | 82.6 | 4.7 | 12.6 | 508 | 6 | 74.2 | 9.3 | 16.5 | 582 |
| 9 | 71.4 | 4.1 | 24.5 | 588 | 20 | 53.6 | 6.7 | 39.6 | 806 |
| 35-28-2 | 87.5 | 5.8 | 6.7 | 480 | 36-56-6 | 74.0 | 9.6 | 16.4 | 584 |
| 4 | 82.0 | 5.5 | 12.5 | 512 | 18 | 55.7 | 7.2 | 37.1 | 776 |
| 11 | 67.3 | 4.5 | 28.2 | 624 | 19 | 54.5 | 7.1 | 38.4 | 792 |
| 35-30-17 | 58.2 | 4.1 | 37.7 | 722 | 36-58-2 | 82.8 | 11.1 | 6.1 | 522 |
| 35-32-11 | 66.9 | 5.1 | 28.0 | 628 | 3 | 80.3 | 10.8 | 8.9 | 538 |
| 35-34-11 | 66.7 | 5.4 | 27.9 | 630 | 15 | 59.2 | 7.9 | 32.9 | 730 |
| 13 | 63.4 | 5.1 | 31.4 | 662 | 29 | 45.3 | 6.1 | 48.6 | 954 |
| 17 | 57.9 | 4.7 | 37.4 | 726 | 36-60-2 | 82.4 | 11.4 | 6.2 | 524 |
| 35-52-2 | 83.3 | 10.3 | 6.3 | 504 | 3 | 80.0 | 11.1 | 8.9 | 540 |
| 6 | 73.9 | 9.2 | 16.9 | 568 | 5 | 75.5 | 10.5 | 14.0 | 572 |
| 35-56-2 | 82.7 | 11.0 | 6.3 | 508 | 30 | 44.4 | 6.2 | 49.4 | 972 |
| 3 | 80.2 | 10.7 | 9.1 | 524 | 31 | 43.7 | 6.1 | 50.2 | 988 |
| 4 | 77.8 | 10.4 | 11.8 | 540 | 36-62-4 | 77.4 | 11.1 | 11.5 | 558 |
| 14 | 60.0 | 8.0 | 32.0 | 700 | 7 | 71.3 | 10.2 | 18.5 | 606 |
| 35-58-11 | 64.2 | 8.9 | 26.9 | 654 | 31 | 43.6 | 6.3 | 50.1 | 970 |
| 14 | 59.9 | 8.2 | 31.9 | 702 | 36-64-8 | 69.2 | 10.2 | 20.5 | 624 |
| 32 | 42.4 | 5.9 | 51.7 | 990 | 36-66-5 | 74.7 | 11.4 | 13.8 | 578 |
| 35-68-4 | 76.1 | 12.3 | 11.6 | 552 | 31 | 43.5 | 6.6 | 49.9 | 964 |
| 5 | 73.9 | 12.0 | 14.1 | 568 | 36-68-5 | 74.5 | 11.7 | 13.8 | 580 |
| 35-70-1 | 80.3 | 13.8 | 3.2 | 506 | 7 | 70.6 | 11.1 | 18.3 | 612 |
| 2 | 80.5 | 13.4 | 6.1 | 522 | 36-70-4 | 76.3 | 12.4 | 11.3 | 566 |
| 35-72-1 | 82.7 | 14.2 | 3.1 | 508 | 5 | 74.2 | 12.0 | 13.7 | 582 |
| 2 | 80.2 | 13.7 | 6.1 | 524 | 7 | 70.4 | 11.4 | 18.2 | 614 |
| 36-16-4 | 84.4 | 3.1 | 12.5 | 512 | 36-72-1 | 83.1 | 13.8 | 3.1 | 520 |
| 36-22-7 | 76.3 | 3.9 | 19.8 | 566 | 2 | 76.0 | 12.7 | 11.3 | 536 |
| 8 | 74.2 | 3.8 | 22.0 | 582 | 36-74-1 | 82.7 | 14.2 | 3.1 | 522 |
| 9 | 72.2 | 3.7 | 24.1 | 598 | 2 | 80.3 | 13.7 | 5.9 | 538 |
| 36-24-7 | 76.1 | 4.2 | 19.7 | 568 | 37-26-8 | 74.2 | 4.3 | 21.4 | 598 |
| 36-26-6 | 78.0 | 4.7 | 17.3 | 554 | 37-34-10 | 69.6 | 5.3 | 25.1 | 638 |
| 8 | 73.7 | 4.4 | 21.8 | 586 | 11 | 67.9 | 5.2 | 26.9 | 654 |
| 16 | 60.5 | 3.6 | 35.9 | 714 | 37-36-1 | 89.5 | 7.3 | 3.2 | 496 |
| 36-28-3 | 85.0 | 5.5 | 9.4 | 598 | 37-40-17 | 58.7 | 5.3 | 36.0 | 756 |
| 6 | 77.7 | 5.0 | 17.3 | 556 | 37-50-25 | 49.7 | 5.6 | 44.7 | 894 |
| 36-30-3 | 84.7 | 5.9 | 9.4 | 510 | 37-52-4 | 79.3 | 9.3 | 11.4 | 560 |
| 8 | 73.2 | 5.1 | 21.7 | 590 | 37-54-2 | 83.8 | 10.2 | 6.0 | 530 |
| 13 | 64.5 | 4.5 | 31.0 | 670 | 37-56-18 | 56.3 | 7.1 | 36.5 | 788 |
| 16 | 60.2 | 4.2 | 35.6 | 718 | 37-66-2 | 81.9 | 12.2 | 5.9 | 542 |
| 36-32-6 | 77.1 | 5.7 | 17.1 | 560 | 4 | 77.3 | 11.5 | 11.1 | 574 |
| 10 | 69.2 | 5.1 | 25.6 | 624 | 18 | 55.5 | 8.5 | 36.0 | 800 |
| 14 | 62.8 | 4.6 | 32.6 | 688 | 37-74-1 | 83.1 | 13.9 | 3.0 | 534 |
| 36-34-9 | 72.7 | 5.7 | 21.5 | 594 | 2 | 80.7 | 13.5 | 5.8 | 550 |
| 15 | 61.2 | 4.8 | 34.0 | 706 | 37-76-1 | 82.8 | 14.2 | 3.0 | 536 |
| 17 | 58.5 | 4.6 | 36.9 | 738 | 2 | 80.4 | 13.8 | 5.8 | 552 |
| 20 | 55.0 | 4.3 | 40.7 | 786 | 38-24-11 | 69.5 | 3.6 | 26.8 | 656 |
| 36-36-6 | 76.6 | 6.4 | 17.0 | 564 | 38-26-7 | 76.8 | 4.4 | 18.8 | 594 |
| 15 | 61.0 | 5.1 | 33.9 | 768 | 9 | 72.8 | 4.1 | 23.0 | 626 |
| 21 | 53.7 | 4.4 | 41.8 | 804 | 10 | 71.0 | 4.0 | 24.9 | 642 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 38-26-15 | 63.2 | 3.6 | 33.2 | 722 | 40-52-4 | 80.5 | 8.7 | 10.7 | 596 |
| 17 | 60.5 | 3.4 | 36.1 | 754 | 40-54-27 | 49.7 | 5.6 | 44.7 | 966 |
| 38-30-6 | 78.3 | 5.2 | 16.5 | 582 | 40-56-5 | 77.9 | 9.1 | 13.0 | 616 |
| 9 | 72.4 | 4.7 | 22.9 | 630 | 40-58-3 | 81.9 | 9.9 | 8.2 | 586 |
| 38-32-3 | 85.1 | 6.0 | 8.9 | 536 | 5 | 77.7 | 9.4 | 12.9 | 618 |
| 12 | 67.1 | 4.7 | 28.2 | 680 | 9 | 70.4 | 8.5 | 21.1 | 682 |
| 38-34-11 | 68.5 | 5.1 | 26.4 | 666 | 40-60-2 | 83.9 | 10.5 | 5.6 | 572 |
| 12 | 66.9 | 5.0 | 28.1 | 682 | 4 | 79.5 | 9.9 | 10.6 | 604 |
| 38-36-6 | 77.5 | 6.1 | 16.3 | 588 | 6 | 75.5 | 9.4 | 15.1 | 636 |
| 38-40-17 | 59.4 | 5.2 | 35.4 | 768 | 40-62-2 | 83.6 | 10.8 | 5.6 | 574 |
| 38-42-4 | 81.1 | 7.5 | 11.4 | 562 | 3 | 81.4 | 10.5 | 8.1 | 560 |
| 38-44-4 | 80.8 | 7.8 | 11.4 | 564 | 4 | 79.2 | 10.2 | 10.6 | 606 |
| 38-62-3 | 80.6 | 11.0 | 8.4 | 566 | 5 | 77.2 | 10.0 | 12.8 | 622 |
| 11 | 65.7 | 8.9 | 25.4 | 694 | 6 | 75.2 | 9.7 | 15.1 | 638 |
| 38-64-3 | 80.3 | 11.3 | 8.4 | 568 | 7 | 73.4 | 9.5 | 17.1 | 674 |
| 18 | 56.4 | 7.9 | 35.6 | 808 | 40-64-4 | 79.0 | 10.5 | 10.5 | 608 |
| 38-66-4 | 77.8 | 11.3 | 10.9 | 586 | 5 | 76.9 | 10.3 | 12.8 | 624 |
| 17 | 57.4 | 8.3 | 34.2 | 794 | 18 | 57.7 | 7.7 | 34.6 | 832 |
| 38-72-7 | 71.3 | 11.2 | 17.5 | 640 | 40-66-7 | 58.7 | 8.1 | 33.2 | 678 |
| 38-74-4 | 76.8 | 12.4 | 10.8 | 594 | 40-68-17 | 58.5 | 8.3 | 33.2 | 820 |
| 38-76-1 | 83.2 | 13.9 | 2.9 | 548 | 40-70-1 | 84.8 | 12.4 | 2.8 | 566 |
| 2 | 80.8 | 13.5 | 5.7 | 564 | 4 | 78.2 | 11.4 | 10.4 | 614 |
| 38-78-1 | 82.9 | 14.2 | 2.9 | 550 | 18 | 57.3 | 8.3 | 34.4 | 838 |
| 2 | 80.6 | 13.8 | 5.6 | 566 | 28 | 48.1 | 7.0 | 44.9 | 998 |
| 39-26-2 | 89.0 | 4.9 | 6.1 | 526 | 40-74-8 | 70.4 | 10.8 | 18.8 | 682 |
| 39-30-24 | 53.1 | 3.4 | 43.5 | 882 | 40-80-1 | 83.3 | 13.9 | 2.8 | 576 |
| 39-34-11 | 69.0 | 5.0 | 26.0 | 678 | 2 | 81.1 | 13.5 | 5.4 | 592 |
| 39-38-14 | 64.1 | 5.2 | 30.7 | 730 | 40-82-1 | 83.0 | 14.2 | 5.4 | 578 |
| 39-56-16 | 60.0 | 7.2 | 32.8 | 780 | 2 | 80.8 | 13.8 | 5.4 | 584 |
| 39-64-2 | 82.9 | 11.3 | 5.7 | 564 | 41-32-4 | 83.7 | 5.4 | 10.9 | 588 |
| 39-72-5 | 75.5 | 11.6 | 12.9 | 620 | 11 | 70.3 | 4.6 | 25.1 | 700 |
| 7 | 71.8 | 11.0 | 17.2 | 652 | 41-34-3 | 85.7 | 5.9 | 8.4 | 574 |
| 39-74-6 | 73.4 | 11.6 | 15.0 | 638 | 11 | 70.1 | 4.8 | 25.1 | 702 |
| 39-76-4 | 67.2 | 12.2 | 10.6 | 608 | 15 | 64.2 | 4.4 | 31.3 | 766 |
| 5 | 75.2 | 11.9 | 12.9 | 624 | 41-38-3 | 85.1 | 6.6 | 8.3 | 578 |
| 39-78-1 | 83.3 | 13.9 | 2.8 | 562 | 41-68-2 | 83.1 | 11.5 | 5.4 | 592 |
| 2 | 81.0 | 13.5 | 5.5 | 578 | 4 | 78.8 | 10.9 | 10.3 | 624 |
| 39-80-1 | 83.0 | 14.2 | 2.8 | 564 | 37 | 42.7 | 5.9 | 51.4 | 1152 |
| 2 | 80.7 | 13.8 | 5.5 | 580 | 41-74-2 | 82.3 | 12.4 | 5.3 | 568 |
| 40-22-7 | 78.2 | 3.6 | 18.2 | 614 | 41-78-6 | 73.9 | 11.7 | 14.4 | 666 |
| 40-24-8 | 75.9 | 3.8 | 20.2 | 632 | 41-82-1 | 83.4 | 13.9 | 2.7 | 590 |
| 40-26-7 | 77.7 | 4.2 | 18.1 | 618 | 2 | 81.2 | 13.5 | 5.3 | 606 |
| 8 | 75.7 | 4.1 | 20.2 | 634 | 41-84-1 | 83.1 | 14.2 | 2.7 | 592 |
| 40-28-6 | 79.5 | 4.6 | 15.9 | 604 | 2 | 80.9 | 13.8 | 5.3 | 608 |
| 40-30-14 | 65.4 | 4.1 | 30.5 | 734 | 42-22-12 | 70.2 | 3.1 | 26.7 | 718 |
| 17 | 61.4 | 3.8 | 34.8 | 782 | 42-30-13 | 67.9 | 4.0 | 28.0 | 742 |
| 40-32-7 | 76.9 | 5.1 | 18.0 | 624 | 42-32-6 | 79.8 | 5.0 | 15.2 | 632 |
| 14 | 65.2 | 4.3 | 30.4 | 736 | 42-34-10 | 72.2 | 4.9 | 22.9 | 698 |
| 40-34-15 | 63.7 | 4.5 | 31.8 | 754 | 15 | 64.8 | 4.4 | 30.8 | 778 |
| 40-36-12 | 67.8 | 5.1 | 27.1 | 708 | 16 | 63.5 | 4.3 | 32.2 | 794 |
| 16 | 62.2 | 4.7 | 33.1 | 772 | 17 | 62.2 | 4.2 | 33.6 | 810 |
| 21 | 56.3 | 4.2 | 39.1 | 852 | 42-36-10 | 72.0 | 5.1 | 22.9 | 700 |
| 40-38-16 | 62.0 | 4.9 | 33.1 | 774 | 13 | 67.4 | 4.8 | 27.8 | 748 |
| 17 | 60.8 | 4.8 | 34.4 | 790 | 16 | 63.3 | 4.5 | 32.2 | 796 |
| 18 | 59.6 | 4.7 | 35.7 | 806 | 42-38-13 | 67.2 | 5.1 | 27.7 | 750 |
| 19 | 58.4 | 4.6 | 37.0 | 822 | 16 | 63.2 | 4.7 | 32.1 | 798 |
| 40-40-2 | 86.9 | 7.2 | 5.8 | 552 | 42-40-5 | 80.8 | 6.4 | 12.8 | 624 |
| 10 | 70.6 | 5.9 | 23.5 | 680 | 42-44-22 | 56.0 | 4.9 | 39.1 | 900 |
| 40-50-14 | 63.7 | 6.6 | 29.7 | 754 | 42-46-23 | 54.9 | 5.0 | 40.1 | 918 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 42-48-16 | 62,4 | 5,9 | 31,7 | 808 | 45-28-2 | 90,0 | 4,7 | 5,3 | 600 |
| 27 | 51,2 | 4,9 | 43,9 | 984 | 45-32-2 | 89,4 | 5,3 | 5,3 | 604 |
| 42-50-22 | 55,6 | 5,5 | 38,9 | 906 | 45-66-1 | 86,8 | 10,6 | 2,6 | 622 |
| 42-56-15 | 63,0 | 7,0 | 30,0 | 800 | 7 | 75,2 | 9,2 | 15,6 | 718 |
| 42-64-10 | 69,2 | 8,8 | 22,0 | 728 | 45-72-3 | 81,8 | 10,9 | 7,3 | 660 |
| 42-66-12 | 66,1 | 8,6 | 25,2 | 762 | 15 | 63,4 | 8,4 | 28,2 | 852 |
| 42-68-4 | 79,2 | 10,7 | 10,1 | 636 | 45-74-4 | 79,6 | 10,9 | 9,4 | 678 |
| 12 | 66,0 | 8,9 | 25,1 | 764 | 45-80-28 | 50,6 | 7,5 | 41,9 | 1068 |
| 42-70-2 | 83,1 | 11,6 | 5,3 | 606 | 45-86-6 | 74,8 | 11,9 | 13,3 | 722 |
| 42-74-2 | 82,6 | 12,1 | 5,2 | 610 | 45-90-1 | 83,6 | 13,9 | 2,5 | 646 |
| 42-76-7 | 72,8 | 11,0 | 16,2 | 892 | 2 | 81,6 | 13,6 | 4,8 | 662 |
| 8 | 71,2 | 10,7 | 18,1 | 808 | 45-92-1 | 83,3 | 14,2 | 2,5 | 648 |
| 42-78-6 | 74,3 | 11,5 | 14,2 | 678 | 2 | 81,3 | 13,9 | 4,8 | 664 |
| 7 | 72,6 | 11,2 | 16,1 | 694 | 46-6-5 | 86,5 | 0,9 | 12,5 | 638 |
| 42-80-7 | 72,4 | 11,5 | 16,1 | 696 | 46-32-15 | 67,0 | 3,9 | 29,1 | 824 |
| 42-84-1 | 83,4 | 13,9 | 2,6 | 604 | 16 | 65,7 | 3,8 | 30,5 | 840 |
| 2 | 81,3 | 13,5 | 5,2 | 620 | 46-38-4 | 79,5 | 11,2 | 9,2 | 654 |
| 42-86-1 | 83,1 | 14,2 | 2,6 | 606 | 13 | 65,9 | 9,3 | 24,8 | 798 |
| 2 | 81,0 | 13,8 | 5,1 | 622 | 46-42-6 | 75,6 | 11,2 | 13,2 | 690 |
| 43-26-10 | 73,5 | 3,7 | 22,8 | 702 | 46-46-7 | 77,7 | 6,5 | 15,8 | 710 |
| 43-38-10 | 72,3 | 5,3 | 22,4 | 714 | 46-48-15 | 65,7 | 5,7 | 28,6 | 840 |
| 43-46-10 | 71,5 | 6,4 | 22,1 | 722 | 46-58-15 | 64,9 | 6,8 | 28,2 | 850 |
| 43-50-16 | 62,8 | 6,1 | 31,1 | 822 | 46-66-24 | 55,1 | 6,6 | 38,3 | 1002 |
| 43-76-4 | 78,7 | 11,6 | 9,6 | 656 | 46-68-10 | 70,8 | 8,7 | 20,5 | 780 |
| 13 | 64,5 | 9,5 | 26,0 | 800 | 46-72-12 | 67,7 | 8,8 | 23,5 | 816 |
| 43-84-5 | 75,9 | 12,3 | 11,8 | 680 | 46-76-1 | 85,7 | 11,8 | 2,5 | 644 |
| 43-86-1 | 83,5 | 13,9 | 2,6 | 618 | 46-80-2 | 83,1 | 12,1 | 4,8 | 664 |
| 2 | 81,4 | 13,6 | 5,0 | 634 | 7 | 74,2 | 10,8 | 15,0 | 744 |
| 43-88-1 | 83,2 | 14,2 | 2,6 | 620 | 46-84-25 | 53,3 | 8,1 | 38,6 | 1036 |
| 2 | 81,1 | 13,8 | 5,0 | 636 | 46-92-1 | 83,6 | 13,9 | 2,4 | 660 |
| 44-28-9 | 75,4 | 4,0 | 20,6 | 700 | 2 | 81,7 | 13,6 | 4,7 | 676 |
| 44-30-9 | 75,2 | 4,3 | 20,5 | 702 | 46-94-1 | 83,4 | 14,2 | 2,4 | 662 |
| 15 | 66,1 | 3,8 | 30,1 | 798 | 47-30-11 | 73,2 | 3,9 | 22,9 | 770 |
| 44-34-8 | 76,5 | 4,9 | 18,5 | 690 | 47-36-12 | 71,2 | 4,5 | 24,2 | 792 |
| 9 | 74,8 | 4,8 | 20,4 | 706 | 47-42-16 | 65,4 | 4,9 | 29,7 | 862 |
| 11 | 71,5 | 4,6 | 23,8 | 738 | 47-68-8 | 74,2 | 8,9 | 16,8 | 760 |
| 44-38-3 | 86,0 | 6,2 | 7,8 | 614 | 47-78-1 | 85,7 | 11,9 | 2,4 | 658 |
| 15 | 65,5 | 4,7 | 29,8 | 806 | 2 | 83,7 | 11,6 | 4,7 | 674 |
| 44-40-15 | 65,3 | 4,9 | 29,7 | 808 | 47-88-5 | 77,0 | 12,0 | 10,9 | 732 |
| 44-42-1 | 90,1 | 7,2 | 2,7 | 586 | 47-94-1 | 83,7 | 13,9 | 2,4 | 674 |
| 44-54-4 | 81,7 | 8,4 | 9,9 | 646 | 2 | 81,8 | 13,6 | 4,6 | 690 |
| 44-58-18 | 60,4 | 6,6 | 33,0 | 874 | 47-96-1 | 83,4 | 14,2 | 2,4 | 676 |
| 44-60-19 | 59,2 | 6,7 | 34,1 | 892 | 2 | 81,5 | 13,9 | 4,6 | 692 |
| 44-62-4 | 80,7 | 9,5 | 9,8 | 654 | 48-18-1 | 94,4 | 2,6 | 2,6 | 610 |
| 44-64-4 | 80,4 | 9,8 | 9,8 | 656 | 48-28-11 | 73,8 | 3,6 | 22,6 | 780 |
| 5 | 78,6 | 9,5 | 11,9 | 672 | 48-30-10 | 75,2 | 3,9 | 20,9 | 766 |
| 13 | 66,0 | 8,0 | 26,0 | 800 | 48-36-12 | 71,6 | 4,5 | 23,9 | 804 |
| 44-68-5 | 78,1 | 10,1 | 11,8 | 676 | 48-38-12 | 71,4 | 4,7 | 23,8 | 806 |
| 14 | 64,4 | 8,3 | 27,3 | 820 | 19 | 62,7 | 4,1 | 33,1 | 918 |
| 16 | 62,0 | 8,0 | 30,0 | 852 | 48-42-18 | 63,6 | 4,6 | 31,8 | 906 |
| 44-70-4 | 79,8 | 10,6 | 9,6 | 662 | 48-54-5 | 81,1 | 7,6 | 11,3 | 710 |
| 28 | 59,5 | 6,7 | 42,8 | 1046 | 48-60-18 | 62,3 | 6,5 | 31,2 | 924 |
| 44-76-2 | 83,0 | 11,9 | 5,0 | 636 | 48-64-10 | 72,0 | 8,0 | 20,0 | 800 |
| 44-78-2 | 82,8 | 12,2 | 5,0 | 638 | 12 | 69,2 | 7,7 | 23,1 | 832 |
| 44-82-3 | 80,2 | 12,5 | 7,3 | 658 | 48-66-3 | 83,5 | 9,6 | 6,9 | 690 |
| 44-83-1 | 83,6 | 13,9 | 2,5 | 632 | 29 | 52,1 | 5,9 | 41,9 | 1106 |
| 2 | 81,5 | 13,6 | 4,9 | 648 | 48-68-25 | 55,2 | 6,5 | 38,3 | 1044 |
| 44-90-1 | 83,3 | 14,2 | 2,5 | 634 | 48-70-17 | 62,8 | 7,6 | 29,6 | 918 |
| 2 | 81,2 | 13,8 | 4,9 | 650 | 48-72-5 | 79,1 | 9,9 | 11,0 | 728 |

| C-H-O | C% | H% | O% | M.G. | C-H-O | C% | H% | O% | M.G. |
|----------|------|------|------|------|----------|------|------|------|------|
| 48-72-12 | 68.6 | 8.6 | 22.8 | 840 | 53-108-1 | 83.9 | 14.0 | 2.1 | 778 |
| 48-74-37 | 46.4 | 5.9 | 47.7 | 1242 | 2 | 82.2 | 13.7 | 4.1 | 774 |
| 48-78-3 | 82.0 | 11.1 | 6.8 | 702 | 53-108-1 | 83.7 | 14.2 | 2.1 | 769 |
| 9 | 72.2 | 9.8 | 18.0 | 798 | 2 | 82.0 | 13.9 | 4.1 | 776 |
| 48-80-19 | 60.0 | 8.3 | 31.7 | 960 | 54-38-6 | 84.6 | 5.0 | 10.4 | 766 |
| 48-82-41 | 43.8 | 6.2 | 49.9 | 1314 | 54-44-22 | 62.1 | 4.2 | 33.7 | 1041 |
| 48-90-8 | 72.5 | 11.3 | 16.1 | 794 | 24 | 60.2 | 4.1 | 35.7 | 1076 |
| 48-94-2 | 82.0 | 13.4 | 4.6 | 702 | 54-46-17 | 67.1 | 4.8 | 28.1 | 966 |
| 48-96-1 | 83.7 | 14.0 | 2.3 | 688 | 54-48-18 | 65.8 | 4.9 | 29.2 | 984 |
| 2 | 81.8 | 13.6 | 4.5 | 704 | 54-50-21 | 62.7 | 4.8 | 32.5 | 1034 |
| 48-98-1 | 83.5 | 14.2 | 26.5 | 660 | 54-84-24 | 58.1 | 7.5 | 34.4 | 1116 |
| 2 | 81.6 | 13.9 | 20.1 | 706 | 54-86-1 | 86.4 | 11.5 | 2.1 | 750 |
| 49-34-14 | 69.5 | 4.0 | 4.6 | 816 | 7 | 76.6 | 10.2 | 13.2 | 846 |
| 49-48-10 | 73.9 | 6.0 | 20.1 | 796 | 54-90-4 | 80.8 | 11.2 | 8.0 | 802 |
| 49-68-2 | 85.5 | 9.9 | 4.6 | 688 | 6 | 77.7 | 10.8 | 11.5 | 834 |
| 49-98-1 | 83.8 | 13.9 | 2.3 | 702 | 54-96-27 | 55.1 | 8.2 | 36.7 | 1176 |
| 2 | 81.9 | 13.6 | 4.5 | 718 | 54-98-2 | 83.3 | 12.6 | 4.1 | 778 |
| 49-100-1 | 83.5 | 14.2 | 13.3 | 704 | 54-108-1 | 83.9 | 14.0 | 2.1 | 772 |
| 2 | 81.7 | 13.9 | 4.4 | 729 | 2 | 82.2 | 13.7 | 4.1 | 788 |
| 50-26-6 | 83.1 | 3.6 | 13.3 | 722 | 54-110-1 | 83.7 | 14.2 | 2.1 | 774 |
| 50-28-7 | 81.1 | 3.8 | 15.1 | 740 | 2 | 82.0 | 13.9 | 4.1 | 790 |
| 50-36-14 | 69.8 | 4.2 | 26.0 | 860 | 55-110-1 | 84.0 | 14.0 | 2.0 | 786 |
| 50-46-4 | 84.5 | 6.5 | 9.0 | 710 | 2 | 82.3 | 13.7 | 4.0 | 802 |
| 25 | 57.4 | 4.4 | 38.2 | 1046 | 55-112-1 | 83.8 | 14.2 | 2.0 | 788 |
| 50-50-6 | 80.4 | 6.7 | 12.9 | 746 | 2 | 82.1 | 13.9 | 4.0 | 804 |
| 11 | 72.6 | 6.0 | 21.3 | 826 | 56-34-17 | 68.7 | 3.5 | 27.8 | 978 |
| 50-68-4 | 82.0 | 9.3 | 8.7 | 732 | 56-48-24 | 60.9 | 4.3 | 34.8 | 1104 |
| 50-70-8 | 75.2 | 8.8 | 16.0 | 798 | 36 | 51.8 | 3.7 | 44.4 | 1296 |
| 17 | 63.7 | 7.4 | 28.9 | 942 | 56-50-35 | 52.4 | 3.9 | 43.7 | 1282 |
| 50-74-28 | 53.5 | 6.6 | 39.9 | 1122 | 56-52-36 | 51.7 | 4.0 | 44.3 | 1300 |
| 50-82-7 | 75.6 | 10.3 | 14.1 | 794 | 56-56-37 | 50.9 | 4.2 | 44.9 | 1320 |
| 9 | 72.6 | 9.9 | 17.4 | 826 | 40 | 49.1 | 4.1 | 46.8 | 1368 |
| 50-84-3 | 82.0 | 11.5 | 6.5 | 732 | 56-58-38 | 50.2 | 4.3 | 45.4 | 1338 |
| 50-100-1 | 90.1 | 7.5 | 2.4 | 716 | 56-70-29 | 55.4 | 6.3 | 38.3 | 1212 |
| 2 | 88.0 | 7.3 | 4.7 | 732 | 56-80-8 | 76.4 | 9.1 | 14.5 | 880 |
| 50-102-1 | 89.8 | 7.8 | 2.4 | 718 | 56-84-23 | 59.8 | 7.5 | 32.7 | 1124 |
| 2 | 87.7 | 7.6 | 4.7 | 734 | 56-88-8 | 75.6 | 10.0 | 14.4 | 888 |
| 51-82-3 | 82.5 | 11.0 | 6.5 | 742 | 56-96-1 | 85.7 | 12.2 | 2.0 | 784 |
| 51-98-6 | 75.9 | 12.2 | 11.9 | 804 | 56-112-1 | 84.0 | 14.0 | 2.0 | 800 |
| 51-102-1 | 83.8 | 14.0 | 2.2 | 730 | 2 | 82.4 | 13.7 | 3.9 | 816 |
| 2 | 82.0 | 13.7 | 4.3 | 746 | 56-114-1 | 83.8 | 14.2 | 2.0 | 802 |
| 51-104-1 | 83.6 | 14.2 | 2.2 | 732 | 2 | 82.2 | 13.9 | 3.9 | 818 |
| 2 | 81.8 | 13.9 | 4.3 | 748 | 57-34-14 | 72.6 | 3.6 | 23.8 | 942 |
| 52-40-24 | 59.5 | 3.8 | 36.6 | 1048 | 57-72-33 | 53.3 | 5.6 | 41.1 | 1284 |
| 52-42-1 | 91.5 | 6.2 | 2.3 | 682 | 57-98-6 | 77.9 | 11.2 | 10.9 | 878 |
| 52-46-23 | 69.1 | 4.1 | 35.5 | 1038 | 57-104-6 | 77.3 | 11.7 | 10.9 | 884 |
| 52-60-26 | 56.7 | 5.4 | 37.8 | 1100 | 57-108-6 | 77.0 | 12.1 | 10.8 | 888 |
| 52-70-8 | 75.9 | 8.5 | 15.6 | 822 | 57-110-6 | 76.8 | 12.4 | 10.8 | 890 |
| 52-82-23 | 58.1 | 7.6 | 34.3 | 1074 | 57-114-1 | 84.0 | 14.0 | 2.0 | 814 |
| 52-84-2 | 84.3 | 11.3 | 4.3 | 740 | 2 | 82.4 | 13.7 | 3.9 | 830 |
| 52-104-1 | 83.9 | 14.0 | 2.1 | 744 | 57-116-1 | 83.8 | 14.2 | 2.0 | 816 |
| 2 | 82.1 | 13.7 | 4.2 | 760 | 2 | 82.2 | 13.9 | 3.8 | 832 |
| 52-106-1 | 83.7 | 14.2 | 2.1 | 746 | 58-46-23 | 62.7 | 4.1 | 33.2 | 1110 |
| 2 | 81.9 | 13.9 | 4.2 | 762 | 58-54-14 | 71.5 | 5.5 | 23.0 | 974 |
| 53-48-11 | 74.0 | 5.6 | 20.4 | 860 | 58-58-13 | 72.3 | 6.0 | 21.6 | 962 |
| 53-50-19 | 64.2 | 5.0 | 30.7 | 990 | 58-86-31 | 54.5 | 6.7 | 38.8 | 1278 |
| 53-76-8 | 75.7 | 9.0 | 15.2 | 840 | 58-88-5 | 80.6 | 10.2 | 9.2 | 864 |
| 53-84-19 | 62.1 | 8.2 | 20.7 | 1024 | 58-116-1 | 84.0 | 14.0 | 1.9 | 828 |
| 53-104-5 | 77.5 | 12.7 | 9.8 | 820 | 2 | 82.5 | 13.7 | 3.8 | 844 |

| C-H-O | C% | H% | O% | M. G. | C-H-O | C% | H% | O% | M. G. |
|-----------|------|------|------|-------|-------------|------|------|------|-------|
| 58-118-1 | 83.9 | 14.2 | 1.9 | 830 | 70-56-4 | 87.5 | 5.8 | 6.7 | 960 |
| 2 | 82.2 | 13.9 | 3.8 | 846 | 70-140-2 | 83.0 | 13.8 | 3.2 | 1012 |
| 59-118-1 | 84.1 | 14.0 | 1.9 | 842 | 71-112-59 | 44.6 | 5.9 | 49.4 | 1908 |
| 2 | 82.5 | 13.8 | 3.7 | 858 | 72-62-31 | 60.8 | 4.3 | 34.9 | 1422 |
| 59-120-1 | 83.9 | 14.2 | 1.9 | 844 | 72-66-33 | 59.3 | 4.5 | 36.2 | 1458 |
| 2 | 82.3 | 14.0 | 3.7 | 860 | 72-90-41 | 53.7 | 5.6 | 40.7 | 1610 |
| 60-54-27 | 59.7 | 4.5 | 35.8 | 1206 | 72-112-40 | 53.5 | 6.9 | 39.6 | 1616 |
| 60-96-9 | 75.0 | 10.0 | 15.0 | 960 | 72-114-36 | 55.6 | 7.3 | 37.1 | 1554 |
| 22 | 61.6 | 8.2 | 30.1 | 1168 | 72-120-6 | 80.0 | 11.1 | 8.9 | 1080 |
| 60-98-1 | 86.3 | 11.8 | 1.9 | 834 | 72-126-63 | 43.2 | 6.3 | 50.5 | 1998 |
| 60-104-52 | 43.5 | 6.3 | 50.2 | 1656 | 73-100-32 | 58.9 | 6.7 | 34.4 | 1488 |
| 60-120-1 | 84.1 | 14.0 | 1.9 | 856 | 75-54-15 | 75.4 | 4.5 | 20.1 | 1194 |
| 2 | 82.6 | 13.7 | 3.7 | 872 | 75-56-21 | 68.7 | 4.3 | 27.0 | 1292 |
| 60-122-1 | 83.9 | 14.2 | 1.9 | 858 | 75-102-9 | 78.5 | 8.9 | 13.6 | 1146 |
| 2 | 82.4 | 14.0 | 3.6 | 874 | 75-108-30 | 60.5 | 7.3 | 32.2 | 1488 |
| 61-50-18 | 68.4 | 4.7 | 26.9 | 1070 | 78-148-9 | 76.2 | 12.1 | 11.7 | 1228 |
| 61-96-36 | 52.1 | 6.8 | 41.0 | 1404 | 78-152-6 | 79.0 | 12.8 | 8.1 | 1184 |
| 62-44-16 | 71.3 | 4.2 | 24.5 | 1044 | 80-46-9 | 83.5 | 4.0 | 12.5 | 1150 |
| 62-94-4 | 82.5 | 10.4 | 7.1 | 902 | 10 | 82.3 | 3.9 | 13.7 | 1166 |
| 63-72-27 | 60.0 | 5.7 | 34.3 | 1260 | 80-54-2 | 91.8 | 5.1 | 3.1 | 1046 |
| 63-122-6 | 79.6 | 12.8 | 7.6 | 974 | 80-104-8 | 80.5 | 8.7 | 10.7 | 1192 |
| 63-124-5 | 78.8 | 12.9 | 8.3 | 960 | 80-120-5 | 82.8 | 10.3 | 6.9 | 1160 |
| 64-128-2 | 82.8 | 13.8 | 3.4 | 928 | 80-124-29 | 62.0 | 8.0 | 30.0 | 1548 |
| 65-42-17 | 71.3 | 3.8 | 24.9 | 1094 | 82-100-46 | 54.1 | 5.5 | 40.4 | 1820 |
| 65-48-22 | 66.1 | 4.0 | 29.8 | 1180 | 84-64-32 | 63.6 | 4.0 | 32.3 | 1584 |
| 65-84-8 | 78.6 | 8.5 | 12.9 | 992 | 86-46-25 | 69.8 | 3.1 | 27.1 | 1478 |
| 66-4-11 | 81.5 | 0.4 | 18.1 | 972 | 89-142-74 | 44.6 | 6.0 | 49.4 | 2394 |
| 66-40-15 | 73.9 | 3.7 | 22.4 | 1072 | 92-182-6 | 79.9 | 13.2 | 6.9 | 1282 |
| 66-132-2 | 82.9 | 13.8 | 3.3 | 956 | 93-182-6 | 80.1 | 13.0 | 6.9 | 1304 |
| 67-60-23 | 65.3 | 4.9 | 29.8 | 1232 | 96-102-51 | 55.7 | 4.9 | 39.4 | 2070 |
| 67-68-9 | 79.1 | 6.7 | 14.2 | 1016 | 96-162-81 | 50.3 | 7.1 | 42.6 | 2290 |
| 68-52-20 | 68.7 | 4.4 | 26.9 | 1188 | 105-96-33 | 66.9 | 5.1 | 28.0 | 1884 |
| 68-118-35 | 64.6 | 7.9 | 37.5 | 1494 | 114-216-11 | 77.7 | 12.3 | 10.0 | 1760 |
| 68-126-4 | 81.1 | 12.5 | 6.4 | 1006 | 156-160-52 | 65.4 | 5.6 | 29.0 | 2864 |
| 69-128-6 | 78.7 | 12.2 | 9.1 | 1052 | 216-360-180 | 45.1 | 6.1 | 48.8 | 5896 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|-------|------|------|------|------|-------|------|------|------|------|
| 1-1-1 | 44,4 | 3,7 | 51,9 | 27 | 2-5-3 | 33,8 | 7,0 | 59,1 | 71 |
| 3 | 21,8 | 1,8 | 76,4 | 55 | 5 | 24,2 | 5,0 | 70,7 | 99 |
| 5 | 14,5 | 1,2 | 84,3 | 83 | 7 | 18,9 | 3,9 | 77,2 | 127 |
| 7 | 10,8 | 9,0 | 88,2 | 111 | 2-6-2 | 41,4 | 10,3 | 48,3 | 58 |
| 1-2-2 | 28,5 | 4,8 | 66,7 | 42 | 4 | 27,9 | 7,0 | 65,1 | 86 |
| 4 | 17,1 | 2,9 | 80,0 | 70 | 6 | 21,1 | 5,2 | 73,7 | 114 |
| 6 | 12,2 | 2,0 | 85,7 | 98 | 8 | 16,9 | 4,2 | 78,8 | 142 |
| 8 | 9,6 | 1,6 | 88,8 | 126 | 2-7-1 | 53,3 | 15,6 | 31,1 | 45 |
| 1-3-1 | 41,4 | 10,3 | 48,3 | 29 | 3 | 32,9 | 9,6 | 57,5 | 73 |
| 3 | 21,1 | 5,2 | 73,7 | 57 | 5 | 23,8 | 6,9 | 69,3 | 101 |
| 5 | 14,1 | 3,5 | 82,3 | 85 | 7 | 18,6 | 5,4 | 76,0 | 129 |
| 7 | 10,6 | 2,7 | 86,7 | 113 | 2-8-2 | 40,0 | 13,3 | 46,7 | 69 |
| 1-4-2 | 27,3 | 9,1 | 63,6 | 44 | 4 | 27,3 | 9,1 | 63,6 | 88 |
| 4 | 16,7 | 5,5 | 77,8 | 72 | 6 | 20,7 | 6,9 | 72,4 | 116 |
| 6 | 12,0 | 4,0 | 84,0 | 100 | 8 | 16,7 | 5,5 | 77,8 | 144 |
| 8 | 9,4 | 3,1 | 87,5 | 128 | 3-1-1 | 70,6 | 2,0 | 27,4 | 51 |
| 1-5-1 | 38,7 | 16,1 | 45,2 | 31 | 3 | 45,5 | 1,3 | 53,2 | 79 |
| 3 | 20,3 | 8,5 | 71,2 | 59 | 5 | 33,6 | 0,9 | 65,4 | 107 |
| 5 | 13,8 | 5,7 | 80,4 | 87 | 7 | 26,7 | 0,7 | 72,6 | 135 |
| 7 | 10,4 | 4,3 | 85,2 | 115 | 3-2-2 | 54,5 | 3,0 | 42,4 | 66 |
| 1-6-2 | 26,1 | 13,0 | 60,9 | 46 | 4 | 38,3 | 2,1 | 59,6 | 94 |
| 4 | 16,2 | 8,1 | 75,7 | 74 | 6 | 29,5 | 1,6 | 68,8 | 122 |
| 6 | 11,8 | 5,9 | 82,3 | 102 | 8 | 24,0 | 1,3 | 74,7 | 150 |
| 8 | 9,2 | 4,6 | 86,2 | 130 | 3-3-1 | 67,9 | 5,7 | 26,4 | 53 |
| 2-1-1 | 61,5 | 2,6 | 35,9 | 39 | 3 | 44,4 | 3,7 | 51,9 | 81 |
| 3 | 35,8 | 1,5 | 62,7 | 67 | 5 | 33,0 | 2,8 | 64,2 | 109 |
| 5 | 25,3 | 1,0 | 73,7 | 95 | 7 | 26,3 | 2,2 | 71,5 | 137 |
| 7 | 19,5 | 0,8 | 79,6 | 123 | 3-4-2 | 52,9 | 5,9 | 41,2 | 68 |
| 2-2-2 | 44,4 | 3,7 | 51,9 | 54 | 4 | 37,5 | 4,2 | 58,3 | 96 |
| 4 | 29,3 | 2,4 | 68,3 | 82 | 6 | 29,0 | 3,2 | 67,7 | 124 |
| 6 | 21,8 | 1,8 | 76,4 | 110 | 8 | 23,7 | 2,6 | 73,7 | 152 |
| 8 | 17,4 | 1,4 | 81,1 | 138 | 3-5-1 | 65,9 | 9,1 | 25,4 | 55 |
| 10 | 14,5 | 1,2 | 84,3 | 166 | 3 | 43,4 | 6,0 | 50,6 | 83 |
| 2-3-1 | 58,5 | 7,3 | 34,2 | 41 | 5 | 32,4 | 4,5 | 63,1 | 111 |
| 3 | 34,8 | 4,3 | 60,8 | 69 | 7 | 25,9 | 3,6 | 70,5 | 139 |
| 5 | 24,7 | 3,1 | 72,2 | 97 | 3-6-2 | 51,4 | 8,6 | 40,0 | 70 |
| 7 | 19,2 | 2,4 | 78,4 | 125 | 4 | 36,7 | 6,1 | 57,1 | 98 |
| 2-4-2 | 42,8 | 7,1 | 50,0 | 56 | 6 | 28,5 | 4,8 | 66,7 | 126 |
| 4 | 28,6 | 4,8 | 66,8 | 84 | 8 | 23,4 | 3,9 | 72,7 | 154 |
| 6 | 21,4 | 3,6 | 75,0 | 112 | 3-7-1 | 63,2 | 12,3 | 24,5 | 57 |
| 8 | 17,1 | 2,9 | 80,0 | 140 | 3 | 42,3 | 8,2 | 49,4 | 85 |
| 10 | 14,3 | 2,4 | 83,3 | 168 | 5 | 31,9 | 6,2 | 61,9 | 113 |
| 2-5-1 | 55,8 | 11,6 | 32,6 | 43 | 7 | 25,5 | 5,0 | 69,5 | 141 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|--------|------|------|------|------|--------|------|------|------|------|
| 3-8-2 | 50.0 | 11.1 | 38.9 | 72 | 4-12-6 | 33.3 | 8.3 | 58.3 | 144 |
| 4 | 36.0 | 8.0 | 56.0 | 100 | 8 | 21.1 | 5.2 | 73.7 | 172 |
| 6 | 28.1 | 6.2 | 65.6 | 128 | 4-13-1 | 64.0 | 17.3 | 18.7 | 75 |
| 8 | 23.1 | 5.1 | 71.8 | 156 | 3 | 46.6 | 12.6 | 40.8 | 103 |
| 3-9-1 | 61.0 | 15.2 | 23.7 | 59 | 5 | 36.7 | 9.9 | 53.4 | 131 |
| 3 | 41.4 | 10.3 | 48.3 | 87 | 7 | 30.2 | 8.2 | 61.6 | 159 |
| 5 | 31.3 | 7.8 | 60.9 | 115 | 5-1-1 | 80.0 | 1.3 | 18.7 | 75 |
| 7 | 25.2 | 6.3 | 68.5 | 143 | 3 | 58.2 | 1.0 | 40.8 | 103 |
| 3-10-2 | 48.6 | 13.5 | 37.8 | 74 | 5 | 45.8 | 0.8 | 53.4 | 131 |
| 4 | 35.3 | 9.8 | 54.9 | 102 | 7 | 37.7 | 0.6 | 61.6 | 159 |
| 6 | 27.7 | 7.7 | 64.6 | 130 | 5-2-2 | 66.7 | 2.2 | 31.1 | 90 |
| 8 | 22.8 | 6.3 | 70.9 | 158 | 4 | 50.8 | 1.7 | 47.5 | 118 |
| 4-1-1 | 76.2 | 1.6 | 22.2 | 63 | 6 | 41.1 | 1.4 | 57.5 | 146 |
| 3 | 52.7 | 1.1 | 46.2 | 91 | 8 | 34.5 | 1.1 | 64.3 | 174 |
| 5 | 40.3 | 0.8 | 58.8 | 119 | 5-3-1 | 77.9 | 3.9 | 18.2 | 77 |
| 7 | 32.6 | 0.7 | 66.7 | 147 | 3 | 57.1 | 2.9 | 40.0 | 105 |
| 4-2-2 | 61.5 | 2.6 | 35.9 | 78 | 5 | 45.1 | 2.3 | 52.6 | 133 |
| 4 | 45.3 | 1.9 | 52.8 | 106 | 7 | 37.3 | 1.8 | 60.9 | 161 |
| 6 | 35.8 | 1.5 | 62.7 | 134 | 5-4-2 | 65.2 | 4.3 | 30.4 | 92 |
| 8 | 29.6 | 1.2 | 69.2 | 162 | 4 | 50.0 | 3.3 | 46.7 | 120 |
| 4-3-1 | 73.9 | 4.6 | 21.5 | 65 | 6 | 40.5 | 2.7 | 56.7 | 148 |
| 3 | 51.6 | 3.2 | 45.2 | 93 | 8 | 34.1 | 2.3 | 63.6 | 176 |
| 5 | 39.7 | 2.5 | 57.8 | 121 | 5-5-1 | 76.0 | 6.3 | 17.7 | 79 |
| 7 | 32.2 | 2.0 | 65.8 | 149 | 3 | 56.1 | 4.7 | 39.2 | 107 |
| 4-4-2 | 60.0 | 5.0 | 35.0 | 80 | 5 | 44.4 | 3.7 | 51.9 | 135 |
| 4 | 44.4 | 3.7 | 51.9 | 108 | 7 | 36.8 | 3.1 | 60.1 | 163 |
| 6 | 35.3 | 2.9 | 61.8 | 136 | 5-6-2 | 63.8 | 6.4 | 29.8 | 94 |
| 8 | 29.3 | 2.4 | 68.3 | 164 | 4 | 49.2 | 4.9 | 45.9 | 122 |
| 4-5-1 | 71.7 | 7.4 | 20.9 | 67 | 6 | 40.0 | 4.0 | 56.0 | 150 |
| 3 | 50.5 | 5.2 | 44.2 | 95 | 8 | 33.7 | 3.4 | 62.9 | 178 |
| 5 | 39.0 | 4.1 | 56.9 | 123 | 5-7-1 | 74.1 | 8.6 | 17.3 | 81 |
| 7 | 31.8 | 3.3 | 64.9 | 151 | 3 | 55.0 | 6.4 | 38.5 | 109 |
| 4-6-2 | 58.5 | 7.3 | 34.2 | 82 | 5 | 43.8 | 5.1 | 51.1 | 137 |
| 4 | 43.6 | 5.4 | 50.9 | 110 | 7 | 36.4 | 4.2 | 59.4 | 165 |
| 6 | 34.8 | 4.3 | 60.8 | 138 | 5-8-2 | 62.5 | 8.3 | 29.2 | 96 |
| 8 | 28.9 | 3.6 | 67.5 | 166 | 4 | 48.4 | 6.4 | 45.2 | 124 |
| 4-7-1 | 69.6 | 10.1 | 20.3 | 69 | 6 | 39.5 | 5.2 | 55.3 | 152 |
| 3 | 49.5 | 7.2 | 43.3 | 97 | 8 | 33.3 | 4.4 | 62.2 | 180 |
| 5 | 38.4 | 5.6 | 56.0 | 125 | 5-9-1 | 72.3 | 10.8 | 16.9 | 83 |
| 7 | 31.4 | 4.6 | 64.0 | 153 | 3 | 54.0 | 8.1 | 37.8 | 111 |
| 4-8-2 | 57.1 | 9.5 | 33.3 | 84 | 5 | 43.2 | 6.5 | 50.0 | 139 |
| 4 | 42.8 | 7.1 | 50.0 | 112 | 7 | 35.9 | 5.4 | 68.7 | 167 |
| 6 | 34.3 | 5.7 | 60.0 | 140 | 5-10-2 | 61.2 | 10.2 | 28.6 | 98 |
| 8 | 28.6 | 4.8 | 66.8 | 168 | 4 | 47.6 | 7.9 | 44.4 | 126 |
| 20 | 14.3 | 2.4 | 83.3 | 336 | 6 | 39.0 | 6.5 | 54.5 | 154 |
| 4-9-1 | 67.6 | 12.7 | 19.7 | 71 | 8 | 33.0 | 5.5 | 61.5 | 182 |
| 3 | 48.5 | 9.1 | 42.4 | 99 | 5-11-1 | 70.6 | 12.9 | 16.4 | 85 |
| 5 | 37.8 | 7.1 | 55.1 | 127 | 3 | 53.1 | 9.7 | 37.2 | 113 |
| 7 | 31.0 | 5.8 | 63.2 | 155 | 5 | 42.6 | 7.8 | 49.6 | 141 |
| 4-10-2 | 55.8 | 11.6 | 32.6 | 86 | 7 | 35.5 | 6.5 | 58.0 | 169 |
| 4 | 42.1 | 8.8 | 49.1 | 114 | 5-12-2 | 60.0 | 12.0 | 28.0 | 100 |
| 6 | 33.8 | 7.0 | 59.1 | 142 | 4 | 46.9 | 9.4 | 43.7 | 128 |
| 8 | 28.2 | 5.9 | 65.9 | 170 | 6 | 38.5 | 7.7 | 53.8 | 156 |
| 4-11-1 | 65.7 | 15.1 | 19.2 | 73 | 8 | 32.6 | 6.5 | 60.9 | 184 |
| 3 | 47.5 | 10.9 | 41.6 | 101 | 5-13-1 | 68.9 | 14.9 | 16.1 | 87 |
| 5 | 37.2 | 8.5 | 54.3 | 129 | 3 | 52.2 | 11.3 | 36.5 | 115 |
| 7 | 30.5 | 7.0 | 62.4 | 157 | 5 | 42.0 | 9.1 | 48.9 | 143 |
| 4-12-2 | 54.6 | 13.6 | 31.8 | 88 | 7 | 35.1 | 7.6 | 57.3 | 171 |
| 4 | 41.4 | 10.3 | 48.3 | 116 | 5-14-2 | 58.8 | 13.7 | 27.5 | 102 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|--------|------|------|------|-------|--------|------|------|------|-------|
| 5-14-4 | 46.1 | 10.8 | 43.1 | 130 | 6-16-4 | 50.0 | 11.1 | 38.9 | 144 |
| 6 | 38.0 | 8.8 | 53.2 | 158 | 6 | 41.9 | 9.3 | 48.8 | 172 |
| 8 | 32.2 | 7.5 | 60.2 | 186 | 8 | 36.0 | 8.0 | 56.0 | 200 |
| 6-3-1 | 80.9 | 3.4 | 15.7 | 89 | 6-17-1 | 69.9 | 16.5 | 13.6 | 103 |
| 3 | 61.5 | 2.6 | 35.9 | 117 | 3 | 55.0 | 12.8 | 32.1 | 131 |
| 5 | 49.6 | 2.1 | 48.3 | 145 | 5 | 45.3 | 10.7 | 44.0 | 159 |
| 7 | 41.6 | 1.7 | 56.6 | 173 | 7 | 38.5 | 9.1 | 52.4 | 187 |
| 9 | 35.8 | 1.5 | 62.7 | 201 | 6-18-2 | 61.0 | 15.2 | 23.7 | 118 |
| 6-4-2 | 69.2 | 3.8 | 26.9 | 104 | 4 | 49.3 | 12.3 | 38.4 | 146 |
| 4 | 54.5 | 3.0 | 42.4 | 132 | 6 | 41.4 | 10.3 | 48.3 | 174 |
| 6 | 45.0 | 2.5 | 52.5 | 160 | 8 | 35.6 | 8.9 | 55.4 | 202 |
| 8 | 38.3 | 2.1 | 59.6 | 188 | 7-4-2 | 72.4 | 3.4 | 24.1 | 116 |
| 6-5-1 | 79.1 | 5.5 | 15.4 | 91 | 4 | 58.3 | 2.8 | 38.9 | 144 |
| 3 | 60.5 | 4.2 | 35.3 | 119 | 6 | 48.8 | 2.3 | 48.8 | 172 |
| 5 | 49.0 | 3.4 | 47.6 | 147 | 8 | 42.0 | 2.0 | 56.0 | 200 |
| 7 | 41.1 | 2.9 | 56.0 | 175 | 7-5-1 | 81.6 | 4.8 | 13.6 | 103 |
| 6-6-2 | 67.9 | 5.7 | 26.4 | 106 | 3 | 64.1 | 3.8 | 32.1 | 131 |
| 4 | 53.7 | 4.5 | 41.8 | 134 | 5 | 52.8 | 3.1 | 44.0 | 159 |
| 6 | 44.4 | 3.7 | 51.9 | 162 | 7 | 44.9 | 2.7 | 52.4 | 187 |
| 8 | 37.9 | 3.1 | 59.0 | 190 | 7-6-2 | 71.2 | 5.1 | 23.7 | 118 |
| 10 | 33.0 | 2.8 | 64.2 | 218 | 4 | 57.5 | 4.1 | 38.4 | 146 |
| 6-7-1 | 77.4 | 7.5 | 15.0 | 93 | 6 | 48.3 | 3.4 | 48.3 | 174 |
| 3 | 59.5 | 5.8 | 34.7 | 121 | 8 | 41.6 | 3.0 | 55.4 | 202 |
| 5 | 48.3 | 4.7 | 47.0 | 149 | 7-7-1 | 80.0 | 6.7 | 13.3 | 105 |
| 7 | 40.7 | 3.9 | 45.4 | 177 | 3 | 63.1 | 5.3 | 31.6 | 133 |
| 6-8-2 | 66.7 | 7.4 | 25.9 | 108 | 5 | 52.2 | 4.3 | 43.5 | 161 |
| 4 | 52.9 | 5.9 | 41.2 | 136 | 7 | 44.4 | 3.7 | 51.9 | 189 |
| 6 | 43.9 | 4.9 | 51.2 | 164 | 7-8-2 | 70.0 | 6.7 | 23.3 | 120 |
| 8 | 37.5 | 4.2 | 58.3 | 192 | 4 | 56.7 | 5.4 | 37.8 | 148 |
| 6-9-1 | 75.8 | 9.5 | 14.7 | 95 | 6 | 47.7 | 4.5 | 47.7 | 176 |
| 3 | 58.5 | 7.3 | 34.2 | 123 | 8 | 41.2 | 3.9 | 54.9 | 204 |
| 5 | 47.7 | 6.0 | 46.3 | 151 | 7-9-1 | 78.5 | 8.4 | 13.1 | 107 |
| 7 | 40.2 | 5.0 | 54.8 | 179 | 3 | 62.2 | 6.7 | 31.1 | 135 |
| 11 | 30.6 | 3.8 | 65.5 | 235 | 5 | 51.5 | 5.5 | 42.9 | 163 |
| 6-10-2 | 65.5 | 9.1 | 25.4 | 110 | 7 | 44.0 | 4.7 | 51.3 | 191 |
| 4 | 52.2 | 7.2 | 40.6 | 138 | 7-10-2 | 68.8 | 8.2 | 23.0 | 122 |
| 6 | 43.4 | 6.0 | 50.6 | 166 | 4 | 56.0 | 6.7 | 37.3 | 150 |
| 8 | 37.1 | 5.2 | 57.7 | 194 | 6 | 47.2 | 5.6 | 47.2 | 178 |
| 6-11-1 | 74.2 | 11.3 | 14.4 | 97 | 8 | 40.8 | 4.8 | 54.4 | 206 |
| 3 | 57.6 | 8.8 | 33.6 | 125 | 7-11-1 | 77.1 | 10.1 | 12.8 | 109 |
| 5 | 47.1 | 7.2 | 45.7 | 153 | 3 | 61.3 | 8.0 | 30.7 | 137 |
| 7 | 39.8 | 6.1 | 54.1 | 181 | 5 | 72.7 | 6.7 | 42.4 | 165 |
| 6-12-2 | 64.3 | 10.7 | 25.0 | 112 | 7 | 43.5 | 5.7 | 50.8 | 193 |
| 4 | 51.4 | 8.6 | 40.0 | 140 | 7-12-2 | 67.7 | 9.7 | 22.6 | 124 |
| 6 | 42.8 | 7.1 | 50.0 | 168 | 4 | 55.3 | 7.9 | 36.8 | 152 |
| 8 | 36.7 | 6.1 | 57.1 | 196 | 6 | 46.7 | 6.6 | 46.7 | 180 |
| 6-13-1 | 72.7 | 13.1 | 14.1 | 99 | 8 | 40.4 | 5.8 | 53.8 | 208 |
| 3 | 56.7 | 10.2 | 33.1 | 127 | 7-13-1 | 75.7 | 11.7 | 12.6 | 111 |
| 5 | 46.4 | 8.4 | 45.2 | 155 | 3 | 60.4 | 9.4 | 30.2 | 139 |
| 7 | 39.3 | 7.1 | 53.5 | 183 | 5 | 50.3 | 7.8 | 41.9 | 167 |
| 6-14-2 | 63.2 | 12.3 | 24.5 | 114 | 7 | 43.1 | 6.7 | 50.2 | 195 |
| 4 | 50.7 | 9.8 | 39.4 | 142 | 7-14-2 | 66.7 | 11.1 | 22.2 | 126 |
| 6 | 42.3 | 8.2 | 49.4 | 170 | 4 | 54.5 | 9.1 | 36.4 | 154 |
| 8 | 36.4 | 7.1 | 56.5 | 198 | 6 | 46.1 | 7.7 | 46.1 | 182 |
| 6-15-1 | 71.3 | 14.8 | 13.9 | 101 | 8 | 40.0 | 6.7 | 53.3 | 210 |
| 3 | 55.8 | 11.6 | 32.6 | 129 | 7-15-1 | 74.3 | 13.3 | 12.4 | 113 |
| 5 | 45.9 | 9.5 | 44.6 | 157 | 3 | 59.6 | 10.6 | 29.8 | 141 |
| 7 | 38.9 | 8.1 | 53.0 | 185 | 5 | 49.7 | 8.9 | 41.4 | 169 |
| 6-16-2 | 62.1 | 13.8 | 24.1 | 116 | 7 | 42.6 | 7.6 | 49.7 | 197 |

| C-H-N | C % | H % | N % | M.G. | C-H-N | C % | H % | N % | M.G. |
|--------|------|------|------|------|--------|------|------|------|------|
| 7-16-2 | 65.5 | 12.5 | 21.9 | 128 | 8-15-7 | 45.9 | 7.2 | 46.9 | 209 |
| 4 | 53.8 | 10.3 | 35.9 | 156 | 8-16-2 | 68.6 | 11.4 | 20.0 | 140 |
| 6 | 45.6 | 8.7 | 45.6 | 184 | 4 | 57.1 | 9.5 | 33.3 | 168 |
| 8 | 39.6 | 7.5 | 52.8 | 212 | 6 | 49.0 | 8.2 | 42.8 | 196 |
| 7-17-1 | 73.0 | 14.8 | 12.2 | 115 | 8 | 42.8 | 7.1 | 50.0 | 224 |
| 3 | 58.7 | 11.9 | 29.4 | 143 | 8-17-1 | 75.6 | 13.4 | 11.0 | 127 |
| 5 | 49.1 | 9.9 | 40.9 | 171 | 3 | 61.9 | 11.0 | 27.1 | 155 |
| 7 | 42.2 | 8.5 | 49.2 | 199 | 5 | 52.5 | 9.3 | 38.2 | 183 |
| 7-18-2 | 64.6 | 13.8 | 21.5 | 130 | 7 | 45.5 | 8.0 | 45.5 | 211 |
| 4 | 53.2 | 11.4 | 35.4 | 158 | 8-18-2 | 67.6 | 12.7 | 19.7 | 142 |
| 6 | 45.1 | 9.7 | 45.1 | 186 | 4 | 56.4 | 10.6 | 32.9 | 170 |
| 8 | 39.2 | 8.4 | 52.3 | 214 | 6 | 48.5 | 9.1 | 42.4 | 198 |
| 8-4-2 | 75.0 | 3.1 | 21.9 | 128 | 8 | 42.5 | 8.0 | 49.5 | 226 |
| 4 | 61.5 | 2.6 | 35.9 | 156 | 8-19-1 | 74.4 | 14.7 | 10.9 | 129 |
| 6 | 52.2 | 2.2 | 45.6 | 184 | 3 | 61.2 | 12.1 | 26.7 | 157 |
| 8 | 45.3 | 1.9 | 52.8 | 212 | 5 | 51.9 | 10.3 | 37.8 | 185 |
| 8-5-1 | 83.5 | 4.3 | 12.2 | 115 | 7 | 45.0 | 8.9 | 46.0 | 213 |
| 3 | 67.1 | 3.5 | 29.4 | 143 | 8-20-2 | 66.7 | 13.9 | 19.4 | 144 |
| 5 | 56.1 | 2.9 | 40.9 | 171 | 4 | 55.8 | 11.6 | 32.6 | 172 |
| 7 | 48.2 | 2.5 | 49.2 | 199 | 6 | 48.0 | 10.0 | 42.0 | 200 |
| 8-6-2 | 73.9 | 4.6 | 21.5 | 130 | 8 | 42.1 | 8.8 | 49.1 | 228 |
| 4 | 60.8 | 3.8 | 35.4 | 158 | 8-21-1 | 73.3 | 16.0 | 10.7 | 131 |
| 6 | 51.6 | 3.2 | 45.2 | 186 | 3 | 60.4 | 13.2 | 26.4 | 159 |
| 8 | 44.9 | 2.8 | 52.3 | 214 | 5 | 51.3 | 11.2 | 37.4 | 187 |
| 8-7-1 | 82.0 | 6.0 | 12.0 | 117 | 7 | 44.6 | 9.8 | 45.6 | 215 |
| 3 | 66.2 | 4.8 | 29.0 | 145 | 9-3-1 | 86.4 | 2.4 | 11.2 | 125 |
| 5 | 55.5 | 4.0 | 40.5 | 173 | 3 | 70.6 | 2.0 | 27.4 | 153 |
| 7 | 47.7 | 3.5 | 48.7 | 201 | 5 | 79.7 | 1.6 | 38.7 | 181 |
| 8-8-2 | 72.7 | 6.1 | 21.2 | 132 | 7 | 51.7 | 1.4 | 46.9 | 209 |
| 4 | 60.0 | 5.0 | 35.0 | 160 | 13 | 45.6 | 1.3 | 53.1 | 237 |
| 6 | 51.1 | 4.2 | 44.7 | 188 | 9-4-2 | 77.1 | 2.9 | 20.0 | 140 |
| 8 | 44.4 | 3.7 | 51.9 | 216 | 4 | 64.3 | 2.4 | 33.3 | 168 |
| 8-9-1 | 80.6 | 7.6 | 11.8 | 119 | 6 | 55.1 | 2.0 | 42.8 | 196 |
| 3 | 65.3 | 6.1 | 28.6 | 147 | 8 | 48.2 | 1.8 | 50.0 | 224 |
| 5 | 54.9 | 5.1 | 40.0 | 175 | 9-5-1 | 85.0 | 3.9 | 11.0 | 127 |
| 7 | 47.3 | 4.4 | 48.3 | 203 | 3 | 69.7 | 3.2 | 27.1 | 155 |
| 8-10-2 | 71.7 | 7.4 | 20.9 | 134 | 5 | 59.0 | 2.7 | 38.2 | 183 |
| 4 | 59.3 | 6.2 | 34.5 | 162 | 7 | 51.2 | 2.4 | 46.4 | 211 |
| 6 | 50.5 | 5.2 | 44.2 | 190 | 9-6-2 | 76.0 | 4.2 | 19.7 | 142 |
| 8 | 44.0 | 4.6 | 51.4 | 218 | 4 | 63.5 | 3.5 | 32.9 | 170 |
| 8-11-1 | 79.3 | 9.1 | 11.6 | 121 | 6 | 54.5 | 3.0 | 42.4 | 198 |
| 3 | 64.4 | 7.4 | 28.2 | 149 | 8 | 47.8 | 2.6 | 49.6 | 226 |
| 5 | 54.2 | 6.2 | 39.6 | 177 | 9-7-1 | 83.7 | 5.4 | 10.8 | 129 |
| 7 | 46.8 | 5.4 | 47.8 | 205 | 3 | 68.8 | 4.4 | 26.7 | 157 |
| 8-12-2 | 70.6 | 8.8 | 20.6 | 136 | 5 | 58.4 | 3.8 | 37.8 | 185 |
| 4 | 58.5 | 7.3 | 34.2 | 164 | 7 | 50.7 | 3.3 | 46.0 | 213 |
| 6 | 50.0 | 6.2 | 43.8 | 192 | 9-8-2 | 75.0 | 5.6 | 19.4 | 144 |
| 8 | 43.6 | 5.4 | 50.9 | 220 | 4 | 62.8 | 4.6 | 32.6 | 172 |
| 8-13-1 | 78.0 | 10.6 | 11.4 | 123 | 6 | 54.0 | 4.0 | 42.0 | 200 |
| 3 | 63.6 | 8.6 | 27.8 | 151 | 8 | 47.4 | 3.5 | 49.1 | 228 |
| 5 | 53.6 | 7.2 | 39.1 | 179 | 9-9-1 | 82.4 | 6.9 | 10.7 | 131 |
| 7 | 46.4 | 6.3 | 47.3 | 207 | 3 | 67.9 | 5.7 | 26.4 | 159 |
| 8-14-2 | 69.6 | 10.1 | 20.3 | 138 | 5 | 57.8 | 4.8 | 37.4 | 187 |
| 4 | 57.8 | 8.4 | 33.7 | 166 | 7 | 50.2 | 4.2 | 45.6 | 215 |
| 6 | 49.5 | 7.2 | 43.3 | 194 | 9-10-2 | 74.0 | 6.8 | 19.2 | 146 |
| 8 | 43.2 | 6.3 | 50.4 | 222 | 4 | 62.1 | 5.7 | 32.2 | 174 |
| 8-15-1 | 76.8 | 12.0 | 11.2 | 125 | 6 | 53.5 | 4.9 | 41.6 | 202 |
| 3 | 62.7 | 9.8 | 27.4 | 153 | 8 | 47.0 | 4.3 | 48.7 | 230 |
| 5 | 53.0 | 8.3 | 38.7 | 181 | 9-11-1 | 81.2 | 8.3 | 10.5 | 133 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|--------|------|------|------|------|---------|------|------|------|------|
| 9-11-3 | 67.1 | 6.8 | 26.1 | 161 | 10-8-2 | 76.9 | 5.1 | 17.9 | 156 |
| 5 | 57.1 | 5.8 | 37.0 | 189 | 4 | 65.2 | 4.3 | 30.4 | 184 |
| 7 | 49.8 | 5.1 | 45.1 | 219 | 6 | 56.6 | 3.8 | 39.6 | 212 |
| 9-12-2 | 73.0 | 8.1 | 18.9 | 148 | 8 | 50.0 | 3.3 | 46.7 | 240 |
| 4 | 61.4 | 6.8 | 31.8 | 176 | 10-9-1 | 83.9 | 6.3 | 9.8 | 143 |
| 6 | 52.9 | 5.9 | 41.2 | 204 | 3 | 70.2 | 5.3 | 24.5 | 171 |
| 8 | 46.5 | 5.2 | 48.3 | 232 | 5 | 60.3 | 4.5 | 35.2 | 199 |
| 9-13-1 | 80.0 | 9.6 | 10.4 | 135 | 7 | 52.9 | 4.0 | 43.1 | 227 |
| 3 | 66.2 | 8.0 | 25.8 | 163 | 10-10-2 | 76.0 | 6.3 | 17.7 | 158 |
| 5 | 56.6 | 6.8 | 36.6 | 191 | 4 | 64.5 | 5.4 | 30.1 | 186 |
| 7 | 49.3 | 5.9 | 44.7 | 219 | 6 | 56.1 | 4.7 | 39.2 | 214 |
| 9-14-2 | 72.0 | 9.3 | 18.7 | 150 | 8 | 49.6 | 4.1 | 46.3 | 242 |
| 4 | 60.7 | 7.8 | 31.5 | 178 | 10-11-1 | 82.8 | 7.6 | 9.6 | 145 |
| 6 | 52.4 | 6.8 | 40.8 | 206 | 3 | 69.4 | 6.3 | 24.3 | 173 |
| 8 | 46.1 | 6.0 | 47.9 | 234 | 5 | 59.7 | 5.5 | 34.8 | 201 |
| 9-15-1 | 78.8 | 10.9 | 10.2 | 137 | 7 | 52.4 | 4.8 | 42.8 | 229 |
| 3 | 65.5 | 9.1 | 25.4 | 165 | 10-12-2 | 75.0 | 7.5 | 17.5 | 160 |
| 5 | 56.0 | 7.7 | 36.3 | 193 | 4 | 63.8 | 6.4 | 29.8 | 188 |
| 7 | 48.9 | 6.8 | 44.3 | 221 | 6 | 55.5 | 5.5 | 38.9 | 216 |
| 9-16-2 | 71.1 | 10.5 | 18.4 | 152 | 8 | 49.2 | 4.9 | 45.9 | 244 |
| 4 | 60.0 | 8.9 | 31.1 | 180 | 10-13-1 | 81.6 | 8.8 | 9.5 | 147 |
| 6 | 51.9 | 7.7 | 40.4 | 208 | 3 | 68.6 | 7.4 | 34.0 | 175 |
| 8 | 45.8 | 6.8 | 47.4 | 236 | 5 | 59.1 | 6.4 | 34.5 | 203 |
| 9-17-1 | 77.7 | 12.2 | 10.1 | 139 | 7 | 52.0 | 5.6 | 42.4 | 231 |
| 3 | 64.7 | 10.2 | 25.1 | 167 | 10-14-2 | 74.1 | 8.6 | 17.3 | 162 |
| 5 | 55.4 | 8.7 | 35.9 | 195 | 4 | 63.2 | 7.3 | 29.5 | 190 |
| 7 | 48.4 | 7.6 | 43.9 | 223 | 6 | 55.0 | 6.4 | 38.5 | 218 |
| 9-18-2 | 70.1 | 11.7 | 18.2 | 154 | 8 | 48.8 | 5.7 | 45.5 | 246 |
| 4 | 59.3 | 9.9 | 30.8 | 182 | 10-15-1 | 80.5 | 10.1 | 9.4 | 149 |
| 6 | 51.4 | 8.6 | 40.0 | 210 | 3 | 67.8 | 8.5 | 23.7 | 177 |
| 8 | 45.4 | 7.6 | 47.0 | 238 | 5 | 58.5 | 7.3 | 34.2 | 205 |
| 9-19-1 | 76.6 | 13.5 | 9.9 | 141 | 7 | 51.5 | 6.4 | 42.1 | 233 |
| 3 | 63.9 | 11.2 | 24.8 | 169 | 10-16-2 | 73.1 | 9.7 | 17.1 | 164 |
| 5 | 54.8 | 9.6 | 35.5 | 197 | 4 | 62.5 | 8.3 | 29.2 | 192 |
| 7 | 48.0 | 8.4 | 43.5 | 225 | 6 | 54.5 | 7.3 | 38.2 | 220 |
| 9-20-2 | 69.2 | 12.8 | 17.9 | 156 | 8 | 48.4 | 6.4 | 45.2 | 248 |
| 4 | 58.7 | 10.9 | 30.4 | 184 | 10-17-1 | 79.5 | 11.2 | 9.3 | 151 |
| 6 | 50.9 | 9.4 | 39.6 | 212 | 3 | 67.0 | 9.5 | 23.5 | 179 |
| 8 | 45.0 | 8.3 | 46.7 | 240 | 5 | 58.0 | 8.2 | 33.8 | 207 |
| 9-21-1 | 75.5 | 14.7 | 9.8 | 143 | 7 | 51.1 | 7.2 | 41.7 | 235 |
| 3 | 63.2 | 12.3 | 24.5 | 171 | 10-18-2 | 72.3 | 10.8 | 16.9 | 166 |
| 5 | 54.3 | 10.5 | 35.2 | 199 | 4 | 61.9 | 9.3 | 28.8 | 194 |
| 7 | 47.6 | 9.2 | 43.2 | 227 | 6 | 54.0 | 8.1 | 37.8 | 222 |
| 9-22-2 | 68.4 | 13.9 | 17.7 | 158 | 8 | 48.0 | 7.2 | 44.8 | 250 |
| 4 | 58.1 | 11.8 | 30.1 | 186 | 10-19-1 | 78.4 | 12.4 | 9.1 | 153 |
| 6 | 50.5 | 10.3 | 39.2 | 214 | 3 | 66.3 | 10.5 | 23.2 | 181 |
| 8 | 44.6 | 9.1 | 46.3 | 242 | 5 | 57.4 | 9.1 | 33.5 | 209 |
| 10-5-1 | 86.3 | 3.6 | 10.1 | 139 | 7 | 50.6 | 8.0 | 41.3 | 237 |
| 3 | 71.9 | 3.0 | 25.1 | 167 | 10-20-2 | 71.4 | 11.9 | 16.7 | 168 |
| 5 | 61.5 | 2.6 | 35.9 | 195 | 4 | 61.2 | 10.2 | 28.6 | 196 |
| 7 | 53.8 | 2.2 | 44.0 | 223 | 6 | 53.6 | 8.9 | 37.5 | 224 |
| 10-6-2 | 77.9 | 3.9 | 18.2 | 154 | 8 | 47.6 | 7.9 | 44.4 | 252 |
| 4 | 65.9 | 3.3 | 30.8 | 182 | 10-21-1 | 77.4 | 13.5 | 9.0 | 155 |
| 6 | 57.1 | 2.9 | 40.0 | 210 | 3 | 65.6 | 11.5 | 22.9 | 183 |
| 8 | 50.4 | 2.5 | 47.0 | 238 | 5 | 56.9 | 9.9 | 33.2 | 211 |
| 10-7-1 | 85.1 | 5.0 | 9.9 | 141 | 7 | 50.2 | 8.8 | 41.0 | 239 |
| 3 | 71.0 | 4.1 | 24.8 | 169 | 10-22-2 | 76.6 | 12.9 | 16.4 | 170 |
| 5 | 60.9 | 3.5 | 35.5 | 197 | 4 | 60.6 | 11.1 | 28.3 | 198 |
| 7 | 53.3 | 3.1 | 43.6 | 225 | 6 | 53.1 | 9.7 | 37.2 | 226 |

| C-H-N | C % | H % | N % | M.G. | C-H-N | C % | H % | N % | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 10-22-8 | 47.2 | 8.7 | 44.1 | 254 | 11-16-4 | 64.7 | 7.8 | 27.4 | 204 |
| 10-23-1 | 76.4 | 14.6 | 8.9 | 157 | 6 | 56.9 | 6.9 | 36.2 | 232 |
| 3 | 64.9 | 12.4 | 22.7 | 185 | 8 | 50.8 | 6.1 | 43.1 | 260 |
| 5 | 56.3 | 10.8 | 32.9 | 213 | 11-17-1 | 81.0 | 10.4 | 8.6 | 163 |
| 7 | 49.8 | 9.5 | 40.7 | 241 | 3 | 69.1 | 8.9 | 22.0 | 191 |
| 10-24-2 | 69.8 | 13.9 | 16.3 | 172 | 5 | 60.3 | 7.8 | 31.9 | 219 |
| 4 | 60.0 | 12.0 | 28.0 | 200 | 7 | 53.4 | 6.9 | 39.7 | 247 |
| 6 | 52.6 | 10.5 | 36.8 | 228 | 11-18-2 | 74.2 | 10.1 | 15.7 | 178 |
| 8 | 46.9 | 9.4 | 43.7 | 256 | 4 | 64.1 | 8.7 | 27.2 | 206 |
| 10-25-1 | 75.5 | 15.7 | 8.8 | 159 | 6 | 56.4 | 7.7 | 35.9 | 234 |
| 3 | 64.2 | 13.4 | 22.4 | 187 | 8 | 50.4 | 6.9 | 42.7 | 262 |
| 5 | 55.8 | 11.6 | 32.6 | 215 | 11-19-1 | 80.0 | 11.5 | 8.5 | 165 |
| 7 | 49.4 | 10.3 | 40.3 | 243 | 3 | 68.4 | 9.8 | 21.7 | 193 |
| 10-26-2 | 68.9 | 14.9 | 16.1 | 174 | 5 | 59.7 | 8.6 | 31.7 | 221 |
| 4 | 59.4 | 12.9 | 27.7 | 202 | 7 | 53.0 | 7.6 | 39.3 | 249 |
| 6 | 52.2 | 11.3 | 36.5 | 230 | 11-20-2 | 73.3 | 11.1 | 15.6 | 180 |
| 8 | 46.5 | 10.1 | 43.4 | 258 | 4 | 63.5 | 9.6 | 26.9 | 208 |
| 11-5-3 | 73.7 | 2.8 | 23.5 | 179 | 6 | 55.9 | 8.5 | 35.6 | 236 |
| 11-6-2 | 79.5 | 3.6 | 16.9 | 166 | 8 | 50.0 | 7.6 | 42.4 | 264 |
| 4 | 68.0 | 3.1 | 28.9 | 194 | 11-21-1 | 79.0 | 12.6 | 8.4 | 167 |
| 6 | 59.4 | 2.7 | 37.8 | 222 | 3 | 67.7 | 10.7 | 21.5 | 195 |
| 8 | 52.8 | 2.4 | 44.8 | 250 | 5 | 59.2 | 9.4 | 31.4 | 223 |
| 11-7-1 | 86.3 | 4.6 | 9.1 | 153 | 7 | 52.6 | 8.4 | 39.0 | 251 |
| 3 | 72.9 | 3.9 | 23.2 | 181 | 11-22-2 | 72.5 | 12.1 | 15.4 | 182 |
| 5 | 63.2 | 3.3 | 33.5 | 209 | 4 | 62.8 | 10.5 | 26.7 | 210 |
| 7 | 55.7 | 2.9 | 41.3 | 237 | 6 | 55.5 | 9.2 | 35.3 | 238 |
| 11-8-2 | 78.5 | 4.8 | 16.7 | 168 | 8 | 49.6 | 8.3 | 42.1 | 266 |
| 4 | 67.3 | 4.1 | 28.6 | 196 | 11-23-1 | 78.1 | 13.6 | 8.3 | 169- |
| 6 | 58.9 | 3.6 | 37.5 | 224 | 3 | 67.0 | 11.7 | 21.3 | 197 |
| 8 | 52.4 | 3.2 | 44.4 | 252 | 5 | 58.6 | 10.2 | 31.1 | 225 |
| 11-9-1 | 85.2 | 5.8 | 9.0 | 155 | 7 | 52.2 | 9.1 | 38.7 | 253 |
| 3 | 72.1 | 4.9 | 22.9 | 183 | 11-24-2 | 71.7 | 13.0 | 15.2 | 184 |
| 5 | 62.6 | 4.2 | 33.2 | 211 | 4 | 62.3 | 11.3 | 26.4 | 212 |
| 7 | 55.2 | 3.8 | 41.0 | 239 | 6 | 55.0 | 10.0 | 45.0 | 240 |
| 11-10-2 | 77.6 | 5.9 | 16.5 | 170 | 8 | 49.3 | 8.9 | 41.8 | 268 |
| 4 | 66.7 | 5.0 | 28.3 | 198 | 11-25-1 | 77.2 | 24.6 | 8.2 | 171 |
| 6 | 58.4 | 4.4 | 37.2 | 226 | 3 | 66.3 | 12.6 | 21.1 | 199 |
| 8 | 52.0 | 3.9 | 44.1 | 254 | 5 | 58.1 | 11.0 | 30.8 | 227 |
| 11-11-1 | 84.1 | 7.0 | 8.9 | 157 | 7 | 51.8 | 9.8 | 38.4 | 255 |
| 3 | 71.3 | 5.9 | 22.7 | 185 | 11-26-2 | 70.9 | 14.0 | 15.0 | 186 |
| 5 | 62.0 | 5.1 | 32.9 | 213 | 4 | 61.7 | 12.1 | 26.2 | 214 |
| 7 | 54.8 | 4.5 | 40.7 | 241 | 6 | 54.5 | 10.7 | 34.7 | 242 |
| 11-12-2 | 76.7 | 7.0 | 16.3 | 172 | 8 | 48.9 | 9.6 | 41.5 | 270 |
| 4 | 66.0 | 6.0 | 28.0 | 200 | 12-6-2 | 80.9 | 3.4 | 15.7 | 178 |
| 6 | 57.9 | 5.3 | 36.8 | 228 | 4 | 69.9 | 2.9 | 27.2 | 206 |
| 8 | 51.6 | 4.7 | 43.7 | 256 | 6 | 61.5 | 2.6 | 35.9 | 234 |
| 11-13-1 | 83.0 | 8.2 | 8.8 | 159 | 8 | 55.0 | 2.3 | 42.7 | 262 |
| 3 | 70.6 | 6.9 | 22.5 | 187 | 12-7-1 | 87.3 | 4.2 | 8.5 | 165 |
| 5 | 61.4 | 6.0 | 32.6 | 215 | 3 | 74.6 | 3.6 | 21.8 | 193 |
| 7 | 54.3 | 5.3 | 40.3 | 243 | 5 | 65.1 | 3.2 | 31.7 | 221 |
| 11-14-2 | 75.8 | 8.0 | 16.1 | 174 | 7 | 57.5 | 2.8 | 39.3 | 249 |
| 4 | 65.3 | 6.9 | 27.7 | 202 | 12-8-2 | 80.0 | 4.4 | 15.6 | 180 |
| 6 | 57.4 | 6.1 | 36.5 | 230 | 4 | 69.2 | 3.8 | 26.9 | 208 |
| 8 | 51.2 | 5.4 | 43.4 | 258 | 6 | 61.0 | 3.4 | 35.6 | 236 |
| 11-15-1 | 82.0 | 9.3 | 8.7 | 161 | 8 | 54.5 | 3.0 | 42.4 | 264 |
| 3 | 69.8 | 7.9 | 22.2 | 189 | 12-9-1 | 86.2 | 5.4 | 8.4 | 167 |
| 5 | 60.8 | 6.9 | 32.3 | 217 | 3 | 73.9 | 4.6 | 21.5 | 195 |
| 7 | 53.9 | 6.1 | 40.0 | 245 | 5 | 64.6 | 4.0 | 31.4 | 223 |
| 11-16-2 | 75.0 | 9.1 | 15.9 | 176 | 7 | 57.4 | 3.6 | 39.0 | 251 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|---------|------|------|------|-------|
| 12-9-9 | 51,6 | 3,2 | 45,2 | 279 | 12-24-6 | 57,1 | 9,5 | 33,3 | 252 |
| 12-10-2 | 79,1 | 5,5 | 15,4 | 182 | 12-24-8 | 51,4 | 8,6 | 40,0 | 280 |
| 4 | 68,6 | 4,7 | 26,7 | 210 | 12-25-1 | 78,7 | 13,7 | 7,6 | 183 |
| 6 | 60,5 | 4,2 | 35,3 | 238 | 3 | 68,2 | 11,8 | 19,9 | 211 |
| 8 | 54,1 | 3,7 | 42,1 | 266 | 5 | 60,2 | 10,5 | 29,3 | 239 |
| 12-11-1 | 85,2 | 6,5 | 8,3 | 169 | 7 | 53,9 | 9,4 | 36,7 | 267 |
| 3 | 73,1 | 5,6 | 21,3 | 197 | 12-26-2 | 72,7 | 13,1 | 14,1 | 198 |
| 5 | 64,0 | 4,9 | 31,1 | 225 | 4 | 63,7 | 11,5 | 24,8 | 226 |
| 7 | 56,9 | 4,3 | 38,7 | 253 | 6 | 56,7 | 10,2 | 33,1 | 254 |
| 12-12-2 | 78,3 | 6,5 | 15,2 | 184 | 8 | 51,1 | 9,2 | 39,7 | 282 |
| 4 | 67,9 | 5,7 | 26,4 | 212 | 12-27-1 | 77,8 | 14,6 | 7,6 | 185 |
| 6 | 60,0 | 5,0 | 35,0 | 240 | 3 | 67,6 | 12,7 | 19,7 | 213 |
| 8 | 53,7 | 4,5 | 41,8 | 268 | 5 | 59,7 | 11,2 | 29,0 | 241 |
| 12-13-1 | 84,2 | 7,6 | 8,2 | 171 | 7 | 53,5 | 10,0 | 36,4 | 269 |
| 3 | 72,4 | 6,5 | 21,1 | 199 | 12-28-2 | 72,0 | 14,0 | 14,0 | 200 |
| 5 | 63,4 | 5,7 | 30,8 | 227 | 4 | 63,2 | 12,3 | 24,5 | 228 |
| 7 | 56,5 | 5,1 | 38,4 | 255 | 6 | 56,2 | 10,9 | 32,8 | 256 |
| 12-14-2 | 77,4 | 7,5 | 15,0 | 186 | 8 | 50,7 | 9,8 | 39,4 | 284 |
| 4 | 67,3 | 6,5 | 26,2 | 214 | 12-29-1 | 77,0 | 15,5 | 7,5 | 187 |
| 6 | 59,5 | 5,8 | 34,7 | 242 | 3 | 67,0 | 13,5 | 19,5 | 215 |
| 8 | 53,3 | 5,2 | 41,4 | 270 | 5 | 59,2 | 11,9 | 28,8 | 243 |
| 12-15-1 | 83,2 | 8,7 | 8,1 | 173 | 7 | 53,1 | 10,7 | 36,2 | 271 |
| 3 | 71,7 | 7,4 | 20,9 | 201 | 12-30-2 | 71,3 | 14,8 | 13,9 | 202 |
| 5 | 62,9 | 6,5 | 30,6 | 229 | 4 | 62,6 | 13,0 | 24,3 | 230 |
| 7 | 56,0 | 5,8 | 38,1 | 257 | 6 | 55,8 | 11,6 | 32,6 | 258 |
| 12-16-2 | 76,6 | 8,5 | 14,9 | 188 | 8 | 50,3 | 10,5 | 39,2 | 286 |
| 4 | 66,7 | 7,4 | 25,9 | 216 | 12-31-1 | 76,2 | 16,4 | 7,4 | 189 |
| 6 | 59,0 | 6,6 | 34,4 | 244 | 3 | 66,3 | 14,3 | 19,4 | 217 |
| 8 | 52,9 | 5,9 | 41,2 | 272 | 5 | 58,8 | 12,6 | 28,6 | 245 |
| 12-17-1 | 82,3 | 9,7 | 8,0 | 175 | 7 | 52,7 | 11,3 | 35,9 | 273 |
| 3 | 70,9 | 8,4 | 20,7 | 203 | 13-7-1 | 88,1 | 4,0 | 7,9 | 177 |
| 5 | 62,3 | 7,4 | 30,3 | 231 | 3 | 76,1 | 3,4 | 20,5 | 205 |
| 7 | 55,6 | 6,6 | 37,8 | 259 | 5 | 67,0 | 3,0 | 30,0 | 233 |
| 12-18-2 | 75,8 | 9,5 | 14,7 | 190 | 7 | 59,8 | 2,7 | 37,5 | 261 |
| 4 | 66,1 | 8,2 | 25,7 | 218 | 13-8-2 | 81,3 | 4,1 | 14,6 | 192 |
| 6 | 58,5 | 7,3 | 34,2 | 246 | 4 | 70,9 | 3,6 | 25,4 | 220 |
| 8 | 52,5 | 6,6 | 40,9 | 274 | 6 | 62,9 | 3,2 | 33,9 | 248 |
| 12-19-1 | 81,4 | 10,7 | 7,9 | 177 | 8 | 56,5 | 2,9 | 40,6 | 276 |
| 3 | 70,2 | 9,3 | 20,5 | 205 | 13-9-1 | 87,1 | 5,0 | 7,8 | 179 |
| 5 | 61,8 | 8,2 | 30,0 | 233 | 3 | 75,3 | 4,3 | 20,3 | 207 |
| 7 | 55,2 | 7,3 | 37,5 | 261 | 5 | 66,4 | 3,8 | 29,8 | 235 |
| 12-20-2 | 75,0 | 10,4 | 14,6 | 192 | 7 | 59,3 | 3,4 | 37,3 | 263 |
| 4 | 65,5 | 9,1 | 25,4 | 220 | 13-10-2 | 80,4 | 5,2 | 14,4 | 194 |
| 6 | 58,1 | 8,1 | 33,8 | 248 | 4 | 70,3 | 4,5 | 25,2 | 222 |
| 8 | 52,2 | 7,2 | 40,6 | 276 | 6 | 62,4 | 4,0 | 33,6 | 250 |
| 12-21-1 | 80,4 | 11,7 | 7,8 | 179 | 8 | 56,1 | 3,6 | 40,3 | 278 |
| 3 | 69,6 | 10,1 | 20,3 | 207 | 13-11-1 | 86,2 | 6,1 | 7,7 | 181 |
| 5 | 61,2 | 8,9 | 29,8 | 235 | 3 | 74,6 | 5,3 | 20,1 | 209 |
| 7 | 54,7 | 8,0 | 37,3 | 263 | 5 | 65,8 | 4,6 | 29,5 | 237 |
| 12-22-2 | 74,2 | 11,3 | 14,4 | 194 | 7 | 58,9 | 4,1 | 37,0 | 265 |
| 4 | 64,9 | 9,9 | 25,2 | 222 | 13-12-2 | 79,6 | 6,1 | 14,3 | 196 |
| 6 | 57,6 | 8,8 | 33,6 | 250 | 4 | 69,6 | 5,4 | 25,0 | 224 |
| 8 | 51,8 | 7,9 | 40,3 | 278 | 6 | 61,9 | 4,8 | 33,3 | 252 |
| 12-23-1 | 79,6 | 12,7 | 7,7 | 181 | 8 | 55,7 | 4,3 | 40,0 | 280 |
| 3 | 68,9 | 11,0 | 20,1 | 209 | 13-13-1 | 85,2 | 7,1 | 7,6 | 183 |
| 5 | 60,8 | 9,7 | 29,5 | 237 | 3 | 73,9 | 6,2 | 19,9 | 211 |
| 7 | 54,3 | 8,7 | 37,0 | 265 | 5 | 65,3 | 5,4 | 29,3 | 239 |
| 12-24-2 | 73,4 | 12,2 | 14,3 | 196 | 7 | 58,4 | 4,9 | 36,7 | 267 |
| 4 | 64,3 | 10,7 | 25,0 | 224 | 13-14-2 | 78,8 | 7,2 | 14,1 | 198 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 13-14-4 | 69.0 | 6.2 | 24.8 | 226 | 13-29-1 | 78.4 | 14.6 | 7.0 | 199 |
| 6 | 61.4 | 5.5 | 33.1 | 254 | 3 | 68.7 | 12.8 | 18.5 | 227 |
| 8 | 55.3 | 5.0 | 39.7 | 282 | 5 | 61.2 | 11.4 | 27.4 | 255 |
| 13-15-1 | 84.3 | 8.1 | 7.6 | 185 | 7 | 55.1 | 10.3 | 34.6 | 283 |
| 3 | 73.3 | 7.0 | 19.7 | 213 | 13-30-2 | 72.9 | 14.0 | 13.1 | 214 |
| 5 | 64.7 | 6.2 | 29.0 | 241 | 4 | 64.5 | 12.4 | 23.1 | 242 |
| 7 | 58.0 | 5.6 | 36.4 | 269 | 6 | 57.8 | 11.1 | 31.1 | 270 |
| 13-16-2 | 78.0 | 8.0 | 14.0 | 200 | 8 | 52.4 | 10.0 | 37.6 | 298 |
| 4 | 68.4 | 7.0 | 24.6 | 228 | 13-31-1 | 77.6 | 15.4 | 7.0 | 201 |
| 6 | 60.9 | 6.2 | 32.8 | 256 | 3 | 68.1 | 13.5 | 18.3 | 229 |
| 8 | 54.9 | 5.6 | 39.4 | 284 | 5 | 60.7 | 12.1 | 27.2 | 257 |
| 13-17-1 | 83.4 | 9.1 | 7.5 | 187 | 7 | 54.7 | 10.9 | 34.4 | 285 |
| 3 | 72.6 | 7.9 | 19.5 | 215 | 13-32-2 | 72.2 | 14.8 | 13.0 | 216 |
| 5 | 64.2 | 7.0 | 28.8 | 243 | 4 | 63.9 | 13.1 | 23.0 | 244 |
| 7 | 57.6 | 6.3 | 36.1 | 271 | 6 | 57.3 | 11.8 | 30.9 | 272 |
| 13-18-2 | 77.2 | 8.9 | 13.9 | 202 | 8 | 52.0 | 10.7 | 37.3 | 300 |
| 4 | 67.8 | 7.8 | 24.3 | 230 | 14-8-2 | 82.3 | 3.9 | 13.7 | 204 |
| 6 | 60.5 | 7.0 | 32.5 | 258 | 4 | 72.4 | 3.4 | 24.1 | 232 |
| 8 | 54.5 | 6.3 | 39.2 | 286 | 6 | 64.6 | 3.1 | 32.3 | 260 |
| 13-19-1 | 82.5 | 10.1 | 7.4 | 189 | 8 | 58.3 | 2.8 | 38.9 | 288 |
| 3 | 71.9 | 8.7 | 19.3 | 217 | 14-9-1 | 88.0 | 4.7 | 7.3 | 191 |
| 5 | 63.7 | 7.7 | 28.6 | 245 | 3 | 76.7 | 4.1 | 19.2 | 219 |
| 7 | 57.1 | 7.0 | 35.9 | 273 | 5 | 68.0 | 3.6 | 28.3 | 247 |
| 13-20-2 | 75.5 | 9.8 | 13.7 | 204 | 7 | 61.1 | 3.3 | 35.6 | 275 |
| 4 | 67.2 | 8.6 | 24.1 | 232 | 14-10-2 | 81.6 | 4.8 | 13.6 | 206 |
| 6 | 60.0 | 7.7 | 32.3 | 260 | 4 | 71.8 | 4.3 | 23.9 | 234 |
| 8 | 54.2 | 6.9 | 38.9 | 288 | 6 | 64.1 | 3.8 | 32.1 | 262 |
| 13-21-1 | 81.7 | 11.0 | 7.3 | 191 | 8 | 57.9 | 3.4 | 38.6 | 290 |
| 3 | 71.2 | 9.6 | 19.2 | 219 | 14-11-1 | 87.0 | 5.7 | 7.2 | 193 |
| 5 | 63.2 | 8.5 | 28.3 | 247 | 3 | 76.0 | 5.0 | 19.0 | 221 |
| 7 | 56.7 | 7.6 | 35.6 | 275 | 5 | 67.5 | 4.4 | 28.1 | 249 |
| 13-22-2 | 75.7 | 10.7 | 13.6 | 206 | 7 | 60.6 | 4.0 | 35.4 | 277 |
| 4 | 66.7 | 9.4 | 23.9 | 234 | 14-12-2 | 80.8 | 5.8 | 13.4 | 208 |
| 6 | 59.4 | 8.4 | 32.1 | 262 | 4 | 71.2 | 5.1 | 23.7 | 236 |
| 8 | 53.8 | 7.6 | 38.6 | 290 | 6 | 63.6 | 4.5 | 31.8 | 264 |
| 13-23-1 | 80.8 | 11.9 | 7.2 | 193 | 8 | 57.5 | 4.1 | 38.4 | 292 |
| 3 | 70.6 | 10.4 | 19.0 | 221 | 14-13-1 | 86.1 | 6.7 | 7.2 | 195 |
| 5 | 62.6 | 9.2 | 28.1 | 249 | 3 | 75.3 | 5.8 | 18.8 | 223 |
| 7 | 56.3 | 8.3 | 35.4 | 277 | 5 | 66.9 | 5.2 | 27.9 | 251 |
| 13-24-2 | 75.0 | 11.5 | 13.5 | 208 | 7 | 60.2 | 4.6 | 35.1 | 279 |
| 4 | 66.1 | 10.2 | 23.7 | 236 | 14-14-2 | 80.0 | 6.7 | 13.3 | 210 |
| 6 | 59.1 | 9.1 | 31.8 | 264 | 4 | 70.6 | 5.9 | 23.5 | 238 |
| 8 | 53.4 | 8.2 | 38.3 | 292 | 6 | 63.1 | 5.3 | 31.6 | 266 |
| 13-25-1 | 80.0 | 12.8 | 7.2 | 195 | 8 | 57.1 | 4.8 | 38.1 | 294 |
| 3 | 70.0 | 11.2 | 18.8 | 223 | 14-15-1 | 85.3 | 7.6 | 7.1 | 197 |
| 5 | 62.1 | 10.0 | 27.9 | 251 | 3 | 74.6 | 6.7 | 18.7 | 225 |
| 7 | 55.9 | 9.0 | 35.1 | 279 | 5 | 66.4 | 5.9 | 27.7 | 253 |
| 13-26-2 | 74.3 | 12.4 | 13.3 | 210 | 7 | 59.8 | 5.3 | 34.9 | 281 |
| 4 | 65.5 | 10.9 | 23.5 | 238 | 14-16-2 | 79.2 | 7.5 | 13.2 | 212 |
| 6 | 58.6 | 9.8 | 31.6 | 266 | 4 | 70.0 | 6.7 | 23.3 | 240 |
| 8 | 53.1 | 8.8 | 38.1 | 294 | 6 | 62.7 | 6.0 | 31.3 | 268 |
| 13-27-1 | 79.2 | 13.7 | 7.1 | 197 | 8 | 56.7 | 5.4 | 37.8 | 296 |
| 3 | 69.3 | 12.0 | 18.7 | 225 | 14-17-1 | 84.4 | 8.5 | 7.0 | 199 |
| 5 | 61.6 | 10.7 | 27.7 | 253 | 3 | 74.0 | 7.5 | 18.5 | 227 |
| 7 | 55.5 | 9.6 | 34.9 | 281 | 5 | 65.9 | 6.7 | 27.4 | 255 |
| 13-28-2 | 73.6 | 13.2 | 13.2 | 212 | 7 | 59.4 | 6.0 | 34.6 | 283 |
| 4 | 65.0 | 11.7 | 23.3 | 240 | 14-18-2 | 78.5 | 8.4 | 13.1 | 214 |
| 6 | 58.2 | 10.4 | 31.3 | 268 | 4 | 69.4 | 7.4 | 23.1 | 242 |
| 8 | 52.7 | 9.5 | 37.8 | 296 | 6 | 62.2 | 6.7 | 31.1 | 270 |

| C-H-N | C% | H% | N% | M. G. | C-H-N | C% | H% | N% | M. G. |
|---------|------|------|------|-------|---------|------|------|------|-------|
| 14-18-8 | 56.4 | 6.0 | 37.6 | 298 | 14-33-5 | 62.0 | 12.2 | 25.8 | 271 |
| 14-19-1 | 83.6 | 9.4 | 7.0 | 201 | 7 | 56.2 | 11.0 | 32.7 | 299 |
| 3 | 73.4 | 8.3 | 18.3 | 229 | 15-8-2 | 83.3 | 3.7 | 13.0 | 216 |
| 5 | 65.4 | 7.3 | 27.2 | 257 | 4 | 73.8 | 3.3 | 22.9 | 244 |
| 7 | 58.9 | 6.7 | 34.4 | 285 | 6 | 66.2 | 2.9 | 30.9 | 272 |
| 14-20-2 | 77.8 | 9.2 | 13.0 | 216 | 8 | 60.0 | 2.7 | 37.3 | 300 |
| 4 | 68.8 | 8.2 | 23.0 | 244 | 15-9-1 | 88.7 | 4.4 | 6.9 | 203 |
| 6 | 61.8 | 7.3 | 30.9 | 272 | 3 | 77.9 | 3.9 | 18.2 | 231 |
| 8 | 56.0 | 6.7 | 37.3 | 300 | 5 | 69.5 | 3.5 | 27.0 | 259 |
| 14-21-1 | 82.8 | 10.3 | 6.9 | 203 | 7 | 62.7 | 3.1 | 34.1 | 287 |
| 3 | 72.7 | 9.1 | 18.2 | 231 | 15-10-2 | 82.6 | 4.6 | 12.8 | 218 |
| 5 | 64.9 | 8.1 | 27.0 | 259 | 4 | 73.2 | 4.1 | 22.7 | 246 |
| 7 | 58.5 | 7.3 | 34.2 | 287 | 6 | 65.7 | 3.6 | 30.7 | 274 |
| 14-22-2 | 77.1 | 10.1 | 12.8 | 218 | 8 | 59.6 | 3.3 | 37.1 | 302 |
| 4 | 68.3 | 8.9 | 22.7 | 246 | 15-11-1 | 87.8 | 5.4 | 6.8 | 205 |
| 6 | 61.3 | 8.0 | 30.7 | 274 | 3 | 77.3 | 4.7 | 18.0 | 233 |
| 8 | 55.6 | 7.3 | 37.1 | 302 | 5 | 69.0 | 4.2 | 26.8 | 261 |
| 14-23-1 | 82.0 | 11.2 | 6.8 | 205 | 7 | 62.3 | 3.8 | 33.9 | 289 |
| 3 | 72.1 | 9.9 | 18.0 | 233 | 15-12-2 | 81.8 | 5.4 | 12.7 | 220 |
| 5 | 64.4 | 8.8 | 26.8 | 261 | 4 | 72.6 | 4.8 | 22.6 | 248 |
| 7 | 58.1 | 8.0 | 33.9 | 289 | 6 | 65.2 | 4.3 | 30.4 | 276 |
| 14-24-2 | 76.4 | 10.9 | 12.7 | 220 | 8 | 59.2 | 3.9 | 36.8 | 304 |
| 4 | 67.7 | 9.7 | 22.6 | 248 | 15-13-1 | 87.0 | 6.3 | 6.6 | 207 |
| 6 | 60.9 | 8.7 | 30.4 | 276 | 3 | 76.6 | 5.5 | 17.9 | 235 |
| 8 | 55.3 | 7.9 | 36.8 | 304 | 5 | 68.4 | 4.9 | 26.6 | 263 |
| 14-25-1 | 81.2 | 12.1 | 6.7 | 207 | 7 | 61.8 | 4.5 | 33.7 | 291 |
| 3 | 71.5 | 10.6 | 17.9 | 235 | 15-14-2 | 81.1 | 6.3 | 12.6 | 222 |
| 5 | 63.9 | 9.5 | 26.6 | 263 | 4 | 72.0 | 5.6 | 22.4 | 250 |
| 7 | 57.7 | 8.6 | 33.7 | 291 | 6 | 64.7 | 5.0 | 30.2 | 278 |
| 14-26-2 | 75.7 | 11.7 | 12.6 | 222 | 8 | 58.8 | 4.6 | 36.6 | 306 |
| 4 | 67.2 | 10.4 | 22.4 | 250 | 15-15-1 | 86.1 | 7.2 | 6.7 | 209 |
| 6 | 60.4 | 9.4 | 30.2 | 278 | 3 | 76.0 | 6.3 | 17.7 | 237 |
| 8 | 54.9 | 8.5 | 36.6 | 306 | 5 | 67.9 | 5.7 | 26.4 | 265 |
| 14-27-1 | 80.4 | 12.9 | 6.7 | 209 | 7 | 61.4 | 5.1 | 33.4 | 293 |
| 3 | 70.9 | 11.4 | 17.7 | 237 | 15-16-2 | 80.4 | 7.1 | 12.5 | 224 |
| 5 | 63.4 | 10.2 | 26.4 | 265 | 4 | 71.4 | 6.3 | 22.2 | 252 |
| 7 | 57.3 | 9.2 | 33.5 | 293 | 6 | 64.3 | 5.7 | 30.0 | 280 |
| 14-28-2 | 75.0 | 12.5 | 12.5 | 224 | 8 | 58.4 | 5.2 | 36.4 | 308 |
| 4 | 66.7 | 11.1 | 22.2 | 252 | 15-17-1 | 85.3 | 8.1 | 6.6 | 211 |
| 6 | 60.0 | 10.0 | 30.0 | 280 | 3 | 75.3 | 7.1 | 17.6 | 239 |
| 8 | 54.5 | 9.1 | 36.4 | 308 | 5 | 67.4 | 6.4 | 26.2 | 267 |
| 14-29-1 | 79.6 | 13.7 | 6.6 | 211 | 7 | 61.0 | 5.8 | 33.2 | 295 |
| 3 | 70.3 | 12.1 | 17.6 | 239 | 15-18-2 | 79.6 | 8.0 | 12.4 | 226 |
| 5 | 62.9 | 10.9 | 26.2 | 267 | 4 | 70.9 | 7.1 | 22.0 | 254 |
| 7 | 56.9 | 9.8 | 33.2 | 295 | 6 | 63.8 | 6.4 | 29.8 | 282 |
| 14-30-2 | 74.3 | 13.3 | 12.4 | 226 | 8 | 58.1 | 5.8 | 36.1 | 310 |
| 4 | 66.1 | 11.8 | 22.1 | 254 | 15-19-1 | 84.5 | 8.9 | 6.6 | 213 |
| 6 | 59.6 | 10.6 | 29.8 | 282 | 3 | 74.7 | 7.9 | 17.4 | 241 |
| 8 | 54.2 | 9.7 | 36.1 | 310 | 5 | 66.9 | 7.1 | 26.0 | 269 |
| 14-31-1 | 78.9 | 14.4 | 6.6 | 213 | 7 | 60.6 | 6.4 | 33.3 | 297 |
| 3 | 69.7 | 12.9 | 17.4 | 241 | 15-20-2 | 78.9 | 8.8 | 12.3 | 228 |
| 5 | 62.4 | 11.5 | 26.0 | 269 | 4 | 70.3 | 7.8 | 21.9 | 256 |
| 7 | 56.6 | 10.4 | 33.0 | 297 | 6 | 63.4 | 7.0 | 29.6 | 284 |
| 14-32-2 | 73.7 | 14.0 | 12.3 | 228 | 8 | 57.7 | 6.4 | 35.9 | 312 |
| 4 | 65.5 | 12.5 | 21.9 | 256 | 15-21-1 | 83.7 | 9.8 | 6.5 | 215 |
| 6 | 59.1 | 11.3 | 29.6 | 284 | 3 | 74.1 | 8.6 | 17.3 | 243 |
| 8 | 53.8 | 10.3 | 35.9 | 312 | 5 | 66.4 | 7.7 | 25.8 | 271 |
| 14-33-1 | 78.1 | 15.3 | 6.5 | 215 | 7 | 60.2 | 7.0 | 32.8 | 299 |
| 3 | 69.1 | 13.6 | 17.3 | 243 | 15-22-2 | 78.3 | 9.6 | 12.1 | 230 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 15-22-4 | 69.8 | 8.5 | 21.7 | 258 | 16-11-1 | 88.5 | 5.1 | 6.4 | 217 |
| 6 | 62.9 | 7.7 | 29.4 | 286 | 3 | 78.4 | 4.5 | 17.1 | 245 |
| 8 | 57.3 | 7.0 | 35.7 | 314 | 5 | 70.3 | 4.0 | 25.6 | 273 |
| 15-23-1 | 82.9 | 10.6 | 6.4 | 217 | 7 | 63.8 | 3.6 | 32.6 | 301 |
| 3 | 73.5 | 9.4 | 17.1 | 245 | 16-12-2 | 82.8 | 5.2 | 12.0 | 232 |
| 5 | 65.9 | 8.4 | 25.6 | 273 | 4 | 73.9 | 4.6 | 21.5 | 260 |
| 7 | 59.8 | 7.6 | 32.6 | 301 | 6 | 66.6 | 4.2 | 29.2 | 268 |
| 15-24-2 | 77.6 | 10.3 | 12.1 | 232 | 8 | 60.8 | 3.8 | 35.4 | 316 |
| 4 | 69.2 | 9.2 | 21.5 | 260 | 16-13-1 | 87.7 | 5.9 | 6.4 | 219 |
| 6 | 62.5 | 8.3 | 29.2 | 286 | 3 | 77.7 | 5.3 | 17.0 | 247 |
| 8 | 57.0 | 7.6 | 35.4 | 316 | 5 | 69.8 | 4.7 | 25.4 | 275 |
| 15-25-1 | 82.2 | 11.4 | 6.4 | 219 | 7 | 63.4 | 4.3 | 32.3 | 303 |
| 3 | 72.9 | 10.1 | 17.0 | 247 | 16-14-2 | 82.0 | 6.0 | 12.0 | 234 |
| 5 | 65.5 | 9.1 | 25.4 | 275 | 4 | 73.3 | 5.3 | 21.4 | 262 |
| 7 | 59.4 | 8.3 | 32.3 | 303 | 6 | 66.2 | 4.8 | 29.0 | 290 |
| 15-26-2 | 76.9 | 11.1 | 12.0 | 234 | 8 | 60.4 | 4.4 | 35.2 | 318 |
| 4 | 68.7 | 9.9 | 21.4 | 262 | 10 | 55.5 | 4.0 | 40.5 | 346 |
| 6 | 62.1 | 8.9 | 29.0 | 290 | 16-15-1 | 86.9 | 6.8 | 6.3 | 221 |
| 8 | 56.6 | 8.2 | 35.2 | 318 | 3 | 77.1 | 6.0 | 16.9 | 249 |
| 15-27-1 | 81.4 | 12.2 | 6.3 | 221 | 5 | 69.3 | 5.4 | 25.3 | 277 |
| 3 | 72.3 | 10.8 | 16.9 | 249 | 7 | 62.9 | 4.9 | 32.1 | 305 |
| 5 | 65.0 | 9.7 | 25.3 | 277 | 16-16-2 | 81.3 | 6.8 | 11.9 | 236 |
| 7 | 59.0 | 8.8 | 32.1 | 305 | 4 | 72.7 | 6.1 | 21.2 | 264 |
| 15-28-2 | 76.3 | 11.8 | 11.8 | 236 | 6 | 65.7 | 5.5 | 28.8 | 292 |
| 4 | 68.2 | 10.6 | 21.2 | 264 | 8 | 60.0 | 5.0 | 35.0 | 320 |
| 6 | 61.6 | 9.6 | 28.8 | 292 | 16-17-1 | 86.1 | 7.6 | 6.3 | 223 |
| 8 | 56.2 | 8.7 | 35.0 | 320 | 3 | 76.5 | 6.8 | 16.7 | 251 |
| 15-29-1 | 80.7 | 13.0 | 6.3 | 223 | 5 | 68.8 | 6.1 | 25.1 | 279 |
| 3 | 71.7 | 11.6 | 16.7 | 251 | 7 | 62.5 | 5.5 | 31.9 | 307 |
| 5 | 64.5 | 10.4 | 25.1 | 279 | 16-18-2 | 80.6 | 7.6 | 11.8 | 238 |
| 7 | 58.6 | 9.4 | 31.9 | 307 | 4 | 72.2 | 6.8 | 21.0 | 266 |
| 15-30-2 | 75.6 | 12.6 | 11.8 | 238 | 6 | 65.3 | 6.1 | 28.6 | 294 |
| 4 | 67.7 | 11.3 | 21.0 | 266 | 8 | 59.6 | 5.6 | 34.8 | 322 |
| 6 | 61.2 | 10.2 | 29.4 | 294 | 16-19-1 | 85.3 | 8.4 | 6.2 | 225 |
| 8 | 55.9 | 9.3 | 34.8 | 322 | 3 | 75.9 | 7.5 | 16.6 | 253 |
| 15-31-1 | 80.0 | 13.8 | 6.2 | 225 | 5 | 68.3 | 6.8 | 24.9 | 281 |
| 3 | 71.2 | 12.2 | 16.6 | 253 | 7 | 62.1 | 6.1 | 31.7 | 309 |
| 5 | 64.0 | 11.0 | 24.9 | 281 | 16-20-2 | 80.0 | 8.3 | 11.7 | 240 |
| 7 | 58.2 | 10.0 | 31.7 | 309 | 4 | 71.7 | 7.4 | 20.9 | 268 |
| 15-32-2 | 75.0 | 13.3 | 11.7 | 240 | 6 | 64.9 | 6.7 | 28.4 | 296 |
| 4 | 67.2 | 11.9 | 20.9 | 268 | 8 | 59.3 | 6.2 | 34.5 | 324 |
| 6 | 60.8 | 10.8 | 28.4 | 296 | 16-21-1 | 84.6 | 9.2 | 6.2 | 227 |
| 8 | 55.6 | 9.9 | 34.5 | 324 | 3 | 75.3 | 8.2 | 16.5 | 255 |
| 15-33-1 | 79.3 | 14.5 | 6.2 | 227 | 5 | 67.8 | 7.4 | 24.7 | 283 |
| 3 | 70.6 | 12.9 | 16.4 | 255 | 7 | 61.7 | 6.7 | 31.5 | 311 |
| 5 | 63.6 | 11.7 | 24.7 | 283 | 16-22-2 | 79.3 | 9.1 | 11.6 | 242 |
| 7 | 57.9 | 10.6 | 31.5 | 311 | 4 | 71.1 | 8.1 | 20.7 | 270 |
| 15-34-2 | 74.4 | 14.0 | 11.6 | 242 | 6 | 64.4 | 7.4 | 28.2 | 298 |
| 4 | 66.7 | 12.6 | 20.7 | 270 | 8 | 58.9 | 6.7 | 34.3 | 326 |
| 6 | 60.4 | 11.4 | 28.2 | 298 | 16-23-1 | 83.8 | 10.0 | 6.1 | 229 |
| 8 | 55.2 | 10.4 | 34.4 | 326 | 3 | 74.7 | 8.9 | 16.3 | 257 |
| 16-9-1 | 89.3 | 4.2 | 6.5 | 215 | 5 | 67.4 | 8.1 | 24.5 | 285 |
| 3 | 79.0 | 3.7 | 17.3 | 243 | 7 | 61.4 | 7.3 | 31.3 | 313 |
| 5 | 70.8 | 3.3 | 25.8 | 271 | 16-24-2 | 78.7 | 9.8 | 11.5 | 244 |
| 7 | 64.2 | 3.0 | 32.8 | 299 | 4 | 70.6 | 8.8 | 20.6 | 272 |
| 16-10-2 | 83.5 | 4.3 | 12.2 | 230 | 6 | 64.0 | 8.0 | 28.0 | 300 |
| 4 | 74.4 | 3.9 | 21.7 | 258 | 8 | 58.5 | 7.3 | 34.2 | 328 |
| 6 | 67.1 | 3.5 | 29.4 | 286 | 16-25-1 | 83.1 | 10.8 | 6.1 | 231 |
| 8 | 61.1 | 3.2 | 35.7 | 314 | 3 | 74.1 | 9.6 | 16.2 | 259 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 16-25-5 | 66.9 | 8.7 | 24.4 | 287 | 17-13-3 | 78.8 | 5.0 | 16.2 | 259 |
| 7 | 61.0 | 7.9 | 31.1 | 315 | 5 | 71.1 | 4.5 | 24.4 | 287 |
| 16-26-2 | 78.0 | 10.6 | 11.4 | 246 | 7 | 64.8 | 4.1 | 31.1 | 315 |
| 4 | 70.1 | 9.5 | 20.4 | 274 | 17-14-2 | 82.9 | 5.7 | 11.4 | 246 |
| 6 | 63.6 | 8.6 | 27.8 | 302 | 4 | 74.4 | 5.1 | 20.5 | 274 |
| 8 | 58.2 | 7.9 | 33.9 | 330 | 6 | 67.6 | 4.6 | 27.8 | 302 |
| 16-27-1 | 82.4 | 11.6 | 6.0 | 233 | 8 | 61.8 | 4.2 | 33.9 | 330 |
| 3 | 73.6 | 10.3 | 16.1 | 261 | 17-15-1 | 87.0 | 6.4 | 6.0 | 233 |
| 5 | 66.4 | 9.3 | 24.2 | 289 | 3 | 78.1 | 5.7 | 16.1 | 261 |
| 7 | 60.6 | 8.5 | 30.9 | 317 | 5 | 70.6 | 5.2 | 24.2 | 289 |
| 16-28-2 | 77.4 | 11.3 | 11.3 | 248 | 7 | 64.4 | 4.7 | 30.9 | 317 |
| 4 | 69.6 | 10.1 | 20.3 | 276 | 17-16-2 | 82.2 | 6.4 | 11.3 | 248 |
| 6 | 63.2 | 9.2 | 27.6 | 304 | 4 | 73.9 | 5.8 | 20.3 | 276 |
| 8 | 57.8 | 8.4 | 33.7 | 332 | 6 | 67.1 | 5.3 | 27.6 | 304 |
| 16-29-1 | 81.7 | 12.3 | 6.0 | 235 | 8 | 61.4 | 4.8 | 33.7 | 332 |
| 3 | 73.0 | 11.0 | 16.0 | 265 | 17-17-1 | 86.8 | 7.2 | 6.0 | 235 |
| 5 | 66.0 | 10.0 | 24.0 | 291 | 3 | 77.6 | 6.5 | 15.9 | 265 |
| 7 | 60.2 | 9.1 | 30.7 | 319 | 5 | 70.1 | 5.8 | 24.0 | 291 |
| 16-30-2 | 76.8 | 12.0 | 11.2 | 250 | 7 | 64.0 | 5.3 | 30.7 | 319 |
| 4 | 69.1 | 10.8 | 20.1 | 278 | 17-18-2 | 81.6 | 7.2 | 11.2 | 250 |
| 6 | 62.7 | 9.8 | 27.4 | 306 | 4 | 73.4 | 6.5 | 20.1 | 278 |
| 8 | 57.5 | 9.0 | 33.5 | 334 | 6 | 66.7 | 5.9 | 27.4 | 306 |
| 16-31-1 | 81.0 | 13.1 | 5.9 | 237 | 8 | 61.1 | 5.4 | 33.5 | 334 |
| 3 | 72.5 | 11.7 | 15.8 | 265 | 17-19-1 | 86.1 | 8.0 | 5.9 | 237 |
| 5 | 65.5 | 10.6 | 23.9 | 293 | 3 | 77.0 | 7.2 | 15.8 | 265 |
| 7 | 59.8 | 9.6 | 30.5 | 321 | 5 | 69.6 | 6.5 | 23.9 | 293 |
| 16-32-2 | 76.2 | 12.7 | 11.1 | 252 | 7 | 63.5 | 5.9 | 30.5 | 321 |
| 4 | 68.6 | 11.4 | 20.0 | 280 | 17-20-2 | 80.9 | 7.9 | 11.1 | 252 |
| 6 | 62.3 | 10.4 | 27.3 | 308 | 4 | 72.9 | 7.1 | 20.0 | 280 |
| 8 | 57.1 | 9.5 | 33.3 | 336 | 6 | 66.2 | 6.5 | 27.3 | 308 |
| 16-33-1 | 80.3 | 13.8 | 5.9 | 239 | 8 | 60.7 | 5.9 | 33.3 | 336 |
| 3 | 71.9 | 12.3 | 15.7 | 267 | 17-21-1 | 85.3 | 8.8 | 5.8 | 239 |
| 5 | 65.1 | 11.2 | 23.7 | 295 | 3 | 76.4 | 7.9 | 15.7 | 267 |
| 7 | 59.4 | 10.2 | 30.3 | 323 | 5 | 69.2 | 7.1 | 23.7 | 295 |
| 16-34-2 | 75.6 | 13.4 | 11.0 | 254 | 7 | 63.2 | 6.5 | 30.3 | 323 |
| 4 | 68.1 | 12.1 | 19.8 | 282 | 17-22-2 | 80.3 | 8.7 | 11.0 | 254 |
| 6 | 61.9 | 11.0 | 27.1 | 310 | 4 | 72.3 | 7.8 | 19.9 | 282 |
| 8 | 56.8 | 10.1 | 33.1 | 338 | 6 | 65.8 | 7.1 | 27.1 | 310 |
| 16-35-1 | 79.6 | 14.5 | 5.8 | 241 | 8 | 60.3 | 6.5 | 33.1 | 338 |
| 3 | 71.4 | 13.0 | 15.6 | 269 | 17-23-1 | 84.6 | 9.5 | 5.8 | 241 |
| 5 | 64.6 | 11.8 | 23.6 | 297 | 3 | 75.8 | 8.5 | 15.6 | 269 |
| 7 | 59.1 | 10.8 | 30.1 | 325 | 5 | 68.7 | 7.7 | 23.6 | 297 |
| 17-9-1 | 89.9 | 3.9 | 6.2 | 227 | 7 | 62.8 | 7.1 | 30.1 | 325 |
| 3 | 80.0 | 3.5 | 16.5 | 255 | 17-24-2 | 79.7 | 9.4 | 10.9 | 256 |
| 5 | 72.1 | 3.2 | 24.7 | 283 | 4 | 71.8 | 8.4 | 19.7 | 284 |
| 7 | 65.6 | 2.9 | 31.5 | 311 | 6 | 65.4 | 7.7 | 26.9 | 312 |
| 17-10-2 | 84.3 | 4.1 | 11.6 | 242 | 8 | 60.0 | 7.0 | 32.9 | 340 |
| 4 | 75.6 | 3.7 | 20.7 | 270 | 17-25-1 | 83.9 | 10.3 | 5.8 | 243 |
| 6 | 68.4 | 3.4 | 28.2 | 298 | 3 | 75.3 | 9.2 | 15.5 | 271 |
| 8 | 62.6 | 3.1 | 34.3 | 326 | 5 | 68.2 | 8.3 | 23.4 | 299 |
| 17-11-1 | 89.1 | 4.8 | 6.1 | 229 | 7 | 62.4 | 7.6 | 30.0 | 327 |
| 3 | 79.4 | 4.3 | 16.3 | 257 | 17-26-2 | 79.1 | 10.1 | 10.8 | 258 |
| 5 | 71.6 | 3.8 | 24.6 | 285 | 4 | 71.3 | 9.1 | 19.6 | 286 |
| 7 | 65.2 | 3.5 | 31.3 | 313 | 6 | 65.0 | 8.3 | 26.7 | 314 |
| 17-12-2 | 83.6 | 4.9 | 11.5 | 244 | 8 | 59.6 | 7.6 | 32.7 | 342 |
| 4 | 75.0 | 4.4 | 20.6 | 272 | 17-27-1 | 83.3 | 11.0 | 5.7 | 245 |
| 6 | 68.0 | 4.0 | 28.0 | 300 | 3 | 74.7 | 9.9 | 15.4 | 273 |
| 8 | 62.2 | 3.7 | 24.1 | 328 | 5 | 67.8 | 9.0 | 23.2 | 301 |
| 17-13-1 | 88.3 | 5.6 | 6.1 | 231 | 7 | 62.0 | 8.2 | 29.8 | 329 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|---------|------|-----|------|-------|
| 17-28-2 | 78.5 | 10.8 | 10.8 | 260 | 18-11-7 | 66.4 | 3.4 | 30.2 | 325 |
| 4 | 70.8 | 9.7 | 19.4 | 288 | 18-12-2 | 84.4 | 4.7 | 10.9 | 256 |
| 6 | 64.6 | 8.8 | 26.6 | 316 | 4 | 76.0 | 4.2 | 19.7 | 284 |
| 8 | 59.3 | 8.1 | 32.6 | 344 | 6 | 69.2 | 3.8 | 26.9 | 312 |
| 17-29-1 | 82.6 | 11.7 | 5.7 | 247 | 8 | 63.5 | 3.5 | 32.9 | 340 |
| 3 | 74.2 | 10.5 | 15.3 | 275 | 18-13-1 | 88.9 | 5.3 | 5.8 | 243 |
| 5 | 67.3 | 9.6 | 23.1 | 303 | 3 | 79.7 | 4.8 | 15.5 | 271 |
| 7 | 61.6 | 8.7 | 29.6 | 331 | 5 | 72.2 | 4.3 | 23.4 | 299 |
| 17-30-2 | 77.9 | 11.4 | 10.7 | 262 | 7 | 66.1 | 4.0 | 29.9 | 327 |
| 4 | 70.4 | 10.3 | 19.3 | 290 | 18-14-2 | 83.7 | 5.4 | 10.8 | 258 |
| 6 | 64.1 | 9.4 | 26.4 | 318 | 4 | 75.5 | 4.9 | 19.6 | 286 |
| 8 | 58.9 | 8.7 | 32.4 | 346 | 6 | 68.8 | 4.4 | 26.7 | 314 |
| 17-31-1 | 81.9 | 12.4 | 5.6 | 249 | 8 | 63.2 | 4.1 | 32.7 | 342 |
| 3 | 73.6 | 11.2 | 15.2 | 277 | 18-15-1 | 88.2 | 6.1 | 5.7 | 245 |
| 5 | 66.9 | 10.2 | 22.9 | 305 | 3 | 79.1 | 5.5 | 15.4 | 273 |
| 7 | 61.3 | 9.3 | 29.4 | 333 | 5 | 71.8 | 5.0 | 23.2 | 301 |
| 17-32-2 | 77.3 | 12.1 | 10.6 | 264 | 7 | 65.7 | 4.5 | 29.8 | 329 |
| 4 | 69.9 | 10.9 | 19.2 | 292 | 18-16-2 | 83.1 | 6.1 | 10.8 | 260 |
| 6 | 63.7 | 10.0 | 26.2 | 320 | 4 | 75.0 | 5.6 | 19.4 | 288 |
| 8 | 58.6 | 9.2 | 32.2 | 348 | 6 | 68.3 | 5.1 | 26.6 | 316 |
| 17-33-1 | 81.3 | 13.1 | 5.6 | 251 | 8 | 62.8 | 4.6 | 32.6 | 344 |
| 3 | 73.1 | 11.8 | 15.1 | 279 | 18-17-1 | 87.5 | 6.9 | 5.6 | 247 |
| 5 | 66.4 | 10.7 | 22.8 | 307 | 3 | 78.5 | 6.2 | 15.3 | 275 |
| 7 | 60.9 | 9.8 | 29.2 | 335 | 5 | 71.3 | 5.6 | 23.1 | 303 |
| 17-34-2 | 76.7 | 12.8 | 10.5 | 266 | 7 | 65.2 | 5.1 | 29.6 | 331 |
| 4 | 69.4 | 11.6 | 19.0 | 294 | 18-18-2 | 82.4 | 6.9 | 10.7 | 262 |
| 6 | 63.3 | 10.6 | 26.1 | 322 | 4 | 74.5 | 6.2 | 19.3 | 290 |
| 8 | 58.3 | 9.7 | 32.0 | 350 | 6 | 67.9 | 5.7 | 26.4 | 318 |
| 17-35-1 | 80.6 | 13.8 | 5.5 | 253 | 8 | 62.4 | 5.2 | 32.4 | 346 |
| 3 | 72.6 | 12.4 | 14.9 | 281 | 18-19-1 | 86.7 | 7.6 | 5.6 | 249 |
| 5 | 66.0 | 11.3 | 22.6 | 309 | 3 | 78.0 | 6.9 | 15.1 | 277 |
| 7 | 60.5 | 10.4 | 29.1 | 337 | 5 | 70.8 | 6.2 | 22.9 | 305 |
| 17-36-2 | 76.1 | 13.4 | 10.4 | 268 | 7 | 64.9 | 5.7 | 29.4 | 333 |
| 4 | 68.9 | 12.2 | 18.9 | 296 | 18-20-2 | 81.8 | 7.6 | 10.6 | 264 |
| 6 | 63.0 | 11.1 | 25.9 | 324 | 4 | 74.0 | 6.8 | 19.2 | 292 |
| 8 | 58.0 | 10.2 | 31.8 | 352 | 6 | 67.5 | 6.2 | 26.2 | 320 |
| 17-37-1 | 80.0 | 14.5 | 5.5 | 255 | 8 | 62.1 | 5.7 | 32.2 | 348 |
| 3 | 72.1 | 13.1 | 14.8 | 283 | 18-21-1 | 86.0 | 8.4 | 5.6 | 251 |
| 5 | 65.6 | 11.9 | 22.5 | 311 | 3 | 77.4 | 7.5 | 15.0 | 279 |
| 7 | 60.2 | 10.9 | 28.9 | 339 | 5 | 70.3 | 6.8 | 22.9 | 307 |
| 17-38-2 | 75.5 | 14.1 | 10.4 | 270 | 7 | 64.5 | 6.3 | 29.2 | 335 |
| 4 | 68.4 | 12.7 | 18.8 | 298 | 18-22-2 | 81.2 | 8.3 | 10.5 | 266 |
| 6 | 62.6 | 11.6 | 25.8 | 326 | 4 | 73.5 | 7.5 | 19.0 | 294 |
| 8 | 57.6 | 10.7 | 31.6 | 354 | 6 | 67.1 | 6.8 | 26.1 | 322 |
| 18-8-2 | 85.7 | 3.2 | 11.1 | 252 | 8 | 61.7 | 6.3 | 32.0 | 350 |
| 4 | 77.1 | 2.9 | 20.0 | 280 | 18-23-1 | 85.4 | 9.1 | 5.5 | 253 |
| 6 | 70.1 | 2.6 | 27.3 | 308 | 3 | 76.9 | 8.2 | 14.9 | 281 |
| 8 | 64.3 | 2.4 | 33.3 | 336 | 5 | 69.9 | 7.4 | 22.6 | 309 |
| 18-9-1 | 90.4 | 3.8 | 5.8 | 239 | 7 | 64.1 | 6.8 | 29.1 | 337 |
| 3 | 80.9 | 3.4 | 15.7 | 267 | 18-24-2 | 80.6 | 9.0 | 10.4 | 268 |
| 5 | 73.2 | 3.0 | 23.7 | 295 | 4 | 73.0 | 8.1 | 18.9 | 296 |
| 7 | 66.9 | 2.8 | 30.3 | 323 | 6 | 66.7 | 7.4 | 25.9 | 324 |
| 18-10-2 | 85.0 | 3.9 | 11.0 | 254 | 8 | 61.3 | 6.8 | 31.8 | 352 |
| 4 | 76.6 | 3.5 | 19.8 | 282 | 18-25-1 | 84.7 | 9.8 | 5.5 | 255 |
| 6 | 69.7 | 3.2 | 27.1 | 310 | 3 | 76.3 | 8.8 | 14.8 | 283 |
| 8 | 63.9 | 2.9 | 33.1 | 338 | 5 | 69.4 | 8.0 | 22.5 | 311 |
| 18-11-1 | 89.6 | 4.6 | 5.7 | 241 | 7 | 63.7 | 7.4 | 28.9 | 339 |
| 3 | 80.3 | 4.1 | 15.6 | 269 | 18-26-2 | 80.0 | 9.6 | 10.4 | 270 |
| 5 | 72.7 | 3.7 | 23.6 | 297 | 4 | 72.4 | 8.7 | 18.8 | 298 |

| C-H-N | C % | H % | N % | M.G. | C-H-N | C % | H % | N % | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 18-26-6 | 66.2 | 8.0 | 25.8 | 326 | 18-41-3 | 72.2 | 13.7 | 14.0 | 290 |
| 8 | 61.0 | 7.3 | 31.6 | 354 | 5 | 66.1 | 12.5 | 21.4 | 327 |
| 18-27-1 | 84.0 | 10.5 | 5.4 | 257 | 7 | 60.8 | 11.6 | 27.6 | 355 |
| 3 | 75.8 | 9.5 | 14.7 | 285 | 18-42-2 | 75.5 | 14.7 | 9.8 | 286 |
| 5 | 69.0 | 8.6 | 22.4 | 313 | 4 | 68.8 | 13.4 | 17.8 | 314 |
| 7 | 63.3 | 7.9 | 28.7 | 341 | 6 | 63.2 | 12.3 | 24.5 | 342 |
| 18-28-2 | 79.4 | 10.3 | 10.3 | 272 | 8 | 58.4 | 11.3 | 30.3 | 370 |
| 4 | 72.0 | 9.3 | 18.7 | 300 | 18-43-1 | 79.1 | 15.7 | 5.1 | 273 |
| 6 | 65.9 | 8.5 | 25.6 | 328 | 3 | 71.7 | 14.3 | 13.9 | 301 |
| 8 | 60.7 | 7.8 | 31.5 | 356 | 5 | 65.6 | 13.1 | 21.3 | 329 |
| 18-29-1 | 83.4 | 11.2 | 5.4 | 259 | 7 | 60.5 | 12.0 | 27.5 | 357 |
| 3 | 75.2 | 10.1 | 14.6 | 287 | 18-44-2 | 75.0 | 15.3 | 9.7 | 288 |
| 5 | 68.6 | 9.2 | 22.2 | 315 | 4 | 68.4 | 13.9 | 17.7 | 316 |
| 7 | 83.0 | 8.4 | 28.6 | 343 | 6 | 62.8 | 12.8 | 24.4 | 344 |
| 18-30-2 | 78.8 | 10.9 | 10.2 | 274 | 8 | 58.1 | 11.8 | 30.1 | 372 |
| 4 | 71.5 | 9.9 | 18.6 | 302 | 18-45-1 | 78.5 | 16.4 | 5.1 | 275 |
| 6 | 65.5 | 9.1 | 25.4 | 330 | 3 | 71.3 | 14.8 | 13.9 | 303 |
| 8 | 60.3 | 8.4 | 31.3 | 358 | 5 | 65.2 | 13.6 | 21.1 | 331 |
| 18-31-1 | 82.7 | 11.9 | 5.4 | 261 | 7 | 60.2 | 12.5 | 27.3 | 359 |
| 3 | 74.7 | 10.7 | 14.5 | 289 | 18-46-2 | 74.5 | 15.9 | 9.6 | 290 |
| 5 | 68.1 | 9.8 | 22.1 | 317 | 4 | 67.9 | 14.5 | 17.6 | 318 |
| 7 | 62.6 | 9.0 | 28.4 | 345 | 6 | 62.4 | 13.3 | 24.3 | 346 |
| 18-32-2 | 78.3 | 11.6 | 10.1 | 276 | 8 | 57.8 | 12.3 | 29.9 | 374 |
| 4 | 71.1 | 10.5 | 18.4 | 304 | 19-11-1 | 90.1 | 4.3 | 5.5 | 253 |
| 6 | 65.1 | 9.6 | 25.3 | 332 | 19-12-2 | 85.1 | 4.5 | 10.4 | 268 |
| 8 | 60.0 | 8.9 | 31.1 | 360 | 4 | 77.0 | 4.0 | 18.9 | 306 |
| 18-33-1 | 82.1 | 12.6 | 5.3 | 263 | 6 | 70.4 | 3.7 | 25.9 | 324 |
| 3 | 74.2 | 11.3 | 14.4 | 291 | 8 | 64.8 | 3.4 | 31.8 | 352 |
| 5 | 67.7 | 10.3 | 21.9 | 319 | 19-13-1 | 89.4 | 5.1 | 5.5 | 255 |
| 7 | 62.3 | 9.5 | 28.2 | 347 | 3 | 80.6 | 4.6 | 14.8 | 283 |
| 18-34-2 | 77.7 | 12.2 | 10.1 | 278 | 5 | 73.3 | 4.2 | 22.5 | 311 |
| 4 | 70.6 | 11.1 | 18.3 | 306 | 7 | 67.3 | 3.8 | 28.9 | 339 |
| 6 | 64.7 | 10.2 | 25.1 | 334 | 19-14-2 | 84.4 | 5.2 | 10.4 | 270 |
| 8 | 59.7 | 9.4 | 30.9 | 362 | 4 | 76.5 | 4.7 | 18.8 | 298 |
| 18-35-1 | 81.5 | 13.2 | 5.3 | 265 | 6 | 69.9 | 4.3 | 25.8 | 326 |
| 3 | 73.7 | 11.9 | 14.3 | 293 | 8 | 64.4 | 4.0 | 31.6 | 354 |
| 5 | 67.3 | 10.9 | 21.8 | 321 | 19-15-1 | 88.7 | 5.8 | 5.4 | 257 |
| 7 | 61.9 | 10.0 | 28.1 | 349 | 3 | 80.0 | 5.3 | 14.7 | 285 |
| 18-36-2 | 77.1 | 12.9 | 10.0 | 280 | 5 | 72.8 | 4.8 | 22.4 | 313 |
| 4 | 70.1 | 11.7 | 18.2 | 308 | 7 | 66.9 | 4.4 | 28.7 | 341 |
| 6 | 64.3 | 10.7 | 25.0 | 336 | 19-16-2 | 83.8 | 5.9 | 10.3 | 272 |
| 8 | 59.3 | 9.9 | 30.8 | 364 | 4 | 76.0 | 5.3 | 18.7 | 300 |
| 18-37-1 | 80.9 | 13.8 | 5.2 | 267 | 6 | 69.5 | 4.9 | 25.6 | 328 |
| 3 | 73.2 | 12.5 | 14.2 | 295 | 8 | 64.0 | 4.5 | 31.5 | 356 |
| 5 | 66.9 | 11.4 | 21.7 | 323 | 19-17-1 | 88.0 | 6.6 | 5.4 | 259 |
| 7 | 61.6 | 10.5 | 27.9 | 351 | 3 | 79.4 | 5.9 | 14.6 | 287 |
| 18-38-2 | 76.6 | 13.5 | 9.9 | 282 | 5 | 72.4 | 5.4 | 22.2 | 315 |
| 4 | 69.7 | 12.3 | 18.0 | 310 | 7 | 66.5 | 4.9 | 28.6 | 343 |
| 6 | 63.9 | 11.2 | 24.8 | 338 | 19-18-2 | 83.2 | 6.6 | 10.2 | 274 |
| 8 | 59.0 | 10.4 | 30.6 | 366 | 4 | 75.5 | 6.0 | 18.5 | 302 |
| 18-39-1 | 80.3 | 14.5 | 5.2 | 269 | 6 | 69.1 | 5.4 | 25.4 | 330 |
| 3 | 72.7 | 13.1 | 14.1 | 297 | 8 | 63.7 | 5.0 | 31.3 | 358 |
| 5 | 66.5 | 12.0 | 21.5 | 325 | 19-19-1 | 87.4 | 7.3 | 5.3 | 261 |
| 7 | 61.2 | 11.0 | 27.8 | 353 | 3 | 78.9 | 6.6 | 14.5 | 289 |
| 18-40-2 | 76.0 | 14.1 | 9.9 | 284 | 5 | 71.9 | 6.0 | 22.1 | 317 |
| 4 | 69.2 | 12.8 | 17.9 | 312 | 7 | 66.1 | 5.5 | 28.4 | 345 |
| 6 | 63.5 | 11.8 | 24.7 | 340 | 19-20-2 | 82.6 | 7.2 | 10.1 | 276 |
| 8 | 58.7 | 10.9 | 30.4 | 368 | 4 | 75.0 | 6.6 | 18.4 | 304 |
| 18-41-1 | 79.7 | 15.1 | 5.2 | 271 | 6 | 68.7 | 6.0 | 25.3 | 332 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 19-20-8 | 63,3 | 5,5 | 31,1 | 360 | 19-35-5 | 68,5 | 10,5 | 21,0 | 333 |
| 19-21-1 | 86,7 | 8,0 | 5,3 | 263 | 7 | 63,1 | 9,7 | 27,1 | 361 |
| 3 | 78,3 | 7,2 | 14,4 | 291 | 19-36-2 | 78,1 | 12,3 | 9,6 | 292 |
| 5 | 71,5 | 6,6 | 21,9 | 319 | 4 | 71,2 | 11,2 | 17,5 | 320 |
| 7 | 65,7 | 6,1 | 28,2 | 347 | 6 | 65,5 | 10,3 | 24,1 | 348 |
| 19-22-2 | 82,0 | 7,9 | 10,1 | 278 | 8 | 60,6 | 9,6 | 29,8 | 376 |
| 4 | 74,5 | 7,2 | 18,3 | 306 | 19-37-1 | 81,7 | 13,3 | 5,0 | 279 |
| 6 | 68,3 | 6,6 | 25,1 | 334 | 3 | 74,3 | 12,0 | 13,7 | 307 |
| 8 | 63,0 | 6,1 | 30,9 | 362 | 5 | 68,1 | 11,0 | 20,9 | 335 |
| 19-23-1 | 86,0 | 8,7 | 5,3 | 265 | 7 | 62,8 | 10,2 | 27,0 | 365 |
| 3 | 77,8 | 7,8 | 14,3 | 293 | 19-38-2 | 77,6 | 12,9 | 9,5 | 294 |
| 5 | 71,0 | 7,2 | 21,8 | 321 | 4 | 70,8 | 11,8 | 17,4 | 322 |
| 7 | 65,3 | 6,6 | 28,1 | 349 | 6 | 65,1 | 10,8 | 24,0 | 350 |
| 19-24-2 | 81,4 | 8,6 | 10,0 | 280 | 8 | 60,3 | 10,1 | 29,6 | 378 |
| 4 | 74,0 | 7,8 | 18,2 | 308 | 19-39-1 | 81,1 | 13,9 | 5,0 | 281 |
| 6 | 67,8 | 7,1 | 25,0 | 336 | 3 | 73,8 | 12,6 | 13,6 | 309 |
| 8 | 62,6 | 6,6 | 30,8 | 364 | 5 | 67,6 | 11,6 | 20,8 | 337 |
| 19-25-1 | 85,4 | 9,3 | 5,3 | 267 | 7 | 62,5 | 10,7 | 26,8 | 365 |
| 3 | 77,3 | 8,5 | 14,2 | 295 | 19-40-2 | 77,0 | 13,5 | 9,4 | 296 |
| 5 | 70,6 | 7,7 | 21,7 | 323 | 4 | 70,4 | 12,3 | 17,3 | 324 |
| 7 | 65,0 | 7,1 | 27,9 | 351 | 6 | 64,8 | 11,4 | 23,8 | 352 |
| 19-26-2 | 80,8 | 9,2 | 9,9 | 282 | 8 | 60,0 | 10,5 | 29,5 | 380 |
| 4 | 73,5 | 8,4 | 18,1 | 310 | 19-41-1 | 80,6 | 14,5 | 4,9 | 283 |
| 6 | 67,4 | 7,7 | 24,8 | 338 | 3 | 73,3 | 13,2 | 13,5 | 311 |
| 8 | 62,3 | 7,1 | 30,6 | 366 | 5 | 67,3 | 12,1 | 20,6 | 339 |
| 19-27-1 | 84,7 | 10,0 | 5,2 | 269 | 7 | 62,1 | 11,2 | 26,7 | 367 |
| 3 | 76,8 | 9,1 | 14,1 | 297 | 19-42-2 | 76,5 | 14,1 | 9,4 | 298 |
| 5 | 70,2 | 8,3 | 21,5 | 325 | 4 | 69,9 | 12,9 | 17,2 | 326 |
| 7 | 64,6 | 7,6 | 27,7 | 353 | 6 | 64,4 | 11,9 | 23,7 | 354 |
| 19-28-2 | 80,3 | 9,8 | 9,8 | 284 | 8 | 59,7 | 11,0 | 29,3 | 382 |
| 4 | 73,1 | 9,0 | 17,9 | 312 | 20-12-2 | 85,7 | 4,3 | 10,0 | 280 |
| 6 | 67,1 | 8,2 | 24,7 | 340 | 4 | 77,9 | 3,9 | 18,2 | 308 |
| 8 | 61,9 | 7,6 | 30,4 | 368 | 6 | 71,4 | 3,6 | 25,0 | 336 |
| 19-29-1 | 84,1 | 10,7 | 5,2 | 271 | 8 | 65,9 | 3,3 | 30,8 | 364 |
| 3 | 76,2 | 9,7 | 14,0 | 299 | 20-13-1 | 80,8 | 4,9 | 5,2 | 267 |
| 5 | 69,7 | 8,9 | 21,4 | 327 | 3 | 81,4 | 4,4 | 14,2 | 295 |
| 7 | 64,2 | 8,2 | 27,6 | 355 | 5 | 74,3 | 4,0 | 21,7 | 323 |
| 19-30-2 | 79,7 | 10,5 | 9,8 | 286 | 7 | 68,4 | 3,7 | 27,9 | 351 |
| 4 | 72,6 | 9,6 | 17,8 | 314 | 20-14-2 | 85,1 | 5,0 | 9,9 | 282 |
| 6 | 66,7 | 8,8 | 24,5 | 342 | 4 | 77,4 | 4,5 | 18,1 | 310 |
| 8 | 61,6 | 8,1 | 30,2 | 370 | 6 | 71,0 | 4,1 | 24,8 | 338 |
| 19-31-1 | 83,5 | 11,4 | 5,1 | 273 | 8 | 65,6 | 3,8 | 30,6 | 366 |
| 3 | 75,7 | 10,3 | 14,0 | 301 | 20-15-1 | 80,2 | 5,6 | 5,2 | 269 |
| 5 | 69,3 | 9,4 | 21,3 | 329 | 3 | 80,8 | 5,0 | 14,1 | 297 |
| 7 | 63,9 | 8,7 | 27,4 | 357 | 5 | 73,9 | 4,6 | 21,5 | 325 |
| 19-32-2 | 79,2 | 11,1 | 9,7 | 288 | 7 | 68,0 | 4,2 | 27,8 | 353 |
| 4 | 72,1 | 10,1 | 17,7 | 316 | 20-16-2 | 84,5 | 5,6 | 9,9 | 284 |
| 6 | 66,3 | 9,3 | 24,4 | 344 | 4 | 76,9 | 5,1 | 17,9 | 312 |
| 8 | 61,3 | 8,6 | 30,1 | 372 | 6 | 70,6 | 4,7 | 24,7 | 340 |
| 19-33-1 | 82,9 | 12,0 | 5,1 | 275 | 8 | 65,2 | 4,3 | 30,4 | 368 |
| 3 | 75,2 | 10,9 | 13,8 | 303 | 20-17-1 | 88,6 | 6,3 | 5,1 | 271 |
| 5 | 68,9 | 10,0 | 21,1 | 331 | 3 | 80,3 | 5,7 | 14,0 | 299 |
| 7 | 63,5 | 9,2 | 27,3 | 359 | 5 | 73,4 | 5,2 | 21,4 | 327 |
| 19-34-2 | 78,6 | 11,7 | 9,7 | 290 | 7 | 67,6 | 4,8 | 27,6 | 355 |
| 4 | 71,7 | 10,7 | 17,6 | 318 | 20-18-2 | 83,9 | 6,3 | 9,8 | 286 |
| 6 | 65,9 | 9,8 | 24,3 | 346 | 4 | 76,4 | 5,7 | 17,8 | 314 |
| 8 | 61,0 | 9,1 | 29,9 | 374 | 6 | 70,2 | 5,3 | 24,5 | 342 |
| 19-35-1 | 82,3 | 12,6 | 5,0 | 277 | 8 | 64,8 | 4,9 | 30,3 | 370 |
| 3 | 74,7 | 11,5 | 13,8 | 305 | 20-19-1 | 87,9 | 6,9 | 5,1 | 273 |

| C | H | W | C | H | W | C | H | W | M.G. |
|----|----|---|---|---|---|----|----|---|------|
| 20 | 19 | 1 | 1 | 1 | 1 | 20 | 14 | 1 | 1 |
| 20 | 20 | 2 | 1 | 1 | 1 | 20 | 15 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| | | 5 | 1 | 1 | 1 | | | | |
| 20 | 21 | 1 | 1 | 1 | 1 | 20 | 16 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| 20 | 22 | 2 | 1 | 1 | 1 | 20 | 17 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| 20 | 23 | 1 | 1 | 1 | 1 | 20 | 18 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| 20 | 24 | 2 | 1 | 1 | 1 | 20 | 19 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| 20 | 25 | 1 | 1 | 1 | 1 | 20 | 20 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| 20 | 26 | 2 | 1 | 1 | 1 | 20 | 21 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| 20 | 27 | 1 | 1 | 1 | 1 | 20 | 22 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| 20 | 28 | 2 | 1 | 1 | 1 | 20 | 23 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| 20 | 29 | 1 | 1 | 1 | 1 | 20 | 24 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| 20 | 30 | 2 | 1 | 1 | 1 | 20 | 25 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| 20 | 31 | 1 | 1 | 1 | 1 | 20 | 26 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| 20 | 32 | 2 | 1 | 1 | 1 | 20 | 27 | 1 | 1 |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| 20 | 33 | 1 | 1 | 1 | 1 | 20 | 28 | 1 | 1 |
| | | 2 | 1 | 1 | 1 | | | | |
| | | 3 | 1 | 1 | 1 | | | | |
| | | 4 | 1 | 1 | 1 | | | | |
| | | 5 | 1 | 1 | 1 | | | | |
| | | 6 | 1 | 1 | 1 | | | | |
| | | 7 | 1 | 1 | 1 | | | | |

| C-H-N | C% | H% | N% | M. G. | C-H-N | C% | H% | N% | M. G. |
|---------|------|-----|------|-------|---------|------|------|------|-------|
| 21-13-7 | 69.4 | 3.6 | 27.0 | 363 | 21-28-4 | 75.0 | 8.3 | 16.7 | 336 |
| 21-14-2 | 85.7 | 4.8 | 9.5 | 294 | 6 | 69.2 | 7.7 | 23.1 | 364 |
| 4 | 78.3 | 4.3 | 17.4 | 322 | 8 | 64.3 | 7.1 | 28.6 | 392 |
| 6 | 72.0 | 4.0 | 24.0 | 350 | 21-29-1 | 85.4 | 9.8 | 4.7 | 295 |
| 8 | 66.6 | 3.7 | 29.6 | 378 | 3 | 78.0 | 9.0 | 13.0 | 323 |
| 21-15-1 | 89.7 | 5.3 | 5.0 | 281 | 5 | 71.8 | 8.3 | 19.9 | 351 |
| 3 | 81.6 | 4.8 | 13.6 | 309 | 7 | 66.5 | 7.6 | 25.8 | 379 |
| 5 | 74.8 | 4.4 | 20.8 | 337 | 21-30-2 | 81.3 | 9.7 | 9.0 | 310 |
| 7 | 69.1 | 4.1 | 26.8 | 365 | 4 | 74.6 | 8.9 | 16.5 | 338 |
| 21-16-2 | 85.1 | 5.4 | 9.5 | 296 | 6 | 68.8 | 8.2 | 23.0 | 366 |
| 4 | 77.8 | 4.9 | 17.3 | 324 | 8 | 64.0 | 7.6 | 28.4 | 394 |
| 6 | 71.7 | 4.5 | 23.8 | 352 | 21-31-1 | 84.8 | 10.4 | 4.7 | 297 |
| 8 | 66.3 | 4.2 | 29.5 | 380 | 3 | 77.5 | 9.5 | 12.9 | 325 |
| 21-17-1 | 89.1 | 6.0 | 4.9 | 283 | 5 | 71.4 | 8.8 | 19.8 | 353 |
| 3 | 81.0 | 5.4 | 13.5 | 311 | 7 | 66.1 | 8.1 | 25.7 | 381 |
| 5 | 74.3 | 5.0 | 20.6 | 339 | 21-32-2 | 80.8 | 10.3 | 8.9 | 312 |
| 7 | 68.7 | 4.6 | 26.7 | 367 | 4 | 74.1 | 9.4 | 16.5 | 340 |
| 21-18-2 | 84.6 | 6.0 | 9.4 | 298 | 6 | 68.5 | 8.7 | 22.8 | 368 |
| 4 | 77.3 | 5.5 | 17.2 | 326 | 8 | 63.6 | 8.1 | 28.3 | 396 |
| 6 | 71.2 | 5.1 | 23.7 | 354 | 21-33-1 | 84.3 | 11.0 | 4.7 | 299 |
| 8 | 66.0 | 4.7 | 29.3 | 382 | 3 | 77.1 | 10.1 | 12.8 | 327 |
| 21-19-1 | 88.4 | 6.7 | 4.9 | 285 | 5 | 71.0 | 9.3 | 19.7 | 355 |
| 3 | 80.5 | 6.1 | 13.4 | 313 | 7 | 65.8 | 8.6 | 25.6 | 383 |
| 5 | 73.9 | 5.6 | 20.5 | 341 | 21-34-2 | 80.3 | 10.8 | 8.9 | 314 |
| 7 | 68.3 | 5.1 | 26.6 | 369 | 4 | 73.7 | 9.9 | 16.4 | 342 |
| 21-20-2 | 84.0 | 6.7 | 9.3 | 300 | 6 | 68.1 | 9.2 | 22.7 | 370 |
| 4 | 76.8 | 6.1 | 17.1 | 328 | 8 | 63.3 | 8.5 | 28.1 | 398 |
| 6 | 70.8 | 5.6 | 23.6 | 356 | 21-35-1 | 83.7 | 11.6 | 4.6 | 301 |
| 8 | 65.6 | 5.2 | 29.2 | 384 | 3 | 76.6 | 10.6 | 12.8 | 329 |
| 21-21-1 | 87.8 | 7.3 | 4.9 | 287 | 5 | 69.6 | 9.8 | 19.6 | 357 |
| 3 | 80.0 | 6.7 | 13.3 | 315 | 7 | 65.4 | 9.1 | 25.5 | 385 |
| 5 | 73.4 | 6.1 | 20.4 | 343 | 21-36-2 | 79.8 | 11.4 | 8.8 | 316 |
| 7 | 67.9 | 5.7 | 26.4 | 371 | 4 | 73.2 | 10.5 | 16.3 | 344 |
| 9 | 63.1 | 5.3 | 31.6 | 399 | 6 | 67.7 | 9.7 | 22.6 | 372 |
| 21-22-2 | 83.4 | 7.3 | 9.3 | 302 | 8 | 63.0 | 9.0 | 28.0 | 400 |
| 4 | 76.4 | 6.6 | 17.0 | 330 | 21-37-1 | 83.2 | 12.2 | 4.6 | 303 |
| 6 | 70.4 | 6.1 | 23.4 | 358 | 3 | 76.1 | 11.2 | 12.7 | 331 |
| 8 | 65.3 | 5.7 | 28.9 | 386 | 5 | 70.2 | 10.3 | 19.5 | 359 |
| 21-23-1 | 87.2 | 8.0 | 4.8 | 289 | 7 | 65.1 | 9.6 | 25.3 | 387 |
| 3 | 79.5 | 7.3 | 13.2 | 317 | 21-38-2 | 79.2 | 12.0 | 8.8 | 318 |
| 5 | 73.1 | 6.6 | 20.3 | 345 | 4 | 72.8 | 11.0 | 16.2 | 346 |
| 7 | 67.6 | 6.2 | 26.2 | 373 | 6 | 67.4 | 10.2 | 22.4 | 374 |
| 21-24-2 | 82.9 | 7.9 | 9.2 | 304 | 8 | 62.7 | 9.4 | 27.9 | 402 |
| 4 | 75.9 | 7.2 | 16.9 | 332 | 21-39-1 | 82.6 | 12.8 | 4.6 | 305 |
| 6 | 70.0 | 6.7 | 23.3 | 360 | 3 | 75.7 | 11.7 | 12.6 | 333 |
| 8 | 64.9 | 6.2 | 28.9 | 388 | 5 | 69.8 | 10.8 | 19.4 | 361 |
| 21-25-1 | 86.6 | 8.6 | 4.8 | 291 | 7 | 64.8 | 10.0 | 25.2 | 389 |
| 3 | 78.9 | 7.8 | 13.2 | 319 | 21-40-2 | 78.7 | 12.5 | 8.7 | 320 |
| 5 | 72.6 | 7.2 | 20.2 | 347 | 4 | 72.4 | 11.5 | 16.1 | 348 |
| 7 | 67.2 | 6.7 | 26.1 | 375 | 6 | 67.0 | 10.6 | 22.3 | 376 |
| 21-26-2 | 82.4 | 8.5 | 9.1 | 306 | 8 | 63.4 | 9.9 | 27.7 | 404 |
| 4 | 75.4 | 7.8 | 16.8 | 334 | 21-41-1 | 82.1 | 13.3 | 4.6 | 307 |
| 6 | 69.6 | 7.2 | 23.2 | 362 | 3 | 75.2 | 12.2 | 12.5 | 335 |
| 8 | 64.6 | 6.7 | 28.7 | 390 | 5 | 69.4 | 11.3 | 19.3 | 363 |
| 21-27-1 | 86.0 | 9.2 | 4.8 | 293 | 7 | 64.5 | 10.5 | 25.0 | 391 |
| 3 | 78.5 | 8.4 | 13.1 | 321 | 21-42-2 | 78.3 | 13.0 | 8.7 | 322 |
| 5 | 72.2 | 7.7 | 20.1 | 349 | 4 | 72.0 | 12.0 | 16.0 | 350 |
| 7 | 66.8 | 7.2 | 26.0 | 377 | 6 | 66.7 | 11.1 | 22.2 | 378 |
| 21-28-2 | 81.8 | 9.1 | 9.1 | 308 | 8 | 62.1 | 10.3 | 27.6 | 406 |

| C-H-N | C° | H° | N° | M.G. | C-H-N | C° | H° | N° | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 21-43-1 | 81.6 | 13.9 | 4.5 | 306 | 22-20-8 | 66.7 | 5.0 | 28.3 | 396 |
| 3 | 74.8 | 12.8 | 12.4 | 337 | 22-21-1 | 88.3 | 7.0 | 4.7 | 269 |
| 5 | 69.0 | 11.8 | 19.2 | 365 | 3 | 80.7 | 6.4 | 12.5 | 327 |
| 7 | 64.1 | 10.9 | 24.9 | 393 | 5 | 74.4 | 5.9 | 19.7 | 355 |
| 21-44-2 | 77.8 | 13.6 | 8.6 | 324 | 7 | 68.9 | 5.5 | 25.6 | 383 |
| 4 | 71.6 | 12.5 | 15.9 | 352 | 22-22-2 | 84.1 | 7.0 | 8.9 | 314 |
| 6 | 66.3 | 11.6 | 22.1 | 380 | 4 | 77.2 | 6.4 | 16.4 | 342 |
| 8 | 61.8 | 10.8 | 27.4 | 408 | 6 | 71.3 | 5.9 | 22.7 | 370 |
| 21-45-1 | 81.0 | 14.5 | 4.5 | 311 | 8 | 66.3 | 5.5 | 28.1 | 398 |
| 3 | 74.3 | 13.3 | 12.4 | 339 | 22-23-1 | 87.7 | 7.6 | 4.6 | 301 |
| 5 | 68.7 | 12.2 | 19.1 | 367 | 3 | 80.2 | 7.0 | 12.8 | 329 |
| 7 | 63.8 | 11.2 | 24.8 | 395 | 5 | 73.9 | 6.4 | 19.6 | 357 |
| 21-46-2 | 77.3 | 14.1 | 8.6 | 326 | 7 | 68.6 | 5.9 | 25.4 | 385 |
| 4 | 71.2 | 13.0 | 15.8 | 354 | 22-24-2 | 83.6 | 7.6 | 8.8 | 316 |
| 6 | 66.0 | 12.0 | 22.0 | 382 | 4 | 76.7 | 7.0 | 16.3 | 344 |
| 8 | 61.5 | 11.2 | 27.3 | 410 | 6 | 71.0 | 6.4 | 22.6 | 372 |
| 22-10-2 | 87.4 | 3.3 | 9.3 | 362 | 8 | 66.0 | 6.0 | 28.0 | 400 |
| 4 | 80.0 | 3.0 | 17.0 | 339 | 22-25-1 | 87.1 | 8.2 | 4.6 | 303 |
| 6 | 73.7 | 2.8 | 23.5 | 358 | 3 | 79.7 | 7.6 | 12.7 | 331 |
| 8 | 68.4 | 2.6 | 29.0 | 386 | 5 | 73.5 | 7.0 | 19.5 | 359 |
| 22-11-1 | 91.3 | 3.8 | 4.8 | 289 | 7 | 68.2 | 6.5 | 25.3 | 387 |
| 3 | 83.3 | 3.5 | 13.2 | 317 | 22-26-2 | 83.0 | 8.2 | 8.8 | 318 |
| 5 | 76.5 | 3.2 | 20.3 | 345 | 4 | 76.3 | 7.5 | 16.2 | 346 |
| 7 | 70.8 | 2.9 | 26.3 | 373 | 6 | 70.6 | 6.9 | 22.5 | 374 |
| 22-12-2 | 86.8 | 3.9 | 9.2 | 304 | 8 | 65.6 | 6.5 | 27.8 | 402 |
| 4 | 79.5 | 3.6 | 16.9 | 332 | 22-27-1 | 86.5 | 8.8 | 4.6 | 305 |
| 6 | 73.3 | 3.3 | 23.3 | 360 | 3 | 79.3 | 8.1 | 12.6 | 333 |
| 8 | 68.0 | 3.1 | 28.9 | 388 | 5 | 73.1 | 7.5 | 19.4 | 361 |
| 22-13-1 | 90.7 | 4.5 | 4.8 | 291 | 7 | 67.8 | 6.9 | 25.2 | 389 |
| 3 | 82.7 | 4.1 | 13.2 | 319 | 22-28-2 | 82.5 | 8.7 | 8.7 | 320 |
| 5 | 76.1 | 3.7 | 20.2 | 347 | 4 | 75.8 | 8.0 | 16.1 | 348 |
| 7 | 70.4 | 3.5 | 26.1 | 375 | 6 | 70.2 | 7.4 | 22.3 | 376 |
| 22-14-2 | 86.3 | 4.6 | 9.1 | 306 | 8 | 65.3 | 6.9 | 27.7 | 404 |
| 4 | 79.0 | 4.2 | 16.8 | 334 | 22-29-1 | 85.9 | 9.4 | 4.6 | 307 |
| 6 | 72.9 | 3.9 | 23.2 | 362 | 3 | 78.8 | 8.7 | 12.5 | 335 |
| 8 | 67.7 | 3.6 | 28.7 | 390 | 5 | 72.7 | 8.0 | 19.3 | 363 |
| 22-15-1 | 90.1 | 5.1 | 4.8 | 293 | 7 | 67.5 | 7.4 | 25.1 | 391 |
| 3 | 82.2 | 4.7 | 13.1 | 321 | 22-30-2 | 82.0 | 9.3 | 8.7 | 322 |
| 5 | 75.6 | 4.3 | 20.0 | 349 | 4 | 75.4 | 8.6 | 16.0 | 350 |
| 7 | 70.0 | 4.0 | 26.0 | 377 | 6 | 69.8 | 7.9 | 22.2 | 378 |
| 22-16-2 | 85.7 | 5.2 | 9.1 | 308 | 8 | 65.0 | 7.4 | 27.6 | 406 |
| 4 | 78.5 | 4.8 | 16.7 | 336 | 22-31-1 | 85.4 | 10.0 | 4.5 | 309 |
| 6 | 72.5 | 4.4 | 23.1 | 364 | 3 | 78.3 | 9.2 | 12.5 | 337 |
| 8 | 67.3 | 4.1 | 28.6 | 392 | 5 | 72.3 | 8.5 | 19.2 | 365 |
| 22-17-1 | 89.5 | 5.8 | 4.7 | 295 | 7 | 67.2 | 7.9 | 24.9 | 393 |
| 3 | 81.7 | 5.3 | 13.0 | 323 | 22-32-2 | 81.5 | 9.9 | 8.6 | 324 |
| 5 | 75.2 | 4.8 | 19.9 | 351 | 4 | 75.0 | 9.1 | 15.9 | 352 |
| 7 | 69.6 | 4.5 | 25.8 | 379 | 6 | 69.5 | 8.4 | 22.1 | 380 |
| 22-18-2 | 85.2 | 5.8 | 9.0 | 310 | 8 | 64.7 | 7.8 | 27.4 | 408 |
| 4 | 78.1 | 5.3 | 16.6 | 338 | 22-33-1 | 84.9 | 10.6 | 4.5 | 311 |
| 6 | 72.1 | 4.9 | 22.9 | 366 | 3 | 77.9 | 9.7 | 12.4 | 339 |
| 8 | 66.9 | 4.6 | 28.4 | 394 | 5 | 71.9 | 9.0 | 19.1 | 367 |
| 22-19-1 | 88.9 | 6.4 | 4.7 | 297 | 7 | 66.8 | 8.3 | 24.8 | 395 |
| 3 | 81.2 | 5.9 | 12.9 | 325 | 22-34-2 | 81.0 | 10.4 | 8.6 | 326 |
| 5 | 74.8 | 5.4 | 19.8 | 353 | 4 | 74.6 | 9.6 | 15.8 | 354 |
| 7 | 69.3 | 5.0 | 25.7 | 381 | 6 | 69.1 | 8.9 | 22.0 | 382 |
| 22-20-2 | 84.6 | 6.4 | 9.0 | 312 | 8 | 64.4 | 8.3 | 27.3 | 410 |
| 4 | 77.6 | 5.9 | 16.5 | 340 | 22-35-1 | 84.3 | 11.2 | 4.5 | 313 |
| 6 | 71.7 | 5.4 | 22.8 | 368 | 3 | 77.4 | 10.3 | 12.3 | 341 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|------|------|------|---------|------|-----|------|------|
| 22-35-5 | 71.5 | 9.5 | 19.0 | 369 | 23-13-3 | 83.4 | 3.9 | 12.7 | 331 |
| 7 | 66.5 | 8.8 | 24.7 | 397 | 5 | 76.9 | 3.6 | 19.5 | 359 |
| 22-36-2 | 80.5 | 11.0 | 8.5 | 328 | 7 | 71.3 | 3.4 | 25.3 | 387 |
| 4 | 74.2 | 10.1 | 15.7 | 356 | 23-14-2 | 86.8 | 4.4 | 8.8 | 318 |
| 6 | 68.7 | 9.4 | 21.9 | 384 | 4 | 79.8 | 4.0 | 16.2 | 346 |
| 8 | 64.1 | 8.7 | 27.2 | 412 | 6 | 73.8 | 3.7 | 22.5 | 374 |
| 22-37-1 | 83.8 | 11.7 | 4.4 | 315 | 8 | 68.6 | 3.5 | 27.9 | 402 |
| 3 | 76.9 | 10.8 | 12.2 | 343 | 23-15-1 | 90.4 | 4.9 | 4.6 | 305 |
| 5 | 71.1 | 10.0 | 18.9 | 371 | 3 | 82.9 | 4.5 | 12.6 | 333 |
| 7 | 66.2 | 9.3 | 24.5 | 399 | 5 | 76.5 | 4.1 | 19.4 | 361 |
| 22-38-2 | 80.0 | 11.5 | 8.5 | 330 | 7 | 70.9 | 3.9 | 25.2 | 389 |
| 4 | 73.8 | 10.6 | 15.6 | 358 | 23-16-2 | 86.2 | 5.0 | 8.7 | 320 |
| 6 | 68.4 | 9.8 | 21.7 | 386 | 4 | 79.3 | 4.6 | 16.1 | 348 |
| 8 | 63.7 | 9.2 | 27.0 | 414 | 6 | 73.4 | 4.3 | 22.3 | 376 |
| 22-39-1 | 83.3 | 12.3 | 4.4 | 317 | 8 | 68.3 | 4.0 | 27.7 | 404 |
| 3 | 76.5 | 11.3 | 12.2 | 345 | 23-17-1 | 89.9 | 5.5 | 4.6 | 307 |
| 5 | 70.8 | 10.4 | 18.8 | 373 | 3 | 82.4 | 5.1 | 12.5 | 335 |
| 7 | 65.8 | 24.4 | 9.7 | 401 | 5 | 76.0 | 4.7 | 19.3 | 363 |
| 22-40-2 | 79.5 | 12.0 | 8.4 | 332 | 7 | 70.6 | 4.3 | 25.1 | 391 |
| 4 | 73.3 | 11.1 | 15.6 | 360 | 23-18-2 | 85.7 | 5.6 | 8.7 | 322 |
| 6 | 68.0 | 10.3 | 21.6 | 388 | 4 | 78.8 | 5.1 | 16.0 | 350 |
| 8 | 63.5 | 9.6 | 26.9 | 416 | 6 | 73.0 | 4.8 | 22.2 | 378 |
| 22-41-1 | 82.7 | 12.8 | 4.4 | 319 | 8 | 68.0 | 4.4 | 27.6 | 406 |
| 3 | 76.1 | 11.8 | 12.1 | 347 | 23-19-1 | 89.3 | 6.1 | 4.5 | 309 |
| 5 | 70.4 | 10.9 | 18.7 | 375 | 3 | 81.9 | 5.6 | 12.5 | 337 |
| 7 | 65.5 | 10.2 | 24.3 | 403 | 5 | 75.6 | 5.2 | 19.2 | 365 |
| 22-42-2 | 79.0 | 12.6 | 8.4 | 334 | 7 | 70.2 | 4.8 | 24.9 | 393 |
| 4 | 72.9 | 11.6 | 15.5 | 362 | 23-20-2 | 85.2 | 6.2 | 8.6 | 324 |
| 6 | 67.7 | 10.7 | 21.5 | 390 | 4 | 78.4 | 5.7 | 15.9 | 352 |
| 8 | 63.1 | 10.0 | 26.8 | 418 | 6 | 72.6 | 5.3 | 22.1 | 380 |
| 22-43-1 | 82.2 | 13.4 | 4.4 | 321 | 8 | 67.6 | 4.9 | 27.4 | 408 |
| 3 | 75.6 | 12.3 | 12.0 | 349 | 23-21-1 | 88.7 | 6.8 | 4.5 | 311 |
| 5 | 70.0 | 11.4 | 18.6 | 377 | 3 | 81.4 | 6.2 | 12.4 | 339 |
| 7 | 65.2 | 10.6 | 24.2 | 405 | 5 | 75.2 | 5.7 | 19.1 | 367 |
| 22-44-2 | 78.6 | 13.1 | 8.3 | 336 | 7 | 69.9 | 5.3 | 24.8 | 395 |
| 4 | 72.5 | 12.1 | 15.4 | 364 | 23-22-2 | 84.7 | 6.7 | 8.6 | 326 |
| 6 | 67.3 | 11.2 | 21.4 | 392 | 4 | 78.0 | 6.2 | 15.8 | 354 |
| 8 | 62.8 | 10.5 | 26.7 | 420 | 6 | 72.2 | 5.7 | 22.0 | 382 |
| 22-45-1 | 81.7 | 13.9 | 4.3 | 323 | 8 | 67.3 | 5.4 | 27.3 | 410 |
| 3 | 75.2 | 12.8 | 12.0 | 351 | 23-23-1 | 88.2 | 7.3 | 4.5 | 313 |
| 5 | 69.6 | 11.9 | 18.5 | 379 | 3 | 80.9 | 6.7 | 12.3 | 341 |
| 7 | 64.9 | 11.0 | 24.1 | 407 | 5 | 74.8 | 6.2 | 19.0 | 369 |
| 22-46-2 | 78.1 | 13.6 | 8.3 | 338 | 7 | 69.5 | 5.8 | 24.7 | 397 |
| 4 | 72.1 | 12.6 | 15.3 | 366 | 23-24-2 | 87.9 | 7.6 | 4.5 | 314 |
| 6 | 67.0 | 11.7 | 21.3 | 394 | 4 | 80.7 | 7.0 | 12.3 | 342 |
| 8 | 62.5 | 10.9 | 26.5 | 422 | 6 | 74.6 | 6.5 | 18.9 | 370 |
| 22-47-1 | 81.2 | 14.5 | 4.3 | 325 | 8 | 69.4 | 6.0 | 24.6 | 398 |
| 3 | 74.8 | 13.3 | 11.9 | 353 | 23-25-1 | 87.6 | 7.9 | 4.4 | 315 |
| 5 | 69.3 | 12.3 | 18.4 | 381 | 3 | 80.4 | 7.3 | 12.2 | 343 |
| 7 | 64.6 | 11.5 | 23.9 | 409 | 5 | 74.4 | 6.7 | 18.9 | 371 |
| 22-48-2 | 77.6 | 14.1 | 8.2 | 340 | 7 | 69.2 | 6.3 | 24.5 | 399 |
| 4 | 71.7 | 13.0 | 15.2 | 368 | 23-26-2 | 83.6 | 7.8 | 8.5 | 330 |
| 6 | 66.7 | 12.1 | 21.2 | 396 | 4 | 77.1 | 7.3 | 15.6 | 358 |
| 8 | 62.3 | 11.3 | 26.4 | 424 | 6 | 71.5 | 6.7 | 21.8 | 386 |
| 23-12-2 | 87.3 | 3.8 | 8.9 | 316 | 8 | 66.7 | 6.3 | 27.0 | 414 |
| 4 | 80.2 | 3.5 | 16.2 | 344 | 23-27-1 | 87.1 | 8.5 | 4.4 | 317 |
| 6 | 74.2 | 3.2 | 22.6 | 372 | 3 | 80.0 | 7.8 | 12.2 | 345 |
| 8 | 69.0 | 3.0 | 28.0 | 400 | 5 | 74.0 | 7.2 | 18.8 | 373 |
| 23-13-1 | 91.1 | 4.3 | 4.6 | 303 | 7 | 68.8 | 6.7 | 24.4 | 401 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 23-28-2 | 83.1 | 8.4 | 8.4 | 332 | 23-42-8 | 64.2 | 9.8 | 26.0 | 430 |
| 4 | 76.7 | 7.8 | 15.5 | 360 | 23-43-1 | 82.9 | 12.9 | 4.2 | 333 |
| 6 | 71.1 | 7.2 | 21.7 | 388 | 3 | 76.4 | 11.9 | 11.6 | 361 |
| 8 | 66.3 | 6.7 | 26.9 | 416 | 5 | 70.9 | 11.0 | 18.0 | 389 |
| 23-29-1 | 86.5 | 9.1 | 4.4 | 319 | 7 | 66.2 | 10.3 | 23.5 | 417 |
| 3 | 79.5 | 8.3 | 12.1 | 347 | 23-44-2 | 79.3 | 12.6 | 8.1 | 348 |
| 5 | 73.6 | 7.7 | 18.7 | 375 | 4 | 73.4 | 11.7 | 14.9 | 376 |
| 7 | 68.5 | 7.2 | 24.3 | 403 | 6 | 68.3 | 10.9 | 20.8 | 404 |
| 23-30-2 | 82.6 | 9.0 | 8.4 | 334 | 8 | 63.9 | 10.2 | 25.9 | 432 |
| 4 | 76.2 | 8.3 | 15.5 | 362 | 23-45-1 | 82.4 | 13.4 | 4.2 | 335 |
| 6 | 70.8 | 7.7 | 21.5 | 390 | 3 | 76.0 | 12.4 | 11.6 | 363 |
| 8 | 66.0 | 7.2 | 26.8 | 418 | 5 | 70.6 | 11.5 | 17.9 | 391 |
| 23-31-1 | 86.0 | 9.7 | 4.3 | 321 | 7 | 65.9 | 10.7 | 23.4 | 419 |
| 3 | 79.1 | 8.9 | 12.0 | 349 | 23-46-2 | 78.8 | 13.1 | 8.0 | 350 |
| 5 | 73.2 | 8.2 | 18.6 | 377 | 4 | 73.0 | 12.2 | 14.8 | 378 |
| 7 | 68.1 | 7.6 | 24.2 | 405 | 6 | 68.0 | 11.3 | 20.7 | 406 |
| 23-32-2 | 82.1 | 9.5 | 8.3 | 336 | 8 | 63.6 | 10.6 | 25.8 | 434 |
| 4 | 75.8 | 8.8 | 15.4 | 364 | 23-47-1 | 81.9 | 14.0 | 4.1 | 337 |
| 6 | 70.4 | 8.2 | 21.4 | 392 | 3 | 75.6 | 12.9 | 11.5 | 365 |
| 8 | 65.7 | 7.6 | 26.7 | 420 | 5 | 70.2 | 12.0 | 17.8 | 393 |
| 23-33-1 | 85.4 | 10.2 | 4.3 | 323 | 7 | 65.5 | 11.2 | 23.3 | 421 |
| 3 | 78.7 | 9.4 | 11.9 | 351 | 23-48-2 | 78.4 | 13.6 | 8.0 | 352 |
| 5 | 72.8 | 8.7 | 18.5 | 379 | 4 | 72.6 | 12.6 | 14.7 | 380 |
| 7 | 67.8 | 8.1 | 24.1 | 407 | 6 | 67.6 | 11.8 | 20.6 | 408 |
| 23-34-2 | 81.7 | 10.0 | 8.3 | 338 | 8 | 63.3 | 11.0 | 25.7 | 436 |
| 4 | 75.4 | 9.3 | 15.3 | 366 | 23-49-1 | 81.4 | 14.4 | 4.1 | 339 |
| 6 | 70.0 | 8.6 | 21.3 | 394 | 3 | 75.2 | 13.3 | 11.4 | 367 |
| 8 | 65.4 | 8.1 | 26.5 | 422 | 5 | 69.9 | 12.4 | 17.7 | 395 |
| 23-35-1 | 84.9 | 10.8 | 4.3 | 325 | 7 | 65.2 | 11.6 | 23.2 | 423 |
| 3 | 78.2 | 9.9 | 11.9 | 353 | 23-50-2 | 78.0 | 14.1 | 7.9 | 354 |
| 5 | 72.4 | 9.2 | 18.4 | 381 | 4 | 72.2 | 13.1 | 14.7 | 382 |
| 7 | 67.5 | 8.6 | 23.9 | 409 | 6 | 67.3 | 12.2 | 20.5 | 410 |
| 23-36-2 | 81.2 | 10.6 | 8.2 | 340 | 8 | 63.0 | 11.4 | 25.6 | 438 |
| 4 | 75.0 | 9.8 | 15.2 | 368 | 24-10-2 | 88.3 | 3.1 | 8.6 | 326 |
| 6 | 69.7 | 9.1 | 21.2 | 396 | 4 | 81.3 | 2.8 | 15.8 | 354 |
| 8 | 65.1 | 8.5 | 26.4 | 424 | 6 | 75.4 | 2.6 | 22.0 | 382 |
| 23-37-1 | 84.4 | 11.3 | 4.3 | 327 | 8 | 70.2 | 2.4 | 27.3 | 410 |
| 3 | 77.7 | 10.4 | 11.8 | 355 | 24-11-1 | 92.0 | 3.5 | 4.5 | 313 |
| 5 | 72.1 | 9.6 | 18.3 | 383 | 3 | 84.5 | 3.2 | 12.3 | 341 |
| 7 | 67.1 | 9.0 | 23.8 | 411 | 5 | 78.0 | 3.0 | 19.0 | 369 |
| 23-38-2 | 80.7 | 11.1 | 8.2 | 342 | 7 | 70.1 | 2.7 | 27.2 | 411 |
| 4 | 74.6 | 10.3 | 15.1 | 370 | 24-12-2 | 87.8 | 3.6 | 8.6 | 328 |
| 6 | 69.4 | 9.5 | 21.1 | 398 | 4 | 80.9 | 3.4 | 15.7 | 356 |
| 8 | 64.8 | 8.9 | 26.3 | 426 | 6 | 75.0 | 3.1 | 21.9 | 384 |
| 23-39-1 | 83.9 | 11.9 | 4.2 | 329 | 8 | 69.9 | 2.9 | 27.2 | 412 |
| 3 | 77.3 | 10.9 | 11.8 | 357 | 24-13-1 | 91.4 | 4.1 | 4.4 | 315 |
| 5 | 71.7 | 10.1 | 18.2 | 385 | 3 | 83.9 | 3.8 | 12.2 | 343 |
| 7 | 66.8 | 9.4 | 23.7 | 413 | 5 | 77.6 | 3.5 | 18.9 | 371 |
| 23-40-2 | 80.2 | 11.6 | 8.1 | 344 | 7 | 72.2 | 3.3 | 24.5 | 399 |
| 4 | 74.2 | 10.8 | 15.0 | 372 | 24-14-2 | 87.3 | 4.2 | 8.5 | 330 |
| 6 | 69.0 | 10.0 | 21.0 | 400 | 4 | 80.5 | 3.9 | 15.6 | 358 |
| 8 | 64.5 | 9.3 | 26.2 | 428 | 6 | 74.6 | 3.6 | 21.8 | 386 |
| 23-41-1 | 83.4 | 12.4 | 4.2 | 331 | 8 | 69.5 | 3.4 | 27.0 | 414 |
| 3 | 76.9 | 11.4 | 11.7 | 359 | 24-15-1 | 90.9 | 4.7 | 4.4 | 317 |
| 5 | 71.3 | 10.6 | 18.1 | 387 | 3 | 83.5 | 4.3 | 12.2 | 345 |
| 7 | 64.3 | 9.6 | 26.1 | 429 | 5 | 77.2 | 4.0 | 18.8 | 373 |
| 23-42-2 | 79.8 | 12.1 | 8.1 | 346 | 7 | 71.8 | 3.7 | 24.4 | 401 |
| 4 | 73.8 | 11.2 | 15.0 | 374 | 24-16-2 | 86.7 | 4.8 | 8.4 | 332 |
| 6 | 68.6 | 10.4 | 20.9 | 402 | 4 | 80.0 | 4.4 | 15.6 | 360 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|-----|------|-------|---------|------|------|------|-------|
| 24-16-0 | 74.2 | 4.1 | 21.6 | 388 | 24-31-1 | 86.5 | 9.3 | 4.2 | 333 |
| 8 | 69.2 | 3.8 | 26.9 | 416 | 3 | 79.8 | 8.6 | 11.6 | 361 |
| 24-17-1 | 90.3 | 5.3 | 4.4 | 319 | 5 | 74.0 | 8.0 | 18.0 | 389 |
| 3 | 83.0 | 4.9 | 12.1 | 347 | 7 | 69.0 | 7.4 | 23.5 | 417 |
| 5 | 76.8 | 4.5 | 18.7 | 375 | 24-32-2 | 82.8 | 9.2 | 8.0 | 348 |
| 7 | 71.4 | 4.2 | 24.3 | 403 | 4 | 76.6 | 8.5 | 14.9 | 376 |
| 24-18-2 | 86.2 | 5.4 | 8.4 | 334 | 6 | 71.3 | 7.9 | 20.8 | 404 |
| 4 | 79.5 | 5.0 | 15.5 | 362 | 8 | 66.7 | 7.4 | 25.9 | 432 |
| 6 | 73.9 | 4.6 | 21.5 | 390 | 24-33-1 | 86.0 | 9.8 | 4.2 | 335 |
| 8 | 68.9 | 4.3 | 26.8 | 418 | 3 | 79.3 | 9.1 | 11.6 | 363 |
| 24-19-1 | 89.7 | 5.9 | 4.4 | 321 | 5 | 73.7 | 8.4 | 17.9 | 391 |
| 3 | 82.5 | 5.4 | 12.0 | 349 | 7 | 68.8 | 7.8 | 23.4 | 419 |
| 5 | 76.4 | 5.0 | 18.6 | 377 | 24-34-2 | 82.3 | 9.7 | 8.0 | 350 |
| 7 | 71.1 | 4.7 | 24.2 | 405 | 4 | 76.2 | 9.0 | 14.8 | 375 |
| 24-20-2 | 85.7 | 5.9 | 8.3 | 336 | 6 | 70.9 | 8.4 | 20.7 | 406 |
| 4 | 79.1 | 5.5 | 15.4 | 364 | 8 | 66.3 | 7.8 | 25.8 | 434 |
| 6 | 73.5 | 5.1 | 21.4 | 392 | 24-35-1 | 85.4 | 10.4 | 4.2 | 337 |
| 8 | 68.6 | 4.7 | 26.7 | 420 | 3 | 78.9 | 9.6 | 11.5 | 365 |
| 24-21-1 | 89.2 | 6.5 | 4.3 | 323 | 5 | 73.3 | 8.9 | 17.8 | 393 |
| 3 | 82.0 | 6.0 | 12.0 | 351 | 7 | 68.4 | 8.3 | 23.3 | 421 |
| 5 | 76.0 | 5.5 | 18.5 | 379 | 24-36-2 | 81.8 | 10.2 | 7.9 | 352 |
| 7 | 70.7 | 5.2 | 24.1 | 407 | 4 | 75.8 | 9.5 | 14.7 | 380 |
| 24-22-2 | 85.2 | 6.5 | 8.3 | 338 | 6 | 70.6 | 8.8 | 20.6 | 408 |
| 4 | 78.7 | 6.0 | 15.3 | 366 | 8 | 66.1 | 8.2 | 25.7 | 436 |
| 6 | 73.1 | 5.6 | 21.3 | 394 | 24-37-1 | 85.0 | 10.9 | 4.1 | 339 |
| 8 | 68.2 | 5.2 | 26.5 | 422 | 3 | 78.5 | 10.1 | 11.4 | 367 |
| 24-23-1 | 88.6 | 7.1 | 4.3 | 325 | 5 | 72.9 | 9.4 | 17.7 | 395 |
| 3 | 81.6 | 6.5 | 11.9 | 353 | 7 | 68.1 | 8.7 | 23.2 | 423 |
| 5 | 75.6 | 6.0 | 18.4 | 381 | 24-38-2 | 81.4 | 10.7 | 7.9 | 354 |
| 7 | 70.4 | 5.6 | 24.0 | 409 | 4 | 75.4 | 9.9 | 14.7 | 382 |
| 24-24-2 | 84.7 | 7.1 | 8.2 | 340 | 6 | 70.2 | 9.3 | 20.5 | 410 |
| 4 | 78.3 | 6.5 | 15.2 | 368 | 8 | 65.7 | 8.7 | 25.6 | 438 |
| 6 | 72.7 | 6.1 | 21.2 | 396 | 24-39-1 | 84.5 | 11.4 | 4.1 | 341 |
| 8 | 67.9 | 5.7 | 26.4 | 424 | 3 | 78.0 | 10.6 | 11.4 | 369 |
| 24-25-1 | 88.1 | 7.6 | 4.3 | 327 | 5 | 72.6 | 9.8 | 17.6 | 397 |
| 3 | 81.1 | 7.0 | 11.8 | 355 | 7 | 67.8 | 9.2 | 23.0 | 425 |
| 5 | 75.2 | 6.5 | 18.3 | 383 | 24-40-2 | 80.9 | 11.2 | 7.9 | 356 |
| 7 | 70.1 | 6.1 | 23.8 | 411 | 4 | 75.0 | 10.4 | 14.6 | 384 |
| 24-26-2 | 84.2 | 7.6 | 8.2 | 342 | 6 | 69.9 | 9.7 | 20.4 | 412 |
| 4 | 77.8 | 7.0 | 15.1 | 370 | 8 | 65.5 | 9.1 | 25.4 | 440 |
| 6 | 72.4 | 6.5 | 21.1 | 398 | 24-41-1 | 83.9 | 12.0 | 4.1 | 343 |
| 8 | 67.6 | 6.1 | 26.3 | 426 | 3 | 77.6 | 11.0 | 11.3 | 371 |
| 24-27-1 | 87.6 | 8.2 | 4.2 | 329 | 5 | 72.2 | 10.3 | 17.5 | 399 |
| 3 | 80.6 | 7.6 | 11.8 | 357 | 7 | 67.4 | 9.6 | 22.9 | 427 |
| 5 | 74.8 | 7.0 | 18.2 | 385 | 24-42-2 | 80.4 | 11.7 | 7.8 | 358 |
| 7 | 69.7 | 6.5 | 23.7 | 413 | 4 | 74.6 | 10.9 | 14.5 | 386 |
| 9 | 65.3 | 6.1 | 28.6 | 441 | 6 | 69.6 | 10.1 | 20.3 | 414 |
| 24-28-2 | 83.7 | 8.1 | 8.1 | 344 | 8 | 65.1 | 9.5 | 25.3 | 442 |
| 4 | 77.4 | 7.5 | 15.0 | 372 | 24-43-1 | 83.5 | 12.5 | 4.0 | 345 |
| 6 | 72.0 | 7.0 | 21.0 | 400 | 3 | 77.2 | 11.5 | 11.2 | 373 |
| 8 | 67.3 | 6.5 | 26.2 | 428 | 5 | 71.8 | 10.7 | 17.5 | 401 |
| 24-29-1 | 87.0 | 8.8 | 4.2 | 331 | 7 | 67.1 | 10.0 | 22.8 | 429 |
| 3 | 80.2 | 8.1 | 11.7 | 359 | 24-44-2 | 80.0 | 22.2 | 7.8 | 360 |
| 5 | 74.4 | 7.5 | 18.1 | 387 | 4 | 74.2 | 11.3 | 14.4 | 388 |
| 7 | 69.4 | 7.0 | 23.6 | 415 | 6 | 69.2 | 10.6 | 20.2 | 416 |
| 24-30-2 | 83.2 | 8.7 | 8.1 | 346 | 8 | 64.9 | 9.9 | 25.2 | 444 |
| 4 | 77.0 | 8.0 | 15.0 | 374 | 24-45-1 | 83.0 | 13.0 | 4.0 | 347 |
| 6 | 71.7 | 7.4 | 20.9 | 402 | 3 | 76.8 | 12.0 | 11.2 | 375 |
| 8 | 67.0 | 7.0 | 26.0 | 430 | 5 | 71.4 | 11.2 | 17.4 | 403 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|---------|------|-----|------|-------|
| 24-45-7 | 66.8 | 10.4 | 22.7 | 431 | 25-17-5 | 77.5 | 4.4 | 18.1 | 387 |
| 24-46-2 | 79.6 | 12.7 | 7.7 | 362 | 25-17-5 | 72.3 | 4.1 | 23.6 | 415 |
| 4 | 73.8 | 11.8 | 14.4 | 390 | 25-18-2 | 86.7 | 5.2 | 8.1 | 346 |
| 6 | 68.9 | 11.0 | 20.1 | 418 | 4 | 80.2 | 4.8 | 15.0 | 374 |
| 8 | 64.6 | 10.3 | 25.1 | 446 | 6 | 74.6 | 4.5 | 20.9 | 402 |
| 24-47-1 | 82.5 | 13.5 | 4.0 | 349 | 8 | 69.8 | 4.2 | 26.1 | 430 |
| 3 | 76.4 | 12.5 | 11.1 | 377 | 25-19-1 | 90.1 | 5.7 | 4.2 | 333 |
| 5 | 71.1 | 11.6 | 17.3 | 405 | 3 | 83.1 | 5.3 | 11.6 | 361 |
| 7 | 66.5 | 10.9 | 22.6 | 433 | 5 | 77.1 | 4.9 | 18.0 | 389 |
| 24-48-2 | 79.1 | 13.2 | 7.7 | 364 | 7 | 71.9 | 4.6 | 23.5 | 417 |
| 4 | 73.4 | 12.2 | 14.3 | 392 | 25-20-2 | 86.2 | 5.7 | 8.0 | 348 |
| 6 | 68.6 | 11.4 | 20.0 | 420 | 4 | 79.8 | 5.3 | 14.9 | 376 |
| 8 | 64.3 | 10.7 | 25.0 | 448 | 6 | 74.2 | 4.9 | 20.8 | 404 |
| 24-49-1 | 82.1 | 13.9 | 4.0 | 351 | 8 | 69.4 | 4.6 | 25.9 | 432 |
| 3 | 76.0 | 12.9 | 11.1 | 379 | 25-21-1 | 89.6 | 6.2 | 4.2 | 335 |
| 5 | 70.8 | 12.0 | 17.2 | 407 | 3 | 82.6 | 5.8 | 11.6 | 363 |
| 7 | 66.2 | 11.3 | 22.5 | 435 | 5 | 76.7 | 5.4 | 17.9 | 391 |
| 24-50-2 | 78.7 | 13.7 | 7.6 | 366 | 7 | 71.6 | 5.0 | 23.4 | 419 |
| 4 | 73.1 | 12.7 | 14.2 | 394 | 25-22-2 | 85.7 | 6.3 | 8.0 | 350 |
| 6 | 68.2 | 11.8 | 19.9 | 422 | 4 | 79.3 | 5.8 | 14.8 | 378 |
| 8 | 64.0 | 11.1 | 24.9 | 450 | 6 | 73.9 | 5.4 | 20.7 | 406 |
| 24-51-1 | 81.6 | 14.4 | 4.0 | 353 | 8 | 69.1 | 5.1 | 25.8 | 434 |
| 3 | 75.6 | 13.4 | 11.0 | 381 | 25-23-1 | 89.0 | 6.8 | 4.1 | 337 |
| 5 | 70.4 | 12.5 | 17.1 | 409 | 3 | 82.2 | 6.3 | 11.5 | 365 |
| 7 | 65.9 | 11.7 | 22.4 | 437 | 5 | 76.3 | 5.8 | 17.8 | 393 |
| 24-52-2 | 78.2 | 14.1 | 7.6 | 368 | 7 | 71.2 | 5.5 | 23.3 | 421 |
| 4 | 72.7 | 13.1 | 14.1 | 396 | 25-24-2 | 85.2 | 6.8 | 8.0 | 352 |
| 6 | 67.9 | 12.3 | 19.8 | 424 | 4 | 79.0 | 6.3 | 14.7 | 380 |
| 8 | 63.7 | 11.5 | 24.8 | 452 | 6 | 73.5 | 5.9 | 20.6 | 408 |
| 25-10-2 | 88.8 | 2.9 | 8.3 | 338 | 8 | 68.8 | 5.5 | 25.7 | 436 |
| 4 | 82.0 | 2.7 | 15.3 | 366 | 25-25-1 | 88.5 | 7.4 | 4.1 | 339 |
| 6 | 76.1 | 2.6 | 21.3 | 394 | 3 | 81.7 | 6.8 | 11.4 | 367 |
| 8 | 71.1 | 2.4 | 26.5 | 422 | 5 | 76.0 | 6.3 | 17.7 | 395 |
| 25-11-1 | 92.3 | 3.4 | 4.3 | 325 | 7 | 70.9 | 5.9 | 23.2 | 423 |
| 3 | 85.0 | 3.1 | 11.9 | 353 | 25-26-2 | 84.7 | 7.3 | 7.9 | 354 |
| 5 | 78.7 | 2.9 | 18.4 | 381 | 4 | 78.5 | 6.8 | 14.7 | 382 |
| 7 | 73.3 | 2.7 | 24.0 | 409 | 6 | 73.2 | 6.3 | 20.5 | 410 |
| 25-12-2 | 88.2 | 3.5 | 8.2 | 340 | 8 | 68.5 | 5.9 | 25.6 | 438 |
| 4 | 81.5 | 3.3 | 15.2 | 368 | 25-27-1 | 88.0 | 7.9 | 4.1 | 341 |
| 6 | 75.7 | 3.0 | 21.3 | 396 | 3 | 81.3 | 7.3 | 11.4 | 369 |
| 8 | 70.7 | 2.8 | 26.4 | 424 | 5 | 75.6 | 6.8 | 17.6 | 397 |
| 25-13-1 | 91.7 | 4.0 | 4.3 | 327 | 7 | 70.6 | 6.3 | 23.1 | 425 |
| 3 | 84.5 | 3.7 | 11.8 | 355 | 25-28-2 | 84.3 | 7.8 | 7.8 | 356 |
| 5 | 78.3 | 3.4 | 18.3 | 383 | 4 | 78.1 | 7.3 | 14.6 | 384 |
| 7 | 73.0 | 3.2 | 23.8 | 411 | 6 | 72.8 | 6.8 | 20.4 | 412 |
| 25-14-2 | 87.7 | 4.1 | 8.2 | 342 | 8 | 68.2 | 6.4 | 25.4 | 440 |
| 4 | 81.1 | 3.8 | 15.1 | 370 | 25-29-1 | 87.4 | 8.4 | 4.1 | 343 |
| 6 | 75.4 | 3.5 | 21.1 | 398 | 3 | 80.8 | 7.8 | 11.3 | 371 |
| 8 | 70.4 | 3.3 | 26.3 | 426 | 5 | 75.2 | 7.3 | 17.5 | 399 |
| 25-15-1 | 91.2 | 4.6 | 4.2 | 329 | 7 | 70.3 | 6.8 | 22.9 | 427 |
| 3 | 84.0 | 4.2 | 11.8 | 357 | 25-30-2 | 83.8 | 8.3 | 7.8 | 358 |
| 5 | 77.9 | 3.9 | 18.2 | 385 | 4 | 77.7 | 7.8 | 14.5 | 386 |
| 7 | 72.6 | 3.6 | 23.7 | 413 | 6 | 72.4 | 7.2 | 20.3 | 414 |
| 25-16-2 | 87.2 | 4.6 | 8.1 | 344 | 8 | 67.9 | 6.8 | 25.3 | 442 |
| 4 | 80.6 | 4.3 | 15.1 | 372 | 25-31-1 | 87.0 | 9.0 | 4.0 | 345 |
| 6 | 75.0 | 4.0 | 21.0 | 400 | 3 | 80.4 | 8.3 | 11.3 | 373 |
| 8 | 70.1 | 3.7 | 26.2 | 428 | 5 | 74.8 | 7.7 | 17.5 | 401 |
| 25-17-1 | 90.6 | 5.1 | 4.2 | 331 | 7 | 69.9 | 7.2 | 22.8 | 429 |
| 3 | 83.6 | 4.7 | 11.7 | 359 | 25-32-2 | 83.3 | 8.9 | 7.8 | 360 |

| C-H-N | C°. | H°. | N°. | M.G. | C-H-N | C°. | H°. | N°. | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 25-32-4 | 77.3 | 8.2 | 14.4 | 388 | 25-47-1 | 83.1 | 13.0 | 3.9 | 361 |
| 6 | 72.1 | 7.7 | 20.2 | 416 | 3 | 77.1 | 12.1 | 10.8 | 389 |
| 8 | 67.6 | 7.2 | 25.2 | 444 | 5 | 71.9 | 11.3 | 16.8 | 417 |
| 25-33-1 | 86.5 | 9.5 | 4.0 | 347 | 7 | 67.4 | 10.6 | 22.0 | 445 |
| 3 | 80.0 | 8.8 | 11.2 | 375 | 25-48-2 | 79.8 | 12.8 | 7.4 | 376 |
| 5 | 74.4 | 8.2 | 17.4 | 403 | 4 | 74.2 | 11.9 | 13.0 | 404 |
| 7 | 69.6 | 7.6 | 22.7 | 431 | 6 | 69.4 | 11.1 | 19.5 | 432 |
| 25-34-2 | 82.9 | 9.4 | 7.7 | 362 | 8 | 65.2 | 10.4 | 24.3 | 460 |
| 4 | 76.9 | 8.7 | 14.4 | 390 | 25-49-1 | 82.6 | 13.5 | 3.9 | 363 |
| 6 | 71.8 | 8.1 | 20.1 | 418 | 3 | 76.7 | 12.5 | 10.7 | 391 |
| 8 | 67.3 | 7.6 | 25.1 | 446 | 5 | 71.6 | 11.7 | 16.7 | 419 |
| 25-35-1 | 86.0 | 10.0 | 4.0 | 349 | 7 | 67.1 | 11.0 | 21.9 | 447 |
| 3 | 79.6 | 9.3 | 11.1 | 377 | 25-50-2 | 79.3 | 13.2 | 7.4 | 378 |
| 5 | 74.1 | 8.6 | 17.3 | 405 | 4 | 73.9 | 12.3 | 13.8 | 406 |
| 7 | 69.3 | 8.1 | 22.6 | 433 | 6 | 69.1 | 11.5 | 19.4 | 434 |
| 25-36-2 | 82.4 | 9.9 | 7.7 | 364 | 8 | 64.9 | 10.8 | 24.2 | 462 |
| 4 | 76.5 | 9.2 | 14.3 | 392 | 25-51-1 | 82.2 | 14.0 | 3.8 | 365 |
| 6 | 71.4 | 8.6 | 20.0 | 420 | 3 | 76.3 | 13.0 | 10.7 | 393 |
| 8 | 67.0 | 8.0 | 25.0 | 448 | 5 | 71.2 | 12.1 | 16.6 | 421 |
| 25-37-1 | 85.5 | 10.5 | 4.0 | 351 | 7 | 66.8 | 11.3 | 21.8 | 449 |
| 3 | 79.1 | 9.8 | 11.1 | 379 | 25-52-2 | 79.0 | 13.7 | 7.3 | 380 |
| 5 | 73.7 | 9.1 | 17.2 | 407 | 4 | 73.5 | 12.7 | 13.7 | 408 |
| 7 | 69.0 | 8.5 | 22.5 | 435 | 6 | 68.8 | 11.9 | 19.3 | 436 |
| 25-38-2 | 82.0 | 10.4 | 7.6 | 366 | 8 | 64.6 | 11.2 | 24.1 | 464 |
| 4 | 76.1 | 9.6 | 14.2 | 394 | 25-53-1 | 81.7 | 14.4 | 3.8 | 367 |
| 6 | 71.1 | 9.0 | 19.9 | 422 | 3 | 75.9 | 13.4 | 10.6 | 395 |
| 8 | 66.7 | 8.2 | 25.0 | 450 | 5 | 70.9 | 12.5 | 16.5 | 423 |
| 25-39-1 | 85.0 | 11.0 | 4.0 | 353 | 7 | 66.5 | 11.7 | 21.7 | 451 |
| 3 | 78.7 | 10.2 | 11.0 | 381 | 25-54-2 | 78.5 | 14.1 | 7.3 | 382 |
| 5 | 73.3 | 9.6 | 17.1 | 409 | 4 | 73.2 | 13.2 | 13.6 | 410 |
| 7 | 68.6 | 8.9 | 22.4 | 437 | 6 | 68.5 | 12.3 | 19.2 | 438 |
| 25-40-2 | 81.5 | 10.9 | 7.6 | 368 | 8 | 64.4 | 11.6 | 24.0 | 466 |
| 4 | 75.7 | 10.1 | 14.1 | 396 | 26-12-2 | 88.6 | 3.4 | 8.0 | 352 |
| 6 | 70.7 | 9.4 | 19.8 | 424 | 4 | 82.1 | 3.2 | 14.7 | 380 |
| 8 | 66.4 | 8.8 | 24.8 | 452 | 6 | 76.5 | 2.9 | 20.6 | 408 |
| 25-41-1 | 84.5 | 11.6 | 3.9 | 355 | 8 | 71.6 | 2.7 | 25.7 | 436 |
| 3 | 78.3 | 10.7 | 11.0 | 383 | 26-13-1 | 92.0 | 3.8 | 4.1 | 339 |
| 5 | 73.0 | 10.0 | 17.0 | 411 | 3 | 85.0 | 3.5 | 11.4 | 367 |
| 7 | 68.3 | 9.3 | 22.3 | 439 | 5 | 79.0 | 3.3 | 17.7 | 395 |
| 25-42-2 | 81.1 | 11.3 | 7.6 | 370 | 7 | 73.7 | 3.1 | 23.2 | 423 |
| 4 | 75.4 | 10.6 | 14.0 | 398 | 26-14-2 | 88.1 | 4.0 | 7.9 | 354 |
| 6 | 70.4 | 9.9 | 19.7 | 426 | 4 | 81.7 | 3.7 | 14.6 | 382 |
| 8 | 66.1 | 9.2 | 24.7 | 454 | 6 | 76.1 | 3.4 | 20.5 | 410 |
| 25-43-1 | 84.0 | 12.0 | 3.9 | 357 | 8 | 71.2 | 3.2 | 25.6 | 438 |
| 3 | 77.9 | 11.2 | 10.9 | 385 | 26-15-1 | 91.5 | 4.4 | 4.1 | 341 |
| 5 | 72.3 | 10.8 | 16.9 | 415 | 3 | 84.5 | 4.1 | 11.4 | 369 |
| 7 | 68.0 | 9.7 | 22.2 | 441 | 5 | 78.6 | 3.8 | 17.6 | 397 |
| 25-44-2 | 80.6 | 11.8 | 7.5 | 372 | 7 | 73.4 | 3.5 | 23.1 | 425 |
| 4 | 75.0 | 11.0 | 14.0 | 400 | 26-16-2 | 87.6 | 4.5 | 7.9 | 356 |
| 6 | 70.1 | 10.3 | 19.6 | 428 | 4 | 81.3 | 4.1 | 14.6 | 384 |
| 8 | 65.8 | 9.6 | 24.6 | 456 | 6 | 75.7 | 3.9 | 20.4 | 412 |
| 25-45-1 | 83.6 | 12.5 | 3.9 | 359 | 8 | 70.9 | 3.6 | 25.4 | 440 |
| 3 | 77.5 | 11.6 | 10.9 | 387 | 26-17-1 | 90.9 | 4.9 | 4.1 | 343 |
| 5 | 72.3 | 10.8 | 16.9 | 415 | 3 | 84.1 | 4.6 | 11.3 | 371 |
| 7 | 67.7 | 10.2 | 22.1 | 443 | 5 | 78.2 | 4.3 | 17.5 | 399 |
| 25-46-2 | 80.2 | 12.3 | 7.5 | 374 | 7 | 73.1 | 4.0 | 22.9 | 427 |
| 4 | 74.6 | 11.4 | 13.9 | 402 | 26-18-2 | 87.1 | 5.0 | 7.8 | 358 |
| 6 | 69.8 | 10.7 | 19.5 | 430 | 4 | 80.8 | 4.7 | 14.5 | 386 |
| 8 | 65.5 | 10.0 | 24.4 | 458 | 6 | 75.3 | 4.3 | 20.3 | 414 |

| C-H-N | C% | H% | N% | M. G. | C-H-N | C% | H% | N% | M. G. |
|---------|------|-----|------|-------|---------|------|------|------|-------|
| 26-18-8 | 70.6 | 4.1 | 25.3 | 442 | 26-33-5 | 75.2 | 7.9 | 16.9 | 415 |
| 26-19-1 | 90.5 | 5.5 | 4.0 | 345 | 26-34-2 | 70.5 | 7.4 | 22.1 | 443 |
| 3 | 83.6 | 5.1 | 11.2 | 373 | 4 | 83.4 | 9.1 | 7.5 | 374 |
| 5 | 77.8 | 4.7 | 17.5 | 401 | 6 | 77.6 | 8.4 | 13.9 | 402 |
| 7 | 72.7 | 4.4 | 22.8 | 429 | 8 | 72.6 | 7.9 | 19.5 | 430 |
| 26-20-2 | 86.7 | 5.5 | 7.8 | 360 | 26-35-1 | 88.1 | 7.4 | 24.5 | 458 |
| 4 | 80.4 | 5.2 | 14.4 | 388 | 3 | 86.4 | 9.7 | 3.9 | 361 |
| 6 | 75.0 | 4.8 | 20.2 | 416 | 5 | 80.2 | 9.0 | 10.8 | 389 |
| 8 | 70.3 | 4.5 | 25.2 | 444 | 7 | 74.8 | 8.4 | 16.8 | 417 |
| 26-21-1 | 89.9 | 6.1 | 4.0 | 347 | 26-36-2 | 70.1 | 7.9 | 22.0 | 445 |
| 3 | 83.2 | 5.6 | 11.2 | 375 | 4 | 83.0 | 9.6 | 7.4 | 376 |
| 5 | 77.4 | 5.2 | 17.4 | 403 | 6 | 77.2 | 8.9 | 13.9 | 404 |
| 7 | 72.4 | 4.9 | 22.7 | 431 | 8 | 72.2 | 8.3 | 19.4 | 432 |
| 26-22-2 | 86.2 | 6.1 | 7.7 | 362 | 26-37-1 | 87.8 | 7.8 | 24.3 | 460 |
| 4 | 80.0 | 5.6 | 14.3 | 390 | 3 | 86.0 | 10.2 | 3.8 | 363 |
| 6 | 74.6 | 5.3 | 20.1 | 418 | 5 | 79.8 | 9.4 | 10.7 | 391 |
| 8 | 70.0 | 4.9 | 25.1 | 446 | 7 | 74.4 | 8.8 | 16.7 | 419 |
| 26-23-1 | 89.4 | 6.6 | 4.0 | 349 | 26-38-2 | 69.8 | 8.3 | 21.9 | 447 |
| 3 | 82.8 | 6.1 | 11.1 | 377 | 4 | 82.5 | 10.1 | 7.4 | 378 |
| 5 | 77.0 | 5.7 | 17.3 | 405 | 6 | 76.8 | 9.4 | 13.8 | 406 |
| 7 | 72.1 | 5.3 | 22.6 | 433 | 8 | 71.9 | 8.7 | 19.3 | 434 |
| 26-24-2 | 85.7 | 6.6 | 7.7 | 364 | 26-39-1 | 87.5 | 8.3 | 24.2 | 462 |
| 4 | 79.6 | 6.1 | 14.3 | 392 | 3 | 85.5 | 10.7 | 3.8 | 365 |
| 6 | 74.3 | 5.7 | 20.0 | 420 | 5 | 79.4 | 9.9 | 10.7 | 393 |
| 8 | 69.6 | 5.4 | 25.0 | 448 | 7 | 74.1 | 9.3 | 16.6 | 421 |
| 26-25-1 | 88.9 | 7.1 | 4.0 | 351 | 26-40-2 | 69.5 | 8.7 | 21.8 | 449 |
| 3 | 82.3 | 6.6 | 11.1 | 379 | 4 | 82.1 | 10.5 | 7.4 | 380 |
| 5 | 76.7 | 6.1 | 17.2 | 407 | 6 | 76.5 | 9.8 | 13.7 | 408 |
| 7 | 71.7 | 5.7 | 22.5 | 435 | 8 | 71.6 | 9.2 | 19.2 | 436 |
| 26-26-2 | 85.2 | 7.1 | 7.6 | 366 | 26-41-1 | 87.2 | 8.6 | 24.1 | 464 |
| 4 | 79.2 | 6.6 | 14.2 | 394 | 3 | 85.0 | 11.2 | 3.8 | 367 |
| 6 | 73.9 | 6.2 | 19.9 | 422 | 5 | 79.0 | 10.4 | 10.6 | 395 |
| 8 | 69.3 | 5.8 | 24.9 | 450 | 7 | 73.7 | 9.7 | 16.5 | 423 |
| 26-27-1 | 88.4 | 7.6 | 4.0 | 353 | 26-42-2 | 69.2 | 9.1 | 21.7 | 451 |
| 3 | 81.9 | 7.1 | 11.0 | 381 | 4 | 81.7 | 11.0 | 7.3 | 382 |
| 5 | 76.3 | 6.6 | 17.1 | 409 | 6 | 76.1 | 10.2 | 13.6 | 410 |
| 7 | 71.4 | 6.2 | 22.4 | 437 | 8 | 71.2 | 9.6 | 19.2 | 438 |
| 26-28-2 | 84.8 | 7.6 | 7.6 | 368 | 26-43-1 | 87.0 | 9.0 | 24.0 | 466 |
| 4 | 78.8 | 7.1 | 14.1 | 396 | 3 | 84.5 | 11.6 | 3.8 | 369 |
| 6 | 73.6 | 6.6 | 19.8 | 424 | 5 | 78.6 | 10.8 | 10.6 | 397 |
| 8 | 69.0 | 6.2 | 24.8 | 452 | 7 | 73.4 | 10.1 | 16.5 | 425 |
| 26-29-1 | 87.9 | 8.2 | 3.9 | 355 | 26-44-2 | 68.9 | 9.5 | 21.6 | 453 |
| 3 | 81.5 | 7.6 | 10.9 | 383 | 4 | 81.2 | 11.4 | 7.3 | 384 |
| 5 | 75.9 | 7.1 | 17.0 | 411 | 6 | 75.7 | 10.7 | 13.6 | 412 |
| 7 | 71.1 | 6.6 | 22.3 | 439 | 8 | 70.9 | 10.0 | 19.1 | 440 |
| 26-30-2 | 84.3 | 8.1 | 7.6 | 370 | 26-45-1 | 86.7 | 9.4 | 23.9 | 468 |
| 4 | 78.4 | 7.5 | 14.1 | 398 | 3 | 84.1 | 12.1 | 3.8 | 371 |
| 6 | 73.3 | 7.0 | 19.7 | 426 | 5 | 78.2 | 11.3 | 10.5 | 399 |
| 8 | 68.7 | 6.6 | 24.7 | 454 | 7 | 73.1 | 10.5 | 16.4 | 427 |
| 26-31-1 | 87.4 | 8.7 | 3.9 | 357 | 26-46-2 | 68.6 | 9.9 | 21.5 | 455 |
| 3 | 81.0 | 8.0 | 10.9 | 385 | 4 | 80.8 | 11.9 | 7.2 | 386 |
| 5 | 75.5 | 7.5 | 17.0 | 413 | 6 | 75.3 | 11.1 | 13.5 | 414 |
| 7 | 70.8 | 7.0 | 22.2 | 441 | 8 | 70.6 | 10.4 | 19.0 | 412 |
| 26-32-2 | 83.9 | 8.6 | 7.4 | 372 | 26-47-1 | 86.4 | 9.8 | 23.8 | 470 |
| 4 | 78.0 | 8.0 | 14.0 | 400 | 3 | 83.6 | 12.6 | 3.7 | 373 |
| 6 | 72.9 | 7.5 | 19.6 | 428 | 5 | 77.8 | 11.7 | 10.5 | 401 |
| 8 | 68.4 | 7.0 | 24.6 | 456 | 7 | 72.7 | 11.0 | 16.3 | 429 |
| 26-33-1 | 86.9 | 9.2 | 3.9 | 359 | 26-48-2 | 68.3 | 10.3 | 21.4 | 457 |
| 3 | 80.6 | 8.5 | 10.9 | 387 | | 80.4 | 12.4 | 7.2 | 388 |

| C-H-N | C % | H % | N % | M.G. | C-H-N | C % | H % | N % | M.G. |
|---------|------|------|------|------|---------|------|-----|------|------|
| 26-48-4 | 75.0 | 11.5 | 13.5 | 416 | 27-20-2 | 87.1 | 5.4 | 7.5 | 372 |
| 6 | 70.3 | 10.8 | 18.9 | 444 | 4 | 81.0 | 5.0 | 14.0 | 460 |
| 8 | 66.1 | 10.2 | 23.7 | 472 | 6 | 75.7 | 4.7 | 19.6 | 428 |
| 26-49-1 | 83.2 | 13.1 | 3.7 | 375 | 8 | 71.1 | 4.4 | 24.5 | 456 |
| 3 | 77.4 | 12.2 | 10.4 | 403 | 27-21-1 | 90.3 | 5.8 | 3.9 | 359 |
| 5 | 72.4 | 11.4 | 16.2 | 431 | 3 | 83.7 | 5.4 | 10.8 | 387 |
| 7 | 68.0 | 10.7 | 21.3 | 459 | 5 | 78.1 | 5.0 | 16.9 | 415 |
| 26-50-2 | 80.0 | 12.8 | 7.2 | 390 | 7 | 73.2 | 4.7 | 22.1 | 443 |
| 4 | 74.6 | 12.0 | 13.4 | 418 | 27-22-2 | 86.6 | 5.9 | 7.5 | 374 |
| 6 | 70.0 | 11.2 | 18.8 | 446 | 4 | 80.6 | 5.5 | 13.9 | 402 |
| 8 | 65.8 | 10.6 | 23.6 | 474 | 6 | 75.4 | 5.1 | 19.5 | 430 |
| 26-51-1 | 82.8 | 13.5 | 3.7 | 377 | 8 | 70.7 | 4.8 | 24.4 | 458 |
| 3 | 77.0 | 12.6 | 10.4 | 405 | 27-23-1 | 89.7 | 6.4 | 3.9 | 361 |
| 5 | 72.0 | 11.8 | 16.2 | 433 | 3 | 83.3 | 5.9 | 10.8 | 389 |
| 7 | 67.7 | 11.1 | 21.2 | 461 | 5 | 77.7 | 5.5 | 16.8 | 417 |
| 26-52-2 | 82.5 | 13.7 | 3.7 | 378 | 7 | 72.8 | 5.2 | 22.0 | 445 |
| 4 | 74.3 | 12.4 | 13.3 | 420 | 27-24-2 | 86.2 | 6.4 | 7.4 | 376 |
| 6 | 69.6 | 11.6 | 18.8 | 448 | 4 | 80.2 | 5.9 | 13.8 | 404 |
| 8 | 58.6 | 9.8 | 31.6 | 532 | 6 | 75.0 | 5.6 | 19.4 | 432 |
| 26-53-1 | 82.3 | 14.0 | 3.7 | 379 | 8 | 70.4 | 5.2 | 24.3 | 460 |
| 3 | 76.6 | 13.0 | 10.3 | 407 | 27-25-1 | 89.3 | 6.9 | 3.8 | 363 |
| 5 | 71.7 | 12.2 | 16.1 | 435 | 3 | 82.9 | 6.4 | 10.7 | 391 |
| 7 | 67.4 | 11.4 | 21.2 | 463 | 5 | 77.4 | 5.9 | 16.7 | 419 |
| 26-54-2 | 79.2 | 13.7 | 7.1 | 394 | 7 | 72.5 | 5.6 | 21.9 | 447 |
| 4 | 73.9 | 12.8 | 13.3 | 422 | 27-26-2 | 85.7 | 6.9 | 7.4 | 378 |
| 6 | 69.3 | 12.0 | 18.7 | 450 | 4 | 79.8 | 6.4 | 13.8 | 406 |
| 8 | 65.3 | 11.3 | 23.4 | 478 | 6 | 74.6 | 6.0 | 19.4 | 434 |
| 26-55-1 | 81.9 | 14.4 | 3.7 | 381 | 8 | 70.1 | 5.6 | 24.2 | 462 |
| 3 | 76.3 | 13.4 | 10.3 | 409 | 27-27-1 | 88.8 | 7.4 | 3.8 | 365 |
| 5 | 71.4 | 12.6 | 16.0 | 437 | 3 | 82.4 | 6.9 | 10.7 | 393 |
| 7 | 67.1 | 11.8 | 21.1 | 465 | 5 | 77.0 | 6.4 | 16.6 | 421 |
| 27-13-1 | 92.3 | 3.7 | 4.0 | 351 | 7 | 72.1 | 6.0 | 21.8 | 449 |
| 3 | 85.5 | 3.4 | 11.1 | 379 | 27-28-2 | 85.3 | 7.3 | 7.3 | 380 |
| 5 | 79.6 | 3.2 | 17.2 | 407 | 4 | 79.4 | 6.9 | 13.7 | 408 |
| 7 | 74.5 | 3.0 | 22.5 | 435 | 6 | 74.3 | 6.4 | 19.3 | 436 |
| 27-14-2 | 88.5 | 3.8 | 7.7 | 366 | 8 | 69.8 | 6.0 | 24.1 | 464 |
| 4 | 82.2 | 3.6 | 14.2 | 394 | 27-29-1 | 88.3 | 7.9 | 3.8 | 367 |
| 6 | 76.8 | 3.3 | 19.9 | 422 | 3 | 82.0 | 7.3 | 10.6 | 395 |
| 8 | 72.0 | 3.1 | 24.9 | 450 | 5 | 76.6 | 6.9 | 16.5 | 423 |
| 27-15-1 | 91.8 | 4.2 | 4.0 | 353 | 7 | 71.8 | 6.4 | 21.7 | 451 |
| 3 | 85.0 | 3.9 | 11.0 | 381 | 27-30-2 | 84.8 | 7.9 | 7.3 | 382 |
| 5 | 79.2 | 3.7 | 17.1 | 409 | 4 | 79.0 | 7.3 | 13.7 | 410 |
| 7 | 74.1 | 3.4 | 22.4 | 437 | 6 | 74.0 | 6.8 | 19.2 | 438 |
| 27-16-2 | 88.0 | 4.3 | 7.6 | 368 | 8 | 69.5 | 6.4 | 24.0 | 466 |
| 4 | 81.8 | 4.0 | 14.1 | 396 | 27-31-1 | 87.8 | 8.4 | 3.8 | 369 |
| 6 | 76.4 | 3.8 | 19.8 | 424 | 3 | 81.6 | 7.8 | 10.6 | 397 |
| 8 | 71.7 | 3.5 | 24.8 | 452 | 5 | 76.2 | 7.3 | 16.5 | 425 |
| 27-17-1 | 91.3 | 4.8 | 3.9 | 355 | 7 | 71.5 | 6.8 | 21.6 | 453 |
| 3 | 84.6 | 4.4 | 11.0 | 383 | 27-32-2 | 84.4 | 8.3 | 7.3 | 384 |
| 5 | 78.8 | 4.1 | 17.0 | 411 | 4 | 78.6 | 7.8 | 13.6 | 412 |
| 7 | 73.8 | 3.9 | 22.3 | 439 | 6 | 73.6 | 7.3 | 19.1 | 440 |
| 27-18-2 | 87.6 | 4.8 | 7.6 | 370 | 8 | 69.2 | 6.8 | 23.9 | 468 |
| 4 | 81.4 | 4.5 | 14.1 | 398 | 27-33-1 | 87.3 | 8.9 | 3.8 | 371 |
| 6 | 76.0 | 4.2 | 19.7 | 426 | 3 | 81.2 | 8.3 | 10.5 | 399 |
| 8 | 71.4 | 3.9 | 24.7 | 454 | 5 | 75.9 | 7.7 | 16.4 | 427 |
| 27-19-1 | 90.8 | 5.3 | 3.9 | 357 | 7 | 71.2 | 7.2 | 21.5 | 455 |
| 3 | 84.1 | 4.9 | 10.9 | 385 | 27-34-2 | 83.9 | 8.8 | 7.3 | 386 |
| 5 | 78.4 | 4.6 | 16.9 | 413 | 4 | 78.2 | 8.2 | 13.5 | 414 |
| 7 | 73.5 | 4.3 | 22.2 | 441 | 6 | 73.3 | 7.7 | 19.0 | 442 |

| C—H—N | C % | H % | N % | M. G. | C—H—N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|---------|------|------|------|-------|
| 27-34-8 | 68.9 | 7.2 | 23.8 | 470 | 27-49-5 | 73.2 | 11.0 | 15.8 | 443 |
| 27-35-1 | 86.9 | 9.4 | 3.7 | 373 | 7 | 68.7 | 10.5 | 20.8 | 471 |
| 3 | 80.8 | 8.7 | 10.5 | 401 | 27-50-2 | 80.6 | 12.4 | 7.0 | 402 |
| 5 | 75.5 | 8.2 | 16.3 | 429 | 4 | 75.4 | 11.6 | 13.0 | 430 |
| 7 | 70.9 | 7.7 | 21.4 | 457 | 6 | 70.7 | 10.9 | 18.3 | 458 |
| 27-36-2 | 83.5 | 9.3 | 7.2 | 388 | 8 | 66.6 | 10.3 | 23.0 | 486 |
| 4 | 77.9 | 8.6 | 13.4 | 416 | 27-51-1 | 83.3 | 13.1 | 3.6 | 389 |
| 6 | 73.0 | 8.1 | 18.9 | 444 | 3 | 77.7 | 12.2 | 10.1 | 417 |
| 8 | 68.7 | 7.6 | 23.7 | 472 | 5 | 72.8 | 11.5 | 15.7 | 445 |
| 27-37-1 | 86.4 | 9.9 | 3.7 | 375 | 7 | 68.5 | 10.8 | 20.7 | 473 |
| 3 | 80.4 | 9.2 | 10.4 | 403 | 27-52-2 | 80.2 | 12.9 | 6.9 | 404 |
| 5 | 75.2 | 8.6 | 16.2 | 431 | 4 | 75.0 | 12.0 | 13.0 | 432 |
| 7 | 70.6 | 8.1 | 21.3 | 459 | 6 | 70.4 | 11.3 | 18.3 | 460 |
| 27-38-2 | 83.1 | 9.7 | 7.2 | 390 | 8 | 66.4 | 10.6 | 22.9 | 488 |
| 4 | 77.5 | 9.1 | 13.4 | 418 | 27-53-1 | 82.9 | 13.5 | 3.6 | 391 |
| 6 | 72.6 | 8.5 | 18.8 | 446 | 3 | 77.3 | 12.6 | 10.0 | 419 |
| 8 | 68.4 | 8.0 | 23.6 | 474 | 5 | 72.5 | 11.8 | 15.7 | 447 |
| 27-39-1 | 86.0 | 10.3 | 3.7 | 377 | 7 | 68.2 | 11.2 | 20.6 | 475 |
| 3 | 80.0 | 9.6 | 10.4 | 405 | 27-54-2 | 79.8 | 13.3 | 6.9 | 406 |
| 5 | 74.8 | 9.0 | 16.2 | 433 | 4 | 74.6 | 12.4 | 12.9 | 434 |
| 7 | 70.3 | 8.4 | 21.2 | 461 | 6 | 70.1 | 11.7 | 18.2 | 462 |
| 27-40-2 | 82.7 | 10.2 | 7.1 | 392 | 8 | 66.1 | 11.0 | 22.8 | 490 |
| 4 | 77.1 | 9.5 | 13.3 | 420 | 27-55-1 | 82.4 | 14.0 | 3.6 | 393 |
| 6 | 72.3 | 8.9 | 18.8 | 448 | 3 | 76.9 | 13.1 | 10.0 | 421 |
| 8 | 68.1 | 8.4 | 23.5 | 476 | 5 | 72.1 | 12.2 | 15.6 | 449 |
| 27-41-1 | 85.5 | 10.8 | 3.7 | 379 | 7 | 67.9 | 11.5 | 20.5 | 477 |
| 3 | 79.6 | 10.1 | 10.2 | 407 | 27-56-2 | 79.4 | 13.7 | 6.9 | 408 |
| 5 | 74.5 | 9.4 | 16.1 | 435 | 4 | 74.3 | 12.8 | 12.8 | 436 |
| 7 | 70.0 | 8.8 | 21.2 | 463 | 6 | 69.8 | 12.1 | 18.1 | 464 |
| 27-42-2 | 82.2 | 10.7 | 7.1 | 394 | 8 | 65.9 | 11.4 | 22.7 | 492 |
| 4 | 76.8 | 9.9 | 13.3 | 422 | 28-14-2 | 88.9 | 3.7 | 7.4 | 378 |
| 6 | 72.0 | 9.3 | 18.7 | 450 | 4 | 82.8 | 3.4 | 13.8 | 406 |
| 8 | 67.8 | 8.8 | 23.4 | 478 | 6 | 77.4 | 3.2 | 19.4 | 434 |
| 27-43-1 | 85.0 | 11.3 | 3.7 | 381 | 8 | 72.7 | 3.0 | 24.2 | 462 |
| 3 | 79.2 | 10.5 | 10.3 | 409 | 28-15-1 | 92.1 | 4.1 | 3.8 | 395 |
| 5 | 74.1 | 9.8 | 16.0 | 437 | 3 | 85.5 | 3.8 | 10.7 | 393 |
| 7 | 69.7 | 9.2 | 21.1 | 465 | 5 | 79.8 | 3.6 | 16.6 | 421 |
| 27-44-2 | 81.8 | 11.1 | 7.1 | 396 | 7 | 74.8 | 3.3 | 21.8 | 449 |
| 4 | 76.4 | 10.4 | 13.2 | 424 | 28-16-2 | 88.4 | 4.2 | 7.4 | 380 |
| 6 | 71.7 | 9.7 | 18.6 | 452 | 4 | 82.3 | 3.9 | 13.7 | 408 |
| 8 | 67.5 | 9.2 | 23.3 | 480 | 6 | 77.1 | 3.7 | 19.2 | 436 |
| 27-45-1 | 84.6 | 11.7 | 3.7 | 383 | 8 | 72.4 | 3.4 | 24.1 | 464 |
| 3 | 78.8 | 10.9 | 10.2 | 411 | 28-17-1 | 91.6 | 4.6 | 3.8 | 367 |
| 5 | 73.8 | 10.2 | 15.9 | 439 | 3 | 85.0 | 4.3 | 10.6 | 395 |
| 7 | 69.4 | 9.6 | 21.0 | 467 | 5 | 79.4 | 4.0 | 16.5 | 423 |
| 27-46-2 | 81.4 | 11.6 | 7.0 | 398 | 7 | 74.5 | 3.8 | 21.7 | 451 |
| 4 | 76.0 | 10.8 | 13.1 | 426 | 28-18-2 | 88.0 | 4.7 | 7.3 | 382 |
| 6 | 71.4 | 10.1 | 18.5 | 454 | 4 | 81.9 | 4.4 | 13.6 | 410 |
| 8 | 67.2 | 9.5 | 23.2 | 482 | 6 | 76.7 | 4.1 | 19.2 | 438 |
| 27-47-1 | 84.1 | 12.2 | 3.6 | 385 | 8 | 72.1 | 3.9 | 24.0 | 466 |
| 3 | 78.4 | 11.4 | 10.2 | 413 | 28-19-1 | 91.0 | 5.1 | 3.8 | 369 |
| 5 | 73.5 | 10.6 | 15.9 | 441 | 3 | 84.6 | 4.8 | 10.6 | 397 |
| 7 | 69.1 | 10.0 | 20.9 | 469 | 5 | 79.1 | 4.4 | 16.5 | 425 |
| 27-48-2 | 81.0 | 12.0 | 7.0 | 400 | 7 | 74.2 | 4.2 | 21.6 | 453 |
| 4 | 75.7 | 11.2 | 13.1 | 428 | 28-20-2 | 87.5 | 5.2 | 7.3 | 384 |
| 6 | 71.1 | 10.5 | 18.4 | 456 | 4 | 81.6 | 4.8 | 13.6 | 412 |
| 8 | 66.9 | 9.9 | 23.1 | 484 | 6 | 76.4 | 4.5 | 19.1 | 440 |
| 27-49-1 | 83.7 | 12.7 | 3.6 | 387 | 8 | 71.8 | 4.3 | 23.9 | 468 |
| 3 | 78.1 | 11.8 | 10.1 | 415 | 28-21-1 | 90.6 | 5.6 | 3.8 | 371 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|-----|------|------|---------|------|------|------|------|
| 28-21-3 | 84.2 | 5.3 | 10.5 | 399 | 28-36-2 | 84.0 | 9.0 | 7.0 | 400 |
| 5 | 78.7 | 4.9 | 16.4 | 427 | 4 | 78.5 | 8.4 | 13.1 | 428 |
| 7 | 73.0 | 4.6 | 21.5 | 455 | 6 | 73.7 | 7.9 | 18.4 | 456 |
| 28-22-2 | 87.0 | 5.7 | 7.2 | 386 | 8 | 69.4 | 7.4 | 23.1 | 484 |
| 4 | 81.1 | 5.3 | 13.5 | 414 | 28-37-1 | 86.9 | 9.5 | 3.6 | 387 |
| 6 | 76.0 | 5.0 | 19.0 | 442 | 3 | 81.0 | 8.9 | 10.1 | 415 |
| 8 | 71.5 | 4.7 | 23.8 | 470 | 5 | 75.9 | 8.3 | 15.8 | 443 |
| 28-23-1 | 90.1 | 6.2 | 3.7 | 373 | 7 | 71.3 | 7.8 | 20.8 | 471 |
| 3 | 83.8 | 5.7 | 10.5 | 401 | 28-38-2 | 83.6 | 9.4 | 7.0 | 402 |
| 5 | 78.3 | 5.4 | 16.3 | 429 | 4 | 78.2 | 8.8 | 13.0 | 430 |
| 7 | 73.5 | 5.0 | 21.4 | 457 | 6 | 73.4 | 8.3 | 18.3 | 458 |
| 28-24-2 | 86.6 | 6.2 | 7.2 | 388 | 8 | 69.1 | 7.8 | 23.0 | 486 |
| 4 | 80.8 | 5.8 | 13.4 | 416 | 28-39-1 | 86.3 | 10.0 | 3.6 | 389 |
| 6 | 75.7 | 5.4 | 18.9 | 444 | 3 | 80.6 | 9.3 | 10.1 | 417 |
| 8 | 71.2 | 5.1 | 23.7 | 472 | 5 | 75.5 | 8.8 | 15.7 | 445 |
| 28-25-1 | 89.6 | 6.7 | 3.7 | 375 | 7 | 71.0 | 8.2 | 20.7 | 473 |
| 3 | 83.4 | 6.2 | 10.4 | 403 | 28-40-2 | 83.2 | 9.9 | 6.9 | 404 |
| 5 | 78.0 | 5.8 | 16.2 | 431 | 4 | 77.8 | 9.2 | 13.0 | 432 |
| 7 | 73.2 | 5.4 | 21.4 | 459 | 6 | 73.0 | 8.7 | 18.3 | 460 |
| 28-26-2 | 86.1 | 6.7 | 7.2 | 390 | 8 | 68.8 | 8.2 | 23.0 | 488 |
| 4 | 80.4 | 6.2 | 13.4 | 418 | 28-41-1 | 86.0 | 10.5 | 3.5 | 391 |
| 6 | 75.3 | 5.8 | 18.8 | 446 | 3 | 80.2 | 9.8 | 10.0 | 419 |
| 8 | 70.9 | 5.5 | 23.6 | 474 | 5 | 75.1 | 9.2 | 15.7 | 447 |
| 28-27-1 | 89.1 | 7.2 | 3.7 | 377 | 7 | 70.7 | 8.6 | 20.6 | 475 |
| 3 | 83.0 | 6.7 | 10.3 | 405 | 28-42-2 | 82.8 | 10.3 | 6.9 | 406 |
| 5 | 77.6 | 6.2 | 16.2 | 433 | 4 | 77.4 | 9.7 | 12.9 | 434 |
| 7 | 72.9 | 5.9 | 21.2 | 461 | 6 | 72.7 | 9.1 | 18.2 | 462 |
| 28-28-2 | 85.7 | 7.1 | 7.1 | 392 | 8 | 68.6 | 8.6 | 22.8 | 490 |
| 4 | 80.0 | 6.7 | 13.3 | 420 | 28-43-1 | 85.5 | 10.9 | 3.5 | 393 |
| 6 | 75.0 | 6.2 | 18.8 | 448 | 3 | 79.9 | 10.2 | 9.9 | 421 |
| 8 | 70.6 | 5.9 | 23.5 | 476 | 5 | 74.8 | 9.6 | 15.6 | 449 |
| 28-29-1 | 88.6 | 7.6 | 3.7 | 379 | 7 | 70.4 | 9.0 | 20.5 | 477 |
| 3 | 82.6 | 7.1 | 10.3 | 407 | 28-44-2 | 82.3 | 10.8 | 6.9 | 408 |
| 5 | 77.2 | 6.7 | 16.1 | 435 | 4 | 77.1 | 10.1 | 12.8 | 436 |
| 7 | 72.6 | 6.3 | 21.1 | 463 | 6 | 72.4 | 9.5 | 18.1 | 464 |
| 28-30-2 | 85.3 | 7.6 | 7.1 | 394 | 8 | 68.3 | 8.9 | 22.7 | 492 |
| 4 | 79.6 | 7.1 | 13.2 | 422 | 28-45-1 | 85.0 | 11.4 | 3.5 | 395 |
| 6 | 74.6 | 6.7 | 18.7 | 450 | 3 | 79.4 | 10.6 | 9.9 | 423 |
| 8 | 70.3 | 6.3 | 23.4 | 478 | 5 | 74.5 | 10.0 | 15.5 | 451 |
| 28-31-1 | 88.2 | 8.1 | 3.7 | 381 | 7 | 70.1 | 9.4 | 20.5 | 479 |
| 3 | 82.1 | 7.6 | 10.3 | 409 | 28-46-2 | 82.0 | 11.2 | 6.8 | 410 |
| 5 | 76.9 | 7.1 | 16.0 | 437 | 4 | 76.7 | 10.5 | 12.8 | 438 |
| 7 | 72.2 | 6.7 | 21.1 | 465 | 6 | 72.1 | 9.9 | 18.0 | 466 |
| 28-32-2 | 84.8 | 8.1 | 7.1 | 396 | 8 | 68.0 | 9.3 | 22.7 | 494 |
| 4 | 79.2 | 7.5 | 13.2 | 424 | 28-47-1 | 84.6 | 11.8 | 3.5 | 397 |
| 6 | 74.3 | 7.1 | 18.6 | 452 | 3 | 79.1 | 11.0 | 9.9 | 425 |
| 8 | 70.0 | 6.7 | 23.3 | 480 | 5 | 74.2 | 10.4 | 15.4 | 453 |
| 28-33-1 | 87.7 | 8.6 | 3.6 | 383 | 7 | 69.8 | 9.8 | 20.4 | 481 |
| 3 | 81.7 | 8.0 | 10.2 | 411 | 28-48-2 | 81.5 | 11.6 | 6.8 | 412 |
| 5 | 76.5 | 7.5 | 15.9 | 439 | 4 | 76.4 | 10.9 | 12.7 | 440 |
| 7 | 72.2 | 7.1 | 20.6 | 467 | 6 | 71.8 | 10.3 | 17.9 | 468 |
| 28-34-2 | 84.4 | 8.5 | 7.0 | 398 | 8 | 67.7 | 9.7 | 22.6 | 496 |
| 4 | 78.9 | 8.0 | 13.1 | 426 | 28-49-1 | 84.2 | 12.3 | 3.5 | 399 |
| 6 | 74.0 | 7.5 | 18.5 | 454 | 3 | 78.7 | 11.5 | 9.8 | 427 |
| 8 | 69.7 | 7.0 | 23.2 | 482 | 5 | 73.8 | 10.8 | 15.4 | 455 |
| 28-35-1 | 87.3 | 9.1 | 3.6 | 385 | 7 | 69.6 | 10.1 | 20.3 | 483 |
| 3 | 81.3 | 8.5 | 10.2 | 413 | 28-50-2 | 81.2 | 12.1 | 6.7 | 414 |
| 5 | 76.2 | 7.9 | 15.9 | 441 | 4 | 76.0 | 11.3 | 12.7 | 442 |
| 7 | 71.6 | 7.5 | 20.9 | 469 | 6 | 71.5 | 10.6 | 17.9 | 470 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|---------|------|-----|------|-------|
| 28-50-8 | 67.5 | 10.0 | 22.5 | 498 | 29-19-5 | 79.6 | 4.3 | 16.0 | 437 |
| 28-51-1 | 83.8 | 12.7 | 3.5 | 401 | 29-19-5 | 74.8 | 4.1 | 21.1 | 405 |
| 3 | 78.3 | 11.9 | 9.8 | 429 | 29-20-2 | 87.8 | 5.0 | 7.1 | 396 |
| 5 | 73.5 | 11.1 | 15.3 | 457 | 4 | 82.1 | 4.7 | 13.2 | 424 |
| 7 | 69.3 | 10.5 | 20.2 | 485 | 6 | 77.0 | 4.4 | 18.6 | 452 |
| 28-52-2 | 80.8 | 12.5 | 6.7 | 416 | 8 | 72.5 | 4.2 | 23.3 | 480 |
| 4 | 75.7 | 11.7 | 12.6 | 444 | 29-21-1 | 90.9 | 5.5 | 3.6 | 383 |
| 6 | 71.2 | 11.0 | 17.8 | 472 | 3 | 84.7 | 5.1 | 10.2 | 411 |
| 8 | 67.2 | 10.4 | 22.4 | 500 | 5 | 79.3 | 4.8 | 15.9 | 439 |
| 28-53-1 | 83.4 | 13.1 | 3.5 | 403 | 7 | 74.5 | 4.5 | 21.0 | 467 |
| 3 | 78.0 | 12.3 | 9.7 | 431 | 29-22-2 | 87.4 | 5.5 | 7.0 | 398 |
| 5 | 73.2 | 11.5 | 15.2 | 459 | 4 | 81.7 | 5.2 | 13.1 | 426 |
| 7 | 68.9 | 10.9 | 20.1 | 487 | 6 | 76.7 | 4.8 | 18.5 | 454 |
| 28-54-2 | 80.4 | 12.9 | 6.7 | 418 | 8 | 72.2 | 4.6 | 23.2 | 482 |
| 4 | 75.3 | 12.1 | 12.5 | 446 | 29-23-1 | 90.4 | 6.0 | 3.6 | 385 |
| 6 | 70.9 | 11.4 | 17.7 | 474 | 3 | 84.2 | 5.6 | 10.2 | 413 |
| 8 | 66.9 | 10.7 | 22.3 | 502 | 5 | 78.9 | 5.2 | 15.9 | 441 |
| 28-55-1 | 82.9 | 13.6 | 3.5 | 405 | 7 | 74.2 | 4.9 | 20.9 | 469 |
| 3 | 77.6 | 12.7 | 9.7 | 433 | 29-24-2 | 87.0 | 6.0 | 7.0 | 400 |
| 5 | 72.9 | 11.9 | 15.2 | 461 | 4 | 81.3 | 5.6 | 13.1 | 428 |
| 7 | 68.7 | 11.2 | 20.0 | 489 | 6 | 76.3 | 5.3 | 18.4 | 456 |
| 28-56-2 | 80.0 | 13.3 | 6.7 | 420 | 8 | 71.9 | 5.0 | 23.1 | 484 |
| 4 | 75.0 | 12.5 | 12.5 | 448 | 29-25-1 | 89.9 | 6.5 | 3.6 | 387 |
| 6 | 70.6 | 11.8 | 17.6 | 476 | 3 | 83.9 | 6.0 | 10.1 | 415 |
| 8 | 66.7 | 11.1 | 22.2 | 504 | 5 | 78.6 | 5.6 | 15.8 | 443 |
| 28-57-1 | 82.6 | 14.0 | 3.4 | 407 | 7 | 73.9 | 5.3 | 20.8 | 471 |
| 3 | 77.2 | 13.1 | 9.7 | 435 | 29-26-2 | 86.5 | 6.5 | 7.0 | 402 |
| 5 | 72.6 | 12.3 | 15.1 | 463 | 4 | 80.9 | 6.0 | 13.0 | 430 |
| 7 | 68.4 | 11.6 | 20.0 | 491 | 6 | 76.0 | 5.7 | 18.3 | 458 |
| 28-58-2 | 79.6 | 13.7 | 6.6 | 422 | 8 | 71.6 | 5.3 | 23.0 | 486 |
| 4 | 74.6 | 12.9 | 12.4 | 450 | 29-27-1 | 89.4 | 6.9 | 3.6 | 389 |
| 6 | 70.3 | 12.1 | 17.6 | 478 | 3 | 83.4 | 6.5 | 10.1 | 417 |
| 8 | 66.4 | 11.5 | 22.1 | 506 | 5 | 78.2 | 6.1 | 15.7 | 445 |
| 28-59-1 | 82.2 | 14.4 | 3.4 | 409 | 7 | 73.6 | 5.7 | 20.7 | 473 |
| 3 | 76.9 | 13.5 | 9.6 | 437 | 29-28-2 | 86.1 | 6.9 | 6.9 | 404 |
| 5 | 72.2 | 12.7 | 15.0 | 465 | 4 | 80.6 | 6.5 | 12.9 | 432 |
| 7 | 68.2 | 11.9 | 19.9 | 493 | 6 | 75.7 | 6.1 | 18.2 | 460 |
| 28-60-2 | 79.2 | 14.1 | 6.6 | 424 | 8 | 71.3 | 5.7 | 22.9 | 488 |
| 4 | 74.3 | 13.3 | 12.4 | 452 | 29-29-1 | 89.0 | 7.4 | 3.6 | 391 |
| 6 | 70.0 | 12.5 | 17.5 | 480 | 3 | 83.0 | 6.9 | 10.0 | 419 |
| 8 | 66.1 | 11.8 | 22.1 | 508 | 5 | 77.8 | 6.5 | 15.7 | 447 |
| 29-15-1 | 92.3 | 4.0 | 3.7 | 377 | 7 | 73.2 | 6.1 | 20.6 | 475 |
| 3 | 85.9 | 3.7 | 10.4 | 405 | 29-30-2 | 85.7 | 7.4 | 6.9 | 406 |
| 5 | 80.4 | 3.4 | 16.2 | 433 | 4 | 80.2 | 6.9 | 12.9 | 434 |
| 7 | 75.5 | 3.2 | 21.2 | 461 | 6 | 75.3 | 6.5 | 18.2 | 462 |
| 29-16-2 | 88.8 | 4.1 | 7.1 | 392 | 8 | 71.0 | 6.1 | 22.8 | 490 |
| 4 | 82.9 | 3.8 | 13.3 | 420 | 29-31-1 | 88.5 | 7.9 | 3.5 | 393 |
| 6 | 77.7 | 3.6 | 18.7 | 448 | 3 | 82.6 | 7.4 | 9.9 | 421 |
| 8 | 73.1 | 3.4 | 23.5 | 476 | 5 | 77.5 | 6.9 | 15.6 | 449 |
| 29-17-1 | 91.8 | 4.5 | 3.7 | 379 | 7 | 72.9 | 6.5 | 20.5 | 477 |
| 3 | 85.5 | 4.1 | 10.3 | 407 | 29-32-2 | 85.3 | 7.8 | 6.9 | 408 |
| 5 | 80.0 | 3.9 | 16.1 | 435 | 4 | 79.8 | 7.3 | 12.8 | 436 |
| 7 | 75.2 | 3.7 | 21.1 | 463 | 6 | 75.0 | 6.9 | 18.1 | 464 |
| 29-18-2 | 88.3 | 4.6 | 7.1 | 394 | 8 | 70.7 | 6.5 | 22.8 | 492 |
| 4 | 82.4 | 4.3 | 13.3 | 422 | 29-33-1 | 88.1 | 8.4 | 3.5 | 395 |
| 6 | 77.3 | 4.0 | 18.7 | 450 | 3 | 82.3 | 7.8 | 9.9 | 423 |
| 8 | 72.8 | 3.8 | 23.4 | 478 | 5 | 77.2 | 7.3 | 15.5 | 451 |
| 29-19-1 | 91.3 | 5.0 | 3.7 | 381 | 7 | 72.6 | 6.9 | 20.5 | 479 |
| 3 | 85.1 | 4.6 | 10.3 | 409 | 29-34-2 | 84.9 | 8.3 | 6.8 | 410 |

| C—H—N | C % | H % | N % | M.G. | C—H—N | C % | H % | N % | M.G. |
|---------|------|------|------|------|---------|------|------|------|------|
| 29-34-4 | 79.4 | 7.8 | 12.8 | 438 | 29-49-1 | 84.7 | 11.9 | 3.4 | 411 |
| 6 | 74.7 | 7.3 | 18.0 | 466 | 3 | 79.3 | 11.1 | 9.6 | 439 |
| 8 | 70.4 | 6.9 | 22.7 | 491 | 5 | 74.5 | 10.5 | 15.0 | 467 |
| 29-35-1 | 87.7 | 8.8 | 3.5 | 397 | 7 | 70.3 | 9.9 | 19.8 | 495 |
| 3 | 81.9 | 8.2 | 9.9 | 425 | 29-50-2 | 81.7 | 11.7 | 6.6 | 426 |
| 5 | 76.8 | 7.7 | 15.4 | 453 | 4 | 76.7 | 11.0 | 12.3 | 454 |
| 7 | 72.3 | 7.3 | 20.4 | 481 | 6 | 72.2 | 10.4 | 17.4 | 482 |
| 29-36-2 | 84.5 | 8.7 | 6.8 | 412 | 8 | 68.2 | 9.8 | 22.0 | 510 |
| 4 | 79.1 | 8.2 | 12.7 | 440 | 29-51-1 | 84.2 | 12.3 | 3.4 | 413 |
| 6 | 74.4 | 7.7 | 17.9 | 468 | 3 | 78.9 | 11.6 | 9.5 | 441 |
| 8 | 70.1 | 7.3 | 22.6 | 496 | 5 | 74.2 | 10.9 | 14.9 | 469 |
| 29-37-1 | 87.2 | 9.3 | 3.5 | 399 | 7 | 70.0 | 10.3 | 19.7 | 497 |
| 3 | 81.5 | 8.7 | 9.8 | 427 | 29-52-2 | 81.3 | 12.1 | 6.5 | 428 |
| 5 | 76.5 | 8.1 | 15.4 | 455 | 4 | 76.3 | 11.4 | 12.3 | 456 |
| 7 | 72.0 | 7.7 | 20.3 | 483 | 6 | 71.9 | 10.7 | 17.3 | 484 |
| 29-38-2 | 84.0 | 9.2 | 6.8 | 414 | 8 | 68.0 | 10.1 | 21.9 | 512 |
| 4 | 78.7 | 8.6 | 12.7 | 442 | 29-53-1 | 83.8 | 12.8 | 3.4 | 415 |
| 6 | 74.0 | 8.1 | 17.9 | 470 | 3 | 78.6 | 11.9 | 9.5 | 443 |
| 8 | 69.9 | 7.6 | 22.5 | 498 | 5 | 74.0 | 11.2 | 14.8 | 471 |
| 29-39-1 | 86.8 | 9.7 | 3.5 | 401 | 7 | 69.7 | 10.6 | 19.6 | 499 |
| 3 | 81.1 | 9.1 | 9.8 | 429 | 29-54-2 | 80.9 | 12.6 | 6.5 | 430 |
| 5 | 76.1 | 8.5 | 15.3 | 457 | 4 | 76.0 | 11.8 | 12.2 | 458 |
| 7 | 71.7 | 8.0 | 20.2 | 485 | 6 | 71.6 | 11.1 | 17.3 | 486 |
| 29-40-2 | 83.7 | 9.6 | 6.7 | 416 | 8 | 67.7 | 10.5 | 21.8 | 514 |
| 4 | 78.4 | 9.0 | 12.6 | 444 | 29-55-1 | 83.4 | 13.2 | 3.4 | 417 |
| 6 | 73.7 | 8.5 | 17.8 | 472 | 3 | 78.2 | 12.3 | 9.4 | 445 |
| 8 | 69.6 | 8.0 | 22.4 | 500 | 5 | 73.6 | 11.6 | 14.8 | 473 |
| 29-41-1 | 86.3 | 10.2 | 3.5 | 403 | 7 | 69.4 | 11.0 | 19.6 | 501 |
| 3 | 80.7 | 9.5 | 9.7 | 431 | 29-56-2 | 80.5 | 13.0 | 6.5 | 432 |
| 5 | 75.8 | 8.9 | 15.2 | 459 | 4 | 75.6 | 12.2 | 12.2 | 460 |
| 7 | 71.4 | 8.4 | 20.1 | 487 | 6 | 71.3 | 11.5 | 17.2 | 488 |
| 29-42-2 | 83.2 | 10.0 | 6.7 | 418 | 8 | 67.4 | 10.8 | 21.7 | 516 |
| 4 | 78.0 | 9.4 | 12.5 | 446 | 29-57-1 | 83.0 | 13.6 | 3.3 | 419 |
| 6 | 73.4 | 8.9 | 17.7 | 474 | 3 | 77.8 | 12.7 | 9.4 | 447 |
| 8 | 69.3 | 8.4 | 22.3 | 502 | 5 | 73.2 | 12.0 | 14.7 | 475 |
| 29-43-1 | 85.9 | 10.6 | 3.5 | 405 | 7 | 69.2 | 11.3 | 19.5 | 503 |
| 3 | 80.4 | 9.9 | 9.7 | 433 | 29-58-2 | 80.2 | 13.4 | 6.4 | 434 |
| 5 | 75.5 | 9.3 | 15.2 | 461 | 4 | 75.3 | 12.5 | 12.1 | 462 |
| 7 | 71.2 | 8.8 | 20.0 | 489 | 6 | 71.1 | 11.8 | 17.1 | 490 |
| 29-44-2 | 82.8 | 10.5 | 6.7 | 420 | 8 | 67.2 | 11.2 | 21.6 | 518 |
| 4 | 77.7 | 9.8 | 12.5 | 448 | 29-59-1 | 82.6 | 14.0 | 3.3 | 421 |
| 6 | 73.1 | 9.2 | 17.6 | 476 | 3 | 77.5 | 13.1 | 9.4 | 449 |
| 8 | 69.0 | 8.7 | 22.2 | 504 | 5 | 72.9 | 12.4 | 14.7 | 477 |
| 29-45-1 | 85.5 | 11.1 | 3.4 | 407 | 7 | 68.9 | 11.7 | 19.4 | 505 |
| 3 | 80.0 | 10.3 | 9.7 | 435 | 29-60-2 | 79.8 | 13.8 | 6.4 | 436 |
| 5 | 75.2 | 9.7 | 15.1 | 463 | 4 | 75.0 | 12.9 | 12.1 | 464 |
| 7 | 70.9 | 9.1 | 20.0 | 491 | 6 | 70.6 | 12.2 | 17.1 | 492 |
| 29-46-2 | 82.4 | 10.9 | 6.6 | 422 | 8 | 66.9 | 11.5 | 21.5 | 520 |
| 4 | 77.3 | 10.2 | 12.4 | 450 | 29-61-1 | 82.3 | 14.4 | 3.3 | 423 |
| 6 | 72.8 | 9.6 | 17.6 | 478 | 3 | 77.1 | 13.5 | 9.3 | 451 |
| 8 | 68.8 | 9.1 | 22.1 | 506 | 5 | 72.7 | 12.7 | 14.6 | 479 |
| 29-47-1 | 85.1 | 11.5 | 3.4 | 409 | 7 | 68.6 | 12.0 | 19.3 | 507 |
| 3 | 79.6 | 10.8 | 9.6 | 437 | 29-62-2 | 79.4 | 14.1 | 6.4 | 438 |
| 5 | 74.8 | 10.1 | 15.0 | 465 | 4 | 74.7 | 13.3 | 12.0 | 466 |
| 7 | 70.6 | 9.5 | 19.9 | 493 | 6 | 70.4 | 12.5 | 17.0 | 494 |
| 29-48-2 | 82.1 | 11.3 | 6.6 | 424 | 8 | 66.7 | 11.9 | 21.4 | 522 |
| 4 | 77.0 | 10.6 | 12.4 | 452 | 30-16-2 | 89.1 | 4.0 | 6.9 | 404 |
| 6 | 72.5 | 10.0 | 17.5 | 480 | 4 | 83.3 | 3.7 | 13.0 | 432 |
| 8 | 68.5 | 9.4 | 22.0 | 508 | 6 | 78.3 | 3.5 | 18.2 | 460 |

| C-H-N | C% | H% | N% | M.G. | C-H-N | C% | H% | N% | M.G. |
|---------|------|-----|------|------|---------|------|------|------|------|
| 30-16-8 | 73.8 | 3.3 | 22.0 | 488 | 30-31-5 | 78.1 | 6.7 | 15.2 | 461 |
| 30-17-1 | 92.1 | 4.3 | 3.6 | 391 | 7 | 73.6 | 6.3 | 20.0 | 489 |
| 3 | 85.9 | 4.0 | 10.0 | 419 | 30-32-2 | 85.7 | 7.0 | 6.7 | 420 |
| 5 | 80.5 | 3.8 | 15.7 | 447 | 4 | 80.4 | 7.1 | 12.5 | 448 |
| 7 | 75.8 | 3.6 | 20.6 | 475 | 6 | 75.6 | 6.7 | 17.6 | 476 |
| 30-18-2 | 88.7 | 4.4 | 6.9 | 406 | 8 | 71.4 | 6.3 | 22.2 | 504 |
| 4 | 82.9 | 4.1 | 12.9 | 434 | 30-33-1 | 88.4 | 8.1 | 3.4 | 497 |
| 6 | 77.9 | 3.9 | 18.2 | 462 | 3 | 82.7 | 7.6 | 9.7 | 435 |
| 8 | 73.5 | 3.7 | 22.8 | 490 | 5 | 77.8 | 7.1 | 15.1 | 463 |
| 30-19-1 | 91.6 | 4.8 | 3.6 | 393 | 7 | 73.3 | 6.7 | 20.0 | 491 |
| 3 | 85.5 | 4.5 | 10.0 | 421 | 30-34-2 | 85.3 | 8.1 | 6.6 | 422 |
| 5 | 80.2 | 4.2 | 15.6 | 449 | 4 | 80.0 | 7.6 | 12.4 | 450 |
| 7 | 75.5 | 4.0 | 20.5 | 477 | 6 | 75.3 | 7.1 | 17.6 | 478 |
| 30-20-2 | 88.2 | 4.9 | 6.9 | 408 | 8 | 71.1 | 6.7 | 22.1 | 506 |
| 4 | 82.6 | 4.6 | 12.8 | 436 | 30-35-1 | 88.0 | 8.6 | 3.4 | 469 |
| 6 | 77.6 | 4.3 | 18.1 | 464 | 3 | 82.4 | 8.0 | 9.6 | 437 |
| 8 | 73.2 | 4.1 | 22.7 | 492 | 5 | 77.4 | 7.5 | 15.0 | 465 |
| 30-21-1 | 91.1 | 5.3 | 3.5 | 395 | 7 | 73.0 | 7.1 | 19.9 | 493 |
| 3 | 85.1 | 5.0 | 9.9 | 423 | 30-36-2 | 84.9 | 8.5 | 6.6 | 424 |
| 5 | 79.8 | 4.7 | 15.5 | 451 | 4 | 79.6 | 8.0 | 12.4 | 472 |
| 7 | 75.2 | 4.4 | 20.4 | 479 | 6 | 75.0 | 7.5 | 17.5 | 489 |
| 30-22-2 | 87.8 | 5.1 | 6.8 | 410 | 8 | 70.9 | 7.1 | 22.0 | 508 |
| 4 | 82.2 | 5.0 | 12.8 | 438 | 30-37-1 | 87.6 | 9.0 | 3.4 | 411 |
| 6 | 77.3 | 4.7 | 18.0 | 466 | 3 | 82.0 | 8.4 | 9.6 | 439 |
| 8 | 72.8 | 4.4 | 22.7 | 494 | 5 | 77.1 | 7.9 | 15.0 | 467 |
| 30-23-1 | 90.7 | 5.8 | 3.5 | 397 | 7 | 72.7 | 7.5 | 19.8 | 495 |
| 3 | 84.7 | 5.4 | 9.9 | 425 | 30-38-2 | 84.5 | 8.9 | 6.6 | 426 |
| 5 | 79.4 | 5.1 | 15.4 | 453 | 4 | 79.3 | 8.4 | 12.3 | 454 |
| 7 | 74.8 | 4.8 | 20.4 | 481 | 6 | 74.7 | 7.9 | 17.4 | 482 |
| 30-24-2 | 87.4 | 5.8 | 6.8 | 412 | 8 | 70.6 | 7.4 | 22.0 | 510 |
| 4 | 81.8 | 5.4 | 12.7 | 440 | 30-39-1 | 87.2 | 9.4 | 3.4 | 413 |
| 6 | 76.9 | 5.1 | 17.9 | 468 | 3 | 81.7 | 8.8 | 9.5 | 441 |
| 8 | 72.6 | 4.8 | 22.6 | 496 | 5 | 76.7 | 8.3 | 14.9 | 469 |
| 30-25-1 | 90.2 | 6.3 | 3.5 | 399 | 7 | 72.4 | 7.8 | 19.7 | 497 |
| 3 | 84.3 | 5.8 | 9.8 | 427 | 30-40-2 | 84.1 | 9.3 | 6.5 | 428 |
| 5 | 79.1 | 5.5 | 15.4 | 455 | 4 | 78.9 | 8.8 | 12.3 | 456 |
| 7 | 74.5 | 5.2 | 20.3 | 483 | 6 | 74.4 | 8.3 | 17.3 | 484 |
| 30-26-2 | 87.0 | 6.3 | 6.6 | 414 | 8 | 70.3 | 7.2 | 21.9 | 512 |
| 4 | 81.4 | 5.9 | 12.7 | 442 | 30-41-1 | 86.7 | 9.9 | 3.4 | 415 |
| 6 | 76.6 | 5.5 | 17.9 | 470 | 3 | 81.3 | 9.2 | 9.5 | 443 |
| 8 | 72.3 | 5.2 | 22.5 | 498 | 5 | 76.4 | 8.8 | 14.8 | 471 |
| 30-27-1 | 89.8 | 6.7 | 3.5 | 401 | 7 | 72.1 | 8.2 | 19.6 | 499 |
| 3 | 83.9 | 6.3 | 9.8 | 429 | 30-42-2 | 83.7 | 9.8 | 6.5 | 436 |
| 5 | 78.8 | 5.9 | 15.3 | 457 | 4 | 78.6 | 9.2 | 12.2 | 478 |
| 7 | 74.2 | 5.6 | 20.2 | 485 | 6 | 74.1 | 8.6 | 17.3 | 486 |
| 30-28-2 | 86.5 | 6.7 | 6.7 | 416 | 8 | 70.0 | 8.2 | 21.8 | 514 |
| 4 | 81.1 | 6.3 | 12.6 | 444 | 30-43-1 | 86.3 | 10.3 | 3.4 | 417 |
| 6 | 76.3 | 5.9 | 17.8 | 472 | 3 | 80.9 | 9.7 | 9.4 | 445 |
| 8 | 72.0 | 5.6 | 22.4 | 500 | 5 | 76.1 | 9.1 | 14.8 | 473 |
| 30-29-1 | 89.3 | 7.2 | 3.5 | 403 | 7 | 71.8 | 8.6 | 19.6 | 501 |
| 3 | 83.5 | 6.7 | 9.7 | 431 | 30-44-2 | 83.3 | 10.2 | 6.5 | 432 |
| 5 | 78.4 | 6.3 | 15.2 | 459 | 4 | 78.3 | 9.6 | 12.1 | 460 |
| 7 | 73.9 | 6.0 | 20.1 | 487 | 6 | 73.8 | 9.0 | 17.2 | 488 |
| 30-30-2 | 86.1 | 7.2 | 6.7 | 418 | 8 | 69.8 | 8.5 | 21.7 | 516 |
| 4 | 80.7 | 6.7 | 12.5 | 446 | 30-45-1 | 85.9 | 10.7 | 3.3 | 419 |
| 6 | 76.0 | 6.3 | 17.7 | 474 | 3 | 80.5 | 10.1 | 9.4 | 447 |
| 8 | 71.7 | 6.0 | 22.3 | 502 | 5 | 75.8 | 9.5 | 14.7 | 475 |
| 30-31-1 | 88.9 | 7.6 | 3.5 | 405 | 7 | 71.6 | 8.9 | 19.5 | 503 |
| 3 | 83.2 | 7.1 | 9.7 | 433 | 30-46-2 | 82.9 | 10.6 | 6.4 | 434 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|---------|------|------|------|-------|
| 30-46-4 | 77,9 | 10,0 | 12,1 | 462 | 30-61-1 | 82,8 | 14,0 | 3,2 | 435 |
| 6 | 73,5 | 9,4 | 17,1 | 490 | 3 | 77,7 | 13,2 | 9,1 | 463 |
| 8 | 69,5 | 8,9 | 21,6 | 518 | 5 | 73,3 | 12,4 | 14,3 | 491 |
| 30-47-1 | 85,5 | 11,2 | 3,3 | 421 | 7 | 69,4 | 11,7 | 18,9 | 519 |
| 3 | 86,2 | 10,4 | 9,4 | 449 | 30-62-2 | 80,0 | 13,8 | 6,2 | 450 |
| 5 | 75,5 | 9,8 | 14,7 | 477 | 4 | 75,3 | 13,0 | 11,7 | 478 |
| 7 | 71,3 | 9,3 | 19,4 | 505 | 6 | 71,2 | 12,2 | 16,6 | 506 |
| 30-48-2 | 82,6 | 11,0 | 6,4 | 436 | 8 | 67,4 | 11,6 | 21,0 | 534 |
| 4 | 77,6 | 10,3 | 12,1 | 464 | 30-63-1 | 82,4 | 14,4 | 3,2 | 437 |
| 6 | 73,2 | 9,7 | 17,1 | 492 | 3 | 77,4 | 13,5 | 9,0 | 465 |
| 8 | 69,2 | 9,2 | 21,5 | 520 | 5 | 73,0 | 12,8 | 14,2 | 493 |
| 30-49-1 | 85,1 | 11,6 | 3,3 | 423 | 7 | 69,1 | 12,1 | 18,8 | 521 |
| 3 | 79,8 | 10,9 | 9,3 | 451 | 31-22-4 | 82,6 | 4,9 | 12,4 | 450 |
| 5 | 75,2 | 10,2 | 14,6 | 479 | 31-23-3 | 85,1 | 5,3 | 9,6 | 437 |
| 7 | 71,0 | 9,7 | 19,3 | 507 | 31-24-2 | 87,7 | 5,7 | 6,6 | 424 |
| 30-50-2 | 82,2 | 11,4 | 6,4 | 438 | 31-25-3 | 84,7 | 5,7 | 9,6 | 439 |
| 4 | 77,3 | 10,7 | 12,0 | 466 | 31-26-2 | 86,4 | 7,6 | 5,9 | 472 |
| 6 | 72,9 | 10,1 | 17,0 | 494 | 4 | 82,0 | 5,7 | 12,3 | 454 |
| 8 | 69,0 | 9,6 | 21,4 | 522 | 31-27-3 | 84,4 | 6,1 | 9,5 | 441 |
| 30-51-1 | 84,7 | 12,0 | 3,3 | 425 | 7 | 74,8 | 5,4 | 19,7 | 497 |
| 3 | 79,5 | 11,2 | 9,3 | 453 | 31-29-3 | 84,0 | 6,5 | 9,5 | 443 |
| 5 | 74,8 | 10,6 | 14,6 | 481 | 31-30-2 | 86,5 | 7,0 | 6,5 | 430 |
| 7 | 70,7 | 10,0 | 19,2 | 509 | 31-34-2 | 85,7 | 7,8 | 6,4 | 434 |
| 30-52-2 | 81,8 | 11,8 | 6,4 | 440 | 31-37-3 | 82,5 | 8,2 | 9,3 | 451 |
| 4 | 76,9 | 11,1 | 12,0 | 468 | 31-41-3 | 81,8 | 9,0 | 9,2 | 455 |
| 6 | 72,6 | 10,5 | 16,9 | 496 | 31-43-3 | 81,4 | 9,4 | 9,2 | 457 |
| 8 | 68,7 | 9,9 | 21,4 | 524 | 31-61-1 | 83,2 | 13,6 | 3,1 | 447 |
| 30-53-1 | 84,3 | 12,4 | 3,3 | 427 | 32-20-4 | 83,5 | 4,3 | 12,2 | 460 |
| 3 | 79,1 | 11,6 | 9,2 | 455 | 32-21-3 | 85,9 | 4,7 | 9,4 | 447 |
| 5 | 74,5 | 11,0 | 14,5 | 483 | 32-22-4 | 83,1 | 4,8 | 12,1 | 462 |
| 7 | 70,4 | 10,4 | 19,2 | 511 | 32-23-5 | 80,5 | 4,8 | 14,7 | 477 |
| 30-54-2 | 81,4 | 12,2 | 6,3 | 442 | 32-24-6 | 78,1 | 4,9 | 17,0 | 492 |
| 4 | 76,6 | 11,5 | 11,9 | 470 | 32-25-3 | 85,1 | 5,5 | 9,3 | 451 |
| 6 | 72,3 | 10,8 | 16,9 | 498 | 32-26-4 | 82,4 | 5,6 | 12,0 | 466 |
| 8 | 68,4 | 10,3 | 21,3 | 526 | 32-27-5 | 79,8 | 5,6 | 14,6 | 481 |
| 30-55-1 | 83,9 | 12,8 | 3,3 | 429 | 7 | 75,4 | 5,3 | 19,3 | 509 |
| 3 | 78,8 | 12,0 | 9,2 | 457 | 32-28-2 | 87,3 | 6,3 | 6,3 | 440 |
| 5 | 74,2 | 11,3 | 14,4 | 485 | 6 | 77,4 | 5,6 | 16,9 | 496 |
| 7 | 70,2 | 10,7 | 19,1 | 513 | 32-29-5 | 79,5 | 6,0 | 14,5 | 483 |
| 30-56-2 | 81,1 | 12,6 | 6,3 | 444 | 32-34-4 | 81,0 | 7,2 | 11,8 | 474 |
| 4 | 76,3 | 11,8 | 11,8 | 472 | 32-36-6 | 76,2 | 7,1 | 16,7 | 504 |
| 6 | 72,0 | 11,2 | 16,8 | 500 | 32-40-4 | 80,0 | 8,3 | 11,7 | 480 |
| 8 | 68,2 | 10,6 | 21,2 | 528 | 32-42-4 | 79,7 | 8,7 | 11,6 | 482 |
| 30-57-1 | 83,5 | 13,2 | 3,2 | 431 | 32-49-1 | 85,9 | 11,0 | 3,1 | 447 |
| 3 | 78,4 | 12,4 | 9,2 | 459 | 32-52-4 | 78,0 | 10,6 | 11,4 | 492 |
| 5 | 73,9 | 11,7 | 14,4 | 487 | 33-22-2 | 88,8 | 4,9 | 6,3 | 446 |
| 7 | 69,9 | 11,1 | 19,0 | 515 | 33-23-5 | 81,0 | 4,7 | 14,3 | 489 |
| 30-58-2 | 80,7 | 13,0 | 6,3 | 446 | 33-24-2 | 88,4 | 5,4 | 6,2 | 448 |
| 4 | 76,0 | 12,2 | 11,8 | 474 | 6 | 78,5 | 4,8 | 16,7 | 504 |
| 6 | 71,7 | 11,6 | 16,7 | 502 | 33-28-4 | 82,5 | 5,8 | 11,7 | 480 |
| 8 | 67,9 | 10,9 | 21,1 | 530 | 33-29-5 | 80,0 | 5,8 | 14,1 | 495 |
| 30-59-1 | 83,2 | 13,6 | 3,2 | 433 | 33-30-6 | 77,6 | 5,9 | 16,5 | 510 |
| 3 | 78,1 | 12,8 | 9,1 | 461 | 8 | 73,6 | 5,6 | 20,8 | 538 |
| 5 | 73,6 | 12,1 | 14,3 | 489 | 33-33-3 | 84,1 | 7,0 | 8,9 | 471 |
| 7 | 69,6 | 11,4 | 19,0 | 517 | 33-35-3 | 83,7 | 7,4 | 8,9 | 473 |
| 30-60-2 | 80,4 | 13,4 | 6,2 | 448 | 33-39-3 | 83,9 | 8,2 | 8,8 | 477 |
| 4 | 75,6 | 12,6 | 11,8 | 476 | 33-51-1 | 85,8 | 11,1 | 3,0 | 461 |
| 6 | 71,4 | 11,9 | 16,7 | 504 | 34-22-4 | 83,9 | 4,5 | 11,5 | 486 |
| 8 | 67,7 | 11,3 | 21,0 | 532 | 34-24-2 | 88,7 | 5,2 | 6,1 | 460 |

| C-H-N | C % | H % | N % | M. G. | C-H-N | C % | H % | N % | M. G. |
|---------|------|------|------|-------|----------|------|------|------|-------|
| 34-24-4 | 83.6 | 4.9 | 11.5 | 488 | 36-51-1 | 86.9 | 10.3 | 2.8 | 497 |
| 34-26-2 | 83.3 | 5.6 | 6.1 | 462 | 37-27-5 | 82.1 | 5.0 | 12.9 | 541 |
| 4 | 83.3 | 5.3 | 11.4 | 490 | 37-29-3 | 86.2 | 5.6 | 8.2 | 515 |
| 6 | 83.8 | 5.0 | 16.2 | 518 | 37-30-2 | 88.4 | 6.0 | 5.6 | 502 |
| 34-28-2 | 83.9 | 6.0 | 6.0 | 464 | 37-38-2 | 87.1 | 7.4 | 5.5 | 510 |
| 4 | 83.9 | 5.7 | 11.4 | 492 | 38-24-2 | 89.7 | 4.7 | 5.5 | 508 |
| 6 | 83.5 | 5.4 | 16.1 | 520 | 38-26-4 | 84.8 | 4.8 | 10.4 | 538 |
| 34-32-2 | 83.2 | 6.8 | 6.0 | 468 | 38-30-8 | 76.2 | 5.0 | 18.7 | 598 |
| 4 | 83.2 | 6.4 | 11.3 | 496 | 38-33-3 | 85.9 | 6.2 | 7.9 | 531 |
| 6 | 83.8 | 6.1 | 16.0 | 524 | 38-41-3 | 84.6 | 7.6 | 7.8 | 539 |
| 34-34-2 | 83.8 | 7.2 | 6.0 | 470 | 38-52-4 | 80.8 | 9.2 | 9.9 | 564 |
| 34-35-3 | 84.1 | 7.2 | 8.7 | 485 | 38-71-1 | 84.3 | 13.1 | 2.6 | 541 |
| 34-36-2 | 83.4 | 7.6 | 5.9 | 472 | 39-30-2 | 69.0 | 5.7 | 5.3 | 526 |
| 34-40-4 | 80.9 | 7.9 | 11.1 | 504 | 6 | 80.4 | 5.2 | 14.4 | 582 |
| 34-42-4 | 80.6 | 8.3 | 11.1 | 506 | 39-34-4 | 83.9 | 6.1 | 10.0 | 558 |
| 34-43-6 | 83.3 | 8.3 | 13.4 | 521 | 39-35-11 | 71.2 | 5.3 | 23.4 | 657 |
| 34-52-2 | 83.6 | 10.6 | 5.7 | 488 | 40-44-6 | 79.0 | 7.2 | 13.8 | 608 |
| 35-24-4 | 84.0 | 4.8 | 11.2 | 500 | 41-30-2 | 89.4 | 5.4 | 5.1 | 550 |
| 35-25-1 | 91.5 | 5.4 | 3.0 | 459 | 42-32-6 | 81.3 | 5.2 | 13.5 | 620 |
| 35-28-2 | 83.6 | 5.5 | 5.9 | 474 | 42-33-5 | 83.0 | 5.4 | 11.5 | 607 |
| 35-30-2 | 83.9 | 6.3 | 5.8 | 478 | 42-36-4 | 84.6 | 6.0 | 9.4 | 596 |
| 35-34-4 | 82.3 | 6.7 | 11.0 | 510 | 42-51-5 | 80.6 | 8.2 | 11.2 | 625 |
| 35-35-5 | 80.0 | 6.7 | 13.3 | 525 | 43-30-2 | 89.9 | 5.2 | 4.9 | 574 |
| 35-41-1 | 83.4 | 8.6 | 2.9 | 475 | 46-34-6 | 82.4 | 5.1 | 12.5 | 670 |
| 35-42-2 | 85.7 | 8.6 | 5.7 | 490 | 37-36-4 | 86.0 | 5.5 | 8.5 | 656 |
| 36-27-3 | 86.2 | 5.4 | 8.4 | 501 | 48-38-6 | 82.5 | 5.4 | 12.0 | 698 |
| 6 | 81.7 | 5.1 | 13.2 | 520 | 48-99-1 | 83.6 | 14.4 | 2.0 | 689 |
| 36-28-6 | 79.4 | 5.2 | 15.4 | 544 | 54-51-5 | 84.3 | 6.6 | 9.1 | 769 |
| 36-29-5 | 81.3 | 5.5 | 13.2 | 531 | 60-123-1 | 84.0 | 14.3 | 1.6 | 857 |
| 36-35-5 | 83.4 | 6.5 | 13.0 | 537 | 61-74-6 | 82.3 | 8.3 | 9.4 | 890 |
| 36-36-6 | 78.3 | 6.5 | 15.2 | 552 | | | | | |

| C-H-O-N | C% | H% | O% | N% | M. G. | C-H-O-N | C% | H% | O% | N% | M. G. |
|---------|------|------|------|------|-------|---------|------|-----|------|------|-------|
| 1-1-1-1 | 27.9 | 2.3 | 37.2 | 32.6 | 43 | 1-5-3-3 | 11.2 | 4.7 | 44.8 | 39.3 | 107 |
| 2-1 | 20.3 | 1.7 | 54.2 | 23.7 | 59 | 4-3 | 9.7 | 4.1 | 52.0 | 34.1 | 123 |
| 3 | 13.8 | 1.1 | 36.8 | 48.3 | 87 | 1-6-1-2 | 19.4 | 9.7 | 25.8 | 45.1 | 62 |
| 3-1 | 16.0 | 1.3 | 64.0 | 18.7 | 75 | 4 | 13.3 | 6.6 | 17.8 | 62.3 | 90 |
| 3 | 11.6 | 1.0 | 46.6 | 40.8 | 103 | 2-2 | 15.4 | 7.7 | 41.0 | 35.9 | 78 |
| 4-1 | 13.2 | 1.1 | 70.3 | 15.4 | 91 | 4 | 11.3 | 5.6 | 30.2 | 52.8 | 106 |
| 3 | 10.1 | 0.8 | 53.8 | 35.3 | 119 | 1-7-1-3 | 15.6 | 9.1 | 20.8 | 54.5 | 77 |
| 5-3 | 8.9 | 0.7 | 59.3 | 31.1 | 135 | 2-1-1-1 | 43.6 | 1.8 | 29.1 | 25.5 | 55 |
| 6-3 | 7.9 | 0.7 | 63.6 | 27.8 | 151 | 3 | 28.9 | 1.2 | 19.3 | 50.6 | 83 |
| 7-3 | 7.2 | 0.6 | 67.1 | 25.1 | 167 | 2-1 | 33.8 | 1.4 | 45.1 | 19.7 | 71 |
| 1-2-1-2 | 20.7 | 3.4 | 27.6 | 48.3 | 58 | 3 | 24.2 | 1.0 | 32.3 | 42.4 | 99 |
| 4 | 14.0 | 2.3 | 18.6 | 65.1 | 86 | 3-1 | 27.6 | 1.1 | 55.1 | 16.1 | 87 |
| 6 | 10.5 | 1.8 | 14.0 | 73.7 | 114 | 3 | 20.9 | 0.9 | 41.7 | 36.5 | 115 |
| 2-2 | 16.2 | 2.7 | 43.2 | 37.8 | 74 | 4-1 | 23.3 | 1.0 | 62.1 | 13.6 | 103 |
| 3-2 | 13.3 | 2.2 | 53.3 | 31.1 | 90 | 3 | 18.3 | 0.8 | 48.8 | 32.1 | 131 |
| 4 | 10.2 | 1.7 | 40.7 | 47.4 | 118 | 5-3 | 16.3 | 0.7 | 54.4 | 28.6 | 147 |
| 4-2 | 11.3 | 1.9 | 60.4 | 26.4 | 106 | 6-3 | 14.7 | 0.6 | 58.9 | 25.8 | 163 |
| 4 | 8.9 | 1.5 | 47.8 | 41.8 | 134 | 7-3 | 13.4 | 0.6 | 62.6 | 23.4 | 179 |
| 5-2 | 9.8 | 1.6 | 65.6 | 23.0 | 122 | 2-2-1-2 | 34.3 | 2.8 | 22.9 | 40.0 | 70 |
| 4 | 8.0 | 1.3 | 53.3 | 37.3 | 150 | 10 | 13.2 | 1.1 | 8.8 | 76.9 | 182 |
| 6-4 | 7.2 | 1.2 | 57.8 | 33.7 | 166 | 2-2 | 27.9 | 2.3 | 37.2 | 32.6 | 86 |
| 1-3-1-1 | 26.7 | 6.7 | 35.5 | 31.1 | 45 | 6 | 16.9 | 1.4 | 22.5 | 59.1 | 142 |
| 3 | 16.4 | 4.1 | 21.9 | 57.5 | 73 | 3-2 | 23.5 | 2.0 | 47.1 | 27.4 | 102 |
| 2-1 | 19.7 | 4.9 | 52.4 | 23.0 | 61 | 4 | 18.5 | 1.5 | 36.9 | 43.1 | 130 |
| 3 | 13.5 | 3.4 | 35.9 | 47.2 | 89 | 4-2 | 20.3 | 1.7 | 54.2 | 23.7 | 118 |
| 3-1 | 15.6 | 3.9 | 62.3 | 18.2 | 77 | 4 | 16.4 | 1.4 | 43.8 | 38.4 | 146 |
| 3 | 11.4 | 2.8 | 45.7 | 40.0 | 105 | 5-2 | 17.9 | 1.5 | 59.7 | 20.9 | 134 |
| 4-3 | 9.9 | 2.5 | 52.9 | 34.7 | 121 | 4 | 14.8 | 1.2 | 49.4 | 34.6 | 162 |
| 5 | 8.1 | 2.0 | 42.9 | 47.0 | 149 | 6-4 | 13.5 | 1.1 | 53.9 | 31.5 | 178 |
| 5-3 | 8.7 | 2.2 | 58.4 | 30.7 | 137 | 8-4 | 11.4 | 0.9 | 60.9 | 26.7 | 210 |
| 1-4-1-2 | 20.0 | 6.7 | 26.7 | 46.6 | 60 | 2-3-1-1 | 42.1 | 5.2 | 28.1 | 24.6 | 57 |
| 4 | 13.6 | 4.5 | 18.2 | 63.6 | 88 | 3 | 28.2 | 3.5 | 18.8 | 49.4 | 85 |
| 2-2 | 15.8 | 5.2 | 42.1 | 36.8 | 76 | 7 | 17.0 | 2.1 | 11.3 | 69.5 | 141 |
| 4 | 11.5 | 3.8 | 30.8 | 53.8 | 104 | 2-1 | 32.9 | 4.1 | 43.8 | 19.2 | 73 |
| 3-2 | 13.0 | 4.3 | 52.2 | 30.4 | 92 | 3 | 23.8 | 3.0 | 31.7 | 41.5 | 101 |
| 4 | 10.0 | 3.3 | 40.0 | 46.7 | 120 | 5 | 18.6 | 2.3 | 24.8 | 54.3 | 129 |
| 4-4 | 8.8 | 2.9 | 47.1 | 41.2 | 136 | 3-1 | 27.0 | 3.3 | 54.0 | 15.7 | 89 |
| 5-4 | 7.9 | 2.6 | 52.6 | 36.9 | 152 | 3 | 20.5 | 2.5 | 41.0 | 35.9 | 117 |
| 6-4 | 7.1 | 2.4 | 57.1 | 33.3 | 168 | 4-1 | 22.9 | 2.8 | 61.0 | 13.3 | 105 |
| 1-5-1-1 | 25.5 | 10.6 | 34.0 | 29.8 | 47 | 3 | 18.0 | 2.2 | 48.1 | 31.6 | 133 |
| 3 | 16.0 | 6.6 | 21.3 | 66.0 | 75 | 5-1 | 19.8 | 2.5 | 66.1 | 11.6 | 121 |
| 2-1 | 19.0 | 7.9 | 50.8 | 22.2 | 63 | 3 | 16.1 | 2.0 | 53.7 | 28.2 | 149 |
| 3 | 13.2 | 5.5 | 35.2 | 46.1 | 91 | 6-3 | 14.5 | 1.8 | 58.2 | 25.5 | 165 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|------|------|------|------|---------|------|-----|------|------|------|
| 2-3-6-5 | 12.4 | 1.6 | 49.7 | 36.3 | 193 | 3-2-4-4 | 22.8 | 1.2 | 40.5 | 35.5 | 158 |
| 2-4-1-2 | 33.3 | 5.5 | 22.2 | 38.9 | 72 | 5-2 | 24.6 | 1.4 | 54.8 | 19.2 | 146 |
| 4 | 24.0 | 4.0 | 16.0 | 56.0 | 109 | 4 | 20.7 | 1.1 | 46.0 | 32.2 | 174 |
| 6 | 18.7 | 3.1 | 12.5 | 65.6 | 128 | 6-2 | 22.2 | 1.2 | 59.3 | 17.3 | 162 |
| 2-2 | 27.3 | 4.5 | 36.4 | 31.8 | 88 | 4 | 19.0 | 1.0 | 50.5 | 29.5 | 190 |
| 4 | 20.7 | 3.4 | 27.6 | 48.3 | 116 | 3-3-1-1 | 52.2 | 4.3 | 23.2 | 20.3 | 69 |
| 3-2 | 23.1 | 3.8 | 46.2 | 26.9 | 104 | 3 | 37.1 | 3.1 | 16.5 | 43.3 | 97 |
| 4 | 18.2 | 3.0 | 36.4 | 42.4 | 132 | 2-1 | 42.3 | 3.5 | 37.6 | 16.5 | 85 |
| 4-2 | 20.0 | 3.3 | 53.3 | 23.3 | 120 | 3 | 31.9 | 2.6 | 28.3 | 47.2 | 113 |
| 4 | 16.2 | 2.7 | 43.2 | 37.8 | 148 | 3-1 | 35.6 | 3.0 | 47.5 | 13.9 | 101 |
| 5-2 | 17.7 | 2.9 | 58.8 | 20.6 | 136 | 3 | 27.9 | 2.3 | 37.2 | 32.6 | 129 |
| 4 | 14.6 | 2.4 | 48.8 | 34.1 | 164 | 4-1 | 30.8 | 2.5 | 54.7 | 12.0 | 117 |
| 6-2 | 15.8 | 2.6 | 63.2 | 18.4 | 152 | 3 | 24.8 | 2.1 | 44.1 | 29.0 | 145 |
| 4 | 13.3 | 2.2 | 53.3 | 31.1 | 180 | 5-1 | 27.1 | 2.2 | 60.1 | 10.5 | 133 |
| 2-5-1-1 | 40.7 | 8.5 | 27.1 | 23.7 | 59 | 3 | 22.4 | 1.8 | 49.7 | 26.1 | 161 |
| 3 | 27.6 | 5.7 | 18.4 | 48.3 | 87 | 6-1 | 24.2 | 2.0 | 64.4 | 9.4 | 149 |
| 5 | 20.9 | 4.3 | 13.9 | 60.9 | 115 | 3 | 20.3 | 1.7 | 54.2 | 23.7 | 177 |
| 7 | 16.8 | 3.5 | 11.2 | 68.5 | 143 | 7-3 | 18.6 | 1.5 | 58.0 | 21.8 | 193 |
| 2-1 | 32.0 | 6.7 | 42.7 | 18.6 | 75 | 3-4-1-2 | 42.9 | 4.8 | 19.0 | 33.3 | 84 |
| 3 | 23.3 | 4.8 | 31.1 | 40.8 | 103 | 4 | 32.1 | 3.6 | 14.3 | 50.0 | 112 |
| 3-1 | 26.3 | 5.5 | 52.7 | 15.4 | 91 | 2-2 | 36.0 | 4.0 | 32.0 | 28.0 | 100 |
| 3 | 20.2 | 4.2 | 40.3 | 35.3 | 119 | 4 | 28.1 | 3.1 | 25.0 | 43.7 | 128 |
| 5 | 16.3 | 3.4 | 32.7 | 47.6 | 147 | 3-2 | 31.0 | 3.4 | 41.4 | 24.1 | 116 |
| 4-1 | 22.5 | 4.6 | 59.8 | 13.1 | 107 | 4 | 25.0 | 2.8 | 33.3 | 38.9 | 144 |
| 3 | 17.8 | 3.7 | 47.4 | 31.1 | 135 | 4-2 | 27.3 | 3.0 | 48.5 | 21.2 | 132 |
| 2-6-1-2 | 32.4 | 8.1 | 21.6 | 37.8 | 74 | 4 | 22.5 | 2.5 | 40.0 | 35.0 | 160 |
| 4 | 23.5 | 5.9 | 15.7 | 54.9 | 102 | 5-4 | 10.5 | 2.3 | 45.4 | 31.8 | 676 |
| 6 | 18.5 | 4.6 | 12.3 | 64.6 | 130 | 6-2 | 22.0 | 2.4 | 58.5 | 17.1 | 164 |
| 2-2 | 26.7 | 6.7 | 35.5 | 31.1 | 90 | 4 | 18.7 | 2.1 | 50.0 | 29.2 | 192 |
| 4 | 20.3 | 5.1 | 27.1 | 47.5 | 118 | 3-5-1-1 | 50.7 | 7.0 | 22.5 | 19.7 | 71 |
| 3-2 | 22.6 | 5.6 | 45.3 | 26.4 | 106 | 3 | 36.4 | 5.0 | 16.2 | 42.4 | 99 |
| 4 | 17.9 | 4.5 | 35.8 | 41.8 | 134 | 5 | 28.3 | 3.9 | 12.6 | 55.1 | 127 |
| 4-2 | 19.7 | 4.9 | 52.4 | 23.0 | 122 | 2-1 | 41.4 | 5.7 | 36.8 | 16.1 | 87 |
| 4 | 16.0 | 4.0 | 42.7 | 37.3 | 150 | 3 | 31.3 | 4.3 | 27.8 | 36.5 | 115 |
| 2-7-1-1 | 39.3 | 11.5 | 26.2 | 23.0 | 61 | 5 | 25.2 | 3.5 | 22.4 | 48.9 | 143 |
| 3 | 27.0 | 7.8 | 18.0 | 47.2 | 89 | 3-1 | 34.9 | 4.8 | 46.6 | 13.6 | 103 |
| 5 | 20.5 | 6.0 | 13.7 | 59.8 | 117 | 3 | 27.5 | 3.8 | 36.6 | 32.1 | 131 |
| 7 | 16.6 | 4.8 | 11.0 | 67.6 | 145 | 4-1 | 30.2 | 4.2 | 53.8 | 11.8 | 119 |
| 2-1 | 31.2 | 9.1 | 41.5 | 18.2 | 77 | 3 | 24.5 | 3.4 | 43.5 | 28.6 | 147 |
| 3 | 22.8 | 6.6 | 30.5 | 40.9 | 105 | 5-1 | 26.6 | 3.7 | 59.3 | 10.4 | 135 |
| 2-8-1-2 | 31.6 | 10.5 | 21.1 | 36.8 | 76 | 3 | 22.1 | 3.0 | 49.1 | 25.8 | 163 |
| 10 | 12.7 | 4.2 | 8.5 | 74.5 | 188 | 6-3 | 20.1 | 2.8 | 53.6 | 23.5 | 179 |
| 2-2 | 26.1 | 8.7 | 34.8 | 30.4 | 92 | 7-3 | 18.5 | 2.6 | 57.4 | 21.3 | 195 |
| 3-2 | 22.2 | 7.4 | 44.4 | 25.9 | 108 | 8-3 | 17.0 | 2.4 | 60.7 | 19.9 | 211 |
| 3-1-1-1 | 53.7 | 1.5 | 23.9 | 20.9 | 67 | 9-3 | 15.8 | 2.2 | 63.4 | 18.5 | 227 |
| 3 | 37.9 | 1.0 | 16.8 | 44.2 | 95 | 3-6-1-2 | 41.9 | 7.0 | 18.6 | 32.5 | 86 |
| 2-1 | 43.4 | 1.2 | 38.6 | 16.8 | 83 | 4 | 31.6 | 5.2 | 14.0 | 49.1 | 114 |
| 3 | 32.4 | 0.9 | 28.8 | 37.8 | 111 | 2-2 | 35.3 | 5.9 | 31.4 | 27.4 | 102 |
| 5 | 25.9 | 0.7 | 23.0 | 50.4 | 139 | 4 | 27.7 | 4.6 | 24.6 | 43.1 | 130 |
| 3-1 | 36.3 | 1.0 | 48.5 | 14.1 | 99 | 3-2 | 30.5 | 5.1 | 40.7 | 23.7 | 118 |
| 3 | 28.3 | 0.8 | 37.8 | 33.1 | 127 | 4 | 24.7 | 4.1 | 32.9 | 38.3 | 146 |
| 3-2-1-2 | 43.9 | 2.4 | 19.5 | 34.2 | 82 | 6 | 20.7 | 3.4 | 27.6 | 48.3 | 174 |
| 4 | 32.7 | 1.8 | 14.5 | 50.9 | 110 | 4-2 | 26.8 | 4.5 | 47.8 | 20.9 | 134 |
| 2-2 | 36.7 | 2.0 | 32.7 | 28.6 | 98 | 4 | 22.2 | 3.7 | 39.5 | 34.6 | 162 |
| 4 | 28.6 | 1.6 | 25.4 | 44.4 | 126 | 5-2 | 24.0 | 4.0 | 53.3 | 18.7 | 150 |
| 6 | 23.4 | 1.3 | 20.8 | 54.5 | 154 | 4 | 20.2 | 3.4 | 44.9 | 31.5 | 178 |
| 3-2 | 31.6 | 1.7 | 42.1 | 24.6 | 114 | 6-2 | 21.7 | 3.6 | 57.8 | 16.9 | 166 |
| 4 | 25.3 | 1.4 | 33.8 | 39.4 | 142 | 4 | 18.5 | 3.1 | 49.5 | 28.9 | 194 |
| 4-2 | 27.7 | 1.5 | 49.2 | 21.6 | 130 | 3-7-1-1 | 49.3 | 9.6 | 21.9 | 19.2 | 73 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|------|------|------|------|---------|------|-----|------|------|------|
| 3-7-1-3 | 35.6 | 6.9 | 15.8 | 41.6 | 101 | 4-3-5-1 | 33.1 | 2.1 | 55.2 | 9.6 | 145 |
| 2-1 | 40.4 | 7.8 | 36.0 | 15.7 | 89 | 3 | 27.7 | 1.7 | 46.2 | 24.3 | 173 |
| 3 | 30.8 | 6.0 | 27.3 | 35.9 | 117 | 4-4-1-2 | 50.0 | 4.2 | 16.6 | 29.2 | 96 |
| 3-1 | 34.3 | 6.7 | 45.7 | 13.3 | 105 | 4 | 38.7 | 3.2 | 12.9 | 45.2 | 124 |
| 3 | 27.1 | 5.2 | 36.1 | 31.6 | 133 | 2-2 | 42.9 | 3.5 | 28.6 | 25.0 | 112 |
| 4-1 | 29.7 | 5.8 | 52.9 | 11.6 | 121 | 4 | 34.3 | 2.8 | 22.9 | 40.0 | 140 |
| 3 | 24.2 | 4.7 | 42.9 | 28.2 | 149 | 6 | 28.6 | 2.4 | 19.0 | 50.0 | 168 |
| 5-1 | 26.3 | 5.1 | 58.4 | 10.2 | 137 | 3-2 | 37.5 | 3.1 | 37.5 | 21.9 | 128 |
| 3 | 21.8 | 4.2 | 48.5 | 25.4 | 165 | 4 | 30.8 | 2.5 | 30.8 | 35.9 | 156 |
| 3-8-1-2 | 40.9 | 9.1 | 18.2 | 31.8 | 88 | 4-2 | 33.3 | 2.8 | 44.4 | 19.4 | 144 |
| 4 | 31.0 | 6.9 | 13.8 | 48.3 | 116 | 4 | 27.9 | 2.3 | 37.2 | 32.6 | 172 |
| 2-2 | 34.6 | 7.7 | 30.8 | 26.9 | 104 | 6 | 24.0 | 2.0 | 32.0 | 42.0 | 200 |
| 4 | 27.3 | 6.1 | 24.2 | 42.4 | 132 | 5-2 | 30.0 | 2.5 | 50.0 | 17.5 | 160 |
| 6 | 22.5 | 5.0 | 20.0 | 52.5 | 160 | 4 | 25.5 | 2.1 | 42.5 | 29.8 | 188 |
| 3-2 | 30.0 | 6.7 | 40.0 | 23.3 | 120 | 6-2 | 27.3 | 2.3 | 54.5 | 15.9 | 176 |
| 4 | 24.3 | 5.4 | 32.4 | 37.8 | 148 | 4 | 23.5 | 2.0 | 47.1 | 27.4 | 204 |
| 4-2 | 26.5 | 5.9 | 47.0 | 20.6 | 136 | 6 | 20.7 | 1.7 | 41.4 | 36.2 | 232 |
| 4 | 21.9 | 4.9 | 39.1 | 34.1 | 164 | 7-2 | 25.0 | 2.1 | 58.3 | 14.6 | 162 |
| 3-9-1-1 | 48.0 | 12.0 | 21.3 | 18.7 | 75 | 4 | 21.8 | 1.8 | 50.9 | 25.5 | 220 |
| 3 | 35.0 | 8.7 | 15.5 | 40.8 | 103 | 8-2 | 23.1 | 1.9 | 61.5 | 13.5 | 208 |
| 2-1 | 39.5 | 9.9 | 35.2 | 15.4 | 91 | 4 | 20.3 | 1.7 | 54.2 | 23.7 | 236 |
| 3 | 30.2 | 7.5 | 26.9 | 35.3 | 119 | 9-2 | 21.4 | 1.8 | 64.3 | 12.5 | 224 |
| 3-1 | 33.6 | 8.4 | 44.8 | 13.1 | 107 | 4 | 19.0 | 1.6 | 57.2 | 22.2 | 252 |
| 3 | 26.7 | 6.7 | 35.5 | 31.1 | 135 | 10-2 | 20.0 | 1.7 | 66.7 | 11.6 | 240 |
| 3-10-1-2 | 40.0 | 11.1 | 17.8 | 31.1 | 90 | 4-5-1-1 | 57.8 | 6.0 | 19.3 | 16.9 | 83 |
| 4 | 30.5 | 8.5 | 13.5 | 47.5 | 118 | 3 | 43.2 | 4.5 | 14.4 | 37.8 | 111 |
| 3-11-2-1 | 38.7 | 11.8 | 34.4 | 15.1 | 93 | 5 | 34.5 | 3.6 | 11.5 | 50.4 | 139 |
| 3-12-1-2 | 69.1 | 13.0 | 17.4 | 30.4 | 92 | 2-1 | 48.5 | 5.0 | 32.3 | 14.1 | 99 |
| 4-1-1-1 | 60.8 | 1.2 | 20.3 | 17.7 | 79 | 3 | 37.8 | 3.9 | 25.2 | 33.1 | 127 |
| 3 | 44.9 | 0.9 | 14.9 | 39.3 | 107 | 5 | 31.0 | 3.2 | 20.6 | 45.2 | 155 |
| 2-1 | 50.5 | 1.0 | 33.7 | 14.7 | 95 | 3-1 | 41.7 | 4.3 | 41.7 | 12.2 | 115 |
| 3 | 39.0 | 0.8 | 26.0 | 34.1 | 123 | 3 | 33.5 | 3.5 | 33.6 | 29.4 | 143 |
| 3-1 | 43.2 | 0.9 | 43.2 | 12.6 | 111 | 5 | 28.1 | 2.9 | 28.1 | 40.9 | 171 |
| 3 | 34.5 | 0.7 | 34.5 | 30.2 | 139 | 4-1 | 36.6 | 3.8 | 48.8 | 10.7 | 131 |
| 4-1 | 37.8 | 0.8 | 50.4 | 11.0 | 127 | 3 | 30.2 | 3.1 | 40.2 | 26.4 | 159 |
| 3 | 31.0 | 0.6 | 41.3 | 27.1 | 155 | 5 | 25.7 | 2.7 | 34.2 | 37.4 | 187 |
| 5-3 | 28.1 | 0.6 | 46.8 | 24.5 | 171 | 5-1 | 32.6 | 3.4 | 54.4 | 9.5 | 147 |
| 6-3 | 25.7 | 0.5 | 51.3 | 22.5 | 187 | 3 | 27.4 | 2.8 | 45.7 | 24.0 | 175 |
| 7-3 | 23.6 | 0.5 | 55.2 | 20.7 | 203 | 5-5 | 23.6 | 2.5 | 39.4 | 34.5 | 203 |
| 4-2-1-2 | 51.1 | 2.1 | 17.0 | 29.8 | 94 | 6-3 | 25.1 | 2.6 | 50.3 | 22.0 | 191 |
| 2-2 | 43.6 | 1.8 | 29.1 | 25.5 | 110 | 5 | 21.9 | 2.3 | 43.8 | 32.0 | 219 |
| 4 | 34.8 | 1.4 | 23.2 | 40.6 | 138 | 7-3 | 23.2 | 2.4 | 54.1 | 20.3 | 207 |
| 6 | 28.9 | 1.2 | 19.3 | 50.6 | 166 | 8-5 | 19.1 | 2.0 | 51.0 | 27.9 | 251 |
| 3-2 | 38.1 | 1.6 | 38.1 | 22.2 | 126 | 4-6-1-2 | 49.0 | 6.1 | 16.3 | 28.6 | 98 |
| 4 | 31.2 | 1.3 | 31.2 | 36.3 | 154 | 4 | 38.1 | 4.7 | 12.7 | 44.4 | 126 |
| 4-2 | 33.8 | 1.4 | 45.0 | 16.9 | 142 | 6 | 31.2 | 3.9 | 10.4 | 54.5 | 154 |
| 4 | 28.2 | 1.2 | 37.6 | 32.9 | 170 | 2-2 | 42.1 | 5.2 | 28.1 | 24.6 | 114 |
| 5-2 | 30.4 | 1.2 | 50.6 | 17.7 | 158 | 4 | 33.8 | 4.2 | 22.5 | 39.4 | 142 |
| 4 | 25.8 | 1.1 | 43.0 | 30.1 | 186 | 6 | 28.2 | 3.5 | 18.8 | 49.4 | 170 |
| 6-4 | 23.7 | 1.0 | 47.5 | 27.7 | 202 | 3-2 | 36.9 | 4.6 | 36.9 | 21.6 | 130 |
| 4-3-1-1 | 59.3 | 3.7 | 19.7 | 17.3 | 81 | 4 | 30.4 | 3.8 | 30.4 | 35.4 | 158 |
| 3 | 52.7 | 3.3 | 17.6 | 26.4 | 109 | 6 | 25.8 | 3.2 | 25.8 | 45.2 | 186 |
| 2-1 | 49.5 | 3.1 | 33.0 | 14.4 | 97 | 4-2 | 32.9 | 4.1 | 43.8 | 19.2 | 146 |
| 3 | 38.4 | 2.4 | 25.6 | 33.6 | 125 | 4 | 27.6 | 3.4 | 36.8 | 32.2 | 174 |
| 5 | 31.4 | 1.9 | 20.9 | 45.8 | 153 | 5-2 | 29.6 | 3.7 | 49.4 | 17.3 | 162 |
| 3-1 | 42.5 | 2.6 | 42.5 | 12.4 | 113 | 4 | 25.3 | 3.1 | 42.1 | 29.5 | 190 |
| 3 | 34.0 | 2.1 | 34.0 | 29.8 | 141 | 6-2 | 27.0 | 3.4 | 53.9 | 15.7 | 178 |
| 4-1 | 37.2 | 2.3 | 49.6 | 10.9 | 129 | 4 | 23.3 | 2.9 | 46.6 | 27.2 | 206 |
| 3 | 30.6 | 1.9 | 40.8 | 26.7 | 157 | 7-2 | 24.7 | 3.1 | 57.7 | 14.5 | 194 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|------|------|------|------|----------|------|------|------|------|------|
| 4-6-7-4 | 21.6 | 2.7 | 50.4 | 25.2 | 222 | 4-9-5-1 | 31.8 | 5.9 | 53.0 | 9.3 | 151 |
| 8-2 | 22.9 | 2.8 | 61.0 | 13.3 | 210 | 3 | 26.8 | 5.0 | 44.7 | 23.5 | 179 |
| 4 | 20.2 | 2.5 | 53.8 | 23.5 | 238 | 5 | 23.2 | 4.3 | 38.6 | 33.8 | 207 |
| 9-2 | 21.2 | 2.6 | 63.7 | 12.4 | 226 | 6-1 | 28.7 | 5.4 | 57.5 | 8.4 | 167 |
| 4 | 18.9 | 2.4 | 56.7 | 22.0 | 254 | 3 | 24.6 | 4.6 | 49.2 | 21.5 | 195 |
| 10-2 | 19.8 | 2.5 | 66.1 | 11.6 | 242 | 5 | 21.5 | 4.0 | 43.1 | 31.4 | 223 |
| 4 | 17.8 | 2.2 | 59.3 | 20.7 | 270 | 7-3 | 22.7 | 4.3 | 53.1 | 19.9 | 211 |
| 11-2 | 18.6 | 2.3 | 68.2 | 10.9 | 258 | 5 | 20.1 | 3.8 | 46.8 | 29.3 | 239 |
| 12-4 | 15.9 | 2.0 | 63.6 | 18.5 | 302 | 8-3 | 21.1 | 3.9 | 56.4 | 18.5 | 227 |
| 4-7-1-1 | 56.4 | 8.2 | 18.8 | 16.5 | 85 | 5 | 18.8 | 3.5 | 50.2 | 27.5 | 265 |
| 3 | 42.5 | 6.2 | 14.1 | 37.2 | 113 | 4-10-1-2 | 47.1 | 9.8 | 15.7 | 27.4 | 102 |
| 5 | 34.1 | 4.9 | 11.3 | 49.6 | 141 | 4 | 36.9 | 7.7 | 12.3 | 43.1 | 130 |
| 2-1 | 47.5 | 6.9 | 31.7 | 13.8 | 101 | 6 | 30.4 | 6.3 | 10.1 | 53.2 | 158 |
| 3 | 37.2 | 5.4 | 24.8 | 32.6 | 129 | 2-2 | 40.7 | 8.5 | 27.1 | 23.7 | 118 |
| 3-1 | 41.0 | 6.0 | 41.0 | 12.0 | 117 | 4 | 32.9 | 6.8 | 21.9 | 38.4 | 146 |
| 3 | 33.1 | 4.8 | 33.1 | 29.0 | 145 | 8 | 23.8 | 5.0 | 15.8 | 55.4 | 202 |
| 5 | 27.7 | 4.0 | 27.7 | 40.5 | 173 | 3-2 | 35.8 | 7.4 | 35.8 | 20.9 | 134 |
| 4-1 | 36.1 | 5.2 | 48.1 | 10.5 | 133 | 4 | 29.6 | 6.2 | 29.6 | 34.6 | 162 |
| 3 | 29.8 | 4.3 | 39.8 | 26.1 | 161 | 4-2 | 32.0 | 6.7 | 42.7 | 18.6 | 150 |
| 5 | 25.4 | 3.7 | 33.9 | 37.0 | 189 | 4 | 27.0 | 5.6 | 36.0 | 31.4 | 178 |
| 5-1 | 32.2 | 4.7 | 53.7 | 9.4 | 149 | 5-2 | 28.9 | 6.0 | 48.2 | 16.9 | 166 |
| 3 | 27.1 | 3.9 | 45.2 | 23.7 | 177 | 4 | 24.7 | 5.1 | 41.2 | 28.9 | 194 |
| 6-1 | 20.1 | 4.2 | 58.2 | 8.5 | 165 | 6-2 | 26.3 | 5.5 | 52.7 | 15.4 | 182 |
| 3 | 24.9 | 3.6 | 49.7 | 21.8 | 193 | 4 | 22.9 | 4.7 | 45.7 | 26.7 | 210 |
| 7-3 | 23.0 | 3.3 | 53.6 | 20.1 | 209 | 4-11-1-1 | 54.0 | 12.3 | 18.0 | 15.7 | 89 |
| 8-1 | 24.4 | 3.5 | 65.0 | 7.1 | 197 | 3 | 41.0 | 9.4 | 13.7 | 35.9 | 117 |
| 3 | 21.3 | 3.1 | 56.9 | 18.7 | 225 | 5 | 33.1 | 7.6 | 11.0 | 48.3 | 145 |
| 4-8-1-2 | 48.0 | 8.0 | 16.0 | 28.0 | 100 | 2-1 | 45.7 | 10.5 | 30.5 | 13.3 | 105 |
| 4 | 37.5 | 6.2 | 12.5 | 43.7 | 128 | 3 | 36.1 | 8.3 | 24.0 | 31.6 | 133 |
| 2-2 | 41.4 | 6.9 | 27.6 | 24.1 | 116 | 5 | 29.8 | 6.8 | 19.9 | 43.5 | 161 |
| 4 | 33.3 | 5.5 | 22.2 | 38.9 | 144 | 3-1 | 39.7 | 9.1 | 39.7 | 11.5 | 121 |
| 6 | 27.9 | 4.6 | 18.6 | 48.9 | 172 | 3 | 32.2 | 7.4 | 32.2 | 28.2 | 149 |
| 3-2 | 36.4 | 6.0 | 36.4 | 21.2 | 132 | 4-1 | 35.0 | 8.0 | 46.7 | 10.2 | 137 |
| 4 | 30.0 | 5.0 | 30.0 | 35.0 | 160 | 3 | 29.1 | 6.6 | 38.8 | 25.4 | 165 |
| 4-2 | 32.4 | 5.4 | 43.2 | 18.9 | 148 | 5-3 | 26.5 | 6.1 | 44.2 | 23.2 | 181 |
| 4 | 27.3 | 4.5 | 36.4 | 31.8 | 176 | 6-3 | 24.4 | 5.6 | 48.7 | 21.3 | 197 |
| 6 | 23.5 | 3.9 | 31.4 | 41.2 | 204 | 4-12-1-2 | 46.2 | 11.5 | 15.4 | 26.9 | 104 |
| 8 | 20.7 | 3.4 | 27.6 | 48.3 | 232 | 4 | 36.4 | 9.1 | 12.1 | 42.4 | 132 |
| 5-2 | 29.3 | 4.9 | 48.8 | 17.0 | 164 | 2-2 | 40.0 | 10.0 | 26.7 | 23.3 | 120 |
| 4 | 25.0 | 4.1 | 41.7 | 29.2 | 192 | 4 | 32.4 | 8.1 | 21.6 | 37.8 | 148 |
| 6-2 | 26.7 | 4.4 | 53.3 | 15.6 | 180 | 3-2 | 35.3 | 8.8 | 35.3 | 20.6 | 136 |
| 4 | 23.1 | 3.8 | 46.2 | 26.9 | 208 | 4 | 29.3 | 7.3 | 29.3 | 34.1 | 164 |
| 7-2 | 24.5 | 4.1 | 57.1 | 14.3 | 196 | 4-2 | 31.5 | 7.9 | 42.1 | 18.4 | 152 |
| 4 | 21.4 | 3.6 | 50.0 | 15.0 | 224 | 4 | 26.7 | 6.7 | 35.5 | 31.1 | 180 |
| 6 | 19.0 | 3.2 | 44.4 | 33.3 | 252 | 6 | 23.1 | 5.8 | 30.7 | 40.4 | 208 |
| 8-2 | 22.6 | 3.8 | 60.4 | 13.2 | 212 | 4-13-1-1 | 52.7 | 14.3 | 17.6 | 15.4 | 91 |
| 4 | 20.0 | 3.3 | 53.3 | 23.3 | 240 | 3 | 40.3 | 10.9 | 13.4 | 35.3 | 119 |
| 6 | 17.9 | 3.0 | 57.7 | 31.3 | 268 | 2-1 | 44.9 | 12.1 | 29.9 | 13.1 | 107 |
| 4-9-1-1 | 55.2 | 10.3 | 18.4 | 16.1 | 87 | 3 | 35.5 | 9.6 | 23.7 | 31.1 | 135 |
| 3 | 41.7 | 7.8 | 13.9 | 36.5 | 115 | 5-1-1-1 | 65.9 | 1.1 | 17.6 | 15.4 | 91 |
| 2-1 | 46.6 | 8.7 | 31.1 | 13.6 | 103 | 6-5 | 26.4 | 0.4 | 42.3 | 30.8 | 227 |
| 3 | 36.7 | 6.9 | 24.4 | 32.0 | 131 | 5-2-1-2 | 56.6 | 1.9 | 15.1 | 26.4 | 106 |
| 5 | 30.2 | 5.7 | 20.1 | 44.0 | 159 | 2-2 | 49.2 | 1.6 | 26.2 | 23.0 | 122 |
| 7 | 25.7 | 4.8 | 17.1 | 52.4 | 187 | 4 | 40.0 | 1.3 | 21.3 | 37.3 | 150 |
| 3-1 | 40.3 | 7.5 | 40.3 | 11.8 | 119 | 3-2 | 43.5 | 1.4 | 34.8 | 20.3 | 138 |
| 3 | 32.6 | 6.1 | 32.6 | 28.6 | 147 | 4 | 36.1 | 1.2 | 28.9 | 33.7 | 166 |
| 5 | 27.4 | 5.1 | 27.4 | 40.0 | 175 | 4-2 | 39.0 | 1.3 | 41.6 | 18.1 | 154 |
| 4-1 | 35.6 | 6.6 | 47.4 | 10.4 | 135 | 4 | 33.0 | 1.1 | 35.1 | 30.8 | 182 |
| 3 | 29.4 | 5.5 | 39.3 | 25.8 | 163 | 5-2 | 35.3 | 1.2 | 47.0 | 16.5 | 170 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|-----|------|------|------|---------|------|-----|------|------|------|
| 5-2-5-4 | 30.3 | 1.0 | 40.4 | 28.3 | 198 | 5-8-2-8 | 33.0 | 3.3 | 17.6 | 46.1 | 182 |
| 6-2 | 32.3 | 1.1 | 51.6 | 15.0 | 186 | 3-2 | 42.2 | 4.2 | 33.8 | 19.7 | 142 |
| 5-3-1-1 | 64.5 | 3.2 | 17.2 | 15.0 | 93 | 4 | 35.3 | 3.5 | 28.2 | 32.9 | 170 |
| 3 | 49.6 | 2.5 | 13.2 | 34.7 | 121 | 6 | 30.3 | 3.0 | 24.2 | 42.4 | 198 |
| 2-1 | 55.1 | 2.7 | 29.3 | 12.8 | 109 | 4-2 | 38.0 | 3.8 | 40.5 | 17.7 | 158 |
| 3 | 43.8 | 2.2 | 23.4 | 30.6 | 137 | 4 | 32.2 | 3.2 | 34.4 | 30.1 | 186 |
| 3-1 | 48.0 | 2.4 | 38.4 | 11.2 | 125 | 6 | 28.0 | 2.8 | 29.9 | 39.3 | 214 |
| 3 | 39.2 | 1.9 | 31.4 | 27.5 | 153 | 5-2 | 34.5 | 3.4 | 46.0 | 16.1 | 174 |
| 4-1 | 42.6 | 2.1 | 45.4 | 9.9 | 141 | 4 | 29.7 | 3.0 | 39.6 | 27.7 | 202 |
| 3 | 35.5 | 1.8 | 37.9 | 24.8 | 169 | 6 | 26.1 | 2.6 | 34.8 | 36.5 | 230 |
| 5 | 30.5 | 1.5 | 32.5 | 35.5 | 197 | 8-2 | 27.0 | 2.7 | 57.7 | 12.6 | 222 |
| 5-1 | 38.2 | 1.9 | 51.0 | 8.9 | 157 | 13-4 | 18.2 | 1.8 | 63.0 | 17.0 | 330 |
| 3 | 32.4 | 1.6 | 43.2 | 22.7 | 185 | 5-7-1-1 | 61.9 | 7.2 | 16.5 | 14.4 | 97 |
| 5 | 28.2 | 1.4 | 37.6 | 32.8 | 213 | 3 | 48.0 | 5.6 | 12.8 | 33.6 | 125 |
| 6-1 | 34.7 | 1.7 | 55.5 | 8.1 | 173 | 5 | 39.2 | 4.6 | 10.4 | 45.8 | 153 |
| 3 | 29.9 | 1.5 | 47.7 | 20.9 | 201 | 2-1 | 53.1 | 6.2 | 28.3 | 12.4 | 113 |
| 5 | 26.2 | 1.3 | 41.9 | 30.6 | 229 | 3 | 42.5 | 4.9 | 22.7 | 29.8 | 141 |
| 7-1 | 31.8 | 1.6 | 59.2 | 7.4 | 189 | 5 | 35.5 | 4.1 | 18.9 | 41.4 | 169 |
| 3 | 27.6 | 1.4 | 51.6 | 19.4 | 217 | 3-1 | 46.5 | 5.4 | 37.2 | 10.9 | 129 |
| 5 | 24.5 | 1.2 | 45.7 | 28.6 | 245 | 3 | 38.2 | 4.5 | 30.6 | 26.7 | 157 |
| 5-4-1-2 | 55.6 | 3.7 | 14.8 | 25.9 | 108 | 5 | 32.4 | 3.8 | 25.9 | 37.8 | 185 |
| 4 | 44.1 | 2.9 | 11.8 | 41.2 | 136 | 4-1 | 41.4 | 4.8 | 44.1 | 9.7 | 145 |
| 2-2 | 48.4 | 3.2 | 25.8 | 22.6 | 124 | 3 | 34.7 | 4.0 | 37.0 | 24.3 | 173 |
| 4 | 39.5 | 2.6 | 21.1 | 36.8 | 152 | 5 | 29.9 | 3.5 | 31.8 | 34.8 | 201 |
| 3-2 | 42.8 | 2.9 | 34.3 | 20.0 | 140 | 5-1 | 37.3 | 4.3 | 49.7 | 8.7 | 161 |
| 4 | 35.7 | 2.4 | 28.6 | 33.3 | 168 | 3 | 31.8 | 3.7 | 42.3 | 22.2 | 189 |
| 6 | 30.6 | 2.0 | 24.5 | 42.8 | 196 | 5 | 27.7 | 3.2 | 36.8 | 32.2 | 217 |
| 4-2 | 38.5 | 2.5 | 41.0 | 17.9 | 156 | 6-1 | 33.9 | 4.0 | 54.2 | 7.9 | 177 |
| 4 | 32.6 | 2.2 | 34.8 | 30.4 | 184 | 3 | 29.3 | 3.4 | 46.8 | 20.5 | 205 |
| 6 | 28.3 | 1.9 | 30.2 | 39.6 | 212 | 5 | 25.8 | 3.0 | 41.2 | 30.0 | 233 |
| 5-2 | 34.9 | 2.3 | 46.5 | 16.3 | 172 | 7-1 | 31.1 | 3.6 | 58.0 | 7.3 | 193 |
| 4 | 30.0 | 2.0 | 40.0 | 28.0 | 200 | 3 | 27.1 | 3.2 | 50.7 | 19.0 | 221 |
| 6 | 26.3 | 1.7 | 35.1 | 36.8 | 228 | 5 | 24.1 | 2.8 | 45.0 | 28.1 | 249 |
| 6-2 | 31.9 | 2.1 | 51.1 | 14.9 | 188 | 8-1 | 28.7 | 3.3 | 61.2 | 6.7 | 209 |
| 4 | 27.8 | 1.8 | 44.4 | 25.9 | 216 | 3 | 25.3 | 2.9 | 54.0 | 17.7 | 237 |
| 6 | 24.6 | 1.6 | 39.4 | 34.4 | 244 | 15-5 | 15.9 | 1.9 | 63.6 | 18.6 | 377 |
| 5-5-1-1 | 63.2 | 5.2 | 16.8 | 14.7 | 95 | 5-8-1-2 | 53.6 | 7.1 | 14.3 | 25.0 | 112 |
| 3 | 48.8 | 4.1 | 13.0 | 34.1 | 123 | 4 | 42.8 | 5.7 | 11.4 | 40.0 | 140 |
| 5 | 39.7 | 3.3 | 10.6 | 46.4 | 151 | 6 | 35.7 | 4.8 | 9.5 | 50.0 | 168 |
| 2-1 | 54.0 | 4.5 | 28.8 | 12.6 | 111 | 2-2 | 46.9 | 6.2 | 25.0 | 21.9 | 128 |
| 3 | 43.2 | 3.6 | 23.0 | 30.2 | 139 | 4 | 38.5 | 5.1 | 20.5 | 35.9 | 156 |
| 5 | 35.9 | 3.0 | 19.2 | 41.9 | 167 | 6 | 32.6 | 4.3 | 17.4 | 45.7 | 184 |
| 3-1 | 47.2 | 3.9 | 37.8 | 11.0 | 127 | 3-2 | 41.7 | 5.5 | 33.3 | 19.5 | 144 |
| 3 | 38.7 | 3.2 | 31.0 | 27.1 | 155 | 4 | 34.9 | 4.6 | 27.9 | 32.6 | 172 |
| 5 | 32.8 | 2.7 | 26.2 | 38.2 | 183 | 6 | 30.0 | 4.0 | 24.0 | 42.0 | 200 |
| 4-1 | 42.0 | 3.5 | 44.7 | 9.8 | 143 | 4-2 | 37.5 | 5.0 | 40.0 | 17.5 | 160 |
| 3 | 35.1 | 2.9 | 37.4 | 24.6 | 171 | 4 | 31.9 | 4.2 | 34.1 | 29.8 | 188 |
| 5 | 30.1 | 2.5 | 32.2 | 35.2 | 199 | 6 | 27.8 | 3.7 | 29.6 | 38.9 | 216 |
| 5-1 | 37.7 | 3.1 | 50.3 | 8.8 | 159 | 5-2 | 34.1 | 4.5 | 45.4 | 15.9 | 176 |
| 3 | 32.1 | 2.7 | 42.8 | 22.4 | 187 | 4 | 29.4 | 3.9 | 39.2 | 27.5 | 204 |
| 5 | 27.9 | 2.3 | 37.2 | 32.6 | 215 | 6 | 25.9 | 3.4 | 34.5 | 36.2 | 232 |
| 6-1 | 34.3 | 2.8 | 54.9 | 8.0 | 175 | 6-2 | 31.3 | 4.1 | 50.0 | 14.6 | 192 |
| 3 | 29.6 | 2.4 | 47.3 | 20.7 | 203 | 4 | 27.3 | 3.6 | 43.6 | 25.4 | 220 |
| 5 | 26.0 | 2.1 | 41.6 | 30.3 | 231 | 6 | 24.2 | 3.2 | 38.7 | 33.9 | 248 |
| 5-6-1-2 | 54.5 | 5.4 | 14.5 | 25.5 | 110 | 7-2 | 28.8 | 3.8 | 53.8 | 13.5 | 208 |
| 4 | 43.5 | 4.3 | 11.6 | 40.6 | 138 | 4 | 25.4 | 3.4 | 47.4 | 23.7 | 236 |
| 6 | 36.1 | 3.6 | 9.6 | 50.6 | 166 | 6 | 22.7 | 3.0 | 42.4 | 31.8 | 264 |
| 2-2 | 47.6 | 4.8 | 25.4 | 22.1 | 126 | 8-2 | 23.4 | 3.1 | 62.5 | 10.9 | 224 |
| 4 | 39.0 | 3.9 | 20.8 | 36.3 | 154 | 4 | 21.1 | 2.8 | 56.3 | 19.7 | 252 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|------|------|------|------|----------|------|------|------|------|------|
| 5-8-8-6 | 19.2 | 2.6 | 51.3 | 26.9 | 280 | 5-11-4-3 | 33.9 | 6.2 | 36.2 | 23.7 | 177 |
| 5-9-1-1 | 60.6 | 9.1 | 16.2 | 14.1 | 99 | 5 | 29.3 | 5.4 | 31.2 | 34.1 | 205 |
| 3 | 47.2 | 7.1 | 12.6 | 33.1 | 127 | 5-1 | 36.4 | 6.6 | 48.5 | 8.5 | 165 |
| 5 | 38.7 | 5.8 | 10.3 | 45.2 | 155 | 3 | 31.1 | 5.7 | 41.4 | 21.8 | 193 |
| 2-1 | 52.2 | 7.8 | 27.8 | 12.2 | 115 | 5 | 27.1 | 5.0 | 36.2 | 31.7 | 221 |
| 3 | 41.9 | 6.3 | 22.4 | 20.4 | 143 | 5-12-1-2 | 51.7 | 10.3 | 13.8 | 24.1 | 116 |
| 5 | 35.1 | 5.2 | 18.7 | 40.9 | 171 | 4 | 41.7 | 8.3 | 11.1 | 38.9 | 144 |
| 3-1 | 45.8 | 6.9 | 36.6 | 10.7 | 131 | 6 | 34.9 | 7.0 | 9.3 | 48.8 | 172 |
| 3 | 37.7 | 5.6 | 30.2 | 26.4 | 159 | 2-2 | 45.4 | 9.1 | 24.2 | 21.2 | 132 |
| 5 | 32.1 | 4.8 | 25.7 | 37.4 | 187 | 4 | 37.5 | 7.5 | 20.0 | 35.0 | 160 |
| 4-1 | 40.8 | 6.1 | 43.5 | 9.5 | 147 | 6 | 31.9 | 6.4 | 17.0 | 44.7 | 188 |
| 3 | 34.3 | 5.1 | 36.6 | 24.0 | 175 | 3-2 | 40.5 | 8.1 | 32.4 | 18.9 | 148 |
| 3 | 29.6 | 4.4 | 31.5 | 34.5 | 203 | 4 | 34.1 | 6.8 | 27.3 | 31.8 | 176 |
| 5-1 | 36.8 | 5.5 | 49.1 | 8.6 | 163 | 6 | 29.4 | 5.9 | 23.5 | 41.2 | 204 |
| 3 | 31.4 | 4.7 | 41.9 | 22.0 | 191 | 4-2 | 36.6 | 7.3 | 39.0 | 17.1 | 164 |
| 5 | 27.4 | 4.1 | 36.5 | 32.0 | 219 | 4 | 31.3 | 6.2 | 33.3 | 29.2 | 192 |
| 6-1 | 33.5 | 5.0 | 53.6 | 7.8 | 179 | 6 | 27.3 | 5.4 | 29.1 | 38.2 | 220 |
| 3 | 29.0 | 4.3 | 46.4 | 20.3 | 207 | 5-2 | 33.3 | 6.7 | 44.4 | 15.6 | 180 |
| 5 | 25.5 | 3.8 | 40.9 | 29.8 | 235 | 5-13-1-1 | 58.2 | 12.6 | 15.5 | 13.6 | 103 |
| 7-1 | 30.8 | 4.6 | 57.4 | 7.2 | 195 | 3 | 45.8 | 9.9 | 12.2 | 32.1 | 131 |
| 3 | 26.9 | 4.0 | 50.2 | 18.8 | 223 | 5 | 37.7 | 8.2 | 10.1 | 44.0 | 159 |
| 5 | 23.9 | 3.6 | 44.6 | 27.9 | 251 | 2-1 | 50.4 | 10.9 | 26.9 | 11.8 | 119 |
| 8-1 | 28.4 | 4.3 | 60.7 | 6.6 | 211 | 3 | 40.8 | 8.8 | 21.8 | 28.6 | 147 |
| 3 | 25.1 | 3.8 | 53.5 | 17.6 | 239 | 5 | 34.3 | 7.4 | 18.3 | 40.0 | 175 |
| 5 | 22.5 | 3.4 | 47.9 | 26.2 | 267 | 3-1 | 44.4 | 9.6 | 35.6 | 10.4 | 135 |
| 5-10-1-2 | 52.6 | 8.8 | 14.0 | 24.6 | 114 | 3 | 36.8 | 8.0 | 29.4 | 25.8 | 163 |
| 4 | 42.2 | 7.0 | 11.3 | 39.4 | 142 | 5 | 31.4 | 6.8 | 25.1 | 36.6 | 191 |
| 6 | 35.3 | 5.9 | 9.4 | 49.4 | 170 | 5-14-1-2 | 50.8 | 11.9 | 13.6 | 23.7 | 118 |
| 2-2 | 46.2 | 7.7 | 24.6 | 21.5 | 130 | 4 | 41.1 | 9.6 | 10.9 | 38.4 | 146 |
| 4 | 38.0 | 6.3 | 20.3 | 35.4 | 158 | 6 | 34.5 | 8.0 | 9.2 | 48.3 | 174 |
| 6 | 32.2 | 5.4 | 17.2 | 45.1 | 186 | 2-2 | 44.8 | 10.4 | 23.9 | 20.9 | 134 |
| 3-2 | 41.1 | 6.8 | 32.9 | 19.2 | 146 | 4 | 37.0 | 8.6 | 19.8 | 34.6 | 162 |
| 4 | 34.5 | 5.7 | 27.6 | 32.2 | 174 | 6 | 31.6 | 7.4 | 16.8 | 44.2 | 190 |
| 6 | 29.7 | 4.9 | 23.7 | 41.6 | 202 | 3-4 | 33.7 | 7.9 | 27.0 | 31.4 | 178 |
| 4-2 | 37.0 | 6.2 | 39.5 | 17.3 | 162 | 6 | 29.1 | 6.8 | 23.3 | 40.8 | 206 |
| 4 | 31.6 | 5.2 | 33.7 | 29.5 | 190 | 6-4 | 26.5 | 6.2 | 42.5 | 24.8 | 226 |
| 6 | 27.5 | 4.6 | 29.4 | 38.5 | 218 | 5-15-1-1 | 57.1 | 14.3 | 15.2 | 13.3 | 105 |
| 5-2 | 33.7 | 5.6 | 45.0 | 15.7 | 178 | 3 | 45.1 | 11.3 | 12.0 | 31.6 | 133 |
| 4 | 29.1 | 4.8 | 38.8 | 27.2 | 206 | 5 | 37.3 | 9.3 | 9.9 | 43.5 | 161 |
| 6 | 25.6 | 4.3 | 34.2 | 35.9 | 234 | 2-1 | 49.6 | 12.4 | 26.4 | 11.6 | 121 |
| 6-2 | 30.9 | 5.2 | 49.5 | 14.4 | 194 | 3 | 40.3 | 10.1 | 21.5 | 28.2 | 149 |
| 4 | 27.0 | 4.5 | 43.2 | 25.3 | 222 | 5 | 33.9 | 8.5 | 18.1 | 39.5 | 177 |
| 6 | 24.0 | 4.0 | 38.4 | 33.6 | 250 | 3-1 | 43.8 | 10.9 | 35.0 | 10.2 | 137 |
| 7-2 | 28.6 | 4.8 | 53.3 | 13.3 | 210 | 3 | 36.4 | 9.1 | 29.1 | 25.4 | 165 |
| 4 | 25.2 | 4.2 | 47.1 | 23.5 | 238 | 5 | 31.1 | 7.8 | 24.8 | 36.3 | 193 |
| 6 | 22.5 | 3.8 | 42.1 | 31.6 | 266 | 4-1 | 39.2 | 9.8 | 41.8 | 9.2 | 153 |
| 8-2 | 26.5 | 4.4 | 56.6 | 12.4 | 226 | 3 | 33.1 | 8.3 | 35.4 | 23.2 | 181 |
| 4 | 23.6 | 3.9 | 50.4 | 22.1 | 254 | 5 | 28.7 | 7.2 | 30.6 | 33.5 | 209 |
| 6 | 21.3 | 3.5 | 45.4 | 29.8 | 282 | 5-1 | 35.5 | 8.9 | 47.3 | 8.3 | 169 |
| 5-11-1-1 | 59.4 | 10.9 | 15.8 | 13.9 | 101 | 3 | 30.5 | 7.6 | 40.6 | 21.3 | 197 |
| 3 | 46.5 | 8.5 | 12.4 | 32.6 | 129 | 5 | 26.7 | 6.7 | 35.5 | 31.1 | 225 |
| 5 | 38.2 | 7.0 | 10.2 | 44.6 | 157 | 5-17-5-7 | 23.7 | 5.9 | 31.6 | 38.7 | 255 |
| 2-1 | 51.3 | 9.4 | 27.3 | 12.0 | 117 | 5-19-2-1 | 48.0 | 15.2 | 25.6 | 11.2 | 125 |
| 3 | 41.4 | 7.6 | 22.1 | 28.9 | 145 | 6-1-1-1 | 69.6 | 1.0 | 15.5 | 13.6 | 103 |
| 5 | 34.7 | 6.3 | 18.5 | 40.5 | 173 | 3 | 55.0 | 0.7 | 12.2 | 32.1 | 131 |
| 3-1 | 45.1 | 8.3 | 36.1 | 10.5 | 133 | 5 | 45.3 | 0.6 | 10.1 | 44.0 | 159 |
| 3 | 37.3 | 6.8 | 29.8 | 26.1 | 161 | 5-5 | 32.3 | 0.4 | 35.9 | 31.4 | 223 |
| 5 | 31.7 | 5.8 | 25.4 | 37.0 | 189 | 6-5 | 30.1 | 0.4 | 40.2 | 29.3 | 239 |
| 4-1 | 40.3 | 7.4 | 42.9 | 9.4 | 149 | 7-5 | 28.2 | 0.4 | 43.9 | 27.4 | 255 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|-----|------|------|------|---------|------|-----|------|------|------|
| 6-1-8-5 | 26.6 | 0.4 | 47.2 | 25.8 | 271 | 6-3-9-1 | 30.9 | 1.3 | 61.8 | 6.0 | 233 |
| 9-5 | 25.1 | 0.3 | 50.2 | 24.4 | 287 | 3 | 27.6 | 1.1 | 55.2 | 16.1 | 261 |
| 10-5 | 23.8 | 0.3 | 52.8 | 23.1 | 303 | 5 | 24.9 | 1.0 | 49.8 | 24.2 | 289 |
| 11-7 | 20.7 | 0.3 | 50.7 | 28.2 | 347 | 6-4-1-2 | 60.0 | 3.3 | 13.3 | 23.3 | 120 |
| 6-2-1-2 | 61.0 | 1.7 | 13.6 | 23.7 | 118 | 4 | 48.6 | 2.7 | 10.8 | 37.8 | 148 |
| 4 | 49.3 | 1.4 | 11.0 | 38.3 | 146 | 6 | 40.9 | 2.3 | 9.1 | 47.7 | 176 |
| 6 | 41.4 | 1.1 | 9.2 | 48.3 | 172 | 2-2 | 53.0 | 2.9 | 23.5 | 20.6 | 136 |
| 2-2 | 53.7 | 1.5 | 23.9 | 20.9 | 134 | 4 | 43.9 | 2.4 | 19.5 | 34.2 | 164 |
| 4 | 44.4 | 1.2 | 19.8 | 34.6 | 162 | 6 | 37.5 | 2.1 | 16.7 | 43.7 | 192 |
| 6 | 37.9 | 1.0 | 16.8 | 44.2 | 190 | 3-2 | 47.4 | 2.6 | 31.6 | 18.4 | 152 |
| 3-2 | 48.0 | 1.3 | 32.0 | 18.7 | 150 | 4 | 40.0 | 2.2 | 26.7 | 31.1 | 180 |
| 4 | 40.4 | 1.1 | 27.0 | 31.5 | 178 | 6 | 34.6 | 1.9 | 23.1 | 40.4 | 208 |
| 6 | 34.9 | 1.0 | 23.3 | 40.8 | 206 | 4-2 | 42.8 | 2.4 | 38.1 | 16.7 | 168 |
| 4-2 | 43.4 | 1.2 | 38.6 | 16.8 | 166 | 4 | 36.7 | 2.0 | 32.7 | 28.6 | 196 |
| 4 | 37.1 | 1.0 | 33.0 | 28.8 | 194 | 6 | 32.1 | 1.8 | 28.6 | 37.5 | 224 |
| 6 | 32.4 | 0.9 | 28.8 | 37.8 | 222 | 5-2 | 39.1 | 2.2 | 43.5 | 15.2 | 184 |
| 5-2 | 39.6 | 1.1 | 44.0 | 15.3 | 182 | 4 | 34.0 | 1.9 | 37.7 | 26.4 | 212 |
| 4 | 34.3 | 0.9 | 38.1 | 26.7 | 210 | 6 | 30.0 | 1.7 | 33.3 | 35.0 | 240 |
| 6 | 30.2 | 0.8 | 33.6 | 35.3 | 238 | 6-2 | 36.0 | 2.0 | 48.0 | 14.0 | 200 |
| 6-2 | 36.3 | 1.0 | 48.5 | 14.1 | 198 | 4 | 31.6 | 1.7 | 42.1 | 24.6 | 228 |
| 4 | 31.8 | 0.9 | 42.5 | 24.8 | 226 | 6 | 28.1 | 1.6 | 37.5 | 32.8 | 256 |
| 6 | 28.3 | 0.8 | 37.8 | 33.1 | 254 | 7-2 | 33.3 | 1.8 | 51.8 | 13.0 | 216 |
| 7-2 | 33.7 | 0.9 | 52.3 | 13.1 | 214 | 4 | 29.5 | 1.6 | 55.9 | 12.9 | 244 |
| 4 | 29.7 | 0.8 | 46.3 | 23.1 | 242 | 6 | 26.5 | 1.5 | 41.1 | 30.9 | 272 |
| 6 | 26.7 | 0.7 | 41.5 | 31.1 | 270 | 6-5-1-1 | 67.3 | 4.7 | 14.9 | 13.1 | 107 |
| 8-2 | 31.3 | 0.9 | 55.6 | 12.2 | 230 | 3 | 53.3 | 3.7 | 11.8 | 31.1 | 135 |
| 4 | 27.9 | 0.8 | 49.6 | 21.7 | 258 | 5 | 44.2 | 3.1 | 9.8 | 42.9 | 163 |
| 6 | 25.2 | 0.7 | 44.7 | 29.4 | 286 | 2-1 | 58.5 | 4.1 | 26.0 | 11.4 | 123 |
| 9-2 | 29.3 | 0.8 | 58.5 | 11.4 | 246 | 3 | 47.6 | 3.3 | 21.2 | 27.8 | 151 |
| 4 | 26.3 | 0.7 | 52.6 | 20.4 | 274 | 5 | 40.2 | 2.8 | 17.9 | 39.1 | 179 |
| 6 | 23.8 | 0.6 | 47.7 | 27.8 | 302 | 3-1 | 51.8 | 3.6 | 34.5 | 10.1 | 139 |
| 10-2 | 27.5 | 0.7 | 61.1 | 10.7 | 262 | 3 | 43.1 | 3.0 | 28.7 | 25.2 | 167 |
| 4 | 24.8 | 0.7 | 55.2 | 19.3 | 290 | 5 | 36.9 | 2.6 | 24.6 | 35.9 | 195 |
| 6 | 22.6 | 0.6 | 50.3 | 26.4 | 318 | 4-1 | 46.5 | 3.2 | 41.3 | 9.0 | 155 |
| 6-3-1-1 | 68.6 | 2.8 | 15.2 | 13.3 | 105 | 3 | 39.3 | 2.7 | 35.0 | 23.0 | 183 |
| 3 | 54.1 | 2.2 | 12.0 | 31.6 | 133 | 5 | 34.1 | 2.4 | 30.3 | 33.2 | 211 |
| 5 | 44.7 | 1.9 | 9.9 | 43.5 | 161 | 5-1 | 42.1 | 2.9 | 46.8 | 8.2 | 171 |
| 2-1 | 59.5 | 2.5 | 26.4 | 11.6 | 121 | 3 | 36.2 | 2.5 | 40.2 | 21.1 | 199 |
| 3 | 48.3 | 2.0 | 21.5 | 28.2 | 149 | 5 | 31.7 | 2.2 | 35.2 | 30.8 | 227 |
| 5 | 40.7 | 1.7 | 18.1 | 39.5 | 177 | 6-1 | 38.5 | 2.7 | 51.3 | 7.5 | 187 |
| 3-1 | 52.6 | 2.2 | 35.0 | 10.2 | 137 | 3 | 33.5 | 2.3 | 44.7 | 19.5 | 215 |
| 3 | 43.6 | 1.8 | 29.1 | 25.5 | 165 | 5 | 29.6 | 2.1 | 39.5 | 28.8 | 243 |
| 5 | 37.3 | 1.5 | 24.9 | 36.3 | 193 | 7-1 | 35.5 | 2.4 | 55.2 | 6.9 | 203 |
| 7 | 32.6 | 1.4 | 21.7 | 44.3 | 221 | 3 | 31.2 | 2.1 | 48.5 | 18.2 | 231 |
| 4-1 | 47.1 | 2.0 | 41.8 | 9.1 | 153 | 5 | 27.8 | 1.9 | 43.2 | 27.0 | 259 |
| 3 | 39.8 | 1.6 | 35.4 | 23.2 | 181 | 8-1 | 32.9 | 2.3 | 58.4 | 6.4 | 219 |
| 5 | 34.4 | 1.4 | 30.6 | 33.5 | 209 | 3 | 29.1 | 2.0 | 51.8 | 17.0 | 247 |
| 5-1 | 42.6 | 1.8 | 47.3 | 8.3 | 169 | 5 | 26.2 | 1.8 | 46.5 | 25.4 | 275 |
| 3 | 36.5 | 1.5 | 40.6 | 21.3 | 197 | 6-6-1-2 | 59.0 | 4.9 | 13.1 | 22.9 | 122 |
| 5 | 32.0 | 1.3 | 35.5 | 31.1 | 225 | 4 | 48.0 | 4.0 | 10.7 | 37.3 | 150 |
| 6-1 | 38.9 | 1.6 | 51.9 | 7.6 | 185 | 6 | 40.4 | 3.4 | 9.0 | 47.2 | 178 |
| 3 | 33.8 | 1.4 | 45.1 | 19.7 | 213 | 2-2 | 52.2 | 4.3 | 23.2 | 20.3 | 138 |
| 5 | 29.9 | 1.2 | 39.8 | 29.0 | 241 | 4 | 43.4 | 3.6 | 19.3 | 33.7 | 166 |
| 7-1 | 35.8 | 1.5 | 55.7 | 7.0 | 201 | 6 | 37.1 | 3.1 | 16.5 | 43.3 | 194 |
| 3 | 31.4 | 1.3 | 48.9 | 18.3 | 229 | 3-2 | 46.7 | 3.9 | 31.2 | 18.2 | 154 |
| 5 | 28.0 | 1.2 | 43.6 | 27.2 | 257 | 4 | 39.6 | 3.3 | 26.4 | 30.8 | 182 |
| 8-1 | 33.2 | 1.4 | 59.0 | 6.4 | 217 | 6 | 34.3 | 2.8 | 22.9 | 40.0 | 210 |
| 3 | 29.4 | 1.2 | 52.2 | 17.1 | 245 | 4-2 | 42.3 | 3.5 | 37.6 | 16.5 | 170 |
| 5 | 26.4 | 1.1 | 46.9 | 25.6 | 273 | 4 | 36.4 | 3.0 | 32.3 | 28.3 | 198 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|-----|------|------|------|---------|------|-----|------|------|------|
| 6-6-4-6 | 31.9 | 2.6 | 28.3 | 47.2 | 226 | 6-8-1-2 | 58.1 | 6.4 | 12.9 | 22.6 | 124 |
| 5-2 | 38.7 | 3.2 | 43.0 | 15.1 | 186 | 4 | 47.4 | 5.3 | 10.5 | 36.8 | 152 |
| 4 | 33.6 | 2.8 | 37.4 | 26.2 | 214 | 6 | 40.0 | 4.4 | 8.9 | 46.7 | 180 |
| 6 | 29.7 | 2.5 | 33.1 | 34.7 | 242 | 2-2 | 51.4 | 5.0 | 22.8 | 20.0 | 140 |
| 6-2 | 35.6 | 3.0 | 47.5 | 13.9 | 202 | 4 | 42.9 | 4.8 | 19.0 | 33.3 | 168 |
| 4 | 31.3 | 2.6 | 41.7 | 24.4 | 230 | 6 | 36.7 | 4.1 | 16.3 | 42.8 | 196 |
| 6 | 27.9 | 2.3 | 37.2 | 32.6 | 258 | 3-2 | 46.2 | 5.1 | 30.7 | 18.0 | 156 |
| 7-2 | 33.0 | 2.7 | 51.4 | 12.8 | 218 | 4 | 39.1 | 4.3 | 26.1 | 30.4 | 184 |
| 4 | 29.3 | 2.4 | 45.5 | 22.8 | 246 | 6 | 34.0 | 3.8 | 22.6 | 39.6 | 212 |
| 6 | 26.3 | 2.2 | 40.9 | 30.6 | 274 | 4-2 | 41.9 | 4.6 | 37.2 | 16.3 | 172 |
| 8-2 | 30.8 | 2.5 | 54.7 | 12.0 | 234 | 4 | 36.0 | 4.0 | 32.0 | 28.0 | 200 |
| 4 | 27.5 | 2.3 | 48.8 | 21.4 | 262 | 6 | 31.6 | 3.5 | 28.1 | 36.8 | 228 |
| 6 | 24.8 | 2.1 | 44.1 | 29.0 | 290 | 5-2 | 38.3 | 4.2 | 42.6 | 14.9 | 188 |
| 9-2 | 28.8 | 2.4 | 57.6 | 11.2 | 250 | 4 | 33.3 | 3.7 | 37.0 | 25.9 | 216 |
| 4 | 25.9 | 2.1 | 51.8 | 20.1 | 278 | 6 | 29.5 | 3.3 | 32.8 | 34.4 | 244 |
| 6 | 23.5 | 1.9 | 47.1 | 27.4 | 306 | 6-2 | 35.3 | 3.9 | 47.1 | 13.7 | 204 |
| 10-2 | 27.1 | 2.2 | 60.1 | 10.5 | 266 | 4 | 31.0 | 3.4 | 41.4 | 24.1 | 232 |
| 4 | 24.5 | 2.0 | 54.4 | 19.1 | 294 | 6 | 27.7 | 3.1 | 36.9 | 32.3 | 260 |
| 6 | 22.4 | 1.8 | 49.7 | 26.1 | 322 | 7-2 | 32.7 | 3.6 | 50.9 | 12.7 | 220 |
| 11-2 | 25.5 | 2.1 | 62.4 | 9.9 | 282 | 4 | 29.0 | 3.2 | 45.1 | 22.6 | 248 |
| 4 | 23.2 | 1.9 | 56.8 | 18.1 | 310 | 6 | 26.1 | 2.9 | 40.6 | 30.4 | 276 |
| 6 | 21.3 | 1.8 | 52.1 | 24.8 | 338 | 8-2 | 30.5 | 3.4 | 54.2 | 11.9 | 236 |
| 12-2 | 24.2 | 2.0 | 64.4 | 9.4 | 298 | 4 | 27.3 | 3.0 | 48.5 | 21.2 | 264 |
| 4 | 22.1 | 1.8 | 58.9 | 17.2 | 326 | 6 | 24.7 | 2.7 | 43.8 | 28.8 | 292 |
| 6 | 20.3 | 1.7 | 54.2 | 23.7 | 354 | 9-2 | 28.6 | 3.2 | 57.1 | 11.1 | 252 |
| 18-6 | 16.0 | 1.3 | 64.0 | 18.7 | 450 | 4 | 25.7 | 2.8 | 51.4 | 20.0 | 280 |
| 6-7-1-1 | 66.1 | 6.4 | 14.7 | 12.8 | 109 | 6 | 23.4 | 2.6 | 46.7 | 27.3 | 308 |
| 3 | 52.5 | 5.1 | 11.7 | 30.7 | 137 | 10-2 | 26.9 | 3.0 | 59.7 | 10.4 | 268 |
| 5 | 43.6 | 4.2 | 9.7 | 42.4 | 165 | 4 | 24.3 | 2.7 | 54.0 | 18.9 | 296 |
| 2-1 | 57.6 | 5.6 | 25.6 | 11.2 | 125 | 6 | 22.2 | 2.5 | 49.4 | 25.9 | 324 |
| 3 | 47.1 | 4.6 | 20.9 | 27.4 | 153 | 13-4 | 20.9 | 2.3 | 60.5 | 16.3 | 344 |
| 5 | 39.7 | 3.9 | 17.7 | 38.7 | 181 | 14-2 | 21.7 | 2.4 | 67.5 | 8.4 | 332 |
| 3-1 | 51.1 | 4.9 | 34.0 | 9.9 | 141 | 18-6 | 15.9 | 1.8 | 63.7 | 18.6 | 432 |
| 3 | 42.6 | 4.1 | 28.4 | 24.9 | 169 | 6-9-1-1 | 64.9 | 8.1 | 14.4 | 12.6 | 111 |
| 5 | 36.5 | 3.5 | 24.4 | 35.5 | 197 | 3 | 51.8 | 6.5 | 11.5 | 30.2 | 139 |
| 4-1 | 45.9 | 4.4 | 40.8 | 8.9 | 157 | 5 | 43.1 | 5.4 | 9.6 | 41.9 | 167 |
| 3 | 38.9 | 3.8 | 34.6 | 22.7 | 185 | 2-1 | 56.7 | 7.1 | 25.2 | 11.0 | 127 |
| 5 | 33.8 | 3.3 | 30.1 | 32.8 | 213 | 3 | 46.5 | 5.8 | 20.6 | 27.1 | 155 |
| 5-1 | 41.6 | 4.0 | 46.2 | 8.1 | 173 | 5 | 39.3 | 4.9 | 17.5 | 38.2 | 183 |
| 3 | 35.8 | 3.5 | 39.8 | 20.9 | 201 | 3-1 | 50.3 | 6.3 | 33.6 | 9.8 | 143 |
| 5 | 31.4 | 3.0 | 34.9 | 30.6 | 229 | 3 | 42.1 | 5.3 | 28.1 | 24.5 | 171 |
| 6-1 | 38.1 | 3.7 | 50.8 | 7.4 | 189 | 5 | 36.2 | 4.5 | 24.1 | 35.2 | 199 |
| 3 | 33.2 | 3.2 | 44.2 | 19.4 | 217 | 7 | 31.7 | 3.9 | 21.1 | 43.2 | 227 |
| 5 | 29.4 | 2.8 | 39.2 | 28.6 | 245 | 9 | 28.2 | 3.5 | 18.8 | 49.4 | 235 |
| 7-1 | 35.1 | 3.4 | 54.6 | 6.8 | 205 | 4-1 | 45.3 | 5.7 | 40.2 | 8.8 | 159 |
| 3 | 30.9 | 3.0 | 48.1 | 18.0 | 233 | 3 | 38.5 | 4.8 | 34.2 | 22.5 | 187 |
| 5 | 27.6 | 2.7 | 42.9 | 26.8 | 261 | 5 | 33.5 | 4.2 | 29.8 | 32.5 | 215 |
| 8-1 | 32.6 | 3.2 | 57.9 | 6.3 | 221 | 5-1 | 41.1 | 5.1 | 45.7 | 8.0 | 175 |
| 3 | 28.9 | 2.8 | 51.4 | 16.9 | 249 | 3 | 35.5 | 4.4 | 39.4 | 20.7 | 203 |
| 5 | 26.0 | 2.5 | 46.2 | 25.3 | 277 | 5 | 31.2 | 3.9 | 34.6 | 30.3 | 231 |
| 9-1 | 30.4 | 2.9 | 60.8 | 5.9 | 237 | 6-1 | 37.7 | 4.7 | 50.2 | 7.3 | 191 |
| 3 | 27.2 | 2.6 | 54.3 | 15.8 | 265 | 3 | 32.9 | 4.1 | 43.8 | 19.2 | 219 |
| 5 | 24.6 | 2.4 | 49.1 | 23.9 | 293 | 5 | 29.1 | 3.6 | 38.9 | 28.3 | 247 |
| 10-1 | 28.5 | 2.8 | 63.2 | 5.5 | 253 | 7-1 | 34.8 | 4.3 | 54.1 | 6.7 | 207 |
| 3 | 25.6 | 2.5 | 56.9 | 14.9 | 281 | 3 | 30.6 | 3.8 | 47.7 | 17.9 | 235 |
| 5 | 23.3 | 2.3 | 51.8 | 22.6 | 309 | 5 | 27.4 | 3.4 | 42.6 | 26.6 | 263 |
| 11-3 | 24.2 | 2.4 | 59.3 | 14.1 | 297 | 8-1 | 32.3 | 4.0 | 57.4 | 6.3 | 223 |
| 15-5 | 18.5 | 1.8 | 61.7 | 18.0 | 389 | 3 | 28.7 | 3.6 | 51.0 | 16.7 | 251 |
| 16-5 | 17.8 | 1.7 | 63.2 | 17.3 | 405 | 5 | 25.8 | 3.2 | 45.9 | 25.1 | 279 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|-----|------|------|------|----------|------|------|------|------|------|
| 6-9-9-1 | 30.1 | 3.8 | 60.2 | 5.8 | 239 | 6-11-5-3 | 35.1 | 5.4 | 39.0 | 20.5 | 205 |
| 3 | 27.0 | 3.4 | 53.9 | 15.7 | 267 | 5 | 30.9 | 4.7 | 34.4 | 30.0 | 233 |
| 5 | 24.4 | 3.1 | 48.8 | 23.7 | 295 | 6-1 | 37.3 | 5.7 | 49.7 | 7.2 | 193 |
| 10-1 | 28.2 | 3.5 | 62.7 | 5.5 | 255 | 3 | 32.6 | 5.0 | 43.4 | 19.0 | 221 |
| 3 | 25.4 | 3.2 | 56.5 | 14.8 | 283 | 5 | 28.9 | 4.4 | 38.5 | 28.1 | 249 |
| 5 | 23.1 | 2.9 | 51.4 | 22.5 | 311 | 7-1 | 34.4 | 5.3 | 53.6 | 6.7 | 209 |
| 11-1 | 26.6 | 3.3 | 64.9 | 5.2 | 271 | 3 | 30.4 | 4.6 | 47.2 | 17.7 | 237 |
| 3 | 24.1 | 3.0 | 58.8 | 14.0 | 299 | 5 | 27.2 | 4.1 | 42.3 | 26.4 | 265 |
| 5 | 22.0 | 2.7 | 53.8 | 21.4 | 327 | 6-1 | 32.0 | 4.9 | 56.9 | 6.2 | 225 |
| 12-1 | 25.1 | 3.1 | 66.9 | 4.9 | 287 | 3 | 28.5 | 4.3 | 50.6 | 16.6 | 253 |
| 3 | 22.9 | 2.8 | 61.0 | 13.3 | 315 | 5 | 25.6 | 3.9 | 45.5 | 24.9 | 281 |
| 5 | 21.0 | 2.6 | 56.0 | 20.4 | 343 | 6-12-1-2 | 56.2 | 9.3 | 12.5 | 21.9 | 128 |
| 16-5 | 17.7 | 2.2 | 62.9 | 17.2 | 407 | 4 | 46.2 | 7.7 | 10.2 | 35.9 | 156 |
| 6-10-1-2 | 57.1 | 7.9 | 12.7 | 22.2 | 126 | 6 | 39.1 | 6.5 | 8.7 | 45.7 | 184 |
| 4 | 46.7 | 6.5 | 10.4 | 36.4 | 154 | 2-2 | 50.0 | 8.3 | 22.2 | 19.4 | 144 |
| 6 | 39.5 | 5.5 | 8.8 | 46.2 | 182 | 4 | 41.9 | 7.0 | 18.6 | 32.5 | 172 |
| 2-2 | 50.7 | 7.0 | 22.5 | 19.7 | 142 | 6 | 36.0 | 6.0 | 16.0 | 42.0 | 200 |
| 4 | 42.3 | 5.9 | 18.8 | 32.9 | 170 | 3-2 | 45.0 | 7.5 | 30.0 | 17.5 | 160 |
| 6 | 36.4 | 5.0 | 16.2 | 42.4 | 198 | 4 | 38.3 | 6.4 | 25.5 | 29.8 | 188 |
| 3-2 | 45.6 | 6.3 | 30.4 | 17.7 | 158 | 6 | 33.3 | 5.5 | 22.2 | 38.9 | 216 |
| 4 | 38.7 | 5.4 | 25.8 | 30.1 | 186 | 4-2 | 40.9 | 6.8 | 36.3 | 15.9 | 176 |
| 6 | 33.6 | 4.7 | 22.5 | 39.2 | 214 | 4 | 35.3 | 5.9 | 31.4 | 27.4 | 204 |
| 4-2 | 41.4 | 5.7 | 36.8 | 16.1 | 174 | 6 | 31.0 | 5.2 | 27.6 | 36.2 | 232 |
| 4 | 35.6 | 4.9 | 31.7 | 27.7 | 202 | 5-2 | 37.5 | 6.2 | 41.7 | 14.6 | 192 |
| 6 | 31.3 | 4.3 | 27.8 | 36.5 | 230 | 4 | 32.7 | 5.4 | 36.4 | 25.5 | 220 |
| 6 | 27.9 | 3.9 | 24.8 | 43.4 | 258 | 6 | 29.0 | 4.8 | 32.2 | 33.9 | 248 |
| 5-2 | 37.9 | 5.3 | 42.1 | 14.7 | 190 | 6-2 | 34.6 | 5.8 | 46.1 | 13.5 | 208 |
| 4 | 33.0 | 4.6 | 36.7 | 25.7 | 218 | 4 | 30.5 | 5.1 | 40.7 | 23.7 | 236 |
| 6 | 29.3 | 4.1 | 32.5 | 34.1 | 246 | 6 | 27.3 | 4.5 | 36.4 | 31.8 | 264 |
| 6-2 | 34.9 | 4.8 | 46.6 | 13.6 | 206 | 7-2 | 32.1 | 5.4 | 50.0 | 12.5 | 224 |
| 4 | 30.8 | 4.3 | 41.0 | 23.9 | 234 | 4 | 28.6 | 4.8 | 44.4 | 22.2 | 252 |
| 6 | 27.5 | 3.8 | 36.6 | 32.1 | 262 | 6 | 25.7 | 4.3 | 40.0 | 30.0 | 280 |
| 7-2 | 32.4 | 4.5 | 50.4 | 12.6 | 222 | 8-2 | 30.0 | 5.0 | 53.3 | 11.7 | 240 |
| 4 | 28.8 | 4.0 | 44.8 | 22.4 | 250 | 4 | 26.8 | 4.5 | 47.8 | 20.9 | 268 |
| 6 | 25.9 | 3.6 | 40.3 | 30.2 | 278 | 6 | 24.3 | 4.0 | 43.2 | 28.4 | 296 |
| 8-2 | 30.2 | 4.2 | 53.8 | 11.8 | 238 | 6-13-1-1 | 62.6 | 11.3 | 13.9 | 12.2 | 115 |
| 4 | 27.1 | 3.8 | 48.1 | 21.0 | 266 | 3 | 50.3 | 9.1 | 11.2 | 29.4 | 143 |
| 6 | 24.5 | 3.4 | 43.5 | 28.6 | 294 | 5 | 42.1 | 7.6 | 9.4 | 40.9 | 171 |
| 9-2 | 28.3 | 3.9 | 56.7 | 11.0 | 254 | 2-1 | 55.0 | 9.9 | 24.4 | 10.7 | 131 |
| 4 | 25.5 | 3.5 | 51.1 | 19.9 | 282 | 3 | 45.3 | 8.2 | 20.1 | 26.4 | 159 |
| 6 | 23.2 | 3.2 | 46.4 | 27.1 | 310 | 5 | 38.5 | 6.9 | 17.1 | 37.4 | 187 |
| 10-2 | 26.6 | 3.7 | 59.3 | 10.4 | 270 | 3-1 | 49.0 | 8.8 | 32.6 | 9.5 | 147 |
| 4 | 24.2 | 3.3 | 53.7 | 18.8 | 298 | 3 | 41.1 | 7.4 | 27.4 | 24.0 | 175 |
| 6 | 22.1 | 3.0 | 49.1 | 25.8 | 326 | 5 | 35.4 | 6.4 | 23.6 | 34.5 | 203 |
| 6-11-1-1 | 63.7 | 9.7 | 14.2 | 12.4 | 113 | 4-1 | 44.2 | 8.0 | 39.2 | 8.6 | 163 |
| 3 | 51.1 | 7.8 | 11.3 | 29.8 | 141 | 3 | 37.7 | 6.8 | 33.5 | 22.0 | 191 |
| 5 | 42.6 | 6.5 | 9.5 | 41.4 | 169 | 5 | 32.9 | 5.9 | 29.2 | 32.0 | 219 |
| 2-1 | 55.8 | 8.5 | 24.8 | 10.9 | 129 | 5-1 | 40.2 | 7.3 | 44.7 | 7.8 | 179 |
| 3 | 45.9 | 7.0 | 20.4 | 26.7 | 157 | 3 | 34.8 | 6.3 | 38.6 | 20.3 | 207 |
| 5 | 38.9 | 5.9 | 17.3 | 37.8 | 185 | 5 | 30.6 | 5.5 | 34.0 | 29.8 | 235 |
| 3-1 | 49.7 | 7.6 | 33.1 | 9.6 | 145 | 6-1 | 36.9 | 6.7 | 49.2 | 7.2 | 195 |
| 3 | 41.6 | 6.3 | 27.8 | 24.3 | 173 | 3 | 32.3 | 5.8 | 43.0 | 18.8 | 223 |
| 5 | 35.8 | 5.5 | 23.9 | 34.8 | 201 | 5 | 28.7 | 5.2 | 38.2 | 27.9 | 251 |
| 7 | 31.4 | 4.8 | 21.0 | 42.8 | 229 | 7-1 | 34.1 | 6.2 | 53.1 | 6.6 | 211 |
| 9 | 28.0 | 4.3 | 18.7 | 48.0 | 257 | 3 | 30.1 | 5.4 | 46.9 | 17.6 | 239 |
| 4-1 | 44.7 | 6.8 | 39.7 | 8.7 | 161 | 5 | 27.0 | 4.8 | 41.9 | 26.2 | 267 |
| 3 | 38.1 | 5.8 | 33.9 | 22.2 | 189 | 6-14-1-2 | 55.4 | 10.7 | 12.3 | 21.6 | 130 |
| 5 | 33.2 | 5.0 | 29.5 | 32.3 | 217 | 4 | 45.6 | 8.8 | 10.1 | 35.5 | 158 |
| 5-1 | 40.7 | 6.2 | 45.2 | 7.9 | 177 | 6 | 38.7 | 7.5 | 8.6 | 45.1 | 186 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|------|------|------|------|----------|------|-----|------|------|------|
| 6-14-2-2 | 49.3 | 9.6 | 21.9 | 19.2 | 146 | 6-18-2-6 | 34.9 | 8.7 | 15.5 | 40.8 | 206 |
| 4 | 41.4 | 8.0 | 18.4 | 32.2 | 174 | 3-4 | 37.1 | 9.3 | 24.7 | 28.9 | 194 |
| 6 | 35.6 | 6.9 | 15.8 | 41.6 | 202 | 6 | 32.4 | 8.1 | 21.6 | 37.8 | 222 |
| 3-2 | 44.5 | 8.6 | 29.6 | 17.3 | 162 | 7-3-1-3 | 57.9 | 2.1 | 11.0 | 29.0 | 145 |
| 4 | 37.9 | 7.4 | 25.2 | 29.5 | 190 | 2-3 | 52.0 | 1.9 | 19.9 | 26.1 | 161 |
| 6 | 33.0 | 6.4 | 22.0 | 38.5 | 218 | 3-1 | 56.4 | 2.0 | 32.2 | 9.4 | 149 |
| 4-2 | 40.4 | 7.8 | 36.0 | 15.7 | 178 | 3 | 47.5 | 1.7 | 27.1 | 23.7 | 177 |
| 4 | 35.0 | 6.8 | 31.0 | 27.2 | 206 | 4-3 | 43.5 | 1.5 | 33.2 | 21.8 | 193 |
| 6 | 30.8 | 6.0 | 27.3 | 35.9 | 234 | 5-3 | 40.2 | 1.4 | 38.3 | 20.1 | 209 |
| 5-2 | 37.1 | 7.2 | 41.2 | 14.4 | 194 | 6-1 | 42.6 | 1.5 | 48.7 | 7.1 | 197 |
| 4 | 32.4 | 6.3 | 36.0 | 25.2 | 222 | 3 | 37.3 | 1.3 | 42.7 | 18.7 | 225 |
| 6 | 28.8 | 5.6 | 32.0 | 33.6 | 250 | 5 | 33.2 | 1.2 | 37.9 | 27.7 | 253 |
| 6-2 | 34.3 | 6.7 | 45.7 | 13.3 | 210 | 7-1 | 39.4 | 1.4 | 52.6 | 6.6 | 213 |
| 4 | 30.3 | 5.9 | 40.3 | 23.5 | 238 | 3 | 34.8 | 1.2 | 46.5 | 17.4 | 241 |
| 6 | 27.1 | 5.2 | 36.1 | 31.6 | 266 | 5 | 31.2 | 1.1 | 41.6 | 26.0 | 289 |
| 7-2 | 31.9 | 6.2 | 49.5 | 12.4 | 226 | 8-1 | 36.7 | 1.3 | 55.9 | 6.1 | 229 |
| 4 | 28.3 | 5.5 | 44.1 | 22.1 | 254 | 3 | 32.7 | 1.2 | 49.8 | 16.3 | 257 |
| 6 | 25.5 | 4.9 | 39.7 | 29.8 | 282 | 5 | 29.5 | 1.0 | 44.9 | 24.6 | 285 |
| 8 | 23.2 | 4.5 | 36.1 | 36.1 | 310 | 9-1 | 34.3 | 1.2 | 58.8 | 5.7 | 245 |
| 6-15-1-1 | 61.5 | 12.8 | 13.7 | 12.0 | 117 | 3 | 30.7 | 1.1 | 52.7 | 15.4 | 273 |
| 3 | 49.7 | 10.3 | 11.0 | 29.0 | 145 | 5 | 27.9 | 1.0 | 47.9 | 23.2 | 301 |
| 5 | 41.6 | 8.7 | 9.2 | 40.5 | 173 | 7-4-1-2 | 63.6 | 3.0 | 12.1 | 21.2 | 132 |
| 2-1 | 54.1 | 11.3 | 24.1 | 10.5 | 133 | 4 | 52.5 | 2.5 | 10.0 | 35.0 | 160 |
| 3 | 44.7 | 9.3 | 19.9 | 26.1 | 161 | 6 | 44.7 | 2.1 | 8.5 | 44.7 | 185 |
| 5 | 38.1 | 7.9 | 16.9 | 37.0 | 189 | 2-2 | 56.7 | 2.7 | 21.6 | 18.9 | 148 |
| 3-1 | 48.3 | 10.1 | 32.2 | 9.4 | 149 | 4 | 47.7 | 2.3 | 18.2 | 31.8 | 176 |
| 3 | 40.7 | 8.5 | 27.1 | 23.7 | 177 | 6 | 41.2 | 2.0 | 15.7 | 41.1 | 204 |
| 5 | 35.1 | 7.3 | 23.4 | 34.1 | 205 | 3-2 | 51.2 | 2.4 | 29.3 | 17.1 | 164 |
| 4-1 | 43.6 | 9.1 | 38.8 | 8.5 | 165 | 4 | 43.7 | 2.1 | 25.0 | 29.2 | 192 |
| 3 | 37.3 | 7.8 | 33.2 | 21.7 | 193 | 6 | 38.2 | 1.8 | 21.8 | 38.2 | 220 |
| 5 | 32.6 | 6.8 | 28.9 | 31.7 | 221 | 4-2 | 46.7 | 2.2 | 35.5 | 15.5 | 180 |
| 5-1 | 39.8 | 8.3 | 44.2 | 7.7 | 181 | 4 | 40.4 | 1.9 | 30.8 | 26.9 | 208 |
| 3 | 34.4 | 7.2 | 38.3 | 20.1 | 209 | 6 | 35.6 | 1.7 | 27.1 | 35.6 | 236 |
| 5 | 30.4 | 6.3 | 33.8 | 29.5 | 237 | 5-2 | 42.8 | 2.0 | 40.8 | 14.3 | 196 |
| 6-1 | 36.5 | 7.6 | 48.7 | 7.1 | 197 | 4 | 37.5 | 1.8 | 35.7 | 25.0 | 224 |
| 6-16-1-2 | 54.5 | 12.1 | 12.1 | 21.2 | 132 | 6 | 33.3 | 1.6 | 31.7 | 33.3 | 252 |
| 4 | 45.0 | 10.0 | 10.0 | 35.0 | 160 | 6-2 | 39.6 | 1.9 | 45.3 | 13.2 | 212 |
| 6 | 38.3 | 8.5 | 8.5 | 44.7 | 188 | 4 | 35.0 | 1.7 | 40.0 | 23.3 | 240 |
| 2-2 | 48.6 | 10.8 | 21.6 | 18.9 | 148 | 6 | 31.3 | 1.5 | 35.8 | 31.3 | 268 |
| 4 | 40.9 | 9.1 | 18.2 | 31.8 | 176 | 7-2 | 36.8 | 1.7 | 49.1 | 12.4 | 226 |
| 6 | 35.3 | 7.8 | 15.7 | 41.2 | 204 | 4 | 32.8 | 1.5 | 50.8 | 21.9 | 258 |
| 3-2 | 43.9 | 9.7 | 29.3 | 17.1 | 164 | 6 | 29.6 | 1.4 | 39.4 | 29.6 | 284 |
| 4 | 37.5 | 8.3 | 25.0 | 29.2 | 192 | 8-2 | 34.4 | 1.6 | 52.5 | 11.5 | 244 |
| 6 | 32.7 | 7.3 | 21.8 | 38.2 | 220 | 4 | 30.9 | 1.5 | 47.0 | 20.6 | 272 |
| 4-2 | 40.0 | 8.9 | 35.6 | 15.5 | 180 | 6 | 28.0 | 1.3 | 42.7 | 28.0 | 300 |
| 4 | 34.6 | 7.7 | 30.8 | 26.9 | 208 | 10-6 | 25.3 | 1.2 | 48.2 | 25.3 | 332 |
| 6 | 30.5 | 6.8 | 27.1 | 35.6 | 236 | 7-5-1-1 | 70.6 | 4.2 | 13.4 | 11.8 | 119 |
| 5-2 | 36.7 | 8.2 | 40.8 | 14.3 | 196 | 3 | 57.1 | 3.4 | 10.9 | 28.6 | 147 |
| 6-17-1-1 | 60.5 | 14.3 | 13.4 | 11.7 | 119 | 5 | 48.0 | 2.9 | 9.1 | 40.0 | 175 |
| 3 | 49.0 | 11.5 | 10.9 | 28.6 | 147 | 2-1 | 62.2 | 3.7 | 23.7 | 10.4 | 135 |
| 5 | 41.1 | 9.7 | 9.1 | 40.0 | 175 | 3 | 51.5 | 3.1 | 19.6 | 25.8 | 163 |
| 2-1 | 53.3 | 12.6 | 23.7 | 10.4 | 135 | 5 | 44.0 | 2.6 | 16.7 | 36.7 | 191 |
| 3 | 44.2 | 10.4 | 19.6 | 25.8 | 163 | 3-1 | 55.6 | 3.3 | 31.8 | 9.3 | 151 |
| 5 | 37.7 | 8.9 | 16.7 | 36.7 | 191 | 3 | 46.9 | 2.8 | 26.8 | 23.5 | 179 |
| 3-1 | 47.7 | 11.2 | 31.8 | 9.3 | 151 | 5 | 40.6 | 2.4 | 23.2 | 33.8 | 205 |
| 3 | 40.2 | 9.5 | 26.8 | 23.5 | 179 | 4-1 | 50.3 | 3.0 | 38.3 | 8.4 | 167 |
| 5 | 34.8 | 8.2 | 23.2 | 33.8 | 207 | 3 | 43.1 | 2.6 | 32.8 | 21.5 | 195 |
| 6-18-1-4 | 44.4 | 11.1 | 9.9 | 34.6 | 162 | 5 | 37.7 | 2.2 | 28.7 | 31.4 | 223 |
| 2-4 | 40.5 | 10.1 | 18.0 | 31.4 | 178 | 5-1 | 45.9 | 2.7 | 43.7 | 7.6 | 183 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|-----|------|------|------|----------|------|-----|------|------|------|
| 7-5-5-3 | 39.8 | 2.4 | 37.9 | 19.9 | 211 | 7-7-8-5 | 29.1 | 2.4 | 44.3 | 24.2 | 289 |
| 5 | 35.1 | 2.1 | 33.5 | 29.3 | 239 | 7-8-1-2 | 61.8 | 5.9 | 11.8 | 20.6 | 136 |
| 6-1 | 42.2 | 2.5 | 48.2 | 7.0 | 199 | 4 | 51.2 | 4.9 | 9.7 | 34.1 | 164 |
| 3 | 37.0 | 2.2 | 42.3 | 18.5 | 227 | 6 | 43.8 | 4.1 | 8.3 | 43.8 | 192 |
| 5 | 33.0 | 2.0 | 37.6 | 27.4 | 255 | 2-2 | 55.3 | 5.3 | 21.0 | 18.4 | 152 |
| 7-1 | 39.1 | 2.3 | 52.1 | 6.5 | 215 | 4 | 46.7 | 4.4 | 17.8 | 31.1 | 180 |
| 3 | 34.6 | 2.0 | 46.1 | 17.3 | 243 | 6 | 40.4 | 3.8 | 15.4 | 40.4 | 208 |
| 5 | 31.0 | 1.8 | 41.3 | 25.8 | 271 | 3-2 | 50.0 | 4.8 | 28.5 | 16.7 | 168 |
| 8-1 | 36.4 | 2.2 | 55.4 | 6.0 | 231 | 4 | 42.8 | 4.1 | 24.5 | 28.6 | 196 |
| 3 | 32.4 | 1.9 | 49.4 | 16.2 | 259 | 6 | 37.5 | 3.6 | 21.4 | 37.5 | 224 |
| 5 | 29.3 | 1.7 | 44.6 | 24.4 | 287 | 4-2 | 45.6 | 4.3 | 34.8 | 15.2 | 184 |
| 9-3 | 30.5 | 1.8 | 52.3 | 15.3 | 275 | 4 | 39.6 | 3.8 | 30.2 | 26.4 | 212 |
| 7-6-1-2 | 62.7 | 4.5 | 11.9 | 20.9 | 134 | 6 | 35.0 | 3.3 | 26.7 | 35.0 | 240 |
| 4 | 51.8 | 3.7 | 9.9 | 34.6 | 162 | 5-2 | 42.0 | 4.0 | 40.0 | 14.0 | 200 |
| 6 | 44.2 | 3.2 | 8.4 | 44.2 | 190 | 4 | 36.8 | 3.5 | 35.1 | 24.6 | 228 |
| 2-2 | 56.0 | 4.0 | 21.3 | 18.7 | 150 | 6 | 32.8 | 3.1 | 31.3 | 32.8 | 256 |
| 4 | 47.2 | 3.4 | 18.0 | 31.4 | 178 | 6-2 | 39.0 | 3.7 | 44.4 | 12.9 | 216 |
| 6 | 40.8 | 2.9 | 15.5 | 40.8 | 206 | 4 | 34.4 | 3.3 | 39.3 | 23.0 | 244 |
| 3-2 | 50.6 | 3.6 | 28.9 | 16.9 | 166 | 6 | 30.9 | 2.9 | 35.3 | 30.9 | 272 |
| 4 | 43.3 | 3.1 | 24.7 | 28.9 | 194 | 7-2 | 36.2 | 3.4 | 48.3 | 12.1 | 232 |
| 6 | 37.8 | 2.7 | 21.6 | 37.8 | 222 | 4 | 32.3 | 3.1 | 43.1 | 21.1 | 260 |
| 4-2 | 46.1 | 3.3 | 35.2 | 15.4 | 182 | 6 | 29.1 | 2.8 | 38.9 | 29.2 | 288 |
| 4 | 40.0 | 2.9 | 30.4 | 26.7 | 210 | 8-2 | 33.9 | 3.2 | 51.6 | 11.3 | 248 |
| 6 | 35.3 | 2.5 | 26.9 | 35.3 | 238 | 4 | 30.4 | 2.9 | 46.4 | 20.3 | 276 |
| 5-2 | 42.4 | 3.0 | 40.4 | 14.1 | 198 | 6 | 27.6 | 2.6 | 42.1 | 27.6 | 304 |
| 4 | 37.2 | 2.6 | 35.4 | 24.8 | 226 | 19-6 | 17.5 | 1.7 | 63.3 | 17.5 | 480 |
| 6 | 33.1 | 2.4 | 31.5 | 33.1 | 254 | 7-9-1-1 | 68.3 | 7.3 | 13.0 | 11.4 | 123 |
| 6-2 | 39.2 | 2.8 | 44.9 | 13.1 | 214 | 3 | 53.6 | 6.0 | 10.6 | 27.8 | 151 |
| 4 | 34.7 | 2.5 | 39.7 | 23.1 | 242 | 5 | 46.9 | 5.0 | 8.9 | 39.1 | 179 |
| 6 | 31.1 | 2.2 | 35.5 | 31.1 | 270 | 2-1 | 60.4 | 6.5 | 23.0 | 10.1 | 139 |
| 7-2 | 36.5 | 2.6 | 48.7 | 12.2 | 230 | 3 | 50.3 | 5.4 | 19.2 | 25.1 | 167 |
| 4 | 32.5 | 2.3 | 43.4 | 21.7 | 258 | 5 | 43.1 | 4.6 | 16.4 | 35.9 | 195 |
| 6 | 29.4 | 2.1 | 39.1 | 29.4 | 286 | 3-1 | 54.2 | 5.8 | 31.0 | 9.0 | 155 |
| 8-2 | 34.1 | 2.4 | 52.0 | 11.4 | 246 | 3 | 45.9 | 4.9 | 26.2 | 23.0 | 183 |
| 4 | 30.7 | 2.2 | 46.7 | 20.4 | 274 | 5 | 39.8 | 4.3 | 22.7 | 33.2 | 211 |
| 6 | 27.8 | 2.0 | 42.4 | 27.8 | 302 | 4-1 | 49.1 | 5.3 | 37.4 | 8.2 | 171 |
| 7-7-1-1 | 69.4 | 5.8 | 13.2 | 11.6 | 121 | 3 | 42.2 | 4.5 | 32.2 | 21.1 | 199 |
| 3 | 56.4 | 4.5 | 10.7 | 28.2 | 149 | 5 | 37.0 | 3.9 | 28.2 | 30.8 | 227 |
| 5 | 47.5 | 3.9 | 9.0 | 39.5 | 177 | 5-1 | 44.9 | 4.8 | 42.8 | 7.5 | 187 |
| 2-1 | 61.3 | 5.1 | 23.4 | 10.2 | 137 | 3 | 39.1 | 4.2 | 37.2 | 19.5 | 215 |
| 3 | 50.9 | 4.2 | 19.4 | 25.4 | 165 | 5 | 34.6 | 3.7 | 32.9 | 28.8 | 243 |
| 5 | 43.5 | 3.6 | 16.6 | 36.3 | 193 | 6-1 | 41.4 | 4.4 | 47.3 | 6.9 | 203 |
| 3-1 | 54.9 | 4.6 | 31.4 | 9.2 | 153 | 3 | 36.4 | 3.9 | 41.5 | 18.2 | 231 |
| 3 | 46.4 | 3.9 | 26.5 | 23.2 | 181 | 5 | 32.4 | 3.5 | 37.1 | 27.0 | 259 |
| 5 | 40.2 | 3.3 | 23.0 | 33.5 | 209 | 7-1 | 38.4 | 4.1 | 51.1 | 6.4 | 219 |
| 4-1 | 49.7 | 4.1 | 37.9 | 8.3 | 169 | 3 | 34.0 | 3.6 | 45.3 | 17.0 | 247 |
| 3 | 42.6 | 3.5 | 32.5 | 21.3 | 197 | 5 | 30.5 | 3.3 | 40.7 | 25.4 | 275 |
| 5 | 37.3 | 3.1 | 28.4 | 31.1 | 225 | 8-1 | 35.7 | 3.8 | 54.5 | 6.0 | 235 |
| 5-1 | 45.4 | 3.8 | 43.2 | 7.6 | 185 | 3 | 31.9 | 3.4 | 48.7 | 16.0 | 263 |
| 3 | 39.4 | 3.3 | 37.6 | 19.7 | 213 | 5 | 28.9 | 3.1 | 44.0 | 24.0 | 291 |
| 5 | 34.8 | 2.9 | 33.2 | 29.0 | 241 | 7-10-1-2 | 60.9 | 7.2 | 11.6 | 20.3 | 138 |
| 6-1 | 41.8 | 3.5 | 47.7 | 7.0 | 201 | 4 | 50.6 | 6.0 | 9.6 | 33.7 | 166 |
| 3 | 36.7 | 3.1 | 41.9 | 18.3 | 229 | 6 | 43.3 | 5.1 | 8.2 | 43.3 | 164 |
| 5 | 32.7 | 2.7 | 37.4 | 27.2 | 257 | 2-2 | 54.5 | 6.5 | 20.8 | 18.2 | 154 |
| 7-1 | 38.7 | 3.2 | 51.6 | 6.4 | 217 | 4 | 46.1 | 5.5 | 17.6 | 30.8 | 182 |
| 3 | 34.3 | 2.9 | 45.7 | 17.1 | 245 | 6 | 40.0 | 4.8 | 15.2 | 40.0 | 210 |
| 5 | 30.8 | 2.6 | 41.0 | 25.6 | 273 | 3-2 | 49.4 | 5.9 | 28.2 | 16.5 | 170 |
| 8-1 | 36.1 | 3.0 | 54.9 | 6.0 | 233 | 4 | 42.4 | 5.0 | 24.2 | 28.3 | 198 |
| 3 | 32.2 | 2.7 | 49.9 | 16.1 | 261 | | | | | | |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|-----|------|------|------|----------|------|------|------|------|------|
| 7-10-3-6 | 37.2 | 4.4 | 21.2 | 37.2 | 226 | 7-12-8-6 | 27.3 | 3.9 | 41.5 | 27.3 | 308 |
| 4-2 | 45.1 | 5.4 | 34.5 | 15.0 | 186 | 7-13-1-1 | 66.1 | 10.2 | 12.6 | 11.0 | 127 |
| 4 | 39.2 | 4.7 | 29.9 | 26.2 | 214 | 3 | 54.2 | 8.4 | 10.3 | 27.1 | 155 |
| 6 | 34.7 | 4.1 | 26.4 | 34.7 | 212 | 5 | 45.9 | 7.1 | 8.7 | 38.2 | 183 |
| 5-2 | 41.6 | 4.9 | 39.6 | 13.9 | 202 | 2-1 | 58.7 | 9.1 | 22.4 | 9.8 | 143 |
| 4 | 36.5 | 4.3 | 34.8 | 24.4 | 230 | 3 | 49.1 | 7.6 | 18.7 | 24.6 | 171 |
| 6 | 32.5 | 3.9 | 31.0 | 32.5 | 258 | 5 | 42.2 | 6.5 | 16.0 | 35.2 | 199 |
| 6-2 | 38.5 | 4.6 | 44.0 | 12.8 | 218 | 3-1 | 52.8 | 8.2 | 30.2 | 8.8 | 159 |
| 4 | 34.1 | 4.1 | 39.0 | 22.8 | 246 | 3 | 44.9 | 6.9 | 25.7 | 22.5 | 187 |
| 6 | 30.7 | 3.6 | 35.0 | 30.7 | 274 | 5 | 39.1 | 6.0 | 22.3 | 32.6 | 215 |
| 7-2 | 35.9 | 4.3 | 47.9 | 11.9 | 234 | 11 | 28.1 | 4.3 | 16.0 | 51.5 | 299 |
| 14-4 | 22.5 | 2.7 | 59.9 | 14.9 | 374 | 4-1 | 48.4 | 7.4 | 36.6 | 8.0 | 175 |
| 7-11-1-1 | 67.2 | 8.8 | 12.8 | 11.2 | 125 | 3 | 41.4 | 6.4 | 31.5 | 20.7 | 203 |
| 3 | 54.8 | 7.2 | 10.5 | 27.4 | 153 | 5 | 36.4 | 5.6 | 27.7 | 30.3 | 231 |
| 5 | 46.4 | 6.1 | 8.8 | 38.7 | 181 | 5-1 | 44.0 | 6.7 | 42.0 | 7.3 | 191 |
| 2-1 | 59.6 | 7.8 | 22.7 | 9.9 | 141 | 3 | 38.4 | 5.9 | 36.5 | 19.2 | 219 |
| 3 | 49.7 | 6.5 | 18.9 | 24.9 | 169 | 5 | 34.0 | 5.3 | 32.4 | 28.3 | 247 |
| 5 | 12.6 | 5.6 | 16.2 | 35.5 | 197 | 6-1 | 40.6 | 6.3 | 46.4 | 6.7 | 207 |
| 3-1 | 53.5 | 7.0 | 30.6 | 8.9 | 157 | 3 | 35.7 | 5.5 | 40.8 | 17.9 | 235 |
| 3 | 45.4 | 5.9 | 25.9 | 22.7 | 185 | 5 | 31.9 | 4.9 | 36.5 | 26.6 | 263 |
| 5 | 39.4 | 5.2 | 22.5 | 32.9 | 213 | 7-14-1-2 | 59.1 | 9.9 | 11.3 | 19.7 | 142 |
| 4-1 | 48.6 | 6.3 | 37.0 | 8.1 | 173 | 4 | 49.4 | 8.2 | 9.4 | 32.9 | 170 |
| 3 | 41.8 | 5.5 | 31.8 | 20.9 | 201 | 6 | 42.4 | 7.1 | 8.1 | 42.4 | 198 |
| 5 | 36.7 | 4.8 | 28.0 | 30.6 | 229 | 2-2 | 53.2 | 8.8 | 20.3 | 17.7 | 158 |
| 5-1 | 44.4 | 5.8 | 42.3 | 7.4 | 189 | 4 | 45.1 | 7.5 | 17.2 | 30.1 | 186 |
| 3 | 38.7 | 5.1 | 36.8 | 19.4 | 217 | 6 | 39.2 | 6.5 | 15.0 | 39.2 | 214 |
| 5 | 34.3 | 4.5 | 32.6 | 28.6 | 245 | 3-2 | 48.3 | 8.0 | 27.6 | 16.1 | 174 |
| 6-1 | 41.0 | 5.4 | 46.8 | 6.5 | 205 | 4 | 41.6 | 6.9 | 23.8 | 27.7 | 202 |
| 3 | 36.1 | 4.7 | 41.2 | 18.0 | 233 | 6 | 36.5 | 6.1 | 20.9 | 36.5 | 230 |
| 5 | 32.2 | 4.2 | 36.8 | 26.8 | 261 | 4-2 | 44.2 | 7.4 | 33.7 | 14.7 | 190 |
| 7-1 | 38.0 | 5.0 | 50.7 | 6.3 | 221 | 4 | 38.5 | 6.4 | 29.3 | 25.7 | 218 |
| 3 | 33.7 | 4.4 | 44.9 | 16.9 | 249 | 6 | 34.1 | 5.7 | 26.0 | 34.1 | 246 |
| 5 | 30.3 | 4.0 | 40.1 | 25.3 | 277 | 5-2 | 40.8 | 6.8 | 38.8 | 13.6 | 206 |
| 8-1 | 35.4 | 4.6 | 54.0 | 5.9 | 237 | 4 | 35.9 | 6.0 | 34.2 | 23.9 | 234 |
| 3 | 31.7 | 4.1 | 48.3 | 15.9 | 265 | 6 | 32.1 | 5.3 | 30.5 | 32.1 | 262 |
| 5 | 28.7 | 3.7 | 43.7 | 23.9 | 293 | 6-2 | 37.8 | 6.3 | 43.2 | 12.6 | 222 |
| 7-12-1-2 | 60.0 | 8.6 | 11.4 | 20.0 | 140 | 4 | 33.6 | 5.6 | 38.4 | 22.4 | 250 |
| 4 | 59.0 | 7.1 | 9.5 | 33.3 | 168 | 6 | 30.2 | 5.0 | 34.5 | 30.2 | 278 |
| 6 | 42.8 | 6.1 | 8.2 | 42.8 | 196 | 7-15-1-1 | 65.1 | 11.6 | 12.4 | 10.8 | 129 |
| 2-2 | 53.8 | 7.7 | 20.5 | 18.0 | 156 | 3 | 53.5 | 9.5 | 10.2 | 26.8 | 157 |
| 4 | 45.7 | 6.5 | 17.4 | 30.4 | 184 | 5 | 45.4 | 8.1 | 8.6 | 37.8 | 185 |
| 6 | 39.6 | 5.7 | 15.1 | 39.6 | 212 | 13 | 28.3 | 5.4 | 5.4 | 61.3 | 297 |
| 3-2 | 48.8 | 7.0 | 27.9 | 16.3 | 172 | 2-1 | 57.9 | 10.3 | 22.1 | 9.7 | 145 |
| 4 | 42.0 | 6.0 | 24.0 | 28.0 | 200 | 3 | 48.5 | 8.7 | 18.5 | 24.3 | 173 |
| 6 | 36.8 | 5.3 | 21.0 | 36.8 | 228 | 5 | 41.8 | 7.5 | 15.9 | 34.8 | 201 |
| 4-2 | 44.7 | 6.4 | 34.0 | 14.9 | 188 | 3-1 | 52.2 | 9.3 | 29.8 | 8.7 | 161 |
| 4 | 38.9 | 5.5 | 29.6 | 25.9 | 216 | 3 | 44.5 | 7.9 | 25.4 | 22.2 | 189 |
| 6 | 34.4 | 4.9 | 26.2 | 34.4 | 244 | 5 | 38.7 | 6.9 | 22.1 | 32.3 | 217 |
| 5-2 | 41.2 | 5.9 | 39.2 | 13.7 | 204 | 4-1 | 47.5 | 8.5 | 36.1 | 7.9 | 177 |
| 4 | 36.2 | 5.2 | 34.5 | 24.1 | 232 | 3 | 41.0 | 7.3 | 31.2 | 20.5 | 205 |
| 6 | 32.3 | 4.6 | 30.8 | 32.3 | 260 | 5 | 36.1 | 6.4 | 27.5 | 30.0 | 233 |
| 6-2 | 38.2 | 5.4 | 43.6 | 12.7 | 220 | 5-1 | 43.5 | 7.8 | 41.4 | 7.2 | 193 |
| 4 | 33.9 | 4.8 | 38.7 | 22.6 | 248 | 3 | 38.0 | 6.8 | 36.2 | 19.0 | 221 |
| 6 | 30.4 | 4.3 | 34.8 | 30.4 | 276 | 5 | 33.7 | 6.0 | 32.1 | 28.1 | 249 |
| 7-2 | 35.6 | 5.1 | 47.4 | 11.9 | 236 | 6-1 | 40.2 | 7.2 | 45.9 | 6.7 | 209 |
| 4 | 31.8 | 4.5 | 42.4 | 21.2 | 264 | 3 | 35.4 | 6.3 | 40.5 | 17.7 | 237 |
| 6 | 28.8 | 4.1 | 38.3 | 28.8 | 292 | 5 | 31.7 | 5.6 | 36.2 | 26.4 | 265 |
| 8-2 | 33.3 | 4.8 | 50.8 | 11.1 | 252 | 7-1 | 37.3 | 6.7 | 49.8 | 6.2 | 225 |
| 4 | 30.0 | 4.3 | 45.7 | 20.0 | 280 | 3 | 33.2 | 5.9 | 44.3 | 16.6 | 253 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|------|------|------|------|---------|------|-----|------|------|------|
| 7-15-7-5 | 29.9 | 5.3 | 39.8 | 24.9 | 281 | 8-4-1-6 | 48.0 | 2.0 | 8.0 | 42.0 | 200 |
| 8-1 | 34.9 | 6.2 | 53.0 | 5.8 | 241 | 2-2 | 60.0 | 2.5 | 20.0 | 17.5 | 160 |
| 3 | 31.2 | 5.6 | 47.6 | 15.6 | 269 | 4 | 51.1 | 2.1 | 17.0 | 29.8 | 188 |
| 5 | 28.3 | 5.0 | 43.1 | 23.6 | 297 | 6 | 44.4 | 1.8 | 14.8 | 38.9 | 216 |
| 7-16-1-2 | 58.3 | 11.1 | 11.1 | 19.4 | 144 | 3-2 | 54.5 | 2.3 | 27.3 | 15.9 | 176 |
| 4 | 48.8 | 9.3 | 9.3 | 32.6 | 172 | 4 | 47.1 | 2.0 | 23.5 | 27.4 | 204 |
| 6 | 42.0 | 8.0 | 8.0 | 42.0 | 200 | 6 | 41.4 | 1.7 | 20.7 | 36.2 | 232 |
| 2-2 | 52.5 | 10.0 | 20.0 | 17.5 | 160 | 4-2 | 50.0 | 2.1 | 33.3 | 14.6 | 192 |
| 4 | 44.7 | 8.5 | 17.0 | 29.8 | 188 | 4 | 43.6 | 1.8 | 29.1 | 25.4 | 220 |
| 6 | 38.9 | 7.4 | 14.8 | 38.9 | 216 | 6 | 38.7 | 1.6 | 25.8 | 33.9 | 248 |
| 3-2 | 47.7 | 9.1 | 27.3 | 15.9 | 176 | 5-2 | 46.1 | 1.9 | 38.5 | 13.5 | 208 |
| 4 | 41.2 | 7.8 | 23.5 | 27.4 | 204 | 4 | 40.7 | 1.7 | 33.9 | 23.7 | 236 |
| 6 | 36.2 | 6.9 | 20.7 | 36.2 | 232 | 6 | 36.4 | 1.5 | 30.3 | 31.8 | 264 |
| 4-2 | 43.8 | 8.3 | 33.3 | 14.6 | 192 | 6-2 | 42.9 | 1.8 | 42.8 | 12.5 | 224 |
| 4 | 38.2 | 7.3 | 29.1 | 25.4 | 220 | 4 | 38.1 | 1.6 | 38.1 | 22.2 | 252 |
| 6 | 33.9 | 6.4 | 25.8 | 33.9 | 248 | 6 | 34.3 | 1.4 | 34.3 | 30.0 | 280 |
| 5-4 | 35.6 | 6.8 | 33.9 | 23.7 | 236 | 7-2 | 40.0 | 1.6 | 46.7 | 11.7 | 240 |
| 7-17-1-1 | 64.1 | 13.0 | 12.2 | 10.7 | 131 | 4 | 35.8 | 1.5 | 41.8 | 20.9 | 268 |
| 3 | 52.8 | 10.7 | 10.1 | 26.4 | 159 | 6 | 32.4 | 1.3 | 37.8 | 28.4 | 296 |
| 5 | 44.9 | 9.1 | 8.6 | 37.4 | 187 | 8-2 | 37.5 | 1.6 | 50.0 | 10.9 | 256 |
| 2-1 | 57.1 | 11.5 | 21.8 | 9.5 | 147 | 4 | 33.8 | 1.4 | 45.0 | 16.9 | 284 |
| 3 | 48.0 | 9.7 | 18.3 | 24.0 | 175 | 6 | 30.8 | 1.3 | 41.0 | 26.9 | 312 |
| 5 | 41.4 | 8.4 | 15.7 | 34.5 | 203 | 9-2 | 35.3 | 1.5 | 52.9 | 10.3 | 272 |
| 3-1 | 51.5 | 10.4 | 29.4 | 8.6 | 163 | 4 | 32.0 | 1.3 | 48.0 | 18.7 | 300 |
| 3 | 44.0 | 8.9 | 25.1 | 22.0 | 191 | 6 | 29.3 | 1.2 | 43.9 | 25.6 | 328 |
| 5 | 38.4 | 7.7 | 21.9 | 32.0 | 219 | 10-2 | 33.3 | 1.4 | 55.5 | 9.7 | 288 |
| 7-18-1-2 | 57.5 | 12.3 | 11.0 | 19.2 | 146 | 4 | 30.4 | 1.2 | 50.6 | 17.7 | 316 |
| 4 | 48.3 | 10.3 | 9.2 | 32.2 | 174 | 6 | 27.9 | 1.2 | 46.5 | 24.4 | 344 |
| 6 | 41.6 | 8.9 | 7.9 | 41.6 | 202 | 8 | 27.3 | 3.8 | 12.2 | 10.7 | 131 |
| 2-2 | 51.9 | 11.1 | 19.7 | 17.3 | 162 | 3 | 60.4 | 3.1 | 10.1 | 26.4 | 159 |
| 4 | 44.2 | 9.4 | 16.9 | 29.5 | 190 | 5 | 51.3 | 2.7 | 8.6 | 37.4 | 187 |
| 6 | 38.5 | 8.3 | 14.7 | 38.5 | 218 | 2-1 | 65.3 | 3.4 | 21.8 | 9.5 | 147 |
| 7-19-1-1 | 63.2 | 14.3 | 12.0 | 10.5 | 133 | 3 | 54.9 | 2.8 | 18.3 | 24.0 | 175 |
| 3 | 52.5 | 11.8 | 9.9 | 26.1 | 161 | 5 | 47.3 | 2.4 | 15.6 | 34.5 | 203 |
| 5 | 44.4 | 10.1 | 8.5 | 37.0 | 189 | 3-1 | 58.9 | 3.1 | 29.4 | 8.6 | 163 |
| 2-1 | 56.4 | 12.7 | 21.5 | 9.4 | 149 | 3 | 50.3 | 2.6 | 25.1 | 22.0 | 191 |
| 3 | 47.5 | 10.7 | 18.1 | 23.7 | 177 | 5 | 43.8 | 2.3 | 21.9 | 32.0 | 219 |
| 5 | 41.0 | 9.3 | 15.6 | 34.1 | 205 | 4-1 | 53.6 | 2.8 | 35.7 | 7.8 | 179 |
| 8-2-4-2 | 50.5 | 1.1 | 33.7 | 14.7 | 190 | 3 | 46.4 | 2.4 | 30.9 | 20.3 | 207 |
| 4 | 44.0 | 0.9 | 29.3 | 25.7 | 218 | 5 | 40.9 | 2.1 | 27.2 | 29.8 | 235 |
| 6 | 39.0 | 0.8 | 26.0 | 34.1 | 246 | 5-1 | 49.2 | 2.6 | 41.0 | 7.2 | 195 |
| 5-2 | 46.6 | 1.0 | 38.8 | 13.6 | 206 | 3 | 43.1 | 2.2 | 35.9 | 18.8 | 223 |
| 4 | 41.0 | 0.8 | 34.2 | 23.0 | 234 | 5 | 38.3 | 2.0 | 31.8 | 27.9 | 251 |
| 6 | 36.6 | 0.8 | 30.5 | 32.1 | 262 | 6-1 | 45.5 | 2.4 | 45.5 | 6.6 | 211 |
| 8-4 | 34.0 | 0.7 | 45.3 | 19.9 | 282 | 3 | 40.2 | 2.1 | 40.2 | 17.5 | 239 |
| 8-3-3-1 | 59.6 | 1.9 | 29.8 | 8.7 | 161 | 5 | 36.0 | 1.9 | 35.9 | 26.2 | 267 |
| 3 | 50.8 | 1.6 | 25.4 | 22.2 | 189 | 7-1 | 42.3 | 2.2 | 49.3 | 6.2 | 227 |
| 5 | 44.2 | 1.4 | 22.1 | 32.3 | 217 | 3 | 37.6 | 2.0 | 43.9 | 16.5 | 255 |
| 4-1 | 54.2 | 1.7 | 36.2 | 7.9 | 177 | 5 | 33.9 | 1.8 | 39.6 | 24.7 | 283 |
| 3 | 46.8 | 1.5 | 31.2 | 20.5 | 205 | 8-1 | 39.5 | 2.0 | 52.7 | 5.8 | 243 |
| 5 | 41.2 | 1.3 | 27.5 | 30.0 | 233 | 3 | 35.4 | 1.8 | 47.2 | 15.5 | 271 |
| 5-1 | 49.7 | 1.6 | 41.4 | 7.3 | 193 | 5 | 32.1 | 1.2 | 42.8 | 23.4 | 299 |
| 3 | 43.4 | 1.4 | 36.2 | 19.0 | 221 | 9-1 | 37.1 | 1.9 | 55.6 | 5.4 | 259 |
| 5 | 38.6 | 1.2 | 32.1 | 28.1 | 249 | 3 | 33.4 | 1.7 | 50.2 | 14.6 | 287 |
| 6-1 | 45.9 | 1.4 | 45.9 | 6.7 | 209 | 5 | 30.5 | 1.6 | 45.7 | 22.2 | 315 |
| 3 | 40.5 | 1.3 | 40.5 | 17.7 | 237 | 10-1 | 34.9 | 1.8 | 58.2 | 5.1 | 275 |
| 5 | 36.2 | 1.1 | 36.2 | 26.4 | 267 | 3 | 31.7 | 1.6 | 52.8 | 13.9 | 303 |
| 8-4-1-2 | 66.7 | 2.8 | 11.1 | 19.4 | 144 | 5 | 29.0 | 1.5 | 48.3 | 21.1 | 331 |
| 4 | 55.8 | 2.3 | 9.3 | 32.6 | 172 | 8-6-1-2 | 65.8 | 4.1 | 10.9 | 19.2 | 146 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|-----|------|------|------|----------|------|-----|------|------|------|
| 8-6-1-4 | 55.1 | 3.4 | 9.2 | 32.2 | 174 | 8-7-10-5 | 28.8 | 2.1 | 42.1 | 21.0 | 333 |
| 6 | 47.5 | 3.0 | 7.9 | 41.6 | 202 | 7 | 26.6 | 1.9 | 43.3 | 27.1 | 361 |
| 2-2 | 59.3 | 3.7 | 19.7 | 17.3 | 162 | 8-8-1-2 | 64.8 | 5.4 | 10.8 | 18.9 | 148 |
| 4 | 50.5 | 3.1 | 16.9 | 29.5 | 190 | 4 | 54.5 | 4.5 | 9.1 | 31.8 | 176 |
| 4 | 44.0 | 2.7 | 14.7 | 38.5 | 218 | 6 | 47.1 | 3.9 | 7.8 | 41.2 | 204 |
| 3-2 | 53.9 | 3.4 | 27.0 | 15.7 | 178 | 2-2 | 58.5 | 4.9 | 19.5 | 17.1 | 164 |
| 4 | 46.6 | 2.9 | 23.3 | 27.2 | 206 | 4 | 50.0 | 4.2 | 16.6 | 29.2 | 192 |
| 6 | 41.0 | 2.5 | 20.5 | 35.9 | 234 | 6 | 43.6 | 3.6 | 14.5 | 38.2 | 220 |
| 4-2 | 49.5 | 3.1 | 33.0 | 14.4 | 194 | 3-2 | 53.3 | 4.4 | 26.7 | 15.5 | 180 |
| 4 | 43.2 | 2.7 | 28.8 | 25.2 | 222 | 4 | 46.2 | 3.8 | 23.1 | 26.9 | 208 |
| 6 | 38.4 | 2.4 | 25.6 | 33.6 | 250 | 6 | 40.7 | 3.4 | 20.3 | 35.6 | 236 |
| 5-2 | 45.7 | 2.9 | 38.1 | 13.3 | 210 | 4-2 | 49.0 | 4.1 | 32.6 | 14.3 | 196 |
| 4 | 40.3 | 2.5 | 33.6 | 23.5 | 238 | 4 | 42.9 | 3.5 | 28.6 | 25.0 | 224 |
| 6 | 36.1 | 2.2 | 30.1 | 31.6 | 266 | 6 | 38.1 | 3.2 | 25.4 | 33.3 | 252 |
| 6-2 | 42.5 | 2.6 | 42.5 | 12.4 | 226 | 5-2 | 45.3 | 3.8 | 37.7 | 13.2 | 212 |
| 4 | 37.8 | 2.4 | 37.8 | 22.0 | 254 | 4 | 40.0 | 3.3 | 33.3 | 23.3 | 240 |
| 6 | 34.0 | 2.1 | 34.0 | 29.8 | 282 | 6 | 35.8 | 3.0 | 29.8 | 31.3 | 268 |
| 7-2 | 39.6 | 2.5 | 46.3 | 11.6 | 242 | 6-2 | 42.1 | 3.5 | 42.1 | 12.3 | 228 |
| 4 | 35.6 | 2.2 | 41.5 | 20.7 | 270 | 4 | 37.5 | 3.1 | 37.5 | 21.9 | 256 |
| 6 | 32.2 | 2.0 | 37.6 | 28.2 | 298 | 6 | 33.8 | 2.8 | 33.8 | 29.6 | 284 |
| 8-2 | 37.2 | 2.3 | 49.6 | 10.9 | 258 | 7-2 | 39.3 | 3.3 | 45.9 | 11.5 | 244 |
| 4 | 33.5 | 2.1 | 44.8 | 19.6 | 286 | 4 | 35.3 | 2.9 | 41.2 | 20.6 | 272 |
| 6 | 30.6 | 1.9 | 40.8 | 26.7 | 314 | 6 | 32.0 | 2.7 | 37.3 | 28.0 | 300 |
| 9-2 | 35.0 | 2.2 | 52.5 | 10.2 | 274 | 8-2 | 36.9 | 3.1 | 49.2 | 10.8 | 260 |
| 4 | 31.8 | 2.0 | 47.7 | 18.5 | 302 | 4 | 33.3 | 2.8 | 44.4 | 19.4 | 288 |
| 6 | 29.1 | 1.8 | 43.6 | 25.4 | 330 | 6 | 30.4 | 2.5 | 40.5 | 26.6 | 316 |
| 10-2 | 33.1 | 2.1 | 55.2 | 9.6 | 290 | 8-9-1-1 | 71.1 | 6.7 | 11.8 | 10.4 | 135 |
| 4 | 30.2 | 1.9 | 50.3 | 17.6 | 318 | 3 | 58.9 | 5.5 | 9.8 | 25.8 | 163 |
| 6 | 27.7 | 1.7 | 46.2 | 24.3 | 346 | 5 | 50.3 | 4.7 | 8.4 | 36.6 | 191 |
| 8-7-1-1 | 72.2 | 5.3 | 12.0 | 10.5 | 133 | 2-1 | 63.6 | 5.9 | 21.2 | 9.3 | 151 |
| 3 | 59.6 | 4.3 | 9.9 | 26.1 | 161 | 3 | 53.6 | 5.0 | 17.9 | 23.5 | 179 |
| 5 | 50.8 | 3.7 | 8.5 | 37.0 | 189 | 5 | 46.4 | 4.3 | 15.4 | 33.8 | 207 |
| 2-1 | 64.4 | 4.7 | 21.5 | 9.4 | 149 | 7 | 40.8 | 3.8 | 13.6 | 41.7 | 235 |
| 3 | 54.2 | 3.9 | 18.1 | 23.7 | 177 | 3-1 | 57.5 | 5.4 | 28.7 | 8.4 | 167 |
| 5 | 46.8 | 3.4 | 15.6 | 34.1 | 205 | 3 | 49.2 | 4.6 | 24.6 | 21.5 | 195 |
| 3-1 | 58.2 | 4.2 | 29.1 | 8.5 | 165 | 5 | 43.1 | 4.0 | 21.5 | 31.4 | 223 |
| 3 | 49.7 | 3.6 | 24.9 | 21.7 | 193 | 4-1 | 52.4 | 4.9 | 35.0 | 7.6 | 183 |
| 5 | 43.4 | 3.2 | 21.7 | 31.7 | 221 | 3 | 45.5 | 4.3 | 30.3 | 19.9 | 211 |
| 4-1 | 53.0 | 3.9 | 35.4 | 7.7 | 181 | 5 | 40.2 | 3.8 | 26.7 | 29.3 | 239 |
| 3 | 45.9 | 3.3 | 30.6 | 20.1 | 209 | 5-1 | 48.2 | 4.5 | 40.2 | 7.0 | 199 |
| 5 | 40.5 | 2.9 | 27.0 | 29.5 | 237 | 3 | 42.3 | 4.0 | 35.2 | 18.5 | 227 |
| 5-1 | 48.7 | 3.5 | 49.6 | 7.1 | 197 | 5 | 37.6 | 3.5 | 31.4 | 27.5 | 255 |
| 3 | 42.6 | 3.1 | 35.6 | 18.6 | 225 | 6-1 | 44.6 | 4.2 | 44.6 | 6.5 | 215 |
| 5 | 37.9 | 2.8 | 31.6 | 27.7 | 253 | 3 | 39.5 | 3.7 | 39.5 | 17.3 | 243 |
| 6-1 | 45.1 | 3.3 | 45.1 | 6.5 | 213 | 5 | 35.4 | 3.3 | 35.4 | 25.8 | 271 |
| 3 | 39.8 | 2.9 | 39.8 | 17.4 | 241 | 7-1 | 41.6 | 3.9 | 48.5 | 6.0 | 231 |
| 5 | 35.7 | 2.6 | 35.7 | 26.0 | 269 | 3 | 37.1 | 3.5 | 42.2 | 16.2 | 259 |
| 7 | 32.3 | 2.4 | 32.3 | 33.0 | 297 | 5 | 33.4 | 3.1 | 39.0 | 24.4 | 287 |
| 7-1 | 41.9 | 3.1 | 48.9 | 6.1 | 229 | 8-1 | 38.9 | 3.6 | 51.8 | 5.7 | 247 |
| 3 | 37.3 | 2.7 | 43.6 | 16.3 | 257 | 3 | 34.9 | 3.3 | 46.5 | 15.3 | 275 |
| 5 | 33.7 | 2.4 | 39.3 | 24.6 | 285 | 5 | 31.7 | 3.0 | 42.2 | 23.1 | 303 |
| 8-1 | 39.2 | 2.8 | 52.2 | 5.7 | 245 | 8-10-1-2 | 64.0 | 6.7 | 10.7 | 18.6 | 150 |
| 3 | 35.1 | 2.6 | 46.9 | 15.4 | 273 | 4 | 53.9 | 5.6 | 9.0 | 31.5 | 178 |
| 5 | 31.9 | 2.3 | 42.6 | 23.2 | 301 | 6 | 46.6 | 4.8 | 7.8 | 40.8 | 206 |
| 9-1 | 36.8 | 2.7 | 55.2 | 5.3 | 261 | 2-2 | 57.8 | 6.0 | 19.3 | 16.9 | 166 |
| 3 | 33.2 | 2.4 | 49.8 | 14.5 | 289 | 4 | 49.5 | 5.1 | 16.5 | 28.9 | 194 |
| 5 | 30.3 | 2.2 | 45.4 | 22.1 | 317 | 6 | 43.2 | 4.5 | 14.4 | 37.8 | 222 |
| 10-1 | 34.7 | 2.5 | 57.8 | 5.0 | 277 | 3-2 | 52.7 | 5.5 | 26.4 | 15.4 | 182 |
| 3 | 31.5 | 2.3 | 52.4 | 13.8 | 305 | 4 | 45.7 | 4.8 | 22.7 | 26.7 | 210 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|-----|------|------|------|----------|------|-----|------|------|------|
| 8-10-3-6 | 40.3 | 4.2 | 20.2 | 35.3 | 238 | 8-12-7-4 | 34.8 | 4.3 | 40.6 | 20.3 | 276 |
| 4-2 | 48.5 | 5.0 | 32.3 | 14.1 | 198 | 6 | 31.6 | 3.9 | 36.8 | 27.6 | 304 |
| 4 | 42.5 | 4.4 | 28.3 | 24.8 | 226 | 6-2 | 36.1 | 4.5 | 48.5 | 10.6 | 264 |
| 6 | 37.8 | 3.9 | 25.2 | 33.1 | 254 | 4 | 32.9 | 4.1 | 43.8 | 19.2 | 292 |
| 5-2 | 44.8 | 4.7 | 37.4 | 13.1 | 214 | 6 | 30.0 | 3.7 | 40.0 | 26.3 | 320 |
| 4 | 39.7 | 4.1 | 33.1 | 23.1 | 242 | 8-2 | 34.3 | 4.3 | 51.3 | 10.0 | 280 |
| 6 | 35.5 | 3.7 | 20.6 | 31.1 | 270 | 4 | 31.2 | 3.9 | 46.7 | 18.2 | 308 |
| 6-2 | 41.7 | 4.3 | 41.7 | 12.2 | 230 | 6 | 28.6 | 3.6 | 42.8 | 25.0 | 336 |
| 4 | 37.2 | 3.9 | 37.2 | 21.7 | 258 | 10-2 | 32.4 | 4.0 | 54.0 | 9.5 | 296 |
| 6 | 33.5 | 3.5 | 33.6 | 29.4 | 286 | 4 | 29.6 | 3.7 | 49.4 | 17.3 | 324 |
| 7-2 | 39.0 | 4.1 | 45.5 | 11.4 | 246 | 6 | 27.3 | 3.4 | 45.4 | 23.9 | 352 |
| 4 | 35.0 | 3.6 | 40.9 | 20.7 | 274 | 8-13-1-1 | 69.1 | 9.3 | 11.5 | 10.1 | 139 |
| 6 | 31.8 | 3.3 | 37.1 | 27.8 | 302 | 3 | 57.5 | 7.8 | 9.6 | 25.1 | 167 |
| 8-2 | 36.6 | 3.8 | 48.8 | 10.7 | 262 | 5 | 49.2 | 6.7 | 8.2 | 35.9 | 195 |
| 4 | 33.1 | 3.4 | 44.1 | 19.3 | 290 | 2-1 | 61.9 | 8.4 | 20.7 | 9.0 | 155 |
| 6 | 30.2 | 3.1 | 40.2 | 26.4 | 318 | 3 | 52.4 | 7.1 | 17.5 | 23.0 | 183 |
| 8-11-1-1 | 70.1 | 8.0 | 11.7 | 10.2 | 137 | 5 | 45.5 | 6.1 | 15.2 | 33.2 | 211 |
| 3 | 58.2 | 6.7 | 9.7 | 25.4 | 165 | 3-1 | 56.1 | 7.6 | 28.1 | 8.2 | 171 |
| 5 | 49.7 | 5.7 | 8.2 | 36.3 | 193 | 3 | 48.2 | 6.5 | 24.1 | 21.2 | 199 |
| 2-1 | 62.7 | 7.2 | 20.9 | 9.2 | 153 | 5 | 42.3 | 5.7 | 21.1 | 30.8 | 227 |
| 3 | 53.0 | 6.1 | 17.7 | 23.2 | 181 | 4-1 | 51.3 | 7.0 | 34.2 | 7.5 | 187 |
| 5 | 45.9 | 5.3 | 15.3 | 33.5 | 209 | 3 | 44.6 | 6.0 | 29.8 | 19.5 | 215 |
| 3-1 | 56.8 | 6.5 | 28.4 | 8.3 | 169 | 5 | 39.5 | 5.3 | 26.3 | 28.8 | 243 |
| 3 | 48.7 | 5.6 | 24.4 | 21.3 | 197 | 5-1 | 47.3 | 6.4 | 39.4 | 6.9 | 203 |
| 5 | 42.7 | 4.9 | 21.3 | 31.1 | 225 | 3 | 41.6 | 5.6 | 34.6 | 18.2 | 231 |
| 4-1 | 51.9 | 5.9 | 34.6 | 7.6 | 185 | 5 | 37.1 | 5.0 | 30.9 | 27.0 | 259 |
| 3 | 45.1 | 5.2 | 30.0 | 19.7 | 213 | 6-1 | 43.8 | 5.9 | 43.8 | 6.4 | 219 |
| 5 | 39.8 | 4.6 | 26.5 | 29.0 | 241 | 3 | 38.9 | 5.2 | 38.9 | 17.0 | 247 |
| 5-1 | 47.7 | 5.5 | 39.8 | 7.0 | 201 | 5 | 34.9 | 4.7 | 34.9 | 25.4 | 275 |
| 3 | 41.9 | 4.8 | 34.9 | 18.3 | 229 | 7-1 | 40.8 | 5.5 | 47.6 | 6.0 | 235 |
| 5 | 37.3 | 4.3 | 31.1 | 27.2 | 257 | 3 | 36.5 | 4.9 | 42.6 | 16.0 | 263 |
| 6-1 | 44.2 | 5.1 | 44.2 | 6.4 | 217 | 5 | 33.0 | 4.5 | 38.5 | 24.0 | 291 |
| 3 | 39.2 | 4.5 | 39.2 | 17.1 | 245 | 8-1 | 38.2 | 5.2 | 41.0 | 5.6 | 251 |
| 5 | 35.2 | 4.0 | 35.2 | 25.6 | 273 | 3 | 34.4 | 4.7 | 45.9 | 15.0 | 279 |
| 7-1 | 41.2 | 4.7 | 48.1 | 6.0 | 233 | 5 | 31.3 | 4.2 | 41.7 | 22.8 | 307 |
| 3 | 36.8 | 4.2 | 42.9 | 16.1 | 261 | 8-14-1-2 | 62.3 | 9.1 | 10.4 | 18.2 | 154 |
| 5 | 33.2 | 3.8 | 38.8 | 24.2 | 289 | 4 | 52.7 | 7.7 | 8.8 | 30.8 | 182 |
| 8-1 | 38.5 | 4.4 | 51.4 | 5.6 | 249 | 6 | 45.7 | 6.7 | 7.6 | 40.0 | 210 |
| 3 | 34.6 | 4.0 | 46.2 | 15.2 | 277 | 2-2 | 56.4 | 8.2 | 18.8 | 16.5 | 170 |
| 5 | 31.5 | 3.6 | 42.0 | 22.9 | 305 | 4 | 48.5 | 6.1 | 16.1 | 28.3 | 198 |
| 8-12-1-2 | 63.2 | 7.9 | 10.5 | 18.4 | 152 | 6 | 42.5 | 6.2 | 14.1 | 37.2 | 226 |
| 4 | 53.3 | 6.7 | 8.9 | 31.1 | 180 | 3-2 | 51.6 | 7.5 | 25.8 | 15.1 | 186 |
| 6 | 46.1 | 5.8 | 7.7 | 40.4 | 208 | 4 | 44.9 | 6.5 | 22.4 | 26.2 | 214 |
| 2-2 | 57.1 | 7.1 | 19.0 | 16.7 | 168 | 6 | 39.7 | 5.8 | 19.8 | 34.7 | 242 |
| 4 | 49.0 | 6.1 | 16.3 | 28.6 | 196 | 4-2 | 47.5 | 6.9 | 31.7 | 13.8 | 202 |
| 6 | 42.8 | 5.4 | 14.3 | 37.5 | 224 | 4 | 41.7 | 6.1 | 27.8 | 24.4 | 230 |
| 3-2 | 52.2 | 6.5 | 26.1 | 25.2 | 184 | 6 | 37.2 | 5.4 | 24.8 | 32.6 | 258 |
| 4 | 45.3 | 5.7 | 22.6 | 26.4 | 212 | 5-2 | 44.0 | 6.4 | 36.7 | 12.8 | 218 |
| 6 | 40.0 | 5.0 | 20.0 | 35.0 | 240 | 4 | 39.0 | 5.7 | 32.5 | 12.8 | 246 |
| 4-2 | 48.0 | 6.0 | 32.0 | 14.0 | 200 | 6 | 35.0 | 5.1 | 29.2 | 30.7 | 274 |
| 4 | 42.1 | 5.2 | 28.1 | 24.6 | 228 | 6-2 | 41.0 | 6.0 | 41.0 | 12.0 | 234 |
| 6 | 37.5 | 4.7 | 25.0 | 32.8 | 256 | 4 | 36.7 | 5.3 | 36.7 | 21.3 | 262 |
| 5-2 | 44.4 | 5.5 | 37.0 | 13.0 | 216 | 6 | 33.1 | 4.8 | 33.1 | 29.0 | 290 |
| 4 | 39.3 | 4.9 | 32.8 | 23.0 | 244 | 7-2 | 38.4 | 5.6 | 44.8 | 11.2 | 250 |
| 6 | 35.3 | 4.4 | 29.4 | 30.9 | 272 | 4 | 34.5 | 5.0 | 40.3 | 20.1 | 278 |
| 6-2 | 41.4 | 5.2 | 41.4 | 12.0 | 232 | 6 | 31.4 | 4.6 | 36.5 | 27.4 | 306 |
| 4 | 36.9 | 4.6 | 36.9 | 21.6 | 260 | 6-2 | 36.1 | 5.2 | 48.1 | 10.5 | 266 |
| 6 | 33.3 | 4.2 | 33.3 | 29.2 | 288 | 4 | 32.6 | 4.8 | 43.6 | 19.0 | 294 |
| 7-2 | 38.9 | 4.8 | 45.1 | 11.3 | 248 | 6 | 29.8 | 4.3 | 39.8 | 26.1 | 322 |

ВЫСТУКА, Lex. d. Kohlenstoffverb.

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|------|------|------|------|----------|------|------|------|------|------|
| 8-15-1-1 | 68.1 | 10.6 | 11.3 | 9.9 | 141 | 8-17-4-5 | 38.9 | 6.0 | 25.9 | 28.3 | 247 |
| 3 | 56.8 | 8.9 | 9.5 | 24.8 | 169 | 5-1 | 46.4 | 8.2 | 38.6 | 6.8 | 207 |
| 5 | 48.7 | 7.6 | 8.1 | 35.5 | 197 | 3 | 40.9 | 7.2 | 34.0 | 17.9 | 235 |
| 2-1 | 61.1 | 9.6 | 20.4 | 8.9 | 157 | 5 | 36.5 | 6.5 | 30.4 | 20.6 | 263 |
| 3 | 51.9 | 8.1 | 17.3 | 22.7 | 185 | 8-18-1-2 | 60.8 | 11.4 | 10.1 | 17.7 | 158 |
| 5 | 45.1 | 7.0 | 15.0 | 32.9 | 213 | 4 | 51.6 | 9.7 | 8.6 | 30.1 | 186 |
| 3-1 | 55.5 | 8.7 | 27.7 | 8.1 | 173 | 6 | 44.9 | 8.4 | 7.5 | 39.2 | 214 |
| 3 | 47.7 | 7.5 | 23.9 | 20.9 | 201 | 2-2 | 55.2 | 10.3 | 18.4 | 16.1 | 174 |
| 5 | 41.9 | 6.5 | 21.0 | 30.6 | 229 | 4 | 47.5 | 8.9 | 15.8 | 27.7 | 202 |
| 4-1 | 50.8 | 7.9 | 33.9 | 7.4 | 189 | 6 | 41.7 | 7.8 | 13.9 | 36.5 | 230 |
| 3 | 44.2 | 6.9 | 29.5 | 19.4 | 217 | 3-2 | 50.5 | 9.5 | 25.3 | 14.7 | 190 |
| 5 | 39.2 | 6.1 | 26.1 | 28.6 | 245 | 4 | 44.0 | 8.3 | 22.0 | 25.7 | 218 |
| 5-1 | 46.8 | 7.3 | 39.0 | 6.8 | 205 | 6 | 39.0 | 7.3 | 19.5 | 34.1 | 246 |
| 3 | 41.2 | 6.4 | 34.3 | 18.0 | 233 | 8-19-1-1 | 66.2 | 13.1 | 11.0 | 9.7 | 145 |
| 5 | 36.8 | 5.7 | 30.6 | 26.8 | 261 | 3 | 55.5 | 11.0 | 9.2 | 24.3 | 173 |
| 6-1 | 43.4 | 6.8 | 43.4 | 6.3 | 221 | 5 | 47.8 | 9.4 | 8.0 | 34.8 | 201 |
| 3 | 38.5 | 6.0 | 38.5 | 16.9 | 249 | 2-1 | 59.6 | 11.8 | 19.9 | 8.7 | 161 |
| 5 | 34.6 | 5.4 | 34.6 | 25.3 | 277 | 3 | 50.8 | 10.0 | 16.9 | 22.2 | 189 |
| 7-1 | 40.5 | 6.3 | 47.2 | 5.9 | 237 | 5 | 44.2 | 8.8 | 14.7 | 32.3 | 217 |
| 3 | 36.2 | 5.7 | 41.3 | 15.8 | 265 | 3-1 | 54.2 | 10.7 | 27.1 | 7.9 | 177 |
| 5 | 32.8 | 5.1 | 38.2 | 23.9 | 293 | 3 | 46.8 | 9.3 | 23.4 | 20.5 | 205 |
| 8-1 | 37.9 | 5.9 | 50.6 | 5.5 | 253 | 5 | 41.2 | 8.2 | 20.6 | 30.0 | 233 |
| 3 | 34.2 | 5.3 | 45.6 | 14.9 | 281 | 4-7 | 34.7 | 6.8 | 23.1 | 35.4 | 277 |
| 5 | 31.1 | 4.8 | 41.4 | 22.6 | 309 | 8-20-3-2 | 50.0 | 10.4 | 25.0 | 14.6 | 192 |
| 9-1 | 35.7 | 5.6 | 53.5 | 5.2 | 269 | 8-21-1-1 | 65.3 | 14.3 | 10.9 | 9.5 | 147 |
| 3 | 32.3 | 5.0 | 48.5 | 14.1 | 297 | 5-3 | 45.5 | 10.0 | 37.9 | 6.6 | 211 |
| 5 | 29.5 | 4.6 | 44.3 | 21.5 | 325 | 8-24-2-2 | 53.3 | 13.3 | 17.8 | 15.5 | 180 |
| 8-16-1-2 | 61.6 | 10.2 | 10.2 | 17.9 | 156 | 9-3-9-3 | 36.3 | 1.0 | 48.5 | 14.1 | 297 |
| 4 | 52.2 | 8.7 | 8.7 | 30.4 | 184 | 9-4-3-2 | 57.4 | 2.1 | 25.5 | 14.9 | 188 |
| 6 | 45.3 | 7.5 | 7.5 | 39.6 | 212 | 6-4 | 40.9 | 1.5 | 36.4 | 21.2 | 264 |
| 2-2 | 55.8 | 9.3 | 18.6 | 16.3 | 172 | 6-4 | 36.5 | 1.4 | 43.2 | 18.9 | 296 |
| 4 | 48.0 | 8.0 | 16.0 | 28.0 | 200 | 9-5-1-1 | 75.5 | 3.5 | 11.2 | 9.8 | 143 |
| 6 | 42.1 | 7.0 | 14.0 | 36.8 | 228 | 3 | 63.2 | 2.9 | 9.4 | 24.5 | 171 |
| 3-2 | 51.1 | 8.5 | 25.5 | 14.9 | 188 | 5 | 54.3 | 2.5 | 8.0 | 35.2 | 199 |
| 4 | 44.4 | 7.4 | 22.2 | 25.9 | 216 | 2-1 | 67.9 | 3.1 | 20.1 | 8.8 | 159 |
| 6 | 39.3 | 6.6 | 19.7 | 34.4 | 244 | 3 | 57.8 | 2.7 | 17.1 | 22.4 | 187 |
| 4-2 | 47.1 | 7.8 | 31.4 | 13.7 | 204 | 5 | 50.2 | 2.3 | 14.9 | 32.6 | 215 |
| 4 | 41.4 | 6.9 | 27.6 | 24.1 | 232 | 3-1 | 61.7 | 2.9 | 27.4 | 8.0 | 175 |
| 6 | 36.9 | 6.1 | 24.6 | 32.3 | 260 | 3 | 53.2 | 2.5 | 23.6 | 20.7 | 203 |
| 5-2 | 43.6 | 7.3 | 36.3 | 12.7 | 220 | 5 | 46.8 | 2.1 | 20.8 | 30.3 | 231 |
| 4 | 38.7 | 6.4 | 32.2 | 22.6 | 248 | 4-1 | 56.6 | 2.6 | 33.5 | 7.3 | 191 |
| 6 | 34.8 | 5.8 | 29.0 | 30.4 | 276 | 3 | 49.3 | 2.3 | 29.2 | 19.2 | 219 |
| 6-2 | 40.7 | 6.8 | 40.7 | 11.8 | 236 | 5 | 43.7 | 2.0 | 25.9 | 28.3 | 247 |
| 4 | 36.4 | 6.0 | 36.4 | 21.2 | 264 | 5-1 | 52.2 | 2.4 | 38.6 | 6.8 | 207 |
| 6 | 32.9 | 5.4 | 32.9 | 28.8 | 292 | 3 | 45.9 | 2.1 | 34.0 | 17.9 | 235 |
| 7-2 | 38.1 | 6.3 | 44.4 | 11.1 | 252 | 5 | 41.1 | 1.9 | 30.4 | 26.6 | 263 |
| 4 | 34.3 | 5.7 | 40.0 | 20.0 | 280 | 6-1 | 48.4 | 2.2 | 43.0 | 6.3 | 223 |
| 6 | 31.2 | 5.2 | 36.3 | 27.3 | 308 | 3 | 43.0 | 2.0 | 38.3 | 16.7 | 251 |
| 8-17-1-1 | 67.1 | 11.9 | 11.2 | 9.8 | 143 | 5 | 38.7 | 1.8 | 34.4 | 25.1 | 279 |
| 3 | 56.1 | 9.9 | 9.3 | 24.6 | 171 | 7-1 | 45.2 | 2.1 | 46.9 | 5.8 | 239 |
| 5 | 48.2 | 8.5 | 8.0 | 35.2 | 199 | 3 | 40.4 | 1.9 | 41.9 | 15.7 | 267 |
| 2-1 | 60.4 | 10.7 | 20.1 | 8.8 | 159 | 5 | 36.6 | 1.7 | 38.0 | 23.7 | 295 |
| 3 | 51.3 | 9.1 | 17.1 | 22.5 | 187 | 8-1 | 42.3 | 2.0 | 50.2 | 5.5 | 255 |
| 5 | 44.6 | 7.9 | 14.9 | 32.6 | 215 | 3 | 38.2 | 1.8 | 45.2 | 14.8 | 283 |
| 3-1 | 54.9 | 9.7 | 27.4 | 7.9 | 175 | 5 | 34.7 | 1.6 | 41.2 | 22.5 | 311 |
| 3 | 47.3 | 8.4 | 23.6 | 20.7 | 203 | 9-6-1-2 | 68.3 | 3.8 | 10.1 | 17.7 | 158 |
| 5 | 41.6 | 7.3 | 20.8 | 30.3 | 231 | 4 | 58.0 | 3.2 | 8.6 | 30.1 | 186 |
| 4-1 | 50.3 | 8.9 | 33.5 | 7.3 | 191 | 6 | 50.5 | 2.8 | 7.5 | 39.2 | 214 |
| 3 | 43.8 | 7.8 | 29.2 | 19.2 | 219 | 2-2 | 62.1 | 3.4 | 18.4 | 16.1 | 174 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|---------|------|-----|------|------|------|----------|------|-----|------|------|------|
| 9-6-2-4 | 53.5 | 3.0 | 15.8 | 27.7 | 202 | 9-8-6-2 | 45.0 | 3.3 | 40.0 | 11.7 | 240 |
| 6 | 47.0 | 2.6 | 13.9 | 36.5 | 230 | 4 | 40.3 | 3.0 | 35.8 | 20.9 | 268 |
| 3-2 | 56.8 | 3.2 | 25.3 | 14.7 | 190 | 6 | 36.5 | 2.7 | 32.4 | 28.4 | 296 |
| 4 | 49.5 | 2.7 | 22.0 | 25.7 | 218 | 7-2 | 42.2 | 3.1 | 43.7 | 10.9 | 256 |
| 6 | 43.9 | 2.4 | 19.5 | 34.2 | 246 | 4 | 38.0 | 2.8 | 39.4 | 19.7 | 284 |
| 4-2 | 52.4 | 2.9 | 31.1 | 13.6 | 206 | 6 | 34.6 | 2.6 | 35.9 | 26.9 | 312 |
| 4 | 46.2 | 2.6 | 27.3 | 23.9 | 234 | 8-2 | 39.7 | 2.9 | 47.1 | 10.3 | 272 |
| 6 | 41.2 | 2.3 | 24.4 | 32.1 | 262 | 4 | 36.0 | 2.7 | 42.7 | 18.6 | 300 |
| 5-2 | 48.6 | 2.7 | 36.0 | 12.6 | 222 | 6 | 32.9 | 2.4 | 39.0 | 25.6 | 328 |
| 4 | 43.2 | 2.4 | 32.0 | 22.4 | 250 | 9-2 | 37.5 | 2.8 | 50.0 | 9.7 | 288 |
| 6 | 38.8 | 2.2 | 28.8 | 30.2 | 278 | 4 | 34.2 | 2.5 | 45.6 | 17.7 | 316 |
| 6-2 | 45.4 | 2.5 | 40.3 | 11.8 | 238 | 6 | 31.4 | 2.3 | 41.9 | 24.4 | 344 |
| 4 | 40.6 | 2.3 | 36.1 | 21.0 | 266 | 10-2 | 35.5 | 2.6 | 52.6 | 9.2 | 304 |
| 6 | 36.7 | 2.0 | 32.7 | 28.6 | 294 | 4 | 32.5 | 2.4 | 48.2 | 16.8 | 332 |
| 7-2 | 42.5 | 2.4 | 44.1 | 11.0 | 254 | 6 | 30.0 | 2.2 | 44.4 | 23.3 | 360 |
| 4 | 38.3 | 2.1 | 39.7 | 19.9 | 282 | 9-9-1-1 | 73.5 | 6.1 | 10.9 | 9.5 | 147 |
| 6 | 34.8 | 1.9 | 36.1 | 27.1 | 310 | 3 | 61.7 | 5.1 | 9.1 | 24.0 | 175 |
| 8-2 | 40.0 | 2.2 | 47.4 | 10.4 | 270 | 5 | 53.2 | 4.4 | 7.9 | 34.5 | 203 |
| 4 | 36.2 | 2.0 | 42.9 | 18.8 | 298 | 2-1 | 66.3 | 5.5 | 19.6 | 8.6 | 163 |
| 6 | 33.1 | 1.8 | 39.3 | 25.8 | 326 | 3 | 56.6 | 4.7 | 16.7 | 22.0 | 191 |
| 9-7-1-1 | 74.5 | 4.8 | 11.0 | 9.7 | 145 | 5 | 49.3 | 4.1 | 14.6 | 32.0 | 219 |
| 3 | 62.4 | 4.0 | 9.2 | 24.3 | 173 | 3-1 | 60.3 | 5.0 | 26.8 | 7.8 | 179 |
| 5 | 53.7 | 3.5 | 8.0 | 34.8 | 201 | 3 | 52.2 | 4.3 | 23.2 | 20.3 | 207 |
| 2-1 | 67.1 | 4.3 | 19.9 | 8.7 | 161 | 5 | 45.9 | 3.8 | 20.4 | 29.8 | 235 |
| 3 | 57.1 | 3.7 | 16.9 | 22.2 | 189 | 4-1 | 55.4 | 4.6 | 32.8 | 7.2 | 195 |
| 5 | 49.8 | 3.2 | 14.7 | 32.3 | 217 | 3 | 48.4 | 4.0 | 28.7 | 18.8 | 223 |
| 3-1 | 61.0 | 3.9 | 27.1 | 7.9 | 177 | 5 | 43.0 | 3.6 | 35.5 | 27.0 | 251 |
| 3 | 52.7 | 3.4 | 25.4 | 20.5 | 205 | 5-1 | 51.2 | 4.3 | 37.9 | 6.6 | 211 |
| 5 | 46.3 | 3.0 | 20.6 | 30.0 | 233 | 3 | 45.2 | 3.7 | 33.5 | 17.6 | 239 |
| 4-1 | 56.0 | 3.6 | 33.2 | 7.2 | 193 | 5 | 40.4 | 3.4 | 30.0 | 26.2 | 267 |
| 3 | 48.9 | 3.2 | 28.9 | 19.0 | 221 | 6-1 | 47.6 | 3.9 | 42.3 | 6.2 | 227 |
| 5 | 43.4 | 2.8 | 25.7 | 28.1 | 249 | 3 | 42.3 | 3.5 | 37.6 | 16.5 | 255 |
| 5-1 | 51.7 | 3.3 | 38.3 | 6.7 | 209 | 5 | 38.2 | 3.2 | 33.9 | 24.7 | 283 |
| 3 | 45.6 | 2.9 | 33.7 | 17.7 | 237 | 7-1 | 44.4 | 3.7 | 46.1 | 5.8 | 243 |
| 5 | 40.8 | 2.6 | 30.2 | 26.4 | 265 | 3 | 39.8 | 3.3 | 41.3 | 15.5 | 271 |
| 6-1 | 48.0 | 3.1 | 42.7 | 6.2 | 225 | 5 | 36.1 | 3.0 | 37.4 | 23.4 | 299 |
| 3 | 42.7 | 2.8 | 37.9 | 16.6 | 253 | 8-1 | 41.7 | 3.5 | 49.4 | 5.4 | 259 |
| 5 | 38.4 | 2.5 | 34.2 | 24.9 | 281 | 3 | 37.6 | 3.1 | 44.6 | 14.6 | 287 |
| 7-1 | 44.8 | 2.9 | 46.5 | 5.8 | 241 | 5 | 34.3 | 2.8 | 40.6 | 22.2 | 315 |
| 3 | 40.1 | 2.6 | 41.6 | 15.6 | 269 | 9-3 | 35.6 | 3.0 | 47.5 | 13.9 | 303 |
| 5 | 36.4 | 2.4 | 37.6 | 23.6 | 297 | 9-10-1-2 | 66.7 | 6.1 | 9.9 | 17.3 | 162 |
| 8-1 | 42.9 | 2.7 | 49.8 | 5.5 | 257 | 4 | 56.9 | 5.3 | 8.4 | 20.5 | 190 |
| 3 | 37.9 | 2.5 | 44.9 | 14.7 | 285 | 6 | 49.5 | 4.6 | 7.3 | 38.5 | 218 |
| 5 | 34.5 | 2.2 | 40.9 | 22.4 | 313 | 2-2 | 60.7 | 5.6 | 18.0 | 15.7 | 178 |
| 9-8-1-2 | 67.5 | 5.0 | 10.0 | 17.5 | 160 | 4 | 52.4 | 4.8 | 15.5 | 27.2 | 206 |
| 4 | 57.4 | 4.3 | 8.5 | 29.8 | 188 | 6 | 46.1 | 4.3 | 13.7 | 35.9 | 234 |
| 6 | 50.0 | 3.7 | 7.4 | 38.9 | 216 | 3-2 | 55.7 | 5.1 | 24.7 | 14.4 | 194 |
| 2 | 61.3 | 4.5 | 18.2 | 15.9 | 176 | 4 | 48.6 | 4.5 | 21.6 | 25.2 | 222 |
| 4 | 52.9 | 3.9 | 15.7 | 27.5 | 204 | 6 | 43.2 | 4.0 | 19.2 | 33.6 | 250 |
| 6 | 46.5 | 3.4 | 13.8 | 36.2 | 232 | 4-2 | 51.4 | 4.8 | 30.5 | 13.3 | 210 |
| 3-2 | 56.3 | 4.1 | 25.0 | 14.6 | 192 | 4 | 45.4 | 4.2 | 26.9 | 23.5 | 238 |
| 4 | 49.1 | 3.6 | 21.8 | 25.4 | 220 | 6 | 40.6 | 3.7 | 24.1 | 31.6 | 266 |
| 6 | 43.5 | 3.2 | 19.3 | 33.9 | 248 | 5-2 | 47.8 | 4.4 | 35.4 | 12.4 | 226 |
| 4-2 | 51.9 | 3.8 | 30.8 | 13.5 | 208 | 4 | 42.5 | 3.9 | 31.5 | 22.0 | 254 |
| 4 | 45.8 | 3.4 | 27.1 | 23.7 | 236 | 6 | 38.3 | 3.5 | 28.4 | 29.8 | 282 |
| 6 | 40.9 | 3.0 | 24.2 | 31.8 | 264 | 6-2 | 44.5 | 4.1 | 39.7 | 11.6 | 242 |
| 5-2 | 48.2 | 3.6 | 35.7 | 12.5 | 224 | 4 | 40.0 | 3.8 | 35.5 | 20.7 | 270 |
| 4 | 42.8 | 3.2 | 31.7 | 22.2 | 252 | 6 | 36.2 | 3.3 | 32.2 | 28.2 | 298 |
| 6 | 38.6 | 2.8 | 28.6 | 30.0 | 280 | 7-2 | 41.9 | 3.9 | 43.4 | 10.8 | 258 |

150*

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|-----|------|------|------|----------|------|-----|------|------|------|
| 9-10-7-4 | 37.8 | 3.5 | 39.1 | 19.6 | 286 | 9-13-2-5 | 48.4 | 5.8 | 14.3 | 31.4 | 223 |
| 6 | 34.4 | 3.2 | 35.7 | 26.7 | 314 | 3-1 | 59.0 | 7.1 | 26.2 | 7.6 | 183 |
| 8-2 | 39.4 | 3.6 | 46.7 | 10.2 | 274 | 3 | 51.2 | 6.2 | 22.7 | 19.9 | 211 |
| 4 | 35.8 | 3.3 | 42.4 | 18.5 | 302 | 5 | 45.2 | 5.4 | 20.1 | 29.3 | 239 |
| 6 | 32.7 | 3.0 | 38.8 | 25.4 | 330 | 4-1 | 54.2 | 6.6 | 32.2 | 7.0 | 199 |
| 9-11-1-1 | 72.5 | 7.4 | 10.7 | 9.4 | 149 | 3 | 47.6 | 5.7 | 28.2 | 18.5 | 227 |
| 3 | 61.0 | 6.2 | 9.0 | 23.7 | 177 | 5 | 42.4 | 5.1 | 25.1 | 27.4 | 255 |
| 5 | 52.7 | 5.3 | 7.8 | 34.1 | 205 | 5-1 | 50.2 | 6.0 | 37.2 | 6.5 | 215 |
| 2-1 | 65.5 | 6.6 | 19.4 | 8.5 | 165 | 3 | 44.4 | 5.3 | 32.9 | 17.3 | 243 |
| 3 | 55.9 | 5.7 | 16.6 | 21.7 | 193 | 5 | 39.8 | 4.8 | 29.5 | 25.8 | 271 |
| 5 | 48.8 | 5.0 | 14.5 | 31.7 | 221 | 6-1 | 46.7 | 5.6 | 41.6 | 6.1 | 231 |
| 7 | 43.4 | 4.4 | 12.9 | 39.3 | 249 | 3 | 41.7 | 5.0 | 37.1 | 16.2 | 259 |
| 3-1 | 59.7 | 6.1 | 26.5 | 7.7 | 181 | 5 | 37.6 | 4.5 | 33.4 | 24.4 | 287 |
| 3 | 51.7 | 5.3 | 22.8 | 20.1 | 209 | 7 | 34.3 | 4.1 | 30.5 | 31.1 | 315 |
| 5 | 45.6 | 4.6 | 20.2 | 29.5 | 237 | 7-1 | 43.7 | 5.3 | 45.3 | 5.7 | 247 |
| 4-1 | 54.8 | 5.6 | 32.5 | 7.1 | 197 | 3 | 39.3 | 4.7 | 40.7 | 15.3 | 275 |
| 3 | 48.0 | 4.9 | 28.4 | 18.7 | 225 | 5 | 35.6 | 4.3 | 36.9 | 23.1 | 303 |
| 5 | 42.7 | 4.3 | 25.3 | 27.7 | 253 | 8-1 | 41.1 | 4.9 | 48.7 | 5.3 | 263 |
| 5-1 | 50.7 | 5.1 | 37.6 | 6.6 | 213 | 3 | 37.1 | 4.5 | 44.0 | 14.4 | 291 |
| 3 | 44.8 | 4.5 | 33.2 | 17.4 | 241 | 5 | 33.8 | 4.1 | 40.1 | 21.9 | 319 |
| 5 | 40.1 | 4.1 | 29.7 | 26.0 | 269 | 9-1 | 38.7 | 4.7 | 51.6 | 5.0 | 279 |
| 6-1 | 47.2 | 4.8 | 41.9 | 6.1 | 229 | 9-14-1-2 | 65.1 | 8.4 | 9.6 | 16.9 | 166 |
| 3 | 42.0 | 4.0 | 37.3 | 16.3 | 257 | 4 | 53.7 | 7.2 | 8.2 | 28.9 | 194 |
| 5 | 37.9 | 3.8 | 33.7 | 24.6 | 285 | 6 | 48.6 | 6.3 | 7.2 | 37.8 | 222 |
| 7-1 | 44.1 | 4.5 | 45.7 | 5.7 | 245 | 2-2 | 59.3 | 7.7 | 17.6 | 15.4 | 182 |
| 3 | 39.6 | 4.0 | 41.0 | 15.4 | 273 | 4 | 51.4 | 7.7 | 15.2 | 26.7 | 210 |
| 5 | 35.9 | 3.6 | 37.2 | 23.2 | 301 | 6 | 45.4 | 5.9 | 13.4 | 35.3 | 238 |
| 8-1 | 41.4 | 4.2 | 49.0 | 5.4 | 261 | 3-2 | 54.5 | 7.1 | 24.2 | 14.1 | 198 |
| 3 | 37.4 | 3.8 | 44.3 | 14.5 | 289 | 4 | 47.8 | 6.2 | 21.1 | 24.8 | 226 |
| 5 | 34.1 | 3.4 | 40.4 | 22.1 | 317 | 6 | 42.5 | 5.5 | 18.9 | 33.1 | 254 |
| 9-12-1-2 | 65.8 | 7.3 | 9.7 | 17.1 | 164 | 4-2 | 50.5 | 6.5 | 29.9 | 13.1 | 214 |
| 4 | 56.3 | 6.2 | 8.3 | 29.2 | 192 | 4 | 44.6 | 5.8 | 26.4 | 23.1 | 242 |
| 6 | 49.1 | 5.4 | 7.3 | 38.2 | 220 | 6 | 40.0 | 5.2 | 23.7 | 31.1 | 270 |
| 2-2 | 60.0 | 6.7 | 17.8 | 15.5 | 180 | 5-2 | 46.9 | 6.1 | 34.8 | 12.2 | 230 |
| 4 | 51.9 | 5.8 | 15.4 | 26.9 | 208 | 4 | 41.9 | 5.4 | 31.0 | 21.7 | 258 |
| 6 | 45.8 | 5.1 | 13.5 | 35.6 | 236 | 6 | 37.7 | 4.9 | 28.0 | 29.4 | 286 |
| 3-2 | 55.1 | 6.1 | 24.5 | 14.3 | 196 | 6-2 | 43.9 | 5.7 | 39.0 | 11.4 | 246 |
| 4 | 48.2 | 5.3 | 21.4 | 25.0 | 224 | 4 | 39.4 | 5.1 | 35.0 | 20.4 | 274 |
| 6 | 42.9 | 4.8 | 19.0 | 33.3 | 252 | 6 | 35.7 | 4.6 | 31.8 | 27.8 | 302 |
| 4-2 | 50.9 | 5.7 | 30.2 | 13.2 | 212 | 7-2 | 41.2 | 5.3 | 42.7 | 10.7 | 262 |
| 4 | 45.0 | 5.0 | 26.7 | 23.3 | 240 | 4 | 37.2 | 4.8 | 38.6 | 19.3 | 290 |
| 6 | 40.3 | 4.5 | 23.9 | 31.3 | 268 | 6 | 33.9 | 4.4 | 35.2 | 26.4 | 318 |
| 5-2 | 47.4 | 5.2 | 35.1 | 12.3 | 228 | 8-2 | 38.8 | 5.0 | 46.0 | 10.1 | 278 |
| 4 | 42.2 | 4.7 | 31.2 | 21.9 | 256 | 4 | 35.3 | 4.6 | 41.8 | 18.3 | 306 |
| 6 | 38.0 | 4.2 | 28.2 | 29.6 | 284 | 6 | 32.3 | 4.2 | 38.3 | 25.1 | 334 |
| 6-2 | 44.3 | 4.9 | 39.3 | 11.5 | 244 | 9-15-1-1 | 70.6 | 9.8 | 10.4 | 9.1 | 153 |
| 4 | 39.7 | 4.4 | 35.3 | 20.6 | 272 | 3 | 59.7 | 8.3 | 8.8 | 23.2 | 181 |
| 6 | 36.0 | 4.0 | 32.0 | 28.0 | 300 | 5 | 51.7 | 7.2 | 7.6 | 33.5 | 209 |
| 7-2 | 41.5 | 4.6 | 43.1 | 10.8 | 260 | 2-1 | 63.9 | 8.9 | 18.9 | 8.3 | 199 |
| 4 | 37.5 | 4.2 | 38.9 | 19.4 | 288 | 3 | 54.8 | 7.6 | 16.2 | 21.3 | 237 |
| 6 | 34.2 | 3.8 | 35.4 | 26.6 | 316 | 5 | 48.0 | 6.7 | 14.2 | 31.1 | 225 |
| 8-2 | 39.1 | 4.3 | 46.4 | 10.1 | 276 | 3-1 | 58.4 | 8.1 | 25.9 | 7.6 | 185 |
| 4 | 35.5 | 3.9 | 42.1 | 18.4 | 304 | 3 | 50.7 | 7.0 | 22.5 | 19.7 | 213 |
| 6 | 32.5 | 3.6 | 38.5 | 25.3 | 332 | 5 | 44.8 | 6.2 | 19.9 | 29.0 | 241 |
| 9-13-1-1 | 71.5 | 8.6 | 10.6 | 9.3 | 151 | 4-1 | 53.7 | 7.5 | 31.8 | 7.0 | 201 |
| 3 | 60.3 | 7.3 | 8.9 | 23.5 | 179 | 3 | 47.2 | 6.5 | 27.9 | 18.3 | 229 |
| 5 | 52.2 | 6.3 | 7.7 | 33.8 | 207 | 5 | 42.0 | 5.8 | 24.9 | 27.2 | 257 |
| 2-1 | 64.7 | 7.8 | 19.1 | 8.4 | 167 | 5-1 | 49.8 | 6.9 | 36.8 | 6.4 | 217 |
| 3 | 55.4 | 6.7 | 16.4 | 21.5 | 195 | 3 | 44.1 | 6.1 | 32.7 | 17.1 | 245 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|------|------|------|------|----------|------|------|------|------|------|
| 9-15-5-5 | 39.6 | 5.5 | 29.3 | 25.6 | 273 | 9-18-4-6 | 39.4 | 6.6 | 23.3 | 30.7 | 274 |
| 6-1 | 46.4 | 6.4 | 41.2 | 6.0 | 233 | 5-2 | 46.1 | 7.7 | 34.2 | 12.0 | 234 |
| 3 | 41.4 | 5.7 | 36.8 | 16.1 | 261 | 4 | 41.2 | 6.9 | 30.5 | 21.4 | 262 |
| 5 | 37.4 | 5.2 | 33.2 | 24.2 | 289 | 6 | 37.2 | 6.2 | 27.6 | 29.0 | 290 |
| 7 | 34.1 | 4.7 | 30.3 | 30.9 | 317 | 6-2 | 43.2 | 7.2 | 38.4 | 11.2 | 250 |
| 9-16-1-2 | 64.3 | 9.5 | 9.5 | 16.7 | 168 | 9-19-1-1 | 68.8 | 12.1 | 10.2 | 8.9 | 157 |
| 4 | 55.1 | 8.2 | 8.2 | 28.5 | 196 | 3 | 58.4 | 10.3 | 8.6 | 22.7 | 185 |
| 6 | 48.2 | 7.1 | 7.1 | 37.5 | 224 | 5 | 50.7 | 8.9 | 7.5 | 32.9 | 213 |
| 2-2 | 58.7 | 8.7 | 17.4 | 15.2 | 184 | 2-1 | 62.4 | 11.0 | 18.5 | 8.1 | 173 |
| 4 | 50.9 | 7.5 | 15.1 | 26.4 | 212 | 3 | 53.7 | 9.4 | 15.9 | 20.8 | 201 |
| 6 | 45.0 | 6.7 | 13.3 | 35.0 | 240 | 5 | 47.1 | 8.3 | 14.0 | 30.6 | 229 |
| 3-2 | 54.0 | 8.0 | 24.0 | 14.0 | 200 | 3-1 | 57.1 | 10.0 | 25.4 | 7.4 | 189 |
| 4 | 47.4 | 7.0 | 21.0 | 24.6 | 228 | 3 | 49.8 | 8.7 | 22.1 | 19.3 | 217 |
| 6 | 42.2 | 6.2 | 18.7 | 32.8 | 256 | 5 | 44.1 | 7.7 | 19.6 | 28.6 | 245 |
| 4-2 | 50.0 | 7.4 | 29.6 | 13.0 | 216 | 4-1 | 52.7 | 9.3 | 31.2 | 6.8 | 205 |
| 4 | 44.3 | 6.5 | 26.2 | 22.9 | 244 | 3 | 46.3 | 8.1 | 27.5 | 18.0 | 233 |
| 6 | 39.7 | 5.9 | 23.5 | 30.9 | 272 | 5 | 31.3 | 7.3 | 24.5 | 26.8 | 261 |
| 5-2 | 46.5 | 6.9 | 34.5 | 12.1 | 232 | 9-20-1-2 | 62.8 | 11.6 | 9.3 | 16.3 | 172 |
| 4 | 41.5 | 6.1 | 30.8 | 21.5 | 260 | 4 | 54.0 | 10.0 | 8.0 | 28.0 | 200 |
| 6 | 37.5 | 5.5 | 27.8 | 29.2 | 288 | 6 | 47.4 | 8.8 | 7.0 | 36.8 | 228 |
| 6-2 | 43.5 | 6.4 | 38.7 | 11.3 | 248 | 2-2 | 57.4 | 10.6 | 17.0 | 14.9 | 188 |
| 4 | 39.1 | 5.8 | 34.8 | 20.3 | 276 | 4 | 50.0 | 9.3 | 13.8 | 25.9 | 216 |
| 6 | 35.5 | 5.3 | 31.6 | 27.6 | 304 | 6 | 44.3 | 8.2 | 13.1 | 34.4 | 244 |
| 7-2 | 40.9 | 6.1 | 42.4 | 10.6 | 264 | 3-2 | 52.9 | 9.8 | 23.5 | 13.7 | 204 |
| 4 | 37.0 | 5.5 | 38.3 | 19.2 | 292 | 4 | 46.5 | 8.6 | 20.7 | 24.1 | 232 |
| 6 | 33.7 | 5.0 | 35.0 | 26.2 | 320 | 6 | 41.5 | 7.7 | 18.5 | 32.3 | 260 |
| 8-2 | 38.6 | 5.7 | 45.7 | 10.0 | 280 | 9-21-1-1 | 67.9 | 13.2 | 10.1 | 8.8 | 159 |
| 4 | 35.1 | 5.2 | 41.5 | 18.2 | 308 | 3 | 57.7 | 11.2 | 8.6 | 22.5 | 187 |
| 6 | 32.1 | 4.8 | 38.1 | 25.0 | 336 | 5 | 50.2 | 9.8 | 7.4 | 32.6 | 215 |
| 13-2 | 30.0 | 4.4 | 57.8 | 7.8 | 360 | 2-1 | 61.7 | 12.0 | 18.3 | 8.0 | 175 |
| 9-17-1-1 | 69.7 | 11.0 | 10.3 | 9.0 | 155 | 3 | 53.2 | 10.3 | 15.8 | 20.7 | 203 |
| 3 | 59.0 | 9.3 | 8.7 | 22.9 | 183 | 5 | 46.8 | 9.1 | 13.8 | 30.3 | 231 |
| 5 | 51.2 | 8.0 | 7.6 | 33.2 | 211 | 3-1 | 56.5 | 11.0 | 25.1 | 7.3 | 191 |
| 2-1 | 63.2 | 9.9 | 18.7 | 8.2 | 171 | 3 | 49.3 | 9.6 | 21.9 | 19.2 | 219 |
| 3 | 54.3 | 8.5 | 16.1 | 21.1 | 199 | 5 | 43.7 | 8.5 | 19.4 | 28.3 | 247 |
| 5 | 47.6 | 7.5 | 14.1 | 30.8 | 227 | 9-22-1-2 | 62.0 | 12.6 | 9.2 | 16.1 | 174 |
| 3-1 | 57.7 | 9.1 | 25.7 | 7.5 | 187 | 4 | 53.5 | 10.9 | 7.9 | 27.7 | 202 |
| 3 | 50.2 | 7.9 | 22.3 | 19.5 | 215 | 6 | 47.0 | 9.6 | 6.9 | 36.5 | 230 |
| 5 | 44.4 | 7.0 | 19.7 | 28.8 | 243 | 2-2 | 56.9 | 11.6 | 16.8 | 14.7 | 190 |
| 4-1 | 53.2 | 8.4 | 31.5 | 6.9 | 203 | 4 | 49.5 | 10.1 | 14.7 | 25.7 | 218 |
| 3 | 46.8 | 7.3 | 27.7 | 18.2 | 231 | 6 | 43.9 | 8.9 | 13.0 | 34.1 | 246 |
| 5 | 41.7 | 6.5 | 24.7 | 27.0 | 259 | 3-2 | 52.4 | 10.7 | 23.3 | 13.5 | 206 |
| 5-1 | 49.3 | 7.8 | 36.5 | 6.4 | 219 | 4 | 46.1 | 9.4 | 20.5 | 23.9 | 234 |
| 3 | 43.7 | 6.9 | 32.4 | 17.0 | 247 | 6 | 41.2 | 8.4 | 18.3 | 32.1 | 262 |
| 5 | 39.3 | 6.2 | 29.1 | 25.4 | 275 | 9-23-1-1 | 67.1 | 14.3 | 9.9 | 8.7 | 161 |
| 0-1 | 45.9 | 7.2 | 40.8 | 6.0 | 235 | 3 | 57.1 | 12.2 | 8.5 | 22.1 | 189 |
| 3 | 41.1 | 6.5 | 36.5 | 15.9 | 263 | 5 | 49.7 | 10.6 | 7.4 | 32.3 | 217 |
| 5 | 37.1 | 5.8 | 33.0 | 24.0 | 291 | 2-1 | 61.0 | 13.0 | 18.1 | 7.9 | 177 |
| 9-18-1-2 | 63.5 | 10.6 | 9.4 | 16.5 | 170 | 3 | 52.7 | 11.2 | 15.6 | 20.5 | 205 |
| 4 | 54.5 | 9.1 | 8.1 | 28.3 | 198 | 5 | 46.3 | 9.9 | 13.7 | 30.0 | 233 |
| 6 | 47.8 | 8.0 | 7.1 | 37.1 | 226 | 3-1 | 55.9 | 11.9 | 24.9 | 7.2 | 193 |
| 2-2 | 58.0 | 9.7 | 17.2 | 15.0 | 186 | 3 | 48.9 | 10.4 | 21.7 | 19.0 | 221 |
| 4 | 50.5 | 8.4 | 14.9 | 26.2 | 214 | 5 | 43.4 | 9.2 | 19.3 | 28.1 | 249 |
| 6 | 44.6 | 7.4 | 13.2 | 34.7 | 242 | 10-3-8-5 | 37.4 | 0.9 | 39.9 | 21.8 | 321 |
| 3-2 | 53.5 | 8.9 | 23.8 | 13.8 | 202 | 9-5 | 35.6 | 0.9 | 42.7 | 20.8 | 337 |
| 4 | 47.0 | 7.8 | 20.9 | 24.3 | 230 | 10-4-3-2 | 60.0 | 2.0 | 24.0 | 14.0 | 200 |
| 6 | 41.9 | 7.0 | 18.6 | 32.5 | 258 | 4-2 | 55.6 | 1.8 | 29.6 | 13.0 | 216 |
| 4-2 | 49.5 | 8.2 | 29.3 | 12.8 | 218 | 6-2 | 48.4 | 1.6 | 38.7 | 11.3 | 248 |
| 4 | 43.9 | 7.3 | 26.0 | 22.8 | 246 | 4 | 43.5 | 1.4 | 34.8 | 20.3 | 276 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|----------|------|-----|------|------|------|----------|------|-----|------|------|------|
| 10-4-6-6 | 39.5 | 1.3 | 31.6 | 27.6 | 304 | 10-6-8-2 | 42.5 | 2.1 | 45.4 | 9.9 | 282 |
| 7-4 | 41.1 | 1.4 | 38.3 | 19.2 | 292 | 4 | 38.7 | 1.9 | 41.3 | 18.1 | 310 |
| 6 | 37.5 | 1.2 | 35.0 | 26.2 | 320 | 6 | 35.5 | 1.8 | 37.9 | 24.8 | 338 |
| 8-4 | 39.0 | 1.3 | 41.5 | 18.2 | 308 | 10-7-1-1 | 76.4 | 4.5 | 10.2 | 8.9 | 157 |
| 6 | 35.7 | 1.2 | 38.1 | 25.0 | 336 | 3 | 64.8 | 3.8 | 8.6 | 22.7 | 185 |
| 9-4 | 37.0 | 1.2 | 44.4 | 17.3 | 324 | 5 | 56.3 | 3.3 | 7.5 | 32.9 | 213 |
| 6 | 34.1 | 1.1 | 40.9 | 23.9 | 352 | 2-1 | 69.4 | 4.0 | 18.5 | 8.1 | 173 |
| 12-4 | 32.3 | 1.1 | 51.6 | 15.0 | 372 | 3 | 59.7 | 3.5 | 15.9 | 20.9 | 201 |
| 10-5-1-1 | 77.4 | 3.2 | 10.3 | 9.0 | 155 | 5 | 52.4 | 3.1 | 13.9 | 30.6 | 229 |
| 3 | 65.6 | 2.7 | 8.7 | 22.9 | 183 | 3-1 | 63.5 | 3.7 | 25.4 | 7.4 | 189 |
| 5 | 56.9 | 2.4 | 7.6 | 33.2 | 211 | 9 | 55.3 | 3.2 | 22.1 | 19.3 | 217 |
| 2-1 | 70.2 | 2.9 | 18.7 | 8.2 | 171 | 5 | 49.0 | 2.9 | 19.6 | 28.5 | 245 |
| 3 | 60.3 | 2.5 | 16.1 | 21.1 | 199 | 4-1 | 58.5 | 3.4 | 31.2 | 6.8 | 205 |
| 5 | 52.8 | 2.2 | 14.1 | 30.8 | 227 | 3 | 51.5 | 3.0 | 27.5 | 18.0 | 233 |
| 3-1 | 64.2 | 2.7 | 25.6 | 7.5 | 187 | 5 | 46.0 | 2.7 | 24.5 | 26.8 | 261 |
| 3 | 55.8 | 2.3 | 22.3 | 19.5 | 215 | 5-1 | 54.3 | 3.2 | 36.2 | 6.3 | 221 |
| 5 | 49.4 | 2.0 | 19.7 | 28.8 | 243 | 3 | 48.2 | 2.8 | 32.1 | 16.9 | 249 |
| 4-1 | 59.1 | 2.5 | 31.5 | 6.9 | 203 | 5 | 43.3 | 2.5 | 28.9 | 25.3 | 277 |
| 3 | 51.9 | 2.2 | 27.7 | 18.2 | 231 | 6-1 | 50.6 | 2.9 | 40.5 | 5.9 | 237 |
| 5 | 46.3 | 1.9 | 24.7 | 27.0 | 259 | 3 | 45.3 | 2.6 | 36.2 | 15.9 | 265 |
| 5-1 | 54.8 | 2.3 | 36.5 | 6.4 | 219 | 5 | 40.9 | 2.4 | 32.8 | 23.9 | 293 |
| 3 | 48.6 | 2.0 | 32.4 | 17.0 | 247 | 7-1 | 47.4 | 2.8 | 44.3 | 5.5 | 253 |
| 5 | 43.6 | 1.8 | 29.1 | 25.4 | 275 | 3 | 42.7 | 2.5 | 39.8 | 14.9 | 281 |
| 6-1 | 51.1 | 2.1 | 40.8 | 5.9 | 235 | 5 | 38.8 | 2.3 | 36.2 | 22.6 | 309 |
| 3 | 45.6 | 1.9 | 36.5 | 16.0 | 263 | 8-1 | 44.6 | 2.6 | 47.6 | 5.2 | 269 |
| 5 | 41.2 | 1.7 | 33.0 | 24.0 | 291 | 3 | 40.4 | 2.3 | 43.1 | 14.1 | 297 |
| 7-1 | 47.8 | 2.0 | 44.6 | 5.6 | 251 | 5 | 36.9 | 2.1 | 39.4 | 21.5 | 325 |
| 3 | 43.0 | 1.8 | 40.1 | 15.0 | 279 | 2 | 69.8 | 4.6 | 9.3 | 16.3 | 172 |
| 5 | 39.1 | 1.6 | 36.5 | 22.8 | 307 | 4 | 60.0 | 4.0 | 8.0 | 28.0 | 200 |
| 8-1 | 44.9 | 1.9 | 47.9 | 5.2 | 267 | 6 | 52.6 | 3.5 | 7.0 | 36.6 | 228 |
| 3 | 40.7 | 1.7 | 43.4 | 14.2 | 295 | 2-2 | 63.8 | 4.3 | 17.0 | 14.9 | 188 |
| 5 | 37.1 | 1.5 | 39.6 | 21.7 | 323 | 4 | 55.5 | 3.7 | 14.8 | 25.9 | 216 |
| 9-1 | 42.4 | 1.8 | 50.9 | 4.9 | 283 | 6 | 49.2 | 3.3 | 13.1 | 34.4 | 244 |
| 3 | 38.6 | 1.6 | 46.3 | 13.5 | 311 | 3-2 | 58.8 | 3.9 | 23.5 | 13.7 | 204 |
| 5 | 35.4 | 1.5 | 42.5 | 20.6 | 339 | 4 | 51.7 | 3.4 | 20.7 | 24.1 | 232 |
| 10-1 | 40.1 | 1.7 | 53.5 | 4.7 | 299 | 6 | 46.1 | 3.1 | 18.4 | 32.3 | 260 |
| 3 | 36.7 | 1.5 | 48.9 | 12.8 | 327 | 4-2 | 54.5 | 3.6 | 29.1 | 12.7 | 220 |
| 5 | 33.8 | 1.4 | 45.1 | 19.7 | 355 | 4 | 48.4 | 3.2 | 25.8 | 22.6 | 248 |
| 10-6-1-2 | 70.6 | 3.5 | 9.4 | 16.5 | 170 | 6 | 43.5 | 2.9 | 23.2 | 30.4 | 276 |
| 4 | 60.6 | 3.0 | 8.1 | 28.3 | 198 | 5-2 | 50.8 | 3.4 | 33.9 | 11.9 | 236 |
| 6 | 53.1 | 2.6 | 7.1 | 37.2 | 226 | 4 | 45.4 | 3.0 | 30.3 | 21.2 | 264 |
| 2-2 | 64.5 | 3.2 | 17.2 | 15.1 | 186 | 6 | 41.1 | 2.7 | 27.4 | 28.8 | 292 |
| 4 | 56.1 | 2.8 | 14.9 | 26.2 | 214 | 6-2 | 47.6 | 3.2 | 38.1 | 11.1 | 252 |
| 6 | 49.6 | 2.5 | 13.2 | 34.7 | 242 | 4 | 42.8 | 2.9 | 34.3 | 20.0 | 280 |
| 3-2 | 59.4 | 3.0 | 23.8 | 13.8 | 202 | 6 | 38.9 | 2.6 | 31.2 | 27.3 | 308 |
| 4 | 52.2 | 2.6 | 20.9 | 24.3 | 230 | 7-2 | 44.8 | 3.0 | 41.8 | 10.4 | 268 |
| 6 | 46.5 | 2.3 | 18.6 | 32.5 | 258 | 4 | 40.5 | 2.7 | 37.8 | 18.9 | 296 |
| 4-2 | 55.0 | 2.8 | 29.3 | 12.8 | 218 | 6 | 37.0 | 2.5 | 34.6 | 25.9 | 324 |
| 4 | 48.8 | 2.4 | 26.0 | 22.8 | 246 | 8-2 | 42.2 | 2.8 | 45.1 | 9.9 | 284 |
| 6 | 43.8 | 2.2 | 23.4 | 30.6 | 274 | 4 | 38.5 | 2.5 | 41.0 | 17.9 | 312 |
| 5-2 | 51.3 | 2.6 | 34.2 | 11.9 | 234 | 6 | 35.3 | 2.3 | 37.7 | 24.7 | 340 |
| 4 | 45.8 | 2.3 | 30.5 | 21.4 | 262 | 10-9-1-1 | 75.5 | 5.7 | 10.0 | 8.8 | 159 |
| 6 | 41.4 | 2.1 | 27.6 | 28.9 | 290 | 3 | 64.2 | 4.8 | 8.6 | 22.4 | 187 |
| 6-2 | 48.0 | 2.4 | 38.4 | 11.2 | 250 | 5 | 55.8 | 4.2 | 7.4 | 32.6 | 215 |
| 4 | 43.2 | 2.2 | 34.5 | 20.1 | 278 | 2-1 | 68.6 | 5.1 | 18.3 | 8.0 | 175 |
| 6 | 39.2 | 2.0 | 31.4 | 27.4 | 306 | 3 | 59.1 | 4.4 | 15.8 | 20.7 | 203 |
| 7-2 | 45.1 | 2.3 | 42.1 | 10.5 | 266 | 5 | 51.9 | 3.9 | 13.8 | 30.3 | 231 |
| 4 | 40.8 | 2.0 | 38.1 | 19.0 | 294 | 3-1 | 62.8 | 4.7 | 25.1 | 7.3 | 191 |
| 6 | 37.3 | 1.8 | 34.8 | 26.1 | 322 | 3 | 54.8 | 4.1 | 21.9 | 19.2 | 219 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 10-9-3-5 | 48.6 | 3.6 | 19.4 | 28.3 | 247 | 10-11-5-3 | 47.4 | 4.3 | 31.6 | 16.6 | 253 |
| 4-1 | 58.0 | 4.3 | 30.9 | 6.8 | 207 | 5 | 42.7 | 3.9 | 28.5 | 24.9 | 281 |
| 3 | 51.1 | 3.8 | 27.2 | 17.9 | 235 | 6-1 | 49.8 | 4.6 | 39.8 | 5.8 | 241 |
| 5 | 45.6 | 3.4 | 24.3 | 26.6 | 263 | 3 | 44.6 | 4.1 | 35.7 | 15.6 | 269 |
| 5-1 | 53.8 | 4.0 | 35.9 | 6.3 | 223 | 5 | 40.4 | 3.7 | 32.3 | 23.6 | 297 |
| 3 | 47.8 | 3.6 | 31.9 | 16.7 | 251 | 7-1 | 46.7 | 4.3 | 43.6 | 5.4 | 257 |
| 5 | 43.0 | 3.2 | 28.7 | 25.1 | 279 | 3 | 42.1 | 3.8 | 39.4 | 14.7 | 285 |
| 6-1 | 50.2 | 3.8 | 40.2 | 5.8 | 239 | 5 | 38.3 | 3.5 | 35.8 | 22.4 | 313 |
| 3 | 44.9 | 3.4 | 35.9 | 15.7 | 267 | 8-1 | 43.9 | 4.0 | 46.9 | 5.1 | 273 |
| 5 | 40.7 | 3.0 | 32.5 | 23.7 | 295 | 3 | 39.9 | 3.6 | 42.5 | 13.9 | 301 |
| 7-1 | 47.1 | 3.5 | 43.9 | 5.5 | 255 | 5 | 36.5 | 3.3 | 38.9 | 21.3 | 329 |
| 3 | 42.4 | 3.2 | 39.6 | 14.8 | 283 | 9-3 | 37.9 | 3.5 | 45.4 | 13.2 | 317 |
| 5 | 38.6 | 2.9 | 46.0 | 22.5 | 311 | 10-12-1-2 | 68.2 | 6.8 | 9.1 | 15.9 | 176 |
| 8-1 | 44.3 | 3.3 | 47.2 | 5.2 | 271 | 4 | 58.8 | 5.9 | 7.8 | 27.4 | 204 |
| 3 | 40.1 | 3.0 | 42.8 | 14.0 | 299 | 6 | 51.7 | 5.2 | 6.9 | 36.2 | 232 |
| 5 | 36.7 | 2.7 | 39.1 | 21.4 | 327 | 2-2 | 62.5 | 6.2 | 16.7 | 14.6 | 192 |
| 9-1 | 41.8 | 3.1 | 50.2 | 4.9 | 287 | 4 | 54.5 | 5.4 | 14.5 | 25.5 | 220 |
| 3 | 38.1 | 2.8 | 45.7 | 13.3 | 315 | 6 | 48.4 | 4.8 | 12.9 | 33.9 | 248 |
| 5 | 35.0 | 2.6 | 42.0 | 20.4 | 343 | 3-2 | 57.7 | 5.8 | 23.1 | 13.4 | 208 |
| 10-1 | 39.6 | 3.0 | 52.8 | 4.6 | 303 | 4 | 50.8 | 5.1 | 20.3 | 23.7 | 236 |
| 3 | 36.2 | 2.7 | 48.3 | 12.7 | 331 | 6 | 45.4 | 4.5 | 18.2 | 31.8 | 264 |
| 5 | 33.4 | 2.5 | 44.6 | 19.5 | 359 | 4-2 | 53.6 | 5.3 | 28.6 | 12.5 | 224 |
| 10-10-1-2 | 68.9 | 5.7 | 9.2 | 16.1 | 174 | 4 | 47.6 | 4.8 | 25.4 | 22.2 | 252 |
| 4 | 59.4 | 4.9 | 7.9 | 27.7 | 202 | 6 | 42.9 | 4.3 | 22.8 | 30.0 | 280 |
| 6 | 52.2 | 4.3 | 6.9 | 36.5 | 230 | 5-2 | 50.0 | 5.0 | 33.3 | 11.7 | 240 |
| 2-2 | 63.2 | 5.2 | 16.8 | 14.7 | 190 | 4 | 44.8 | 4.5 | 29.8 | 20.9 | 268 |
| 4 | 55.0 | 4.6 | 14.7 | 25.7 | 218 | 6 | 40.5 | 4.0 | 27.0 | 28.4 | 296 |
| 6 | 48.8 | 4.1 | 13.0 | 34.1 | 246 | 6-2 | 46.9 | 4.7 | 37.5 | 10.9 | 256 |
| 3-2 | 58.2 | 4.8 | 23.3 | 13.6 | 206 | 4 | 42.2 | 4.2 | 33.8 | 19.7 | 284 |
| 4 | 51.3 | 4.3 | 20.5 | 23.9 | 234 | 6 | 38.5 | 3.8 | 30.8 | 26.9 | 312 |
| 6 | 45.8 | 3.8 | 18.3 | 32.1 | 262 | 7-2 | 44.1 | 4.4 | 41.2 | 10.3 | 272 |
| 4-2 | 54.0 | 4.5 | 28.8 | 12.6 | 222 | 4 | 40.0 | 4.0 | 37.3 | 18.7 | 300 |
| 4 | 48.0 | 4.0 | 25.6 | 22.4 | 250 | 6 | 36.6 | 3.6 | 34.1 | 25.6 | 328 |
| 6 | 43.2 | 3.6 | 23.0 | 30.2 | 278 | 8-2 | 41.7 | 4.2 | 14.4 | 9.7 | 288 |
| 5-2 | 50.4 | 4.2 | 33.6 | 11.8 | 238 | 4 | 38.0 | 3.8 | 40.5 | 17.7 | 316 |
| 4 | 45.1 | 3.8 | 30.1 | 21.0 | 266 | 6 | 34.9 | 3.5 | 37.2 | 24.4 | 344 |
| 6 | 40.8 | 3.4 | 27.2 | 28.6 | 294 | 10-13-1-1 | 73.6 | 8.0 | 9.8 | 8.6 | 163 |
| 6-2 | 47.2 | 3.9 | 37.8 | 11.0 | 254 | 3 | 62.8 | 6.8 | 8.4 | 22.0 | 191 |
| 4 | 42.5 | 3.5 | 34.0 | 19.9 | 282 | 5 | 54.8 | 5.9 | 7.3 | 32.0 | 219 |
| 6 | 38.7 | 3.2 | 31.0 | 27.1 | 310 | 2-1 | 67.0 | 7.3 | 17.9 | 7.8 | 179 |
| 7-2 | 44.4 | 3.7 | 41.5 | 10.4 | 270 | 3 | 58.0 | 6.3 | 15.4 | 20.3 | 207 |
| 4 | 40.3 | 3.3 | 37.6 | 18.8 | 298 | 5 | 51.1 | 5.5 | 13.6 | 29.8 | 235 |
| 6 | 36.8 | 3.1 | 34.3 | 25.8 | 326 | 9 | 41.2 | 4.5 | 11.0 | 43.3 | 291 |
| 8-2 | 42.0 | 3.5 | 44.7 | 9.8 | 286 | 3-1 | 61.5 | 6.7 | 24.6 | 7.2 | 195 |
| 4 | 38.2 | 3.2 | 40.8 | 17.8 | 314 | 3 | 53.8 | 5.8 | 21.5 | 18.8 | 223 |
| 6 | 35.1 | 2.9 | 37.4 | 24.6 | 342 | 5 | 47.8 | 5.2 | 19.1 | 27.9 | 251 |
| 10-11-1-1 | 74.5 | 6.8 | 9.9 | 8.7 | 161 | 4-1 | 56.9 | 6.1 | 30.3 | 6.6 | 211 |
| 3 | 63.5 | 5.8 | 8.5 | 22.2 | 189 | 3 | 50.2 | 5.4 | 26.8 | 17.6 | 239 |
| 5 | 55.3 | 5.1 | 7.4 | 32.2 | 217 | 5 | 44.9 | 4.9 | 24.0 | 56.2 | 267 |
| 2-1 | 67.8 | 6.2 | 18.1 | 7.9 | 177 | 5-1 | 52.9 | 5.7 | 35.2 | 6.2 | 227 |
| 3 | 58.5 | 5.3 | 15.6 | 20.5 | 205 | 3 | 47.0 | 5.1 | 31.4 | 16.5 | 255 |
| 5 | 51.5 | 4.7 | 13.7 | 30.0 | 233 | 5 | 42.4 | 4.6 | 28.3 | 24.7 | 283 |
| 3-1 | 62.2 | 5.7 | 24.8 | 7.2 | 193 | 6-1 | 49.4 | 5.3 | 39.5 | 5.8 | 243 |
| 3 | 54.3 | 5.0 | 21.7 | 19.0 | 221 | 3 | 44.3 | 4.8 | 35.4 | 15.5 | 271 |
| 5 | 48.2 | 4.4 | 19.3 | 28.1 | 249 | 5 | 40.1 | 4.3 | 32.1 | 23.4 | 299 |
| 4-1 | 57.4 | 5.3 | 30.6 | 6.7 | 209 | 7-1 | 46.3 | 5.0 | 43.2 | 5.4 | 259 |
| 3 | 50.6 | 4.6 | 27.0 | 17.7 | 237 | 3 | 41.8 | 4.5 | 39.0 | 14.6 | 287 |
| 5 | 45.3 | 4.1 | 24.1 | 26.4 | 265 | 5 | 38.1 | 4.1 | 35.6 | 22.2 | 315 |
| 5-1 | 53.3 | 4.9 | 35.5 | 6.2 | 225 | 8-1 | 43.6 | 4.7 | 40.5 | 5.1 | 275 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 10-13-8-3 | 39.6 | 4.3 | 42.2 | 13.9 | 303 | 10-16-3-4 | 50.0 | 6.7 | 20.0 | 23.3 | 240 |
| 5 | 36.2 | 3.9 | 38.7 | 21.1 | 331 | 6 | 44.8 | 6.0 | 17.9 | 31.3 | 268 |
| 10-14-1-2 | 67.4 | 7.9 | 9.0 | 15.7 | 178 | 4-2 | 52.6 | 7.0 | 28.1 | 12.3 | 228 |
| 4 | 58.2 | 6.8 | 7.8 | 27.2 | 206 | 4 | 46.9 | 6.2 | 25.0 | 21.9 | 256 |
| 6 | 51.3 | 6.0 | 6.8 | 35.9 | 234 | 6 | 42.2 | 5.6 | 22.5 | 29.6 | 284 |
| 2-2 | 61.9 | 7.2 | 16.5 | 14.4 | 194 | 5-2 | 49.2 | 6.5 | 32.8 | 11.5 | 244 |
| 4 | 54.0 | 6.3 | 14.4 | 25.2 | 222 | 4 | 44.1 | 5.9 | 29.4 | 20.6 | 272 |
| 6 | 48.0 | 5.6 | 12.8 | 33.6 | 250 | 6 | 40.0 | 5.3 | 26.7 | 28.0 | 300 |
| 3-2 | 57.1 | 6.7 | 22.9 | 13.3 | 210 | 6-2 | 46.1 | 6.1 | 36.9 | 10.8 | 260 |
| 4 | 50.4 | 5.9 | 20.2 | 23.5 | 238 | 4 | 41.7 | 5.5 | 33.3 | 19.5 | 288 |
| 6 | 45.1 | 5.3 | 18.0 | 31.5 | 266 | 6 | 38.0 | 5.1 | 30.4 | 26.5 | 316 |
| 4-2 | 53.1 | 6.2 | 28.3 | 12.4 | 226 | 7-2 | 43.5 | 5.8 | 40.6 | 10.1 | 276 |
| 4 | 47.2 | 5.5 | 25.2 | 22.0 | 254 | 4 | 39.5 | 5.3 | 36.8 | 18.4 | 304 |
| 6 | 42.5 | 4.9 | 22.7 | 29.8 | 282 | 6 | 36.1 | 4.8 | 33.3 | 28.8 | 332 |
| 5-2 | 49.6 | 5.8 | 33.1 | 11.5 | 242 | 8-2 | 41.1 | 5.5 | 43.8 | 9.6 | 292 |
| 4 | 44.4 | 5.2 | 29.6 | 20.7 | 270 | 4 | 37.5 | 5.0 | 40.0 | 17.5 | 320 |
| 6 | 40.3 | 4.7 | 26.8 | 28.2 | 298 | 6 | 34.5 | 4.6 | 36.8 | 24.1 | 348 |
| 6-2 | 46.5 | 5.4 | 37.2 | 10.9 | 258 | 10-6 | 31.6 | 4.2 | 42.1 | 22.1 | 380 |
| 4 | 42.0 | 4.9 | 33.5 | 19.6 | 286 | 10-17-1-1 | 71.8 | 10.2 | 9.6 | 8.4 | 167 |
| 6 | 38.2 | 4.5 | 30.6 | 26.7 | 314 | 3 | 61.5 | 8.7 | 8.2 | 21.5 | 195 |
| 7-2 | 43.8 | 5.1 | 40.9 | 10.2 | 274 | 5 | 53.8 | 7.6 | 7.2 | 31.4 | 223 |
| 4 | 39.7 | 4.6 | 37.0 | 18.5 | 302 | 2-1 | 65.6 | 9.3 | 17.5 | 7.6 | 183 |
| 6 | 36.4 | 4.2 | 33.9 | 25.5 | 330 | 3 | 56.9 | 8.0 | 15.2 | 19.9 | 211 |
| 8-2 | 41.4 | 4.8 | 44.1 | 9.7 | 290 | 5 | 50.2 | 7.1 | 13.4 | 29.3 | 239 |
| 4 | 37.7 | 4.4 | 40.2 | 17.6 | 318 | 3-1 | 60.3 | 8.5 | 24.1 | 7.0 | 199 |
| 6 | 34.7 | 4.0 | 37.0 | 24.3 | 346 | 3 | 52.9 | 7.5 | 21.1 | 18.5 | 227 |
| 9-8 | 30.8 | 3.6 | 36.9 | 28.7 | 390 | 5 | 47.1 | 6.7 | 18.8 | 27.4 | 255 |
| 11-4 | 32.8 | 3.8 | 48.1 | 15.3 | 366 | 4-1 | 55.8 | 7.9 | 29.8 | 6.5 | 215 |
| 10-15-1-1 | 72.7 | 9.1 | 9.7 | 8.5 | 165 | 3 | 49.4 | 7.0 | 26.3 | 17.3 | 243 |
| 3 | 62.2 | 7.8 | 8.3 | 21.7 | 193 | 5 | 44.3 | 6.3 | 23.6 | 25.8 | 271 |
| 5 | 54.3 | 6.8 | 7.2 | 31.7 | 221 | 5-1 | 51.9 | 7.4 | 34.6 | 6.1 | 231 |
| 2-1 | 66.2 | 8.3 | 17.7 | 7.7 | 181 | 3 | 46.3 | 6.6 | 30.9 | 16.2 | 259 |
| 3 | 57.4 | 7.2 | 15.3 | 20.1 | 209 | 5 | 41.8 | 5.9 | 27.9 | 24.4 | 287 |
| 5 | 50.6 | 6.3 | 13.5 | 29.5 | 237 | 6-1 | 48.6 | 6.9 | 38.9 | 5.6 | 247 |
| 3-1 | 60.9 | 7.6 | 24.4 | 7.1 | 197 | 7-1 | 45.6 | 6.5 | 42.6 | 5.3 | 263 |
| 3 | 53.3 | 6.7 | 21.3 | 18.6 | 225 | 10-18-1-2 | 65.9 | 9.9 | 8.8 | 15.4 | 182 |
| 5 | 47.4 | 5.9 | 19.0 | 27.7 | 253 | 4 | 57.1 | 8.6 | 7.6 | 26.7 | 210 |
| 4-1 | 56.3 | 7.0 | 30.1 | 6.6 | 213 | 6 | 50.4 | 7.6 | 6.7 | 35.3 | 238 |
| 3 | 49.8 | 6.2 | 26.5 | 17.4 | 241 | 2-2 | 60.6 | 9.1 | 16.2 | 14.1 | 198 |
| 5 | 44.6 | 5.6 | 23.8 | 26.0 | 269 | 4 | 53.1 | 8.0 | 14.1 | 24.8 | 226 |
| 5-1 | 52.4 | 6.5 | 34.9 | 6.1 | 229 | 6 | 47.2 | 7.1 | 12.6 | 33.1 | 254 |
| 3 | 46.7 | 5.8 | 31.1 | 16.3 | 257 | 3-2 | 56.1 | 8.4 | 22.4 | 13.1 | 214 |
| 5 | 42.1 | 5.2 | 28.1 | 24.6 | 285 | 4 | 49.6 | 7.4 | 19.8 | 23.1 | 242 |
| 6-1 | 49.0 | 6.1 | 39.2 | 5.7 | 245 | 6 | 44.4 | 6.7 | 17.8 | 31.1 | 270 |
| 3 | 43.9 | 5.5 | 35.2 | 15.4 | 273 | 4-2 | 52.2 | 7.8 | 27.8 | 12.2 | 230 |
| 5 | 39.9 | 5.0 | 31.9 | 23.2 | 301 | 4 | 46.5 | 7.0 | 24.8 | 17.7 | 258 |
| 7-1 | 46.0 | 5.7 | 42.9 | 5.4 | 261 | 6 | 41.9 | 6.3 | 22.4 | 29.4 | 286 |
| 3 | 41.5 | 5.2 | 38.7 | 14.5 | 289 | 5-2 | 48.8 | 7.3 | 32.5 | 11.4 | 246 |
| 5 | 37.9 | 4.7 | 35.3 | 22.1 | 317 | 4 | 43.8 | 6.6 | 29.2 | 20.4 | 274 |
| 8-1 | 43.3 | 5.4 | 46.2 | 5.1 | 277 | 6 | 39.7 | 5.9 | 26.5 | 27.8 | 302 |
| 3 | 39.3 | 4.9 | 41.9 | 13.8 | 305 | 10-19-1-1 | 71.0 | 11.2 | 9.5 | 8.3 | 169 |
| 5 | 36.0 | 4.5 | 38.4 | 21.0 | 333 | 3 | 60.9 | 9.6 | 8.1 | 21.3 | 197 |
| 10-16-1-2 | 66.7 | 8.9 | 8.9 | 15.5 | 180 | 5 | 53.3 | 8.4 | 7.1 | 31.1 | 225 |
| 4 | 57.7 | 7.7 | 7.7 | 26.9 | 208 | 2-1 | 64.8 | 10.3 | 17.3 | 7.6 | 185 |
| 6 | 50.8 | 6.8 | 6.8 | 35.6 | 236 | 3 | 56.4 | 8.9 | 15.0 | 19.7 | 213 |
| 2-2 | 61.2 | 8.2 | 16.3 | 14.3 | 196 | 5 | 49.8 | 7.9 | 13.3 | 29.0 | 241 |
| 4 | 53.6 | 7.1 | 14.3 | 25.0 | 224 | 3-1 | 59.7 | 9.4 | 23.9 | 7.0 | 201 |
| 6 | 47.6 | 6.3 | 12.7 | 33.3 | 252 | 3 | 52.4 | 8.3 | 21.0 | 18.3 | 229 |
| 3-2 | 56.6 | 7.5 | 22.6 | 13.2 | 212 | 5 | 46.7 | 7.4 | 18.7 | 27.2 | 257 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|----------|------|-----|------|------|------|
| 10-19-4-1 | 55.3 | 8.7 | 29.5 | 6.4 | 217 | 11-7-1-5 | 58.7 | 3.1 | 7.1 | 31.1 | 225 |
| 3 | 49.0 | 7.8 | 26.1 | 17.1 | 245 | 2-1 | 71.3 | 3.8 | 17.3 | 7.6 | 185 |
| 5 | 43.9 | 7.0 | 23.4 | 25.6 | 273 | 3 | 62.0 | 3.3 | 15.0 | 19.7 | 213 |
| 5-1 | 51.5 | 8.2 | 34.3 | 5.9 | 233 | 5 | 54.8 | 2.9 | 13.3 | 29.0 | 241 |
| 10-20-1-2 | 65.2 | 10.9 | 8.7 | 15.2 | 184 | 3-1 | 65.7 | 3.5 | 23.9 | 6.9 | 201 |
| 4 | 56.6 | 9.4 | 7.5 | 26.4 | 212 | 3 | 57.6 | 3.1 | 21.0 | 18.3 | 229 |
| 6 | 50.0 | 8.3 | 6.7 | 35.0 | 240 | 5 | 51.4 | 2.7 | 18.7 | 27.2 | 257 |
| 2-2 | 60.0 | 10.0 | 16.0 | 14.0 | 200 | 4-1 | 60.8 | 3.2 | 29.5 | 6.4 | 217 |
| 4 | 52.6 | 8.8 | 14.0 | 24.6 | 228 | 3 | 53.9 | 2.8 | 26.2 | 17.1 | 245 |
| 6 | 46.9 | 7.8 | 12.5 | 32.8 | 256 | 5 | 48.3 | 2.6 | 23.4 | 25.6 | 273 |
| 3-2 | 55.5 | 9.2 | 22.2 | 13.0 | 216 | 5-1 | 56.7 | 3.0 | 34.3 | 6.0 | 233 |
| 4 | 49.2 | 8.2 | 19.7 | 22.9 | 244 | 3 | 50.6 | 2.7 | 30.6 | 16.1 | 261 |
| 6 | 44.1 | 7.3 | 17.6 | 30.9 | 272 | 5 | 45.7 | 2.4 | 27.7 | 24.2 | 289 |
| 4-2 | 51.7 | 8.6 | 27.6 | 12.0 | 232 | 6-1 | 53.0 | 2.8 | 38.5 | 5.6 | 249 |
| 4 | 46.2 | 7.7 | 24.6 | 21.5 | 260 | 3 | 47.6 | 2.5 | 34.6 | 15.2 | 277 |
| 6 | 41.7 | 6.9 | 22.2 | 29.2 | 288 | 5 | 43.3 | 2.3 | 31.5 | 22.9 | 305 |
| 5-2 | 46.4 | 8.1 | 32.2 | 11.3 | 248 | 7-1 | 49.8 | 2.6 | 42.3 | 5.3 | 265 |
| 4 | 43.5 | 7.2 | 29.0 | 20.3 | 276 | 3 | 45.0 | 2.4 | 38.2 | 14.3 | 293 |
| 6 | 39.5 | 6.6 | 26.3 | 27.6 | 304 | 5 | 41.1 | 2.2 | 34.9 | 21.8 | 321 |
| 8-2 | 40.5 | 6.8 | 43.2 | 9.5 | 296 | 8-1 | 47.0 | 2.5 | 45.5 | 5.0 | 281 |
| 10-21-1-1 | 70.2 | 12.3 | 9.3 | 8.2 | 171 | 3 | 42.7 | 2.3 | 41.4 | 13.6 | 309 |
| 3 | 60.3 | 10.6 | 8.0 | 21.1 | 199 | 5 | 39.2 | 2.1 | 37.9 | 20.8 | 337 |
| 5 | 52.9 | 9.2 | 7.0 | 30.8 | 227 | 11-8-1-2 | 71.7 | 4.3 | 8.7 | 15.2 | 184 |
| 2-1 | 64.2 | 11.2 | 17.1 | 7.5 | 187 | 4 | 62.2 | 3.8 | 7.5 | 26.4 | 212 |
| 3 | 55.8 | 9.8 | 14.9 | 19.5 | 215 | 6 | 55.0 | 3.3 | 6.7 | 35.0 | 240 |
| 5 | 49.4 | 8.6 | 13.2 | 28.8 | 243 | 2-2 | 66.0 | 4.0 | 16.0 | 14.0 | 200 |
| 3-1 | 59.1 | 10.3 | 23.6 | 7.0 | 203 | 4 | 57.9 | 3.5 | 14.0 | 24.6 | 228 |
| 3 | 51.9 | 9.1 | 20.8 | 18.2 | 231 | 6 | 51.6 | 3.1 | 12.5 | 32.8 | 256 |
| 5 | 46.3 | 8.1 | 18.5 | 27.0 | 259 | 3-2 | 61.1 | 3.7 | 22.2 | 13.0 | 216 |
| 4-1 | 54.8 | 9.6 | 29.2 | 6.4 | 219 | 4 | 54.1 | 3.3 | 19.7 | 22.9 | 244 |
| 3 | 48.6 | 8.5 | 25.9 | 17.0 | 247 | 6 | 48.5 | 2.9 | 17.6 | 30.9 | 272 |
| 5 | 43.6 | 7.6 | 23.3 | 25.4 | 275 | 4-2 | 56.9 | 3.4 | 27.6 | 12.1 | 232 |
| 10-22-1-2 | 64.5 | 11.8 | 8.6 | 15.0 | 186 | 4 | 50.8 | 3.1 | 24.6 | 21.5 | 260 |
| 4 | 56.1 | 10.3 | 7.5 | 26.2 | 214 | 6 | 45.8 | 2.8 | 22.2 | 29.2 | 288 |
| 6 | 49.6 | 9.1 | 6.6 | 34.7 | 242 | 5-2 | 53.2 | 3.2 | 32.2 | 11.3 | 248 |
| 2-2 | 59.4 | 10.9 | 15.8 | 13.9 | 202 | 4 | 47.8 | 2.9 | 29.0 | 20.3 | 276 |
| 4 | 52.2 | 9.6 | 13.9 | 24.3 | 230 | 6 | 43.4 | 2.6 | 26.3 | 27.6 | 304 |
| 6 | 46.5 | 8.5 | 12.4 | 32.6 | 258 | 6-2 | 50.0 | 3.0 | 36.4 | 10.6 | 264 |
| 10-23-1-1 | 69.4 | 13.3 | 9.2 | 8.1 | 173 | 4 | 45.2 | 2.7 | 32.9 | 19.2 | 292 |
| 3 | 59.7 | 11.4 | 8.0 | 20.9 | 201 | 6 | 41.2 | 2.5 | 30.0 | 26.2 | 320 |
| 5 | 52.4 | 10.0 | 7.0 | 30.6 | 229 | 7-2 | 47.1 | 2.8 | 40.0 | 10.0 | 280 |
| 2-1 | 63.5 | 12.2 | 16.9 | 7.4 | 189 | 4 | 42.8 | 2.6 | 36.4 | 18.2 | 308 |
| 3 | 55.3 | 10.6 | 14.7 | 19.3 | 217 | 6 | 39.3 | 2.4 | 33.3 | 25.0 | 336 |
| 5 | 49.0 | 9.4 | 13.0 | 28.6 | 245 | 8-2 | 44.6 | 2.7 | 43.2 | 9.5 | 296 |
| 11-4-5-2 | 54.1 | 1.6 | 32.8 | 11.5 | 244 | 4 | 40.7 | 2.5 | 39.5 | 17.3 | 324 |
| 11-5-3-1 | 66.3 | 2.5 | 24.1 | 7.0 | 199 | 6 | 37.5 | 2.3 | 36.4 | 23.8 | 352 |
| 5 | 51.8 | 2.0 | 18.8 | 27.4 | 255 | 11-9-1-1 | 77.2 | 5.3 | 9.3 | 8.2 | 171 |
| 4-1 | 61.4 | 2.3 | 29.8 | 6.5 | 215 | 3 | 69.3 | 4.5 | 8.0 | 21.1 | 199 |
| 5-3 | 51.0 | 1.9 | 30.9 | 16.2 | 259 | 5 | 58.1 | 4.0 | 7.0 | 30.8 | 227 |
| 8-3 | 43.0 | 1.6 | 41.7 | 13.7 | 307 | 2-1 | 70.6 | 4.8 | 17.1 | 7.5 | 187 |
| 11-6-2-2 | 66.7 | 3.0 | 16.2 | 14.1 | 198 | 3 | 61.4 | 4.2 | 14.9 | 19.5 | 215 |
| 4 | 58.4 | 2.6 | 14.2 | 24.8 | 226 | 5 | 54.3 | 3.7 | 13.2 | 28.8 | 243 |
| 6 | 51.9 | 2.4 | 12.6 | 33.1 | 254 | 3-1 | 65.0 | 4.4 | 23.6 | 6.9 | 203 |
| 3-2 | 61.7 | 2.8 | 22.4 | 13.1 | 214 | 3 | 57.1 | 3.9 | 20.8 | 18.2 | 231 |
| 6-2 | 50.4 | 2.3 | 36.6 | 10.7 | 262 | 5 | 50.9 | 3.5 | 18.5 | 27.0 | 259 |
| 4 | 45.5 | 2.1 | 33.1 | 19.3 | 290 | 4-1 | 60.3 | 4.1 | 29.2 | 6.4 | 219 |
| 7-2 | 47.5 | 2.1 | 40.3 | 10.1 | 278 | 3 | 53.4 | 3.6 | 25.9 | 17.0 | 247 |
| 11-7-1-1 | 78.1 | 4.1 | 9.5 | 8.3 | 169 | 5 | 48.0 | 3.3 | 23.3 | 25.4 | 275 |
| 3 | 67.0 | 3.5 | 8.1 | 21.3 | 197 | 5-1 | 56.2 | 3.8 | 34.0 | 5.9 | 235 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 11-9-5-3 | 50.2 | 3.4 | 30.4 | 16.0 | 263 | 11-12-1-2 | 70.2 | 6.4 | 8.5 | 14.0 | 188 |
| 5 | 45.3 | 3.1 | 27.5 | 24.0 | 291 | 4 | 61.1 | 5.5 | 7.4 | 25.0 | 216 |
| 6-1 | 52.6 | 3.6 | 38.2 | 5.6 | 251 | 6 | 54.1 | 4.9 | 6.6 | 34.4 | 244 |
| 3 | 47.3 | 3.2 | 34.4 | 15.1 | 279 | 2-2 | 64.7 | 5.9 | 15.7 | 13.7 | 204 |
| 5 | 43.0 | 2.9 | 31.3 | 22.8 | 307 | 4 | 56.9 | 5.2 | 13.8 | 24.1 | 232 |
| 7-1 | 49.4 | 3.4 | 41.9 | 5.2 | 267 | 6 | 50.8 | 4.6 | 12.3 | 32.3 | 260 |
| 3 | 44.7 | 3.0 | 38.0 | 14.2 | 295 | 3-2 | 60.0 | 5.4 | 21.8 | 12.7 | 220 |
| 5 | 40.8 | 2.8 | 34.7 | 21.7 | 323 | 4 | 53.2 | 4.8 | 19.3 | 22.6 | 248 |
| 8-1 | 46.6 | 3.2 | 45.2 | 4.9 | 283 | 6 | 47.8 | 4.3 | 17.4 | 30.4 | 276 |
| 3 | 42.4 | 2.9 | 41.1 | 13.5 | 311 | 4-2 | 55.9 | 5.1 | 27.1 | 11.9 | 236 |
| 5 | 38.9 | 2.6 | 37.8 | 20.6 | 339 | 4 | 50.0 | 4.5 | 24.2 | 21.2 | 264 |
| 11-10-1-2 | 70.9 | 5.4 | 8.6 | 15.0 | 186 | 6 | 45.2 | 4.1 | 21.9 | 28.8 | 292 |
| 4 | 61.7 | 4.6 | 7.5 | 26.2 | 214 | 5-2 | 52.4 | 4.8 | 31.7 | 11.1 | 252 |
| 6 | 54.5 | 4.1 | 6.6 | 34.7 | 242 | 4 | 47.1 | 4.3 | 28.6 | 20.0 | 280 |
| 2-2 | 65.3 | 4.9 | 15.8 | 13.8 | 202 | 6 | 42.8 | 3.9 | 26.0 | 27.3 | 308 |
| 4 | 57.4 | 4.3 | 13.9 | 24.3 | 230 | 6-2 | 49.3 | 4.5 | 35.8 | 10.4 | 268 |
| 6 | 51.2 | 3.9 | 12.4 | 32.5 | 258 | 4 | 44.6 | 4.0 | 32.4 | 18.9 | 296 |
| 3-2 | 60.5 | 4.6 | 22.0 | 12.8 | 218 | 6 | 40.7 | 3.7 | 29.6 | 25.9 | 324 |
| 4 | 53.7 | 4.1 | 19.5 | 22.7 | 246 | 7-2 | 46.5 | 4.2 | 39.4 | 9.9 | 284 |
| 6 | 48.2 | 3.6 | 17.5 | 30.7 | 274 | 4 | 42.3 | 3.8 | 35.9 | 17.9 | 312 |
| 4-2 | 56.4 | 4.3 | 27.3 | 12.0 | 234 | 6 | 38.8 | 3.5 | 32.9 | 24.7 | 340 |
| 4 | 50.4 | 3.8 | 24.4 | 21.4 | 262 | 8-2 | 44.0 | 4.0 | 42.7 | 9.3 | 300 |
| 6 | 45.5 | 3.4 | 22.1 | 29.0 | 290 | 4 | 40.2 | 3.7 | 39.0 | 17.1 | 328 |
| 5-2 | 52.8 | 4.0 | 32.0 | 11.2 | 250 | 6 | 37.1 | 3.4 | 35.9 | 23.6 | 356 |
| 4 | 47.5 | 3.6 | 28.8 | 20.1 | 278 | 0-4 | 38.4 | 3.5 | 41.8 | 16.3 | 344 |
| 6 | 43.1 | 3.3 | 26.1 | 27.4 | 306 | 10-8 | 31.7 | 2.9 | 38.5 | 26.9 | 416 |
| 6-2 | 49.6 | 3.8 | 36.1 | 10.5 | 266 | 11-13-1-1 | 75.4 | 7.4 | 9.1 | 8.0 | 175 |
| 4 | 44.9 | 3.4 | 32.6 | 19.1 | 294 | 3 | 65.0 | 6.4 | 7.9 | 20.7 | 203 |
| 6 | 41.0 | 3.1 | 29.8 | 26.1 | 322 | 5 | 57.1 | 5.6 | 6.9 | 30.3 | 231 |
| 7-2 | 46.8 | 3.5 | 39.7 | 9.9 | 282 | 2-1 | 69.1 | 6.8 | 16.7 | 7.3 | 191 |
| 4 | 42.6 | 3.2 | 36.1 | 18.1 | 310 | 3 | 60.3 | 5.9 | 14.6 | 19.2 | 219 |
| 6 | 39.0 | 3.0 | 33.1 | 24.9 | 338 | 5 | 53.4 | 5.3 | 12.9 | 28.3 | 247 |
| 8-2 | 44.3 | 3.4 | 42.9 | 9.4 | 298 | 3-1 | 63.7 | 6.3 | 23.2 | 6.8 | 207 |
| 4 | 40.5 | 3.1 | 39.2 | 17.2 | 326 | 3 | 56.2 | 5.5 | 20.4 | 17.9 | 235 |
| 6 | 37.3 | 2.8 | 36.2 | 23.7 | 354 | 5 | 50.2 | 4.9 | 18.2 | 26.6 | 263 |
| 11-11-1-1 | 76.3 | 6.3 | 9.2 | 8.1 | 173 | 4-1 | 59.2 | 5.8 | 28.7 | 6.3 | 223 |
| 3 | 65.7 | 5.5 | 7.9 | 20.9 | 201 | 3 | 52.6 | 5.2 | 25.5 | 16.7 | 251 |
| 5 | 57.6 | 4.8 | 7.0 | 30.6 | 229 | 5 | 47.3 | 4.7 | 22.9 | 25.1 | 279 |
| 2-1 | 69.8 | 5.8 | 16.9 | 7.4 | 189 | 5-1 | 55.2 | 5.4 | 33.5 | 5.9 | 239 |
| 3 | 60.8 | 5.1 | 14.7 | 19.4 | 217 | 3 | 49.4 | 4.9 | 30.0 | 15.7 | 267 |
| 5 | 53.9 | 4.5 | 13.0 | 28.6 | 245 | 5 | 44.7 | 4.4 | 27.1 | 23.7 | 295 |
| 3-1 | 64.4 | 5.4 | 23.4 | 6.8 | 205 | 6-1 | 51.8 | 5.1 | 37.6 | 5.5 | 255 |
| 3 | 56.6 | 4.7 | 20.6 | 18.0 | 233 | 3 | 46.6 | 4.6 | 33.9 | 14.8 | 283 |
| 5 | 50.6 | 4.2 | 18.4 | 26.8 | 261 | 5 | 42.4 | 4.2 | 30.9 | 22.5 | 311 |
| 4-1 | 59.7 | 5.0 | 29.0 | 6.3 | 221 | 7-1 | 48.7 | 4.8 | 41.3 | 5.2 | 271 |
| 3 | 53.0 | 4.4 | 25.7 | 16.9 | 249 | 3 | 44.1 | 4.4 | 37.4 | 14.0 | 299 |
| 5 | 47.6 | 3.9 | 23.1 | 25.4 | 277 | 5 | 40.4 | 4.0 | 34.2 | 21.4 | 327 |
| 5-1 | 55.7 | 4.6 | 33.7 | 5.9 | 237 | 6-1 | 46.0 | 4.5 | 44.6 | 4.9 | 287 |
| 3 | 49.8 | 4.1 | 30.2 | 15.9 | 265 | 3 | 41.9 | 4.1 | 40.6 | 13.3 | 315 |
| 5 | 45.0 | 3.7 | 27.3 | 23.9 | 293 | 5 | 38.5 | 3.8 | 37.3 | 20.4 | 343 |
| 6-1 | 52.2 | 4.3 | 38.0 | 5.5 | 253 | 11-14-1-2 | 69.5 | 7.4 | 8.4 | 14.7 | 190 |
| 3 | 47.0 | 3.9 | 34.1 | 14.9 | 281 | 4 | 60.5 | 6.4 | 7.3 | 25.7 | 218 |
| 5 | 42.7 | 3.6 | 31.1 | 22.6 | 309 | 6 | 43.7 | 5.7 | 6.5 | 34.1 | 246 |
| 7-1 | 49.1 | 4.1 | 41.6 | 5.2 | 269 | 2-2 | 64.1 | 6.8 | 15.5 | 13.6 | 206 |
| 3 | 44.4 | 3.7 | 37.7 | 14.1 | 297 | 4 | 56.4 | 6.0 | 13.7 | 23.9 | 234 |
| 5 | 40.6 | 3.4 | 34.5 | 21.5 | 325 | 6 | 50.4 | 5.3 | 12.2 | 32.1 | 262 |
| 8-1 | 46.3 | 3.9 | 44.9 | 4.9 | 285 | 3-2 | 59.4 | 6.3 | 21.6 | 12.6 | 222 |
| 3 | 42.2 | 3.5 | 40.9 | 13.4 | 313 | 4 | 52.8 | 5.6 | 19.2 | 22.4 | 250 |
| 5 | 38.7 | 3.2 | 37.5 | 20.5 | 341 | 6 | 47.5 | 5.0 | 17.3 | 30.2 | 278 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 11-14-4-2 | 55.4 | 5.9 | 26.9 | 11.8 | 238 | 11-16-7-6 | 38.4 | 4.6 | 32.6 | 24.4 | 344 |
| 4 | 49.6 | 5.3 | 24.1 | 21.0 | 266 | 8-2 | 43.4 | 5.3 | 42.1 | 9.2 | 304 |
| 6 | 44.9 | 4.8 | 21.8 | 28.5 | 294 | 4 | 39.7 | 4.8 | 38.5 | 16.9 | 332 |
| 5-2 | 52.0 | 5.5 | 31.5 | 11.0 | 254 | 6 | 36.7 | 4.4 | 35.5 | 23.3 | 360 |
| 4 | 46.8 | 5.0 | 28.4 | 19.8 | 282 | 11-17-1-1 | 73.8 | 9.5 | 8.9 | 7.8 | 179 |
| 6 | 42.6 | 4.5 | 25.8 | 27.1 | 310 | 3 | 63.8 | 8.2 | 7.7 | 20.3 | 207 |
| 6-2 | 48.9 | 5.2 | 35.5 | 10.4 | 270 | 5 | 56.2 | 7.2 | 6.7 | 29.8 | 235 |
| 4 | 44.3 | 4.7 | 32.2 | 18.8 | 298 | 2-1 | 67.7 | 8.7 | 16.4 | 7.2 | 195 |
| 6 | 40.5 | 4.3 | 29.4 | 25.8 | 326 | 3 | 59.2 | 7.6 | 14.3 | 18.8 | 223 |
| 7-2 | 46.1 | 4.9 | 39.2 | 9.8 | 286 | 5 | 52.6 | 6.8 | 12.7 | 27.9 | 251 |
| 4 | 42.0 | 4.4 | 35.7 | 17.8 | 314 | 3-1 | 62.6 | 8.1 | 22.7 | 6.6 | 211 |
| 6 | 38.6 | 4.1 | 32.7 | 24.5 | 342 | 3 | 55.2 | 7.1 | 20.1 | 17.6 | 239 |
| 8-2 | 43.7 | 4.6 | 42.4 | 9.3 | 302 | 5 | 49.4 | 6.4 | 18.0 | 26.2 | 267 |
| 4 | 40.0 | 4.2 | 38.8 | 17.0 | 330 | 4-1 | 58.1 | 7.5 | 28.2 | 6.2 | 227 |
| 6 | 36.9 | 3.9 | 35.7 | 23.5 | 358 | 3 | 51.8 | 6.7 | 15.1 | 16.4 | 255 |
| 11-15-1-1 | 74.6 | 8.5 | 9.0 | 7.9 | 177 | 5 | 46.6 | 6.0 | 22.6 | 24.7 | 283 |
| 3 | 64.4 | 7.3 | 7.8 | 20.5 | 205 | 5-1 | 54.3 | 7.0 | 32.9 | 5.8 | 243 |
| 5 | 56.6 | 6.4 | 6.9 | 30.0 | 233 | 3 | 48.7 | 6.3 | 29.5 | 15.5 | 271 |
| 2-1 | 68.4 | 7.8 | 16.6 | 7.2 | 193 | 5 | 44.1 | 5.7 | 26.7 | 23.4 | 299 |
| 3 | 59.7 | 6.8 | 14.5 | 19.0 | 221 | 6-1 | 51.0 | 6.6 | 37.0 | 5.4 | 259 |
| 5 | 53.0 | 6.0 | 12.8 | 28.1 | 249 | 3 | 46.6 | 5.9 | 33.4 | 14.6 | 287 |
| 3-1 | 63.1 | 7.2 | 23.0 | 6.7 | 209 | 5 | 41.9 | 5.4 | 30.5 | 22.2 | 315 |
| 3 | 55.7 | 6.3 | 20.2 | 17.7 | 237 | 11-18-1-2 | 68.1 | 9.3 | 8.2 | 14.4 | 194 |
| 5 | 49.8 | 5.7 | 18.1 | 26.4 | 265 | 4 | 59.4 | 8.1 | 7.2 | 25.2 | 222 |
| 4-1 | 58.6 | 6.7 | 28.4 | 6.2 | 225 | 6 | 52.8 | 7.2 | 6.4 | 33.6 | 250 |
| 3 | 52.2 | 5.9 | 25.3 | 16.6 | 253 | 2-2 | 62.9 | 8.6 | 15.2 | 13.3 | 210 |
| 5 | 46.9 | 5.3 | 22.8 | 24.9 | 281 | 4 | 55.4 | 7.6 | 13.4 | 23.5 | 238 |
| 5-1 | 54.8 | 6.2 | 33.2 | 5.8 | 241 | 6 | 49.6 | 6.8 | 12.0 | 31.6 | 266 |
| 3 | 49.0 | 5.6 | 29.7 | 15.6 | 269 | 3-2 | 58.4 | 8.0 | 21.2 | 12.4 | 226 |
| 5 | 44.4 | 5.0 | 26.9 | 23.6 | 297 | 4 | 52.0 | 7.1 | 18.9 | 22.0 | 254 |
| 6-1 | 51.4 | 5.8 | 37.4 | 5.4 | 257 | 6 | 46.8 | 6.4 | 17.0 | 29.8 | 282 |
| 3 | 46.3 | 5.3 | 33.7 | 14.7 | 285 | 4-2 | 54.5 | 7.4 | 26.4 | 11.6 | 242 |
| 5 | 42.1 | 4.8 | 30.7 | 22.4 | 313 | 4 | 48.9 | 6.7 | 23.7 | 20.7 | 270 |
| 7-1 | 48.3 | 5.5 | 41.0 | 5.1 | 273 | 6 | 44.3 | 6.0 | 21.5 | 28.2 | 298 |
| 3 | 43.8 | 5.0 | 37.2 | 13.9 | 301 | 5-2 | 51.2 | 7.0 | 31.0 | 10.8 | 258 |
| 5 | 40.1 | 4.6 | 34.0 | 21.3 | 329 | 4 | 46.1 | 6.3 | 28.0 | 19.6 | 286 |
| 8-1 | 45.7 | 5.2 | 44.3 | 4.8 | 289 | 6 | 42.0 | 5.7 | 25.5 | 26.7 | 314 |
| 3 | 41.6 | 4.7 | 40.4 | 13.3 | 317 | 6-2 | 48.2 | 6.6 | 35.0 | 10.2 | 274 |
| 5 | 38.3 | 4.3 | 37.1 | 20.3 | 345 | 4 | 43.7 | 6.0 | 31.8 | 18.5 | 302 |
| 11-16-1-2 | 68.8 | 8.3 | 8.3 | 14.6 | 192 | 6 | 40.0 | 5.4 | 29.1 | 25.5 | 330 |
| 4 | 60.0 | 7.3 | 7.3 | 25.4 | 220 | 11-19-1-1 | 72.9 | 10.5 | 8.8 | 7.7 | 181 |
| 6 | 53.2 | 6.4 | 6.4 | 33.9 | 248 | 3 | 63.1 | 9.1 | 7.7 | 20.1 | 209 |
| 2-2 | 63.5 | 7.7 | 15.4 | 13.4 | 208 | 5 | 55.7 | 8.0 | 6.7 | 29.5 | 237 |
| 4 | 55.9 | 6.8 | 13.6 | 23.7 | 236 | 2-1 | 67.0 | 9.6 | 16.2 | 7.1 | 197 |
| 6 | 50.0 | 6.1 | 12.1 | 31.8 | 264 | 3 | 58.7 | 8.4 | 14.2 | 18.6 | 225 |
| 3-2 | 58.9 | 7.1 | 21.4 | 12.5 | 224 | 5 | 52.2 | 7.5 | 12.6 | 27.7 | 253 |
| 4 | 52.4 | 6.3 | 19.0 | 22.2 | 252 | 3-1 | 62.0 | 8.9 | 22.5 | 6.6 | 213 |
| 6 | 47.1 | 5.7 | 17.2 | 30.0 | 280 | 3 | 54.8 | 7.9 | 19.9 | 17.4 | 241 |
| 4-2 | 55.0 | 6.7 | 26.7 | 11.6 | 240 | 5 | 49.1 | 7.1 | 17.8 | 26.0 | 269 |
| 4 | 49.2 | 6.0 | 23.9 | 20.9 | 268 | 4-1 | 57.6 | 8.3 | 27.9 | 6.1 | 229 |
| 6 | 44.6 | 5.4 | 21.6 | 28.4 | 296 | 3 | 51.3 | 7.4 | 24.9 | 16.3 | 257 |
| 5-2 | 51.6 | 6.2 | 31.2 | 10.9 | 256 | 5 | 46.3 | 6.7 | 22.4 | 24.6 | 285 |
| 4 | 46.5 | 5.6 | 28.2 | 19.7 | 284 | 5-1 | 53.9 | 7.7 | 32.7 | 5.7 | 245 |
| 6 | 42.3 | 5.1 | 25.6 | 26.9 | 312 | 3 | 48.3 | 7.0 | 29.3 | 15.4 | 273 |
| 6-2 | 48.5 | 5.9 | 35.3 | 10.3 | 272 | 11-20-1-2 | 67.3 | 10.2 | 8.2 | 14.3 | 196 |
| 4 | 44.0 | 5.3 | 32.0 | 18.7 | 300 | 4 | 58.9 | 8.9 | 7.1 | 25.0 | 224 |
| 6 | 40.2 | 4.9 | 29.3 | 25.6 | 328 | 6 | 52.4 | 7.9 | 6.3 | 33.3 | 252 |
| 7-2 | 45.8 | 5.6 | 38.9 | 9.7 | 288 | 2-2 | 62.2 | 9.4 | 15.1 | 13.2 | 212 |
| 4 | 41.8 | 5.1 | 25.4 | 17.7 | 316 | 4 | 55.0 | 8.3 | 13.3 | 23.3 | 240 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|----------|------|-----|------|------|------|
| 11-20-2-6 | 49.3 | 7.5 | 11.9 | 31.3 | 268 | 12-5-7-3 | 47.5 | 1.6 | 37.0 | 13.9 | 303 |
| 3-2 | 57.9 | 8.8 | 21.0 | 12.3 | 228 | 8-6 | 41.5 | 1.4 | 36.9 | 20.2 | 347 |
| 4 | 51.6 | 7.8 | 18.7 | 21.9 | 256 | 7 | 38.4 | 1.3 | 34.1 | 26.1 | 375 |
| 6 | 46.5 | 7.0 | 16.9 | 29.6 | 284 | 9-7 | 36.8 | 1.3 | 36.8 | 25.1 | 391 |
| 4-2 | 54.1 | 8.2 | 26.2 | 11.5 | 244 | 10-3 | 41.0 | 1.4 | 45.6 | 12.0 | 351 |
| 4 | 48.5 | 7.3 | 23.5 | 20.6 | 272 | 12-7 | 32.8 | 1.1 | 43.7 | 22.3 | 439 |
| 6 | 44.0 | 6.7 | 33.3 | 16.0 | 300 | 13-7 | 31.6 | 1.1 | 45.7 | 21.5 | 455 |
| 6-6 | 39.8 | 6.0 | 28.9 | 25.3 | 332 | 12-6-1-2 | 74.2 | 3.1 | 8.2 | 14.4 | 194 |
| 11-21-1-1 | 72.1 | 11.4 | 8.7 | 7.7 | 183 | 2-4 | 60.5 | 0.2 | 13.4 | 23.5 | 238 |
| 3 | 62.6 | 9.9 | 7.6 | 19.9 | 211 | 4-2 | 59.5 | 2.5 | 26.4 | 11.6 | 242 |
| 5 | 55.2 | 8.8 | 6.7 | 29.3 | 239 | 5-2 | 55.8 | 2.3 | 31.0 | 10.9 | 258 |
| 2-1 | 66.3 | 10.5 | 16.1 | 7.0 | 199 | 6-6 | 43.6 | 1.8 | 29.1 | 25.5 | 330 |
| 3 | 58.1 | 9.2 | 14.1 | 18.5 | 227 | 7-6 | 41.6 | 1.7 | 32.4 | 24.3 | 346 |
| 5 | 51.8 | 8.2 | 12.6 | 27.4 | 255 | 8-2 | 47.1 | 2.0 | 41.8 | 9.1 | 306 |
| 3-1 | 61.4 | 9.8 | 22.3 | 6.5 | 215 | 4 | 43.1 | 1.8 | 38.3 | 16.8 | 334 |
| 3 | 54.3 | 8.6 | 19.7 | 17.3 | 243 | 6 | 39.8 | 1.6 | 35.4 | 23.2 | 362 |
| 5 | 48.7 | 7.7 | 17.7 | 25.8 | 271 | 9-4 | 41.1 | 1.7 | 41.1 | 16.0 | 350 |
| 4-1 | 57.1 | 9.1 | 27.7 | 6.1 | 231 | 6 | 41.1 | 1.6 | 38.1 | 22.2 | 352 |
| 3 | 51.0 | 8.1 | 24.7 | 16.2 | 259 | 10-4 | 39.3 | 1.6 | 43.7 | 15.3 | 366 |
| 5 | 46.0 | 7.3 | 22.3 | 24.4 | 287 | 12-4 | 36.2 | 1.5 | 48.2 | 14.1 | 398 |
| 11-22-1-2 | 66.7 | 11.1 | 8.1 | 14.1 | 198 | 12-7-1-1 | 79.6 | 3.9 | 8.8 | 7.7 | 181 |
| 4 | 58.4 | 9.7 | 7.1 | 24.8 | 226 | 3 | 68.9 | 3.3 | 7.7 | 20.1 | 207 |
| 6 | 52.0 | 8.6 | 6.3 | 33.1 | 254 | 5 | 60.8 | 2.9 | 6.7 | 29.5 | 239 |
| 2-2 | 61.7 | 10.3 | 14.9 | 12.1 | 214 | 2-1 | 73.1 | 3.5 | 16.2 | 7.1 | 197 |
| 4 | 54.5 | 9.1 | 13.2 | 23.1 | 242 | 3 | 64.0 | 3.1 | 14.2 | 18.6 | 225 |
| 6 | 48.9 | 8.2 | 11.8 | 31.1 | 270 | 5 | 56.9 | 2.8 | 12.6 | 27.7 | 253 |
| 3-2 | 57.4 | 9.5 | 20.9 | 12.2 | 230 | 3-1 | 67.6 | 3.3 | 22.5 | 6.6 | 213 |
| 4 | 51.2 | 8.5 | 18.6 | 21.7 | 258 | 3 | 59.7 | 2.9 | 19.9 | 17.4 | 241 |
| 6 | 46.1 | 7.7 | 16.8 | 29.4 | 286 | 5 | 53.5 | 2.6 | 17.8 | 26.0 | 269 |
| 4-2 | 53.7 | 8.9 | 26.0 | 11.4 | 246 | 4-1 | 62.9 | 3.1 | 27.9 | 6.1 | 229 |
| 4 | 48.2 | 8.0 | 23.4 | 20.4 | 274 | 3 | 66.0 | 2.7 | 24.9 | 16.3 | 257 |
| 6 | 43.7 | 7.3 | 21.2 | 27.8 | 302 | 5 | 50.5 | 2.5 | 22.4 | 24.6 | 285 |
| 11-23-1-1 | 71.3 | 12.4 | 8.6 | 7.6 | 185 | 5-1 | 58.8 | 2.8 | 32.7 | 5.7 | 245 |
| 3 | 62.0 | 10.8 | 7.5 | 19.7 | 213 | 3 | 52.7 | 2.6 | 29.3 | 15.4 | 273 |
| 5 | 54.8 | 9.5 | 6.6 | 29.0 | 241 | 5 | 47.8 | 2.3 | 26.6 | 23.2 | 301 |
| 2-1 | 65.7 | 11.4 | 15.9 | 7.0 | 201 | 6-1 | 55.2 | 2.7 | 36.8 | 5.3 | 261 |
| 3 | 57.6 | 10.0 | 14.0 | 18.3 | 229 | 3 | 49.8 | 2.4 | 33.2 | 14.5 | 289 |
| 5 | 51.4 | 8.9 | 12.5 | 27.2 | 257 | 5 | 45.4 | 2.2 | 30.3 | 22.1 | 317 |
| 6-9 | 35.0 | 6.1 | 25.5 | 33.4 | 377 | 7-1 | 52.0 | 2.5 | 40.4 | 5.0 | 277 |
| 11-24-1-2 | 66.0 | 12.0 | 8.0 | 14.0 | 200 | 3 | 47.2 | 2.3 | 36.7 | 13.8 | 305 |
| 4 | 57.9 | 10.5 | 7.0 | 24.6 | 228 | 5 | 43.2 | 2.1 | 33.6 | 21.0 | 333 |
| 6 | 51.6 | 8.4 | 6.2 | 32.8 | 256 | 8-1 | 49.1 | 2.4 | 43.7 | 4.8 | 293 |
| 2-2 | 61.1 | 11.1 | 14.8 | 13.0 | 216 | 3 | 44.8 | 2.2 | 39.9 | 13.1 | 321 |
| 4 | 54.1 | 9.8 | 13.1 | 23.0 | 244 | 5 | 41.2 | 2.0 | 36.7 | 20.0 | 349 |
| 6 | 48.5 | 8.8 | 11.8 | 30.9 | 272 | 9-1 | 46.6 | 2.3 | 46.6 | 4.5 | 309 |
| 5-10 | 35.1 | 6.4 | 21.3 | 37.2 | 376 | 3 | 42.7 | 2.1 | 42.7 | 12.5 | 337 |
| 11-25-1-1 | 70.6 | 13.4 | 8.5 | 7.5 | 187 | 5 | 39.4 | 1.9 | 39.4 | 19.2 | 365 |
| 3 | 61.4 | 11.6 | 7.4 | 19.5 | 215 | 10-1 | 44.3 | 2.1 | 49.2 | 4.3 | 325 |
| 5 | 54.3 | 10.3 | 6.6 | 28.8 | 243 | 3 | 40.8 | 2.0 | 45.3 | 11.9 | 353 |
| 2-1 | 65.0 | 11.3 | 15.8 | 6.9 | 203 | 5 | 37.8 | 1.8 | 42.0 | 18.4 | 381 |
| 3 | 57.2 | 10.8 | 13.8 | 18.2 | 231 | 12-8-1-2 | 73.4 | 4.1 | 8.2 | 14.3 | 196 |
| 5 | 51.0 | 9.7 | 12.3 | 27.0 | 259 | 4 | 64.3 | 3.6 | 7.1 | 25.0 | 224 |
| 11-26-1-2 | 65.3 | 12.9 | 7.9 | 13.9 | 202 | 6 | 57.1 | 3.2 | 6.3 | 33.3 | 252 |
| 6-2 | 46.8 | 9.2 | 34.0 | 9.9 | 282 | 8 | 51.4 | 2.9 | 5.7 | 40.0 | 280 |
| 12-3-6-3 | 50.5 | 1.1 | 33.7 | 14.7 | 285 | 2-2 | 67.9 | 3.8 | 15.1 | 13.2 | 212 |
| 12-4-4-2 | 60.0 | 1.7 | 26.7 | 11.6 | 240 | 4 | 60.0 | 3.3 | 13.3 | 23.3 | 240 |
| 8-2 | 47.4 | 1.3 | 42.1 | 9.2 | 304 | 6 | 53.7 | 3.0 | 11.9 | 31.3 | 268 |
| 16-6 | 29.5 | 0.8 | 52.4 | 17.2 | 488 | 3-2 | 63.1 | 3.5 | 21.0 | 12.4 | 228 |
| 12-5-5-1 | 59.3 | 2.0 | 32.9 | 5.8 | 243 | 4 | 56.2 | 3.1 | 18.7 | 21.9 | 256 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 12-8-3-6 | 50,7 | 2,8 | 16,9 | 29,6 | 284 | 12-10-5-6 | 45,3 | 3,1 | 25,2 | 26,4 | 318 |
| 4-2 | 59,0 | 3,3 | 26,2 | 11,5 | 244 | 6-2 | 51,8 | 3,6 | 34,5 | 10,1 | 278 |
| 4 | 53,0 | 2,9 | 23,5 | 20,6 | 272 | 4 | 47,0 | 3,3 | 31,4 | 18,3 | 306 |
| 6 | 48,0 | 2,7 | 21,3 | 28,0 | 300 | 6 | 43,1 | 3,0 | 28,7 | 25,2 | 334 |
| 5-2 | 55,4 | 3,0 | 30,8 | 10,8 | 260 | 7-2 | 49,0 | 3,4 | 38,1 | 9,5 | 294 |
| 4 | 50,0 | 2,8 | 27,8 | 19,4 | 288 | 4 | 44,7 | 3,1 | 34,8 | 17,4 | 322 |
| 6 | 45,6 | 2,5 | 25,3 | 26,6 | 316 | 6 | 41,1 | 2,9 | 32,0 | 24,0 | 350 |
| 6-2 | 52,2 | 2,9 | 34,8 | 10,1 | 276 | 8-2 | 46,5 | 3,2 | 41,3 | 9,0 | 310 |
| 4 | 47,4 | 2,6 | 31,6 | 18,4 | 304 | 4 | 42,6 | 3,0 | 37,9 | 16,5 | 338 |
| 6 | 43,4 | 2,4 | 28,9 | 25,3 | 332 | 6 | 39,3 | 2,7 | 35,0 | 23,0 | 366 |
| 7-2 | 49,3 | 2,7 | 38,4 | 9,6 | 292 | 12-11-1-1 | 77,8 | 5,9 | 8,6 | 7,6 | 185 |
| 4 | 45,0 | 2,5 | 35,0 | 17,5 | 320 | 3 | 67,6 | 5,2 | 7,5 | 19,7 | 213 |
| 6 | 41,4 | 2,3 | 32,2 | 24,1 | 348 | 5 | 59,9 | 4,5 | 6,6 | 29,0 | 241 |
| 8-2 | 46,8 | 2,6 | 41,5 | 9,1 | 308 | 2-1 | 71,6 | 5,5 | 15,9 | 7,0 | 201 |
| 4 | 42,8 | 2,4 | 38,1 | 16,7 | 336 | 3 | 62,9 | 4,8 | 14,0 | 18,3 | 229 |
| 6 | 39,5 | 2,2 | 35,2 | 23,1 | 364 | 5 | 56,0 | 4,3 | 12,4 | 27,2 | 257 |
| 9-2 | 44,4 | 2,5 | 44,4 | 8,6 | 324 | 3-1 | 66,3 | 5,1 | 22,1 | 6,5 | 217 |
| 4 | 40,9 | 2,3 | 40,9 | 15,9 | 352 | 3 | 58,8 | 4,5 | 19,6 | 17,1 | 245 |
| 6 | 37,9 | 2,1 | 37,9 | 22,1 | 380 | 5 | 52,7 | 4,0 | 17,6 | 25,6 | 273 |
| 10-6 | 36,4 | 2,0 | 40,4 | 21,2 | 396 | 4-1 | 61,8 | 4,7 | 27,5 | 6,0 | 233 |
| 11-6 | 35,0 | 1,9 | 42,7 | 20,4 | 412 | 3 | 55,2 | 4,2 | 24,5 | 16,1 | 261 |
| 12-9-1-1 | 78,7 | 4,9 | 8,7 | 7,6 | 183 | 5 | 49,8 | 3,8 | 22,1 | 24,2 | 289 |
| 3 | 68,2 | 4,3 | 7,6 | 19,9 | 211 | 6-1 | 57,8 | 4,4 | 32,1 | 5,6 | 249 |
| 5 | 60,2 | 3,8 | 6,7 | 29,3 | 239 | 3 | 52,0 | 4,0 | 28,9 | 15,1 | 277 |
| 2-1 | 72,4 | 4,5 | 16,1 | 7,0 | 199 | 5 | 47,2 | 3,6 | 26,2 | 22,9 | 305 |
| 3 | 63,4 | 3,9 | 14,1 | 18,5 | 227 | 6-1 | 54,3 | 4,2 | 36,2 | 5,3 | 265 |
| 5 | 56,5 | 3,5 | 12,5 | 27,4 | 255 | 3 | 49,1 | 3,7 | 32,8 | 14,3 | 293 |
| 3-1 | 67,0 | 4,2 | 22,3 | 6,5 | 215 | 5 | 44,8 | 3,4 | 29,9 | 21,8 | 321 |
| 3 | 59,3 | 3,7 | 19,7 | 17,3 | 243 | 7-1 | 51,2 | 3,9 | 39,8 | 5,0 | 281 |
| 5 | 53,1 | 3,3 | 17,7 | 25,8 | 271 | 3 | 46,6 | 3,6 | 36,2 | 13,6 | 309 |
| 4-1 | 62,3 | 4,0 | 27,7 | 6,0 | 231 | 5 | 42,7 | 3,2 | 33,3 | 20,8 | 337 |
| 3 | 55,6 | 3,5 | 24,7 | 16,2 | 259 | 8-1 | 48,5 | 3,7 | 43,1 | 4,7 | 297 |
| 5 | 50,2 | 3,1 | 22,3 | 24,4 | 287 | 3 | 44,3 | 3,4 | 39,4 | 12,9 | 325 |
| 5-1 | 58,2 | 3,6 | 32,4 | 5,7 | 247 | 5 | 40,8 | 3,1 | 36,2 | 19,8 | 353 |
| 3 | 52,3 | 3,3 | 29,1 | 15,3 | 275 | 9-3 | 42,2 | 3,2 | 42,2 | 12,3 | 341 |
| 5 | 47,5 | 3,0 | 26,4 | 23,1 | 303 | 12-12-1-2 | 72,0 | 6,0 | 8,0 | 14,0 | 200 |
| 6-1 | 54,7 | 3,4 | 36,5 | 5,3 | 263 | 4 | 63,2 | 5,2 | 7,0 | 14,6 | 228 |
| 3 | 49,5 | 3,1 | 33,0 | 14,4 | 291 | 6 | 56,2 | 4,7 | 6,2 | 32,8 | 256 |
| 5 | 45,1 | 2,8 | 30,1 | 21,9 | 319 | 2-2 | 66,7 | 5,6 | 14,8 | 12,9 | 216 |
| 7-1 | 51,6 | 3,2 | 40,1 | 5,0 | 279 | 4 | 59,0 | 4,9 | 13,1 | 32,9 | 244 |
| 3 | 46,9 | 2,9 | 36,5 | 13,7 | 307 | 6 | 52,9 | 4,4 | 11,8 | 30,9 | 272 |
| 5 | 43,0 | 2,7 | 33,4 | 20,9 | 335 | 3-2 | 62,1 | 5,2 | 20,7 | 12,0 | 232 |
| 8-1 | 58,8 | 3,0 | 43,4 | 4,7 | 295 | 4 | 55,4 | 4,6 | 18,4 | 21,5 | 260 |
| 3 | 44,6 | 2,8 | 39,6 | 13,0 | 323 | 6 | 50,0 | 4,2 | 16,6 | 29,2 | 288 |
| 5 | 41,0 | 2,6 | 36,5 | 19,9 | 351 | 4-2 | 57,1 | 4,8 | 25,8 | 11,3 | 248 |
| 12-10-1-2 | 72,7 | 5,0 | 8,1 | 14,1 | 198 | 4 | 52,2 | 4,3 | 23,2 | 20,3 | 276 |
| 6 | 63,7 | 4,4 | 7,1 | 24,8 | 226 | 6 | 47,3 | 3,9 | 21,1 | 27,6 | 304 |
| 4 | 56,6 | 3,9 | 6,3 | 33,2 | 254 | 5-2 | 54,5 | 5,5 | 30,3 | 10,6 | 264 |
| 2-2 | 67,3 | 4,7 | 14,9 | 13,1 | 214 | 4 | 49,3 | 4,1 | 27,4 | 19,2 | 292 |
| 4 | 59,5 | 4,1 | 13,2 | 23,1 | 242 | 6 | 45,0 | 3,7 | 25,0 | 26,2 | 320 |
| 6 | 53,3 | 3,7 | 11,8 | 31,1 | 270 | 6-2 | 51,4 | 4,3 | 34,3 | 10,0 | 280 |
| 3-2 | 62,6 | 4,3 | 20,8 | 12,2 | 230 | 4 | 46,7 | 3,9 | 31,2 | 18,2 | 308 |
| 4 | 55,8 | 3,9 | 18,6 | 21,7 | 258 | 6 | 42,9 | 3,5 | 28,6 | 25,0 | 336 |
| 6 | 50,3 | 3,4 | 16,8 | 29,4 | 286 | 7-2 | 48,6 | 4,0 | 37,8 | 9,5 | 296 |
| 4-2 | 58,5 | 4,1 | 26,0 | 11,4 | 246 | 4 | 44,4 | 3,7 | 34,6 | 17,3 | 324 |
| 4 | 52,6 | 3,6 | 23,3 | 20,4 | 274 | 6 | 40,9 | 3,4 | 31,8 | 23,8 | 352 |
| 6 | 47,6 | 3,3 | 21,2 | 27,8 | 302 | 8-2 | 46,3 | 3,5 | 41,1 | 9,0 | 311 |
| 5-2 | 55,0 | 3,8 | 30,5 | 10,7 | 262 | 12-13-1-1 | 77,0 | 6,9 | 8,5 | 7,5 | 187 |
| 4 | 49,7 | 3,4 | 27,6 | 19,3 | 290 | 3 | 67,0 | 6,0 | 7,4 | 19,5 | 215 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 12-13-1-5 | 59.2 | 5.3 | 6.6 | 28.8 | 243 | 12-15-2-1 | 70.2 | 7.3 | 15.6 | 6.8 | 205 |
| 2-1 | 70.9 | 6.4 | 15.8 | 6.9 | 203 | 3 | 61.8 | 6.4 | 13.7 | 18.0 | 233 |
| 3 | 62.3 | 5.6 | 13.8 | 18.2 | 231 | 5 | 55.2 | 5.7 | 12.2 | 26.8 | 261 |
| 5 | 55.6 | 5.0 | 12.3 | 27.0 | 259 | 3-1 | 65.2 | 6.8 | 21.7 | 6.3 | 221 |
| 9 | 45.7 | 4.1 | 10.2 | 40.0 | 315 | 3 | 57.8 | 6.0 | 19.3 | 16.9 | 249 |
| 3-1 | 65.7 | 5.9 | 21.9 | 6.4 | 219 | 5 | 52.0 | 5.4 | 17.3 | 25.3 | 277 |
| 3 | 58.3 | 5.3 | 19.4 | 17.0 | 247 | 4-1 | 60.7 | 6.3 | 27.0 | 5.9 | 237 |
| 5 | 52.4 | 4.7 | 17.4 | 25.4 | 275 | 3 | 54.3 | 5.7 | 24.1 | 15.8 | 265 |
| 4-1 | 61.3 | 5.5 | 27.2 | 5.9 | 235 | 5 | 49.1 | 5.1 | 21.8 | 23.9 | 293 |
| 3 | 54.8 | 4.9 | 24.3 | 16.0 | 263 | 5-1 | 56.9 | 5.9 | 31.6 | 5.5 | 253 |
| 5 | 49.4 | 4.5 | 22.0 | 24.0 | 291 | 3 | 51.2 | 5.3 | 28.5 | 14.9 | 281 |
| 5-1 | 57.3 | 5.1 | 31.9 | 5.6 | 251 | 5 | 46.6 | 4.8 | 25.9 | 22.6 | 309 |
| 3 | 51.6 | 4.6 | 28.7 | 15.1 | 279 | 6-1 | 53.5 | 5.6 | 35.7 | 5.2 | 269 |
| 5 | 46.9 | 4.2 | 26.1 | 22.8 | 307 | 3 | 48.5 | 5.0 | 32.3 | 14.1 | 297 |
| 6-1 | 53.9 | 4.9 | 35.9 | 5.2 | 267 | 5 | 44.3 | 4.6 | 29.5 | 21.5 | 325 |
| 3 | 48.8 | 4.4 | 32.5 | 14.2 | 295 | 7-1 | 50.5 | 5.3 | 39.3 | 4.9 | 285 |
| 5 | 44.6 | 4.0 | 29.7 | 21.7 | 323 | 3 | 46.0 | 4.8 | 35.8 | 13.4 | 313 |
| 7-1 | 50.9 | 4.6 | 39.6 | 4.9 | 283 | 5 | 42.2 | 4.4 | 32.8 | 20.5 | 341 |
| 3 | 46.3 | 4.2 | 36.0 | 13.5 | 311 | 8-1 | 47.8 | 5.0 | 42.5 | 4.6 | 301 |
| 5 | 42.5 | 3.8 | 33.0 | 20.6 | 339 | 3 | 43.8 | 4.6 | 38.9 | 12.7 | 329 |
| 8-1 | 48.1 | 4.3 | 42.8 | 4.7 | 299 | 5 | 40.3 | 4.2 | 35.8 | 19.6 | 357 |
| 3 | 44.0 | 4.0 | 39.1 | 12.8 | 327 | 9-3 | 41.7 | 4.3 | 41.7 | 12.2 | 345 |
| 5 | 40.6 | 3.5 | 36.1 | 19.7 | 355 | 20-5 | 26.2 | 2.7 | 58.3 | 12.7 | 549 |
| 9-1 | 45.7 | 4.1 | 45.7 | 4.4 | 315 | 12-16-1-2 | 70.6 | 7.8 | 7.8 | 13.7 | 204 |
| 3 | 42.0 | 3.8 | 42.0 | 12.2 | 343 | 4 | 62.1 | 6.9 | 6.9 | 24.1 | 232 |
| 5 | 38.8 | 3.5 | 38.8 | 18.9 | 371 | 6 | 55.4 | 6.1 | 6.1 | 32.3 | 260 |
| 10-1 | 43.5 | 3.9 | 48.3 | 4.2 | 331 | 2-2 | 65.5 | 7.3 | 14.5 | 12.7 | 220 |
| 3 | 40.1 | 3.6 | 44.6 | 11.7 | 359 | 4 | 58.1 | 6.4 | 12.9 | 22.6 | 248 |
| 5 | 37.2 | 3.3 | 41.3 | 18.1 | 387 | 6 | 52.2 | 5.8 | 11.6 | 30.4 | 276 |
| 12-14-1-2 | 71.3 | 6.9 | 7.9 | 13.9 | 202 | 3-2 | 61.0 | 6.8 | 20.3 | 11.9 | 236 |
| 4 | 62.6 | 6.1 | 7.0 | 24.3 | 230 | 4 | 54.5 | 6.1 | 18.2 | 21.2 | 264 |
| 6 | 55.8 | 5.4 | 6.2 | 32.6 | 258 | 6 | 49.3 | 5.5 | 16.4 | 28.8 | 292 |
| 2-2 | 66.1 | 6.4 | 14.7 | 12.8 | 218 | 4-2 | 57.2 | 6.3 | 25.4 | 11.1 | 252 |
| 4 | 58.5 | 5.7 | 13.0 | 22.8 | 246 | 4 | 51.4 | 5.7 | 22.8 | 20.0 | 280 |
| 6 | 52.5 | 5.1 | 11.7 | 30.7 | 274 | 6 | 46.7 | 5.2 | 20.8 | 27.3 | 308 |
| 3-2 | 61.5 | 6.0 | 20.5 | 12.0 | 234 | 5-2 | 53.7 | 6.0 | 29.8 | 10.4 | 268 |
| 4 | 55.0 | 5.3 | 18.3 | 21.4 | 262 | 4 | 48.6 | 5.4 | 27.0 | 18.9 | 296 |
| 6 | 49.7 | 4.8 | 16.6 | 28.9 | 290 | 6 | 44.4 | 4.9 | 24.7 | 25.9 | 324 |
| 4-2 | 57.6 | 5.6 | 25.6 | 11.2 | 250 | 6-2 | 50.7 | 5.6 | 33.8 | 9.9 | 284 |
| 4 | 51.8 | 5.0 | 23.0 | 20.1 | 278 | 4 | 46.2 | 5.1 | 30.7 | 18.0 | 312 |
| 6 | 47.1 | 4.6 | 20.9 | 27.4 | 306 | 6 | 42.3 | 4.7 | 28.2 | 24.7 | 340 |
| 5-2 | 54.1 | 5.3 | 30.1 | 10.5 | 266 | 7-2 | 48.0 | 5.3 | 37.3 | 9.3 | 300 |
| 4 | 49.0 | 4.8 | 27.2 | 19.0 | 294 | 4 | 43.9 | 4.9 | 34.1 | 17.1 | 328 |
| 6 | 44.7 | 4.3 | 24.8 | 26.1 | 322 | 6 | 40.4 | 4.5 | 31.5 | 23.6 | 356 |
| 6-2 | 51.1 | 4.9 | 34.0 | 9.9 | 282 | 8-2 | 45.6 | 5.0 | 40.5 | 8.9 | 316 |
| 4 | 46.4 | 4.5 | 31.0 | 18.1 | 310 | 4 | 41.9 | 4.6 | 37.2 | 16.3 | 344 |
| 6 | 42.6 | 4.1 | 28.1 | 24.9 | 338 | 6 | 38.7 | 4.3 | 34.4 | 22.6 | 372 |
| 7-2 | 48.3 | 4.7 | 37.5 | 9.4 | 298 | 10-2 | 41.4 | 4.6 | 45.9 | 8.0 | 348 |
| 4 | 44.2 | 4.3 | 34.3 | 17.2 | 326 | 18-4 | 28.6 | 3.2 | 57.1 | 11.1 | 504 |
| 6 | 40.7 | 3.9 | 31.6 | 23.7 | 354 | 23-6 | 23.5 | 2.6 | 60.2 | 13.7 | 612 |
| 8-2 | 45.9 | 4.4 | 40.8 | 8.9 | 314 | 12-17-1-1 | 75.4 | 8.9 | 8.4 | 7.3 | 191 |
| 4 | 42.1 | 4.1 | 37.4 | 16.4 | 342 | 3 | 65.7 | 7.8 | 7.3 | 19.2 | 219 |
| 6 | 38.9 | 3.8 | 34.6 | 22.7 | 370 | 5 | 58.3 | 6.9 | 6.5 | 28.3 | 247 |
| 11-2 | 28.7 | 2.8 | 35.1 | 33.4 | 362 | 2-1 | 69.6 | 8.2 | 15.4 | 6.8 | 207 |
| 22 | 24.2 | 2.4 | 59.2 | 14.1 | 594 | 3 | 61.3 | 7.2 | 13.6 | 17.9 | 235 |
| 27 | 20.5 | 2.0 | 61.5 | 15.9 | 702 | 5 | 54.7 | 6.5 | 12.2 | 26.6 | 263 |
| 12-15-1-1 | 76.2 | 7.9 | 8.5 | 7.4 | 189 | 23-6 | 64.6 | 7.6 | 21.5 | 6.3 | 221 |
| 3 | 66.4 | 6.9 | 7.4 | 19.3 | 217 | 3-1 | 57.4 | 6.8 | 19.1 | 16.7 | 251 |
| 5 | 58.8 | 6.1 | 6.5 | 28.6 | 245 | 5 | 51.6 | 6.1 | 17.2 | 25.1 | 279 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 12-17-4-1 | 60.2 | 7.1 | 26.8 | 5.8 | 239 | 12-19-6-1 | 52.7 | 6.9 | 35.2 | 5.1 | 273 |
| 3 | 53.9 | 6.4 | 24.0 | 15.7 | 267 | 3 | 47.8 | 6.3 | 31.9 | 13.9 | 301 |
| 5 | 48.8 | 5.8 | 21.7 | 23.7 | 295 | 5 | 43.8 | 5.7 | 29.2 | 21.3 | 329 |
| 5-1 | 56.5 | 6.6 | 31.4 | 5.5 | 255 | 7-1 | 49.8 | 6.6 | 38.7 | 4.8 | 289 |
| 3 | 50.9 | 6.0 | 28.3 | 14.8 | 283 | 12-1 | 39.0 | 5.1 | 52.0 | 3.8 | 369 |
| 5 | 46.3 | 5.5 | 25.7 | 22.5 | 311 | 17-3 | 30.2 | 4.0 | 57.0 | 8.8 | 477 |
| 6-1 | 53.1 | 6.3 | 35.4 | 5.2 | 271 | 12-20-1-2 | 69.2 | 9.6 | 7.7 | 13.5 | 208 |
| 3 | 48.1 | 5.7 | 32.1 | 14.0 | 299 | 4 | 61.0 | 8.5 | 6.8 | 23.7 | 236 |
| 5 | 44.0 | 5.2 | 29.3 | 21.4 | 327 | 6 | 54.5 | 7.6 | 6.1 | 31.8 | 264 |
| 7-1 | 50.2 | 5.9 | 39.0 | 4.8 | 287 | 2-2 | 64.3 | 8.9 | 14.3 | 12.5 | 224 |
| 3 | 45.7 | 5.4 | 35.6 | 13.3 | 315 | 4 | 57.1 | 7.9 | 12.7 | 22.2 | 252 |
| 5 | 42.0 | 4.9 | 32.6 | 20.4 | 343 | 6 | 51.4 | 7.1 | 11.4 | 30.0 | 280 |
| 8-1 | 47.5 | 5.5 | 42.2 | 4.6 | 303 | 3-2 | 60.0 | 8.3 | 20.0 | 11.7 | 240 |
| 3 | 43.5 | 5.1 | 38.7 | 12.7 | 331 | 4 | 53.7 | 7.4 | 17.9 | 20.9 | 298 |
| 5 | 40.1 | 4.7 | 35.7 | 19.5 | 359 | 6 | 48.6 | 6.8 | 16.2 | 28.4 | 296 |
| 10-3 | 39.6 | 4.7 | 44.1 | 11.6 | 363 | 4-2 | 56.2 | 7.8 | 25.0 | 10.9 | 256 |
| 16-3 | 31.4 | 3.7 | 55.8 | 9.1 | 459 | 4 | 50.7 | 7.0 | 22.5 | 19.7 | 284 |
| 21-5 | 25.4 | 3.0 | 59.3 | 12.3 | 567 | 6 | 46.2 | 6.4 | 20.5 | 26.9 | 312 |
| 12-18-1-2 | 69.9 | 8.7 | 7.8 | 13.6 | 206 | 5-2 | 52.9 | 7.3 | 29.4 | 10.3 | 272 |
| 4 | 61.5 | 7.7 | 6.8 | 23.9 | 234 | 4 | 48.0 | 6.7 | 26.7 | 18.6 | 300 |
| 6 | 55.0 | 6.8 | 6.1 | 32.1 | 262 | 6 | 43.9 | 6.1 | 24.4 | 25.6 | 328 |
| 2-2 | 64.9 | 8.1 | 14.4 | 12.6 | 222 | 6-2 | 50.0 | 6.9 | 33.3 | 9.7 | 288 |
| 4 | 57.6 | 7.2 | 12.8 | 22.4 | 250 | 4 | 45.6 | 6.3 | 30.4 | 17.7 | 316 |
| 6 | 51.8 | 6.5 | 11.5 | 30.2 | 278 | 6 | 41.9 | 5.8 | 27.9 | 24.4 | 344 |
| 3-2 | 60.5 | 7.5 | 20.2 | 11.8 | 238 | 7-2 | 47.4 | 6.6 | 36.8 | 9.2 | 304 |
| 4 | 54.1 | 6.8 | 18.0 | 21.1 | 266 | 4 | 43.4 | 6.0 | 33.7 | 16.9 | 332 |
| 6 | 49.0 | 6.1 | 16.3 | 28.6 | 294 | 6 | 40.0 | 5.5 | 31.1 | 23.3 | 360 |
| 4-2 | 56.7 | 7.1 | 25.2 | 11.0 | 254 | 8-2 | 45.0 | 6.2 | 40.0 | 8.7 | 320 |
| 4 | 51.0 | 6.4 | 22.7 | 19.8 | 282 | 4 | 41.4 | 5.7 | 36.8 | 16.1 | 348 |
| 6 | 46.5 | 5.8 | 20.6 | 27.1 | 310 | 6 | 38.3 | 5.3 | 34.0 | 22.3 | 376 |
| 5-2 | 53.3 | 6.7 | 29.6 | 10.4 | 270 | 11-12 | 28.3 | 3.9 | 34.7 | 33.1 | 508 |
| 4 | 48.3 | 6.0 | 26.8 | 18.8 | 298 | 12-21-1-1 | 73.8 | 10.8 | 8.2 | 7.2 | 195 |
| 6 | 44.2 | 5.5 | 24.5 | 25.8 | 326 | 3 | 64.6 | 9.4 | 7.2 | 18.8 | 223 |
| 6-2 | 50.3 | 6.3 | 33.6 | 9.8 | 286 | 5 | 57.4 | 8.3 | 6.4 | 27.9 | 251 |
| 4 | 45.8 | 5.7 | 30.6 | 17.8 | 314 | 2-1 | 68.2 | 9.9 | 15.2 | 6.6 | 211 |
| 6 | 42.1 | 5.3 | 28.1 | 24.5 | 342 | 3 | 60.2 | 8.8 | 13.4 | 17.6 | 239 |
| 7-2 | 47.7 | 5.9 | 37.1 | 9.3 | 302 | 5 | 53.9 | 7.9 | 12.0 | 26.2 | 267 |
| 4 | 43.6 | 5.4 | 33.9 | 17.0 | 330 | 3-1 | 63.4 | 9.2 | 21.1 | 6.2 | 227 |
| 6 | 40.2 | 5.0 | 31.3 | 23.5 | 358 | 3 | 56.4 | 8.2 | 18.8 | 16.5 | 255 |
| 8-2 | 45.3 | 5.7 | 40.2 | 8.8 | 318 | 5 | 50.9 | 7.4 | 17.0 | 24.7 | 283 |
| 4 | 41.6 | 5.2 | 37.0 | 16.2 | 346 | 4-1 | 59.2 | 8.6 | 26.3 | 5.8 | 243 |
| 6 | 38.5 | 4.8 | 34.2 | 22.5 | 374 | 3 | 53.1 | 7.7 | 23.6 | 15.5 | 271 |
| 14-2 | 34.8 | 4.3 | 54.1 | 6.7 | 414 | 5 | 48.1 | 7.0 | 21.4 | 23.4 | 299 |
| 19-4 | 27.6 | 3.4 | 58.2 | 10.7 | 522 | 5-1 | 55.6 | 8.1 | 30.9 | 5.4 | 259 |
| 12-19-1-1 | 74.6 | 9.8 | 8.3 | 7.2 | 193 | 3 | 50.2 | 7.3 | 27.9 | 14.6 | 287 |
| 3 | 65.2 | 8.6 | 7.2 | 19.0 | 221 | 5 | 45.7 | 6.7 | 25.4 | 22.2 | 315 |
| 5 | 57.8 | 7.6 | 6.4 | 28.1 | 249 | 6-1 | 52.3 | 7.6 | 34.9 | 5.1 | 275 |
| 2-1 | 68.9 | 9.1 | 15.3 | 6.7 | 209 | 3 | 47.5 | 6.9 | 31.7 | 13.8 | 303 |
| 3 | 60.7 | 8.0 | 13.5 | 17.7 | 237 | 5 | 43.5 | 6.3 | 29.0 | 21.1 | 331 |
| 5 | 54.3 | 7.2 | 12.1 | 26.4 | 265 | 11-1 | 40.6 | 5.9 | 49.6 | 3.9 | 355 |
| 3-1 | 64.0 | 8.4 | 21.3 | 6.2 | 225 | 12-22-1-2 | 68.6 | 10.5 | 7.6 | 13.3 | 210 |
| 3 | 56.9 | 7.5 | 19.0 | 16.6 | 253 | 4 | 60.5 | 9.2 | 6.7 | 23.5 | 238 |
| 5 | 51.1 | 6.8 | 17.1 | 24.9 | 281 | 6 | 54.1 | 8.3 | 6.0 | 36.5 | 266 |
| 4-1 | 59.7 | 7.9 | 26.5 | 5.8 | 241 | 2-2 | 63.7 | 9.7 | 14.2 | 12.4 | 224 |
| 3 | 53.5 | 7.1 | 23.8 | 15.6 | 269 | 4 | 56.7 | 8.7 | 12.6 | 22.0 | 256 |
| 5 | 48.5 | 6.4 | 21.5 | 23.6 | 297 | 6 | 51.1 | 7.8 | 11.3 | 29.8 | 282 |
| 5-1 | 56.0 | 7.4 | 31.1 | 5.4 | 257 | 3-2 | 59.5 | 9.1 | 19.8 | 11.6 | 242 |
| 3 | 50.5 | 6.7 | 28.1 | 14.7 | 285 | 4 | 53.3 | 8.1 | 17.8 | 20.7 | 270 |
| 5 | 46.0 | 6.0 | 25.6 | 22.4 | 313 | 6 | 48.3 | 7.4 | 16.1 | 28.2 | 298 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 12-22-4-2 | 55.8 | 8.5 | 24.8 | 10.9 | 258 | 12-27-3-3 | 55.2 | 10.3 | 18.4 | 16.1 | 261 |
| 4 | 50.3 | 7.7 | 22.4 | 19.6 | 286 | 5 | 49.8 | 9.3 | 16.6 | 24.2 | 289 |
| 6 | 45.9 | 7.0 | 20.4 | 26.7 | 314 | 4-1 | 57.8 | 10.8 | 25.7 | 5.6 | 249 |
| 8-2 | 44.7 | 6.8 | 39.7 | 8.7 | 322 | 12-30-1-4 | 58.5 | 12.2 | 6.5 | 22.8 | 246 |
| 22-6 | 23.9 | 3.6 | 58.5 | 13.9 | 602 | 13-5-10-3 | 43.0 | 1.4 | 44.1 | 11.5 | 363 |
| 12-23-1-1 | 73.1 | 11.7 | 8.1 | 7.1 | 197 | 13-6-2-2 | 70.3 | 2.7 | 14.4 | 12.6 | 222 |
| 3 | 64.0 | 10.2 | 7.1 | 18.7 | 225 | 4-2 | 61.4 | 2.4 | 25.2 | 11.0 | 254 |
| 5 | 56.9 | 9.1 | 6.3 | 27.7 | 253 | 5-2 | 57.8 | 2.2 | 29.6 | 10.4 | 270 |
| 2-1 | 67.6 | 10.8 | 15.0 | 6.6 | 213 | 6-2 | 54.5 | 2.1 | 33.6 | 9.8 | 286 |
| 3 | 59.7 | 9.5 | 13.3 | 17.4 | 241 | 9-4 | 43.1 | 1.6 | 39.8 | 15.5 | 362 |
| 5 | 53.5 | 8.5 | 11.9 | 26.0 | 269 | 11-4 | 39.6 | 1.5 | 44.7 | 14.2 | 394 |
| 3-1 | 62.9 | 10.0 | 21.0 | 6.1 | 229 | 12-6 | 33.5 | 1.3 | 41.2 | 24.0 | 466 |
| 3 | 56.0 | 8.9 | 18.7 | 16.3 | 257 | 13-8 | 32.4 | 1.2 | 43.2 | 23.2 | 482 |
| 5 | 50.5 | 8.1 | 16.8 | 24.6 | 285 | 13-7-1-1 | 80.9 | 3.6 | 8.3 | 7.2 | 193 |
| 4-1 | 58.8 | 9.4 | 26.1 | 5.7 | 245 | 3 | 70.6 | 3.2 | 7.2 | 19.0 | 221 |
| 3 | 52.7 | 8.4 | 23.4 | 15.4 | 273 | 5 | 62.6 | 2.8 | 6.4 | 28.1 | 249 |
| 5 | 47.8 | 7.6 | 21.3 | 23.2 | 301 | 2-1 | 74.6 | 3.3 | 15.3 | 6.7 | 209 |
| 5-1 | 55.2 | 8.8 | 30.6 | 5.4 | 261 | 3 | 65.8 | 2.9 | 13.5 | 17.7 | 237 |
| 3 | 49.8 | 8.0 | 27.7 | 14.5 | 289 | 5 | 58.9 | 2.6 | 12.1 | 26.4 | 265 |
| 5 | 45.4 | 7.3 | 25.2 | 22.1 | 317 | 3-1 | 69.3 | 3.1 | 21.3 | 6.2 | 225 |
| 6-1 | 52.0 | 8.3 | 34.6 | 5.1 | 277 | 3 | 61.6 | 2.8 | 19.0 | 16.6 | 253 |
| 3 | 47.2 | 7.5 | 31.5 | 13.8 | 305 | 5 | 55.5 | 2.5 | 17.1 | 24.9 | 281 |
| 5 | 43.3 | 6.9 | 28.8 | 21.0 | 333 | 4-1 | 64.7 | 2.9 | 26.5 | 5.8 | 241 |
| 10-1 | 42.2 | 6.7 | 46.9 | 4.1 | 341 | 3 | 58.0 | 2.6 | 23.8 | 15.6 | 269 |
| 12-24-1-2 | 67.9 | 11.3 | 7.5 | 13.2 | 212 | 5 | 52.5 | 2.4 | 21.5 | 23.6 | 297 |
| 4 | 60.0 | 10.0 | 6.7 | 23.3 | 240 | 5-1 | 60.7 | 2.7 | 31.1 | 5.4 | 257 |
| 6 | 53.7 | 9.0 | 6.0 | 31.3 | 268 | 3 | 54.7 | 2.4 | 28.1 | 14.7 | 285 |
| 2-2 | 63.1 | 10.5 | 14.0 | 12.4 | 228 | 5 | 49.8 | 2.2 | 25.6 | 22.4 | 313 |
| 4 | 56.2 | 9.3 | 12.5 | 21.9 | 256 | 6-1 | 57.1 | 2.6 | 35.2 | 5.1 | 273 |
| 6 | 50.7 | 8.4 | 11.3 | 29.6 | 284 | 3 | 51.8 | 2.3 | 31.9 | 13.9 | 301 |
| 3-2 | 59.0 | 9.8 | 19.7 | 11.5 | 244 | 5 | 47.4 | 2.1 | 29.2 | 21.3 | 329 |
| 4 | 52.9 | 8.8 | 17.6 | 20.6 | 272 | 8-1 | 51.1 | 2.3 | 42.0 | 4.6 | 305 |
| 6 | 48.0 | 8.0 | 16.0 | 28.0 | 300 | 3 | 46.8 | 2.1 | 38.4 | 12.6 | 333 |
| 4-2 | 55.4 | 9.2 | 24.6 | 10.8 | 260 | 5 | 43.2 | 1.9 | 35.4 | 19.4 | 361 |
| 4 | 50.0 | 8.3 | 22.2 | 19.4 | 288 | 9-3 | 44.7 | 2.0 | 41.2 | 12.0 | 349 |
| 6 | 45.5 | 7.6 | 20.3 | 26.6 | 316 | 10-3 | 42.7 | 1.9 | 43.8 | 11.5 | 365 |
| 10-2 | 40.4 | 6.7 | 44.9 | 7.9 | 356 | 5 | 39.7 | 1.8 | 40.7 | 17.8 | 393 |
| 2-25-1-1 | 72.3 | 12.6 | 8.0 | 7.1 | 199 | 13-8-1-2 | 75.0 | 3.8 | 7.7 | 13.5 | 208 |
| 3 | 63.4 | 11.0 | 7.0 | 18.5 | 227 | 4 | 66.1 | 3.4 | 6.8 | 23.7 | 236 |
| 5 | 56.5 | 9.8 | 6.3 | 27.4 | 255 | 6 | 59.1 | 3.0 | 6.1 | 31.8 | 264 |
| 2-1 | 67.0 | 11.6 | 14.9 | 6.5 | 215 | 2-2 | 69.6 | 3.6 | 14.3 | 12.5 | 224 |
| 3 | 59.2 | 10.6 | 13.2 | 17.3 | 243 | 4 | 61.9 | 3.2 | 12.7 | 22.2 | 252 |
| 5 | 53.1 | 9.2 | 11.8 | 25.8 | 271 | 6 | 55.7 | 2.9 | 11.4 | 30.0 | 280 |
| 5-11 | 35.7 | 6.2 | 19.8 | 38.2 | 403 | 3-2 | 65.0 | 3.3 | 20.0 | 11.7 | 240 |
| 11-1 | 40.1 | 7.0 | 49.0 | 3.9 | 359 | 4 | 58.2 | 2.9 | 17.9 | 20.9 | 268 |
| 12-26-1-2 | 67.3 | 12.1 | 7.5 | 13.1 | 214 | 6 | 52.7 | 2.7 | 16.2 | 28.4 | 266 |
| 4 | 59.5 | 20.7 | 6.6 | 23.1 | 242 | 4-2 | 60.9 | 3.1 | 25.0 | 10.9 | 256 |
| 6 | 53.3 | 9.6 | 5.9 | 31.1 | 270 | 4 | 54.9 | 2.8 | 22.5 | 19.7 | 284 |
| 2-2 | 62.6 | 11.3 | 13.9 | 12.2 | 230 | 6 | 50.0 | 2.6 | 20.5 | 26.9 | 312 |
| 4 | 55.8 | 10.1 | 12.4 | 21.7 | 258 | 5-2 | 57.3 | 2.9 | 29.4 | 10.3 | 272 |
| 6 | 50.3 | 9.1 | 11.2 | 29.4 | 286 | 4 | 52.0 | 2.7 | 26.7 | 18.6 | 300 |
| 3-2 | 58.5 | 10.6 | 19.5 | 11.4 | 246 | 6 | 47.6 | 2.4 | 24.4 | 25.6 | 328 |
| 12-27-1-1 | 71.6 | 13.4 | 8.0 | 7.0 | 201 | 6-2 | 54.2 | 2.8 | 33.3 | 9.7 | 288 |
| 3 | 62.9 | 11.8 | 7.0 | 18.3 | 229 | 4 | 49.3 | 2.5 | 30.4 | 17.7 | 316 |
| 5 | 56.0 | 10.5 | 6.2 | 27.2 | 257 | 6 | 45.3 | 2.3 | 27.9 | 24.4 | 344 |
| 2-1 | 66.3 | 12.4 | 14.7 | 6.5 | 217 | 7-2 | 51.3 | 2.6 | 36.8 | 9.2 | 304 |
| 3 | 58.8 | 11.0 | 13.1 | 17.1 | 245 | 4 | 47.0 | 2.4 | 33.7 | 16.9 | 332 |
| 5 | 52.7 | 9.9 | 11.7 | 25.6 | 273 | 6 | 43.3 | 2.2 | 31.1 | 23.3 | 360 |
| 3-1 | 61.8 | 11.6 | 20.6 | 6.0 | 233 | 8-2 | 48.8 | 2.5 | 40.0 | 8.7 | 320 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 13-8-8-4 | 44.8 | 2.3 | 36.8 | 16.1 | 348 | 13-11-3-3 | 60.7 | 4.2 | 18.7 | 16.3 | 257 |
| 6 | 41.5 | 2.1 | 34.0 | 22.3 | 376 | 5 | 54.7 | 3.9 | 16.8 | 24.6 | 285 |
| 9-2 | 46.4 | 2.4 | 42.8 | 8.3 | 336 | 4-1 | 63.7 | 4.5 | 26.1 | 5.7 | 245 |
| 4 | 42.8 | 2.2 | 39.6 | 15.4 | 364 | 3 | 57.1 | 4.0 | 23.4 | 15.4 | 273 |
| 6 | 39.8 | 2.0 | 36.7 | 21.4 | 392 | 5 | 51.8 | 3.7 | 21.3 | 23.2 | 301 |
| 13-9-1-1 | 80.0 | 4.6 | 8.2 | 7.2 | 195 | 5-1 | 59.8 | 4.2 | 30.6 | 5.4 | 261 |
| 3 | 70.0 | 4.0 | 7.2 | 18.8 | 223 | 3 | 54.0 | 3.8 | 27.7 | 14.5 | 289 |
| 5 | 62.1 | 3.6 | 6.4 | 27.9 | 251 | 5 | 49.2 | 3.5 | 25.2 | 22.0 | 317 |
| 2-1 | 73.9 | 4.3 | 15.2 | 6.6 | 211 | 6-1 | 56.3 | 4.0 | 34.7 | 5.0 | 277 |
| 3 | 65.3 | 3.7 | 13.4 | 17.6 | 239 | 3 | 51.1 | 3.6 | 31.5 | 13.8 | 305 |
| 5 | 58.4 | 3.4 | 12.0 | 26.2 | 267 | 5 | 46.8 | 3.3 | 28.8 | 21.0 | 333 |
| 3-1 | 68.7 | 3.9 | 21.1 | 6.2 | 227 | 7-1 | 53.2 | 3.8 | 38.2 | 4.8 | 293 |
| 3 | 61.2 | 3.5 | 18.8 | 16.5 | 255 | 3 | 48.6 | 3.4 | 34.9 | 13.1 | 321 |
| 5 | 55.1 | 3.2 | 17.0 | 24.7 | 283 | 5 | 44.7 | 3.1 | 32.0 | 20.1 | 349 |
| 4-1 | 64.2 | 3.7 | 26.3 | 5.8 | 243 | 9-3 | 40.9 | 2.9 | 37.8 | 18.4 | 381 |
| 3 | 57.6 | 3.3 | 23.6 | 15.5 | 271 | 13-12-1-2 | 73.6 | 5.7 | 7.5 | 13.2 | 212 |
| 5 | 52.1 | 3.0 | 21.4 | 23.4 | 299 | 4 | 65.0 | 5.0 | 6.7 | 23.3 | 240 |
| 5-1 | 60.2 | 3.5 | 30.9 | 5.4 | 259 | 6 | 58.2 | 4.5 | 6.0 | 31.3 | 268 |
| 3 | 54.3 | 3.1 | 27.9 | 14.6 | 287 | 2-2 | 68.4 | 5.3 | 14.0 | 12.3 | 228 |
| 5 | 49.5 | 2.9 | 25.4 | 22.2 | 315 | 4 | 60.9 | 4.7 | 12.5 | 21.9 | 256 |
| 7 | 45.5 | 2.6 | 23.3 | 28.6 | 343 | 6 | 54.9 | 4.2 | 11.3 | 29.6 | 284 |
| 6-1 | 56.7 | 3.3 | 34.9 | 5.1 | 275 | 3-2 | 63.9 | 4.9 | 19.7 | 11.5 | 244 |
| 3 | 51.5 | 3.0 | 31.7 | 13.8 | 303 | 4 | 57.4 | 4.4 | 17.6 | 20.6 | 272 |
| 5 | 47.1 | 2.7 | 29.0 | 21.2 | 331 | 6 | 52.0 | 4.0 | 16.0 | 28.0 | 300 |
| 7-1 | 53.5 | 3.1 | 38.5 | 4.8 | 291 | 4-2 | 60.0 | 4.6 | 24.6 | 10.8 | 260 |
| 3 | 48.9 | 2.8 | 35.1 | 13.2 | 319 | 4 | 54.2 | 4.2 | 22.2 | 19.4 | 288 |
| 5 | 44.9 | 2.6 | 32.3 | 20.2 | 347 | 6 | 49.3 | 3.8 | 20.3 | 26.6 | 316 |
| 8-1 | 50.8 | 2.9 | 41.7 | 4.6 | 307 | 5-2 | 56.5 | 4.3 | 29.0 | 10.1 | 276 |
| 3 | 46.6 | 2.7 | 38.2 | 12.5 | 335 | 4 | 51.3 | 3.9 | 26.3 | 18.4 | 304 |
| 5 | 43.0 | 2.5 | 35.2 | 19.3 | 363 | 6 | 47.0 | 3.6 | 24.1 | 25.3 | 332 |
| 9-5 | 41.1 | 2.4 | 38.0 | 18.5 | 379 | 6-2 | 53.4 | 4.1 | 32.9 | 9.6 | 292 |
| 13-10-1-2 | 74.3 | 4.8 | 7.6 | 13.3 | 210 | 4 | 48.8 | 3.7 | 30.0 | 17.5 | 320 |
| 4 | 65.5 | 4.2 | 6.7 | 23.5 | 238 | 6 | 44.8 | 3.4 | 27.6 | 24.1 | 348 |
| 6 | 58.6 | 3.8 | 6.0 | 31.6 | 266 | 7-2 | 50.6 | 3.9 | 36.4 | 9.1 | 308 |
| 2-2 | 69.0 | 4.4 | 14.2 | 12.4 | 226 | 4 | 46.4 | 3.6 | 33.3 | 16.7 | 336 |
| 4 | 61.4 | 3.9 | 12.6 | 22.0 | 254 | 6 | 42.8 | 3.3 | 30.8 | 23.1 | 364 |
| 6 | 53.3 | 3.5 | 11.3 | 29.8 | 282 | 8-2 | 48.2 | 3.7 | 39.5 | 8.6 | 324 |
| 3-2 | 64.5 | 4.1 | 19.8 | 11.6 | 242 | 4 | 44.3 | 3.4 | 36.4 | 15.9 | 352 |
| 4 | 57.8 | 3.7 | 17.8 | 20.7 | 270 | 6 | 41.0 | 3.2 | 33.7 | 22.1 | 380 |
| 6 | 52.3 | 3.4 | 16.0 | 28.2 | 298 | 9-6 | 39.4 | 3.0 | 36.4 | 21.2 | 396 |
| 4-2 | 60.5 | 3.9 | 24.8 | 10.8 | 258 | 12-4 | 37.5 | 2.9 | 46.2 | 13.4 | 416 |
| 4 | 54.5 | 3.5 | 22.4 | 19.6 | 286 | 13-13-1-1 | 78.4 | 6.5 | 8.0 | 7.0 | 199 |
| 6 | 49.7 | 3.2 | 20.4 | 26.7 | 314 | 3 | 68.7 | 5.7 | 7.0 | 18.5 | 227 |
| 5-2 | 56.9 | 3.6 | 29.2 | 10.2 | 274 | 5 | 61.2 | 5.1 | 6.2 | 27.4 | 255 |
| 4 | 51.7 | 3.3 | 26.5 | 18.5 | 302 | 2-1 | 72.6 | 6.0 | 14.9 | 6.5 | 215 |
| 6 | 47.3 | 3.0 | 24.2 | 25.4 | 330 | 3 | 64.2 | 5.3 | 13.2 | 17.3 | 243 |
| 6-2 | 53.8 | 3.4 | 33.1 | 9.7 | 290 | 5 | 57.6 | 4.8 | 11.8 | 25.8 | 271 |
| 4 | 49.1 | 3.1 | 30.2 | 17.6 | 318 | 3-1 | 67.5 | 5.6 | 20.8 | 6.1 | 231 |
| 6 | 45.1 | 2.9 | 27.7 | 24.3 | 346 | 3 | 60.2 | 5.0 | 18.5 | 16.2 | 259 |
| 7-2 | 51.0 | 3.3 | 36.6 | 9.1 | 306 | 5 | 54.3 | 4.5 | 16.7 | 24.4 | 287 |
| 4 | 46.7 | 3.0 | 33.5 | 16.8 | 334 | 4-1 | 63.2 | 5.2 | 25.9 | 5.7 | 247 |
| 6 | 43.1 | 2.8 | 30.9 | 23.2 | 362 | 3 | 56.7 | 4.7 | 23.3 | 15.3 | 275 |
| 13-11-1-1 | 79.2 | 5.6 | 8.1 | 7.1 | 197 | 5 | 51.5 | 4.3 | 21.1 | 23.1 | 303 |
| 3 | 69.3 | 4.9 | 7.0 | 18.7 | 225 | 5-1 | 59.3 | 4.9 | 30.4 | 5.3 | 263 |
| 5 | 61.7 | 4.3 | 6.3 | 27.7 | 253 | 3 | 53.6 | 4.5 | 27.5 | 14.4 | 291 |
| 2-1 | 73.2 | 5.2 | 15.0 | 6.6 | 213 | 5 | 48.9 | 4.1 | 25.1 | 21.9 | 319 |
| 3 | 64.7 | 4.6 | 13.3 | 17.4 | 241 | 6-1 | 55.9 | 4.7 | 34.4 | 5.0 | 279 |
| 5 | 58.0 | 4.1 | 11.9 | 26.0 | 269 | 3 | 50.8 | 4.2 | 31.3 | 13.7 | 307 |
| 3-1 | 68.1 | 4.8 | 21.0 | 6.1 | 229 | 5 | 46.6 | 3.9 | 28.6 | 20.9 | 335 |

RICHTER, *Lex. d. Kohlenstoffverb.*

151

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 13-13-7-1 | 52.9 | 4.4 | 38.0 | 4.7 | 295 | 13-16-2-4 | 60.0 | 6.1 | 12.3 | 21.5 | 260 |
| 3 | 48.3 | 4.0 | 34.7 | 13.0 | 323 | 6 | 54.2 | 5.5 | 11.1 | 29.2 | 288 |
| 5 | 44.5 | 3.7 | 31.9 | 19.9 | 351 | 3-2 | 62.9 | 6.4 | 19.3 | 11.3 | 248 |
| 8-1 | 50.2 | 4.2 | 41.1 | 4.5 | 311 | 4 | 56.5 | 5.8 | 17.4 | 20.3 | 276 |
| 3 | 46.0 | 3.8 | 37.8 | 12.4 | 339 | 6 | 51.3 | 5.3 | 15.8 | 27.6 | 304 |
| 5 | 42.5 | 3.5 | 34.9 | 19.1 | 367 | 4-2 | 59.1 | 6.1 | 24.2 | 10.6 | 264 |
| 9-1 | 47.7 | 4.0 | 44.0 | 4.3 | 327 | 4 | 53.4 | 5.5 | 21.9 | 19.2 | 292 |
| 3 | 43.9 | 3.7 | 40.6 | 11.8 | 355 | 6 | 48.8 | 5.0 | 20.0 | 26.2 | 320 |
| 5 | 40.7 | 3.4 | 37.6 | 18.3 | 383 | 5-2 | 55.7 | 5.7 | 28.6 | 10.0 | 280 |
| 10-3 | 42.0 | 3.5 | 43.1 | 11.3 | 371 | 4 | 50.6 | 5.2 | 26.0 | 18.2 | 308 |
| 11-3 | 40.3 | 3.3 | 48.5 | 10.9 | 387 | 6 | 46.4 | 4.8 | 23.8 | 25.0 | 336 |
| 13-14-1-2 | 72.9 | 6.5 | 7.5 | 13.1 | 214 | 6-2 | 52.7 | 5.4 | 32.4 | 9.5 | 296 |
| 4 | 64.5 | 5.8 | 6.6 | 23.1 | 242 | 4 | 48.1 | 4.9 | 29.6 | 17.3 | 324 |
| 6 | 57.8 | 5.2 | 5.9 | 31.1 | 270 | 6 | 44.3 | 4.5 | 27.3 | 23.9 | 352 |
| 2-2 | 97.8 | 6.1 | 13.9 | 12.2 | 230 | 7-2 | 50.5 | 5.1 | 35.9 | 9.0 | 312 |
| 4 | 60.5 | 5.4 | 12.4 | 21.7 | 258 | 4 | 45.9 | 4.7 | 32.9 | 16.5 | 340 |
| 6 | 54.5 | 4.9 | 11.2 | 20.4 | 286 | 6 | 42.4 | 4.3 | 30.4 | 22.8 | 368 |
| 3-2 | 63.4 | 5.7 | 19.5 | 11.4 | 246 | 8 | 39.4 | 4.0 | 28.3 | 28.3 | 396 |
| 4 | 56.9 | 5.1 | 17.5 | 20.4 | 274 | 13-17-1-1 | 76.8 | 8.4 | 7.9 | 6.9 | 203 |
| 6 | 51.7 | 4.6 | 15.9 | 27.8 | 302 | 3 | 67.5 | 7.4 | 6.9 | 18.2 | 231 |
| 4-2 | 59.5 | 5.3 | 24.4 | 10.7 | 262 | 5 | 60.2 | 6.6 | 6.2 | 27.0 | 259 |
| 4 | 53.8 | 4.8 | 22.1 | 19.3 | 290 | 2-1 | 71.2 | 7.7 | 14.6 | 6.4 | 219 |
| 6 | 49.1 | 4.4 | 20.1 | 26.4 | 318 | 3 | 63.2 | 6.9 | 12.9 | 17.0 | 247 |
| 5-2 | 56.1 | 5.0 | 28.8 | 10.1 | 278 | 5 | 56.7 | 6.2 | 11.6 | 25.4 | 275 |
| 4 | 51.0 | 4.6 | 26.1 | 18.3 | 306 | 3-1 | 66.4 | 7.2 | 20.4 | 5.9 | 235 |
| 6 | 46.7 | 4.2 | 23.9 | 25.2 | 334 | 3 | 59.3 | 6.5 | 18.2 | 16.0 | 263 |
| 6-2 | 53.1 | 4.8 | 32.6 | 9.5 | 294 | 5 | 53.6 | 5.8 | 16.5 | 24.0 | 291 |
| 4 | 48.4 | 4.3 | 29.8 | 17.4 | 322 | 4-1 | 62.1 | 6.8 | 25.5 | 5.6 | 251 |
| 6 | 44.6 | 4.0 | 27.4 | 24.0 | 350 | 3 | 55.9 | 6.1 | 22.9 | 15.1 | 279 |
| 7-2 | 50.3 | 4.5 | 36.1 | 9.0 | 310 | 5 | 50.8 | 5.5 | 20.8 | 22.8 | 307 |
| 4 | 46.2 | 4.1 | 33.1 | 16.6 | 338 | 5-1 | 58.4 | 6.0 | 30.0 | 5.2 | 267 |
| 6 | 42.6 | 3.8 | 30.6 | 22.9 | 366 | 3 | 52.9 | 5.7 | 27.1 | 14.2 | 295 |
| 8-2 | 47.9 | 4.3 | 30.2 | 8.6 | 326 | 5 | 48.3 | 5.2 | 24.8 | 21.7 | 323 |
| 13-15-1-1 | 77.6 | 7.4 | 8.0 | 7.0 | 201 | 6-1 | 55.1 | 6.0 | 33.9 | 4.9 | 283 |
| 3 | 68.1 | 6.5 | 7.0 | 18.3 | 229 | 3 | 50.1 | 5.5 | 30.9 | 13.5 | 311 |
| 5 | 60.7 | 5.8 | 6.2 | 27.2 | 257 | 5 | 46.0 | 5.0 | 28.3 | 20.6 | 339 |
| 2-1 | 71.9 | 6.9 | 14.7 | 6.4 | 217 | 7-1 | 52.1 | 5.7 | 37.4 | 4.7 | 299 |
| 3 | 63.7 | 6.1 | 13.1 | 17.1 | 245 | 8-1 | 49.5 | 5.4 | 40.6 | 4.4 | 315 |
| 5 | 57.1 | 5.5 | 11.7 | 25.6 | 273 | 13-18-1-2 | 71.6 | 8.2 | 7.3 | 12.8 | 218 |
| 3-1 | 66.9 | 6.4 | 20.6 | 6.0 | 233 | 4 | 63.4 | 7.3 | 6.5 | 22.8 | 246 |
| 3 | 59.7 | 5.7 | 18.4 | 16.1 | 261 | 6 | 56.9 | 6.5 | 5.8 | 30.7 | 274 |
| 5 | 54.0 | 5.2 | 16.6 | 24.2 | 289 | 2-2 | 66.6 | 7.7 | 13.7 | 12.0 | 234 |
| 4-1 | 62.6 | 6.0 | 25.7 | 5.6 | 249 | 4 | 59.5 | 6.8 | 12.2 | 21.4 | 262 |
| 3 | 56.3 | 5.4 | 23.1 | 15.2 | 277 | 6 | 53.8 | 6.2 | 11.0 | 29.0 | 290 |
| 5 | 51.1 | 4.9 | 21.0 | 22.9 | 305 | 3-2 | 62.4 | 7.2 | 19.2 | 11.2 | 250 |
| 5-1 | 58.8 | 5.7 | 30.2 | 5.3 | 265 | 4 | 56.1 | 6.5 | 17.3 | 20.1 | 278 |
| 3 | 53.2 | 5.1 | 27.3 | 14.3 | 293 | 6 | 51.0 | 5.9 | 15.7 | 27.4 | 306 |
| 5 | 48.6 | 4.7 | 24.9 | 21.8 | 321 | 4-2 | 58.6 | 6.8 | 24.1 | 10.5 | 266 |
| 6-1 | 55.5 | 5.3 | 34.2 | 5.0 | 281 | 4 | 53.1 | 6.1 | 21.8 | 19.0 | 294 |
| 3 | 50.5 | 4.8 | 31.1 | 13.6 | 309 | 6 | 48.4 | 5.6 | 19.9 | 26.1 | 322 |
| 5 | 46.3 | 4.4 | 28.5 | 20.8 | 337 | 5-2 | 55.3 | 6.4 | 28.4 | 9.9 | 282 |
| 7-1 | 52.5 | 5.0 | 37.7 | 4.7 | 297 | 4 | 50.3 | 5.8 | 25.8 | 18.1 | 310 |
| 3 | 48.0 | 4.6 | 34.5 | 12.9 | 325 | 6 | 46.2 | 5.3 | 23.7 | 24.8 | 338 |
| 5 | 44.2 | 4.2 | 31.7 | 19.8 | 353 | 6-2 | 52.4 | 6.0 | 32.2 | 9.4 | 298 |
| 9-1 | 47.4 | 4.7 | 43.7 | 4.2 | 329 | 4 | 47.8 | 5.5 | 20.4 | 17.2 | 326 |
| 13-16-1-2 | 72.2 | 7.4 | 7.4 | 13.0 | 216 | 6 | 44.1 | 5.1 | 27.1 | 23.7 | 354 |
| 4 | 63.9 | 6.5 | 6.5 | 23.0 | 244 | 13-19-1-1 | 76.1 | 9.3 | 7.8 | 6.8 | 205 |
| 6 | 57.3 | 5.9 | 5.9 | 30.9 | 272 | 3 | 66.9 | 8.2 | 6.9 | 18.0 | 233 |
| 2-2 | 67.2 | 6.9 | 13.8 | 12.1 | 232 | 5 | 59.8 | 7.3 | 6.1 | 26.8 | 261 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 13-19-2-1 | 70.6 | 8.6 | 14.5 | 6.3 | 221 | 13-22-4-4 | 52.3 | 7.4 | 21.5 | 18.8 | 298 |
| 3 | 62.6 | 7.6 | 12.9 | 16.9 | 249 | 5-4 | 49.7 | 7.0 | 25.5 | 17.8 | 314 |
| 5 | 56.3 | 6.9 | 11.5 | 25.3 | 277 | 7-2 | 49.1 | 6.9 | 35.2 | 8.8 | 318 |
| 3-1 | 65.8 | 8.0 | 20.2 | 5.9 | 237 | 13-23-1-1 | 74.6 | 11.0 | 7.6 | 6.7 | 209 |
| 3 | 58.9 | 7.1 | 18.1 | 15.9 | 265 | 3 | 65.8 | 9.7 | 6.7 | 17.7 | 237 |
| 5 | 53.2 | 6.5 | 16.4 | 23.9 | 293 | 5 | 58.9 | 8.7 | 6.0 | 26.4 | 265 |
| 4-1 | 61.7 | 7.5 | 25.3 | 5.5 | 253 | 2-1 | 69.3 | 10.2 | 14.2 | 6.2 | 225 |
| 3 | 55.5 | 6.8 | 22.8 | 14.9 | 281 | 3 | 61.7 | 9.1 | 12.6 | 16.6 | 253 |
| 5 | 50.5 | 6.1 | 20.7 | 22.6 | 309 | 5 | 55.5 | 8.2 | 11.4 | 24.9 | 281 |
| 5-1 | 58.0 | 7.1 | 29.7 | 5.2 | 269 | 3-1 | 64.7 | 9.5 | 19.9 | 5.8 | 241 |
| 3 | 52.5 | 6.4 | 26.9 | 14.1 | 297 | 3 | 58.0 | 8.5 | 17.8 | 15.6 | 269 |
| 5 | 48.0 | 5.8 | 24.6 | 21.5 | 325 | 5 | 52.5 | 7.7 | 16.2 | 23.6 | 297 |
| 6-1 | 54.7 | 6.7 | 33.7 | 4.9 | 285 | 4-1 | 60.7 | 9.0 | 24.9 | 5.4 | 257 |
| 3 | 49.8 | 6.1 | 30.7 | 13.4 | 313 | 3 | 54.7 | 8.1 | 22.5 | 14.7 | 285 |
| 5 | 45.7 | 5.6 | 28.2 | 20.5 | 341 | 5 | 49.9 | 7.3 | 20.4 | 22.4 | 313 |
| 13-20-1-2 | 70.9 | 9.1 | 7.3 | 12.7 | 220 | 5-1 | 57.1 | 8.4 | 29.3 | 5.1 | 273 |
| 4 | 62.9 | 8.1 | 6.4 | 22.6 | 248 | 3 | 51.8 | 7.6 | 26.6 | 14.0 | 301 |
| 6 | 56.5 | 7.2 | 5.8 | 30.4 | 276 | 5 | 47.4 | 7.0 | 24.3 | 21.3 | 329 |
| 2-2 | 66.1 | 8.5 | 13.6 | 11.8 | 236 | 13-24-1-2 | 69.6 | 10.7 | 7.1 | 12.5 | 224 |
| 4 | 59.1 | 7.6 | 12.1 | 21.2 | 264 | 4 | 61.9 | 9.5 | 6.4 | 22.2 | 252 |
| 6 | 53.4 | 6.8 | 11.0 | 28.8 | 292 | 6 | 55.7 | 8.6 | 5.7 | 30.0 | 280 |
| 3-2 | 61.9 | 7.9 | 19.0 | 11.1 | 252 | 2-2 | 65.0 | 10.0 | 13.3 | 11.7 | 240 |
| 4 | 55.7 | 7.1 | 17.1 | 20.0 | 280 | 4 | 58.2 | 8.9 | 11.9 | 20.9 | 268 |
| 6 | 50.6 | 6.5 | 15.6 | 27.3 | 308 | 6 | 53.7 | 8.1 | 10.8 | 28.3 | 296 |
| 4-2 | 58.2 | 7.4 | 23.9 | 10.4 | 268 | 3-2 | 60.9 | 9.4 | 18.7 | 10.9 | 256 |
| 4 | 52.7 | 6.7 | 21.6 | 18.9 | 296 | 4 | 54.9 | 8.4 | 16.9 | 19.7 | 284 |
| 6 | 48.2 | 6.2 | 19.7 | 25.9 | 324 | 6 | 50.0 | 7.7 | 15.4 | 26.9 | 312 |
| 5-2 | 54.9 | 7.0 | 28.2 | 9.8 | 284 | 4-2 | 57.3 | 8.8 | 23.5 | 10.3 | 272 |
| 4 | 50.0 | 6.4 | 25.6 | 18.0 | 312 | 4 | 52.0 | 8.0 | 21.3 | 18.7 | 300 |
| 6 | 45.9 | 5.9 | 23.5 | 24.7 | 340 | 6 | 47.5 | 7.3 | 19.5 | 25.6 | 328 |
| 6-2 | 52.0 | 6.7 | 32.0 | 9.3 | 300 | 5-2 | 54.1 | 8.3 | 27.8 | 9.7 | 288 |
| 4 | 47.5 | 6.1 | 29.3 | 17.1 | 328 | 4 | 49.4 | 7.6 | 25.3 | 17.7 | 316 |
| 6 | 43.8 | 5.6 | 27.0 | 23.6 | 356 | 6 | 45.3 | 7.0 | 23.3 | 24.4 | 344 |
| 7-2 | 49.4 | 6.3 | 35.4 | 8.9 | 316 | 6-4 | 47.0 | 7.2 | 28.9 | 16.9 | 332 |
| 13-21-1-1 | 75.4 | 10.1 | 7.7 | 6.8 | 207 | 7-2 | 48.7 | 7.5 | 35.0 | 8.7 | 320 |
| 3 | 66.4 | 8.9 | 6.8 | 17.9 | 235 | 13-25-1-1 | 73.9 | 11.8 | 7.6 | 6.6 | 211 |
| 5 | 59.3 | 8.0 | 6.1 | 26.6 | 263 | 3 | 65.3 | 10.4 | 6.7 | 17.6 | 239 |
| 2-1 | 70.0 | 9.4 | 14.3 | 6.3 | 223 | 5 | 58.4 | 9.4 | 6.0 | 26.2 | 267 |
| 3 | 62.2 | 8.4 | 12.7 | 16.7 | 251 | 2-1 | 68.7 | 11.0 | 14.1 | 6.2 | 227 |
| 5 | 55.9 | 7.5 | 11.5 | 25.1 | 279 | 3 | 61.2 | 9.8 | 12.5 | 16.5 | 255 |
| 3-1 | 65.3 | 8.8 | 20.1 | 5.8 | 239 | 5 | 55.1 | 8.8 | 11.3 | 24.7 | 283 |
| 3 | 58.4 | 7.9 | 18.0 | 15.7 | 267 | 3-1 | 64.2 | 10.3 | 19.8 | 5.7 | 243 |
| 5 | 52.9 | 7.1 | 16.3 | 23.7 | 295 | 3 | 57.6 | 9.2 | 17.7 | 15.5 | 271 |
| 4-1 | 61.2 | 8.2 | 25.1 | 5.5 | 255 | 5 | 52.1 | 8.4 | 16.0 | 23.4 | 299 |
| 3 | 55.1 | 7.4 | 22.6 | 14.8 | 283 | 4-1 | 60.2 | 9.6 | 24.7 | 5.4 | 259 |
| 5 | 50.2 | 6.7 | 20.5 | 22.5 | 311 | 3 | 54.4 | 8.7 | 22.3 | 14.6 | 287 |
| 5-1 | 57.6 | 7.7 | 29.5 | 5.2 | 271 | 5 | 49.5 | 7.9 | 20.3 | 22.2 | 315 |
| 3 | 52.2 | 7.0 | 26.7 | 14.0 | 299 | 5-1 | 56.7 | 9.1 | 29.1 | 5.1 | 275 |
| 5 | 47.7 | 6.4 | 24.5 | 21.4 | 327 | 3 | 51.4 | 8.3 | 26.4 | 13.9 | 303 |
| 13-22-1-2 | 70.3 | 9.9 | 7.2 | 12.6 | 222 | 5 | 47.1 | 7.6 | 24.2 | 21.1 | 331 |
| 4 | 62.4 | 8.8 | 6.4 | 22.4 | 250 | 13-26-1-2 | 69.0 | 11.5 | 7.1 | 12.4 | 226 |
| 6 | 56.1 | 7.9 | 5.7 | 30.2 | 278 | 4 | 61.4 | 10.2 | 6.3 | 22.1 | 254 |
| 2-2 | 65.5 | 9.2 | 13.4 | 11.8 | 238 | 6 | 55.3 | 9.2 | 5.7 | 29.8 | 282 |
| 4 | 58.6 | 8.3 | 12.0 | 21.1 | 266 | 2-2 | 64.5 | 10.7 | 13.2 | 11.6 | 242 |
| 6 | 53.0 | 7.5 | 10.9 | 28.6 | 294 | 4 | 57.8 | 9.6 | 11.8 | 20.7 | 270 |
| 3-2 | 61.4 | 8.7 | 18.9 | 11.0 | 254 | 6 | 52.4 | 8.7 | 10.7 | 28.2 | 298 |
| 4 | 55.3 | 7.8 | 17.0 | 19.9 | 282 | 3-2 | 60.5 | 10.1 | 18.6 | 10.8 | 258 |
| 6 | 50.3 | 7.1 | 15.5 | 27.1 | 310 | 4 | 54.5 | 9.1 | 16.8 | 19.6 | 286 |
| 4-2 | 57.8 | 8.1 | 23.7 | 10.4 | 270 | 6 | 49.7 | 8.3 | 15.3 | 26.7 | 314 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|----------|------|-----|------|------|------|
| 13-26-4-2 | 56.9 | 9.5 | 23.4 | 10.2 | 274 | 14-7-3-1 | 70.9 | 2.9 | 20.2 | 5.9 | 237 |
| 4 | 51.7 | 8.6 | 21.2 | 18.5 | 302 | 3 | 63.4 | 2.6 | 18.1 | 15.9 | 265 |
| 6 | 47.3 | 7.9 | 19.4 | 25.4 | 330 | 5 | 57.3 | 2.4 | 16.4 | 23.9 | 293 |
| 5-2 | 53.8 | 9.0 | 27.6 | 9.6 | 290 | 4-1 | 66.4 | 2.8 | 25.3 | 5.5 | 253 |
| 4 | 49.0 | 8.2 | 25.2 | 17.6 | 318 | 3 | 59.8 | 2.5 | 22.8 | 14.9 | 281 |
| 6 | 45.1 | 7.5 | 23.1 | 24.3 | 346 | 5 | 54.4 | 2.3 | 20.7 | 22.6 | 309 |
| 6-2 | 51.0 | 8.5 | 31.4 | 9.1 | 306 | 5-1 | 62.4 | 2.6 | 29.7 | 5.2 | 269 |
| 4 | 46.7 | 7.8 | 28.7 | 16.8 | 334 | 3 | 56.6 | 2.4 | 26.9 | 14.1 | 297 |
| 6 | 43.1 | 7.2 | 26.5 | 23.2 | 363 | 5 | 51.7 | 2.1 | 24.6 | 21.5 | 325 |
| 10-4 | 39.2 | 6.5 | 40.2 | 14.1 | 398 | 6-1 | 58.9 | 2.4 | 33.7 | 4.9 | 285 |
| 13-27-1-1 | 73.2 | 12.7 | 7.5 | 6.6 | 213 | 3 | 53.7 | 2.2 | 30.7 | 13.4 | 313 |
| 3 | 64.7 | 11.2 | 6.6 | 17.4 | 241 | 5 | 49.3 | 2.0 | 28.2 | 20.5 | 341 |
| 5 | 58.0 | 10.0 | 5.9 | 26.0 | 269 | 7-1 | 55.8 | 2.3 | 37.2 | 4.6 | 301 |
| 2-1 | 68.1 | 11.8 | 14.0 | 6.1 | 229 | 3 | 51.1 | 2.1 | 34.0 | 12.8 | 329 |
| 3 | 60.7 | 10.5 | 12.4 | 16.3 | 257 | 5 | 47.0 | 2.0 | 31.4 | 19.6 | 357 |
| 5 | 54.7 | 9.5 | 11.2 | 24.6 | 285 | 8-1 | 53.0 | 2.2 | 40.4 | 4.4 | 317 |
| 3-1 | 63.7 | 11.0 | 19.6 | 5.7 | 245 | 3 | 48.7 | 2.0 | 37.1 | 12.2 | 345 |
| 3 | 57.1 | 9.9 | 17.6 | 15.4 | 273 | 5 | 45.0 | 1.9 | 34.3 | 18.8 | 373 |
| 5 | 51.8 | 9.0 | 15.9 | 23.2 | 301 | 10-5 | 41.5 | 1.7 | 39.5 | 17.3 | 405 |
| 4-1 | 59.8 | 10.3 | 24.5 | 5.4 | 261 | 11-3 | 42.7 | 1.8 | 44.8 | 10.7 | 393 |
| 3 | 54.0 | 9.3 | 22.1 | 14.5 | 289 | 14-8-1-2 | 76.4 | 3.6 | 7.3 | 12.7 | 220 |
| 5 | 49.2 | 8.5 | 20.2 | 22.1 | 317 | 4 | 67.7 | 3.2 | 6.4 | 22.6 | 248 |
| 13-28-1-2 | 68.4 | 12.3 | 7.0 | 12.3 | 228 | 6 | 60.9 | 2.9 | 5.8 | 30.4 | 276 |
| 4 | 60.9 | 10.9 | 6.2 | 21.9 | 256 | 2-2 | 71.2 | 3.4 | 13.6 | 11.8 | 236 |
| 6 | 54.9 | 9.9 | 5.6 | 29.6 | 284 | 4 | 63.6 | 3.0 | 12.1 | 21.2 | 264 |
| 2-2 | 63.9 | 11.5 | 13.1 | 11.5 | 244 | 6 | 57.5 | 2.7 | 10.9 | 28.8 | 292 |
| 4 | 57.3 | 10.3 | 11.8 | 20.6 | 272 | 3-2 | 66.7 | 3.2 | 19.0 | 11.1 | 252 |
| 6 | 52.0 | 9.3 | 10.7 | 28.0 | 300 | 4 | 60.0 | 2.9 | 17.1 | 20.0 | 280 |
| 3-2 | 60.0 | 10.8 | 18.4 | 10.8 | 260 | 6 | 54.5 | 2.6 | 15.6 | 27.3 | 308 |
| 4 | 54.2 | 9.7 | 16.7 | 19.4 | 288 | 4-2 | 62.7 | 3.0 | 23.9 | 10.4 | 268 |
| 6 | 49.4 | 8.8 | 15.2 | 26.6 | 316 | 4 | 56.7 | 2.7 | 21.6 | 18.9 | 296 |
| 6-4 | 46.4 | 8.3 | 28.6 | 16.7 | 336 | 6 | 51.8 | 2.5 | 19.7 | 25.9 | 324 |
| 13-29-1-1 | 72.6 | 13.5 | 7.4 | 6.5 | 215 | 5-2 | 59.2 | 2.8 | 28.2 | 9.8 | 284 |
| 3 | 64.2 | 11.9 | 6.6 | 17.3 | 243 | 4 | 53.8 | 2.6 | 25.6 | 17.9 | 312 |
| 5 | 57.6 | 10.7 | 5.9 | 25.8 | 271 | 6 | 49.4 | 2.3 | 23.5 | 24.7 | 340 |
| 2-1 | 67.6 | 12.5 | 13.9 | 6.0 | 231 | 6-2 | 56.0 | 2.7 | 32.0 | 9.3 | 300 |
| 3 | 60.2 | 11.2 | 12.3 | 16.2 | 259 | 4 | 51.2 | 2.4 | 29.3 | 17.1 | 328 |
| 5 | 54.3 | 10.1 | 11.1 | 24.4 | 287 | 6 | 47.2 | 2.2 | 27.0 | 23.6 | 356 |
| 14-4-10-4 | 43.3 | 1.0 | 41.2 | 14.4 | 388 | 7-2 | 53.2 | 2.5 | 35.4 | 8.9 | 316 |
| 12-4 | 40.0 | 1.0 | 45.7 | 13.3 | 420 | 4 | 48.8 | 2.3 | 32.6 | 16.3 | 344 |
| 14-5-11-5 | 40.1 | 1.2 | 42.0 | 16.7 | 419 | 6 | 45.2 | 2.1 | 30.1 | 22.6 | 372 |
| 14-6-4-2 | 63.2 | 2.2 | 24.0 | 10.6 | 266 | 8-2 | 50.6 | 2.4 | 38.6 | 8.4 | 332 |
| 6-2 | 56.4 | 2.0 | 32.2 | 9.4 | 298 | 4 | 46.7 | 2.2 | 35.5 | 15.5 | 360 |
| 4 | 51.5 | 1.8 | 29.4 | 17.2 | 326 | 6 | 43.3 | 2.1 | 33.0 | 21.6 | 388 |
| 6 | 47.5 | 1.7 | 27.1 | 23.7 | 354 | 9-2 | 48.3 | 2.3 | 41.4 | 8.0 | 348 |
| 7-2 | 53.5 | 1.9 | 35.7 | 8.9 | 314 | 4 | 44.7 | 2.1 | 38.3 | 14.9 | 376 |
| 4 | 49.1 | 1.7 | 32.7 | 16.4 | 342 | 6 | 41.6 | 2.0 | 35.6 | 20.8 | 404 |
| 6 | 45.4 | 1.6 | 29.2 | 22.7 | 370 | 10-6 | 40.0 | 1.9 | 38.1 | 20.0 | 420 |
| 8-2 | 50.9 | 1.8 | 38.8 | 8.5 | 330 | 14-10 | 31.1 | 1.5 | 41.5 | 25.9 | 540 |
| 4 | 46.9 | 1.7 | 35.7 | 15.6 | 358 | 14-9-1-1 | 81.2 | 4.3 | 7.7 | 6.8 | 207 |
| 6 | 43.5 | 1.5 | 33.2 | 21.8 | 386 | 3 | 71.5 | 3.8 | 6.8 | 17.9 | 235 |
| 9-4 | 44.9 | 1.6 | 38.5 | 15.0 | 374 | 5 | 63.9 | 3.4 | 6.1 | 26.6 | 263 |
| 14-8 | 32.9 | 1.2 | 43.9 | 22.0 | 510 | 2-1 | 75.3 | 4.0 | 14.3 | 6.3 | 223 |
| 14-7-1-1 | 82.0 | 3.4 | 7.8 | 6.8 | 205 | 3 | 66.9 | 3.6 | 12.7 | 16.7 | 251 |
| 3 | 72.1 | 3.0 | 6.9 | 18.0 | 233 | 5 | 60.2 | 3.2 | 11.5 | 25.1 | 279 |
| 5 | 64.4 | 2.7 | 6.1 | 26.8 | 261 | 3-1 | 71.4 | 3.7 | 20.1 | 5.8 | 239 |
| 2-1 | 76.0 | 3.2 | 14.5 | 6.3 | 221 | 3 | 62.9 | 3.4 | 18.0 | 15.7 | 267 |
| 3 | 67.5 | 2.8 | 12.9 | 16.8 | 249 | 5 | 56.9 | 3.0 | 16.3 | 23.7 | 295 |
| 5 | 60.6 | 2.5 | 11.6 | 25.3 | 277 | 4-1 | 65.9 | 3.5 | 25.1 | 5.5 | 255 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 14-9-4-3 | 59.4 | 3.2 | 22.6 | 14.8 | 283 | 14-11-4-5 | 53.7 | 3.5 | 20.4 | 22.4 | 313 |
| 5 | 54.0 | 2.9 | 20.6 | 22.5 | 311 | 5-1 | 61.5 | 4.0 | 29.3 | 5.1 | 273 |
| 5-1 | 62.0 | 3.3 | 29.5 | 5.2 | 271 | 3 | 55.8 | 3.6 | 26.6 | 14.0 | 301 |
| 3 | 56.2 | 3.0 | 26.7 | 14.0 | 299 | 5 | 51.1 | 3.3 | 24.3 | 21.3 | 329 |
| 5 | 51.4 | 2.7 | 24.5 | 21.4 | 327 | 6-1 | 58.1 | 3.8 | 33.2 | 4.8 | 289 |
| 6-1 | 58.5 | 3.1 | 33.4 | 4.9 | 287 | 3 | 53.0 | 3.5 | 30.3 | 13.2 | 317 |
| 3 | 53.3 | 2.9 | 30.5 | 13.3 | 315 | 5 | 48.7 | 3.2 | 27.8 | 20.3 | 345 |
| 5 | 49.0 | 2.6 | 28.0 | 20.4 | 343 | 7-1 | 55.1 | 3.6 | 36.7 | 4.6 | 305 |
| 7-1 | 55.4 | 3.0 | 37.0 | 4.6 | 303 | 3 | 50.4 | 3.3 | 33.6 | 12.6 | 333 |
| 3 | 50.8 | 2.7 | 33.8 | 12.7 | 331 | 5 | 46.5 | 3.0 | 31.0 | 19.4 | 361 |
| 5 | 46.8 | 2.5 | 31.2 | 19.5 | 359 | 8-1 | 52.3 | 3.4 | 39.9 | 4.4 | 321 |
| 8-1 | 52.7 | 2.8 | 40.1 | 4.4 | 319 | 3 | 48.1 | 3.1 | 36.7 | 12.0 | 349 |
| 3 | 48.4 | 2.6 | 36.9 | 12.1 | 347 | 5 | 44.6 | 2.9 | 33.9 | 18.6 | 377 |
| 5 | 44.8 | 2.4 | 34.1 | 18.7 | 375 | 9-5 | 42.7 | 2.8 | 36.6 | 17.8 | 393 |
| 9-3 | 46.3 | 2.5 | 39.6 | 11.6 | 363 | 10-7 | 38.4 | 2.5 | 36.6 | 22.4 | 437 |
| 10-3 | 44.3 | 2.4 | 42.2 | 11.1 | 379 | 14-7 | 33.5 | 2.2 | 44.7 | 19.6 | 501 |
| 12-7 | 36.0 | 1.9 | 41.1 | 21.0 | 467 | 14-12-1-2 | 75.0 | 5.4 | 7.1 | 12.5 | 224 |
| 14-10-1-2 | 75.7 | 4.5 | 7.2 | 12.6 | 222 | 4 | 66.7 | 4.8 | 6.3 | 22.2 | 252 |
| 4 | 67.2 | 4.0 | 6.4 | 22.4 | 250 | 6 | 60.0 | 4.3 | 5.7 | 30.0 | 280 |
| 6 | 60.4 | 3.6 | 5.8 | 30.2 | 278 | 2-2 | 70.0 | 5.0 | 13.3 | 11.7 | 240 |
| 2-2 | 70.6 | 4.2 | 13.4 | 11.8 | 238 | 4 | 62.7 | 4.5 | 11.9 | 20.9 | 268 |
| 4 | 63.2 | 3.8 | 12.0 | 21.0 | 266 | 6 | 56.8 | 4.0 | 10.8 | 28.4 | 296 |
| 6 | 57.1 | 3.4 | 10.9 | 28.6 | 294 | 3-2 | 65.6 | 4.7 | 18.7 | 10.9 | 256 |
| 3-2 | 66.1 | 3.9 | 18.9 | 11.0 | 254 | 4 | 59.2 | 4.2 | 16.9 | 19.7 | 284 |
| 4 | 59.6 | 3.5 | 17.0 | 19.9 | 282 | 6 | 53.8 | 3.8 | 15.4 | 26.9 | 312 |
| 6 | 54.2 | 3.2 | 15.5 | 27.1 | 310 | 4-2 | 61.8 | 4.4 | 23.5 | 10.3 | 272 |
| 4-2 | 62.2 | 3.7 | 23.7 | 10.4 | 270 | 4 | 56.0 | 4.0 | 21.3 | 18.7 | 300 |
| 4 | 56.4 | 3.3 | 21.5 | 18.8 | 298 | 6 | 51.2 | 3.7 | 19.5 | 25.6 | 328 |
| 6 | 51.5 | 3.1 | 19.6 | 25.8 | 326 | 5-2 | 58.3 | 4.2 | 27.8 | 9.7 | 288 |
| 8 | 47.5 | 2.8 | 18.1 | 31.6 | 354 | 4 | 53.2 | 3.8 | 25.3 | 17.7 | 316 |
| 5-2 | 58.7 | 3.5 | 28.0 | 9.8 | 286 | 6 | 48.8 | 3.5 | 23.3 | 24.4 | 344 |
| 4 | 53.5 | 3.2 | 25.5 | 17.8 | 314 | 6-2 | 55.3 | 3.9 | 31.6 | 9.2 | 304 |
| 6 | 49.1 | 2.9 | 23.4 | 24.6 | 342 | 4 | 50.6 | 3.6 | 28.9 | 16.9 | 332 |
| 6-2 | 55.6 | 3.3 | 31.8 | 9.3 | 302 | 6 | 66.7 | 3.3 | 26.7 | 23.3 | 360 |
| 4 | 50.9 | 3.0 | 29.1 | 17.0 | 330 | 7-2 | 52.5 | 3.7 | 35.0 | 8.7 | 320 |
| 6 | 46.9 | 2.8 | 26.8 | 23.5 | 358 | 4 | 48.3 | 3.4 | 32.2 | 16.1 | 348 |
| 7-2 | 52.8 | 3.1 | 35.2 | 8.8 | 318 | 6 | 44.7 | 3.2 | 29.8 | 22.3 | 376 |
| 4 | 48.6 | 2.9 | 32.2 | 16.2 | 346 | 8-2 | 50.0 | 3.6 | 38.1 | 8.3 | 336 |
| 6 | 44.9 | 2.7 | 30.0 | 22.4 | 374 | 4 | 46.1 | 3.3 | 35.2 | 15.4 | 364 |
| 8-2 | 50.3 | 3.0 | 38.3 | 8.4 | 334 | 6 | 42.9 | 3.1 | 32.6 | 21.4 | 392 |
| 4 | 46.2 | 2.8 | 35.4 | 15.5 | 362 | 12-2 | 42.0 | 3.0 | 48.0 | 7.0 | 400 |
| 6 | 43.1 | 2.6 | 32.8 | 21.5 | 390 | 14-13-1-1 | 79.6 | 6.2 | 7.6 | 6.6 | 211 |
| 9-2 | 48.0 | 2.9 | 41.1 | 8.0 | 350 | 3 | 70.3 | 5.4 | 6.7 | 17.6 | 239 |
| 4 | 44.4 | 2.6 | 38.1 | 14.8 | 378 | 5 | 62.9 | 4.9 | 6.0 | 26.2 | 267 |
| 6 | 41.4 | 2.4 | 35.5 | 20.7 | 406 | 2-1 | 74.0 | 5.7 | 14.1 | 6.2 | 227 |
| 10-8 | 37.3 | 2.2 | 35.5 | 24.9 | 450 | 3 | 65.9 | 5.1 | 12.5 | 16.5 | 255 |
| 11-2 | 44.0 | 2.6 | 46.1 | 7.3 | 382 | 5 | 59.4 | 4.6 | 11.3 | 24.7 | 283 |
| 12-8 | 34.9 | 2.1 | 39.8 | 23.2 | 482 | 7 | 51.7 | 4.0 | 9.8 | 34.4 | 325 |
| 14-11-1-1 | 80.4 | 5.2 | 7.6 | 6.7 | 209 | 3-1 | 69.1 | 5.3 | 19.8 | 5.8 | 243 |
| 3 | 70.9 | 4.6 | 6.8 | 17.7 | 237 | 3 | 62.0 | 4.8 | 17.7 | 15.5 | 271 |
| 5 | 63.4 | 4.1 | 6.0 | 26.4 | 265 | 5 | 56.2 | 4.3 | 16.0 | 23.4 | 299 |
| 2-1 | 74.7 | 4.9 | 14.2 | 6.2 | 225 | 4-1 | 64.9 | 5.0 | 24.7 | 5.4 | 259 |
| 3 | 66.4 | 4.3 | 12.6 | 16.6 | 253 | 3 | 58.6 | 4.5 | 22.3 | 14.6 | 287 |
| 4 | 59.8 | 3.9 | 11.4 | 24.9 | 281 | 5 | 53.3 | 4.1 | 20.3 | 22.2 | 315 |
| 3-1 | 69.7 | 4.6 | 19.9 | 5.8 | 241 | 5-1 | 61.1 | 4.7 | 29.1 | 5.1 | 275 |
| 3 | 62.4 | 4.1 | 17.8 | 15.6 | 269 | 3 | 55.4 | 4.3 | 26.4 | 13.9 | 303 |
| 5 | 56.5 | 3.7 | 16.2 | 23.6 | 297 | 5 | 50.8 | 3.9 | 24.2 | 21.1 | 331 |
| 4-1 | 65.4 | 4.3 | 24.9 | 5.4 | 287 | 6-1 | 57.7 | 4.5 | 33.0 | 4.8 | 291 |
| 3 | 59.0 | 3.9 | 22.4 | 14.7 | 285 | 3 | 52.7 | 4.0 | 30.1 | 13.2 | 319 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 14-13-6-5 | 48.4 | 3.7 | 27.7 | 20.2 | 347 | 10-18-1-6 | 59.2 | 5.6 | 5.6 | 29.6 | 284 |
| 7-1 | 54.7 | 4.2 | 36.5 | 4.6 | 307 | 2-2 | 68.8 | 6.6 | 13.1 | 11.5 | 244 |
| 3 | 50.2 | 3.9 | 33.4 | 12.5 | 335 | 4 | 61.8 | 5.9 | 11.8 | 20.6 | 272 |
| 5 | 46.3 | 3.6 | 30.8 | 19.3 | 363 | 6 | 56.0 | 5.3 | 10.7 | 28.0 | 300 |
| 8-1 | 52.0 | 4.0 | 39.6 | 4.3 | 323 | 3-2 | 64.6 | 6.1 | 18.5 | 10.8 | 260 |
| 3 | 47.9 | 3.7 | 36.5 | 11.9 | 351 | 4 | 58.3 | 5.5 | 16.7 | 19.4 | 288 |
| 5 | 44.3 | 3.4 | 33.8 | 18.5 | 379 | 6 | 53.1 | 5.1 | 15.2 | 26.6 | 316 |
| 14-14-1-2 | 74.3 | 6.2 | 7.1 | 12.4 | 226 | 4-2 | 60.9 | 5.8 | 23.2 | 10.1 | 276 |
| 4 | 66.1 | 5.5 | 6.3 | 22.0 | 254 | 4 | 55.3 | 5.3 | 21.0 | 18.4 | 304 |
| 6 | 59.6 | 4.9 | 5.7 | 29.8 | 282 | 6 | 50.6 | 4.8 | 19.3 | 25.3 | 332 |
| 2-2 | 69.4 | 5.8 | 13.2 | 11.6 | 242 | 5-2 | 57.5 | 5.5 | 27.4 | 9.6 | 292 |
| 4 | 62.2 | 5.2 | 11.8 | 20.7 | 270 | 4 | 52.5 | 5.0 | 25.0 | 17.5 | 320 |
| 6 | 56.4 | 4.5 | 10.7 | 28.2 | 298 | 6 | 48.3 | 4.6 | 23.0 | 24.1 | 348 |
| 3-2 | 65.1 | 5.4 | 18.6 | 10.9 | 258 | 6-2 | 54.5 | 5.2 | 31.2 | 9.1 | 308 |
| 4 | 58.7 | 4.9 | 16.8 | 19.6 | 286 | 4 | 50.0 | 4.8 | 28.5 | 16.7 | 336 |
| 6 | 53.5 | 4.5 | 15.3 | 26.7 | 314 | 6 | 46.1 | 4.4 | 26.4 | 23.1 | 364 |
| 4-2 | 61.3 | 5.1 | 23.4 | 10.2 | 274 | 8-2 | 49.4 | 4.7 | 37.6 | 8.2 | 340 |
| 4 | 55.6 | 4.6 | 21.2 | 18.6 | 302 | 14-17-1-1 | 78.1 | 7.9 | 7.4 | 6.5 | 215 |
| 6 | 50.9 | 4.2 | 19.4 | 25.4 | 330 | 3 | 69.1 | 7.0 | 6.6 | 17.3 | 243 |
| 5-2 | 57.9 | 4.8 | 27.6 | 9.7 | 290 | 5 | 62.0 | 6.3 | 5.9 | 25.8 | 271 |
| 4 | 52.8 | 4.4 | 25.2 | 17.6 | 318 | 2-1 | 72.7 | 7.4 | 13.8 | 6.1 | 231 |
| 6 | 48.6 | 4.0 | 23.1 | 24.3 | 346 | 3 | 64.9 | 6.6 | 12.3 | 16.2 | 259 |
| 6-2 | 54.9 | 4.6 | 31.4 | 9.2 | 306 | 5 | 58.5 | 5.9 | 11.2 | 24.4 | 287 |
| 4 | 50.3 | 4.2 | 28.7 | 16.8 | 334 | 3-1 | 68.0 | 6.9 | 19.4 | 5.7 | 247 |
| 6 | 46.4 | 3.9 | 26.5 | 23.2 | 362 | 3 | 61.1 | 6.2 | 17.4 | 15.3 | 275 |
| 7-2 | 52.2 | 4.3 | 34.8 | 8.7 | 322 | 5 | 55.4 | 5.6 | 15.8 | 23.1 | 303 |
| 4 | 48.0 | 4.0 | 32.0 | 16.0 | 350 | 4-1 | 63.9 | 6.5 | 24.3 | 5.3 | 263 |
| 6 | 44.4 | 3.7 | 29.6 | 22.2 | 378 | 3 | 57.7 | 5.8 | 22.0 | 14.4 | 291 |
| 8-2 | 49.7 | 4.1 | 37.9 | 8.3 | 338 | 5 | 52.7 | 5.3 | 20.1 | 21.9 | 319 |
| 4 | 45.9 | 3.8 | 35.0 | 15.3 | 366 | 5-1 | 60.2 | 6.1 | 28.7 | 5.0 | 279 |
| 6 | 42.6 | 3.5 | 32.5 | 21.3 | 394 | 3 | 54.7 | 5.5 | 26.1 | 13.7 | 307 |
| 10-2 | 45.4 | 3.8 | 43.2 | 7.6 | 370 | 5 | 50.1 | 5.1 | 23.9 | 20.9 | 335 |
| 14-15-1-1 | 78.9 | 7.0 | 7.5 | 6.6 | 213 | 6-1 | 56.9 | 5.8 | 32.5 | 4.7 | 295 |
| 3 | 69.7 | 6.2 | 6.6 | 17.4 | 241 | 3 | 52.0 | 5.3 | 29.7 | 13.0 | 323 |
| 5 | 62.4 | 5.6 | 5.9 | 26.0 | 269 | 5 | 47.9 | 4.8 | 27.4 | 19.9 | 351 |
| 2-1 | 73.4 | 6.5 | 14.0 | 6.1 | 229 | 7-1 | 54.0 | 5.5 | 36.0 | 4.5 | 311 |
| 3 | 65.4 | 5.8 | 12.4 | 16.3 | 257 | 14-18-1-2 | 73.1 | 7.8 | 6.9 | 12.2 | 230 |
| 5 | 58.9 | 5.3 | 11.2 | 24.6 | 285 | 4 | 65.1 | 7.0 | 6.2 | 21.7 | 258 |
| 3-1 | 68.6 | 6.1 | 19.6 | 5.7 | 245 | 6 | 58.7 | 6.3 | 5.6 | 29.3 | 286 |
| 3 | 61.5 | 5.5 | 17.6 | 15.4 | 273 | 2-2 | 68.3 | 7.3 | 13.0 | 11.4 | 246 |
| 5 | 55.8 | 5.0 | 16.0 | 23.2 | 301 | 4 | 61.3 | 6.6 | 11.7 | 20.4 | 274 |
| 4-1 | 64.4 | 5.7 | 24.5 | 5.4 | 261 | 6 | 55.6 | 6.0 | 10.6 | 27.8 | 302 |
| 3 | 58.1 | 5.2 | 22.1 | 14.5 | 289 | 3-2 | 64.1 | 6.9 | 18.3 | 10.7 | 262 |
| 5 | 53.0 | 4.7 | 20.2 | 22.1 | 317 | 4 | 57.9 | 6.2 | 16.5 | 19.3 | 290 |
| 7 | 48.7 | 4.3 | 18.6 | 28.4 | 345 | 6 | 52.8 | 5.7 | 15.1 | 26.4 | 318 |
| 5-1 | 60.7 | 5.4 | 28.9 | 5.0 | 277 | 4-2 | 60.4 | 6.5 | 23.0 | 10.1 | 278 |
| 3 | 55.1 | 4.9 | 26.2 | 13.8 | 305 | 4 | 54.9 | 5.9 | 20.9 | 18.3 | 306 |
| 5 | 50.5 | 4.5 | 24.0 | 21.0 | 333 | 6 | 50.3 | 5.4 | 19.2 | 25.1 | 334 |
| 6-1 | 57.3 | 5.1 | 32.8 | 4.8 | 293 | 5-2 | 57.1 | 6.1 | 27.2 | 9.5 | 294 |
| 3 | 52.3 | 4.7 | 29.9 | 13.1 | 321 | 4 | 52.2 | 5.6 | 24.8 | 17.4 | 322 |
| 5 | 48.1 | 4.3 | 27.5 | 20.1 | 349 | 6 | 48.0 | 5.1 | 22.9 | 24.0 | 350 |
| 7-1 | 54.4 | 4.8 | 36.2 | 4.5 | 309 | 6-2 | 54.2 | 5.8 | 31.0 | 9.0 | 310 |
| 3 | 49.8 | 4.4 | 33.2 | 12.5 | 337 | 4 | 49.7 | 5.3 | 28.4 | 16.6 | 338 |
| 5 | 46.0 | 4.1 | 30.7 | 19.2 | 365 | 6 | 45.9 | 4.9 | 26.2 | 23.0 | 366 |
| 8-1 | 51.7 | 4.6 | 39.4 | 4.3 | 325 | 7-2 | 51.5 | 5.5 | 34.3 | 8.6 | 326 |
| 3 | 47.6 | 4.2 | 36.3 | 11.9 | 353 | 4 | 47.5 | 5.1 | 31.6 | 15.8 | 354 |
| 5 | 44.1 | 3.9 | 33.6 | 18.4 | 381 | 6 | 44.0 | 4.7 | 29.3 | 22.0 | 382 |
| 14-16-1-2 | 73.7 | 7.0 | 7.0 | 12.3 | 228 | 10-2 | 44.9 | 4.8 | 42.8 | 7.5 | 374 |
| 4 | 65.6 | 6.2 | 6.2 | 21.9 | 256 | 4 | 41.8 | 4.5 | 39.8 | 13.9 | 402 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|------------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 14-18-10-6 | 39.1 | 4.2 | 37.2 | 19.5 | 430 | 14-22-1-6 | 57.9 | 7.6 | 5.5 | 29.0 | 290 |
| 14-19-1-1 | 77.4 | 8.7 | 7.4 | 6.4 | 217 | 2-2 | 67.2 | 8.8 | 12.8 | 11.2 | 250 |
| 3 | 68.6 | 7.8 | 6.5 | 17.1 | 245 | 4 | 60.4 | 7.9 | 11.5 | 20.1 | 278 |
| 5 | 61.5 | 6.9 | 5.9 | 25.6 | 273 | 6 | 54.8 | 7.2 | 10.5 | 27.4 | 306 |
| 2-1 | 72.1 | 8.2 | 13.7 | 6.0 | 233 | 3-2 | 63.2 | 8.3 | 18.0 | 10.5 | 266 |
| 3 | 64.4 | 7.3 | 12.2 | 16.1 | 261 | 4 | 57.1 | 7.5 | 16.3 | 19.1 | 294 |
| 5 | 58.1 | 6.6 | 11.1 | 24.2 | 289 | 6 | 52.2 | 6.8 | 14.9 | 26.1 | 322 |
| 3-1 | 67.5 | 7.6 | 19.3 | 5.6 | 249 | 4-2 | 59.6 | 7.8 | 22.7 | 9.9 | 282 |
| 3 | 60.6 | 6.9 | 17.3 | 15.2 | 277 | 4 | 54.2 | 7.1 | 20.6 | 18.1 | 310 |
| 5 | 55.1 | 6.2 | 15.7 | 23.0 | 305 | 6 | 49.7 | 6.5 | 18.9 | 24.9 | 338 |
| 4-1 | 63.4 | 7.2 | 24.1 | 5.3 | 265 | 5-2 | 56.4 | 7.4 | 26.8 | 9.4 | 298 |
| 3 | 57.3 | 6.5 | 21.8 | 14.3 | 293 | 4 | 51.5 | 6.7 | 24.5 | 17.2 | 326 |
| 5 | 52.3 | 5.9 | 19.9 | 21.8 | 321 | 6 | 47.5 | 6.2 | 22.6 | 23.7 | 354 |
| 5-1 | 59.8 | 6.8 | 28.4 | 5.0 | 281 | 6-2 | 53.5 | 7.0 | 30.6 | 8.9 | 314 |
| 3 | 54.4 | 6.1 | 25.9 | 13.6 | 309 | 4 | 49.1 | 6.4 | 28.1 | 16.4 | 342 |
| 5 | 49.8 | 5.6 | 23.7 | 20.8 | 337 | 6 | 45.4 | 5.9 | 25.9 | 22.7 | 370 |
| 6-1 | 56.6 | 6.4 | 32.3 | 4.7 | 297 | 7-2 | 50.9 | 6.7 | 33.9 | 8.5 | 330 |
| 3 | 51.7 | 5.8 | 29.5 | 12.9 | 325 | 4 | 46.9 | 6.1 | 31.3 | 15.6 | 358 |
| 5 | 47.6 | 5.4 | 27.2 | 19.8 | 353 | 6 | 43.5 | 5.7 | 29.0 | 21.8 | 386 |
| 8-1 | 51.1 | 5.8 | 38.9 | 4.2 | 329 | 8-2 | 48.6 | 6.3 | 37.0 | 8.1 | 346 |
| 12-1 | 42.7 | 4.8 | 48.8 | 3.6 | 393 | 14-23-1-1 | 76.0 | 10.4 | 7.2 | 6.3 | 221 |
| 14-20-1-2 | 72.4 | 8.6 | 6.9 | 12.1 | 232 | 3 | 67.5 | 9.2 | 6.4 | 16.9 | 249 |
| 4 | 64.6 | 7.7 | 6.2 | 21.5 | 260 | 5 | 60.6 | 8.3 | 5.8 | 25.3 | 277 |
| 6 | 58.3 | 6.9 | 5.6 | 29.2 | 288 | 2-1 | 70.9 | 9.7 | 13.5 | 5.9 | 237 |
| 2-2 | 67.7 | 8.1 | 12.9 | 11.3 | 248 | 3 | 63.4 | 8.7 | 12.1 | 15.8 | 265 |
| 4 | 60.9 | 7.2 | 11.6 | 20.3 | 276 | 5 | 57.3 | 7.8 | 10.9 | 23.9 | 293 |
| 6 | 55.3 | 6.6 | 10.5 | 27.6 | 304 | 3-1 | 66.4 | 9.1 | 19.0 | 5.5 | 253 |
| 3-2 | 63.6 | 7.6 | 18.2 | 10.6 | 264 | 3 | 59.8 | 8.2 | 17.1 | 14.9 | 281 |
| 4 | 57.5 | 6.8 | 16.4 | 19.2 | 292 | 5 | 54.4 | 7.4 | 15.5 | 22.7 | 309 |
| 6 | 52.5 | 6.2 | 15.0 | 26.2 | 320 | 4-1 | 62.4 | 8.5 | 23.8 | 5.2 | 269 |
| 4-2 | 60.0 | 7.1 | 22.9 | 10.0 | 280 | 3 | 56.5 | 7.7 | 21.5 | 14.1 | 297 |
| 4 | 54.5 | 6.5 | 20.8 | 18.2 | 308 | 5 | 51.7 | 7.1 | 19.7 | 21.5 | 325 |
| 6 | 50.0 | 5.9 | 19.1 | 25.0 | 336 | 5-1 | 58.9 | 8.1 | 28.1 | 4.9 | 285 |
| 5-2 | 56.8 | 6.8 | 27.0 | 9.4 | 296 | 3 | 53.7 | 7.3 | 25.6 | 13.4 | 313 |
| 4 | 51.8 | 6.2 | 24.7 | 17.3 | 324 | 5 | 49.3 | 6.7 | 23.5 | 20.5 | 341 |
| 6 | 47.7 | 5.7 | 22.7 | 23.9 | 352 | 6-1 | 55.8 | 7.6 | 31.9 | 4.6 | 301 |
| 6-2 | 53.8 | 6.4 | 30.8 | 9.0 | 312 | 3 | 51.1 | 7.0 | 29.2 | 12.7 | 329 |
| 4 | 49.4 | 5.9 | 28.2 | 16.5 | 340 | 5 | 47.1 | 6.4 | 26.9 | 19.6 | 357 |
| 6 | 45.7 | 5.4 | 26.1 | 22.8 | 368 | 10-11 | 33.3 | 4.5 | 31.7 | 30.5 | 505 |
| 14-21-1-1 | 76.7 | 9.6 | 7.3 | 6.4 | 219 | 14-24-1-2 | 71.2 | 10.2 | 6.8 | 11.8 | 236 |
| 3 | 68.0 | 8.5 | 6.5 | 17.0 | 247 | 4 | 63.6 | 9.1 | 6.1 | 21.2 | 264 |
| 5 | 61.1 | 7.6 | 5.8 | 25.4 | 275 | 6 | 57.5 | 8.2 | 5.5 | 28.8 | 292 |
| 2-1 | 71.5 | 8.9 | 13.6 | 6.0 | 235 | 2-2 | 66.7 | 9.5 | 12.7 | 11.1 | 252 |
| 3 | 63.9 | 8.0 | 12.1 | 16.0 | 263 | 4 | 60.0 | 8.6 | 11.4 | 20.0 | 280 |
| 5 | 57.7 | 7.2 | 11.0 | 24.1 | 291 | 6 | 54.5 | 7.8 | 10.4 | 27.3 | 308 |
| 3-1 | 66.9 | 8.4 | 19.1 | 5.6 | 251 | 3-2 | 62.8 | 8.9 | 17.9 | 10.4 | 268 |
| 3 | 60.2 | 7.5 | 17.2 | 15.1 | 279 | 4 | 56.7 | 8.1 | 16.2 | 18.9 | 296 |
| 5 | 54.7 | 6.8 | 15.6 | 22.8 | 307 | 6 | 51.8 | 7.4 | 14.8 | 25.9 | 324 |
| 4-1 | 62.9 | 7.9 | 24.0 | 5.2 | 267 | 4-2 | 59.2 | 8.4 | 22.5 | 9.9 | 284 |
| 3 | 57.0 | 7.1 | 21.7 | 14.2 | 295 | 4 | 53.8 | 7.7 | 20.5 | 18.0 | 312 |
| 5 | 52.0 | 6.5 | 19.8 | 21.7 | 323 | 6 | 49.4 | 7.1 | 18.8 | 24.7 | 340 |
| 5-1 | 59.4 | 7.4 | 28.3 | 4.9 | 283 | 5-2 | 56.0 | 8.0 | 26.7 | 9.3 | 300 |
| 3 | 54.0 | 6.8 | 25.7 | 13.5 | 311 | 4 | 51.2 | 7.3 | 24.4 | 17.1 | 328 |
| 5 | 49.6 | 6.2 | 23.6 | 20.6 | 339 | 6 | 47.2 | 6.7 | 22.5 | 23.6 | 356 |
| 6-1 | 56.2 | 7.0 | 32.1 | 4.7 | 299 | 6-2 | 53.2 | 7.6 | 30.4 | 8.8 | 316 |
| 3 | 51.4 | 6.4 | 39.4 | 12.8 | 327 | 4 | 48.8 | 7.0 | 27.9 | 16.3 | 344 |
| 5 | 47.3 | 5.9 | 37.0 | 19.7 | 355 | 6 | 45.2 | 6.4 | 25.8 | 22.6 | 372 |
| 14-22-1-2 | 71.8 | 9.4 | 6.8 | 12.0 | 234 | 14-25-1-1 | 75.3 | 11.2 | 7.2 | 6.3 | 223 |
| 4 | 64.1 | 8.4 | 6.1 | 21.4 | 262 | 3 | 66.9 | 10.0 | 6.4 | 16.7 | 251 |

| C-H-O-N | C% | H% | O% | N% | M. G. | C-H-O-N | C% | H% | O% | N% | M. G. |
|-----------|------|------|------|------|-------|-----------|------|------|------|------|-------|
| 14-25-1-5 | 60.2 | 9.0 | 5.7 | 25.1 | 279 | 14-30-2-2 | 65.1 | 11.6 | 12.4 | 10.8 | 268 |
| 2-1 | 70.3 | 10.5 | 13.4 | 5.8 | 239 | 4 | 58.7 | 10.5 | 11.2 | 19.6 | 286 |
| 3 | 62.9 | 9.4 | 12.0 | 15.7 | 267 | 6 | 53.5 | 9.5 | 10.2 | 26.8 | 314 |
| 5 | 57.0 | 8.4 | 10.8 | 23.7 | 295 | 3-2 | 61.3 | 10.9 | 17.5 | 10.2 | 274 |
| 3-1 | 65.9 | 9.8 | 18.8 | 5.5 | 255 | 4 | 55.6 | 9.9 | 15.9 | 18.6 | 302 |
| 3 | 59.4 | 8.8 | 17.0 | 14.8 | 283 | 6 | 50.9 | 9.1 | 14.5 | 25.4 | 330 |
| 5 | 54.0 | 8.0 | 15.4 | 22.5 | 311 | 4-2 | 57.9 | 10.3 | 22.1 | 9.7 | 290 |
| 4-1 | 62.0 | 9.2 | 23.6 | 5.2 | 271 | 4 | 52.8 | 9.4 | 20.1 | 17.6 | 318 |
| 3 | 56.2 | 8.4 | 21.4 | 14.0 | 299 | 6 | 48.5 | 8.7 | 18.5 | 24.3 | 346 |
| 5 | 51.4 | 7.6 | 19.6 | 21.4 | 327 | 6-4 | 48.0 | 8.6 | 27.4 | 16.0 | 350 |
| 14-26-1-2 | 70.6 | 10.9 | 6.7 | 11.8 | 238 | 14-31-1-1 | 73.4 | 13.5 | 7.0 | 6.1 | 229 |
| 4 | 63.2 | 9.8 | 6.0 | 21.0 | 266 | 3 | 65.4 | 12.1 | 6.2 | 16.3 | 257 |
| 6 | 57.1 | 8.8 | 5.4 | 28.6 | 294 | 5 | 58.9 | 10.9 | 5.6 | 24.6 | 285 |
| 2-2 | 66.1 | 10.2 | 12.6 | 11.0 | 254 | 2-1 | 68.6 | 12.6 | 13.1 | 5.7 | 245 |
| 4 | 59.6 | 9.2 | 11.4 | 19.8 | 282 | 3 | 61.5 | 11.3 | 11.7 | 15.4 | 273 |
| 6 | 54.2 | 8.4 | 10.3 | 27.1 | 310 | 5 | 55.8 | 10.3 | 10.6 | 23.2 | 301 |
| 3-2 | 62.2 | 9.6 | 17.8 | 10.4 | 270 | 3-1 | 64.3 | 11.9 | 18.4 | 5.4 | 261 |
| 4 | 56.4 | 8.7 | 16.1 | 18.8 | 298 | 3 | 58.1 | 10.7 | 16.6 | 14.5 | 289 |
| 6 | 51.5 | 8.0 | 14.7 | 25.8 | 326 | 5 | 53.0 | 9.8 | 15.1 | 22.1 | 317 |
| 4-2 | 58.7 | 9.1 | 22.4 | 9.8 | 286 | 14-32-1-2 | 68.9 | 13.1 | 6.5 | 11.5 | 244 |
| 4 | 53.5 | 8.3 | 20.4 | 17.8 | 314 | 4 | 61.9 | 11.8 | 5.9 | 20.6 | 272 |
| 6 | 49.1 | 7.6 | 18.7 | 24.6 | 342 | 6 | 56.0 | 10.7 | 5.3 | 28.0 | 300 |
| 10-2 | 44.0 | 6.7 | 42.0 | 7.3 | 382 | 2-2 | 64.6 | 12.3 | 12.3 | 10.8 | 260 |
| 14-27-1-1 | 74.7 | 12.0 | 7.1 | 6.2 | 225 | 4 | 58.3 | 11.1 | 11.1 | 19.4 | 288 |
| 3 | 66.4 | 10.7 | 6.3 | 16.6 | 253 | 6 | 53.2 | 10.1 | 10.1 | 26.6 | 316 |
| 5 | 59.8 | 9.6 | 5.7 | 24.9 | 281 | 15-6-12-4 | 41.5 | 1.4 | 44.2 | 12.9 | 434 |
| 2-1 | 69.7 | 11.2 | 13.3 | 5.8 | 241 | 13-4 | 40.0 | 1.3 | 46.2 | 12.4 | 450 |
| 3 | 62.4 | 10.0 | 11.9 | 15.6 | 269 | 15-7-2-3 | 66.0 | 2.7 | 12.2 | 16.1 | 261 |
| 5 | 56.5 | 9.1 | 10.8 | 23.6 | 297 | 3-1 | 72.3 | 2.8 | 19.3 | 5.6 | 249 |
| 3-1 | 65.4 | 10.5 | 18.7 | 5.4 | 257 | 6-1 | 60.6 | 2.4 | 32.3 | 4.7 | 297 |
| 3 | 58.9 | 9.5 | 16.8 | 14.7 | 285 | 3 | 55.4 | 2.1 | 29.5 | 12.9 | 325 |
| 5 | 53.7 | 8.6 | 15.3 | 22.4 | 313 | 5 | 51.0 | 2.0 | 27.2 | 19.8 | 353 |
| 4-1 | 61.5 | 9.9 | 23.4 | 5.1 | 273 | 8 | 54.7 | 2.1 | 38.9 | 4.3 | 329 |
| 3 | 55.8 | 9.0 | 21.3 | 13.9 | 301 | 15-8-1-2 | 77.6 | 3.4 | 6.9 | 12.1 | 232 |
| 5 | 51.1 | 8.2 | 19.4 | 21.3 | 329 | 6-2 | 57.7 | 2.5 | 30.8 | 9.0 | 312 |
| 14-28-1-2 | 70.0 | 11.7 | 6.6 | 11.7 | 240 | 4 | 52.9 | 2.3 | 28.2 | 16.5 | 340 |
| 4 | 62.7 | 10.4 | 6.0 | 20.9 | 268 | 7-4 | 50.6 | 2.2 | 31.5 | 15.7 | 356 |
| 6 | 56.7 | 9.4 | 5.4 | 28.4 | 296 | 8-2 | 52.3 | 2.3 | 37.2 | 8.1 | 344 |
| 2-2 | 65.6 | 10.9 | 12.5 | 10.9 | 256 | 10-4 | 44.5 | 2.0 | 39.6 | 13.8 | 404 |
| 4 | 59.1 | 9.9 | 11.3 | 19.7 | 284 | 15-9-1-1 | 82.2 | 4.1 | 7.3 | 6.4 | 219 |
| 6 | 53.8 | 9.0 | 10.2 | 26.9 | 312 | 2-1 | 76.6 | 3.8 | 13.6 | 6.0 | 235 |
| 3-2 | 61.8 | 10.3 | 17.6 | 10.3 | 272 | 3 | 68.4 | 3.4 | 12.2 | 16.0 | 263 |
| 4 | 56.0 | 9.3 | 16.0 | 18.7 | 300 | 3-1 | 71.7 | 3.6 | 19.1 | 5.6 | 251 |
| 6 | 51.2 | 8.5 | 14.6 | 25.6 | 328 | 3 | 64.5 | 3.2 | 17.2 | 15.0 | 279 |
| 4-2 | 58.3 | 9.7 | 22.2 | 9.7 | 288 | 5 | 58.6 | 2.9 | 15.6 | 22.8 | 307 |
| 4 | 53.2 | 8.8 | 20.3 | 17.7 | 316 | 4-1 | 67.4 | 3.4 | 24.0 | 5.2 | 267 |
| 6 | 48.8 | 8.1 | 18.6 | 24.4 | 344 | 3 | 61.0 | 3.0 | 21.7 | 14.2 | 295 |
| 14-29-1-1 | 74.0 | 12.8 | 7.0 | 6.2 | 227 | 5 | 55.7 | 2.8 | 19.8 | 21.7 | 323 |
| 3 | 65.9 | 11.4 | 6.3 | 16.4 | 255 | 5-1 | 63.6 | 3.2 | 28.3 | 4.9 | 283 |
| 5 | 59.4 | 10.2 | 5.6 | 24.7 | 283 | 3 | 57.9 | 2.9 | 25.7 | 13.5 | 311 |
| 2-1 | 69.1 | 11.9 | 13.2 | 5.8 | 243 | 5 | 53.1 | 2.7 | 23.6 | 20.6 | 339 |
| 3 | 62.0 | 10.7 | 11.8 | 15.5 | 271 | 6-1 | 60.2 | 3.0 | 32.1 | 4.7 | 299 |
| 5 | 56.2 | 9.7 | 10.7 | 23.4 | 299 | 3 | 55.1 | 2.7 | 29.3 | 12.8 | 327 |
| 3-1 | 64.9 | 11.2 | 18.5 | 5.4 | 259 | 5 | 50.7 | 2.5 | 27.0 | 10.7 | 355 |
| 3 | 58.5 | 10.1 | 16.7 | 14.6 | 287 | 8-1 | 54.4 | 2.7 | 38.7 | 4.2 | 331 |
| 5 | 53.3 | 9.2 | 15.2 | 22.2 | 315 | 9-3 | 48.0 | 2.4 | 38.4 | 11.2 | 375 |
| 14-30-1-2 | 69.4 | 12.4 | 6.6 | 11.6 | 242 | 10-3 | 46.0 | 2.3 | 40.9 | 10.7 | 391 |
| 4 | 62.3 | 11.1 | 5.9 | 20.7 | 270 | 15-10-1-2 | 76.9 | 4.3 | 6.8 | 12.0 | 234 |
| 6 | 56.4 | 10.0 | 5.4 | 28.2 | 298 | 4 | 68.7 | 3.8 | 6.1 | 21.4 | 262 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. | |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|-----|
| 15-10-1-6 | 62.1 | 3.4 | 5.5 | 29.0 | 290 | 15-12-7-6 | 46.4 | 3.1 | 28.9 | 21.6 | 388 | |
| 2-2 | 72.0 | 4.0 | 12.8 | 11.2 | 250 | 9-6 | 42.9 | 2.8 | 34.3 | 20.0 | 420 | |
| 4 | 64.7 | 3.6 | 11.5 | 20.1 | 278 | 12-8 | 36.3 | 2.4 | 38.7 | 22.5 | 496 | |
| 6 | 58.8 | 3.3 | 10.4 | 27.4 | 306 | 15-13-1-1 | 80.7 | 5.8 | 7.2 | 6.3 | 223 | |
| 3-2 | 67.7 | 3.8 | 18.0 | 10.5 | 266 | 3 | 71.7 | 5.2 | 6.4 | 16.7 | 251 | |
| 4 | 61.2 | 3.4 | 16.3 | 19.1 | 294 | 5 | 64.5 | 4.6 | 5.7 | 25.1 | 279 | |
| 6 | 55.9 | 3.1 | 14.9 | 26.1 | 322 | 2-1 | 75.3 | 5.4 | 13.4 | 5.9 | 239 | |
| 4-2 | 63.8 | 3.5 | 22.7 | 9.9 | 282 | 3 | 67.4 | 4.9 | 12.0 | 15.7 | 267 | |
| 4 | 58.1 | 3.2 | 20.6 | 18.1 | 310 | 5 | 61.0 | 4.4 | 10.9 | 23.7 | 295 | |
| 6 | 53.2 | 3.0 | 18.9 | 24.9 | 338 | 3-1 | 70.6 | 5.1 | 18.8 | 5.5 | 255 | |
| 5-2 | 60.4 | 3.4 | 26.8 | 9.4 | 298 | 3 | 63.6 | 4.6 | 17.0 | 14.8 | 283 | |
| 4 | 55.2 | 3.1 | 24.5 | 17.2 | 326 | 5 | 57.9 | 4.2 | 15.4 | 22.5 | 311 | |
| 6 | 50.8 | 2.8 | 22.6 | 23.7 | 354 | 4-1 | 66.4 | 4.8 | 23.6 | 5.2 | 271 | |
| 6-2 | 57.3 | 3.2 | 30.6 | 8.9 | 314 | 3 | 60.2 | 4.3 | 21.4 | 14.0 | 299 | |
| 4 | 52.6 | 2.9 | 28.1 | 16.4 | 342 | 5 | 55.0 | 4.0 | 10.6 | 21.4 | 327 | |
| 6 | 48.6 | 2.7 | 25.9 | 22.7 | 370 | 5-1 | 62.7 | 4.5 | 27.9 | 4.9 | 287 | |
| 7-2 | 54.5 | 3.0 | 33.9 | 8.5 | 330 | 3 | 57.1 | 3.2 | 25.4 | 13.3 | 315 | |
| 8-2 | 52.0 | 2.9 | 37.0 | 8.0 | 346 | 5 | 52.5 | 3.8 | 23.3 | 20.4 | 343 | |
| 13-8 | 35.3 | 2.0 | 40.8 | 21.9 | 510 | 6-1 | 59.4 | 4.3 | 31.7 | 4.6 | 303 | |
| 15-11-1-1 | 81.4 | 5.0 | 7.2 | 6.3 | 221 | 3 | 54.4 | 3.9 | 29.0 | 12.7 | 331 | |
| 3 | 72.3 | 4.4 | 6.4 | 16.9 | 249 | 5 | 50.2 | 3.6 | 26.7 | 19.5 | 359 | |
| 5 | 65.0 | 4.0 | 5.7 | 25.3 | 277 | 7-1 | 56.4 | 4.1 | 35.1 | 4.4 | 319 | |
| 2-1 | 75.9 | 4.6 | 13.5 | 5.9 | 237 | 3 | 51.9 | 3.7 | 32.3 | 12.1 | 347 | |
| 3 | 67.9 | 4.1 | 12.1 | 15.9 | 265 | 5 | 48.0 | 3.4 | 29.9 | 18.7 | 375 | |
| 5 | 61.4 | 3.7 | 10.9 | 23.9 | 293 | 8-1 | 53.7 | 3.9 | 38.2 | 4.2 | 335 | |
| 3-1 | 71.2 | 4.3 | 19.0 | 5.5 | 253 | 3 | 49.6 | 3.6 | 35.3 | 11.5 | 363 | |
| 3 | 64.0 | 3.9 | 17.1 | 14.9 | 281 | 5 | 46.0 | 3.3 | 32.7 | 17.9 | 391 | |
| 5 | 58.2 | 3.6 | 15.5 | 22.6 | 309 | 15-14-1-2 | 75.6 | 5.9 | 6.7 | 11.8 | 238 | |
| 4-1 | 66.9 | 4.1 | 23.8 | 5.2 | 269 | 4 | 67.7 | 5.3 | 6.0 | 21.0 | 266 | |
| 3 | 60.6 | 3.7 | 21.6 | 14.1 | 297 | 6 | 61.2 | 4.8 | 5.4 | 28.6 | 294 | |
| 5 | 55.4 | 3.4 | 19.7 | 21.5 | 325 | 2-2 | 70.8 | 5.5 | 12.6 | 11.0 | 254 | |
| 5-1 | 63.2 | 3.8 | 28.1 | 4.9 | 285 | 4 | 63.8 | 5.0 | 11.3 | 19.8 | 282 | |
| 3 | 57.5 | 3.5 | 25.6 | 13.4 | 313 | 6 | 58.1 | 4.5 | 10.3 | 27.1 | 310 | |
| 5 | 52.8 | 3.2 | 23.5 | 20.5 | 341 | 3-2 | 66.6 | 5.2 | 17.8 | 10.4 | 270 | |
| 6 | 1 | 59.8 | 3.6 | 31.9 | 4.6 | 301 | 4 | 60.4 | 4.7 | 16.1 | 18.7 | 298 |
| 3 | 54.7 | 3.3 | 29.2 | 12.8 | 329 | 6 | 55.2 | 4.3 | 14.7 | 25.8 | 326 | |
| 5 | 50.4 | 3.1 | 26.9 | 19.6 | 357 | 4-2 | 62.9 | 4.9 | 22.4 | 9.8 | 286 | |
| 7-1 | 56.8 | 3.5 | 35.3 | 4.4 | 317 | 4 | 57.3 | 4.5 | 20.4 | 17.8 | 314 | |
| 3 | 52.2 | 3.2 | 32.5 | 12.1 | 345 | 6 | 52.6 | 4.1 | 18.7 | 24.6 | 342 | |
| 15-12-1-2 | 76.3 | 5.1 | 6.8 | 11.8 | 236 | 5-2 | 59.6 | 4.6 | 26.5 | 9.3 | 302 | |
| 4 | 68.2 | 4.5 | 6.1 | 21.2 | 264 | 4 | 54.5 | 4.2 | 24.2 | 17.0 | 330 | |
| 6 | 61.6 | 4.1 | 5.5 | 28.8 | 292 | 6 | 50.3 | 3.9 | 22.3 | 23.5 | 358 | |
| 2 | 71.4 | 4.8 | 12.7 | 11.1 | 252 | 6-2 | 56.6 | 4.4 | 30.2 | 8.8 | 318 | |
| 4 | 64.3 | 4.3 | 11.4 | 20.0 | 280 | 4 | 52.0 | 4.0 | 27.7 | 16.2 | 346 | |
| 6 | 58.4 | 3.9 | 10.4 | 27.3 | 308 | 6 | 48.1 | 3.7 | 25.7 | 22.5 | 374 | |
| 3-2 | 67.2 | 4.5 | 17.9 | 10.4 | 268 | 7-2 | 53.9 | 4.2 | 33.5 | 8.4 | 334 | |
| 4 | 60.8 | 4.0 | 16.2 | 18.9 | 296 | 4 | 49.7 | 3.9 | 30.9 | 15.5 | 362 | |
| 6 | 55.6 | 3.7 | 14.8 | 25.9 | 324 | 6 | 46.1 | 3.6 | 28.7 | 21.5 | 390 | |
| 4-2 | 63.4 | 4.2 | 22.5 | 9.9 | 284 | 8-2 | 51.4 | 4.0 | 36.6 | 8.0 | 350 | |
| 4 | 57.7 | 3.8 | 20.5 | 17.9 | 312 | 4 | 47.6 | 3.7 | 33.9 | 14.8 | 378 | |
| 6 | 52.9 | 3.5 | 18.8 | 24.7 | 340 | 6 | 44.3 | 3.4 | 31.5 | 20.7 | 406 | |
| 5-2 | 60.0 | 4.0 | 26.7 | 9.3 | 300 | 15-15-1-1 | 80.0 | 6.7 | 7.1 | 6.2 | 225 | |
| 4 | 54.9 | 3.6 | 24.1 | 17.1 | 328 | 3 | 71.1 | 5.9 | 6.3 | 16.6 | 253 | |
| 6 | 50.5 | 3.4 | 22.5 | 23.6 | 356 | 5 | 64.0 | 5.3 | 5.7 | 24.9 | 281 | |
| 6-2 | 57.0 | 3.8 | 30.4 | 8.8 | 316 | 2-1 | 74.7 | 6.2 | 13.3 | 5.8 | 241 | |
| 4 | 52.3 | 3.5 | 27.9 | 16.3 | 344 | 3 | 66.9 | 5.6 | 11.9 | 15.6 | 269 | |
| 6 | 48.4 | 3.2 | 25.8 | 22.6 | 372 | 5 | 60.6 | 5.0 | 10.8 | 23.6 | 297 | |
| 7-2 | 54.2 | 3.6 | 33.7 | 8.4 | 332 | 3-1 | 70.0 | 5.8 | 18.7 | 5.4 | 257 | |
| 4 | 50.0 | 3.3 | 31.1 | 15.6 | 360 | 3 | 63.2 | 5.2 | 16.8 | 14.7 | 285 | |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 15-15-3-5 | 57.5 | 4.8 | 15.3 | 22.4 | 313 | 15-17-6-5 | 49.6 | 4.7 | 26.4 | 19.3 | 363 |
| 4-1 | 65.9 | 5.5 | 23.4 | 5.1 | 273 | 8-1 | 53.1 | 5.0 | 37.8 | 4.1 | 339 |
| 3 | 59.8 | 5.0 | 21.3 | 13.9 | 301 | 15-18-1-2 | 74.4 | 7.4 | 6.6 | 11.6 | 242 |
| 5 | 54.7 | 4.6 | 19.4 | 21.3 | 329 | 4 | 66.7 | 6.7 | 5.9 | 20.7 | 270 |
| 5-1 | 62.3 | 5.2 | 27.7 | 4.8 | 289 | 6 | 60.4 | 6.0 | 5.4 | 28.2 | 298 |
| 3 | 56.8 | 4.7 | 25.2 | 13.3 | 317 | 2-2 | 69.8 | 7.0 | 12.4 | 10.8 | 258 |
| 5 | 52.2 | 4.3 | 23.2 | 20.3 | 345 | 4 | 62.9 | 6.3 | 11.2 | 19.6 | 286 |
| 6-1 | 59.0 | 4.9 | 31.5 | 4.6 | 305 | 6 | 57.3 | 5.7 | 10.2 | 26.8 | 314 |
| 3 | 54.0 | 4.5 | 28.8 | 12.6 | 333 | 3-2 | 65.7 | 6.6 | 17.5 | 10.2 | 274 |
| 5 | 49.9 | 4.1 | 26.6 | 19.4 | 361 | 4 | 59.6 | 6.0 | 15.9 | 18.5 | 302 |
| 7-1 | 56.1 | 4.7 | 34.9 | 4.3 | 321 | 6 | 54.5 | 5.4 | 14.5 | 25.5 | 330 |
| 3 | 51.6 | 4.3 | 32.1 | 12.0 | 349 | 4-2 | 62.1 | 6.2 | 22.1 | 9.6 | 290 |
| 5 | 47.7 | 4.0 | 29.7 | 18.6 | 377 | 6 | 56.6 | 5.7 | 20.1 | 17.6 | 318 |
| 8-1 | 53.4 | 4.4 | 38.0 | 4.2 | 337 | 6 | 52.0 | 5.2 | 18.5 | 24.3 | 346 |
| 3 | 49.3 | 4.1 | 35.1 | 11.5 | 365 | 5-2 | 58.8 | 5.9 | 26.1 | 9.1 | 306 |
| 5 | 45.8 | 3.8 | 32.6 | 17.8 | 393 | 4 | 53.9 | 5.4 | 23.9 | 16.8 | 334 |
| 15-16-1-2 | 75.0 | 6.7 | 6.7 | 11.6 | 240 | 6 | 49.7 | 5.0 | 22.1 | 23.2 | 362 |
| 4 | 67.1 | 6.0 | 6.0 | 20.9 | 268 | 6-2 | 55.9 | 5.6 | 29.8 | 8.7 | 322 |
| 6 | 60.8 | 5.4 | 5.4 | 28.4 | 296 | 4 | 51.4 | 5.1 | 27.4 | 16.0 | 350 |
| 2-2 | 70.3 | 6.2 | 12.5 | 10.9 | 256 | 6 | 47.6 | 4.8 | 25.4 | 22.1 | 378 |
| 4 | 63.4 | 5.6 | 11.3 | 19.7 | 284 | 7-2 | 53.3 | 5.3 | 33.1 | 8.3 | 338 |
| 6 | 57.7 | 5.1 | 10.2 | 26.9 | 312 | 15-19-1-1 | 78.6 | 8.3 | 7.0 | 6.1 | 229 |
| 3-2 | 66.2 | 5.9 | 17.6 | 10.3 | 272 | 3 | 70.0 | 7.4 | 6.2 | 16.3 | 257 |
| 4 | 60.0 | 5.3 | 16.0 | 18.7 | 300 | 5 | 63.2 | 6.7 | 5.6 | 24.5 | 285 |
| 6 | 54.9 | 4.9 | 14.6 | 25.6 | 328 | 2-1 | 73.5 | 7.7 | 13.1 | 5.7 | 245 |
| 4-2 | 62.5 | 5.6 | 22.2 | 9.7 | 288 | 3 | 65.9 | 7.0 | 11.7 | 15.4 | 273 |
| 4 | 57.0 | 5.0 | 20.3 | 17.7 | 316 | 5 | 59.8 | 6.3 | 10.6 | 23.2 | 301 |
| 6 | 52.3 | 4.6 | 18.6 | 24.4 | 344 | 3-1 | 68.9 | 7.3 | 18.4 | 5.4 | 261 |
| 5-2 | 59.2 | 5.3 | 26.3 | 9.2 | 304 | 3 | 62.3 | 6.6 | 16.6 | 14.5 | 289 |
| 4 | 54.2 | 4.8 | 24.1 | 16.9 | 332 | 5 | 56.8 | 6.0 | 15.1 | 22.1 | 317 |
| 6 | 50.0 | 4.4 | 22.2 | 23.3 | 360 | 4-1 | 65.0 | 6.8 | 23.1 | 5.1 | 277 |
| 6-2 | 56.2 | 5.0 | 30.0 | 8.7 | 320 | 3 | 59.0 | 6.2 | 21.0 | 13.8 | 305 |
| 4 | 51.7 | 4.6 | 27.6 | 16.1 | 348 | 5 | 54.0 | 5.7 | 19.2 | 21.0 | 333 |
| 6 | 47.9 | 4.3 | 25.5 | 22.3 | 376 | 5-1 | 61.4 | 6.5 | 27.3 | 4.8 | 293 |
| 7-2 | 53.6 | 4.8 | 33.3 | 8.3 | 336 | 3 | 56.1 | 5.9 | 24.9 | 13.1 | 321 |
| 4 | 49.4 | 4.4 | 30.8 | 15.4 | 364 | 5 | 51.6 | 5.4 | 22.9 | 20.1 | 349 |
| 6 | 45.9 | 4.1 | 28.6 | 21.4 | 392 | 6-1 | 58.2 | 6.1 | 31.1 | 4.5 | 309 |
| 8-2 | 51.1 | 4.5 | 36.4 | 8.0 | 352 | 3 | 53.4 | 5.6 | 28.5 | 12.5 | 337 |
| 4 | 47.4 | 4.2 | 33.7 | 14.7 | 380 | 5 | 49.3 | 5.2 | 26.3 | 19.2 | 365 |
| 6 | 44.1 | 3.9 | 31.4 | 20.6 | 408 | 7-1 | 55.4 | 5.8 | 34.5 | 4.3 | 325 |
| 15-17-1-1 | 79.3 | 7.4 | 7.1 | 6.2 | 227 | 9-1 | 50.4 | 5.3 | 40.3 | 3.9 | 357 |
| 3 | 70.6 | 6.6 | 6.3 | 16.5 | 255 | 15-20-1-2 | 73.8 | 8.2 | 6.5 | 11.5 | 244 |
| 5 | 63.6 | 6.0 | 5.6 | 24.7 | 283 | 4 | 66.2 | 7.3 | 5.9 | 20.6 | 272 |
| 2-1 | 74.1 | 7.0 | 13.2 | 5.7 | 243 | 6 | 60.0 | 6.7 | 5.3 | 28.0 | 300 |
| 3 | 65.4 | 6.3 | 11.8 | 15.5 | 271 | 2-2 | 69.2 | 7.7 | 12.2 | 10.8 | 260 |
| 5 | 60.2 | 5.7 | 10.7 | 23.4 | 299 | 4 | 62.5 | 6.9 | 11.1 | 19.4 | 288 |
| 3-1 | 69.5 | 6.5 | 18.5 | 5.4 | 259 | 6 | 57.0 | 6.3 | 10.1 | 26.6 | 316 |
| 3 | 62.7 | 5.9 | 16.7 | 14.6 | 287 | 3-2 | 65.2 | 7.2 | 17.4 | 10.1 | 276 |
| 5 | 57.1 | 5.4 | 15.2 | 22.2 | 315 | 4 | 59.2 | 6.6 | 15.8 | 18.4 | 304 |
| 4-1 | 65.4 | 6.2 | 23.3 | 5.1 | 275 | 6 | 54.2 | 6.0 | 14.4 | 25.3 | 332 |
| 3 | 59.4 | 5.6 | 21.1 | 13.9 | 303 | 4-2 | 61.6 | 6.8 | 21.9 | 9.6 | 292 |
| 5 | 54.4 | 5.1 | 19.3 | 21.2 | 331 | 4 | 56.3 | 6.2 | 20.2 | 17.5 | 320 |
| 7 | 50.1 | 4.7 | 17.8 | 27.3 | 359 | 6 | 51.7 | 5.7 | 18.4 | 24.1 | 348 |
| 9 | 46.5 | 4.4 | 16.5 | 32.6 | 387 | 5-2 | 58.4 | 6.5 | 26.0 | 9.1 | 308 |
| 5-1 | 61.9 | 5.8 | 27.5 | 4.8 | 291 | 4 | 53.6 | 5.9 | 23.8 | 16.7 | 336 |
| 3 | 56.4 | 5.3 | 25.1 | 13.2 | 319 | 6 | 49.4 | 5.5 | 22.0 | 23.1 | 364 |
| 5 | 51.9 | 4.9 | 23.0 | 20.2 | 347 | 6-2 | 55.6 | 6.2 | 29.6 | 8.6 | 324 |
| 6-1 | 58.6 | 5.5 | 31.3 | 4.6 | 307 | 4 | 51.1 | 5.7 | 27.3 | 15.9 | 352 |
| 3 | 53.7 | 5.1 | 28.7 | 12.5 | 335 | 6 | 47.4 | 5.3 | 25.2 | 22.1 | 380 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 15-20-8-2 | 50.6 | 5.6 | 36.0 | 7.8 | 356 | 15-24-1-2 | 72.6 | 9.7 | 6.4 | 11.3 | 248 |
| 15-21-1-1 | 77.9 | 9.1 | 6.9 | 6.1 | 231 | 4 | 65.2 | 8.7 | 5.8 | 20.3 | 276 |
| 3 | 69.5 | 8.1 | 6.2 | 16.2 | 259 | 6 | 59.2 | 7.9 | 5.3 | 27.5 | 304 |
| 5 | 62.7 | 7.3 | 5.6 | 24.4 | 287 | 2-2 | 68.2 | 9.1 | 12.1 | 10.6 | 264 |
| 2-1 | 72.9 | 8.5 | 12.9 | 5.7 | 247 | 4 | 61.6 | 8.2 | 10.9 | 19.2 | 292 |
| 3 | 65.4 | 7.6 | 11.6 | 15.3 | 275 | 6 | 56.2 | 7.5 | 10.0 | 26.2 | 320 |
| 5 | 59.4 | 6.9 | 10.6 | 23.1 | 303 | 3-2 | 64.3 | 8.6 | 17.1 | 10.0 | 280 |
| 3-1 | 68.4 | 8.0 | 18.2 | 5.3 | 263 | 4 | 58.4 | 7.8 | 15.6 | 18.2 | 308 |
| 3 | 61.9 | 7.2 | 16.5 | 14.4 | 291 | 6 | 53.6 | 7.1 | 14.3 | 25.0 | 336 |
| 5 | 56.4 | 6.6 | 15.0 | 21.9 | 319 | 4-2 | 60.8 | 8.1 | 21.6 | 9.4 | 296 |
| 4-1 | 64.5 | 7.5 | 22.9 | 5.0 | 279 | 4 | 55.6 | 7.4 | 19.7 | 17.3 | 324 |
| 3 | 58.6 | 6.8 | 20.8 | 13.7 | 307 | 6 | 51.1 | 6.8 | 18.2 | 23.9 | 352 |
| 5 | 53.8 | 6.2 | 19.1 | 20.9 | 335 | 5-2 | 57.7 | 7.7 | 25.6 | 9.0 | 312 |
| 5-1 | 61.0 | 7.1 | 27.1 | 4.8 | 295 | 4 | 52.9 | 7.1 | 23.5 | 16.5 | 340 |
| 3 | 55.7 | 6.5 | 24.8 | 13.0 | 323 | 6 | 48.9 | 6.5 | 21.7 | 22.8 | 368 |
| 5 | 51.3 | 6.0 | 22.8 | 19.9 | 351 | 6-2 | 54.9 | 7.3 | 29.3 | 8.5 | 328 |
| 6-1 | 57.9 | 6.7 | 30.9 | 4.5 | 311 | 8-2 | 50.0 | 6.7 | 35.6 | 7.7 | 360 |
| 3 | 53.1 | 6.2 | 28.3 | 12.4 | 339 | 9-2 | 47.9 | 6.4 | 38.3 | 7.4 | 376 |
| 5 | 49.1 | 5.7 | 26.1 | 19.1 | 367 | 4 | 44.6 | 5.9 | 35.6 | 13.9 | 404 |
| 6-1 | 52.5 | 6.1 | 37.3 | 4.1 | 343 | 12-6 | 37.5 | 5.0 | 40.0 | 17.5 | 480 |
| 9-3 | 46.5 | 5.4 | 37.2 | 10.9 | 387 | 15-25-1-1 | 76.6 | 10.6 | 6.8 | 6.0 | 235 |
| 15-22-1-2 | 73.2 | 8.9 | 6.5 | 11.4 | 246 | 3 | 68.4 | 9.5 | 6.1 | 16.0 | 263 |
| 4 | 65.7 | 8.0 | 5.8 | 20.4 | 274 | 5 | 61.8 | 8.6 | 5.5 | 24.0 | 291 |
| 6 | 59.6 | 7.3 | 5.3 | 27.8 | 302 | 2-1 | 71.7 | 10.0 | 12.7 | 5.6 | 251 |
| 2-2 | 68.7 | 8.4 | 12.2 | 10.7 | 262 | 3 | 64.5 | 9.0 | 11.5 | 15.0 | 279 |
| 4 | 62.1 | 7.6 | 11.0 | 19.3 | 290 | 5 | 58.6 | 8.1 | 10.4 | 22.8 | 307 |
| 6 | 56.6 | 6.9 | 10.1 | 26.4 | 318 | 3-1 | 67.4 | 9.4 | 18.0 | 5.2 | 267 |
| 3-2 | 64.7 | 7.9 | 17.3 | 10.1 | 278 | 3 | 61.0 | 8.5 | 16.3 | 14.2 | 295 |
| 4 | 58.8 | 7.2 | 15.7 | 18.3 | 306 | 5 | 55.7 | 7.7 | 14.9 | 21.7 | 323 |
| 6 | 53.9 | 6.6 | 14.4 | 25.1 | 334 | 4-1 | 63.6 | 8.8 | 22.6 | 4.9 | 283 |
| 4-2 | 61.2 | 7.5 | 21.8 | 9.5 | 294 | 3 | 57.9 | 8.0 | 20.6 | 13.5 | 311 |
| 4 | 55.9 | 6.8 | 19.9 | 17.4 | 322 | 5 | 53.1 | 7.4 | 18.9 | 20.6 | 339 |
| 6 | 51.4 | 6.3 | 18.3 | 24.0 | 350 | 5-1 | 60.2 | 8.3 | 26.7 | 4.7 | 299 |
| 5-2 | 58.1 | 7.1 | 25.8 | 9.0 | 310 | 3 | 55.0 | 7.6 | 24.5 | 12.8 | 327 |
| 4 | 53.2 | 6.5 | 23.7 | 16.6 | 338 | 5 | 50.7 | 7.0 | 22.5 | 19.7 | 355 |
| 6 | 49.2 | 6.0 | 21.9 | 22.9 | 366 | 6-1 | 57.1 | 7.9 | 30.5 | 4.4 | 315 |
| 6-2 | 55.2 | 6.7 | 29.4 | 8.6 | 326 | 3 | 52.5 | 7.3 | 28.0 | 12.2 | 343 |
| 4 | 50.8 | 6.2 | 27.1 | 15.8 | 354 | 5 | 48.5 | 6.7 | 25.9 | 18.9 | 371 |
| 6 | 47.1 | 5.8 | 25.1 | 22.0 | 382 | 8-5 | 44.6 | 6.2 | 31.8 | 17.4 | 403 |
| 7-2 | 52.6 | 6.4 | 32.7 | 8.2 | 342 | 15-26-1-2 | 72.0 | 10.4 | 6.4 | 11.2 | 250 |
| 8-4 | 46.6 | 5.7 | 33.2 | 14.5 | 386 | 4 | 64.7 | 9.3 | 5.8 | 20.1 | 278 |
| 15-23-1-1 | 77.3 | 9.9 | 6.8 | 6.0 | 233 | 6 | 58.8 | 8.5 | 5.2 | 27.4 | 306 |
| 3 | 69.0 | 8.8 | 6.1 | 16.1 | 261 | 2-2 | 67.7 | 9.8 | 12.0 | 10.5 | 266 |
| 5 | 62.3 | 8.0 | 5.5 | 24.2 | 289 | 4 | 61.2 | 8.8 | 10.9 | 19.0 | 294 |
| 2-1 | 72.3 | 9.2 | 12.8 | 5.6 | 249 | 6 | 55.9 | 8.1 | 9.9 | 26.1 | 322 |
| 3 | 65.0 | 8.3 | 11.6 | 15.1 | 277 | 3-2 | 63.8 | 9.2 | 17.0 | 9.9 | 282 |
| 5 | 59.0 | 7.5 | 10.5 | 23.0 | 305 | 4 | 58.1 | 8.4 | 15.5 | 18.0 | 310 |
| 3-1 | 67.9 | 8.7 | 18.1 | 5.3 | 265 | 6 | 53.2 | 7.7 | 14.2 | 24.9 | 338 |
| 3 | 61.4 | 7.8 | 16.4 | 14.3 | 293 | 4-2 | 60.4 | 8.7 | 21.5 | 9.4 | 298 |
| 5 | 56.1 | 7.2 | 14.9 | 21.8 | 321 | 4 | 55.2 | 8.0 | 19.6 | 17.2 | 326 |
| 4 | 51.0 | 6.2 | 22.8 | 5.0 | 281 | 6 | 50.9 | 7.3 | 18.1 | 23.7 | 354 |
| 3 | 58.3 | 7.4 | 20.7 | 13.6 | 309 | 5-2 | 57.3 | 8.3 | 25.5 | 8.9 | 314 |
| 5 | 53.4 | 6.8 | 19.0 | 20.8 | 337 | 4 | 52.6 | 7.6 | 23.4 | 16.4 | 342 |
| 5-1 | 60.6 | 7.7 | 26.9 | 4.7 | 297 | 6 | 48.6 | 7.0 | 21.6 | 22.7 | 370 |
| 3 | 55.4 | 7.1 | 24.6 | 12.9 | 325 | 10-2 | 45.7 | 6.6 | 40.6 | 7.1 | 394 |
| 5 | 51.0 | 6.5 | 22.7 | 19.8 | 353 | 15-27-1-1 | 75.9 | 11.4 | 6.7 | 5.9 | 237 |
| 6-1 | 57.5 | 7.3 | 30.7 | 4.5 | 313 | 3 | 67.9 | 10.2 | 6.0 | 15.9 | 265 |
| 3 | 52.8 | 6.7 | 28.2 | 12.3 | 341 | 5 | 61.4 | 9.2 | 5.5 | 23.9 | 293 |
| 5 | 48.8 | 6.2 | 26.0 | 19.0 | 369 | 2-1 | 71.2 | 10.7 | 12.6 | 5.5 | 253 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 15-27-2-3 | 64.0 | 9.6 | 11.4 | 14.9 | 281 | 15-30-5-2 | 56.6 | 9.4 | 25.2 | 8.8 | 318 |
| 5 | 58.3 | 8.7 | 10.3 | 22.7 | 309 | 4 | 52.0 | 8.7 | 23.1 | 16.2 | 346 |
| 3-1 | 66.9 | 10.0 | 17.8 | 5.2 | 269 | 6 | 48.1 | 8.0 | 21.4 | 22.5 | 374 |
| 3 | 60.6 | 9.1 | 16.2 | 14.1 | 297 | 6-2 | 53.9 | 9.0 | 28.7 | 8.4 | 334 |
| 5 | 55.4 | 8.3 | 14.8 | 21.5 | 325 | 4 | 49.7 | 8.3 | 26.5 | 15.5 | 362 |
| 4-1 | 63.2 | 9.5 | 22.4 | 4.9 | 285 | 6 | 46.2 | 7.7 | 24.6 | 21.5 | 390 |
| 3 | 57.5 | 8.6 | 20.4 | 13.4 | 313 | 7-2 | 51.4 | 8.6 | 32.0 | 8.0 | 350 |
| 5 | 52.8 | 7.9 | 18.8 | 20.5 | 341 | 4 | 47.6 | 7.9 | 29.6 | 14.8 | 378 |
| 5-1 | 59.8 | 9.0 | 26.6 | 4.6 | 301 | 6 | 44.3 | 7.4 | 27.6 | 20.7 | 406 |
| 3 | 54.7 | 8.2 | 24.3 | 12.7 | 329 | 15-31-1-1 | 74.7 | 12.9 | 6.6 | 5.8 | 241 |
| 5 | 50.4 | 7.6 | 22.4 | 19.6 | 357 | 3 | 66.9 | 11.5 | 5.9 | 15.6 | 269 |
| 6-1 | 56.8 | 8.5 | 30.3 | 4.4 | 317 | 5 | 60.6 | 10.4 | 5.4 | 23.6 | 297 |
| 3 | 52.2 | 7.8 | 27.8 | 12.2 | 345 | 2-1 | 70.0 | 12.1 | 12.4 | 5.4 | 257 |
| 5 | 48.3 | 7.2 | 25.7 | 18.8 | 373 | 3 | 63.2 | 10.9 | 11.2 | 14.7 | 285 |
| 7-1 | 54.0 | 8.1 | 33.6 | 4.2 | 333 | 5 | 57.5 | 9.9 | 10.2 | 22.4 | 313 |
| 3 | 49.9 | 7.5 | 31.0 | 11.6 | 361 | 3-1 | 65.9 | 11.4 | 17.6 | 5.1 | 273 |
| 5 | 46.3 | 6.9 | 28.8 | 18.0 | 389 | 3 | 59.8 | 10.3 | 16.0 | 13.9 | 301 |
| 15-28-1-2 | 71.4 | 11.1 | 6.3 | 11.1 | 252 | 5 | 54.7 | 9.4 | 14.6 | 21.3 | 329 |
| 4 | 64.3 | 10.0 | 5.7 | 20.0 | 280 | 15-32-1-2 | 70.3 | 12.5 | 6.2 | 10.9 | 256 |
| 6 | 58.4 | 9.1 | 5.2 | 27.3 | 308 | 4 | 63.4 | 11.3 | 6.6 | 19.7 | 284 |
| 2-2 | 67.2 | 10.4 | 11.9 | 10.4 | 268 | 6 | 57.7 | 10.2 | 5.2 | 26.9 | 312 |
| 4 | 60.8 | 9.5 | 10.8 | 18.9 | 296 | 2-2 | 60.2 | 11.7 | 11.7 | 10.3 | 272 |
| 6 | 55.6 | 8.6 | 9.9 | 25.9 | 324 | 4 | 60.0 | 10.7 | 10.7 | 18.6 | 300 |
| 3-2 | 63.4 | 9.8 | 16.9 | 9.8 | 284 | 6 | 54.9 | 9.7 | 9.7 | 25.6 | 328 |
| 4 | 57.7 | 9.0 | 15.4 | 17.9 | 312 | 15-33-3-1 | 65.4 | 12.0 | 17.4 | 5.1 | 275 |
| 6 | 52.9 | 8.2 | 14.1 | 24.7 | 340 | 16-2-6-2 | 60.4 | 0.6 | 30.2 | 8.8 | 318 |
| 4-2 | 60.0 | 9.3 | 21.3 | 9.3 | 300 | 16-6-2-2 | 74.4 | 2.3 | 12.4 | 10.9 | 258 |
| 4 | 54.9 | 8.5 | 19.5 | 17.1 | 328 | 8-4 | 50.3 | 1.6 | 33.5 | 14.6 | 382 |
| 6 | 50.6 | 7.8 | 18.0 | 23.6 | 356 | 16-7-6-1 | 62.1 | 2.3 | 31.1 | 4.5 | 309 |
| 5-2 | 57.0 | 8.8 | 25.3 | 8.8 | 316 | 16-8-2-2 | 73.8 | 3.1 | 12.3 | 10.8 | 260 |
| 4 | 52.3 | 8.1 | 23.3 | 16.3 | 344 | 4 | 66.7 | 2.8 | 11.1 | 19.4 | 288 |
| 6 | 48.4 | 7.5 | 21.5 | 22.6 | 372 | 4-2 | 65.8 | 2.7 | 21.9 | 9.6 | 292 |
| 15-29-1-1 | 75.3 | 12.1 | 6.7 | 5.9 | 239 | 4 | 60.0 | 2.5 | 20.0 | 17.5 | 320 |
| 3 | 67.4 | 10.9 | 6.0 | 15.7 | 267 | 6 | 55.2 | 2.3 | 18.4 | 24.1 | 348 |
| 5 | 61.0 | 9.8 | 5.4 | 23.7 | 295 | 5-2 | 62.3 | 2.6 | 26.0 | 9.1 | 308 |
| 2-1 | 70.6 | 11.4 | 12.6 | 5.4 | 255 | 4 | 57.1 | 2.4 | 23.8 | 16.7 | 336 |
| 3 | 63.6 | 10.2 | 11.3 | 14.8 | 283 | 6 | 52.7 | 2.2 | 22.0 | 23.1 | 364 |
| 5 | 57.9 | 9.3 | 10.3 | 22.5 | 311 | 6-2 | 59.3 | 2.5 | 29.6 | 8.6 | 324 |
| 3-1 | 66.4 | 10.7 | 17.7 | 5.2 | 271 | 4 | 54.5 | 2.3 | 27.3 | 15.9 | 352 |
| 3 | 60.2 | 9.7 | 16.0 | 14.0 | 299 | 6 | 50.5 | 2.1 | 25.3 | 22.1 | 380 |
| 5 | 55.0 | 8.9 | 14.7 | 21.4 | 327 | 7-2 | 56.5 | 2.3 | 32.9 | 8.2 | 340 |
| 4-1 | 62.7 | 10.1 | 22.3 | 4.9 | 287 | 4 | 52.2 | 2.2 | 30.4 | 15.2 | 368 |
| 3 | 57.1 | 9.2 | 20.3 | 13.3 | 315 | 6 | 48.5 | 2.0 | 28.3 | 21.2 | 396 |
| 5 | 52.5 | 8.4 | 18.6 | 20.4 | 343 | 10-4 | 46.2 | 1.9 | 38.4 | 13.5 | 416 |
| 5-1 | 59.4 | 9.6 | 26.4 | 4.6 | 303 | 13-4 | 41.4 | 1.7 | 44.8 | 12.1 | 464 |
| 3 | 54.4 | 8.7 | 24.2 | 12.7 | 331 | 16-9-1-1 | 83.1 | 3.9 | 6.9 | 6.1 | 231 |
| 5 | 50.1 | 8.1 | 22.3 | 19.5 | 359 | 3 | 74.1 | 3.5 | 6.2 | 16.2 | 259 |
| 15-30-1-2 | 70.9 | 11.8 | 6.3 | 11.0 | 254 | 5 | 66.9 | 3.1 | 5.6 | 24.4 | 287 |
| 4 | 63.8 | 10.6 | 5.7 | 19.8 | 282 | 2-1 | 77.7 | 3.6 | 12.9 | 5.7 | 247 |
| 6 | 58.1 | 9.7 | 5.1 | 27.1 | 310 | 3 | 69.8 | 3.3 | 11.6 | 15.3 | 275 |
| 2-2 | 66.7 | 11.1 | 11.8 | 10.4 | 270 | 5 | 63.4 | 3.0 | 10.5 | 23.1 | 303 |
| 4 | 60.4 | 10.1 | 10.7 | 18.8 | 298 | 3-1 | 73.0 | 3.4 | 18.2 | 5.3 | 263 |
| 6 | 55.2 | 9.2 | 9.8 | 25.8 | 326 | 3 | 66.0 | 3.1 | 16.5 | 14.4 | 291 |
| 3-2 | 62.9 | 10.5 | 16.8 | 9.8 | 286 | 5 | 60.2 | 2.8 | 15.0 | 21.9 | 319 |
| 4 | 57.3 | 9.5 | 15.3 | 17.8 | 314 | 4-1 | 68.8 | 3.2 | 22.9 | 5.0 | 279 |
| 6 | 52.6 | 8.8 | 14.0 | 24.6 | 342 | 3 | 62.5 | 2.9 | 20.8 | 13.7 | 307 |
| 4-2 | 59.6 | 9.9 | 21.2 | 9.3 | 302 | 5 | 57.3 | 2.7 | 19.1 | 20.9 | 335 |
| 4 | 54.5 | 9.1 | 19.4 | 17.0 | 330 | 5-1 | 65.1 | 3.0 | 27.1 | 4.7 | 295 |
| 6 | 50.3 | 8.4 | 17.9 | 23.4 | 358 | 3 | 59.4 | 2.8 | 24.8 | 13.0 | 323 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 16-9-5-5 | 54.6 | 2.6 | 22.8 | 19.9 | 351 | 16-12-1-4 | 69.6 | 4.3 | 5.8 | 20.3 | 276 |
| 7 | 50.6 | 2.4 | 21.1 | 25.8 | 379 | 6 | 63.2 | 3.9 | 5.3 | 27.6 | 304 |
| 6-5 | 52.3 | 2.4 | 26.2 | 19.1 | 367 | 2-2 | 72.7 | 4.5 | 12.1 | 10.6 | 264 |
| 8-5 | 48.1 | 2.2 | 32.1 | 17.5 | 399 | 4 | 65.8 | 4.1 | 10.9 | 19.2 | 292 |
| 7 | 45.0 | 2.1 | 30.0 | 22.0 | 427 | 6 | 60.0 | 3.7 | 10.0 | 26.3 | 320 |
| 16-10-1-2 | 78.0 | 4.1 | 6.5 | 11.4 | 246 | 3-2 | 68.6 | 4.3 | 17.1 | 10.0 | 280 |
| 4 | 70.1 | 3.6 | 5.8 | 20.4 | 274 | 4 | 62.3 | 3.9 | 15.6 | 18.1 | 308 |
| 6 | 63.6 | 3.3 | 5.3 | 27.8 | 302 | 6 | 57.1 | 3.6 | 14.3 | 25.0 | 336 |
| 2-2 | 73.3 | 3.8 | 12.2 | 10.7 | 262 | 4-2 | 64.8 | 4.1 | 21.6 | 9.5 | 296 |
| 4 | 66.2 | 3.4 | 11.0 | 19.3 | 290 | 4 | 59.3 | 3.7 | 19.7 | 17.3 | 324 |
| 6 | 60.4 | 3.1 | 10.1 | 26.4 | 318 | 6 | 54.5 | 3.4 | 18.2 | 23.9 | 352 |
| 3-2 | 69.1 | 3.6 | 17.3 | 10.0 | 278 | 5-2 | 61.5 | 3.8 | 25.6 | 9.0 | 312 |
| 4 | 62.7 | 3.3 | 15.7 | 18.3 | 306 | 4 | 56.5 | 3.5 | 23.5 | 16.5 | 340 |
| 6 | 57.5 | 3.0 | 14.4 | 25.1 | 334 | 6 | 52.2 | 3.3 | 21.7 | 22.8 | 368 |
| 4-2 | 65.3 | 3.4 | 21.8 | 9.5 | 294 | 0-2 | 58.5 | 3.7 | 29.3 | 8.5 | 328 |
| 4 | 59.6 | 3.1 | 19.9 | 17.4 | 322 | 4 | 53.9 | 3.4 | 27.0 | 15.7 | 356 |
| 6 | 54.9 | 2.8 | 18.3 | 24.0 | 350 | 6 | 50.0 | 3.1 | 25.0 | 21.9 | 384 |
| 5-2 | 61.9 | 3.2 | 25.8 | 9.0 | 310 | 7-2 | 55.8 | 3.5 | 32.6 | 8.1 | 344 |
| 4 | 56.8 | 3.0 | 23.7 | 16.5 | 338 | 4 | 51.6 | 3.2 | 30.1 | 15.1 | 372 |
| 6 | 52.5 | 2.7 | 21.9 | 22.9 | 366 | 6 | 48.0 | 3.0 | 28.0 | 21.0 | 400 |
| 6-2 | 55.0 | 3.1 | 29.4 | 8.6 | 326 | 8-2 | 53.3 | 3.3 | 35.6 | 7.8 | 360 |
| 4 | 54.2 | 2.8 | 27.1 | 15.8 | 354 | 4 | 49.5 | 3.1 | 33.0 | 14.4 | 388 |
| 6 | 50.3 | 2.6 | 25.1 | 22.0 | 382 | 6 | 46.1 | 2.9 | 30.8 | 20.2 | 416 |
| 8 | 46.8 | 2.4 | 23.4 | 27.3 | 410 | 9-2 | 51.1 | 3.2 | 38.3 | 7.4 | 376 |
| 7-2 | 56.1 | 2.9 | 32.7 | 8.2 | 342 | 10-4 | 45.7 | 2.9 | 38.1 | 13.3 | 420 |
| 4 | 51.9 | 2.7 | 30.3 | 15.1 | 370 | 6 | 42.8 | 2.7 | 35.7 | 18.8 | 448 |
| 6 | 48.2 | 2.5 | 28.1 | 21.1 | 398 | 16-13-1-1 | 81.7 | 5.5 | 6.8 | 6.0 | 235 |
| 8-2 | 53.6 | 2.8 | 35.7 | 7.8 | 358 | 3 | 73.0 | 4.9 | 6.1 | 16.0 | 263 |
| 4 | 49.7 | 2.6 | 33.2 | 14.5 | 386 | 5 | 69.0 | 4.5 | 5.5 | 24.0 | 291 |
| 6 | 46.4 | 2.4 | 30.9 | 20.3 | 414 | 2-1 | 76.5 | 5.2 | 12.7 | 5.6 | 251 |
| 9-2 | 51.3 | 2.7 | 38.5 | 7.5 | 374 | 3 | 68.8 | 4.7 | 11.5 | 15.0 | 279 |
| 6 | 44.6 | 2.3 | 33.5 | 19.5 | 430 | 5 | 62.5 | 4.2 | 10.4 | 22.8 | 307 |
| 13-4 | 42.7 | 2.2 | 42.7 | 12.4 | 450 | 3-1 | 71.9 | 4.9 | 18.0 | 5.2 | 297 |
| 16-11-1-1 | 82.4 | 4.7 | 6.9 | 6.0 | 233 | 3 | 65.1 | 4.4 | 16.3 | 14.2 | 295 |
| 3 | 73.6 | 4.2 | 6.1 | 16.1 | 261 | 5 | 59.4 | 4.0 | 14.9 | 21.7 | 323 |
| 5 | 66.4 | 3.8 | 5.5 | 24.2 | 289 | 4-1 | 67.9 | 4.6 | 22.6 | 4.9 | 283 |
| 2-1 | 77.1 | 4.4 | 12.8 | 5.6 | 249 | 3 | 61.7 | 4.2 | 20.6 | 13.5 | 311 |
| 3 | 69.3 | 4.0 | 11.5 | 15.2 | 277 | 5 | 56.6 | 3.8 | 18.9 | 20.6 | 339 |
| 5 | 62.9 | 3.6 | 10.5 | 22.9 | 305 | 5-1 | 64.2 | 4.3 | 26.7 | 4.7 | 299 |
| 3-1 | 72.5 | 4.1 | 18.1 | 5.3 | 265 | 3 | 58.7 | 4.0 | 24.5 | 12.8 | 327 |
| 3 | 65.5 | 3.7 | 16.4 | 14.3 | 293 | 5 | 54.1 | 3.7 | 22.5 | 19.7 | 355 |
| 5 | 59.8 | 3.4 | 15.0 | 21.8 | 321 | 6-1 | 61.0 | 4.1 | 30.5 | 4.4 | 315 |
| 4-1 | 68.3 | 3.9 | 22.8 | 5.0 | 281 | 3 | 56.0 | 3.8 | 28.0 | 12.2 | 343 |
| 3 | 62.1 | 3.6 | 20.7 | 13.6 | 309 | 5 | 51.7 | 3.5 | 25.9 | 18.9 | 371 |
| 5 | 57.0 | 3.2 | 19.0 | 20.8 | 337 | 7-1 | 58.0 | 3.9 | 33.8 | 4.3 | 331 |
| 5-1 | 64.7 | 3.7 | 26.9 | 4.7 | 297 | 3 | 53.5 | 3.6 | 31.2 | 11.7 | 359 |
| 3 | 59.1 | 3.4 | 24.6 | 12.9 | 325 | 5 | 49.6 | 3.4 | 28.9 | 18.1 | 387 |
| 5 | 54.4 | 3.1 | 22.7 | 19.8 | 353 | 8-1 | 55.3 | 3.7 | 36.9 | 4.0 | 347 |
| 6-1 | 61.3 | 3.5 | 30.7 | 4.5 | 313 | 3 | 51.2 | 3.5 | 34.1 | 11.2 | 375 |
| 9 | 56.3 | 3.2 | 28.2 | 12.3 | 341 | 5 | 47.5 | 3.2 | 31.8 | 17.4 | 403 |
| 5 | 52.0 | 3.0 | 26.0 | 19.0 | 369 | 6-5 | 45.8 | 3.1 | 34.3 | 16.7 | 419 |
| 7-1 | 58.4 | 3.3 | 34.1 | 4.2 | 329 | 10-3 | 47.2 | 3.2 | 39.3 | 10.3 | 407 |
| 3 | 53.8 | 3.1 | 31.4 | 11.7 | 357 | 16-14-1-2 | 76.8 | 5.6 | 6.4 | 11.2 | 250 |
| 5 | 49.9 | 2.8 | 29.1 | 18.2 | 385 | 4 | 69.1 | 5.0 | 5.8 | 20.1 | 278 |
| 8-1 | 55.7 | 3.2 | 37.1 | 4.0 | 345 | 6 | 62.7 | 4.6 | 5.2 | 27.5 | 306 |
| 3 | 51.5 | 2.9 | 34.3 | 11.3 | 373 | 2-2 | 72.2 | 5.3 | 12.0 | 10.5 | 266 |
| 5 | 47.9 | 2.7 | 31.9 | 17.5 | 401 | 4 | 65.8 | 4.8 | 19.9 | 19.0 | 294 |
| 10-3 | 47.4 | 2.7 | 39.5 | 10.4 | 405 | 6 | 59.6 | 4.3 | 9.9 | 26.1 | 322 |
| 16-12-1-2 | 77.4 | 4.8 | 6.4 | 11.3 | 248 | 3-2 | 68.1 | 5.0 | 17.0 | 9.9 | 282 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | G.M. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 16-14-3-4 | 61.9 | 4.5 | 15.5 | 18.1 | 310 | 16-16-5-2 | 60.6 | 5.1 | 25.3 | 8.9 | 316 |
| 6 | 56.8 | 4.1 | 14.2 | 24.8 | 338 | 4 | 55.8 | 4.6 | 23.3 | 16.3 | 344 |
| 4-2 | 64.4 | 4.7 | 21.5 | 9.4 | 298 | 6 | 51.6 | 4.3 | 21.5 | 22.6 | 372 |
| 4 | 58.9 | 4.3 | 19.6 | 17.2 | 326 | 6-2 | 57.8 | 4.8 | 28.9 | 8.4 | 332 |
| 6 | 54.2 | 3.9 | 18.1 | 23.7 | 354 | 4 | 53.3 | 4.4 | 26.7 | 15.5 | 360 |
| 5-2 | 61.2 | 4.4 | 25.5 | 8.9 | 314 | 6 | 49.5 | 4.1 | 24.7 | 21.6 | 388 |
| 4 | 56.1 | 4.1 | 23.4 | 16.4 | 342 | 7-2 | 55.2 | 4.6 | 32.2 | 8.0 | 348 |
| 6 | 51.9 | 3.8 | 21.6 | 22.7 | 370 | 4 | 51.1 | 4.2 | 29.8 | 14.9 | 376 |
| 6-2 | 58.2 | 4.2 | 29.1 | 8.5 | 330 | 6 | 47.5 | 4.0 | 27.7 | 20.8 | 404 |
| 4 | 53.6 | 3.9 | 26.8 | 15.6 | 358 | 8-2 | 52.7 | 4.4 | 35.2 | 7.7 | 364 |
| 6 | 49.7 | 3.6 | 24.9 | 21.7 | 386 | 4 | 49.0 | 4.1 | 32.6 | 14.3 | 392 |
| 7-2 | 55.5 | 4.0 | 32.4 | 8.1 | 346 | 6 | 45.7 | 3.8 | 30.5 | 20.0 | 420 |
| 4 | 51.3 | 3.7 | 30.0 | 15.0 | 374 | 8 | 42.9 | 3.5 | 28.6 | 25.0 | 448 |
| 6 | 47.8 | 3.5 | 27.8 | 20.9 | 402 | 16-17-1-1 | 80.3 | 7.1 | 6.7 | 5.9 | 239 |
| 8-2 | 53.0 | 3.9 | 35.4 | 7.7 | 362 | 3 | 71.9 | 6.4 | 6.0 | 15.7 | 267 |
| 4 | 49.2 | 3.6 | 32.8 | 14.4 | 390 | 5 | 65.1 | 5.8 | 5.4 | 23.7 | 295 |
| 6 | 45.9 | 3.3 | 30.6 | 20.1 | 418 | 2-1 | 75.3 | 6.6 | 12.6 | 5.5 | 255 |
| 6-2 | 50.8 | 3.7 | 38.1 | 7.4 | 378 | 3 | 67.9 | 6.0 | 11.3 | 14.8 | 283 |
| 4 | 47.3 | 3.4 | 35.5 | 13.8 | 406 | 5 | 61.7 | 5.5 | 10.3 | 22.5 | 311 |
| 6 | 44.2 | 3.2 | 33.2 | 19.3 | 434 | 3-1 | 70.9 | 6.3 | 17.7 | 5.2 | 271 |
| 16-15-1-1 | 81.0 | 6.3 | 6.7 | 5.9 | 237 | 3 | 64.2 | 5.7 | 16.0 | 14.0 | 269 |
| 3 | 72.5 | 5.7 | 6.1 | 15.8 | 265 | 5 | 58.7 | 5.2 | 14.7 | 21.4 | 327 |
| 5 | 65.5 | 5.1 | 5.5 | 23.9 | 293 | 4-1 | 66.9 | 5.9 | 22.3 | 4.9 | 287 |
| 2-1 | 75.9 | 5.9 | 12.6 | 5.5 | 253 | 3 | 60.9 | 5.4 | 20.3 | 13.3 | 315 |
| 3 | 68.3 | 5.3 | 10.8 | 14.9 | 281 | 5 | 56.0 | 4.9 | 18.7 | 20.4 | 343 |
| 5 | 62.1 | 4.8 | 10.4 | 22.7 | 309 | 5-1 | 63.4 | 5.6 | 26.4 | 4.6 | 303 |
| 3-1 | 71.4 | 5.6 | 17.8 | 5.2 | 269 | 3 | 58.0 | 5.1 | 24.2 | 12.7 | 331 |
| 3 | 64.6 | 5.0 | 16.2 | 14.1 | 297 | 5 | 53.5 | 4.7 | 22.3 | 19.5 | 359 |
| 5 | 59.1 | 4.6 | 14.8 | 21.5 | 325 | 6-1 | 60.2 | 5.3 | 30.1 | 4.4 | 319 |
| 4-1 | 67.4 | 5.3 | 22.4 | 4.9 | 285 | 3 | 55.3 | 4.9 | 27.7 | 12.1 | 347 |
| 3 | 61.4 | 4.8 | 20.4 | 13.4 | 313 | 5 | 51.2 | 4.5 | 25.6 | 18.7 | 375 |
| 5 | 56.3 | 4.4 | 18.8 | 20.5 | 341 | 7-1 | 57.3 | 5.1 | 33.4 | 4.2 | 335 |
| 5-1 | 63.8 | 5.0 | 26.6 | 4.6 | 301 | 3 | 52.9 | 4.7 | 30.8 | 11.6 | 363 |
| 3 | 58.4 | 4.5 | 24.3 | 12.8 | 329 | 5 | 49.1 | 4.3 | 28.7 | 17.9 | 391 |
| 5 | 53.8 | 4.2 | 22.4 | 19.6 | 357 | 9-1 | 52.3 | 4.6 | 39.2 | 3.8 | 367 |
| 6-1 | 60.6 | 4.7 | 30.3 | 4.4 | 317 | 16-18-1-2 | 75.6 | 7.1 | 6.3 | 11.0 | 254 |
| 3 | 55.7 | 4.3 | 27.8 | 12.2 | 345 | 4 | 68.1 | 6.4 | 5.7 | 19.8 | 282 |
| 5 | 51.5 | 4.0 | 25.7 | 18.8 | 373 | 6 | 61.9 | 5.8 | 5.2 | 27.1 | 310 |
| 7-1 | 57.7 | 4.5 | 33.6 | 4.2 | 333 | 2-2 | 71.1 | 6.7 | 11.8 | 10.4 | 270 |
| 3 | 53.2 | 4.1 | 31.0 | 11.6 | 361 | 4 | 64.4 | 6.0 | 10.7 | 18.8 | 298 |
| 5 | 49.3 | 3.8 | 28.8 | 18.0 | 389 | 6 | 58.9 | 5.5 | 9.8 | 25.8 | 326 |
| 8-1 | 55.0 | 4.3 | 36.7 | 4.0 | 349 | 3-2 | 67.1 | 6.3 | 16.8 | 9.8 | 286 |
| 3 | 50.9 | 4.0 | 34.0 | 11.1 | 377 | 4 | 61.2 | 5.7 | 15.3 | 17.8 | 314 |
| 5 | 47.4 | 3.7 | 31.6 | 17.3 | 405 | 6 | 56.1 | 5.3 | 14.0 | 24.6 | 342 |
| 9-1 | 52.6 | 4.1 | 39.5 | 3.8 | 365 | 4-2 | 63.6 | 5.9 | 21.2 | 9.3 | 302 |
| 3 | 48.9 | 3.8 | 36.6 | 10.7 | 393 | 4 | 58.2 | 5.4 | 19.4 | 17.0 | 330 |
| 5 | 45.6 | 3.6 | 34.1 | 16.6 | 421 | 6 | 53.6 | 5.0 | 17.9 | 23.5 | 358 |
| 16-16-1-2 | 76.2 | 6.3 | 6.3 | 11.1 | 252 | 5-2 | 60.4 | 5.6 | 25.2 | 8.8 | 318 |
| 4 | 68.6 | 5.7 | 5.7 | 20.0 | 280 | 4 | 55.5 | 5.2 | 23.1 | 16.2 | 346 |
| 6 | 62.3 | 5.2 | 5.2 | 27.3 | 308 | 6 | 51.3 | 4.8 | 21.4 | 22.5 | 374 |
| 2-2 | 71.7 | 6.0 | 11.9 | 10.4 | 268 | 6-2 | 57.5 | 5.4 | 28.7 | 8.4 | 334 |
| 4 | 64.8 | 5.4 | 10.8 | 18.9 | 296 | 4 | 53.0 | 5.0 | 26.5 | 15.5 | 362 |
| 6 | 59.3 | 4.9 | 9.9 | 25.9 | 324 | 6 | 49.2 | 4.6 | 24.6 | 21.5 | 390 |
| 3-2 | 67.6 | 5.6 | 16.9 | 9.9 | 284 | 8-2 | 52.4 | 4.9 | 35.0 | 7.6 | 366 |
| 4 | 61.5 | 5.1 | 15.4 | 17.9 | 312 | 16-19-1-1 | 79.7 | 7.9 | 6.6 | 5.8 | 241 |
| 6 | 56.5 | 4.7 | 14.1 | 24.7 | 340 | 3 | 71.4 | 7.1 | 5.9 | 15.6 | 269 |
| 4-2 | 64.0 | 5.3 | 21.3 | 9.3 | 300 | 5 | 64.6 | 6.4 | 5.4 | 23.6 | 297 |
| 4 | 58.5 | 4.9 | 19.5 | 17.1 | 328 | 2-1 | 74.7 | 7.4 | 12.4 | 5.4 | 257 |
| 6 | 53.9 | 4.5 | 18.0 | 23.6 | 356 | 3 | 67.4 | 6.7 | 11.2 | 14.7 | 285 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 16-19-2-5 | 61.3 | 6.1 | 10.2 | 22.4 | 313 | 16-22-3-6 | 55.5 | 6.3 | 13.9 | 24.3 | 346 |
| 3-1 | 70.3 | 7.0 | 17.6 | 5.1 | 273 | 4-2 | 62.7 | 7.2 | 20.9 | 9.1 | 306 |
| 3 | 63.8 | 6.3 | 15.9 | 13.9 | 301 | 4 | 57.5 | 6.6 | 19.1 | 16.8 | 334 |
| 5 | 58.4 | 5.7 | 14.6 | 21.3 | 329 | 6 | 53.0 | 6.1 | 17.7 | 23.2 | 362 |
| 4-1 | 66.4 | 6.6 | 22.1 | 4.8 | 289 | 5-2 | 59.6 | 6.8 | 24.8 | 8.7 | 322 |
| 3 | 60.6 | 6.0 | 20.2 | 13.2 | 317 | 4 | 54.7 | 6.4 | 22.9 | 16.0 | 350 |
| 5 | 55.7 | 5.5 | 18.5 | 20.3 | 345 | 6 | 50.8 | 5.8 | 21.2 | 22.2 | 378 |
| 5-1 | 62.9 | 6.2 | 26.2 | 4.6 | 305 | 6-2 | 56.8 | 6.5 | 28.4 | 8.3 | 338 |
| 3 | 57.7 | 5.7 | 24.0 | 12.6 | 333 | 4 | 52.5 | 6.0 | 26.2 | 15.3 | 366 |
| 5 | 53.2 | 5.2 | 22.2 | 19.4 | 361 | 6 | 48.7 | 5.6 | 24.4 | 21.3 | 394 |
| 6-1 | 59.8 | 5.9 | 29.9 | 4.4 | 321 | 8-4 | 48.2 | 5.5 | 32.2 | 14.1 | 398 |
| 3 | 55.0 | 5.4 | 27.5 | 12.0 | 349 | 13-4 | 40.2 | 4.6 | 43.5 | 11.7 | 478 |
| 5 | 50.9 | 5.0 | 25.5 | 18.6 | 377 | 16-23-1-1 | 78.4 | 9.4 | 6.5 | 5.7 | 245 |
| 16-20-1-2 | 75.0 | 7.8 | 6.2 | 10.9 | 256 | 3 | 70.3 | 8.4 | 5.9 | 15.4 | 273 |
| 4 | 67.6 | 7.0 | 5.6 | 19.7 | 284 | 5 | 63.8 | 7.6 | 5.3 | 23.2 | 301 |
| 6 | 61.5 | 6.4 | 5.1 | 26.9 | 312 | 2-1 | 73.6 | 8.8 | 12.2 | 5.4 | 261 |
| 2-2 | 70.6 | 7.3 | 11.8 | 10.3 | 272 | 3 | 66.4 | 8.0 | 11.1 | 14.5 | 289 |
| 4 | 64.0 | 6.7 | 10.7 | 18.6 | 300 | 5 | 60.6 | 7.2 | 10.1 | 22.1 | 317 |
| 6 | 58.5 | 6.1 | 9.7 | 25.6 | 328 | 3-1 | 60.3 | 8.3 | 17.3 | 5.1 | 277 |
| 3-2 | 66.7 | 6.9 | 16.7 | 9.7 | 288 | 3 | 62.9 | 7.5 | 15.7 | 13.8 | 305 |
| 4 | 60.8 | 6.3 | 15.2 | 17.7 | 316 | 5 | 57.7 | 6.9 | 14.4 | 21.0 | 333 |
| 6 | 55.8 | 5.8 | 14.0 | 24.4 | 344 | 4-1 | 65.5 | 7.8 | 21.8 | 4.8 | 293 |
| 4-2 | 63.2 | 6.6 | 21.0 | 9.2 | 304 | 3 | 59.8 | 7.2 | 19.9 | 13.1 | 321 |
| 4 | 57.8 | 6.0 | 19.3 | 16.9 | 332 | 5 | 55.0 | 6.6 | 18.2 | 20.1 | 349 |
| 6 | 53.3 | 5.6 | 17.8 | 23.3 | 360 | 5-1 | 62.1 | 7.4 | 25.9 | 4.5 | 309 |
| 5-2 | 60.0 | 6.2 | 25.0 | 8.8 | 320 | 3 | 57.0 | 6.8 | 23.7 | 12.5 | 337 |
| 4 | 55.2 | 5.7 | 23.0 | 16.1 | 348 | 5 | 52.6 | 6.3 | 21.9 | 19.2 | 365 |
| 6 | 51.1 | 5.3 | 21.3 | 22.3 | 376 | 6-1 | 59.1 | 7.1 | 29.5 | 4.3 | 325 |
| 6-2 | 57.1 | 5.9 | 28.6 | 8.3 | 336 | 3 | 54.4 | 6.5 | 27.2 | 11.9 | 353 |
| 8-2 | 52.2 | 5.4 | 34.7 | 7.6 | 368 | 5 | 50.4 | 6.0 | 25.2 | 18.4 | 381 |
| 8 | 42.5 | 4.4 | 28.3 | 24.8 | 452 | 6-5 | 44.7 | 5.4 | 33.6 | 16.3 | 429 |
| 9-6 | 43.6 | 4.5 | 32.7 | 19.1 | 440 | 16-24-1-2 | 73.8 | 9.2 | 6.1 | 10.8 | 260 |
| 16-21-1-1 | 79.0 | 8.6 | 6.6 | 5.8 | 243 | 4 | 66.7 | 8.3 | 5.6 | 19.4 | 288 |
| 3 | 70.8 | 7.7 | 5.9 | 15.5 | 271 | 6 | 60.7 | 7.6 | 5.1 | 26.6 | 316 |
| 5 | 64.2 | 7.0 | 5.3 | 23.4 | 299 | 2-2 | 69.6 | 8.7 | 11.6 | 10.1 | 276 |
| 2-1 | 74.1 | 8.1 | 12.3 | 5.4 | 259 | 4 | 63.2 | 7.9 | 10.5 | 18.4 | 304 |
| 3 | 66.9 | 7.3 | 11.1 | 14.6 | 287 | 6 | 57.8 | 7.2 | 9.6 | 25.3 | 332 |
| 5 | 60.9 | 6.7 | 10.2 | 22.2 | 315 | 3-2 | 65.7 | 8.2 | 16.4 | 9.6 | 292 |
| 3-1 | 69.8 | 7.6 | 17.4 | 5.1 | 275 | 4 | 60.0 | 7.5 | 15.0 | 17.5 | 320 |
| 3 | 63.4 | 6.9 | 15.8 | 13.9 | 303 | 6 | 55.2 | 6.9 | 13.8 | 24.1 | 348 |
| 5 | 58.0 | 6.3 | 14.5 | 21.1 | 331 | 4-2 | 62.3 | 7.8 | 20.8 | 9.1 | 308 |
| 4-1 | 66.0 | 7.2 | 22.0 | 4.8 | 291 | 4 | 57.1 | 7.1 | 19.0 | 16.7 | 336 |
| 5 | 60.2 | 6.6 | 20.0 | 13.2 | 319 | 6 | 52.7 | 6.6 | 17.6 | 23.1 | 364 |
| 5 | 55.3 | 6.0 | 18.4 | 20.2 | 347 | 5-2 | 59.3 | 7.4 | 24.7 | 8.6 | 324 |
| 5-1 | 62.5 | 6.8 | 26.1 | 4.6 | 307 | 4 | 54.6 | 6.8 | 22.7 | 15.9 | 352 |
| 3 | 57.3 | 6.3 | 23.9 | 12.5 | 335 | 6 | 50.5 | 6.3 | 21.0 | 22.1 | 380 |
| 5 | 52.9 | 5.8 | 22.0 | 19.3 | 363 | 6-2 | 56.5 | 7.1 | 28.2 | 8.2 | 340 |
| 6-1 | 59.4 | 6.5 | 39.7 | 4.3 | 323 | 8-2 | 51.6 | 6.4 | 34.4 | 7.5 | 372 |
| 7-1 | 56.6 | 6.2 | 33.0 | 4.1 | 339 | 16-25-1-1 | 77.7 | 10.1 | 6.5 | 5.7 | 247 |
| 8-1 | 54.1 | 5.9 | 36.0 | 3.9 | 355 | 3 | 69.8 | 9.1 | 5.8 | 15.3 | 275 |
| 10-1 | 49.6 | 5.4 | 41.3 | 3.6 | 387 | 5 | 63.3 | 8.2 | 5.3 | 23.1 | 303 |
| 16-22-1-2 | 74.4 | 8.5 | 6.2 | 10.8 | 258 | 2-1 | 73.0 | 9.5 | 12.2 | 5.3 | 263 |
| 4 | 67.1 | 7.7 | 5.6 | 19.6 | 286 | 3 | 66.0 | 8.6 | 11.0 | 14.4 | 291 |
| 6 | 61.2 | 7.0 | 5.1 | 26.7 | 314 | 5 | 60.2 | 7.8 | 10.0 | 21.9 | 319 |
| 2-2 | 70.1 | 8.0 | 11.7 | 10.2 | 274 | 3-1 | 68.8 | 9.0 | 17.2 | 5.0 | 279 |
| 4 | 63.6 | 7.3 | 10.6 | 18.5 | 302 | 3 | 62.5 | 8.1 | 15.6 | 13.7 | 307 |
| 6 | 58.2 | 6.7 | 9.7 | 25.4 | 330 | 5 | 57.3 | 7.5 | 14.3 | 20.9 | 335 |
| 3-2 | 66.2 | 7.6 | 16.5 | 9.7 | 290 | 4-1 | 65.1 | 8.5 | 21.7 | 4.7 | 295 |
| 4 | 60.4 | 6.9 | 15.1 | 17.6 | 318 | 3 | 59.4 | 7.7 | 19.8 | 13.0 | 323 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 16-25-4-5 | 54.7 | 7.1 | 18.2 | 20.0 | 351 | 16-29-2-1 | 71.9 | 10.9 | 12.0 | 5.2 | 267 |
| 5-1 | 61.7 | 8.0 | 25.7 | 4.5 | 311 | 3 | 65.1 | 9.8 | 10.8 | 14.2 | 295 |
| 3 | 56.6 | 7.4 | 23.6 | 12.4 | 339 | 5 | 59.4 | 9.0 | 9.9 | 21.7 | 323 |
| 5 | 52.3 | 6.8 | 21.8 | 19.1 | 367 | 3-1 | 67.9 | 10.2 | 17.0 | 4.9 | 283 |
| 6-1 | 58.7 | 7.6 | 29.3 | 4.3 | 327 | 3 | 61.7 | 9.3 | 15.4 | 13.5 | 311 |
| 3 | 54.1 | 7.0 | 27.0 | 11.8 | 355 | 5 | 56.6 | 8.6 | 14.2 | 20.6 | 339 |
| 5 | 50.1 | 6.5 | 25.1 | 18.3 | 383 | 4-1 | 64.2 | 9.7 | 21.4 | 4.7 | 299 |
| 16-26-1-2 | 73.3 | 9.9 | 6.1 | 10.7 | 262 | 3 | 58.7 | 8.9 | 19.6 | 12.8 | 327 |
| 4 | 66.2 | 9.0 | 5.5 | 19.3 | 290 | 5 | 54.1 | 8.2 | 18.0 | 19.7 | 355 |
| 6 | 60.4 | 8.2 | 5.0 | 26.4 | 318 | 6-1 | 52.6 | 7.9 | 35.1 | 4.4 | 365 |
| 2-2 | 79.1 | 9.3 | 11.5 | 10.1 | 278 | 16-30-1-2 | 72.2 | 11.3 | 6.0 | 10.5 | 266 |
| 4 | 62.7 | 8.5 | 10.5 | 18.3 | 306 | 4 | 65.3 | 10.2 | 5.4 | 19.1 | 294 |
| 6 | 57.5 | 7.8 | 9.6 | 25.1 | 334 | 6 | 59.6 | 9.3 | 5.0 | 26.1 | 322 |
| 3-2 | 65.3 | 8.8 | 16.3 | 9.5 | 294 | 2-2 | 68.1 | 10.6 | 11.3 | 9.9 | 282 |
| 4 | 59.6 | 8.1 | 14.9 | 17.4 | 322 | 4 | 61.9 | 9.7 | 10.3 | 18.1 | 310 |
| 6 | 54.9 | 7.4 | 13.7 | 24.0 | 350 | 6 | 56.8 | 8.9 | 9.5 | 24.8 | 338 |
| 4-2 | 61.9 | 8.4 | 20.7 | 9.0 | 310 | 3-2 | 64.4 | 10.1 | 16.1 | 9.4 | 298 |
| 4 | 56.8 | 7.7 | 18.9 | 16.6 | 338 | 4 | 58.9 | 9.2 | 14.7 | 17.2 | 326 |
| 6 | 52.4 | 7.1 | 17.5 | 23.0 | 366 | 6 | 54.2 | 8.5 | 13.6 | 23.7 | 354 |
| 5-2 | 58.9 | 8.0 | 24.5 | 8.6 | 326 | 4-2 | 61.1 | 9.6 | 20.4 | 9.9 | 314 |
| 4 | 54.2 | 7.3 | 22.6 | 15.8 | 354 | 4 | 56.1 | 8.8 | 18.7 | 16.4 | 342 |
| 6 | 50.3 | 6.8 | 20.9 | 22.0 | 382 | 6 | 51.9 | 8.1 | 17.3 | 22.7 | 370 |
| 16-27-1-1 | 77.1 | 10.8 | 6.4 | 5.6 | 249 | 5-2 | 58.2 | 9.1 | 24.2 | 8.5 | 330 |
| 3 | 69.3 | 9.7 | 5.8 | 15.2 | 277 | 4 | 53.6 | 8.4 | 22.3 | 15.6 | 358 |
| 5 | 62.9 | 8.8 | 5.2 | 23.0 | 305 | 6 | 49.7 | 7.8 | 20.7 | 21.7 | 386 |
| 2-1 | 72.5 | 10.2 | 12.0 | 5.3 | 265 | 16-31-1-1 | 75.9 | 12.2 | 6.3 | 5.5 | 253 |
| 3 | 65.5 | 9.2 | 10.9 | 14.3 | 293 | 3 | 68.3 | 11.0 | 5.7 | 14.9 | 281 |
| 5 | 59.8 | 8.4 | 10.0 | 21.8 | 321 | 5 | 62.1 | 10.0 | 5.2 | 22.6 | 309 |
| 3-1 | 68.3 | 9.6 | 17.1 | 5.0 | 281 | 2-1 | 71.4 | 11.5 | 11.9 | 5.2 | 269 |
| 3 | 62.1 | 8.7 | 15.5 | 13.6 | 309 | 3 | 64.6 | 10.4 | 10.8 | 14.1 | 297 |
| 5 | 57.0 | 8.0 | 14.2 | 20.8 | 337 | 5 | 59.1 | 9.5 | 9.8 | 21.5 | 325 |
| 4-1 | 64.6 | 9.1 | 21.6 | 4.7 | 297 | 3-1 | 67.4 | 10.9 | 16.8 | 4.9 | 285 |
| 3 | 59.1 | 8.3 | 19.7 | 12.9 | 325 | 3 | 61.4 | 9.9 | 15.3 | 13.4 | 313 |
| 5 | 54.4 | 7.6 | 18.1 | 19.8 | 353 | 5 | 56.3 | 9.1 | 14.1 | 20.5 | 341 |
| 5-1 | 61.4 | 8.6 | 25.6 | 4.4 | 313 | 9 | 48.4 | 7.8 | 12.1 | 31.7 | 397 |
| 3 | 56.3 | 7.9 | 23.5 | 12.3 | 341 | 4-1 | 63.8 | 10.3 | 21.3 | 4.6 | 301 |
| 5 | 52.0 | 7.3 | 21.7 | 19.0 | 369 | 3 | 58.4 | 9.4 | 19.4 | 12.7 | 329 |
| 8-3 | 49.3 | 6.9 | 32.9 | 10.8 | 389 | 5 | 53.8 | 8.7 | 17.9 | 19.6 | 357 |
| 16-28-1-2 | 72.7 | 10.6 | 6.1 | 10.6 | 264 | 5-1 | 60.6 | 9.8 | 25.2 | 4.4 | 317 |
| 4 | 65.7 | 9.6 | 5.5 | 19.2 | 292 | 3 | 55.7 | 9.0 | 23.2 | 12.1 | 345 |
| 6 | 60.0 | 8.7 | 5.0 | 26.2 | 320 | 5 | 51.5 | 8.3 | 21.4 | 18.8 | 373 |
| 2-2 | 68.6 | 10.0 | 11.4 | 10.0 | 280 | 16-32-1-2 | 71.6 | 11.9 | 6.0 | 10.5 | 268 |
| 4 | 62.3 | 9.1 | 10.4 | 18.2 | 308 | 4 | 64.8 | 10.8 | 5.4 | 18.9 | 296 |
| 6 | 57.1 | 8.3 | 9.5 | 25.0 | 336 | 6 | 59.2 | 9.9 | 4.9 | 25.9 | 324 |
| 3-2 | 64.8 | 9.5 | 16.2 | 9.5 | 296 | 8 | 54.5 | 9.1 | 4.5 | 31.8 | 352 |
| 4 | 59.3 | 8.6 | 14.8 | 17.3 | 324 | 2-2 | 67.6 | 11.3 | 11.3 | 9.8 | 284 |
| 6 | 54.5 | 8.0 | 13.6 | 23.9 | 352 | 4 | 61.6 | 10.2 | 10.2 | 17.9 | 312 |
| 4-2 | 61.5 | 9.0 | 20.5 | 9.0 | 312 | 6 | 56.5 | 9.4 | 9.4 | 24.7 | 340 |
| 4 | 56.4 | 8.2 | 18.8 | 16.5 | 340 | 3-2 | 64.0 | 10.7 | 16.0 | 9.3 | 300 |
| 6 | 52.2 | 7.6 | 17.4 | 22.8 | 368 | 4 | 58.5 | 9.7 | 14.6 | 17.1 | 328 |
| 5-2 | 58.5 | 8.5 | 24.4 | 8.5 | 328 | 6 | 53.9 | 9.0 | 13.5 | 23.6 | 356 |
| 4 | 53.9 | 7.9 | 22.5 | 15.7 | 356 | 4-2 | 60.8 | 10.1 | 20.2 | 8.9 | 316 |
| 6 | 50.0 | 7.3 | 20.8 | 21.9 | 384 | 4 | 55.8 | 9.3 | 18.6 | 16.3 | 344 |
| 6-2 | 55.8 | 8.1 | 27.9 | 8.1 | 344 | 6 | 51.6 | 8.6 | 17.2 | 22.6 | 372 |
| 4 | 51.6 | 7.5 | 25.8 | 15.1 | 372 | 16-33-1-1 | 75.3 | 12.9 | 6.3 | 5.5 | 255 |
| 6 | 48.0 | 7.0 | 24.0 | 21.0 | 400 | 3 | 67.8 | 11.7 | 5.6 | 14.8 | 283 |
| 16-29-1-1 | 76.5 | 11.5 | 6.4 | 5.6 | 251 | 5 | 61.7 | 10.6 | 5.1 | 22.5 | 311 |
| 3 | 68.8 | 10.4 | 5.7 | 15.1 | 279 | 2-1 | 70.8 | 12.1 | 11.8 | 5.2 | 271 |
| 5 | 62.5 | 9.4 | 5.2 | 22.8 | 307 | 3 | 64.2 | 11.0 | 10.7 | 14.0 | 299 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|-----|------|------|------|
| 16-33-2-5 | 58,7 | 10,1 | 9,8 | 21,4 | 327 | 17-12-1-6 | 64,6 | 3,8 | 5,0 | 26,6 | 316 |
| 3-1 | 66,9 | 11,5 | 16,7 | 4,9 | 287 | 2-2 | 73,9 | 4,3 | 11,6 | 10,1 | 276 |
| 3 | 61,0 | 10,5 | 15,2 | 13,3 | 315 | 4 | 67,1 | 3,9 | 10,5 | 18,4 | 304 |
| 5 | 56,0 | 9,6 | 14,0 | 20,4 | 343 | 6 | 61,4 | 3,6 | 9,6 | 25,3 | 332 |
| 4-1 | 63,4 | 10,9 | 21,1 | 4,6 | 303 | 3-2 | 69,9 | 4,1 | 16,4 | 9,6 | 292 |
| 3 | 58,0 | 10,0 | 19,3 | 12,7 | 331 | 4 | 63,7 | 3,7 | 15,0 | 17,5 | 320 |
| 5 | 53,5 | 9,2 | 17,8 | 19,5 | 359 | 6 | 58,6 | 3,4 | 13,8 | 24,1 | 348 |
| 16-34-1-2 | 71,1 | 12,6 | 5,9 | 10,4 | 270 | 4-2 | 66,2 | 3,9 | 20,8 | 9,1 | 308 |
| 4 | 64,4 | 11,4 | 5,4 | 18,8 | 298 | 6 | 60,7 | 3,6 | 19,0 | 16,7 | 336 |
| 6 | 58,9 | 10,4 | 4,9 | 25,8 | 326 | 6 | 56,0 | 3,3 | 17,6 | 23,1 | 364 |
| 2-2 | 67,1 | 11,9 | 11,2 | 9,8 | 286 | 5-2 | 63,0 | 3,7 | 24,7 | 8,6 | 324 |
| 4 | 61,1 | 10,8 | 10,2 | 17,8 | 314 | 4 | 58,0 | 3,4 | 22,7 | 15,9 | 352 |
| 6 | 56,1 | 9,9 | 9,3 | 24,0 | 342 | 6 | 53,7 | 3,2 | 21,0 | 22,1 | 380 |
| 3-4 | 58,2 | 10,3 | 14,5 | 17,0 | 330 | 6-2 | 60,0 | 3,5 | 28,2 | 8,2 | 340 |
| 17-7-10-1 | 53,0 | 1,8 | 41,6 | 3,6 | 385 | 4 | 55,4 | 3,3 | 26,1 | 15,2 | 368 |
| 17-9-2-1 | 78,8 | 3,5 | 12,3 | 5,4 | 259 | 6 | 51,5 | 3,0 | 24,2 | 21,2 | 396 |
| 3 | 71,1 | 3,1 | 11,1 | 14,7 | 287 | 6-2 | 54,8 | 3,2 | 34,4 | 7,5 | 372 |
| 5 | 64,8 | 2,9 | 10,1 | 22,2 | 315 | 17-13-1-1 | 82,6 | 5,3 | 6,5 | 5,6 | 247 |
| 3-1 | 74,2 | 3,3 | 17,4 | 5,1 | 275 | 3 | 74,2 | 4,7 | 5,8 | 15,3 | 275 |
| 3 | 67,3 | 3,0 | 15,8 | 13,9 | 303 | 5 | 67,3 | 4,3 | 5,3 | 23,1 | 303 |
| 5 | 61,6 | 2,7 | 14,5 | 21,2 | 331 | 2-1 | 77,6 | 4,9 | 12,2 | 5,3 | 263 |
| 4-1 | 70,1 | 3,1 | 22,0 | 4,8 | 291 | 3 | 70,1 | 4,5 | 11,0 | 14,4 | 291 |
| 3 | 63,9 | 2,8 | 20,1 | 13,2 | 319 | 5 | 64,0 | 4,1 | 10,0 | 21,9 | 319 |
| 5 | 58,8 | 2,6 | 18,4 | 20,2 | 347 | 3-1 | 73,1 | 4,7 | 17,2 | 5,0 | 279 |
| 5-1 | 66,4 | 2,9 | 26,1 | 4,6 | 307 | 3 | 66,4 | 4,2 | 15,6 | 13,8 | 307 |
| 6-1 | 63,2 | 2,8 | 29,7 | 4,3 | 323 | 5 | 60,9 | 3,9 | 14,3 | 20,9 | 335 |
| 3 | 58,1 | 2,5 | 27,4 | 12,0 | 351 | 4-1 | 69,2 | 4,4 | 21,7 | 4,7 | 295 |
| 7-1 | 60,2 | 2,7 | 33,0 | 4,1 | 339 | 3 | 73,2 | 4,0 | 19,8 | 13,0 | 323 |
| 8-1 | 57,5 | 2,5 | 36,0 | 3,9 | 355 | 5 | 58,1 | 3,7 | 18,2 | 19,9 | 351 |
| 17-10-2-2 | 74,5 | 3,6 | 11,7 | 10,2 | 274 | 5-1 | 65,6 | 4,2 | 25,7 | 4,5 | 311 |
| 3-2 | 70,4 | 3,4 | 16,5 | 9,7 | 290 | 3 | 60,2 | 3,8 | 23,6 | 12,4 | 339 |
| 4 | 64,2 | 3,1 | 15,1 | 17,6 | 318 | 5 | 55,6 | 3,5 | 21,8 | 19,1 | 367 |
| 6 | 58,9 | 2,9 | 13,9 | 24,3 | 346 | 6-1 | 62,4 | 4,0 | 29,3 | 4,3 | 327 |
| 4-2 | 66,7 | 3,3 | 20,9 | 9,1 | 306 | 3 | 57,5 | 3,7 | 27,0 | 11,8 | 355 |
| 6-8 | 48,3 | 2,4 | 22,7 | 26,5 | 422 | 5 | 53,2 | 3,4 | 25,1 | 18,3 | 383 |
| 7-2 | 57,6 | 2,8 | 31,6 | 7,9 | 354 | 7-1 | 59,5 | 3,8 | 32,6 | 4,1 | 343 |
| 9-2 | 52,8 | 2,6 | 37,3 | 7,3 | 386 | 3 | 55,0 | 3,5 | 30,2 | 11,3 | 371 |
| 17-11-1-1 | 83,3 | 4,5 | 6,5 | 5,7 | 245 | 5 | 51,1 | 3,3 | 28,1 | 17,5 | 399 |
| 3 | 74,7 | 4,1 | 5,8 | 15,4 | 273 | 6-1 | 56,8 | 3,6 | 35,7 | 3,9 | 359 |
| 5 | 67,8 | 3,6 | 5,3 | 23,2 | 301 | 3 | 52,7 | 3,4 | 33,1 | 10,8 | 387 |
| 2-1 | 78,1 | 4,2 | 12,3 | 5,4 | 261 | 5 | 49,2 | 3,1 | 30,8 | 16,9 | 415 |
| 3 | 70,6 | 3,8 | 11,1 | 14,5 | 289 | 17-14-1-2 | 77,9 | 5,3 | 6,1 | 10,7 | 262 |
| 5 | 64,3 | 3,5 | 10,1 | 22,1 | 317 | 4 | 70,4 | 4,8 | 5,5 | 19,3 | 290 |
| 3-1 | 73,6 | 4,0 | 17,3 | 5,1 | 277 | 6 | 64,2 | 4,4 | 5,0 | 26,4 | 318 |
| 3 | 66,9 | 3,6 | 15,7 | 13,8 | 305 | 2-2 | 73,4 | 5,0 | 11,5 | 10,1 | 278 |
| 5 | 61,3 | 3,3 | 14,4 | 21,0 | 333 | 4 | 66,7 | 4,6 | 10,4 | 18,3 | 306 |
| 4-1 | 69,6 | 3,7 | 21,8 | 4,8 | 293 | 6 | 61,1 | 4,2 | 9,6 | 25,1 | 334 |
| 3 | 63,5 | 3,4 | 19,9 | 13,1 | 321 | 3-2 | 69,4 | 4,8 | 16,3 | 9,5 | 294 |
| 5 | 58,4 | 3,2 | 18,3 | 20,1 | 349 | 4 | 63,3 | 4,3 | 14,9 | 17,4 | 322 |
| 5-1 | 66,0 | 3,6 | 25,9 | 4,5 | 309 | 6 | 58,3 | 4,0 | 13,7 | 24,0 | 350 |
| 3 | 60,5 | 3,3 | 23,7 | 12,5 | 337 | 4-2 | 65,8 | 4,5 | 20,6 | 9,0 | 310 |
| 5 | 55,9 | 3,0 | 21,9 | 19,2 | 365 | 4 | 60,3 | 4,1 | 18,9 | 16,6 | 338 |
| 6-1 | 62,8 | 3,4 | 29,5 | 4,3 | 325 | 6 | 55,7 | 3,8 | 17,5 | 22,9 | 366 |
| 3 | 57,8 | 3,1 | 27,2 | 11,9 | 353 | 5-2 | 62,6 | 4,3 | 24,5 | 8,6 | 326 |
| 5 | 53,5 | 2,9 | 25,2 | 18,4 | 381 | 4 | 57,6 | 4,0 | 22,6 | 15,8 | 346 |
| 9-3 | 50,9 | 2,7 | 35,9 | 10,5 | 401 | 6 | 53,4 | 3,7 | 20,9 | 22,0 | 382 |
| 12-7 | 40,4 | 2,2 | 38,0 | 19,4 | 405 | 6-2 | 59,6 | 4,1 | 28,1 | 8,2 | 342 |
| 17-12-1-2 | 78,4 | 4,6 | 6,2 | 10,8 | 260 | 4 | 55,1 | 3,8 | 25,9 | 15,1 | 370 |
| 4 | 70,8 | 4,2 | 5,6 | 19,4 | 288 | 6 | 51,3 | 3,5 | 24,1 | 21,0 | 398 |

RICHTER, Lex d. Kohlenstoffverb.

152

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 17-14-7-4 | 52.8 | 3.6 | 29.0 | 14.5 | 386 | 17-17-6-3 | 56.8 | 4.7 | 26.7 | 11.7 | 359 |
| 8-2 | 54.5 | 3.7 | 34.2 | 7.5 | 374 | 5 | 52.7 | 4.4 | 24.8 | 18.1 | 387 |
| 10-4 | 47.0 | 3.2 | 36.8 | 12.9 | 414 | 17-18-1-2 | 76.7 | 6.8 | 6.0 | 10.5 | 266 |
| 17-15-1-1 | 81.9 | 6.0 | 6.4 | 5.6 | 249 | 4 | 69.4 | 6.1 | 5.4 | 19.1 | 294 |
| 3 | 73.6 | 5.4 | 5.8 | 15.2 | 277 | 6 | 63.3 | 5.6 | 5.0 | 26.1 | 322 |
| 5 | 66.9 | 4.9 | 5.2 | 22.9 | 305 | 2-2 | 72.3 | 6.4 | 11.3 | 9.9 | 282 |
| 2-1 | 77.0 | 5.7 | 12.0 | 5.3 | 265 | 4 | 65.8 | 5.8 | 10.3 | 18.1 | 310 |
| 3 | 69.6 | 5.1 | 11.9 | 14.3 | 293 | 6 | 60.4 | 5.3 | 9.5 | 24.8 | 338 |
| 5 | 63.5 | 4.7 | 10.0 | 21.8 | 321 | 3-2 | 68.5 | 6.0 | 16.1 | 9.4 | 298 |
| 3-1 | 72.6 | 5.3 | 17.0 | 5.1 | 281 | 4 | 62.6 | 5.5 | 14.7 | 17.2 | 326 |
| 3 | 66.0 | 4.8 | 15.5 | 13.6 | 309 | 6 | 57.6 | 5.1 | 13.5 | 23.7 | 354 |
| 5 | 60.5 | 4.4 | 14.2 | 20.8 | 337 | 4-2 | 65.0 | 5.7 | 20.4 | 8.9 | 314 |
| 4-1 | 68.7 | 5.0 | 21.5 | 4.7 | 297 | 4 | 59.6 | 5.3 | 18.7 | 16.4 | 342 |
| 3 | 62.8 | 4.6 | 19.7 | 12.9 | 325 | 6 | 55.1 | 4.9 | 17.3 | 22.7 | 370 |
| 5 | 57.8 | 4.2 | 18.1 | 19.8 | 353 | 10 | 47.9 | 4.2 | 15.0 | 32.9 | 426 |
| 6-1 | 65.2 | 4.8 | 25.6 | 4.4 | 313 | 5-2 | 61.8 | 5.4 | 24.2 | 8.5 | 330 |
| 3 | 59.8 | 4.4 | 23.5 | 12.3 | 341 | 4 | 57.0 | 5.0 | 22.3 | 15.6 | 358 |
| 5 | 55.3 | 4.0 | 21.7 | 19.0 | 369 | 6 | 52.8 | 4.7 | 20.7 | 21.7 | 386 |
| 6-1 | 62.0 | 4.6 | 29.2 | 4.2 | 329 | 6-2 | 59.0 | 5.2 | 27.7 | 8.1 | 346 |
| 3 | 57.1 | 4.2 | 26.9 | 11.8 | 357 | 4 | 54.5 | 4.8 | 25.7 | 15.0 | 374 |
| 5 | 53.0 | 3.9 | 24.9 | 18.2 | 385 | 6 | 50.7 | 4.5 | 23.9 | 20.9 | 402 |
| 7-1 | 59.2 | 4.3 | 32.5 | 4.0 | 345 | 17-19-1-1 | 80.6 | 7.5 | 6.3 | 5.5 | 253 |
| 3 | 54.7 | 4.0 | 30.0 | 11.3 | 373 | 3 | 72.6 | 6.8 | 5.7 | 14.9 | 281 |
| 5 | 50.9 | 3.7 | 27.9 | 17.5 | 401 | 5 | 66.0 | 6.2 | 4.2 | 22.6 | 309 |
| 8-1 | 56.5 | 4.1 | 35.4 | 3.9 | 361 | 2-1 | 75.8 | 7.1 | 11.9 | 5.2 | 269 |
| 17-16-1-2 | 77.3 | 6.0 | 6.0 | 10.6 | 264 | 3 | 68.7 | 6.4 | 10.8 | 14.1 | 297 |
| 4 | 69.9 | 5.5 | 5.5 | 19.1 | 292 | 5 | 62.8 | 5.8 | 9.8 | 21.5 | 325 |
| 6 | 63.5 | 5.0 | 5.0 | 26.5 | 320 | 3-1 | 71.6 | 6.7 | 16.8 | 4.9 | 285 |
| 2-2 | 72.9 | 5.7 | 11.4 | 10.0 | 280 | 3 | 65.2 | 6.1 | 15.3 | 13.4 | 313 |
| 4 | 66.2 | 5.2 | 10.4 | 18.2 | 308 | 5 | 59.8 | 5.6 | 14.1 | 20.5 | 341 |
| 6 | 60.7 | 4.8 | 9.5 | 25.0 | 336 | 4-1 | 67.8 | 6.3 | 21.3 | 4.6 | 301 |
| 3-2 | 68.9 | 5.4 | 16.2 | 9.4 | 296 | 3 | 62.0 | 5.8 | 19.4 | 12.8 | 329 |
| 4 | 63.0 | 4.9 | 14.8 | 17.3 | 324 | 5 | 57.1 | 5.3 | 17.9 | 19.6 | 357 |
| 6 | 58.0 | 4.5 | 13.9 | 23.9 | 352 | 5-1 | 64.4 | 6.0 | 25.2 | 4.4 | 317 |
| 4-2 | 65.4 | 5.1 | 20.5 | 9.0 | 312 | 3 | 59.1 | 5.5 | 23.2 | 12.2 | 345 |
| 4 | 60.0 | 4.7 | 18.8 | 16.5 | 340 | 5 | 54.7 | 5.1 | 21.4 | 18.8 | 373 |
| 6 | 55.4 | 4.3 | 17.4 | 22.8 | 368 | 6-1 | 61.3 | 5.7 | 28.8 | 4.2 | 333 |
| 5-2 | 62.2 | 4.9 | 24.4 | 8.5 | 328 | 3 | 56.5 | 5.3 | 26.6 | 11.6 | 361 |
| 4 | 57.3 | 4.5 | 22.5 | 15.7 | 356 | 5 | 52.4 | 4.9 | 24.7 | 18.0 | 389 |
| 6 | 53.1 | 4.1 | 20.8 | 21.8 | 384 | 17-20-1-2 | 76.1 | 7.5 | 6.0 | 10.4 | 268 |
| 2-2 | 59.3 | 4.6 | 27.9 | 8.1 | 344 | 4 | 68.9 | 6.8 | 5.4 | 18.9 | 296 |
| 4 | 54.8 | 4.3 | 25.8 | 15.1 | 372 | 6 | 63.0 | 6.2 | 4.9 | 25.9 | 324 |
| 6 | 51.0 | 4.0 | 24.0 | 21.0 | 400 | 2-2 | 71.8 | 7.0 | 11.3 | 9.9 | 284 |
| 17-17-1-1 | 81.3 | 6.8 | 6.3 | 5.6 | 251 | 4 | 65.4 | 6.4 | 10.3 | 17.9 | 312 |
| 3 | 73.1 | 6.1 | 5.7 | 15.1 | 279 | 6 | 60.0 | 5.9 | 9.4 | 24.7 | 340 |
| 5 | 66.4 | 5.5 | 5.2 | 22.8 | 307 | 3-2 | 68.0 | 6.7 | 16.0 | 9.3 | 300 |
| 2-1 | 76.4 | 6.4 | 12.0 | 5.2 | 267 | 4 | 62.2 | 6.1 | 14.6 | 17.1 | 328 |
| 3 | 69.2 | 5.8 | 10.8 | 14.2 | 295 | 6 | 57.3 | 5.6 | 13.5 | 23.6 | 356 |
| 5 | 63.2 | 5.2 | 9.9 | 21.7 | 323 | 4-2 | 64.6 | 6.3 | 20.3 | 8.8 | 316 |
| 3-1 | 72.1 | 6.0 | 17.0 | 4.9 | 283 | 4 | 59.3 | 5.8 | 18.6 | 16.3 | 344 |
| 3 | 65.6 | 5.5 | 15.4 | 13.5 | 311 | 6 | 54.8 | 5.4 | 17.2 | 22.6 | 372 |
| 5 | 60.2 | 5.0 | 14.1 | 20.7 | 339 | 5-2 | 61.4 | 6.0 | 24.1 | 8.4 | 332 |
| 4-1 | 68.2 | 5.7 | 21.4 | 4.7 | 299 | 4 | 56.7 | 5.6 | 22.2 | 15.5 | 360 |
| 3 | 62.4 | 5.2 | 19.6 | 12.8 | 327 | 6 | 52.6 | 5.2 | 20.6 | 21.6 | 388 |
| 5 | 57.5 | 4.8 | 18.0 | 19.7 | 355 | 6-2 | 58.6 | 5.7 | 27.6 | 8.1 | 348 |
| 6-1 | 64.8 | 5.4 | 25.4 | 4.4 | 315 | 4 | 54.2 | 5.3 | 25.5 | 14.9 | 376 |
| 3 | 59.5 | 4.9 | 23.3 | 12.2 | 343 | 6 | 50.5 | 4.9 | 23.8 | 20.8 | 404 |
| 5 | 55.0 | 4.6 | 21.5 | 18.9 | 371 | 7-2 | 56.0 | 5.5 | 30.8 | 7.7 | 364 |
| 6-1 | 61.6 | 5.1 | 29.0 | 4.2 | 331 | 4 | 52.0 | 5.1 | 28.6 | 14.3 | 392 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 17-20-7-6 | 48.6 | 4.8 | 26.6 | 20.0 | 420 | 17-24-2-2 | 51.0 | 6.0 | 36.0 | 7.0 | 400 |
| 8-2 | 53.7 | 5.2 | 33.7 | 7.4 | 380 | 4 | 47.6 | 5.6 | 33.6 | 13.1 | 428 |
| 17-21-1-1 | 80.0 | 8.2 | 6.3 | 5.5 | 255 | 17-25-1-1 | 78.8 | 9.6 | 6.2 | 5.4 | 259 |
| 3 | 72.1 | 7.4 | 5.6 | 14.8 | 283 | 3 | 71.1 | 8.7 | 5.6 | 14.6 | 287 |
| 5 | 85.6 | 6.7 | 5.1 | 22.5 | 311 | 5 | 64.8 | 7.9 | 5.1 | 22.2 | 315 |
| 2-1 | 75.3 | 7.7 | 11.8 | 5.2 | 271 | 2-1 | 74.2 | 9.1 | 11.6 | 5.1 | 275 |
| 3 | 68.2 | 7.0 | 10.7 | 14.0 | 299 | 3 | 67.3 | 8.2 | 10.6 | 13.9 | 303 |
| 5 | 62.4 | 6.4 | 9.8 | 21.4 | 327 | 5 | 61.6 | 7.6 | 9.7 | 21.1 | 331 |
| 3-1 | 71.1 | 7.3 | 16.7 | 4.9 | 287 | 3-1 | 70.1 | 8.6 | 16.5 | 4.8 | 291 |
| 3 | 64.8 | 6.7 | 15.2 | 13.3 | 315 | 3 | 63.9 | 7.8 | 15.0 | 13.2 | 319 |
| 5 | 59.5 | 6.1 | 14.0 | 20.4 | 343 | 5 | 58.8 | 7.2 | 13.8 | 20.2 | 347 |
| 4-1 | 67.3 | 6.9 | 21.1 | 4.6 | 303 | 4-1 | 66.4 | 8.1 | 20.8 | 4.6 | 307 |
| 3 | 61.6 | 6.3 | 19.3 | 12.7 | 331 | 3 | 60.9 | 7.5 | 19.1 | 12.5 | 335 |
| 5 | 56.8 | 5.8 | 17.8 | 19.5 | 359 | 5 | 56.1 | 6.9 | 17.6 | 19.3 | 363 |
| 5-1 | 63.9 | 6.6 | 25.1 | 4.4 | 319 | 5-1 | 63.2 | 7.7 | 24.8 | 4.3 | 323 |
| 3 | 58.8 | 6.1 | 23.0 | 12.1 | 347 | 8-3 | 51.1 | 6.3 | 32.1 | 10.5 | 399 |
| 5 | 54.4 | 5.6 | 21.3 | 18.7 | 375 | 17-26-1-2 | 74.4 | 9.5 | 5.8 | 10.2 | 274 |
| 6-1 | 60.9 | 6.3 | 28.6 | 4.2 | 335 | 4 | 67.6 | 8.6 | 5.3 | 18.5 | 302 |
| 9-1 | 53.3 | 5.5 | 37.6 | 3.6 | 383 | 6 | 61.8 | 7.9 | 4.8 | 25.4 | 330 |
| 17-22-1-2 | 75.6 | 8.1 | 5.9 | 10.4 | 270 | 2-2 | 70.3 | 9.0 | 11.0 | 9.7 | 290 |
| 4 | 68.4 | 7.4 | 5.4 | 18.8 | 298 | 4 | 64.1 | 8.2 | 10.1 | 17.6 | 318 |
| 6 | 62.6 | 6.7 | 4.9 | 25.8 | 326 | 6 | 58.9 | 7.5 | 9.2 | 24.3 | 346 |
| 2-2 | 71.3 | 7.7 | 11.2 | 9.8 | 286 | 3-2 | 66.7 | 8.5 | 15.7 | 9.1 | 306 |
| 4 | 65.0 | 7.0 | 10.2 | 17.8 | 314 | 4 | 61.1 | 7.8 | 14.3 | 16.8 | 334 |
| 6 | 59.6 | 6.4 | 9.3 | 24.6 | 342 | 6 | 56.3 | 7.2 | 13.3 | 23.2 | 362 |
| 3-2 | 67.5 | 7.3 | 15.9 | 9.3 | 302 | 4-2 | 63.3 | 8.1 | 19.9 | 8.7 | 322 |
| 4 | 61.8 | 6.7 | 14.5 | 17.0 | 330 | 4 | 58.3 | 7.4 | 18.3 | 16.0 | 350 |
| 6 | 57.0 | 6.1 | 13.4 | 23.5 | 358 | 6 | 54.0 | 6.9 | 16.9 | 22.2 | 378 |
| 4-2 | 64.1 | 6.9 | 20.1 | 8.8 | 318 | 17-27-1-1 | 28.2 | 10.3 | 6.1 | 5.4 | 261 |
| 4 | 58.9 | 6.3 | 18.5 | 16.2 | 346 | 3 | 70.6 | 9.3 | 5.5 | 14.5 | 289 |
| 6 | 54.5 | 5.9 | 17.1 | 22.5 | 374 | 5 | 64.4 | 8.5 | 5.0 | 22.1 | 317 |
| 5-2 | 61.1 | 6.6 | 23.9 | 8.4 | 334 | 2-1 | 73.6 | 9.7 | 11.6 | 5.1 | 277 |
| 17-23-1-1 | 79.4 | 8.9 | 6.2 | 5.4 | 257 | 3 | 66.9 | 8.8 | 10.5 | 13.8 | 305 |
| 3 | 71.6 | 8.1 | 5.6 | 14.7 | 285 | 5 | 61.3 | 8.1 | 9.6 | 21.0 | 333 |
| 5 | 65.2 | 7.3 | 5.1 | 22.4 | 313 | 3-1 | 69.6 | 9.2 | 16.4 | 4.8 | 293 |
| 2-1 | 74.7 | 8.4 | 11.7 | 5.1 | 273 | 3 | 63.5 | 8.4 | 15.0 | 13.1 | 321 |
| 3 | 67.8 | 7.7 | 10.6 | 13.9 | 301 | 5 | 58.4 | 7.7 | 13.8 | 20.1 | 349 |
| 5 | 62.0 | 7.0 | 9.7 | 21.3 | 329 | 4-1 | 66.0 | 8.7 | 20.7 | 4.5 | 309 |
| 3-1 | 70.6 | 8.0 | 16.6 | 4.8 | 289 | 3 | 60.5 | 8.0 | 19.0 | 12.5 | 337 |
| 3 | 64.4 | 7.2 | 15.1 | 13.3 | 317 | 5 | 55.9 | 7.4 | 17.5 | 19.2 | 365 |
| 5 | 59.1 | 6.7 | 23.9 | 20.3 | 345 | 5-1 | 62.8 | 8.3 | 24.6 | 4.3 | 325 |
| 4-1 | 66.9 | 7.5 | 21.0 | 4.6 | 305 | 17-28-1-2 | 73.9 | 10.1 | 5.8 | 10.1 | 276 |
| 3 | 61.3 | 6.9 | 19.2 | 12.6 | 333 | 4 | 67.1 | 9.2 | 5.3 | 18.4 | 304 |
| 5 | 56.5 | 6.4 | 17.7 | 19.4 | 361 | 6 | 61.4 | 8.4 | 4.8 | 25.3 | 332 |
| 5-1 | 63.5 | 7.2 | 24.9 | 4.4 | 321 | 2-2 | 69.9 | 9.6 | 10.9 | 9.6 | 292 |
| 6-1 | 60.5 | 6.8 | 28.5 | 4.1 | 337 | 4 | 63.7 | 8.7 | 10.0 | 17.5 | 320 |
| 17-24-1-2 | 75.0 | 8.8 | 5.9 | 10.3 | 272 | 6 | 58.6 | 8.0 | 9.2 | 24.1 | 348 |
| 4 | 68.0 | 8.0 | 5.3 | 18.7 | 300 | 3-2 | 66.2 | 9.1 | 15.6 | 9.1 | 308 |
| 6 | 62.2 | 7.3 | 4.9 | 25.6 | 328 | 4 | 60.7 | 8.3 | 14.3 | 16.7 | 336 |
| 2-2 | 70.8 | 8.3 | 11.1 | 9.7 | 288 | 6 | 56.0 | 7.7 | 13.2 | 23.1 | 364 |
| 4 | 64.6 | 7.6 | 10.0 | 17.7 | 316 | 4-2 | 63.0 | 8.6 | 19.7 | 8.6 | 324 |
| 6 | 59.3 | 7.0 | 9.3 | 24.4 | 344 | 4 | 58.0 | 7.9 | 18.2 | 15.9 | 352 |
| 3-2 | 67.1 | 7.9 | 15.8 | 9.2 | 304 | 6 | 53.7 | 7.4 | 16.8 | 22.1 | 380 |
| 4 | 61.4 | 7.2 | 14.4 | 16.9 | 332 | 17-29-1-1 | 77.6 | 11.0 | 6.1 | 5.3 | 263 |
| 6 | 66.6 | 6.7 | 13.3 | 23.3 | 360 | 3 | 70.1 | 10.0 | 5.5 | 14.4 | 291 |
| 4-2 | 63.7 | 7.5 | 20.0 | 8.7 | 320 | 5 | 64.0 | 9.1 | 5.0 | 21.9 | 319 |
| 4 | 58.6 | 6.9 | 18.4 | 16.1 | 348 | 2-1 | 73.1 | 10.4 | 11.5 | 5.0 | 279 |
| 6 | 54.2 | 6.4 | 17.0 | 22.3 | 376 | 3 | 66.4 | 9.4 | 10.4 | 13.7 | 307 |
| 5-2 | 60.7 | 7.1 | 23.8 | 8.3 | 336 | 5 | 60.9 | 8.6 | 9.5 | 20.9 | 335 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 17-29-3-1 | 69.2 | 9.8 | 16.3 | 4.7 | 295 | 17-34-2-2 | 68.4 | 11.4 | 10.7 | 9.4 | 298 |
| 3 | 63.2 | 9.0 | 14.9 | 12.9 | 323 | 4 | 62.6 | 10.4 | 9.8 | 17.2 | 326 |
| 5 | 58.1 | 8.3 | 13.7 | 19.9 | 351 | 6 | 57.6 | 9.6 | 9.0 | 23.7 | 354 |
| 4-1 | 65.6 | 9.3 | 20.6 | 4.5 | 311 | 3-2 | 65.0 | 10.8 | 15.3 | 8.9 | 314 |
| 3 | 60.2 | 8.5 | 18.9 | 12.4 | 339 | 4 | 59.6 | 9.9 | 14.0 | 16.4 | 342 |
| 5 | 55.6 | 7.9 | 17.4 | 19.1 | 367 | 6 | 55.1 | 9.2 | 13.0 | 22.7 | 370 |
| 6-1 | 59.5 | 8.5 | 28.0 | 4.0 | 343 | 17-35-1-1 | 75.8 | 13.0 | 5.9 | 5.2 | 269 |
| 17-30-1-2 | 73.4 | 10.8 | 5.8 | 10.0 | 278 | 3 | 68.7 | 11.8 | 5.4 | 14.1 | 297 |
| 4 | 66.7 | 9.8 | 5.2 | 18.3 | 306 | 5 | 62.8 | 10.7 | 4.9 | 21.5 | 325 |
| 6 | 61.1 | 8.9 | 4.8 | 25.1 | 334 | 2-1 | 71.6 | 12.3 | 11.2 | 4.9 | 285 |
| 2-2 | 69.4 | 10.2 | 10.9 | 9.5 | 294 | 3 | 65.2 | 11.2 | 10.2 | 13.4 | 313 |
| 4 | 63.3 | 9.3 | 9.9 | 17.4 | 322 | 5 | 59.8 | 10.3 | 9.4 | 20.5 | 341 |
| 6 | 58.3 | 8.6 | 9.1 | 24.0 | 350 | 3-1 | 67.8 | 11.6 | 16.0 | 4.6 | 301 |
| 3-2 | 65.8 | 9.7 | 15.5 | 9.0 | 310 | 3 | 62.0 | 10.6 | 14.6 | 12.8 | 329 |
| 4 | 60.3 | 8.9 | 14.2 | 16.6 | 338 | 5 | 57.1 | 9.8 | 13.4 | 19.6 | 357 |
| 6 | 55.7 | 8.2 | 13.1 | 23.0 | 366 | 17-36-1-2 | 71.8 | 12.7 | 5.6 | 9.9 | 284 |
| 4-2 | 62.9 | 9.2 | 19.6 | 8.6 | 326 | 4 | 65.4 | 11.5 | 5.1 | 17.9 | 312 |
| 6 | 57.6 | 8.5 | 18.1 | 15.8 | 354 | 6 | 60.0 | 10.6 | 4.7 | 24.7 | 340 |
| 17-31-1-1 | 77.0 | 11.7 | 6.0 | 5.3 | 265 | 2-2 | 68.0 | 12.0 | 10.7 | 9.3 | 300 |
| 3 | 69.6 | 10.6 | 5.5 | 14.3 | 293 | 4 | 62.2 | 11.0 | 9.7 | 17.1 | 328 |
| 5 | 63.5 | 9.6 | 5.0 | 21.8 | 321 | 6 | 57.3 | 10.1 | 8.9 | 23.6 | 356 |
| 2-1 | 72.6 | 11.0 | 11.4 | 5.0 | 281 | 3-2 | 64.6 | 11.4 | 15.2 | 8.8 | 316 |
| 3 | 66.0 | 10.0 | 10.4 | 13.6 | 309 | 4 | 59.3 | 10.5 | 13.9 | 16.3 | 344 |
| 5 | 60.5 | 9.2 | 9.5 | 20.8 | 337 | 6 | 54.8 | 9.7 | 12.9 | 22.6 | 372 |
| 3-1 | 68.7 | 10.4 | 16.2 | 4.7 | 297 | 4-4 | 56.7 | 10.0 | 17.7 | 15.6 | 360 |
| 3 | 62.8 | 9.5 | 14.8 | 12.9 | 325 | 18-6-9-4 | 51.2 | 1.4 | 34.1 | 13.3 | 422 |
| 5 | 57.8 | 8.8 | 13.6 | 19.8 | 353 | 10-4 | 49.3 | 1.4 | 36.5 | 12.8 | 438 |
| 4-1 | 65.2 | 9.9 | 20.4 | 4.5 | 313 | 12-6 | 43.4 | 1.2 | 38.6 | 16.8 | 498 |
| 3 | 59.8 | 9.1 | 18.8 | 12.3 | 341 | 18-7-16-7 | 37.4 | 1.2 | 44.4 | 17.0 | 577 |
| 5 | 55.3 | 8.4 | 17.3 | 19.0 | 369 | 18-8-2-2 | 76.1 | 2.8 | 11.3 | 9.8 | 284 |
| 6-3 | 54.7 | 8.3 | 25.7 | 11.2 | 373 | 6-2 | 62.1 | 2.3 | 27.6 | 8.0 | 348 |
| 17-32-1-2 | 72.9 | 11.4 | 5.7 | 10.0 | 280 | 4 | 57.4 | 2.1 | 25.5 | 14.9 | 376 |
| 4 | 66.2 | 10.4 | 5.2 | 18.2 | 308 | 8-4 | 52.9 | 2.0 | 31.4 | 13.7 | 408 |
| 6 | 60.7 | 9.5 | 4.8 | 25.0 | 336 | 14-6 | 40.6 | 1.5 | 42.1 | 15.8 | 532 |
| 2-2 | 68.9 | 10.8 | 10.8 | 9.4 | 296 | 18-9-4-1 | 71.3 | 3.0 | 21.1 | 4.6 | 303 |
| 4 | 63.0 | 9.8 | 9.8 | 17.3 | 324 | 6-1 | 64.5 | 2.7 | 28.6 | 4.2 | 335 |
| 6 | 58.0 | 9.1 | 9.1 | 23.8 | 352 | 12-5 | 44.3 | 1.8 | 39.4 | 14.4 | 487 |
| 3-2 | 65.4 | 10.2 | 15.1 | 9.0 | 312 | 18-10-2-2 | 75.5 | 3.5 | 11.2 | 9.8 | 286 |
| 4 | 60.0 | 9.4 | 14.1 | 16.5 | 340 | 4 | 68.8 | 3.2 | 10.2 | 17.8 | 314 |
| 6 | 55.1 | 8.7 | 13.0 | 22.8 | 368 | 4-2 | 67.9 | 4.1 | 20.1 | 8.8 | 318 |
| 4-2 | 62.2 | 9.8 | 19.5 | 8.5 | 328 | 5-2 | 64.7 | 3.0 | 23.9 | 8.4 | 334 |
| 4 | 57.3 | 9.0 | 18.0 | 15.7 | 356 | 8 | 51.7 | 2.4 | 19.1 | 26.8 | 418 |
| 6 | 53.1 | 8.3 | 16.7 | 21.9 | 384 | 6-2 | 61.7 | 2.9 | 27.4 | 8.0 | 350 |
| 17-33-1-1 | 76.4 | 12.3 | 6.1 | 5.2 | 267 | 8-2 | 56.6 | 2.6 | 33.5 | 7.3 | 352 |
| 3 | 69.2 | 11.2 | 5.4 | 14.2 | 295 | 10-4 | 48.8 | 2.3 | 36.2 | 12.7 | 442 |
| 5 | 63.2 | 10.2 | 4.9 | 21.7 | 323 | 18-11-1-1 | 84.1 | 4.3 | 6.2 | 5.4 | 257 |
| 2-1 | 72.1 | 11.7 | 11.3 | 4.9 | 283 | 3 | 75.8 | 3.8 | 5.6 | 14.7 | 285 |
| 3 | 65.6 | 10.6 | 10.3 | 13.5 | 311 | 5 | 69.0 | 3.5 | 5.1 | 22.4 | 313 |
| 5 | 60.2 | 9.7 | 9.4 | 20.6 | 339 | 2-1 | 79.1 | 4.0 | 11.7 | 5.1 | 273 |
| 3-1 | 68.2 | 11.0 | 16.0 | 4.7 | 299 | 3 | 71.7 | 3.6 | 10.6 | 14.0 | 301 |
| 3 | 62.4 | 10.1 | 14.7 | 12.8 | 327 | 5 | 65.6 | 3.3 | 9.7 | 21.3 | 329 |
| 5 | 57.5 | 9.3 | 13.5 | 19.7 | 355 | 3-1 | 74.7 | 3.8 | 16.6 | 4.8 | 289 |
| 4-1 | 61.8 | 10.5 | 20.3 | 4.4 | 315 | 3 | 68.1 | 3.5 | 15.1 | 13.2 | 317 |
| 3 | 59.5 | 9.6 | 18.6 | 12.2 | 343 | 5 | 62.6 | 3.2 | 13.9 | 20.3 | 345 |
| 6 | 55.0 | 8.9 | 17.2 | 18.9 | 371 | 4-1 | 70.8 | 3.6 | 21.0 | 4.6 | 305 |
| 17-34-1-2 | 72.3 | 12.1 | 5.7 | 9.9 | 282 | 3 | 64.8 | 3.3 | 19.2 | 12.6 | 333 |
| 4 | 65.8 | 11.0 | 5.1 | 18.1 | 310 | 5 | 59.8 | 3.0 | 17.7 | 19.4 | 361 |
| 6 | 60.4 | 10.1 | 4.7 | 24.8 | 338 | 5-1 | 67.3 | 3.4 | 24.9 | 4.4 | 321 |
| | | | | | | 3 | 61.9 | 3.1 | 22.9 | 12.0 | 349 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 18-11-5-5 | 57,3 | 2,9 | 21,2 | 18,6 | 377 | 18-14-1-4 | 71,5 | 4,6 | 5,3 | 18,6 | 302 |
| 6-1 | 64,1 | 3,3 | 28,5 | 4,1 | 337 | 6 | 65,5 | 4,2 | 4,8 | 25,4 | 330 |
| 3 | 59,2 | 3,0 | 26,3 | 11,5 | 365 | 2-2 | 74,5 | 4,8 | 11,0 | 9,7 | 290 |
| 5 | 54,9 | 2,8 | 24,4 | 17,8 | 393 | 4 | 67,9 | 4,4 | 10,1 | 17,6 | 318 |
| 7-1 | 61,2 | 3,1 | 31,7 | 4,0 | 353 | 6 | 62,4 | 4,0 | 9,2 | 24,3 | 346 |
| 3 | 56,7 | 2,9 | 29,4 | 11,0 | 381 | 3-2 | 70,6 | 4,6 | 15,7 | 9,1 | 306 |
| 5 | 52,8 | 2,7 | 27,4 | 17,1 | 409 | 4 | 64,7 | 4,2 | 14,4 | 16,7 | 334 |
| 6-1 | 58,5 | 3,0 | 34,7 | 3,8 | 369 | 6 | 59,7 | 3,9 | 13,2 | 23,2 | 362 |
| 3 | 54,4 | 2,8 | 32,2 | 10,6 | 397 | 4-2 | 67,1 | 4,3 | 19,9 | 8,7 | 322 |
| 5 | 50,8 | 2,6 | 30,1 | 16,5 | 425 | 4 | 61,7 | 4,0 | 18,3 | 16,0 | 350 |
| 18-12-1-2 | 79,4 | 4,4 | 5,9 | 10,3 | 272 | 6 | 57,1 | 3,7 | 16,9 | 22,2 | 378 |
| 4 | 72,0 | 4,0 | 5,3 | 18,7 | 300 | 5-2 | 63,9 | 4,1 | 23,7 | 8,3 | 338 |
| 6 | 65,8 | 3,7 | 4,9 | 25,6 | 328 | 4 | 59,0 | 3,8 | 21,9 | 15,3 | 366 |
| 2-2 | 75,0 | 4,2 | 11,1 | 9,7 | 288 | 6 | 54,8 | 3,5 | 20,3 | 21,3 | 394 |
| 4 | 68,4 | 3,8 | 10,1 | 17,7 | 316 | 6-2 | 61,0 | 3,9 | 27,1 | 7,9 | 354 |
| 6 | 62,8 | 3,5 | 9,3 | 24,4 | 344 | 4 | 56,6 | 3,7 | 25,1 | 14,6 | 382 |
| 3-2 | 71,1 | 3,9 | 15,8 | 9,2 | 304 | 6 | 52,7 | 3,4 | 23,4 | 20,5 | 410 |
| 4 | 65,1 | 3,6 | 14,5 | 16,8 | 332 | 7-2 | 58,4 | 3,8 | 30,3 | 7,5 | 370 |
| 6 | 60,0 | 3,3 | 13,3 | 23,3 | 360 | 6-2 | 56,0 | 3,6 | 33,2 | 7,2 | 386 |
| 4-2 | 67,5 | 3,7 | 20,0 | 8,7 | 320 | 18-15-1-1 | 82,8 | 5,7 | 6,1 | 5,4 | 261 |
| 4 | 62,1 | 3,4 | 18,4 | 16,1 | 348 | 3 | 74,7 | 5,2 | 5,5 | 14,5 | 289 |
| 6 | 57,4 | 3,2 | 17,0 | 22,3 | 376 | 5 | 68,2 | 4,7 | 5,0 | 22,1 | 317 |
| 5-2 | 64,3 | 3,6 | 23,8 | 8,3 | 336 | 2-1 | 78,0 | 5,4 | 11,5 | 5,1 | 277 |
| 4 | 59,3 | 3,3 | 22,0 | 15,4 | 364 | 3 | 70,8 | 4,9 | 10,5 | 13,8 | 305 |
| 6 | 55,1 | 3,1 | 20,4 | 21,4 | 392 | 5 | 64,9 | 4,5 | 9,6 | 21,0 | 333 |
| 6-2 | 61,4 | 3,4 | 27,3 | 7,9 | 352 | 3-1 | 73,7 | 5,1 | 16,4 | 4,8 | 293 |
| 4 | 56,8 | 3,2 | 25,3 | 14,7 | 380 | 3 | 67,3 | 4,7 | 14,9 | 13,1 | 321 |
| 6 | 52,9 | 2,9 | 23,5 | 20,6 | 408 | 5 | 61,9 | 4,3 | 13,8 | 20,0 | 349 |
| 7-2 | 58,7 | 3,3 | 30,4 | 7,6 | 368 | 4-1 | 69,9 | 4,8 | 20,7 | 4,5 | 309 |
| 4 | 54,5 | 3,0 | 28,3 | 14,1 | 396 | 3 | 64,1 | 4,4 | 19,0 | 12,5 | 337 |
| 6 | 50,9 | 2,8 | 26,4 | 19,8 | 424 | 5 | 59,2 | 4,1 | 17,5 | 19,2 | 365 |
| 6 | 47,8 | 2,6 | 24,8 | 24,8 | 452 | 5-1 | 60,5 | 4,6 | 24,6 | 4,3 | 325 |
| 6-2 | 56,2 | 3,1 | 33,3 | 7,3 | 384 | 3 | 61,2 | 4,2 | 22,7 | 11,9 | 353 |
| 4 | 52,4 | 2,9 | 31,0 | 13,6 | 412 | 5 | 56,7 | 3,9 | 21,0 | 18,4 | 381 |
| 6 | 49,1 | 2,7 | 29,1 | 19,1 | 440 | 6-1 | 63,3 | 4,4 | 28,2 | 4,1 | 341 |
| 6 | 46,2 | 2,6 | 27,3 | 23,9 | 468 | 3 | 58,5 | 4,1 | 26,0 | 11,4 | 369 |
| 12-4 | 45,4 | 2,5 | 40,3 | 11,8 | 476 | 5 | 54,4 | 3,8 | 24,2 | 17,6 | 397 |
| 15-6 | 39,1 | 2,2 | 43,5 | 15,2 | 552 | 18-16-1-2 | 78,3 | 5,8 | 5,8 | 10,1 | 276 |
| 18-13-1-1 | 83,4 | 5,0 | 6,2 | 5,1 | 259 | 4 | 71,0 | 5,3 | 5,3 | 18,4 | 304 |
| 3 | 75,2 | 4,5 | 5,6 | 14,6 | 287 | 6 | 65,1 | 4,8 | 4,8 | 25,3 | 332 |
| 5 | 68,6 | 4,1 | 5,1 | 22,2 | 315 | 2-2 | 74,0 | 5,5 | 10,9 | 9,6 | 292 |
| 2-1 | 78,5 | 4,7 | 11,6 | 5,1 | 275 | 4 | 67,5 | 5,0 | 10,0 | 17,5 | 320 |
| 3 | 71,3 | 4,3 | 10,6 | 13,8 | 303 | 6 | 62,1 | 4,6 | 9,2 | 24,1 | 348 |
| 5 | 65,2 | 3,9 | 9,7 | 21,1 | 331 | 3-2 | 70,1 | 5,2 | 15,6 | 9,1 | 308 |
| 3-1 | 74,2 | 4,5 | 16,5 | 4,8 | 291 | 4 | 64,3 | 4,7 | 14,3 | 16,7 | 336 |
| 3 | 67,7 | 4,1 | 15,0 | 13,2 | 319 | 6 | 59,3 | 4,4 | 13,2 | 23,1 | 364 |
| 5 | 62,2 | 3,7 | 13,8 | 20,2 | 347 | 4-2 | 66,7 | 4,9 | 19,7 | 8,6 | 324 |
| 4-1 | 70,4 | 4,2 | 20,8 | 4,6 | 307 | 4 | 61,3 | 4,5 | 18,2 | 15,9 | 352 |
| 3 | 64,5 | 3,9 | 19,1 | 12,5 | 335 | 6 | 56,8 | 4,2 | 16,8 | 22,1 | 380 |
| 5 | 59,5 | 3,6 | 17,5 | 19,3 | 363 | 5-2 | 63,5 | 4,7 | 23,5 | 8,2 | 340 |
| 5-1 | 66,9 | 4,0 | 24,8 | 4,3 | 323 | 4 | 58,7 | 4,3 | 21,7 | 15,2 | 368 |
| 3 | 61,6 | 3,7 | 22,8 | 11,9 | 351 | 6 | 54,5 | 4,0 | 20,2 | 21,2 | 396 |
| 5 | 57,0 | 3,4 | 21,1 | 18,5 | 379 | 6-2 | 60,7 | 4,5 | 26,9 | 7,9 | 356 |
| 6-1 | 63,7 | 3,8 | 28,3 | 4,1 | 339 | 4 | 56,3 | 4,1 | 25,0 | 14,6 | 384 |
| 3 | 58,9 | 3,5 | 26,2 | 11,4 | 367 | 6 | 52,4 | 3,9 | 24,3 | 20,4 | 412 |
| 5 | 54,7 | 3,3 | 24,3 | 17,7 | 395 | 7-2 | 58,1 | 4,3 | 30,1 | 7,5 | 372 |
| 7-1 | 60,8 | 3,7 | 31,6 | 3,9 | 355 | 4 | 54,0 | 4,0 | 28,0 | 14,0 | 400 |
| 3 | 56,4 | 3,4 | 29,2 | 11,0 | 383 | 6 | 50,5 | 3,7 | 26,2 | 19,6 | 428 |
| 18-14-1-2 | 78,8 | 5,1 | 5,8 | 10,2 | 274 | 6-2 | 55,7 | 4,1 | 33,0 | 7,2 | 388 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 18-16-8-4 | 51.9 | 3.8 | 30.8 | 13.5 | 416 | 18-19-6-1 | 62.6 | 5.5 | 27.8 | 4.1 | 345 |
| 6 | 48.7 | 3.6 | 28.8 | 18.9 | 444 | 3 | 57.9 | 5.1 | 25.7 | 11.3 | 373 |
| 10-6 | 45.4 | 3.4 | 33.6 | 17.6 | 476 | 5 | 53.9 | 4.7 | 23.9 | 17.5 | 401 |
| 18-17-1-1 | 82.1 | 6.5 | 6.1 | 5.3 | 263 | 18-20-1-2 | 77.1 | 7.1 | 5.7 | 10.0 | 280 |
| 3 | 74.2 | 5.8 | 5.5 | 14.4 | 291 | 4 | 70.1 | 6.5 | 5.2 | 18.2 | 308 |
| 5 | 67.7 | 5.3 | 5.0 | 21.9 | 319 | 6 | 64.3 | 5.9 | 4.8 | 25.0 | 336 |
| 2-1 | 77.4 | 6.1 | 11.5 | 5.0 | 279 | 2-2 | 73.0 | 6.7 | 10.8 | 9.5 | 296 |
| 3 | 70.4 | 5.5 | 10.4 | 13.7 | 307 | 4 | 66.7 | 6.1 | 9.9 | 17.3 | 324 |
| 5 | 64.5 | 5.1 | 9.5 | 20.9 | 335 | 6 | 61.4 | 5.7 | 9.1 | 23.8 | 352 |
| 3-1 | 73.2 | 5.8 | 16.3 | 4.7 | 295 | 3-2 | 69.2 | 6.4 | 15.4 | 9.0 | 312 |
| 3 | 66.9 | 5.3 | 14.8 | 13.0 | 323 | 4 | 63.5 | 5.9 | 14.1 | 16.5 | 340 |
| 5 | 61.6 | 4.8 | 13.7 | 19.9 | 351 | 6 | 58.7 | 5.4 | 13.0 | 22.8 | 368 |
| 4-1 | 69.4 | 5.5 | 20.6 | 4.5 | 311 | 4-2 | 65.9 | 6.1 | 19.5 | 8.5 | 328 |
| 3 | 63.7 | 5.0 | 18.9 | 12.4 | 339 | 4 | 60.7 | 5.6 | 18.0 | 15.7 | 356 |
| 5 | 58.9 | 4.6 | 17.4 | 19.1 | 367 | 6 | 56.2 | 5.2 | 16.7 | 21.9 | 384 |
| 5-1 | 66.0 | 5.2 | 24.5 | 4.3 | 327 | 5-2 | 62.8 | 5.8 | 23.3 | 8.1 | 344 |
| 3 | 60.8 | 4.8 | 22.5 | 11.8 | 355 | 4 | 58.1 | 5.4 | 21.5 | 15.0 | 372 |
| 5 | 56.4 | 4.4 | 20.9 | 18.3 | 383 | 6 | 54.0 | 5.0 | 20.0 | 21.0 | 400 |
| 6-1 | 62.9 | 5.0 | 28.0 | 4.1 | 343 | 6-2 | 60.0 | 5.6 | 26.6 | 7.8 | 360 |
| 3 | 58.2 | 4.6 | 25.9 | 11.3 | 371 | 4 | 55.7 | 5.1 | 24.7 | 14.4 | 388 |
| 5 | 54.1 | 4.3 | 24.0 | 17.5 | 399 | 6 | 51.9 | 4.8 | 23.1 | 20.2 | 416 |
| 7-1 | 60.2 | 4.7 | 31.2 | 3.9 | 359 | 7-2 | 57.4 | 5.3 | 29.8 | 7.4 | 376 |
| 3 | 55.8 | 4.4 | 28.9 | 10.8 | 387 | 4 | 53.5 | 4.9 | 27.7 | 13.9 | 404 |
| 10-3 | 49.7 | 3.9 | 36.8 | 9.6 | 435 | 6 | 50.0 | 4.6 | 25.9 | 19.5 | 432 |
| 5 | 46.6 | 3.7 | 34.6 | 15.1 | 463 | 8-2 | 55.1 | 5.1 | 32.7 | 7.1 | 392 |
| 18-18-1-2 | 77.7 | 6.5 | 5.7 | 10.1 | 278 | 4 | 51.4 | 4.8 | 30.3 | 13.3 | 420 |
| 4 | 70.6 | 5.9 | 5.2 | 18.3 | 306 | 6 | 48.2 | 4.5 | 28.6 | 18.6 | 448 |
| 6 | 64.7 | 5.4 | 4.8 | 25.1 | 334 | 10-2 | 50.9 | 4.7 | 37.8 | 6.6 | 424 |
| 2-2 | 73.5 | 6.1 | 10.9 | 9.5 | 294 | 6 | 45.0 | 4.2 | 33.3 | 17.5 | 480 |
| 4 | 67.1 | 5.6 | 9.9 | 17.4 | 322 | 12-2 | 47.4 | 4.4 | 42.1 | 6.1 | 456 |
| 6 | 61.7 | 5.1 | 9.1 | 24.0 | 350 | 18-21-1-1 | 80.9 | 7.9 | 6.0 | 5.2 | 267 |
| 3-2 | 69.7 | 5.8 | 15.5 | 9.0 | 310 | 3 | 73.2 | 7.1 | 5.4 | 14.2 | 295 |
| 4 | 63.9 | 5.3 | 14.2 | 16.6 | 338 | 5 | 66.9 | 6.5 | 4.9 | 21.7 | 323 |
| 6 | 59.0 | 4.9 | 13.1 | 22.9 | 366 | 2-1 | 76.3 | 7.4 | 11.3 | 4.9 | 283 |
| 4-2 | 66.3 | 5.5 | 19.6 | 8.6 | 326 | 3 | 69.4 | 6.8 | 10.3 | 13.5 | 311 |
| 4 | 61.0 | 5.1 | 18.1 | 15.8 | 354 | 5 | 63.7 | 6.2 | 9.4 | 20.6 | 339 |
| 6 | 56.6 | 4.7 | 16.7 | 22.0 | 382 | 3-1 | 72.2 | 7.0 | 16.0 | 4.7 | 299 |
| 5-2 | 63.1 | 5.3 | 23.4 | 8.2 | 342 | 3 | 66.1 | 6.4 | 14.7 | 12.8 | 327 |
| 4 | 58.4 | 4.9 | 21.6 | 15.1 | 370 | 5 | 60.9 | 5.9 | 13.5 | 19.7 | 355 |
| 6 | 54.3 | 4.5 | 20.1 | 21.1 | 398 | 4-1 | 68.6 | 6.7 | 20.3 | 4.4 | 315 |
| 6-2 | 60.3 | 5.0 | 26.8 | 7.8 | 358 | 3 | 63.0 | 6.1 | 18.6 | 12.2 | 343 |
| 4 | 55.9 | 4.7 | 24.9 | 14.5 | 386 | 5 | 58.2 | 5.6 | 17.2 | 18.9 | 371 |
| 6 | 52.2 | 4.3 | 23.2 | 20.3 | 414 | 5-1 | 65.3 | 6.3 | 24.2 | 4.2 | 331 |
| 8-4 | 51.7 | 4.3 | 30.6 | 13.4 | 418 | 3 | 60.2 | 5.8 | 22.3 | 11.7 | 359 |
| 18-19-1-1 | 81.5 | 7.2 | 6.0 | 5.3 | 265 | 5 | 55.8 | 5.4 | 20.7 | 18.1 | 387 |
| 3 | 73.7 | 6.5 | 5.5 | 14.3 | 293 | 6-1 | 62.3 | 6.0 | 27.7 | 4.0 | 347 |
| 5 | 67.3 | 5.9 | 5.0 | 21.8 | 321 | 3 | 57.6 | 5.6 | 25.6 | 11.2 | 375 |
| 2-1 | 76.8 | 6.8 | 11.4 | 5.0 | 281 | 5 | 53.6 | 5.2 | 23.8 | 17.4 | 403 |
| 3 | 70.0 | 6.1 | 10.3 | 13.6 | 309 | 7-3 | 55.2 | 5.4 | 28.6 | 10.7 | 391 |
| 5 | 64.1 | 5.6 | 9.5 | 20.8 | 337 | 38-11 | 21.6 | 2.1 | 60.9 | 15.4 | 999 |
| 3-1 | 72.7 | 6.4 | 16.2 | 4.7 | 297 | 18-22-1-2 | 76.6 | 7.8 | 5.7 | 9.9 | 282 |
| 3 | 66.5 | 5.8 | 14.8 | 12.9 | 325 | 4 | 69.7 | 7.1 | 5.1 | 18.1 | 310 |
| 5 | 61.2 | 5.4 | 13.6 | 19.8 | 353 | 6 | 63.9 | 6.5 | 4.7 | 24.8 | 338 |
| 4-1 | 69.0 | 6.1 | 20.4 | 4.5 | 313 | 2-2 | 72.5 | 7.4 | 10.7 | 9.4 | 298 |
| 3 | 63.3 | 5.6 | 18.8 | 12.3 | 341 | 4 | 66.3 | 6.7 | 9.8 | 17.2 | 326 |
| 5 | 58.5 | 5.1 | 17.3 | 19.0 | 369 | 6 | 61.0 | 6.2 | 9.0 | 23.7 | 354 |
| 5-1 | 55.7 | 5.8 | 24.3 | 4.2 | 329 | 3-2 | 68.8 | 7.0 | 15.3 | 8.9 | 314 |
| 3 | 60.5 | 5.3 | 22.4 | 11.8 | 357 | 4 | 63.2 | 6.4 | 14.0 | 16.4 | 342 |
| 5 | 56.1 | 4.9 | 20.8 | 18.2 | 385 | 6 | 58.4 | 5.9 | 13.0 | 22.7 | 370 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 18-22-4-2 | 65.5 | 6.6 | 19.4 | 8.5 | 330 | 18-25-5-3 | 59.5 | 6.9 | 22.0 | 11.6 | 363 |
| 4 | 60.3 | 6.1 | 17.9 | 15.6 | 358 | 5 | 55.2 | 6.4 | 20.5 | 17.9 | 391 |
| 6 | 55.9 | 5.7 | 16.6 | 21.7 | 386 | 6-1 | 61.6 | 7.1 | 27.3 | 4.0 | 351 |
| 5-2 | 62.4 | 6.4 | 23.1 | 8.1 | 346 | 18-26-1-2 | 75.5 | 9.1 | 5.6 | 9.8 | 286 |
| 4 | 57.7 | 5.9 | 21.4 | 15.0 | 374 | 4 | 68.8 | 8.3 | 5.1 | 17.8 | 314 |
| 6 | 53.7 | 5.5 | 19.9 | 20.9 | 402 | 6 | 63.2 | 7.6 | 4.7 | 24.5 | 342 |
| 6-2 | 59.7 | 6.1 | 26.5 | 7.7 | 362 | 2-2 | 71.5 | 8.6 | 10.6 | 9.3 | 302 |
| 4 | 55.4 | 5.6 | 24.6 | 14.4 | 390 | 4 | 65.5 | 7.9 | 9.7 | 10.9 | 330 |
| 6 | 51.7 | 5.3 | 22.8 | 20.1 | 418 | 6 | 60.3 | 7.3 | 8.9 | 23.5 | 358 |
| 8-2 | 54.8 | 5.6 | 32.5 | 7.1 | 394 | 3-2 | 67.9 | 8.2 | 15.1 | 8.8 | 318 |
| 18-23-1-1 | 80.3 | 8.6 | 5.9 | 5.2 | 269 | 4 | 62.4 | 7.5 | 13.9 | 16.2 | 346 |
| 3 | 72.7 | 7.7 | 5.4 | 14.1 | 297 | 6 | 57.8 | 6.9 | 12.9 | 22.4 | 374 |
| 5 | 66.5 | 7.1 | 4.9 | 21.5 | 325 | 4-2 | 64.7 | 7.8 | 19.1 | 8.4 | 334 |
| 2-1 | 75.8 | 8.1 | 11.2 | 4.9 | 285 | 4 | 59.7 | 7.2 | 17.7 | 15.4 | 362 |
| 3 | 69.0 | 7.3 | 10.2 | 13.4 | 313 | 6 | 55.4 | 6.7 | 16.4 | 21.5 | 390 |
| 5 | 63.4 | 6.7 | 9.4 | 20.5 | 341 | 8-2 | 54.2 | 6.6 | 32.2 | 7.0 | 398 |
| 3-1 | 71.8 | 7.6 | 16.0 | 4.6 | 301 | 18-27-1-1 | 79.1 | 9.9 | 5.9 | 5.1 | 273 |
| 3 | 65.6 | 7.0 | 14.6 | 12.8 | 329 | 3 | 71.7 | 9.0 | 5.3 | 13.9 | 301 |
| 5 | 60.5 | 6.4 | 13.4 | 19.6 | 357 | 5 | 65.7 | 8.2 | 4.8 | 21.3 | 329 |
| 4-1 | 68.2 | 7.2 | 20.2 | 4.4 | 317 | 2-1 | 74.7 | 9.3 | 11.1 | 4.8 | 289 |
| 3 | 62.6 | 6.6 | 18.6 | 12.2 | 345 | 3 | 68.1 | 8.5 | 10.1 | 13.2 | 317 |
| 5 | 57.9 | 6.1 | 17.2 | 18.8 | 373 | 5 | 62.6 | 7.8 | 9.3 | 20.3 | 345 |
| 5-1 | 64.9 | 6.9 | 24.0 | 4.2 | 333 | 3-1 | 70.8 | 8.8 | 15.7 | 4.6 | 305 |
| 3 | 59.8 | 6.4 | 22.2 | 11.6 | 361 | 3 | 64.9 | 8.1 | 14.4 | 12.6 | 333 |
| 5 | 55.5 | 5.9 | 20.6 | 18.0 | 389 | 5 | 59.8 | 7.4 | 13.4 | 19.4 | 361 |
| 6-1 | 61.9 | 6.6 | 27.5 | 4.0 | 349 | 4-1 | 67.3 | 8.4 | 19.9 | 4.4 | 321 |
| 7-1 | 59.2 | 6.3 | 30.7 | 3.8 | 365 | 3 | 61.9 | 7.7 | 18.3 | 12.0 | 349 |
| 18-24-1-2 | 76.1 | 8.4 | 5.6 | 9.9 | 284 | 5 | 57.3 | 7.1 | 17.0 | 18.6 | 377 |
| 4 | 69.2 | 7.7 | 5.1 | 18.0 | 312 | 14-1 | 44.9 | 5.6 | 46.6 | 2.9 | 481 |
| 6 | 63.5 | 7.0 | 4.7 | 24.7 | 340 | 18-28-1-2 | 75.0 | 9.7 | 5.5 | 9.7 | 288 |
| 2-2 | 72.0 | 8.0 | 10.7 | 9.3 | 300 | 4 | 68.3 | 8.9 | 5.1 | 17.7 | 316 |
| 4 | 65.8 | 7.3 | 9.7 | 17.1 | 328 | 6 | 62.8 | 8.1 | 4.6 | 24.4 | 344 |
| 6 | 60.7 | 6.7 | 9.0 | 23.6 | 356 | 2-2 | 71.1 | 9.2 | 10.5 | 9.2 | 304 |
| 3-2 | 68.4 | 7.6 | 15.2 | 8.8 | 316 | 4 | 65.1 | 8.4 | 9.6 | 16.9 | 332 |
| 4 | 62.8 | 7.0 | 13.9 | 16.3 | 344 | 6 | 60.0 | 7.8 | 8.9 | 23.3 | 360 |
| 6 | 58.1 | 6.4 | 12.9 | 22.6 | 372 | 3-2 | 67.5 | 8.7 | 15.0 | 8.7 | 320 |
| 4-2 | 65.0 | 7.2 | 19.3 | 8.4 | 332 | 4 | 62.1 | 8.0 | 13.8 | 16.1 | 348 |
| 6 | 60.0 | 6.7 | 17.8 | 15.5 | 360 | 6 | 57.4 | 7.4 | 12.8 | 22.3 | 376 |
| 5-2 | 55.7 | 6.2 | 16.5 | 21.6 | 388 | 4-2 | 64.3 | 8.3 | 19.1 | 8.3 | 336 |
| 4 | 57.4 | 6.9 | 23.0 | 8.0 | 348 | 4 | 59.3 | 7.7 | 17.6 | 15.4 | 364 |
| 6 | 53.5 | 5.9 | 21.3 | 14.9 | 376 | 6 | 55.1 | 7.1 | 16.3 | 21.4 | 392 |
| 6-2 | 59.3 | 6.6 | 26.4 | 7.7 | 364 | 8-2 | 54.0 | 7.0 | 32.0 | 7.0 | 400 |
| 4 | 55.1 | 6.1 | 24.5 | 14.3 | 392 | 4 | 50.5 | 6.5 | 29.9 | 13.1 | 428 |
| 6 | 51.4 | 5.7 | 22.8 | 20.0 | 420 | 10-2 | 50.0 | 6.5 | 37.0 | 6.5 | 432 |
| 8-2 | 54.5 | 6.1 | 32.3 | 7.1 | 396 | 18-29-1-1 | 78.5 | 10.5 | 5.8 | 5.1 | 275 |
| 18-25-1-1 | 79.7 | 9.2 | 5.9 | 5.2 | 271 | 3 | 71.3 | 9.6 | 5.2 | 13.8 | 303 |
| 3 | 72.2 | 8.4 | 5.3 | 14.0 | 299 | 5 | 65.3 | 8.7 | 4.8 | 21.1 | 331 |
| 5 | 66.1 | 7.6 | 4.9 | 21.4 | 327 | 2-1 | 74.2 | 9.9 | 11.0 | 4.8 | 291 |
| 2-1 | 75.3 | 8.7 | 11.1 | 4.9 | 287 | 3 | 67.7 | 9.1 | 10.0 | 13.2 | 319 |
| 3 | 68.6 | 7.9 | 10.2 | 13.3 | 315 | 5 | 62.2 | 8.4 | 9.2 | 20.2 | 347 |
| 5 | 63.0 | 7.3 | 9.3 | 20.4 | 343 | 3-1 | 70.3 | 9.4 | 15.6 | 4.6 | 307 |
| 3-1 | 71.3 | 8.2 | 15.8 | 4.6 | 303 | 3 | 64.5 | 8.7 | 14.3 | 12.5 | 335 |
| 3 | 65.3 | 7.5 | 14.5 | 12.7 | 331 | 5 | 59.5 | 8.0 | 13.2 | 19.3 | 363 |
| 5 | 60.2 | 6.9 | 13.4 | 19.5 | 359 | 4-1 | 66.9 | 9.0 | 19.8 | 4.3 | 323 |
| 4-1 | 67.7 | 7.8 | 20.1 | 4.4 | 319 | 3 | 61.6 | 8.3 | 18.2 | 11.9 | 351 |
| 3 | 62.2 | 7.2 | 18.4 | 12.1 | 347 | 5 | 57.0 | 7.6 | 16.9 | 18.5 | 379 |
| 5 | 57.6 | 6.6 | 17.1 | 18.7 | 375 | 18-30-1-2 | 74.5 | 10.3 | 5.5 | 9.6 | 290 |
| 5-1 | 64.5 | 7.4 | 23.9 | 4.2 | 335 | 4 | 67.9 | 9.4 | 5.0 | 17.6 | 318 |
| | | | | | | 6 | 62.4 | 8.7 | 4.6 | 24.3 | 346 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|------------|------|------|------|------|------|
| 18-30-2-2 | 70,6 | 9,8 | 10,4 | 9,1 | 306 | 18-34-3-6 | 56,6 | 8,9 | 12,5 | 22,0 | 382 |
| 4 | 64,7 | 9,0 | 9,6 | 16,7 | 334 | 4-2 | 63,2 | 9,9 | 8,2 | 18,7 | 342 |
| 6 | 59,7 | 8,3 | 8,8 | 23,2 | 362 | 4 | 58,4 | 9,2 | 17,3 | 15,1 | 370 |
| 3-2 | 67,1 | 9,3 | 14,9 | 8,7 | 322 | 6 | 54,3 | 8,5 | 16,1 | 21,1 | 398 |
| 4 | 61,7 | 8,6 | 13,7 | 16,0 | 350 | 18-35-1-1 | 76,8 | 12,4 | 5,7 | 5,0 | 281 |
| 6 | 57,1 | 7,9 | 12,7 | 22,2 | 378 | 3 | 69,9 | 11,3 | 5,2 | 13,6 | 309 |
| 4-2 | 63,9 | 8,9 | 18,9 | 8,3 | 338 | 5 | 64,1 | 10,4 | 4,7 | 20,8 | 337 |
| 4 | 59,0 | 8,2 | 17,5 | 15,3 | 366 | 2-1 | 72,7 | 11,8 | 10,8 | 4,7 | 297 |
| 6 | 54,8 | 7,6 | 16,2 | 21,3 | 394 | 3 | 66,5 | 10,8 | 9,8 | 12,9 | 325 |
| 12-2 | 46,4 | 6,4 | 41,2 | 6,0 | 466 | 5 | 61,1 | 9,9 | 9,1 | 19,8 | 353 |
| 18-31-1-1 | 78,0 | 11,2 | 5,8 | 5,0 | 277 | 3-1 | 69,0 | 11,2 | 15,3 | 4,4 | 313 |
| 3 | 70,8 | 10,2 | 5,2 | 13,8 | 305 | 3 | 63,3 | 10,3 | 14,1 | 12,3 | 341 |
| 5 | 64,9 | 9,3 | 4,8 | 21,0 | 333 | 5 | 58,5 | 9,5 | 13,0 | 19,0 | 369 |
| 2-1 | 73,7 | 10,6 | 10,9 | 4,8 | 293 | 4-1 | 65,7 | 10,6 | 19,5 | 4,2 | 329 |
| 3 | 67,3 | 9,6 | 10,0 | 13,1 | 321 | 3 | 60,5 | 9,8 | 17,9 | 11,8 | 357 |
| 5 | 62,0 | 8,9 | 9,1 | 20,0 | 349 | 5 | 56,1 | 9,1 | 16,6 | 18,2 | 385 |
| 3-1 | 69,9 | 10,0 | 15,5 | 4,5 | 309 | 18-36-1-2 | 73,0 | 12,2 | 5,4 | 9,4 | 296 |
| 3 | 64,1 | 9,2 | 14,2 | 12,5 | 337 | 4 | 66,7 | 11,1 | 4,9 | 17,3 | 324 |
| 5 | 59,2 | 8,5 | 13,1 | 19,2 | 365 | 6 | 61,4 | 10,2 | 4,5 | 23,9 | 352 |
| 4-1 | 66,4 | 9,5 | 19,7 | 4,3 | 325 | 2-2 | 69,2 | 11,5 | 10,3 | 9,0 | 312 |
| 3 | 61,2 | 8,8 | 18,1 | 11,9 | 353 | 4 | 63,5 | 10,6 | 9,4 | 16,5 | 340 |
| 5 | 56,7 | 8,1 | 16,8 | 18,4 | 381 | 6 | 58,7 | 9,8 | 8,7 | 22,5 | 368 |
| 5-1 | 63,3 | 9,1 | 23,5 | 4,1 | 341 | 3-2 | 65,9 | 11,0 | 14,6 | 8,5 | 328 |
| 3 | 58,5 | 8,4 | 21,7 | 11,4 | 369 | 4 | 60,7 | 10,1 | 13,4 | 15,7 | 356 |
| 5 | 54,4 | 7,8 | 20,1 | 17,6 | 397 | 6 | 56,2 | 9,3 | 12,5 | 21,0 | 384 |
| 18-32-1-2 | 74,0 | 10,9 | 5,5 | 9,6 | 292 | 4-2 | 62,8 | 10,5 | 18,6 | 8,1 | 344 |
| 4 | 67,5 | 10,0 | 5,0 | 17,5 | 320 | 4 | 58,0 | 9,7 | 17,2 | 15,0 | 372 |
| 6 | 62,1 | 9,2 | 4,6 | 24,1 | 348 | 6 | 54,0 | 9,0 | 16,0 | 21,0 | 400 |
| 2-2 | 70,1 | 10,4 | 10,4 | 9,1 | 308 | 18-37-1-1 | 76,3 | 13,1 | 5,6 | 4,9 | 283 |
| 4 | 64,3 | 9,5 | 9,5 | 16,7 | 336 | 3 | 69,4 | 11,9 | 5,1 | 13,5 | 311 |
| 6 | 59,3 | 8,8 | 8,8 | 23,1 | 364 | 5 | 63,7 | 10,9 | 4,7 | 20,7 | 339 |
| 3-2 | 66,7 | 9,9 | 14,8 | 8,6 | 324 | 2-1 | 72,2 | 12,4 | 10,7 | 4,7 | 299 |
| 4 | 61,4 | 9,1 | 13,6 | 15,9 | 352 | 3 | 66,1 | 11,3 | 9,8 | 12,8 | 327 |
| 6 | 56,8 | 8,4 | 12,6 | 22,1 | 380 | 5 | 60,8 | 10,4 | 9,0 | 19,7 | 355 |
| 4-2 | 63,5 | 9,4 | 18,8 | 8,2 | 340 | 3-1 | 68,6 | 11,7 | 15,2 | 4,4 | 315 |
| 4 | 58,7 | 8,7 | 17,4 | 15,2 | 368 | 3 | 63,0 | 10,8 | 14,0 | 12,2 | 343 |
| 6 | 54,5 | 8,1 | 16,2 | 21,2 | 396 | 5 | 58,2 | 10,0 | 12,9 | 18,9 | 371 |
| 5-2 | 53,5 | 7,9 | 31,7 | 6,9 | 404 | 18-38-1-2 | 72,5 | 12,7 | 5,4 | 9,4 | 298 |
| 18-33-1-1 | 77,4 | 11,8 | 5,7 | 5,0 | 279 | 4 | 66,3 | 11,6 | 4,9 | 17,2 | 326 |
| 3 | 70,3 | 10,7 | 5,2 | 13,7 | 307 | 6 | 61,0 | 10,7 | 4,5 | 23,7 | 354 |
| 5 | 64,5 | 9,8 | 4,8 | 20,9 | 335 | 2-2 | 68,8 | 12,1 | 10,2 | 8,9 | 314 |
| 2-1 | 73,2 | 11,2 | 10,8 | 4,7 | 295 | 4 | 63,2 | 11,1 | 9,3 | 16,4 | 342 |
| 3 | 66,9 | 10,2 | 9,9 | 13,0 | 323 | 6 | 58,4 | 10,3 | 8,6 | 22,7 | 370 |
| 5 | 61,6 | 9,4 | 9,1 | 19,9 | 351 | 18-40-11-6 | 40,9 | 7,6 | 33,3 | 18,2 | 528 |
| 3-1 | 66,4 | 10,6 | 15,4 | 4,5 | 311 | 19-10-6-4 | 58,4 | 2,6 | 24,6 | 14,4 | 390 |
| 3 | 63,7 | 9,7 | 14,2 | 12,4 | 339 | 11-4 | 48,5 | 2,1 | 37,5 | 11,9 | 470 |
| 5 | 58,8 | 9,0 | 13,1 | 19,1 | 367 | 19-11-1-1 | 84,7 | 4,1 | 5,9 | 5,2 | 269 |
| 4-1 | 66,0 | 10,1 | 19,6 | 4,3 | 327 | 2-1 | 80,0 | 3,9 | 11,2 | 4,9 | 285 |
| 3 | 60,8 | 9,3 | 18,0 | 11,8 | 355 | 3-1 | 75,7 | 3,7 | 16,0 | 4,6 | 301 |
| 5 | 56,4 | 8,6 | 16,7 | 18,3 | 383 | 3 | 69,3 | 3,3 | 14,6 | 12,8 | 329 |
| 10-3 | 47,3 | 7,2 | 35,0 | 10,5 | 457 | 4-1 | 71,9 | 3,5 | 20,2 | 4,4 | 317 |
| 18-34-1-2 | 73,5 | 11,6 | 5,4 | 9,5 | 294 | 3 | 66,1 | 3,2 | 18,5 | 12,2 | 345 |
| 4 | 67,1 | 10,6 | 5,0 | 17,3 | 322 | 19-12-1-2 | 49,6 | 2,6 | 41,7 | 6,1 | 460 |
| 6 | 61,7 | 9,7 | 4,6 | 24,0 | 350 | 4 | 73,1 | 3,8 | 5,1 | 17,9 | 312 |
| 2-2 | 69,7 | 11,0 | 10,3 | 9,0 | 310 | 2-2 | 76,0 | 4,0 | 10,7 | 9,3 | 300 |
| 4 | 63,9 | 10,1 | 9,5 | 16,5 | 338 | 3-2 | 72,2 | 3,8 | 15,2 | 8,8 | 316 |
| 6 | 59,0 | 9,3 | 8,7 | 22,9 | 366 | 4-2 | 68,7 | 3,6 | 19,3 | 8,4 | 332 |
| 3-2 | 66,3 | 10,4 | 14,7 | 8,6 | 326 | 4 | 63,3 | 3,3 | 17,8 | 15,6 | 360 |
| 4 | 61,0 | 9,6 | 13,6 | 15,8 | 354 | 5-2 | 65,5 | 3,4 | 23,0 | 8,0 | 348 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 19-12-5-6 | 56.4 | 3.0 | 19.8 | 20.8 | 404 | 19-15-4-3 | 65.3 | 4.3 | 18.3 | 12.0 | 349 |
| 6-2 | 62.6 | 3.3 | 26.4 | 7.7 | 364 | 5 | 60.5 | 4.0 | 17.0 | 18.5 | 377 |
| 8-2 | 57.6 | 3.0 | 32.3 | 7.1 | 396 | 5-1 | 67.6 | 4.4 | 23.7 | 4.2 | 337 |
| 4 | 53.8 | 2.8 | 30.2 | 13.2 | 424 | 3 | 62.5 | 4.1 | 21.9 | 11.5 | 365 |
| 9-2 | 55.3 | 2.9 | 34.9 | 6.8 | 412 | 5 | 58.0 | 3.9 | 20.3 | 17.8 | 393 |
| 10-2 | 53.3 | 2.8 | 37.4 | 6.5 | 428 | 6-1 | 64.6 | 4.2 | 27.2 | 4.0 | 353 |
| 19-13-1-1 | 84.1 | 4.8 | 5.9 | 5.2 | 271 | 3 | 59.8 | 3.9 | 25.2 | 11.0 | 381 |
| 3 | 76.3 | 4.3 | 5.4 | 14.0 | 229 | 5 | 55.8 | 3.7 | 23.4 | 17.1 | 409 |
| 2-1 | 79.4 | 4.5 | 11.1 | 4.9 | 287 | 7-1 | 61.8 | 4.1 | 30.3 | 3.8 | 369 |
| 3 | 72.4 | 4.1 | 10.2 | 13.3 | 315 | 8-1 | 59.2 | 3.9 | 33.2 | 3.6 | 385 |
| 5 | 66.5 | 3.8 | 9.3 | 20.4 | 343 | 12-1 | 50.8 | 3.3 | 42.7 | 3.1 | 449 |
| 3-5 | 63.5 | 3.6 | 13.4 | 19.5 | 359 | 19-16-1-2 | 79.2 | 5.5 | 5.5 | 9.7 | 288 |
| 4-1 | 71.5 | 4.1 | 20.0 | 4.4 | 319 | 4 | 72.2 | 5.0 | 5.0 | 17.7 | 316 |
| 5-1 | 68.0 | 3.9 | 23.9 | 4.2 | 335 | 6 | 56.3 | 4.6 | 4.6 | 24.4 | 344 |
| 3 | 62.8 | 3.6 | 22.0 | 11.6 | 363 | 2-2 | 75.0 | 5.3 | 10.5 | 9.2 | 304 |
| 5 | 58.3 | 3.3 | 20.5 | 17.9 | 391 | 4 | 68.7 | 4.8 | 9.6 | 16.9 | 332 |
| 6-1 | 65.0 | 3.7 | 27.3 | 4.0 | 351 | 6 | 63.3 | 4.4 | 8.9 | 23.3 | 360 |
| 3 | 60.1 | 3.4 | 25.3 | 11.1 | 379 | 3-2 | 71.2 | 5.0 | 15.0 | 8.7 | 320 |
| 5 | 56.0 | 3.2 | 23.6 | 17.2 | 407 | 4 | 65.5 | 4.6 | 13.8 | 16.1 | 348 |
| 7-1 | 62.1 | 3.5 | 30.5 | 3.8 | 367 | 6 | 60.6 | 4.2 | 12.8 | 22.3 | 376 |
| 3 | 57.7 | 3.3 | 28.3 | 10.6 | 395 | 4-2 | 67.8 | 4.8 | 19.1 | 8.3 | 336 |
| 5 | 53.9 | 3.1 | 26.5 | 16.5 | 423 | 4 | 62.6 | 4.4 | 17.6 | 15.4 | 364 |
| 8-1 | 59.5 | 3.4 | 33.4 | 3.6 | 383 | 6 | 58.2 | 4.1 | 16.3 | 21.4 | 392 |
| 3 | 55.5 | 3.2 | 31.1 | 10.2 | 411 | 5-2 | 64.8 | 4.5 | 22.7 | 7.9 | 352 |
| 5 | 51.9 | 3.0 | 29.1 | 16.0 | 439 | 4 | 60.0 | 4.2 | 21.1 | 14.7 | 380 |
| 9-1 | 57.1 | 3.3 | 36.1 | 3.5 | 399 | 6 | 55.9 | 3.9 | 19.6 | 20.6 | 408 |
| 3 | 53.4 | 3.0 | 33.7 | 9.8 | 427 | 6-2 | 61.9 | 4.3 | 26.1 | 7.6 | 368 |
| 5 | 50.1 | 2.9 | 31.6 | 15.4 | 455 | 4 | 57.6 | 4.0 | 24.2 | 14.1 | 396 |
| 19-14-1-2 | 79.7 | 4.9 | 5.6 | 9.8 | 286 | 6 | 53.8 | 3.8 | 22.6 | 19.8 | 424 |
| 4 | 72.6 | 4.4 | 5.1 | 17.8 | 314 | 6 | 82.9 | 6.2 | 5.8 | 5.1 | 275 |
| 6 | 66.7 | 4.1 | 4.7 | 24.5 | 342 | 3 | 75.2 | 5.6 | 5.3 | 13.9 | 303 |
| 2-2 | 75.5 | 4.6 | 10.6 | 9.3 | 302 | 5 | 68.9 | 5.1 | 4.8 | 21.2 | 331 |
| 4 | 69.1 | 4.2 | 9.7 | 17.0 | 330 | 2-1 | 78.3 | 5.8 | 11.0 | 4.8 | 291 |
| 6 | 63.7 | 3.9 | 8.9 | 23.5 | 358 | 3 | 71.5 | 5.3 | 10.0 | 13.2 | 319 |
| 3-2 | 71.7 | 4.4 | 15.1 | 8.8 | 318 | 5 | 65.7 | 4.9 | 9.2 | 20.2 | 347 |
| 4 | 65.9 | 4.0 | 13.9 | 16.2 | 346 | 3-1 | 74.3 | 5.5 | 15.6 | 4.6 | 307 |
| 6 | 61.9 | 3.7 | 12.8 | 22.5 | 374 | 3 | 68.1 | 5.1 | 14.3 | 12.5 | 335 |
| 4-2 | 68.2 | 4.2 | 19.2 | 8.4 | 334 | 5 | 62.8 | 4.7 | 13.2 | 19.3 | 363 |
| 4 | 63.0 | 3.9 | 17.7 | 15.4 | 362 | 4-1 | 70.6 | 5.3 | 19.8 | 4.3 | 323 |
| 6 | 58.5 | 3.6 | 16.4 | 21.5 | 390 | 3 | 65.0 | 4.8 | 18.2 | 12.0 | 351 |
| 5-2 | 65.1 | 4.0 | 22.9 | 8.0 | 350 | 5 | 60.1 | 4.5 | 16.9 | 18.5 | 379 |
| 4 | 60.3 | 3.7 | 21.2 | 14.8 | 378 | 5-1 | 67.3 | 5.0 | 23.6 | 4.1 | 339 |
| 6 | 56.1 | 3.4 | 19.7 | 20.7 | 406 | 3 | 62.1 | 4.6 | 21.8 | 11.4 | 367 |
| 6-2 | 62.3 | 3.8 | 26.2 | 7.6 | 366 | 5 | 57.7 | 4.3 | 20.2 | 17.7 | 395 |
| 4 | 57.8 | 3.6 | 24.4 | 14.2 | 394 | 6-1 | 64.2 | 4.8 | 27.0 | 3.9 | 355 |
| 6 | 54.0 | 3.3 | 22.7 | 19.0 | 422 | 3 | 59.5 | 4.4 | 25.1 | 11.0 | 383 |
| 8 | 50.6 | 3.1 | 21.3 | 25.0 | 450 | 5 | 55.5 | 4.1 | 23.4 | 17.0 | 411 |
| 10 | 57.7 | 2.9 | 20.1 | 29.3 | 478 | 7-1 | 61.4 | 4.6 | 30.2 | 3.8 | 371 |
| 7-2 | 59.7 | 3.7 | 29.3 | 7.3 | 382 | 3 | 57.1 | 4.3 | 28.1 | 10.5 | 399 |
| 19-15-1-1 | 83.5 | 5.5 | 5.9 | 5.1 | 273 | 3 | 53.4 | 4.0 | 26.2 | 16.4 | 427 |
| 3 | 75.7 | 5.0 | 5.3 | 14.0 | 301 | 12-5 | 45.0 | 3.4 | 37.8 | 13.8 | 507 |
| 5 | 69.3 | 4.6 | 4.8 | 21.3 | 329 | 13-1 | 48.8 | 3.6 | 44.5 | 3.0 | 467 |
| 2-1 | 78.9 | 5.2 | 11.0 | 4.8 | 289 | 19-18-1-2 | 78.6 | 6.2 | 5.5 | 9.7 | 290 |
| 3 | 71.9 | 4.7 | 10.1 | 13.2 | 317 | 4 | 71.7 | 5.7 | 5.0 | 17.6 | 318 |
| 5 | 66.1 | 4.3 | 9.3 | 20.3 | 345 | 6 | 65.9 | 5.2 | 4.6 | 24.3 | 346 |
| 3-1 | 74.7 | 4.9 | 15.7 | 4.6 | 305 | 2-2 | 74.5 | 5.9 | 10.4 | 9.1 | 306 |
| 3 | 68.4 | 4.5 | 14.4 | 12.7 | 333 | 4 | 68.2 | 5.4 | 9.6 | 16.8 | 334 |
| 5 | 63.1 | 4.1 | 13.3 | 19.4 | 361 | 6 | 63.0 | 5.0 | 8.8 | 23.2 | 362 |
| 4-1 | 71.0 | 4.7 | 19.9 | 4.4 | 321 | 3-2 | 70.8 | 5.6 | 14.9 | 8.7 | 322 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 19-18-3-4 | 65.1 | 5.1 | 13.7 | 16.1 | 350 | 19-21-4-3 | 64.2 | 5.9 | 18.0 | 11.8 | 355 |
| 6 | 60.3 | 4.8 | 12.7 | 22.2 | 378 | 5 | 59.5 | 5.5 | 16.7 | 18.3 | 383 |
| 4-2 | 67.4 | 5.3 | 18.9 | 8.3 | 338 | 5-1 | 66.5 | 6.1 | 23.3 | 4.1 | 343 |
| 4 | 62.3 | 4.9 | 17.5 | 15.3 | 366 | 3 | 61.4 | 5.7 | 21.6 | 11.3 | 371 |
| 5 | 57.9 | 4.6 | 16.2 | 21.3 | 394 | 5 | 57.1 | 5.3 | 20.1 | 17.5 | 399 |
| 5-2 | 64.4 | 5.1 | 22.6 | 7.9 | 354 | 6-1 | 63.5 | 5.8 | 26.7 | 3.9 | 359 |
| 4 | 59.7 | 4.7 | 20.9 | 14.7 | 382 | 3 | 58.9 | 5.4 | 24.8 | 10.9 | 387 |
| 6 | 55.6 | 4.4 | 19.5 | 20.5 | 410 | 5 | 54.9 | 5.1 | 23.1 | 16.9 | 415 |
| 6-2 | 61.6 | 4.9 | 25.9 | 7.6 | 370 | 6-1 | 56.0 | 5.2 | 35.4 | 3.4 | 407 |
| 7-2 | 59.1 | 4.7 | 29.0 | 7.2 | 386 | 12-1 | 49.0 | 4.6 | 42.2 | 4.1 | 455 |
| 4 | 55.1 | 4.3 | 27.1 | 13.5 | 414 | 19-22-1-2 | 77.5 | 7.5 | 5.4 | 9.5 | 294 |
| 10-4 | 49.3 | 3.9 | 34.6 | 12.1 | 462 | 4 | 70.8 | 6.8 | 5.0 | 17.4 | 322 |
| 11-4 | 47.7 | 3.8 | 36.8 | 11.7 | 478 | 6 | 65.1 | 6.3 | 4.6 | 24.0 | 350 |
| 19-19-1-1 | 82.3 | 6.8 | 5.8 | 5.1 | 277 | 2-2 | 73.6 | 7.1 | 10.3 | 9.0 | 310 |
| 3 | 74.7 | 6.2 | 5.2 | 13.8 | 305 | 4 | 67.4 | 6.5 | 9.5 | 16.6 | 338 |
| 5 | 68.5 | 5.7 | 4.8 | 21.0 | 333 | 6 | 62.3 | 6.0 | 8.7 | 23.0 | 366 |
| 2-1 | 77.8 | 6.5 | 10.9 | 4.8 | 293 | 3-2 | 69.9 | 6.7 | 14.7 | 8.6 | 326 |
| 3 | 71.0 | 5.9 | 10.0 | 13.1 | 321 | 4 | 64.5 | 6.1 | 13.6 | 15.8 | 354 |
| 5 | 65.3 | 5.4 | 9.2 | 20.1 | 349 | 6 | 59.7 | 5.7 | 12.6 | 22.0 | 382 |
| 3-1 | 73.8 | 6.1 | 15.5 | 4.5 | 309 | 4-2 | 66.7 | 6.4 | 18.7 | 8.2 | 342 |
| 3 | 67.6 | 5.6 | 14.2 | 12.5 | 337 | 4 | 61.6 | 5.9 | 17.3 | 15.1 | 370 |
| 5 | 62.5 | 5.2 | 13.1 | 19.2 | 365 | 6 | 57.3 | 5.5 | 16.1 | 21.1 | 398 |
| 4-1 | 70.2 | 5.8 | 19.7 | 4.3 | 325 | 5-2 | 63.7 | 6.1 | 22.4 | 7.8 | 358 |
| 3 | 64.6 | 5.4 | 18.1 | 11.9 | 353 | 4 | 59.1 | 5.7 | 20.7 | 14.5 | 386 |
| 5 | 59.8 | 5.0 | 16.8 | 18.4 | 381 | 6 | 55.1 | 5.3 | 19.3 | 20.3 | 414 |
| 5-1 | 66.9 | 5.5 | 23.5 | 4.1 | 341 | 6-2 | 61.0 | 5.9 | 25.6 | 7.5 | 374 |
| 3 | 61.8 | 5.1 | 21.7 | 11.4 | 369 | 7-4 | 54.5 | 5.3 | 26.8 | 13.4 | 418 |
| 5 | 57.4 | 4.8 | 20.2 | 17.6 | 397 | 19-23-1-1 | 81.1 | 8.2 | 5.7 | 5.0 | 281 |
| 6-1 | 63.9 | 5.3 | 26.9 | 3.9 | 357 | 3 | 73.8 | 7.4 | 5.2 | 13.6 | 309 |
| 8-3 | 54.7 | 4.5 | 30.7 | 10.1 | 417 | 5 | 67.6 | 6.8 | 4.8 | 20.8 | 337 |
| 19-20-1-2 | 78.0 | 6.8 | 5.5 | 9.6 | 292 | 2-1 | 76.8 | 7.7 | 10.8 | 4.6 | 297 |
| 4 | 71.3 | 6.2 | 5.0 | 17.5 | 320 | 3 | 70.2 | 7.1 | 9.8 | 12.9 | 325 |
| 6 | 65.5 | 5.7 | 4.6 | 24.1 | 348 | 5 | 64.6 | 6.5 | 9.1 | 19.8 | 353 |
| 2-2 | 74.0 | 6.5 | 10.4 | 9.1 | 308 | 3-1 | 72.9 | 7.3 | 15.3 | 4.5 | 313 |
| 4 | 67.8 | 6.0 | 9.5 | 16.7 | 336 | 3 | 66.9 | 6.7 | 14.1 | 12.3 | 341 |
| 6 | 62.6 | 5.5 | 8.8 | 23.1 | 364 | 5 | 61.8 | 6.2 | 13.0 | 19.0 | 369 |
| 3-2 | 70.4 | 6.2 | 14.8 | 8.6 | 324 | 4-1 | 69.3 | 7.0 | 19.4 | 4.2 | 329 |
| 4 | 64.8 | 5.7 | 13.6 | 15.9 | 352 | 3 | 63.9 | 6.4 | 17.9 | 11.8 | 357 |
| 6 | 60.0 | 5.3 | 12.6 | 22.1 | 380 | 5-1 | 66.1 | 6.7 | 23.2 | 4.0 | 345 |
| 4-2 | 67.1 | 5.9 | 18.8 | 8.2 | 340 | 7-1 | 60.5 | 6.1 | 29.7 | 3.7 | 377 |
| 4 | 62.0 | 5.4 | 17.4 | 15.2 | 368 | 8-1 | 58.0 | 5.8 | 32.6 | 3.6 | 393 |
| 6 | 57.6 | 5.0 | 16.2 | 21.2 | 396 | 19-24-1-2 | 76.9 | 8.1 | 5.4 | 9.5 | 296 |
| 8 | 53.8 | 4.7 | 15.1 | 26.4 | 424 | 4 | 70.4 | 7.4 | 4.9 | 17.3 | 324 |
| 5-2 | 64.0 | 5.6 | 22.5 | 7.9 | 356 | 6 | 64.8 | 6.8 | 4.5 | 23.9 | 352 |
| 4 | 59.4 | 5.2 | 20.8 | 14.6 | 384 | 2-2 | 73.1 | 7.7 | 10.2 | 9.0 | 312 |
| 6 | 55.4 | 4.8 | 19.4 | 20.4 | 412 | 4 | 67.0 | 7.1 | 9.4 | 16.5 | 340 |
| 6-2 | 61.3 | 5.4 | 25.8 | 7.5 | 372 | 6 | 62.0 | 6.5 | 8.7 | 22.8 | 368 |
| 7-2 | 58.7 | 5.2 | 28.9 | 7.2 | 388 | 3-2 | 69.5 | 7.3 | 14.6 | 8.5 | 326 |
| 9-6 | 47.9 | 4.2 | 30.2 | 17.6 | 476 | 4 | 64.0 | 6.7 | 13.5 | 15.8 | 356 |
| 19-21-1-1 | 81.7 | 7.5 | 5.7 | 5.0 | 279 | 6 | 59.4 | 6.2 | 12.5 | 21.9 | 384 |
| 3 | 74.3 | 6.8 | 5.2 | 13.7 | 307 | 4-2 | 66.3 | 7.0 | 18.6 | 8.1 | 344 |
| 5 | 68.1 | 6.2 | 4.8 | 20.9 | 335 | 4 | 61.3 | 6.5 | 17.2 | 15.0 | 372 |
| 2-1 | 77.3 | 7.1 | 10.8 | 4.7 | 295 | 6 | 57.0 | 6.0 | 16.0 | 21.0 | 400 |
| 3 | 70.6 | 6.5 | 9.9 | 13.0 | 323 | 5-2 | 63.3 | 6.7 | 22.2 | 7.8 | 360 |
| 5 | 65.0 | 6.0 | 9.1 | 19.9 | 351 | 4 | 58.8 | 6.2 | 20.6 | 14.4 | 388 |
| 3-1 | 73.3 | 6.7 | 15.4 | 4.5 | 311 | 6 | 54.8 | 5.8 | 19.2 | 20.2 | 416 |
| 3 | 67.3 | 6.2 | 14.1 | 12.4 | 339 | 7-2 | 58.2 | 6.1 | 28.6 | 7.1 | 392 |
| 5 | 62.1 | 5.7 | 13.1 | 19.1 | 367 | 4 | 54.3 | 5.7 | 26.7 | 13.3 | 420 |
| 4-1 | 69.7 | 6.4 | 19.6 | 4.3 | 327 | 8-2 | 55.9 | 5.9 | 31.4 | 6.8 | 408 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 19-25-1-1 | 80.6 | 8.8 | 5.7 | 4.9 | 283 | 19-30-2-4 | 65.9 | 8.7 | 9.2 | 16.2 | 346 |
| 3 | 73.3 | 8.0 | 5.1 | 13.5 | 311 | 6 | 61.0 | 8.0 | 8.6 | 22.4 | 374 |
| 5 | 67.3 | 7.4 | 4.7 | 20.6 | 339 | 3-2 | 68.3 | 9.0 | 14.3 | 8.4 | 334 |
| 2-1 | 76.2 | 8.4 | 10.7 | 4.7 | 299 | 4 | 63.0 | 8.3 | 13.3 | 15.4 | 362 |
| 3 | 69.7 | 7.6 | 9.8 | 12.8 | 327 | 6 | 58.4 | 7.7 | 12.3 | 21.6 | 390 |
| 5 | 64.2 | 7.0 | 9.0 | 19.7 | 355 | 10-2 | 51.1 | 6.7 | 35.9 | 6.3 | 446 |
| 3-1 | 72.4 | 7.9 | 15.2 | 4.4 | 315 | 19-31-1-1 | 78.9 | 10.7 | 5.5 | 4.8 | 289 |
| 3 | 66.5 | 7.3 | 14.0 | 12.2 | 343 | 3 | 71.9 | 9.8 | 5.0 | 13.3 | 317 |
| 5 | 61.4 | 6.7 | 12.9 | 18.9 | 371 | 5 | 66.1 | 9.0 | 4.6 | 20.3 | 345 |
| 4-1 | 68.9 | 7.6 | 19.3 | 4.2 | 331 | 2-1 | 74.7 | 10.2 | 10.5 | 4.6 | 305 |
| 3 | 63.5 | 7.0 | 17.8 | 11.7 | 359 | 3 | 68.5 | 9.3 | 9.6 | 12.6 | 333 |
| 5 | 58.9 | 6.5 | 16.5 | 18.1 | 387 | 5 | 63.1 | 8.6 | 8.9 | 19.4 | 361 |
| 5-3 | 60.8 | 6.7 | 21.3 | 11.2 | 375 | 3-1 | 71.0 | 9.7 | 14.9 | 4.4 | 321 |
| 6-3 | 58.3 | 6.4 | 24.6 | 10.7 | 391 | 3 | 65.3 | 8.9 | 13.8 | 12.0 | 349 |
| 19-26-1-2 | 76.5 | 8.7 | 5.4 | 9.3 | 298 | 5 | 60.5 | 8.2 | 12.7 | 18.6 | 377 |
| 4 | 69.9 | 8.0 | 4.9 | 17.2 | 326 | 4-1 | 67.6 | 9.2 | 19.0 | 4.1 | 337 |
| 6 | 64.4 | 7.3 | 4.5 | 23.7 | 354 | 5-1 | 64.5 | 8.8 | 22.7 | 4.0 | 353 |
| 2-2 | 72.6 | 8.3 | 10.2 | 8.9 | 314 | 19-32-1-2 | 75.0 | 10.5 | 5.3 | 9.2 | 304 |
| 4 | 66.7 | 7.6 | 9.3 | 16.4 | 342 | 4 | 68.7 | 9.6 | 4.8 | 16.9 | 332 |
| 6 | 61.6 | 7.0 | 8.6 | 22.7 | 370 | 6 | 63.3 | 8.9 | 4.4 | 23.3 | 360 |
| 3-2 | 69.1 | 7.9 | 14.5 | 8.5 | 330 | 2-2 | 71.2 | 10.0 | 10.0 | 8.7 | 320 |
| 4 | 63.7 | 7.3 | 13.4 | 15.6 | 358 | 4 | 65.5 | 9.2 | 9.2 | 16.1 | 348 |
| 6 | 59.1 | 6.7 | 12.4 | 21.7 | 386 | 6 | 60.6 | 8.5 | 8.5 | 22.3 | 376 |
| 10-4 | 48.5 | 5.5 | 34.0 | 11.9 | 470 | 3-2 | 67.8 | 9.5 | 14.3 | 8.3 | 336 |
| 12-2 | 48.1 | 5.5 | 40.5 | 5.9 | 474 | 4 | 62.6 | 8.8 | 13.2 | 15.4 | 364 |
| 19-27-1-1 | 80.0 | 9.5 | 5.6 | 4.9 | 285 | 6 | 58.2 | 8.2 | 12.2 | 21.4 | 392 |
| 3 | 72.9 | 8.6 | 5.1 | 13.4 | 313 | 19-33-1-1 | 78.3 | 11.3 | 5.5 | 4.8 | 291 |
| 5 | 66.9 | 7.9 | 4.7 | 20.5 | 341 | 3 | 71.5 | 10.3 | 5.0 | 13.2 | 319 |
| 2-1 | 75.7 | 9.0 | 10.6 | 4.7 | 301 | 5 | 65.7 | 9.5 | 4.6 | 20.2 | 347 |
| 3 | 69.3 | 8.2 | 9.7 | 12.8 | 329 | 2-1 | 74.2 | 10.7 | 10.4 | 4.6 | 307 |
| 5 | 63.9 | 7.5 | 9.0 | 19.6 | 357 | 3 | 68.1 | 9.8 | 9.6 | 12.5 | 335 |
| 3-1 | 71.9 | 8.5 | 15.1 | 4.4 | 317 | 5 | 62.8 | 9.1 | 8.8 | 19.3 | 363 |
| 3 | 66.1 | 7.8 | 13.9 | 12.2 | 345 | 3-1 | 70.6 | 10.2 | 14.9 | 4.3 | 323 |
| 5 | 61.1 | 7.2 | 12.9 | 18.8 | 373 | 3 | 65.0 | 9.4 | 13.7 | 11.9 | 351 |
| 4-1 | 68.5 | 8.1 | 19.2 | 4.2 | 333 | 5 | 60.1 | 8.7 | 12.7 | 18.5 | 379 |
| 5-1 | 65.3 | 7.7 | 22.9 | 4.0 | 349 | 19-34-1-2 | 74.5 | 11.1 | 5.2 | 9.1 | 306 |
| 19-28-1-2 | 76.0 | 9.3 | 5.3 | 9.3 | 300 | 4 | 68.2 | 10.2 | 4.8 | 16.8 | 334 |
| 4 | 69.5 | 8.5 | 4.9 | 17.1 | 328 | 6 | 62.9 | 9.4 | 4.4 | 23.2 | 362 |
| 6 | 64.0 | 7.8 | 4.5 | 23.6 | 356 | 2-2 | 70.8 | 20.5 | 9.9 | 8.7 | 322 |
| 2-2 | 72.1 | 8.9 | 10.1 | 8.9 | 316 | 4 | 65.1 | 9.7 | 9.1 | 16.0 | 350 |
| 4 | 66.3 | 8.1 | 9.3 | 16.3 | 344 | 6 | 60.3 | 9.0 | 8.5 | 22.2 | 378 |
| 6 | 61.3 | 7.5 | 8.6 | 22.6 | 372 | 3-2 | 67.4 | 10.1 | 14.2 | 8.3 | 338 |
| 3-2 | 68.7 | 8.4 | 14.5 | 8.4 | 332 | 4 | 62.3 | 9.3 | 13.1 | 15.3 | 366 |
| 4 | 63.3 | 7.8 | 13.3 | 15.6 | 360 | 6 | 57.9 | 8.6 | 12.2 | 21.3 | 394 |
| 6 | 58.8 | 7.2 | 12.4 | 21.6 | 388 | 19-35-1-1 | 77.8 | 12.0 | 5.4 | 4.8 | 293 |
| 19-29-1-1 | 79.4 | 10.1 | 5.6 | 4.9 | 287 | 3 | 71.0 | 10.9 | 5.0 | 13.1 | 321 |
| 3 | 72.4 | 9.2 | 5.1 | 13.3 | 315 | 5 | 65.3 | 10.0 | 4.6 | 20.1 | 349 |
| 5 | 66.5 | 8.4 | 4.7 | 20.4 | 343 | 2-1 | 73.8 | 11.3 | 10.4 | 4.5 | 309 |
| 2-1 | 75.2 | 9.6 | 10.6 | 4.6 | 303 | 3 | 67.6 | 10.4 | 9.5 | 12.5 | 337 |
| 3 | 68.9 | 8.8 | 9.6 | 12.7 | 331 | 5 | 62.5 | 9.6 | 8.7 | 19.2 | 365 |
| 5 | 63.5 | 8.1 | 8.9 | 19.5 | 359 | 3-1 | 70.1 | 10.8 | 14.8 | 4.3 | 325 |
| 3-1 | 71.5 | 9.1 | 15.0 | 4.4 | 319 | 3 | 64.6 | 9.9 | 13.6 | 11.9 | 353 |
| 3 | 65.7 | 8.4 | 13.8 | 12.1 | 347 | 19-36-1-2 | 74.0 | 11.7 | 5.2 | 9.1 | 308 |
| 5 | 60.8 | 7.7 | 12.8 | 18.7 | 375 | 4 | 67.8 | 10.7 | 4.8 | 16.7 | 336 |
| 4-1 | 68.1 | 8.6 | 19.1 | 4.2 | 335 | 6 | 62.6 | 9.9 | 4.4 | 23.1 | 364 |
| 19-30-1-2 | 75.5 | 9.9 | 5.3 | 9.2 | 302 | 2-2 | 70.4 | 11.1 | 9.9 | 8.6 | 324 |
| 4 | 69.1 | 9.1 | 4.8 | 17.0 | 330 | 4 | 64.8 | 10.2 | 9.1 | 15.9 | 352 |
| 6 | 63.7 | 8.4 | 4.5 | 23.4 | 358 | 6 | 60.0 | 9.5 | 8.4 | 22.1 | 380 |
| 2-2 | 71.7 | 9.4 | 10.1 | 8.8 | 318 | 3-2 | 67.1 | 10.6 | 14.1 | 8.2 | 340 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|------------|------|-----|------|------|------|
| 19-36-3-4 | 62.0 | 9.8 | 13.0 | 15.2 | 368 | 20-10-9-6 | 50.2 | 2.1 | 30.1 | 17.6 | 478 |
| 6 | 57.6 | 9.1 | 12.1 | 21.2 | 396 | 20-10-10-2 | 54.8 | 2.3 | 36.5 | 6.4 | 438 |
| 19-37-1-1 | 77.3 | 12.5 | 5.4 | 4.7 | 295 | 4 | 51.5 | 2.1 | 34.3 | 12.0 | 466 |
| 3 | 70.6 | 11.5 | 4.9 | 13.0 | 323 | 6 | 48.6 | 2.0 | 32.4 | 17.0 | 494 |
| 5 | 65.0 | 10.5 | 4.6 | 19.9 | 351 | 12-4 | 48.2 | 2.0 | 38.5 | 11.2 | 498 |
| 2-1 | 73.3 | 11.9 | 10.3 | 4.5 | 311 | 20-11-2-3 | 73.8 | 3.4 | 9.8 | 12.9 | 325 |
| 3 | 67.3 | 10.9 | 9.4 | 12.4 | 339 | 3-1 | 76.7 | 3.5 | 15.3 | 4.5 | 313 |
| 5 | 62.1 | 10.1 | 8.7 | 19.1 | 367 | 8-3 | 57.0 | 2.6 | 30.4 | 10.0 | 421 |
| 3-1 | 69.7 | 11.3 | 14.7 | 4.3 | 327 | 5 | 53.4 | 2.4 | 28.5 | 15.6 | 449 |
| 3 | 64.2 | 10.4 | 13.5 | 11.8 | 355 | 10-3 | 53.0 | 2.4 | 35.3 | 9.3 | 506 |
| 5 | 59.5 | 9.7 | 12.5 | 18.3 | 383 | 20-12-1-2 | 81.1 | 4.1 | 5.4 | 9.4 | 296 |
| 19-38-1-2 | 73.6 | 12.2 | 5.2 | 9.0 | 310 | 2-2 | 76.9 | 3.8 | 10.3 | 9.0 | 312 |
| 4 | 67.5 | 11.2 | 4.7 | 16.6 | 338 | 3-2 | 73.2 | 3.7 | 14.6 | 8.5 | 328 |
| 6 | 62.3 | 10.4 | 4.4 | 22.9 | 366 | 4-2 | 69.7 | 3.5 | 18.6 | 8.1 | 344 |
| 2-2 | 69.9 | 11.6 | 9.8 | 8.6 | 326 | 4 | 64.5 | 3.2 | 17.2 | 15.1 | 372 |
| 4 | 64.4 | 10.7 | 9.0 | 15.8 | 354 | 5-2 | 66.7 | 3.3 | 22.2 | 7.8 | 360 |
| 6 | 59.7 | 9.9 | 8.4 | 22.0 | 382 | 4 | 61.8 | 3.1 | 20.6 | 14.4 | 388 |
| 3-2 | 66.7 | 11.1 | 14.0 | 8.2 | 342 | 6 | 57.7 | 2.9 | 19.2 | 20.2 | 416 |
| 4 | 61.6 | 10.3 | 13.0 | 15.1 | 370 | 6-2 | 63.8 | 3.2 | 25.5 | 7.4 | 376 |
| 6 | 57.3 | 9.5 | 12.1 | 21.1 | 398 | 4 | 59.4 | 3.0 | 23.8 | 13.8 | 404 |
| 19-39-1-1 | 76.8 | 13.1 | 5.4 | 4.7 | 207 | 6 | 55.6 | 2.8 | 22.2 | 19.4 | 432 |
| 3 | 70.2 | 12.0 | 4.9 | 12.9 | 325 | 7-2 | 61.2 | 3.1 | 28.6 | 7.1 | 392 |
| 5 | 64.6 | 11.0 | 4.5 | 19.8 | 353 | 4 | 57.1 | 2.9 | 26.7 | 13.3 | 420 |
| 2-1 | 72.9 | 12.4 | 10.2 | 4.5 | 313 | 6 | 53.6 | 2.7 | 25.0 | 18.7 | 448 |
| 3 | 66.9 | 11.4 | 9.4 | 12.3 | 341 | 8-2 | 58.8 | 2.9 | 31.4 | 6.9 | 408 |
| 5 | 61.8 | 10.6 | 8.7 | 18.9 | 369 | 4 | 55.0 | 2.8 | 29.3 | 12.8 | 436 |
| 19-40-1-2 | 73.1 | 12.8 | 5.1 | 9.0 | 312 | 6 | 51.7 | 2.6 | 27.6 | 18.1 | 464 |
| 4 | 67.0 | 11.8 | 4.7 | 16.5 | 340 | 9-2 | 56.6 | 2.8 | 34.0 | 6.6 | 424 |
| 6 | 62.0 | 10.9 | 4.3 | 22.8 | 368 | 4 | 53.1 | 2.6 | 31.8 | 12.4 | 452 |
| 2-2 | 69.5 | 12.2 | 9.8 | 8.5 | 328 | 6 | 50.0 | 2.5 | 30.0 | 17.5 | 480 |
| 4 | 64.0 | 11.2 | 9.0 | 15.7 | 356 | 10-2 | 54.5 | 2.7 | 36.4 | 6.4 | 440 |
| 6 | 59.4 | 10.4 | 8.3 | 21.9 | 384 | 4 | 51.3 | 2.6 | 34.2 | 11.9 | 468 |
| 20-7-13-5 | 45.7 | 1.3 | 39.6 | 13.3 | 525 | 6 | 48.4 | 2.4 | 32.3 | 16.9 | 496 |
| 20-8-2-4 | 71.4 | 2.4 | 9.5 | 16.7 | 336 | 12-4 | 48.0 | 2.4 | 38.4 | 11.2 | 500 |
| 6-2 | 64.5 | 2.1 | 25.8 | 7.5 | 372 | 20-13-1-1 | 84.8 | 4.6 | 5.6 | 4.9 | 283 |
| 9-4 | 53.6 | 1.8 | 32.1 | 12.5 | 448 | 2-1 | 80.3 | 4.3 | 10.7 | 4.7 | 299 |
| 13-4 | 46.9 | 1.6 | 40.6 | 10.9 | 512 | 3 | 73.4 | 4.0 | 9.8 | 12.8 | 327 |
| 6 | 44.4 | 1.5 | 38.5 | 15.6 | 540 | 3-1 | 76.2 | 4.1 | 15.2 | 4.4 | 315 |
| 14-4 | 45.5 | 1.5 | 42.4 | 10.6 | 528 | 4-1 | 72.5 | 3.9 | 19.3 | 4.2 | 331 |
| 20-9-9-3 | 55.2 | 2.1 | 33.1 | 10.6 | 435 | 3 | 66.9 | 3.6 | 17.8 | 11.7 | 359 |
| 5 | 51.8 | 1.9 | 31.2 | 15.1 | 463 | 5 | 62.0 | 3.4 | 16.5 | 18.1 | 397 |
| 12-7 | 44.5 | 1.7 | 35.6 | 18.2 | 539 | 5-1 | 69.2 | 3.7 | 23.1 | 4.0 | 347 |
| 20-10-4-2 | 70.2 | 2.9 | 18.7 | 8.2 | 342 | 3 | 64.0 | 3.5 | 21.3 | 11.2 | 375 |
| 4 | 64.9 | 2.7 | 17.3 | 15.1 | 370 | 5 | 59.5 | 3.2 | 19.8 | 17.4 | 403 |
| 6 | 60.3 | 2.5 | 16.1 | 21.1 | 398 | 6-1 | 66.1 | 3.6 | 26.4 | 3.9 | 363 |
| 5-2 | 67.0 | 2.8 | 22.3 | 7.8 | 358 | 3 | 61.4 | 3.3 | 24.5 | 10.7 | 391 |
| 4 | 62.2 | 2.6 | 20.7 | 14.5 | 386 | 5 | 57.3 | 3.1 | 22.9 | 16.7 | 419 |
| 6 | 58.0 | 2.4 | 19.3 | 20.3 | 414 | 7-1 | 63.3 | 3.4 | 29.5 | 3.7 | 379 |
| 6-2 | 64.2 | 2.7 | 25.6 | 7.5 | 374 | 3 | 59.0 | 3.2 | 27.5 | 10.3 | 407 |
| 4 | 59.7 | 2.5 | 23.9 | 13.9 | 402 | 5 | 55.2 | 3.0 | 25.7 | 16.1 | 435 |
| 6 | 55.8 | 2.3 | 22.3 | 19.5 | 430 | 7 | 51.8 | 2.8 | 24.2 | 21.2 | 463 |
| 7-2 | 61.5 | 2.6 | 28.7 | 7.2 | 390 | 8-1 | 60.7 | 3.3 | 32.4 | 3.6 | 395 |
| 4 | 57.4 | 2.4 | 26.8 | 13.4 | 418 | 3 | 56.7 | 3.1 | 30.3 | 9.9 | 423 |
| 6 | 53.8 | 2.2 | 25.1 | 18.8 | 446 | 5 | 53.2 | 2.9 | 28.4 | 15.5 | 451 |
| 8-2 | 59.1 | 2.5 | 31.5 | 6.9 | 406 | 20-14-1-2 | 80.5 | 4.7 | 5.4 | 9.4 | 298 |
| 4 | 55.3 | 2.3 | 29.5 | 12.9 | 434 | 4 | 73.6 | 4.3 | 4.9 | 17.2 | 326 |
| 6 | 51.9 | 2.2 | 27.7 | 18.2 | 462 | 6 | 67.8 | 4.0 | 4.5 | 23.7 | 354 |
| 9-2 | 56.9 | 2.4 | 34.1 | 6.6 | 422 | 2-2 | 76.4 | 4.5 | 10.2 | 8.9 | 314 |
| 4 | 53.3 | 2.2 | 32.0 | 12.4 | 450 | 4 | 70.2 | 4.1 | 9.3 | 16.4 | 342 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 20-14-2-6 | 64.8 | 3.8 | 8.6 | 22.7 | 370 | 20-16-7-4 | 56.6 | 3.8 | 26.4 | 13.2 | 424 |
| 3-2 | 72.7 | 4.2 | 14.5 | 8.5 | 330 | 6 | 53.1 | 3.5 | 24.8 | 18.6 | 452 |
| 4 | 67.0 | 3.9 | 13.4 | 15.6 | 358 | 8-2 | 58.2 | 3.9 | 31.1 | 6.8 | 412 |
| 6 | 62.2 | 3.6 | 12.4 | 21.8 | 386 | 4 | 54.5 | 3.6 | 29.1 | 12.7 | 440 |
| 4-2 | 69.4 | 4.0 | 18.5 | 8.1 | 346 | 6 | 51.3 | 3.4 | 27.3 | 18.0 | 468 |
| 4 | 64.2 | 3.7 | 17.1 | 15.0 | 374 | 9-4 | 52.6 | 3.5 | 31.6 | 12.3 | 456 |
| 6 | 59.7 | 3.5 | 15.9 | 20.9 | 402 | 10-4 | 50.8 | 3.4 | 33.9 | 11.9 | 472 |
| 5-2 | 66.3 | 3.9 | 22.1 | 7.7 | 362 | 20-17-1-1 | 83.6 | 5.9 | 5.6 | 4.9 | 287 |
| 4 | 61.5 | 3.6 | 20.5 | 14.4 | 390 | 3 | 76.2 | 5.4 | 5.1 | 13.3 | 315 |
| 6 | 57.4 | 3.3 | 19.1 | 20.1 | 418 | 5 | 70.0 | 4.9 | 4.7 | 20.4 | 343 |
| 6-2 | 63.5 | 3.7 | 25.4 | 7.4 | 378 | 2-1 | 79.2 | 5.6 | 10.6 | 4.6 | 303 |
| 4 | 59.1 | 3.4 | 23.6 | 13.8 | 406 | 3 | 72.5 | 5.1 | 9.7 | 12.7 | 331 |
| 6 | 55.3 | 3.2 | 22.1 | 19.3 | 434 | 5 | 66.9 | 4.7 | 8.9 | 19.5 | 359 |
| 7-2 | 60.9 | 3.6 | 28.4 | 7.1 | 394 | 3-1 | 75.2 | 5.3 | 15.0 | 4.4 | 319 |
| 4 | 56.9 | 3.3 | 26.5 | 13.3 | 422 | 3 | 69.2 | 4.9 | 13.8 | 12.1 | 347 |
| 6 | 53.3 | 3.1 | 24.9 | 18.7 | 450 | 5 | 64.0 | 4.5 | 12.8 | 18.7 | 375 |
| 8-2 | 58.5 | 3.4 | 31.2 | 6.8 | 410 | 4-1 | 71.6 | 5.1 | 10.1 | 4.2 | 335 |
| 4 | 54.8 | 3.2 | 29.2 | 12.8 | 438 | 3 | 66.1 | 4.7 | 17.6 | 11.6 | 363 |
| 6 | 51.5 | 3.0 | 27.5 | 18.0 | 466 | 5 | 61.4 | 4.3 | 16.4 | 17.9 | 391 |
| 20-15-1-1 | 84.2 | 5.3 | 5.6 | 4.9 | 285 | 5-1 | 68.4 | 4.8 | 22.8 | 4.0 | 351 |
| 3 | 76.7 | 4.8 | 5.1 | 13.4 | 313 | 3 | 63.3 | 4.5 | 21.1 | 11.1 | 379 |
| 5 | 70.4 | 4.4 | 4.7 | 20.5 | 341 | 5 | 59.0 | 4.2 | 19.6 | 17.2 | 407 |
| 2-1 | 79.7 | 5.0 | 10.6 | 4.6 | 301 | 6-1 | 65.4 | 4.6 | 26.2 | 3.8 | 367 |
| 3 | 73.0 | 4.5 | 9.7 | 12.8 | 329 | 3 | 60.7 | 4.3 | 24.3 | 10.6 | 395 |
| 5 | 67.2 | 4.2 | 9.0 | 19.6 | 357 | 5 | 56.7 | 4.0 | 22.7 | 16.5 | 423 |
| 3-1 | 75.7 | 4.7 | 15.1 | 4.4 | 317 | 7-1 | 62.7 | 4.4 | 20.2 | 3.7 | 383 |
| 3 | 69.6 | 4.3 | 13.9 | 12.2 | 345 | 3 | 58.4 | 4.1 | 27.2 | 10.2 | 411 |
| 5 | 64.3 | 4.0 | 12.9 | 18.8 | 373 | 8-1 | 60.2 | 4.3 | 32.0 | 3.5 | 399 |
| 4-1 | 72.1 | 4.5 | 19.2 | 4.2 | 333 | 20-18-1-2 | 79.5 | 5.9 | 5.3 | 9.3 | 302 |
| 3 | 66.5 | 4.1 | 17.7 | 11.6 | 361 | 4 | 72.7 | 5.4 | 4.8 | 17.0 | 330 |
| 5 | 61.6 | 3.9 | 16.4 | 18.0 | 389 | 6 | 67.0 | 5.0 | 4.5 | 23.5 | 358 |
| 5-1 | 68.8 | 4.3 | 22.9 | 4.0 | 349 | 2-2 | 75.5 | 5.7 | 10.0 | 8.8 | 318 |
| 3 | 63.7 | 4.0 | 21.2 | 11.1 | 377 | 4 | 69.4 | 5.2 | 9.2 | 16.2 | 346 |
| 5 | 59.3 | 3.7 | 19.7 | 17.3 | 405 | 6 | 64.2 | 4.8 | 8.6 | 22.4 | 374 |
| 6-1 | 65.8 | 4.1 | 26.3 | 3.8 | 365 | 3-2 | 71.8 | 5.4 | 14.4 | 8.4 | 334 |
| 3 | 61.1 | 3.8 | 24.4 | 10.7 | 393 | 4 | 66.3 | 5.0 | 13.2 | 15.5 | 362 |
| 5 | 56.9 | 3.6 | 22.8 | 16.6 | 421 | 6 | 61.5 | 4.6 | 12.3 | 21.5 | 390 |
| 7-1 | 63.0 | 3.9 | 29.4 | 3.7 | 381 | 4-2 | 68.6 | 5.1 | 18.3 | 8.0 | 350 |
| 8-1 | 60.5 | 3.8 | 32.2 | 3.5 | 397 | 4 | 63.5 | 4.7 | 16.9 | 14.8 | 378 |
| 9-3 | 54.4 | 3.4 | 32.6 | 9.5 | 441 | 6 | 59.1 | 4.4 | 15.8 | 20.7 | 406 |
| 20-16-1-2 | 80.0 | 5.3 | 5.3 | 9.3 | 300 | 5-2 | 65.6 | 4.9 | 21.9 | 7.6 | 366 |
| 4 | 73.2 | 4.8 | 4.8 | 17.1 | 328 | 4 | 60.9 | 4.5 | 20.3 | 14.2 | 394 |
| 6 | 67.4 | 4.5 | 4.5 | 23.6 | 356 | 6 | 56.9 | 4.3 | 18.9 | 19.9 | 422 |
| 2-2 | 75.9 | 5.1 | 10.1 | 8.9 | 316 | 6-2 | 62.8 | 4.7 | 25.1 | 7.3 | 382 |
| 4 | 69.8 | 4.6 | 9.3 | 16.3 | 344 | 4 | 58.5 | 4.4 | 23.4 | 13.6 | 410 |
| 6 | 64.5 | 4.3 | 8.6 | 22.6 | 372 | 6 | 54.8 | 4.1 | 21.9 | 19.2 | 438 |
| 3-2 | 72.3 | 4.8 | 14.5 | 8.4 | 332 | 7-2 | 60.3 | 4.5 | 28.1 | 7.0 | 398 |
| 4 | 66.7 | 4.4 | 13.3 | 15.6 | 360 | 8-2 | 58.0 | 4.3 | 30.9 | 6.8 | 414 |
| 6 | 61.9 | 4.1 | 12.4 | 21.6 | 388 | 10-2 | 53.8 | 4.0 | 35.9 | 6.3 | 446 |
| 4-2 | 69.0 | 4.6 | 18.4 | 8.0 | 348 | 20-19-1-1 | 83.0 | 6.6 | 5.5 | 4.8 | 289 |
| 4 | 63.8 | 4.3 | 17.0 | 14.9 | 376 | 3 | 75.7 | 6.0 | 5.0 | 13.3 | 317 |
| 6 | 59.4 | 4.0 | 15.8 | 20.8 | 404 | 5 | 69.6 | 5.5 | 4.6 | 20.3 | 345 |
| 5-2 | 65.9 | 4.4 | 22.0 | 7.7 | 364 | 7 | 64.3 | 5.1 | 4.3 | 26.3 | 373 |
| 4 | 61.2 | 4.1 | 20.4 | 14.3 | 392 | 2-1 | 78.7 | 6.2 | 10.5 | 4.6 | 305 |
| 6 | 57.2 | 3.8 | 19.0 | 20.0 | 420 | 3 | 72.1 | 5.7 | 9.6 | 12.6 | 333 |
| 6-2 | 63.2 | 4.2 | 25.3 | 7.3 | 380 | 5 | 66.5 | 5.3 | 8.8 | 19.4 | 361 |
| 4 | 58.8 | 3.9 | 23.5 | 13.7 | 408 | 3-1 | 74.8 | 5.9 | 14.9 | 4.4 | 321 |
| 6 | 55.0 | 3.7 | 22.0 | 19.3 | 436 | 3 | 68.8 | 5.4 | 13.7 | 12.0 | 349 |
| 7-2 | 60.6 | 4.0 | 28.3 | 7.1 | 396 | 5 | 63.6 | 5.0 | 12.7 | 18.6 | 377 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 20-19-4-1 | 71.2 | 5.6 | 19.0 | 4.2 | 337 | 20-22-1-6 | 66.3 | 6.1 | 4.4 | 23.2 | 362 |
| 3 | 65.8 | 5.2 | 17.5 | 11.5 | 365 | 2-2 | 74.5 | 6.8 | 9.9 | 8.7 | 322 |
| 5 | 61.1 | 4.8 | 16.3 | 17.8 | 393 | 4 | 68.6 | 6.3 | 9.1 | 16.0 | 350 |
| 5-1 | 68.0 | 5.4 | 22.7 | 3.9 | 353 | 6 | 63.5 | 5.8 | 8.5 | 22.2 | 378 |
| 3 | 63.0 | 5.0 | 21.0 | 11.0 | 381 | 3-2 | 71.0 | 6.5 | 14.2 | 6.3 | 338 |
| 5 | 58.7 | 4.6 | 19.6 | 17.1 | 409 | 4 | 65.6 | 6.0 | 13.1 | 15.3 | 366 |
| 6-1 | 65.0 | 5.1 | 26.0 | 3.8 | 369 | 6 | 60.9 | 5.6 | 12.2 | 21.3 | 394 |
| 3 | 60.4 | 4.8 | 24.2 | 10.6 | 397 | 4-2 | 67.8 | 6.2 | 18.1 | 7.9 | 354 |
| 5 | 56.5 | 4.5 | 22.6 | 16.4 | 425 | 4 | 62.8 | 5.7 | 16.8 | 14.7 | 382 |
| 7-1 | 62.3 | 4.9 | 29.1 | 3.6 | 385 | 6 | 58.5 | 5.3 | 15.6 | 20.6 | 410 |
| 3 | 58.1 | 4.6 | 27.1 | 10.2 | 413 | 5-2 | 64.9 | 5.9 | 21.6 | 7.6 | 370 |
| 5 | 54.4 | 4.3 | 25.4 | 15.9 | 441 | 4 | 60.3 | 5.5 | 20.1 | 14.1 | 398 |
| 8-1 | 59.9 | 4.7 | 31.9 | 3.5 | 401 | 6 | 56.3 | 5.2 | 18.8 | 19.7 | 426 |
| 3 | 55.9 | 4.4 | 29.8 | 9.8 | 429 | 6-2 | 62.2 | 5.7 | 24.8 | 7.2 | 386 |
| 5 | 52.5 | 4.2 | 28.0 | 15.3 | 457 | 4 | 58.0 | 5.3 | 23.2 | 13.5 | 414 |
| 9-1 | 57.6 | 4.6 | 34.5 | 3.3 | 417 | 6 | 54.3 | 5.0 | 21.7 | 19.0 | 442 |
| 20-20-1-2 | 78.9 | 6.6 | 5.3 | 9.2 | 304 | 7-2 | 59.7 | 5.5 | 27.8 | 7.0 | 402 |
| 4 | 72.3 | 6.0 | 4.8 | 16.9 | 332 | 4 | 55.8 | 5.1 | 26.0 | 13.0 | 430 |
| 6 | 66.7 | 5.5 | 4.4 | 23.3 | 360 | 6 | 52.4 | 4.8 | 24.4 | 18.3 | 458 |
| 2-2 | 75.0 | 6.2 | 10.0 | 8.7 | 320 | 8-2 | 57.4 | 5.3 | 30.6 | 6.7 | 418 |
| 4 | 68.9 | 5.7 | 9.2 | 16.1 | 348 | 4 | 53.8 | 4.9 | 28.7 | 12.6 | 446 |
| 6 | 63.8 | 5.3 | 8.5 | 22.3 | 376 | 6 | 50.6 | 4.6 | 27.0 | 17.7 | 474 |
| 3-2 | 71.4 | 5.9 | 14.3 | 8.3 | 336 | 9-2 | 55.3 | 5.1 | 33.2 | 6.4 | 434 |
| 4 | 65.9 | 5.5 | 13.2 | 15.4 | 364 | 4 | 52.0 | 4.8 | 31.1 | 12.1 | 462 |
| 6 | 61.2 | 5.1 | 12.2 | 21.5 | 392 | 6 | 49.0 | 4.5 | 29.4 | 17.1 | 490 |
| 4-2 | 68.2 | 5.7 | 18.2 | 7.9 | 352 | 16-4 | 41.8 | 3.8 | 44.6 | 9.7 | 574 |
| 4 | 63.2 | 5.2 | 16.8 | 14.7 | 380 | 20-23-1-1 | 81.9 | 7.8 | 5.5 | 4.8 | 293 |
| 6 | 58.8 | 4.9 | 15.7 | 20.6 | 408 | 3 | 74.8 | 7.1 | 5.0 | 13.1 | 321 |
| 5-2 | 65.2 | 5.4 | 21.7 | 7.6 | 368 | 5 | 68.8 | 6.6 | 4.6 | 20.0 | 349 |
| 4 | 60.6 | 5.0 | 20.2 | 14.1 | 396 | 2-1 | 77.7 | 7.4 | 10.4 | 4.5 | 309 |
| 6 | 56.6 | 4.7 | 18.9 | 19.8 | 424 | 3 | 71.2 | 6.8 | 9.5 | 12.5 | 337 |
| 6-2 | 62.5 | 5.2 | 25.0 | 7.3 | 384 | 5 | 65.8 | 6.3 | 8.7 | 19.2 | 365 |
| 4 | 58.2 | 4.8 | 23.3 | 13.6 | 412 | 3-1 | 73.8 | 7.1 | 14.8 | 4.3 | 325 |
| 6 | 54.5 | 4.5 | 21.8 | 19.1 | 440 | 3 | 68.0 | 6.5 | 13.6 | 11.9 | 353 |
| 7-2 | 60.0 | 5.0 | 28.0 | 7.0 | 400 | 5 | 63.0 | 6.0 | 12.6 | 18.4 | 381 |
| 4 | 56.1 | 4.7 | 26.1 | 13.1 | 428 | 4-1 | 70.4 | 6.7 | 11.8 | 4.1 | 341 |
| 6 | 52.6 | 4.4 | 24.6 | 18.4 | 456 | 3 | 65.0 | 6.2 | 17.3 | 11.4 | 369 |
| 8-2 | 57.7 | 4.8 | 30.8 | 6.7 | 416 | 5 | 60.4 | 5.8 | 16.2 | 17.6 | 397 |
| 9-2 | 55.6 | 4.6 | 33.3 | 6.5 | 432 | 5-1 | 67.2 | 6.4 | 22.4 | 3.9 | 357 |
| 12-2 | 50.0 | 4.1 | 40.0 | 5.8 | 480 | 3 | 62.3 | 6.0 | 20.8 | 10.9 | 385 |
| 20-21-1-1 | 82.5 | 7.2 | 5.5 | 4.8 | 291 | 5 | 58.1 | 5.6 | 19.4 | 16.9 | 413 |
| 3 | 75.2 | 6.6 | 5.0 | 13.2 | 319 | 6-1 | 64.3 | 6.2 | 25.7 | 3.7 | 373 |
| 5 | 69.1 | 6.0 | 4.6 | 20.2 | 347 | 3 | 59.9 | 5.7 | 23.9 | 10.5 | 401 |
| 2-1 | 78.2 | 6.8 | 10.4 | 4.6 | 307 | 5 | 55.9 | 5.4 | 22.4 | 16.3 | 429 |
| 3 | 71.6 | 6.3 | 9.6 | 12.5 | 335 | 7-1 | 61.7 | 5.9 | 28.8 | 3.6 | 389 |
| 5 | 66.1 | 5.8 | 8.8 | 19.3 | 363 | 9-1 | 57.0 | 5.5 | 34.2 | 3.3 | 421 |
| 3-1 | 74.3 | 6.5 | 14.9 | 4.3 | 323 | 10-1 | 54.9 | 5.3 | 36.6 | 3.2 | 437 |
| 3 | 68.4 | 6.0 | 13.7 | 11.9 | 351 | 12-1 | 51.2 | 4.9 | 40.9 | 3.0 | 469 |
| 5 | 63.3 | 5.5 | 12.7 | 18.5 | 379 | 14-3 | 45.4 | 4.3 | 42.3 | 8.0 | 529 |
| 4-1 | 70.8 | 6.2 | 18.9 | 4.1 | 339 | 20-24-1-2 | 77.9 | 7.8 | 5.2 | 9.1 | 306 |
| 3 | 65.4 | 5.7 | 17.4 | 11.4 | 367 | 4 | 71.4 | 7.1 | 4.8 | 16.7 | 336 |
| 5 | 60.7 | 5.3 | 16.2 | 17.7 | 395 | 6 | 65.9 | 6.6 | 4.4 | 23.1 | 364 |
| 5-1 | 67.6 | 5.9 | 22.5 | 3.9 | 355 | 2-2 | 74.1 | 7.4 | 9.9 | 8.6 | 324 |
| 3 | 62.7 | 5.5 | 20.9 | 10.9 | 383 | 4 | 68.2 | 6.8 | 9.1 | 15.9 | 352 |
| 5 | 58.4 | 5.1 | 19.5 | 17.0 | 411 | 6 | 63.1 | 6.3 | 8.4 | 22.1 | 380 |
| 7-1 | 62.0 | 5.4 | 28.9 | 3.6 | 387 | 3-2 | 70.6 | 7.1 | 14.1 | 8.2 | 340 |
| 10-1 | 55.2 | 4.8 | 36.8 | 3.2 | 435 | 4 | 65.2 | 6.5 | 13.0 | 15.2 | 368 |
| 20-22-1-2 | 78.4 | 7.2 | 5.2 | 9.1 | 306 | 6 | 60.6 | 6.1 | 12.1 | 21.2 | 396 |
| 4 | 71.8 | 6.6 | 4.8 | 16.8 | 334 | 4-2 | 67.4 | 6.7 | 18.0 | 7.9 | 356 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 20-24-4-4 | 62.5 | 6.2 | 16.7 | 14.0 | 384 | 20-27-4-3 | 64.3 | 7.2 | 17.2 | 11.3 | 373 |
| 6 | 58.2 | 5.8 | 15.5 | 20.4 | 412 | 5 | 59.9 | 6.7 | 15.9 | 17.5 | 401 |
| 5-2 | 64.5 | 6.4 | 21.5 | 7.5 | 372 | 6-3 | 59.3 | 6.7 | 23.7 | 10.5 | 405 |
| 4 | 60.0 | 6.0 | 20.0 | 14.0 | 400 | 9-3 | 53.0 | 5.9 | 31.8 | 9.3 | 453 |
| 6 | 56.1 | 5.6 | 18.7 | 19.6 | 428 | 11-1 | 52.5 | 5.9 | 38.5 | 3.1 | 457 |
| 6-2 | 61.9 | 6.2 | 24.7 | 7.2 | 388 | 20-28-1-2 | 76.9 | 9.0 | 5.1 | 9.0 | 312 |
| 4 | 57.7 | 5.8 | 23.1 | 13.4 | 416 | 4 | 70.6 | 8.2 | 4.7 | 16.5 | 340 |
| 6 | 54.1 | 5.4 | 21.6 | 18.9 | 444 | 6 | 65.2 | 7.6 | 4.3 | 22.8 | 398 |
| 7-2 | 59.5 | 5.7 | 27.8 | 6.9 | 403 | 2-2 | 73.2 | 8.5 | 9.8 | 8.5 | 328 |
| 10-2 | 53.1 | 5.3 | 35.4 | 6.1 | 452 | 4 | 67.4 | 7.9 | 9.0 | 15.7 | 356 |
| 20-25-1-1 | 81.4 | 8.5 | 5.4 | 4.7 | 295 | 6 | 62.5 | 7.3 | 8.3 | 21.9 | 384 |
| 3 | 74.3 | 7.7 | 4.9 | 13.0 | 323 | 3-2 | 69.8 | 8.1 | 13.9 | 8.1 | 344 |
| 5 | 68.4 | 7.1 | 4.6 | 19.9 | 351 | 4 | 64.5 | 7.5 | 12.9 | 15.1 | 372 |
| 2-1 | 77.2 | 8.0 | 10.3 | 4.5 | 311 | 6 | 60.0 | 7.0 | 12.0 | 21.0 | 400 |
| 3 | 70.8 | 7.4 | 9.4 | 12.4 | 339 | 4-2 | 66.7 | 7.8 | 17.7 | 7.8 | 360 |
| 5 | 65.4 | 6.8 | 8.7 | 19.1 | 367 | 4 | 61.9 | 7.2 | 16.5 | 14.4 | 388 |
| 3-1 | 73.4 | 7.6 | 14.7 | 4.3 | 327 | 6 | 57.7 | 6.7 | 15.4 | 20.2 | 416 |
| 3 | 67.6 | 7.0 | 13.5 | 11.8 | 355 | 5-2 | 63.8 | 7.4 | 21.3 | 7.4 | 376 |
| 5 | 62.6 | 6.5 | 12.5 | 18.3 | 383 | 6-2 | 61.2 | 7.1 | 24.5 | 7.1 | 392 |
| 4-1 | 69.9 | 7.3 | 18.6 | 4.1 | 343 | 4 | 57.1 | 6.7 | 22.9 | 13.3 | 420 |
| 3 | 64.7 | 6.7 | 17.2 | 11.3 | 371 | 7-2 | 58.8 | 6.9 | 27.4 | 6.9 | 408 |
| 5 | 60.1 | 6.3 | 16.0 | 17.5 | 399 | 20-29-1-1 | 80.2 | 9.7 | 5.3 | 4.7 | 299 |
| 5-1 | 66.9 | 6.9 | 22.3 | 3.9 | 359 | 3 | 73.4 | 8.9 | 4.9 | 12.8 | 327 |
| 3 | 62.0 | 6.5 | 20.7 | 10.8 | 387 | 5 | 67.6 | 8.2 | 4.5 | 19.7 | 355 |
| 5 | 57.8 | 6.0 | 19.3 | 16.9 | 415 | 2-1 | 76.2 | 9.2 | 10.2 | 4.4 | 315 |
| 6-1 | 64.0 | 6.7 | 25.6 | 3.7 | 375 | 3 | 70.0 | 8.4 | 9.3 | 12.2 | 343 |
| 3 | 59.5 | 6.2 | 23.8 | 10.4 | 403 | 5 | 64.7 | 7.8 | 8.6 | 18.9 | 371 |
| 5 | 55.7 | 5.8 | 22.3 | 16.2 | 431 | 3-1 | 72.5 | 8.8 | 14.5 | 4.2 | 331 |
| 9-1 | 56.7 | 5.9 | 34.0 | 3.3 | 423 | 3 | 66.9 | 8.1 | 13.3 | 11.7 | 359 |
| 20-26-1-2 | 77.4 | 8.4 | 5.2 | 9.0 | 310 | 5 | 62.0 | 7.4 | 12.4 | 18.1 | 387 |
| 4 | 71.0 | 7.7 | 4.7 | 16.6 | 338 | 4-1 | 69.1 | 8.4 | 18.4 | 4.0 | 347 |
| 6 | 65.6 | 7.1 | 4.4 | 22.9 | 366 | 3 | 64.0 | 7.7 | 17.1 | 11.2 | 375 |
| 2-2 | 73.6 | 8.0 | 9.8 | 8.6 | 326 | 5 | 59.5 | 7.2 | 15.9 | 17.4 | 403 |
| 4 | 67.8 | 7.3 | 9.0 | 15.8 | 354 | 20-30-1-2 | 76.4 | 9.6 | 5.1 | 8.9 | 314 |
| 6 | 62.8 | 6.8 | 8.4 | 22.0 | 382 | 4 | 70.2 | 8.8 | 4.6 | 16.4 | 342 |
| 3-2 | 70.2 | 7.6 | 14.0 | 8.2 | 342 | 6 | 64.8 | 8.1 | 4.3 | 22.7 | 370 |
| 4 | 64.8 | 7.0 | 13.0 | 15.1 | 370 | 2-2 | 72.7 | 9.1 | 9.7 | 8.5 | 330 |
| 6 | 60.2 | 6.6 | 12.1 | 21.1 | 398 | 4 | 67.0 | 8.4 | 8.9 | 15.6 | 358 |
| 4-2 | 67.0 | 7.3 | 17.9 | 7.8 | 358 | 6 | 62.2 | 7.8 | 8.3 | 21.7 | 386 |
| 4 | 62.2 | 6.7 | 16.6 | 14.5 | 386 | 3-2 | 69.3 | 8.7 | 13.9 | 8.1 | 346 |
| 6 | 58.0 | 6.3 | 15.4 | 20.3 | 414 | 4 | 64.2 | 8.0 | 12.8 | 15.0 | 374 |
| 5-2 | 64.2 | 6.9 | 21.4 | 7.5 | 374 | 6 | 59.7 | 7.5 | 11.9 | 20.9 | 402 |
| 4 | 59.7 | 6.5 | 19.9 | 13.9 | 402 | 4-2 | 66.2 | 8.3 | 17.7 | 7.7 | 362 |
| 6 | 55.8 | 6.0 | 18.6 | 19.5 | 430 | 10-6 | 46.7 | 5.8 | 31.1 | 16.3 | 514 |
| 6-2 | 61.5 | 6.7 | 24.6 | 7.2 | 390 | 20-31-1-1 | 79.7 | 10.3 | 5.3 | 4.6 | 301 |
| 4 | 57.4 | 6.2 | 23.0 | 13.4 | 418 | 3 | 73.0 | 9.4 | 4.8 | 12.8 | 329 |
| 7-4 | 55.3 | 6.0 | 25.8 | 12.9 | 434 | 5 | 67.2 | 8.7 | 4.5 | 19.6 | 357 |
| 9-2 | 54.8 | 5.9 | 32.9 | 6.4 | 438 | 2-1 | 75.7 | 9.8 | 10.1 | 4.4 | 317 |
| 10-2 | 52.9 | 5.7 | 35.2 | 6.2 | 454 | 3 | 69.6 | 9.0 | 9.2 | 12.2 | 345 |
| 20-27-1-1 | 80.8 | 9.1 | 5.4 | 4.7 | 297 | 5 | 64.3 | 8.3 | 8.6 | 18.8 | 373 |
| 3 | 73.8 | 8.3 | 4.9 | 12.9 | 325 | 3-1 | 72.1 | 9.3 | 14.4 | 4.2 | 333 |
| 5 | 68.0 | 7.6 | 4.5 | 19.8 | 353 | 3 | 66.5 | 8.6 | 13.3 | 11.6 | 361 |
| 2-1 | 76.7 | 8.6 | 10.2 | 4.5 | 313 | 5 | 61.7 | 8.0 | 12.3 | 18.0 | 389 |
| 3 | 70.4 | 7.9 | 9.4 | 12.3 | 341 | 20-32-1-2 | 76.0 | 10.1 | 5.1 | 8.8 | 316 |
| 5 | 65.0 | 7.3 | 8.7 | 19.0 | 369 | 4 | 69.8 | 9.3 | 4.6 | 16.3 | 344 |
| 3-1 | 73.0 | 8.2 | 14.6 | 4.2 | 329 | 6 | 64.5 | 8.6 | 4.3 | 22.6 | 372 |
| 3 | 67.2 | 7.6 | 13.4 | 11.8 | 357 | 2-2 | 72.3 | 9.6 | 9.6 | 8.4 | 332 |
| 5 | 62.3 | 7.0 | 12.5 | 18.2 | 385 | 4 | 66.7 | 8.9 | 8.9 | 15.5 | 360 |
| 4-1 | 69.6 | 7.8 | 18.6 | 4.0 | 345 | 6 | 61.9 | 8.2 | 8.2 | 21.6 | 388 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 20-32-3-2 | 69.0 | 9.2 | 13.8 | 8.0 | 348 | 20-39-1-5 | 65.7 | 10.7 | 4.4 | 19.2 | 365 |
| 4 | 63.8 | 8.5 | 12.8 | 14.9 | 376 | 2-1 | 73.8 | 12.0 | 9.8 | 4.3 | 325 |
| 6 | 59.4 | 7.9 | 11.9 | 20.8 | 404 | 3 | 68.0 | 11.0 | 9.1 | 11.9 | 353 |
| 4-2 | 65.9 | 8.8 | 17.6 | 7.7 | 364 | 5 | 63.0 | 10.2 | 8.4 | 18.4 | 381 |
| 5-2 | 63.2 | 8.4 | 21.0 | 7.4 | 380 | 3-1 | 70.4 | 11.4 | 14.1 | 4.1 | 341 |
| 6-2 | 60.6 | 8.1 | 24.2 | 7.1 | 396 | 3 | 65.0 | 10.6 | 13.0 | 11.4 | 369 |
| 7-2 | 58.2 | 7.8 | 27.2 | 6.8 | 412 | 5 | 60.4 | 9.8 | 12.1 | 17.6 | 397 |
| 13-2 | 47.2 | 6.3 | 40.9 | 5.5 | 508 | 4-1 | 67.2 | 10.9 | 17.9 | 3.9 | 357 |
| 20-33-1-1 | 79.2 | 10.9 | 5.3 | 4.6 | 303 | 3 | 62.3 | 10.1 | 16.6 | 10.9 | 385 |
| 3 | 72.5 | 10.0 | 4.8 | 12.7 | 331 | 5 | 58.1 | 9.4 | 15.5 | 17.0 | 413 |
| 5 | 66.9 | 9.2 | 4.4 | 19.5 | 359 | 20-40-1-2 | 74.1 | 12.3 | 4.9 | 8.6 | 324 |
| 2-1 | 75.2 | 10.3 | 10.0 | 4.4 | 319 | 4 | 68.2 | 11.4 | 4.5 | 15.9 | 352 |
| 3 | 69.2 | 9.5 | 9.2 | 12.1 | 347 | 6 | 63.2 | 10.5 | 4.2 | 22.1 | 380 |
| 5 | 64.0 | 8.8 | 8.5 | 18.7 | 375 | 2-2 | 70.6 | 11.8 | 9.4 | 8.2 | 340 |
| 3-1 | 71.6 | 9.8 | 14.3 | 4.2 | 335 | 4 | 65.2 | 10.9 | 8.7 | 15.2 | 368 |
| 3 | 66.1 | 9.1 | 13.2 | 11.6 | 363 | 6 | 60.6 | 10.1 | 8.1 | 21.2 | 396 |
| 5 | 61.4 | 8.4 | 12.3 | 17.9 | 391 | 3-2 | 67.4 | 11.2 | 13.5 | 7.9 | 356 |
| 20-34-1-2 | 75.5 | 10.7 | 5.0 | 8.8 | 318 | 4 | 62.5 | 10.4 | 12.5 | 14.6 | 384 |
| 4 | 69.4 | 9.8 | 4.6 | 16.2 | 346 | 6 | 58.3 | 9.7 | 11.6 | 20.4 | 412 |
| 6 | 64.2 | 9.1 | 4.3 | 22.4 | 374 | 4-2 | 64.5 | 10.8 | 17.2 | 7.5 | 372 |
| 2-2 | 71.8 | 10.2 | 9.6 | 8.4 | 334 | 4 | 60.0 | 10.0 | 14.0 | 24.0 | 400 |
| 4 | 66.3 | 9.4 | 8.8 | 15.5 | 362 | 6 | 56.2 | 9.3 | 14.9 | 19.6 | 428 |
| 6 | 61.5 | 8.7 | 8.2 | 21.5 | 390 | 20-41-1-1 | 77.1 | 13.2 | 5.1 | 4.5 | 311 |
| 3-2 | 68.6 | 9.7 | 13.7 | 8.0 | 350 | 3 | 70.8 | 12.1 | 4.7 | 12.4 | 339 |
| 4 | 63.5 | 9.0 | 12.7 | 14.8 | 378 | 5 | 65.4 | 11.2 | 4.3 | 19.1 | 367 |
| 6 | 59.1 | 8.4 | 11.8 | 20.7 | 406 | 2-1 | 73.4 | 12.5 | 9.8 | 4.3 | 327 |
| 4-2 | 65.6 | 9.3 | 17.5 | 7.6 | 366 | 3 | 67.6 | 11.5 | 9.0 | 11.8 | 355 |
| 20-35-1-1 | 78.7 | 11.6 | 5.2 | 4.6 | 305 | 5 | 62.6 | 10.7 | 8.4 | 18.3 | 383 |
| 3 | 72.1 | 10.5 | 4.8 | 12.6 | 333 | 20-42-1-2 | 73.6 | 12.9 | 4.9 | 8.6 | 326 |
| 5 | 66.5 | 9.7 | 4.4 | 19.4 | 361 | 4 | 67.8 | 11.9 | 4.5 | 15.8 | 354 |
| 2-1 | 74.8 | 10.9 | 10.0 | 4.3 | 321 | 6 | 62.8 | 11.0 | 4.2 | 22.0 | 382 |
| 3 | 68.8 | 10.0 | 9.2 | 12.0 | 349 | 2-2 | 70.2 | 12.3 | 9.3 | 8.2 | 342 |
| 5 | 63.6 | 9.3 | 8.5 | 18.6 | 377 | 4 | 64.9 | 11.3 | 8.6 | 15.1 | 370 |
| 3-1 | 71.2 | 10.4 | 14.2 | 4.2 | 337 | 6 | 60.3 | 10.6 | 8.0 | 21.1 | 398 |
| 3 | 65.8 | 9.6 | 13.1 | 11.5 | 365 | 20-43-1-1 | 76.7 | 13.7 | 5.1 | 4.5 | 313 |
| 5 | 61.1 | 8.9 | 12.2 | 17.8 | 393 | 3 | 70.4 | 12.6 | 4.7 | 12.3 | 341 |
| 20-36-1-2 | 75.0 | 11.2 | 5.0 | 8.8 | 320 | 5 | 65.1 | 11.7 | 4.3 | 18.9 | 369 |
| 4 | 69.0 | 10.3 | 4.6 | 16.1 | 348 | 2-1 | 73.0 | 13.1 | 9.7 | 4.2 | 329 |
| 6 | 63.8 | 9.6 | 4.2 | 22.3 | 376 | 3 | 67.2 | 12.0 | 9.0 | 11.8 | 357 |
| 2-2 | 71.4 | 10.7 | 9.5 | 8.3 | 336 | 5 | 62.3 | 11.2 | 8.3 | 18.2 | 385 |
| 4 | 65.9 | 9.9 | 8.8 | 15.4 | 364 | 4-3 | 61.7 | 11.0 | 16.4 | 10.8 | 389 |
| 6 | 61.2 | 9.2 | 8.2 | 21.4 | 392 | 20-44-1-2 | 73.2 | 13.4 | 4.9 | 8.5 | 328 |
| 20-37-1-1 | 78.1 | 12.0 | 5.2 | 4.6 | 307 | 4 | 67.4 | 12.4 | 4.5 | 15.7 | 356 |
| 3 | 71.6 | 11.0 | 4.8 | 12.5 | 335 | 6 | 62.5 | 11.4 | 4.2 | 21.9 | 384 |
| 5 | 66.1 | 10.2 | 4.4 | 19.3 | 363 | 2-2 | 69.8 | 12.8 | 9.3 | 8.1 | 344 |
| 7 | 61.4 | 9.4 | 4.1 | 25.1 | 391 | 4 | 64.5 | 11.8 | 8.6 | 15.0 | 372 |
| 2-1 | 74.3 | 11.4 | 9.9 | 4.3 | 323 | 6 | 60.0 | 11.0 | 8.0 | 21.0 | 400 |
| 3 | 68.4 | 10.5 | 9.1 | 12.0 | 351 | 20-45-1-1 | 76.2 | 14.3 | 5.1 | 4.4 | 315 |
| 5 | 63.3 | 9.8 | 8.4 | 18.5 | 379 | 3 | 70.0 | 13.1 | 4.7 | 12.2 | 343 |
| 10-3 | 50.1 | 7.7 | 33.4 | 8.8 | 479 | 5 | 64.7 | 12.1 | 4.3 | 18.9 | 371 |
| 20-38-1-2 | 74.5 | 11.8 | 5.0 | 8.7 | 322 | 2-1 | 72.5 | 13.6 | 9.6 | 4.3 | 331 |
| 4 | 68.6 | 10.8 | 4.6 | 16.0 | 350 | 3 | 66.9 | 12.5 | 8.9 | 11.7 | 359 |
| 6 | 63.5 | 10.1 | 4.2 | 22.2 | 378 | 5 | 62.0 | 11.6 | 8.3 | 18.1 | 387 |
| 2-2 | 71.0 | 11.2 | 9.5 | 8.3 | 338 | 21-10-6-2 | 65.3 | 2.6 | 24.9 | 7.2 | 386 |
| 4 | 65.6 | 10.4 | 8.7 | 15.3 | 366 | 21-12-6-6 | 56.7 | 2.7 | 21.6 | 18.9 | 444 |
| 6 | 60.9 | 9.6 | 8.1 | 21.3 | 394 | 7-2 | 62.4 | 3.0 | 27.7 | 6.9 | 404 |
| 15-2 | 44.0 | 6.9 | 44.0 | 5.1 | 546 | 8-4 | 56.2 | 2.7 | 28.6 | 12.5 | 448 |
| 20-39-1-1 | 77.7 | 12.6 | 5.2 | 4.5 | 309 | 9-6 | 51.2 | 2.4 | 29.3 | 17.1 | 492 |
| 3 | 71.2 | 11.6 | 4.7 | 12.5 | 337 | 21-13-1-1 | 85.4 | 4.4 | 5.4 | 4.8 | 295 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 21-13-1-3 | 78.0 | 4.0 | 4.9 | 13.0 | 323 | 21-16-3-2 | 73.3 | 4.6 | 14.0 | 8.1 | 344 |
| 5 | 71.8 | 3.7 | 4.6 | 19.9 | 351 | 4 | 67.7 | 4.3 | 12.9 | 15.1 | 372 |
| 2-1 | 81.0 | 4.2 | 10.3 | 4.5 | 311 | 6 | 63.0 | 4.0 | 12.0 | 21.0 | 400 |
| 3 | 74.3 | 3.8 | 9.4 | 12.4 | 339 | 4-2 | 70.0 | 4.4 | 17.8 | 7.8 | 360 |
| 5 | 68.6 | 3.5 | 8.7 | 19.1 | 367 | 4 | 64.9 | 4.1 | 16.5 | 14.4 | 388 |
| 3-1 | 77.1 | 3.9 | 14.7 | 4.3 | 327 | 5-2 | 67.0 | 4.3 | 21.3 | 7.4 | 376 |
| 3 | 71.0 | 3.7 | 13.5 | 11.8 | 355 | 21-17-1-1 | 84.2 | 5.7 | 5.3 | 4.7 | 299 |
| 5 | 65.8 | 3.4 | 12.5 | 18.3 | 383 | 3 | 77.0 | 5.2 | 4.9 | 12.9 | 327 |
| 4-1 | 73.5 | 3.8 | 18.6 | 4.1 | 343 | 5 | 71.0 | 4.8 | 4.5 | 19.7 | 355 |
| 3 | 67.9 | 3.5 | 17.2 | 11.3 | 371 | 2-1 | 80.0 | 5.4 | 20.2 | 4.4 | 315 |
| 5 | 63.1 | 3.3 | 16.1 | 17.5 | 399 | 3 | 73.4 | 5.0 | 9.3 | 12.2 | 343 |
| 5-1 | 70.2 | 3.6 | 22.3 | 3.9 | 359 | 5 | 67.9 | 4.6 | 8.6 | 18.9 | 371 |
| 3 | 65.1 | 3.4 | 20.7 | 10.8 | 387 | 3-1 | 76.1 | 5.1 | 14.5 | 4.2 | 331 |
| 5 | 60.7 | 3.1 | 19.3 | 16.9 | 415 | 3 | 70.2 | 4.7 | 13.4 | 11.7 | 359 |
| 6-1 | 67.2 | 3.5 | 25.6 | 3.7 | 375 | 5 | 65.1 | 4.4 | 12.4 | 18.1 | 387 |
| 3 | 62.5 | 3.2 | 23.8 | 10.4 | 403 | 4-1 | 72.6 | 4.9 | 18.4 | 4.0 | 347 |
| 5 | 58.5 | 3.0 | 22.3 | 16.2 | 431 | 3 | 67.2 | 4.5 | 17.1 | 11.2 | 375 |
| 7-1 | 64.5 | 3.3 | 28.6 | 3.6 | 391 | 5 | 62.5 | 4.2 | 15.9 | 17.4 | 403 |
| 3 | 60.1 | 3.1 | 26.7 | 10.0 | 419 | 5-3 | 64.5 | 4.3 | 20.5 | 10.7 | 391 |
| 5 | 56.4 | 2.9 | 25.0 | 15.7 | 447 | 21-18-1-2 | 80.3 | 5.7 | 5.1 | 8.9 | 314 |
| 8-3 | 57.9 | 3.0 | 29.4 | 9.7 | 435 | 4 | 73.7 | 5.2 | 4.7 | 16.4 | 342 |
| 21-14-1-2 | 81.3 | 4.5 | 5.2 | 9.0 | 310 | 6 | 78.1 | 4.8 | 4.3 | 22.7 | 370 |
| 4 | 74.6 | 4.1 | 4.7 | 16.6 | 338 | 2-2 | 76.4 | 5.4 | 9.7 | 8.5 | 330 |
| 2-2 | 77.3 | 4.3 | 9.8 | 8.6 | 326 | 4 | 70.4 | 5.0 | 8.9 | 15.7 | 358 |
| 4 | 71.2 | 4.0 | 9.0 | 15.8 | 354 | 6 | 65.3 | 4.7 | 8.3 | 21.7 | 386 |
| 3-2 | 73.7 | 4.1 | 14.0 | 8.2 | 342 | 3-2 | 72.8 | 5.2 | 13.9 | 8.1 | 346 |
| 4-2 | 70.4 | 3.9 | 17.9 | 7.8 | 358 | 4 | 67.4 | 4.8 | 12.8 | 15.0 | 374 |
| 4 | 65.3 | 3.6 | 16.6 | 14.5 | 386 | 6 | 62.7 | 4.5 | 11.9 | 20.9 | 402 |
| 6 | 60.9 | 3.4 | 15.4 | 20.3 | 414 | 4-2 | 69.6 | 5.0 | 17.7 | 7.7 | 362 |
| 7-4 | 58.1 | 3.2 | 25.8 | 12.9 | 434 | 4 | 64.6 | 4.6 | 16.4 | 14.4 | 390 |
| 8-2 | 59.7 | 3.3 | 30.3 | 6.6 | 422 | 6 | 60.3 | 4.3 | 15.3 | 20.1 | 418 |
| 21-15-1-1 | 84.8 | 5.0 | 5.4 | 4.7 | 297 | 5-2 | 66.7 | 4.8 | 21.1 | 7.4 | 378 |
| 3 | 77.5 | 4.6 | 4.9 | 12.9 | 325 | 4 | 62.1 | 4.4 | 19.7 | 13.8 | 406 |
| 5 | 71.4 | 4.2 | 4.5 | 19.8 | 353 | 6 | 58.1 | 4.1 | 18.4 | 19.3 | 434 |
| 2-1 | 80.5 | 4.8 | 10.2 | 4.5 | 313 | 6-2 | 63.9 | 4.6 | 24.4 | 7.1 | 394 |
| 3 | 73.9 | 4.4 | 9.4 | 12.3 | 341 | 4 | 59.7 | 4.3 | 22.7 | 13.3 | 422 |
| 5 | 68.3 | 4.1 | 8.6 | 19.0 | 369 | 6 | 56.0 | 4.0 | 21.3 | 18.7 | 450 |
| 3-1 | 76.6 | 4.6 | 14.6 | 4.2 | 329 | 10-2 | 55.0 | 3.9 | 34.9 | 6.1 | 458 |
| 3 | 70.6 | 4.2 | 13.4 | 11.8 | 357 | 21-19-1-1 | 73.7 | 6.3 | 5.3 | 4.7 | 301 |
| 5 | 65.4 | 3.9 | 12.5 | 18.2 | 385 | 3 | 76.6 | 5.8 | 4.8 | 12.8 | 329 |
| 4-1 | 73.9 | 4.3 | 18.6 | 3.1 | 345 | 5 | 70.6 | 5.3 | 4.4 | 19.6 | 357 |
| 3 | 67.5 | 4.0 | 17.2 | 11.2 | 373 | 2-1 | 79.5 | 6.0 | 10.1 | 4.4 | 317 |
| 5 | 62.9 | 3.7 | 15.9 | 17.5 | 401 | 3 | 73.1 | 5.5 | 9.2 | 12.2 | 345 |
| 5-1 | 69.8 | 4.1 | 22.2 | 3.9 | 361 | 5 | 67.5 | 5.1 | 8.6 | 18.8 | 373 |
| 3 | 64.8 | 3.8 | 20.6 | 10.8 | 389 | 3-1 | 65.7 | 5.7 | 14.4 | 4.2 | 333 |
| 5 | 60.4 | 3.6 | 19.2 | 16.8 | 417 | 3 | 69.8 | 5.2 | 13.3 | 11.6 | 361 |
| 6-1 | 66.8 | 4.0 | 25.5 | 3.7 | 377 | 5 | 64.7 | 4.9 | 12.3 | 18.0 | 389 |
| 3 | 62.2 | 3.7 | 23.7 | 10.4 | 405 | 4-1 | 72.2 | 5.4 | 18.3 | 4.0 | 349 |
| 5 | 58.2 | 3.4 | 22.2 | 16.2 | 433 | 3 | 66.8 | 5.0 | 17.0 | 11.1 | 377 |
| 7-1 | 64.1 | 3.8 | 28.5 | 3.6 | 393 | 5 | 62.2 | 4.7 | 15.8 | 17.2 | 405 |
| 3 | 59.8 | 3.6 | 26.6 | 10.0 | 421 | 5-1 | 69.1 | 5.2 | 21.9 | 3.8 | 365 |
| 5 | 56.1 | 3.3 | 24.9 | 15.6 | 449 | 3 | 64.1 | 4.8 | 20.3 | 10.7 | 393 |
| 8-1 | 61.6 | 3.7 | 31.3 | 3.4 | 409 | 6-1 | 66.1 | 5.0 | 25.2 | 3.7 | 381 |
| 21-16-1-2 | 80.8 | 5.1 | 5.1 | 9.0 | 312 | 7-1 | 63.5 | 4.8 | 28.2 | 3.5 | 397 |
| 4 | 74.1 | 4.7 | 4.7 | 16.5 | 340 | 8-1 | 61.0 | 4.6 | 31.0 | 3.4 | 413 |
| 6 | 68.5 | 4.3 | 4.3 | 22.8 | 368 | 21-20-1-2 | 79.7 | 6.3 | 5.1 | 8.8 | 316 |
| 2-2 | 76.8 | 4.9 | 9.7 | 8.5 | 328 | 4 | 73.3 | 5.8 | 4.6 | 16.3 | 344 |
| 4 | 70.8 | 4.5 | 9.0 | 15.7 | 356 | 6 | 67.7 | 5.4 | 4.3 | 22.6 | 372 |
| 6 | 65.6 | 4.2 | 8.3 | 21.9 | 384 | 2-2 | 75.9 | 6.0 | 9.6 | 8.4 | 332 |

Richter, Lex. d. Kohlenstoffverb.

153

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 21-20-2-4 | 70.0 | 5.6 | 8.9 | 15.5 | 360 | 21-23-4-1 | 71.4 | 6.5 | 18.1 | 4.0 | 353 |
| 6 | 65.0 | 5.2 | 8.2 | 21.6 | 388 | 3 | 66.1 | 6.0 | 16.8 | 11.0 | 381 |
| 3-2 | 72.4 | 5.7 | 13.8 | 8.0 | 348 | 5 | 61.6 | 5.6 | 15.6 | 17.1 | 409 |
| 4 | 67.0 | 5.3 | 12.8 | 14.9 | 376 | 5-1 | 68.3 | 6.2 | 21.7 | 3.8 | 369 |
| 6 | 62.4 | 4.9 | 11.9 | 20.8 | 404 | 3 | 63.5 | 5.8 | 20.1 | 10.6 | 397 |
| 4-2 | 69.2 | 5.5 | 17.6 | 7.7 | 364 | 6-1 | 65.4 | 6.0 | 24.9 | 3.6 | 385 |
| 4 | 64.3 | 5.1 | 16.3 | 14.3 | 392 | 7-1 | 62.8 | 5.7 | 27.9 | 3.5 | 401 |
| 6 | 60.0 | 4.8 | 15.2 | 20.0 | 420 | 3 | 58.7 | 5.4 | 26.1 | 9.8 | 429 |
| 5-2 | 66.3 | 5.3 | 21.0 | 7.4 | 380 | 8-1 | 50.4 | 5.5 | 30.7 | 3.4 | 417 |
| 4 | 61.8 | 4.9 | 19.6 | 13.7 | 408 | 3 | 56.6 | 5.2 | 28.8 | 9.4 | 445 |
| 6 | 57.8 | 4.6 | 18.3 | 19.3 | 436 | 21-24-1-2 | 78.7 | 7.5 | 5.0 | 8.7 | 320 |
| 6-2 | 63.6 | 5.1 | 24.2 | 7.1 | 396 | 4 | 72.4 | 6.9 | 4.6 | 16.1 | 348 |
| 4 | 59.4 | 4.7 | 22.6 | 13.2 | 424 | 6 | 67.0 | 6.4 | 4.3 | 22.3 | 376 |
| 6 | 55.7 | 4.4 | 21.2 | 18.6 | 452 | 2-2 | 75.0 | 7.1 | 9.5 | 8.3 | 336 |
| 21-21-1-1 | 83.2 | 6.9 | 5.3 | 4.6 | 303 | 4 | 69.2 | 6.5 | 8.8 | 15.4 | 364 |
| 3 | 76.1 | 6.3 | 4.8 | 12.7 | 331 | 6 | 64.3 | 6.1 | 8.2 | 21.4 | 392 |
| 5 | 70.2 | 5.8 | 4.5 | 19.5 | 359 | 3-2 | 71.6 | 6.8 | 13.6 | 7.9 | 352 |
| 2-1 | 79.0 | 6.6 | 10.0 | 4.4 | 319 | 4-2 | 68.5 | 6.5 | 17.4 | 7.6 | 368 |
| 3 | 72.6 | 6.1 | 9.2 | 12.1 | 347 | 4 | 63.6 | 6.1 | 16.2 | 14.1 | 396 |
| 5 | 67.2 | 5.6 | 8.5 | 18.7 | 375 | 5-2 | 65.6 | 6.2 | 20.8 | 7.3 | 384 |
| 3-1 | 75.2 | 6.3 | 14.3 | 4.2 | 335 | 6-2 | 63.0 | 6.0 | 24.0 | 7.0 | 400 |
| 3 | 69.4 | 5.8 | 13.2 | 11.6 | 363 | 4 | 58.9 | 5.6 | 22.4 | 13.1 | 428 |
| 5 | 64.4 | 5.4 | 12.3 | 17.9 | 391 | 7-2 | 60.6 | 5.8 | 26.9 | 6.7 | 416 |
| 4-1 | 71.8 | 6.0 | 18.2 | 4.0 | 351 | 21-25-1-1 | 82.1 | 8.1 | 5.2 | 4.6 | 307 |
| 3 | 66.5 | 5.5 | 16.9 | 11.1 | 379 | 2-1 | 78.0 | 7.7 | 9.9 | 4.3 | 323 |
| 5 | 61.9 | 5.2 | 15.7 | 17.2 | 407 | 3 | 71.8 | 7.1 | 9.1 | 12.0 | 351 |
| 5-1 | 68.6 | 5.7 | 21.8 | 3.8 | 367 | 3-1 | 74.3 | 7.4 | 14.2 | 4.1 | 339 |
| 3 | 63.8 | 5.3 | 20.2 | 10.6 | 395 | 3 | 68.7 | 6.8 | 13.1 | 11.4 | 367 |
| 5 | 59.5 | 5.0 | 18.9 | 16.5 | 423 | 4-1 | 71.0 | 7.0 | 18.0 | 3.9 | 355 |
| 6-1 | 65.7 | 5.5 | 25.1 | 3.7 | 383 | 5-1 | 67.9 | 6.7 | 21.6 | 3.8 | 371 |
| 3 | 61.3 | 5.1 | 23.4 | 10.2 | 411 | 3 | 68.8 | 6.8 | 21.9 | 11.5 | 399 |
| 5 | 57.4 | 4.8 | 21.9 | 15.9 | 439 | 21-26-1-2 | 78.2 | 8.1 | 5.0 | 8.7 | 322 |
| 7-1 | 63.1 | 5.3 | 28.1 | 3.5 | 399 | 4 | 72.0 | 7.4 | 4.6 | 16.0 | 350 |
| 3 | 59.0 | 4.9 | 26.2 | 9.8 | 427 | 2-2 | 64.5 | 7.7 | 9.5 | 8.3 | 338 |
| 5 | 55.4 | 4.6 | 24.6 | 15.4 | 455 | 4 | 68.9 | 7.1 | 8.7 | 15.3 | 366 |
| 21-22-1-2 | 79.2 | 6.9 | 5.0 | 8.8 | 318 | 3-2 | 71.2 | 7.3 | 13.6 | 7.9 | 354 |
| 4 | 72.8 | 6.4 | 4.6 | 16.2 | 346 | 4-2 | 68.1 | 7.0 | 17.3 | 7.6 | 370 |
| 6 | 67.4 | 5.9 | 4.3 | 22.4 | 374 | 8-2 | 58.1 | 6.0 | 29.5 | 6.4 | 434 |
| 2-2 | 75.4 | 6.6 | 9.6 | 8.4 | 334 | 21-27-1-1 | 81.6 | 8.7 | 5.2 | 4.5 | 309 |
| 4 | 69.6 | 6.1 | 8.8 | 15.5 | 362 | 2-1 | 77.5 | 8.3 | 9.8 | 4.3 | 325 |
| 6 | 64.6 | 5.6 | 8.2 | 21.5 | 390 | 3-1 | 73.9 | 7.9 | 14.1 | 4.1 | 341 |
| 3-2 | 72.0 | 6.3 | 13.7 | 8.0 | 350 | 4-1 | 70.6 | 7.5 | 17.9 | 3.9 | 357 |
| 4 | 66.7 | 5.8 | 12.7 | 14.8 | 378 | 6-1 | 64.6 | 6.9 | 24.7 | 3.6 | 389 |
| 6 | 62.1 | 5.4 | 11.8 | 20.7 | 406 | 7-1 | 62.2 | 6.7 | 27.6 | 3.5 | 405 |
| 5-2 | 66.0 | 5.8 | 20.9 | 7.3 | 382 | 21-28-1-2 | 77.8 | 8.6 | 4.9 | 8.6 | 324 |
| 7-2 | 60.9 | 5.3 | 27.0 | 6.8 | 414 | 2-2 | 74.1 | 8.2 | 9.4 | 8.2 | 340 |
| 4 | 47.0 | 5.0 | 25.3 | 12.7 | 442 | 3-2 | 70.8 | 7.8 | 13.5 | 7.8 | 356 |
| 8-2 | 58.6 | 5.1 | 29.8 | 6.5 | 430 | 4 | 65.6 | 7.3 | 12.5 | 14.6 | 384 |
| 9-4 | 53.2 | 4.6 | 30.4 | 11.8 | 474 | 4-2 | 67.7 | 7.5 | 17.2 | 7.5 | 372 |
| 10-2 | 54.5 | 4.8 | 34.6 | 6.1 | 462 | 5-2 | 65.0 | 7.2 | 20.6 | 7.2 | 388 |
| 21-23-1-1 | 82.6 | 7.5 | 5.2 | 4.6 | 305 | 6-2 | 62.4 | 6.9 | 23.8 | 6.9 | 404 |
| 3 | 75.7 | 6.9 | 4.8 | 12.6 | 333 | 7-2 | 60.0 | 6.6 | 26.7 | 6.6 | 420 |
| 5 | 69.8 | 6.4 | 4.4 | 19.4 | 361 | 4 | 56.2 | 6.2 | 25.0 | 12.5 | 448 |
| 2-1 | 78.5 | 7.1 | 10.0 | 4.4 | 321 | 21-29-1-1 | 81.0 | 9.3 | 5.1 | 4.5 | 311 |
| 3 | 72.2 | 6.6 | 9.2 | 12.0 | 349 | 3 | 74.3 | 8.6 | 4.7 | 12.4 | 339 |
| 5 | 66.8 | 6.1 | 8.5 | 18.6 | 377 | 2-1 | 77.1 | 8.9 | 9.8 | 4.2 | 327 |
| 3-1 | 74.8 | 6.8 | 14.2 | 4.2 | 337 | 5 | 65.8 | 7.6 | 8.3 | 18.3 | 383 |
| 3 | 69.0 | 6.3 | 13.1 | 11.5 | 365 | 3-1 | 73.4 | 8.5 | 14.0 | 4.1 | 343 |
| 5 | 64.1 | 5.8 | 12.2 | 17.8 | 393 | 5 | 63.1 | 7.3 | 12.0 | 17.5 | 399 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|------------|------|-----|------|------|------|
| 21-29-4-1 | 70.2 | 8.1 | 17.8 | 3.9 | 350 | 22-10-18-8 | 39.2 | 1.5 | 42.7 | 10.6 | 674 |
| 8-1 | 59.6 | 6.8 | 30.3 | 3.3 | 423 | 22-11-1-1 | 86.5 | 3.0 | 5.2 | 4.6 | 305 |
| 21-30-1-2 | 77.3 | 9.2 | 4.9 | 8.6 | 326 | 22-12-1-2 | 82.5 | 3.7 | 5.0 | 8.7 | 320 |
| 2-2 | 73.7 | 8.7 | 9.3 | 8.3 | 342 | 2-2 | 78.6 | 3.6 | 9.5 | 8.3 | 336 |
| 3-2 | 70.4 | 8.4 | 13.4 | 7.8 | 358 | 3-2 | 75.0 | 3.4 | 13.6 | 7.9 | 352 |
| 4-2 | 67.4 | 8.0 | 17.1 | 7.5 | 374 | 4-2 | 71.7 | 3.3 | 17.4 | 7.6 | 368 |
| 10 | 44.2 | 5.3 | 11.2 | 39.3 | 570 | 5-2 | 68.7 | 3.1 | 20.8 | 7.3 | 384 |
| 7-2 | 59.7 | 7.1 | 26.5 | 6.6 | 422 | 6-2 | 66.0 | 3.0 | 24.0 | 7.0 | 400 |
| 8-2 | 57.5 | 6.8 | 29.2 | 6.4 | 438 | 17-6 | 41.8 | 1.9 | 43.0 | 13.3 | 632 |
| 13-2 | 48.6 | 5.7 | 40.2 | 5.4 | 518 | 22-13-1-1 | 86.0 | 4.2 | 5.2 | 4.6 | 367 |
| 21-31-1-1 | 80.5 | 9.9 | 5.1 | 4.5 | 313 | 2-1 | 81.7 | 4.0 | 9.9 | 4.3 | 323 |
| 2-1 | 76.6 | 9.4 | 9.7 | 4.3 | 329 | 3-3 | 71.9 | 3.5 | 13.1 | 11.4 | 367 |
| 3-1 | 73.1 | 9.0 | 13.9 | 3.0 | 345 | 4-1 | 74.3 | 3.7 | 18.0 | 3.9 | 355 |
| 21-32-1-2 | 76.8 | 9.8 | 4.8 | 8.5 | 328 | 7-1 | 65.5 | 3.2 | 27.8 | 3.5 | 403 |
| 2-2 | 73.3 | 9.3 | 9.3 | 8.1 | 344 | 22-14-1-2 | 82.0 | 4.3 | 5.0 | 8.7 | 322 |
| 3-2 | 70.0 | 8.9 | 13.3 | 7.8 | 360 | 2-2 | 78.1 | 4.1 | 9.5 | 8.3 | 338 |
| 21-33-1-1 | 80.0 | 10.5 | 5.1 | 4.4 | 315 | 4 | 72.1 | 3.8 | 8.7 | 15.3 | 366 |
| 2-1 | 76.1 | 10.0 | 9.7 | 4.2 | 331 | 3-2 | 74.6 | 3.9 | 13.6 | 7.9 | 354 |
| 3-1 | 72.6 | 9.5 | 13.8 | 4.0 | 347 | 4-2 | 71.3 | 3.8 | 17.3 | 7.6 | 370 |
| 21-34-1-2 | 76.4 | 10.3 | 4.8 | 8.5 | 330 | 5-4 | 63.8 | 3.4 | 19.3 | 13.5 | 414 |
| 2-2 | 72.8 | 9.8 | 9.3 | 8.1 | 346 | 6-2 | 65.7 | 3.5 | 23.9 | 6.9 | 402 |
| 3-2 | 69.6 | 9.4 | 13.3 | 7.7 | 362 | 4 | 61.4 | 3.3 | 22.3 | 13.0 | 430 |
| 21-35-1-1 | 79.5 | 11.0 | 5.0 | 4.4 | 317 | 11-2 | 54.8 | 2.9 | 36.5 | 5.8 | 482 |
| 2-1 | 75.7 | 10.5 | 9.6 | 4.2 | 333 | 15-8 | 41.9 | 1.2 | 38.1 | 17.8 | 630 |
| 3-1 | 72.2 | 10.0 | 13.7 | 4.0 | 349 | 22-15-1-1 | 85.4 | 4.8 | 5.2 | 4.5 | 309 |
| 5-5 | 57.7 | 8.0 | 18.3 | 10.0 | 437 | 3 | 78.3 | 4.4 | 4.7 | 12.5 | 337 |
| 21-36-1-2 | 75.9 | 10.8 | 4.8 | 8.4 | 332 | 5 | 72.3 | 4.1 | 4.4 | 19.2 | 365 |
| 2-2 | 72.4 | 10.3 | 9.2 | 8.0 | 348 | 2-1 | 81.2 | 4.6 | 9.8 | 4.3 | 325 |
| 3-2 | 69.2 | 9.9 | 13.2 | 7.7 | 364 | 3 | 74.8 | 4.2 | 9.1 | 11.9 | 353 |
| 21-37-1-1 | 79.0 | 11.6 | 5.0 | 4.4 | 319 | 3-1 | 77.4 | 4.4 | 14.1 | 4.1 | 341 |
| 2-1 | 75.2 | 11.0 | 9.6 | 4.2 | 335 | 3 | 71.5 | 4.1 | 13.0 | 11.4 | 369 |
| 3-1 | 71.8 | 10.5 | 13.7 | 4.0 | 351 | 5 | 66.5 | 3.8 | 12.1 | 17.6 | 397 |
| 21-38-1-2 | 75.4 | 11.4 | 4.8 | 8.4 | 334 | 4-1 | 74.0 | 4.2 | 17.9 | 3.9 | 357 |
| 2-2 | 72.0 | 10.8 | 9.1 | 8.0 | 350 | 5 | 63.9 | 3.6 | 15.5 | 17.0 | 413 |
| 3-2 | 68.8 | 10.4 | 13.1 | 7.7 | 366 | 8-1 | 62.7 | 3.6 | 30.4 | 3.3 | 421 |
| 21-39-1-1 | 78.5 | 12.1 | 5.0 | 4.4 | 321 | 3 | 58.8 | 3.3 | 28.5 | 9.4 | 449 |
| 2-1 | 74.8 | 11.6 | 9.5 | 4.1 | 337 | 22-16-1-2 | 81.5 | 4.9 | 4.9 | 8.6 | 324 |
| 3-1 | 71.3 | 11.0 | 13.6 | 4.0 | 353 | 4 | 75.0 | 4.5 | 4.5 | 15.9 | 352 |
| 21-40-1-2 | 75.0 | 11.9 | 4.8 | 8.3 | 336 | 2-2 | 77.6 | 4.7 | 9.4 | 8.2 | 340 |
| 2-2 | 71.6 | 11.4 | 9.1 | 7.9 | 352 | 4 | 71.7 | 4.3 | 8.7 | 15.2 | 368 |
| 3-2 | 68.5 | 10.9 | 13.0 | 7.6 | 368 | 6 | 66.7 | 4.0 | 8.1 | 21.2 | 396 |
| 4-2 | 65.6 | 10.4 | 16.7 | 7.3 | 384 | 3-2 | 74.1 | 4.5 | 13.5 | 7.9 | 356 |
| 5-2 | 63.0 | 10.0 | 20.0 | 7.0 | 400 | 4-2 | 71.0 | 4.3 | 17.2 | 7.5 | 372 |
| 21-41-1-1 | 78.0 | 12.7 | 4.9 | 4.3 | 323 | 4 | 66.0 | 4.0 | 16.0 | 14.0 | 400 |
| 2-1 | 74.3 | 12.1 | 9.4 | 4.1 | 339 | 5-2 | 68.0 | 4.1 | 20.6 | 7.2 | 388 |
| 3-1 | 71.0 | 11.6 | 13.5 | 3.9 | 355 | 6-2 | 65.3 | 4.0 | 23.7 | 6.9 | 404 |
| 21-42-1-2 | 74.6 | 12.4 | 4.7 | 8.3 | 335 | 8-2 | 60.6 | 3.7 | 29.3 | 6.4 | 436 |
| 2-2 | 71.2 | 11.9 | 9.0 | 7.9 | 354 | 10-2 | 56.1 | 3.4 | 34.2 | 6.0 | 468 |
| 3-2 | 68.1 | 11.3 | 13.0 | 7.6 | 370 | 22-17-1-1 | 84.9 | 5.5 | 5.1 | 4.5 | 311 |
| 21-43-1-1 | 77.5 | 13.2 | 4.9 | 4.3 | 325 | 3 | 77.9 | 5.0 | 4.7 | 12.4 | 339 |
| 2-1 | 73.9 | 12.6 | 9.4 | 4.1 | 341 | 2-1 | 80.7 | 5.2 | 9.8 | 4.3 | 327 |
| 3-1 | 70.6 | 12.0 | 13.4 | 3.9 | 357 | 3 | 74.4 | 4.8 | 9.0 | 11.8 | 355 |
| 21-44-1-2 | 74.1 | 12.9 | 4.7 | 8.2 | 340 | 5 | 68.9 | 4.4 | 8.4 | 18.3 | 383 |
| 2-2 | 70.8 | 12.3 | 9.0 | 7.9 | 356 | 3-1 | 76.9 | 5.0 | 14.0 | 4.1 | 343 |
| 4 | 65.6 | 11.5 | 8.3 | 14.6 | 384 | 3 | 71.1 | 4.6 | 12.9 | 11.3 | 371 |
| 22-10-1-2 | 83.0 | 3.1 | 5.0 | 8.8 | 318 | 5 | 66.2 | 4.3 | 12.0 | 17.5 | 369 |
| 4-2 | 72.1 | 2.7 | 17.5 | 7.6 | 366 | 4-1 | 73.5 | 4.7 | 17.8 | 3.9 | 359 |
| 4 | 67.0 | 2.5 | 16.2 | 14.2 | 394 | 5-1 | 70.4 | 4.5 | 21.3 | 3.7 | 375 |
| 6-2 | 66.3 | 2.5 | 24.1 | 7.0 | 398 | 6-1 | 67.5 | 4.3 | 24.6 | 3.6 | 391 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|-----|------|------|------|
| 22-17-7-3 | 60.7 | 3.9 | 25.7 | 9.7 | 435 | 22-22-5-2 | 67.0 | 5.6 | 20.3 | 7.1 | 394 |
| 8-5 | 55.1 | 3.6 | 26.7 | 14.6 | 479 | 7-2 | 62.0 | 5.1 | 26.3 | 6.6 | 426 |
| 13-1 | 52.5 | 3.4 | 41.3 | 2.8 | 503 | 8-2 | 59.7 | 5.0 | 29.0 | 6.3 | 442 |
| 22-18-1-2 | 81.0 | 5.5 | 4.9 | 8.6 | 326 | 9-2 | 57.6 | 4.8 | 31.4 | 6.1 | 458 |
| 4 | 74.6 | 5.1 | 4.5 | 15.8 | 354 | 22-23-1-1 | 83.3 | 7.3 | 5.0 | 4.4 | 317 |
| 2-2 | 77.2 | 5.3 | 9.3 | 8.2 | 342 | 3 | 76.5 | 6.7 | 4.6 | 12.2 | 345 |
| 4 | 71.4 | 4.9 | 8.6 | 15.1 | 370 | 5 | 70.8 | 6.1 | 4.3 | 18.8 | 373 |
| 3-2 | 73.7 | 5.0 | 13.4 | 7.8 | 358 | 2-1 | 79.3 | 6.9 | 9.6 | 4.2 | 333 |
| 4-2 | 70.6 | 4.8 | 17.1 | 7.5 | 374 | 3 | 73.1 | 6.4 | 8.9 | 11.6 | 361 |
| 4 | 65.6 | 4.5 | 15.9 | 13.9 | 402 | 5 | 67.8 | 5.9 | 8.3 | 18.0 | 389 |
| 5-2 | 67.7 | 4.6 | 20.5 | 7.2 | 390 | 3-1 | 75.6 | 6.6 | 13.7 | 4.0 | 349 |
| 6-2 | 65.0 | 4.4 | 23.6 | 6.9 | 406 | 3 | 70.0 | 6.1 | 12.7 | 11.1 | 377 |
| 7 | 62.6 | 4.3 | 26.5 | 6.6 | 422 | 4-1 | 72.3 | 6.3 | 17.5 | 3.8 | 365 |
| 4 | 58.6 | 4.0 | 24.9 | 12.4 | 450 | 5-1 | 69.3 | 6.0 | 21.9 | 3.7 | 381 |
| 6 | 55.2 | 3.8 | 23.4 | 17.6 | 478 | 6-1 | 66.5 | 5.8 | 24.2 | 3.5 | 397 |
| 8-2 | 60.3 | 4.1 | 29.2 | 6.4 | 438 | 7-1 | 63.9 | 5.6 | 27.1 | 3.4 | 413 |
| 4 | 56.7 | 3.8 | 27.5 | 12.0 | 466 | 3 | 59.0 | 5.2 | 25.4 | 9.5 | 441 |
| 10-2 | 56.2 | 3.8 | 34.0 | 5.9 | 470 | 8-1 | 61.5 | 5.4 | 29.8 | 3.3 | 429 |
| 11-4 | 51.4 | 3.5 | 34.2 | 10.9 | 514 | 9-1 | 59.3 | 5.2 | 32.4 | 3.1 | 445 |
| 22-19-1-1 | 84.4 | 6.1 | 5.1 | 4.5 | 313 | 22-24-1-2 | 79.5 | 7.2 | 4.8 | 8.4 | 332 |
| 3 | 77.4 | 5.6 | 4.7 | 12.3 | 341 | 2-2 | 75.9 | 6.9 | 9.2 | 8.0 | 348 |
| 2-1 | 80.2 | 5.8 | 9.7 | 4.2 | 329 | 4 | 70.2 | 6.4 | 8.5 | 14.9 | 376 |
| 3 | 73.9 | 5.3 | 9.0 | 11.8 | 357 | 6 | 65.3 | 5.9 | 7.9 | 20.8 | 404 |
| 3-1 | 76.6 | 5.5 | 13.9 | 4.0 | 345 | 3-2 | 72.5 | 6.6 | 13.2 | 7.7 | 364 |
| 3 | 70.8 | 5.1 | 12.9 | 11.2 | 373 | 4-2 | 69.5 | 6.3 | 16.8 | 7.4 | 380 |
| 4-1 | 73.1 | 5.3 | 17.7 | 3.9 | 361 | 5-2 | 66.7 | 6.0 | 20.2 | 7.1 | 396 |
| 3 | 67.8 | 4.9 | 16.4 | 10.8 | 389 | 6 | 58.4 | 5.3 | 17.7 | 18.6 | 432 |
| 5-3 | 65.2 | 4.7 | 19.7 | 10.4 | 405 | 6-2 | 64.1 | 5.8 | 23.3 | 6.8 | 412 |
| 6-3 | 62.6 | 4.5 | 22.8 | 10.0 | 421 | 7-2 | 61.6 | 5.6 | 26.2 | 6.5 | 428 |
| 9-1 | 59.9 | 4.3 | 32.6 | 3.2 | 441 | 6 | 54.6 | 5.0 | 23.1 | 17.3 | 484 |
| 22-20-1-2 | 80.5 | 6.1 | 4.9 | 8.5 | 328 | 8-2 | 59.4 | 5.4 | 28.8 | 6.3 | 444 |
| 4 | 74.1 | 5.6 | 4.5 | 15.7 | 356 | 16-2 | 46.1 | 4.2 | 44.8 | 4.9 | 572 |
| 2-2 | 76.7 | 5.8 | 9.3 | 8.1 | 344 | 22-25-1-1 | 82.8 | 7.8 | 5.0 | 4.4 | 319 |
| 4 | 71.0 | 5.4 | 8.6 | 15.0 | 372 | 3 | 76.1 | 7.2 | 4.6 | 12.1 | 347 |
| 3-2 | 73.3 | 5.6 | 13.3 | 7.8 | 360 | 2-1 | 78.8 | 7.5 | 9.5 | 4.2 | 335 |
| 4 | 68.0 | 5.2 | 12.4 | 14.4 | 388 | 3-1 | 75.2 | 7.1 | 13.7 | 4.0 | 351 |
| 4-2 | 70.2 | 5.3 | 17.0 | 7.5 | 376 | 4-1 | 71.9 | 6.8 | 17.4 | 3.8 | 367 |
| 6 | 61.1 | 4.6 | 14.8 | 19.4 | 432 | 5-3 | 64.2 | 6.1 | 19.5 | 10.2 | 411 |
| 5-2 | 67.3 | 5.1 | 20.4 | 7.1 | 392 | 6-1 | 66.2 | 6.3 | 24.0 | 3.5 | 399 |
| 6-2 | 64.7 | 4.9 | 23.5 | 6.9 | 408 | 7-1 | 63.6 | 6.0 | 27.0 | 3.4 | 415 |
| 4 | 60.6 | 4.6 | 22.0 | 12.8 | 436 | 8-1 | 61.2 | 5.8 | 29.7 | 3.3 | 431 |
| 7-2 | 62.3 | 4.7 | 26.4 | 6.6 | 424 | 22-26-1-2 | 79.0 | 7.8 | 4.8 | 8.4 | 334 |
| 8-2 | 60.0 | 4.5 | 29.1 | 6.4 | 440 | 2-2 | 75.4 | 7.4 | 9.1 | 8.0 | 350 |
| 10-2 | 55.9 | 4.2 | 33.9 | 5.9 | 472 | 3-2 | 72.1 | 7.1 | 13.1 | 7.6 | 366 |
| 22-21-1-1 | 83.8 | 6.7 | 5.1 | 4.4 | 315 | 4 | 67.0 | 6.6 | 12.2 | 14.2 | 394 |
| 3 | 77.0 | 6.1 | 4.7 | 12.2 | 343 | 4-2 | 69.1 | 6.8 | 16.7 | 7.3 | 382 |
| 5 | 71.1 | 5.7 | 4.3 | 18.9 | 371 | 4 | 64.4 | 6.3 | 15.6 | 13.6 | 410 |
| 2-1 | 79.8 | 6.3 | 9.7 | 4.2 | 331 | 6-2 | 63.7 | 6.3 | 23.2 | 6.8 | 414 |
| 3 | 73.5 | 5.8 | 8.9 | 11.7 | 359 | 4 | 59.7 | 5.9 | 21.7 | 12.7 | 442 |
| 4-1 | 72.7 | 5.8 | 17.6 | 3.9 | 363 | 7-2 | 61.4 | 6.0 | 26.0 | 6.5 | 430 |
| 5-1 | 69.6 | 5.5 | 21.1 | 3.7 | 379 | 22-27-1-1 | 82.2 | 8.4 | 5.0 | 4.4 | 321 |
| 3 | 64.9 | 5.1 | 19.7 | 10.3 | 407 | 3 | 75.6 | 7.7 | 4.6 | 12.0 | 349 |
| 22-22-1-2 | 80.0 | 6.7 | 4.8 | 8.5 | 330 | 2-1 | 78.3 | 8.0 | 9.5 | 4.2 | 337 |
| 4 | 73.8 | 6.1 | 4.5 | 15.6 | 358 | 5 | 67.2 | 6.9 | 8.1 | 17.8 | 393 |
| 2-2 | 76.3 | 6.3 | 9.2 | 8.1 | 346 | 3-1 | 74.8 | 7.6 | 13.6 | 4.0 | 353 |
| 4 | 70.6 | 5.9 | 8.5 | 15.0 | 374 | 4-1 | 71.5 | 7.3 | 17.3 | 3.8 | 369 |
| 3-2 | 72.9 | 6.1 | 13.3 | 7.7 | 362 | 5-1 | 68.8 | 7.0 | 20.8 | 3.4 | 385 |
| 4 | 67.7 | 5.6 | 12.3 | 14.4 | 390 | 22-28-1-2 | 78.6 | 8.3 | 4.8 | 8.3 | 336 |
| 4-2 | 69.8 | 5.8 | 16.9 | 7.4 | 378 | 2-2 | 75.0 | 7.9 | 9.1 | 7.9 | 352 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|------------|------|------|------|------|------|
| 22-28-2-6 | 64.7 | 6.9 | 7.8 | 20.6 | 408 | 22-44-10-2 | 53.2 | 8.9 | 32.3 | 5.6 | 496 |
| 3-2 | 71.7 | 7.6 | 13.0 | 7.6 | 368 | 22-45-1-1 | 77.9 | 13.3 | 4.7 | 4.1 | 339 |
| 4 | 66.7 | 7.1 | 12.1 | 14.1 | 396 | 2-1 | 74.4 | 12.7 | 9.0 | 3.9 | 355 |
| 4-2 | 68.7 | 7.3 | 16.7 | 7.3 | 384 | 22-46-1-2 | 74.6 | 13.0 | 4.5 | 7.0 | 354 |
| 5-2 | 66.0 | 7.0 | 20.0 | 7.0 | 400 | 2-2 | 71.3 | 12.4 | 8.6 | 7.6 | 370 |
| 8-2 | 58.9 | 6.2 | 28.6 | 6.2 | 448 | 22-58-4-4 | 59.7 | 13.1 | 14.5 | 12.7 | 442 |
| 6 | 52.4 | 5.6 | 25.4 | 16.6 | 504 | 23-12-18-6 | 41.8 | 1.8 | 43.6 | 12.7 | 660 |
| 10-2 | 55.0 | 5.8 | 33.3 | 5.8 | 480 | 23-13-1-1 | 86.5 | 4.1 | 5.0 | 4.4 | 319 |
| 22-29-1-1 | 81.7 | 9.0 | 4.9 | 4.3 | 323 | 3 | 79.5 | 3.7 | 4.6 | 12.1 | 347 |
| 2-1 | 77.9 | 8.6 | 9.4 | 4.1 | 339 | 3-1 | 78.6 | 3.7 | 13.7 | 4.0 | 351 |
| 5-1 | 68.2 | 7.5 | 20.7 | 3.6 | 387 | 23-14-3-2 | 75.4 | 3.8 | 13.1 | 7.6 | 366 |
| 22-30-1-2 | 78.1 | 8.9 | 4.7 | 8.3 | 338 | 4-2 | 72.3 | 3.7 | 16.7 | 7.3 | 382 |
| 2-2 | 74.6 | 8.5 | 9.0 | 7.9 | 354 | 6-4 | 62.4 | 3.2 | 21.7 | 12.7 | 442 |
| 4 | 69.1 | 7.8 | 8.4 | 14.7 | 382 | 6 | 58.7 | 3.0 | 20.4 | 17.9 | 470 |
| 3-2 | 71.3 | 8.1 | 13.0 | 7.6 | 370 | 16-8 | 42.0 | 2.1 | 38.9 | 17.0 | 658 |
| 4-4 | 63.8 | 7.2 | 15.4 | 13.5 | 414 | 23-15-1-1 | 86.0 | 4.7 | 5.0 | 4.3 | 321 |
| 6-4 | 59.2 | 6.7 | 21.5 | 12.6 | 446 | 2-1 | 81.9 | 4.4 | 9.5 | 4.1 | 337 |
| 22-31-1-1 | 81.2 | 9.5 | 4.9 | 4.3 | 325 | 2-3 | 75.6 | 4.1 | 8.8 | 11.5 | 365 |
| 2-1 | 77.4 | 9.1 | 9.4 | 4.1 | 341 | 3-1 | 78.2 | 4.2 | 13.6 | 4.0 | 353 |
| 3-5 | 63.9 | 7.5 | 11.6 | 16.9 | 413 | 4-1 | 74.7 | 4.1 | 17.3 | 3.8 | 369 |
| 23-32-1-2 | 77.6 | 9.4 | 4.7 | 8.2 | 340 | 3 | 69.5 | 3.8 | 16.1 | 10.6 | 397 |
| 2-2 | 74.1 | 9.0 | 9.0 | 7.9 | 356 | 5 | 64.9 | 3.5 | 15.1 | 16.5 | 425 |
| 4-4 | 63.5 | 7.7 | 15.4 | 13.4 | 416 | 8-7 | 53.4 | 2.9 | 24.7 | 19.0 | 517 |
| 22-33-1-1 | 80.7 | 10.1 | 4.9 | 4.3 | 327 | 23-16-1-2 | 82.1 | 4.8 | 4.8 | 8.3 | 336 |
| 2-1 | 77.0 | 9.6 | 9.3 | 4.1 | 343 | 4 | 75.8 | 4.4 | 4.4 | 15.1 | 364 |
| 3-1 | 73.5 | 9.2 | 13.4 | 3.9 | 359 | 2-2 | 78.4 | 4.5 | 9.1 | 7.9 | 352 |
| 4-1 | 70.4 | 8.8 | 17.1 | 3.7 | 375 | 4 | 72.6 | 4.2 | 8.4 | 14.7 | 380 |
| 5-1 | 67.5 | 8.4 | 20.5 | 3.6 | 391 | 3-2 | 75.0 | 4.3 | 13.0 | 7.6 | 368 |
| 22-34-1-2 | 77.2 | 9.9 | 4.7 | 8.2 | 342 | 4 | 69.7 | 4.0 | 12.1 | 14.1 | 396 |
| 2-2 | 73.8 | 9.5 | 8.9 | 7.8 | 358 | 4-2 | 71.9 | 4.2 | 16.6 | 7.3 | 384 |
| 22-35-1-1 | 80.3 | 10.6 | 4.9 | 4.2 | 329 | 4 | 67.0 | 3.9 | 15.5 | 13.6 | 412 |
| 2-1 | 76.6 | 10.1 | 9.3 | 4.0 | 345 | 6-2 | 66.3 | 3.8 | 23.1 | 6.7 | 416 |
| 4-1 | 70.0 | 9.3 | 17.0 | 3.7 | 377 | 23-17-1-1 | 85.4 | 5.3 | 4.9 | 4.3 | 323 |
| 6-1 | 64.5 | 8.6 | 23.5 | 3.4 | 409 | 3 | 78.7 | 4.8 | 4.6 | 11.9 | 351 |
| 22-36-1-2 | 76.7 | 10.5 | 4.6 | 8.1 | 344 | 2-1 | 81.4 | 5.0 | 9.4 | 4.1 | 339 |
| 2-2 | 73.3 | 10.0 | 8.9 | 7.8 | 360 | 3 | 75.2 | 4.6 | 8.7 | 11.4 | 367 |
| 22-37-1-1 | 79.8 | 11.2 | 4.8 | 4.2 | 331 | 3-1 | 77.8 | 4.8 | 13.5 | 3.9 | 355 |
| 2-1 | 76.1 | 10.7 | 9.2 | 4.0 | 347 | 3 | 72.1 | 4.4 | 12.5 | 11.0 | 383 |
| 22-38-1-2 | 76.3 | 11.0 | 4.6 | 8.1 | 346 | 5-1 | 71.3 | 4.4 | 20.7 | 3.6 | 387 |
| 2-2 | 72.9 | 10.5 | 8.8 | 7.7 | 362 | 23-18-1-2 | 81.6 | 5.3 | 4.7 | 8.3 | 338 |
| 3-2 | 69.8 | 10.1 | 12.7 | 7.4 | 378 | 4 | 75.4 | 4.9 | 4.4 | 15.3 | 366 |
| 4-2 | 67.0 | 9.6 | 16.2 | 7.1 | 394 | 2-2 | 78.0 | 5.1 | 9.0 | 7.9 | 354 |
| 9-20 | 36.4 | 5.2 | 19.8 | 38.6 | 726 | 4 | 72.3 | 4.7 | 8.4 | 14.6 | 382 |
| 22-39-1-1 | 79.3 | 11.7 | 4.8 | 4.2 | 333 | 3-2 | 74.6 | 4.9 | 12.9 | 7.6 | 370 |
| 2-1 | 75.6 | 11.2 | 9.1 | 4.0 | 349 | 4-2 | 71.5 | 4.7 | 16.5 | 7.2 | 386 |
| 22-40-1-2 | 75.9 | 11.5 | 4.6 | 8.0 | 348 | 9-8 | 50.2 | 3.3 | 26.2 | 20.3 | 550 |
| 2-2 | 72.5 | 11.0 | 8.8 | 7.7 | 364 | 11-4 | 52.5 | 3.4 | 33.2 | 10.6 | 526 |
| 22-41-1-1 | 78.8 | 12.2 | 4.8 | 4.2 | 335 | 23-19-1-1 | 84.9 | 5.8 | 4.9 | 4.3 | 325 |
| 2-1 | 75.2 | 11.7 | 9.1 | 4.0 | 351 | 3 | 68.2 | 5.4 | 4.5 | 11.9 | 353 |
| 4-1 | 68.9 | 10.7 | 16.7 | 3.7 | 383 | 2-1 | 80.9 | 5.6 | 4.1 | 9.4 | 341 |
| 22-42-1-2 | 75.4 | 12.0 | 4.6 | 8.0 | 350 | 3 | 74.8 | 5.1 | 8.6 | 11.4 | 369 |
| 2-2 | 72.1 | 11.4 | 8.7 | 7.7 | 366 | 4-1 | 74.0 | 5.1 | 17.2 | 3.7 | 373 |
| 4-2 | 66.3 | 10.5 | 16.1 | 7.0 | 398 | 3 | 68.8 | 4.7 | 16.0 | 10.5 | 401 |
| 22-43-1-1 | 78.3 | 12.8 | 4.7 | 4.2 | 337 | 5-1 | 70.9 | 4.9 | 20.6 | 3.6 | 389 |
| 2-1 | 74.8 | 12.2 | 9.1 | 3.9 | 353 | 6-1 | 68.1 | 4.7 | 23.7 | 3.4 | 405 |
| 3-1 | 71.5 | 11.6 | 13.0 | 3.8 | 369 | 23-20-1-2 | 81.2 | 5.9 | 4.7 | 8.2 | 340 |
| 22-44-1-2 | 75.0 | 12.5 | 4.5 | 8.0 | 352 | 2-2 | 77.5 | 5.6 | 9.0 | 7.9 | 356 |
| 2-2 | 71.7 | 12.0 | 8.7 | 7.6 | 368 | 3-2 | 74.2 | 5.4 | 12.9 | 7.5 | 372 |
| 3-2 | 68.7 | 11.5 | 12.5 | 7.3 | 384 | 4-2 | 71.1 | 5.2 | 16.5 | 7.2 | 388 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 23-20-4-4 | 66.3 | 4.8 | 15.4 | 13.5 | 416 | 23-27-2-1 | 79.1 | 7.7 | 9.2 | 4.0 | 349 |
| 5-2 | 68.3 | 4.9 | 19.3 | 6.9 | 404 | 4-1 | 72.4 | 7.1 | 16.8 | 3.7 | 381 |
| 12-8 | 46.0 | 3.3 | 32.0 | 18.7 | 600 | 3 | 67.5 | 6.6 | 15.6 | 10.2 | 409 |
| 23-21-1-1 | 84.4 | 6.4 | 4.9 | 4.3 | 327 | 5-1 | 69.5 | 6.8 | 20.1 | 3.5 | 397 |
| 3 | 77.7 | 5.9 | 4.5 | 11.8 | 355 | 6-1 | 66.8 | 6.5 | 23.2 | 3.4 | 413 |
| 2-1 | 80.4 | 6.1 | 9.3 | 4.1 | 343 | 3 | 62.6 | 6.1 | 21.8 | 9.5 | 441 |
| 3 | 74.4 | 5.7 | 8.6 | 11.3 | 371 | 7-1 | 64.3 | 6.3 | 26.1 | 3.3 | 429 |
| 3-3 | 71.3 | 5.4 | 12.4 | 10.8 | 387 | 3 | 60.4 | 5.9 | 24.4 | 9.2 | 457 |
| 4-1 | 73.6 | 5.6 | 17.1 | 3.6 | 375 | 8-1 | 62.0 | 6.1 | 28.8 | 3.1 | 445 |
| 6-3 | 63.4 | 4.8 | 22.1 | 9.7 | 435 | 23-28-1-2 | 79.3 | 8.0 | 4.6 | 8.0 | 348 |
| 23-22-1-2 | 80.7 | 6.4 | 4.7 | 8.2 | 342 | 2-2 | 75.8 | 7.7 | 8.8 | 7.7 | 364 |
| 4 | 74.6 | 5.9 | 4.3 | 15.1 | 370 | 4 | 70.4 | 7.1 | 8.2 | 14.3 | 392 |
| 2-2 | 77.1 | 6.1 | 8.9 | 7.8 | 358 | 3-2 | 72.6 | 7.4 | 12.6 | 7.4 | 380 |
| 4 | 71.5 | 5.7 | 8.3 | 14.5 | 386 | 4-2 | 69.7 | 7.1 | 16.1 | 7.1 | 396 |
| 3-2 | 73.8 | 5.9 | 12.8 | 7.5 | 374 | 5-2 | 67.0 | 6.8 | 19.4 | 6.8 | 412 |
| 4 | 68.6 | 5.5 | 11.9 | 13.9 | 402 | 6-2 | 64.5 | 6.5 | 22.4 | 6.5 | 428 |
| 4-2 | 70.8 | 5.6 | 16.4 | 7.2 | 390 | 7-2 | 62.1 | 6.3 | 25.2 | 6.3 | 444 |
| 4 | 66.0 | 5.3 | 15.3 | 13.4 | 418 | 8-2 | 60.0 | 6.1 | 27.8 | 6.1 | 460 |
| 8-2 | 60.8 | 4.8 | 28.2 | 6.2 | 454 | 23-29-1-1 | 82.4 | 8.6 | 4.8 | 4.2 | 335 |
| 23-23-1-1 | 83.9 | 7.0 | 4.9 | 4.2 | 329 | 2-1 | 78.7 | 8.2 | 9.1 | 4.0 | 351 |
| 3 | 77.3 | 6.4 | 4.5 | 11.8 | 357 | 3 | 72.8 | 7.6 | 8.4 | 11.1 | 379 |
| 2-1 | 80.0 | 6.7 | 9.3 | 4.0 | 345 | 5 | 67.8 | 7.1 | 7.9 | 17.2 | 407 |
| 3 | 74.0 | 6.2 | 8.6 | 11.2 | 373 | 4-1 | 72.1 | 7.6 | 16.7 | 3.6 | 383 |
| 3-1 | 76.4 | 6.4 | 13.3 | 3.9 | 361 | 5-1 | 69.2 | 7.3 | 20.0 | 3.5 | 399 |
| 5-1 | 70.2 | 5.8 | 20.3 | 3.6 | 393 | 9-1 | 59.6 | 6.3 | 31.1 | 3.0 | 463 |
| 6-1 | 67.5 | 5.6 | 23.5 | 3.4 | 409 | 11-1 | 55.7 | 5.9 | 35.6 | 2.8 | 495 |
| 23-24-1-2 | 80.2 | 7.0 | 4.6 | 8.1 | 344 | 23-30-1-2 | 78.8 | 8.6 | 4.6 | 8.0 | 350 |
| 4 | 74.2 | 6.4 | 4.3 | 15.1 | 372 | 2-2 | 75.4 | 8.2 | 8.7 | 7.6 | 366 |
| 2-2 | 76.7 | 6.6 | 8.9 | 7.8 | 360 | 3-2 | 72.3 | 7.8 | 12.6 | 7.3 | 382 |
| 4 | 71.1 | 6.2 | 8.2 | 14.4 | 388 | 4-2 | 69.4 | 7.5 | 16.1 | 7.0 | 398 |
| 6 | 66.3 | 5.8 | 7.7 | 20.2 | 416 | 5-2 | 66.6 | 7.2 | 19.3 | 6.8 | 414 |
| 3-2 | 73.4 | 6.4 | 12.8 | 7.4 | 376 | 23-31-1-1 | 81.0 | 9.2 | 4.7 | 4.1 | 337 |
| 4-2 | 70.4 | 6.1 | 16.3 | 7.1 | 392 | 2-1 | 78.2 | 8.8 | 9.1 | 3.9 | 353 |
| 4 | 65.7 | 5.7 | 15.2 | 13.3 | 420 | 4-1 | 71.7 | 8.0 | 16.6 | 3.6 | 385 |
| 5-2 | 67.6 | 5.9 | 19.6 | 6.9 | 408 | 23-32-1-2 | 78.4 | 9.1 | 4.5 | 7.9 | 352 |
| 6-6 | 57.5 | 5.0 | 20.0 | 17.5 | 480 | 2-2 | 75.0 | 8.7 | 8.7 | 7.6 | 368 |
| 8-4 | 57.0 | 5.0 | 26.4 | 11.6 | 484 | 4-2 | 69.0 | 8.0 | 16.0 | 7.0 | 400 |
| 23-25-1-1 | 83.4 | 7.6 | 4.8 | 4.2 | 331 | 23-33-1-1 | 81.4 | 9.7 | 4.7 | 4.1 | 339 |
| 5 | 71.3 | 6.5 | 4.1 | 18.1 | 387 | 2-1 | 77.8 | 9.3 | 9.0 | 3.9 | 355 |
| 2-1 | 79.5 | 7.2 | 9.2 | 4.0 | 347 | 8-3 | 57.6 | 6.9 | 26.7 | 8.8 | 479 |
| 3 | 73.6 | 6.7 | 8.5 | 11.2 | 375 | 23-34-1-2 | 78.0 | 9.6 | 4.5 | 7.9 | 354 |
| 3-1 | 76.0 | 6.9 | 13.2 | 3.9 | 363 | 2-2 | 74.6 | 9.2 | 8.7 | 7.5 | 370 |
| 3 | 70.6 | 6.4 | 12.3 | 10.7 | 391 | 23-35-1-1 | 80.9 | 10.3 | 4.7 | 4.1 | 341 |
| 4-1 | 72.8 | 6.6 | 16.9 | 3.7 | 379 | 2-1 | 77.3 | 9.8 | 9.0 | 3.9 | 357 |
| 5-1 | 69.9 | 6.3 | 20.2 | 3.5 | 395 | 23-36-1-2 | 77.5 | 10.1 | 4.5 | 7.9 | 356 |
| 6-1 | 67.1 | 6.1 | 23.4 | 3.4 | 411 | 2-2 | 74.2 | 9.7 | 8.6 | 7.5 | 372 |
| 3 | 62.9 | 5.7 | 21.9 | 9.5 | 439 | 3-2 | 71.1 | 9.3 | 12.4 | 7.2 | 388 |
| 5 | 59.1 | 5.4 | 20.5 | 15.0 | 467 | 23-37-1-1 | 80.4 | 10.8 | 4.7 | 4.1 | 343 |
| 8-1 | 62.3 | 5.6 | 28.9 | 3.2 | 443 | 2-1 | 76.9 | 10.3 | 8.9 | 3.9 | 359 |
| 23-26-1-2 | 79.8 | 7.5 | 4.6 | 8.1 | 346 | 23-38-1-2 | 77.1 | 10.6 | 4.5 | 7.8 | 358 |
| 2-2 | 76.2 | 7.2 | 8.8 | 7.7 | 362 | 2-2 | 73.8 | 10.1 | 8.6 | 7.5 | 374 |
| 3-2 | 73.0 | 6.9 | 12.7 | 7.4 | 378 | 3-2 | 70.8 | 9.7 | 12.3 | 7.2 | 390 |
| 4-2 | 70.1 | 6.6 | 16.2 | 7.1 | 394 | 6-4 | 59.2 | 8.2 | 20.6 | 12.0 | 466 |
| 4 | 65.4 | 6.2 | 15.1 | 13.3 | 422 | 23-39-1-1 | 80.0 | 11.3 | 4.6 | 4.1 | 345 |
| 5-2 | 67.3 | 6.3 | 19.5 | 6.8 | 410 | 2-1 | 76.4 | 10.8 | 8.9 | 3.9 | 361 |
| 6-2 | 64.8 | 6.1 | 22.5 | 6.6 | 426 | 23-40-1-2 | 76.7 | 11.1 | 4.4 | 7.8 | 360 |
| 7-2 | 62.4 | 5.9 | 25.3 | 6.3 | 442 | 2-2 | 73.4 | 10.6 | 8.5 | 7.4 | 376 |
| 23-27-1-1 | 82.9 | 8.1 | 4.8 | 4.2 | 333 | 23-41-1-1 | 79.5 | 11.8 | 4.6 | 4.0 | 347 |
| 3 | 76.5 | 7.5 | 4.4 | 11.6 | 361 | 2-1 | 76.0 | 11.3 | 8.8 | 3.9 | 363 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|------------|------|------|------|------|------|-----------|------|-----|------|------|------|
| 23-42-1-2 | 76.2 | 11.6 | 4.4 | 7.7 | 362 | 24-18-2-4 | 73.1 | 4.6 | 8.1 | 14.2 | 394 |
| 2-2 | 73.0 | 11.1 | 8.4 | 7.4 | 378 | 3-2 | 75.4 | 4.7 | 12.6 | 7.3 | 382 |
| 23-43-1-1 | 79.1 | 12.3 | 4.6 | 4.0 | 349 | 4 | 70.2 | 4.4 | 11.7 | 13.6 | 410 |
| 2-1 | 75.6 | 11.8 | 8.8 | 3.8 | 365 | 6 | 65.8 | 4.1 | 10.9 | 19.2 | 438 |
| 23-44-1-2 | 75.8 | 12.1 | 4.4 | 7.7 | 364 | 4-2 | 72.4 | 4.5 | 16.1 | 7.0 | 398 |
| 2-2 | 72.6 | 11.6 | 8.4 | 7.4 | 380 | 4 | 67.0 | 4.2 | 15.0 | 13.1 | 426 |
| 23-45-1-1 | 78.7 | 12.8 | 4.5 | 4.0 | 351 | 5-2 | 69.6 | 4.3 | 19.3 | 6.8 | 414 |
| 2-1 | 75.2 | 12.3 | 8.7 | 3.8 | 367 | 6-2 | 67.0 | 4.2 | 22.3 | 6.5 | 430 |
| 7-1 | 61.7 | 10.1 | 25.1 | 3.1 | 447 | 6 | 59.3 | 3.7 | 19.7 | 17.3 | 486 |
| 23-46-1-2 | 75.4 | 12.6 | 4.4 | 7.6 | 366 | 7-2 | 64.6 | 4.0 | 25.1 | 6.3 | 446 |
| 2-2 | 72.3 | 12.0 | 8.4 | 7.3 | 382 | 14-8 | 44.8 | 2.8 | 34.9 | 17.4 | 642 |
| 23-47-1-1 | 78.2 | 13.3 | 4.5 | 4.0 | 353 | 24-19-1-1 | 85.4 | 5.6 | 4.7 | 4.2 | 337 |
| 2-1 | 74.8 | 12.7 | 8.7 | 3.8 | 369 | 3 | 78.9 | 5.2 | 4.4 | 11.5 | 365 |
| 23-48-1-2 | 75.0 | 13.0 | 4.3 | 7.6 | 368 | 5 | 73.3 | 4.8 | 4.1 | 17.8 | 393 |
| 2-2 | 71.9 | 12.5 | 8.3 | 7.3 | 384 | 2-1 | 81.6 | 5.4 | 9.1 | 3.9 | 353 |
| 24-10-19-8 | 40.3 | 1.4 | 42.6 | 15.7 | 714 | 3 | 75.0 | 5.0 | 8.4 | 11.0 | 381 |
| 24-12-1-2 | 83.7 | 3.5 | 4.6 | 8.1 | 344 | 3-1 | 78.0 | 5.1 | 13.0 | 3.8 | 369 |
| 18-10 | 39.6 | 1.6 | 39.6 | 19.2 | 728 | 3 | 72.5 | 4.8 | 12.1 | 10.6 | 397 |
| 24-13-4-1 | 76.0 | 3.4 | 16.9 | 3.7 | 379 | 5 | 67.7 | 4.5 | 11.3 | 10.5 | 425 |
| 24-14-1-2 | 83.3 | 4.0 | 4.6 | 8.1 | 346 | 4-5 | 84.5 | 5.6 | 19.8 | 20.5 | 441 |
| 2-2 | 79.6 | 3.9 | 8.8 | 7.7 | 362 | 5-1 | 71.8 | 4.7 | 20.0 | 3.5 | 401 |
| 8-2 | 62.9 | 3.1 | 27.9 | 6.1 | 458 | 6-1 | 69.1 | 4.6 | 23.0 | 3.3 | 417 |
| 4 | 59.2 | 2.9 | 20.3 | 11.5 | 486 | 12-21 | 36.3 | 2.4 | 24.2 | 37.1 | 793 |
| 11-2 | 56.9 | 2.6 | 34.8 | 5.5 | 506 | 24-20-1-2 | 81.8 | 5.7 | 4.5 | 8.0 | 352 |
| 16-8 | 43.0 | 2.1 | 38.1 | 16.7 | 670 | 4 | 75.8 | 5.3 | 4.2 | 14.7 | 380 |
| 24-15-1-3 | 79.8 | 4.2 | 4.4 | 11.6 | 361 | 2-2 | 78.3 | 5.4 | 8.7 | 7.6 | 368 |
| 3-1 | 78.9 | 4.1 | 13.1 | 3.8 | 365 | 4 | 72.7 | 5.0 | 8.1 | 14.1 | 396 |
| 3 | 73.3 | 3.8 | 12.2 | 10.7 | 393 | 3-2 | 75.0 | 5.2 | 12.5 | 7.3 | 384 |
| 5-3 | 67.8 | 3.5 | 18.8 | 9.9 | 425 | 4-2 | 72.0 | 5.0 | 16.0 | 7.0 | 400 |
| 6-3 | 65.3 | 3.4 | 21.8 | 9.5 | 441 | 5-2 | 69.2 | 4.8 | 19.2 | 6.7 | 416 |
| 7-3 | 63.0 | 3.3 | 24.5 | 9.2 | 457 | 18 | 45.0 | 3.1 | 12.5 | 39.4 | 640 |
| 8-5 | 57.5 | 3.0 | 25.5 | 14.0 | 501 | 6-2 | 66.7 | 4.6 | 22.2 | 6.5 | 432 |
| 9-3 | 58.9 | 3.1 | 29.4 | 8.6 | 489 | 7-2 | 64.3 | 4.5 | 25.0 | 6.2 | 448 |
| 10-11 | 46.7 | 2.4 | 25.9 | 25.0 | 617 | 9-2 | 60.9 | 4.2 | 30.0 | 5.8 | 480 |
| 24-16-2-2 | 79.1 | 4.4 | 8.8 | 7.7 | 364 | 10-6 | 52.2 | 3.6 | 29.0 | 15.2 | 552 |
| 3-2 | 75.8 | 4.2 | 12.6 | 7.4 | 380 | 19-6 | 41.4 | 2.9 | 43.6 | 12.1 | 796 |
| 4 | 70.6 | 3.9 | 11.8 | 13.7 | 408 | 24-21-1-1 | 85.0 | 6.2 | 4.7 | 4.1 | 339 |
| 4-2 | 72.7 | 4.0 | 16.2 | 7.1 | 396 | 3 | 78.5 | 5.7 | 4.4 | 11.4 | 367 |
| 4 | 67.9 | 3.8 | 15.1 | 13.2 | 424 | 5 | 72.9 | 5.3 | 4.0 | 17.7 | 395 |
| 5-4 | 65.4 | 3.6 | 18.2 | 12.7 | 440 | 2-1 | 81.1 | 5.9 | 9.0 | 3.9 | 355 |
| 6-4 | 63.1 | 3.5 | 21.0 | 12.4 | 456 | 3 | 75.2 | 5.5 | 8.4 | 10.9 | 383 |
| 7-4 | 61.0 | 3.4 | 23.7 | 11.9 | 472 | 3-1 | 77.6 | 5.6 | 12.9 | 3.8 | 371 |
| 8-6 | 55.8 | 3.1 | 24.8 | 16.3 | 516 | 3 | 72.2 | 5.3 | 12.0 | 10.5 | 399 |
| 9-6 | 54.1 | 3.0 | 27.1 | 15.8 | 532 | 7 | 63.3 | 4.6 | 10.6 | 21.5 | 455 |
| 10-6 | 52.6 | 2.9 | 29.2 | 15.3 | 548 | 4-1 | 74.4 | 5.4 | 16.5 | 3.6 | 387 |
| 24-17-1-1 | 86.0 | 5.0 | 4.8 | 4.2 | 335 | 5-1 | 71.4 | 5.2 | 19.8 | 3.5 | 403 |
| 3 | 79.3 | 4.7 | 4.4 | 11.6 | 363 | 6-1 | 68.7 | 5.0 | 22.9 | 3.4 | 419 |
| 2-3 | 76.0 | 4.5 | 8.4 | 11.1 | 379 | 3 | 64.4 | 4.7 | 21.5 | 9.1 | 447 |
| 3-1 | 78.5 | 4.6 | 13.1 | 3.8 | 367 | 7-3 | 62.2 | 4.5 | 24.2 | 9.1 | 463 |
| 4-1 | 75.2 | 4.4 | 16.7 | 3.7 | 383 | 24-22-1-2 | 81.4 | 6.2 | 4.5 | 7.9 | 354 |
| 3 | 70.1 | 4.1 | 15.6 | 10.2 | 411 | 4 | 75.4 | 5.7 | 4.2 | 14.7 | 382 |
| 5 | 65.6 | 3.9 | 14.6 | 15.9 | 439 | 2-2 | 77.8 | 5.9 | 8.6 | 7.6 | 370 |
| 5-7 | 59.6 | 3.5 | 16.6 | 20.3 | 483 | 3-2 | 74.6 | 5.7 | 12.4 | 7.2 | 386 |
| 6-5 | 61.1 | 3.6 | 20.4 | 14.9 | 471 | 4 | 69.6 | 5.3 | 11.6 | 13.5 | 414 |
| 7-5 | 59.1 | 3.5 | 23.0 | 14.4 | 487 | 4-2 | 71.6 | 5.5 | 15.9 | 7.0 | 402 |
| 24-18-1-2 | 82.3 | 5.1 | 4.6 | 8.0 | 350 | 4 | 67.0 | 5.1 | 14.9 | 13.0 | 430 |
| 4 | 76.2 | 4.8 | 4.2 | 14.8 | 378 | 5-2 | 68.9 | 5.3 | 19.1 | 6.7 | 418 |
| 6 | 70.9 | 4.4 | 3.9 | 20.7 | 406 | 6-2 | 66.3 | 5.1 | 22.1 | 6.5 | 434 |
| 2-2 | 78.7 | 4.9 | 8.7 | 7.6 | 366 | 4 | 62.3 | 4.8 | 20.8 | 12.1 | 462 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|------------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 24-22-6-18 | 43.8 | 3.3 | 14.6 | 38.3 | 658 | 24-28-4-4 | 66.1 | 6.4 | 14.7 | 12.8 | 436 |
| 7-2 | 64.0 | 4.9 | 24.9 | 6.2 | 450 | 6-2 | 65.5 | 6.3 | 21.8 | 6.3 | 440 |
| 4 | 60.2 | 4.6 | 23.4 | 11.7 | 478 | 8-4 | 57.6 | 5.6 | 25.6 | 11.2 | 500 |
| 12-2 | 54.3 | 4.2 | 36.2 | 5.3 | 530 | 9-2 | 59.0 | 5.7 | 29.5 | 5.7 | 488 |
| 24-23-1-1 | 84.5 | 6.7 | 4.7 | 4.1 | 341 | 24-29-1-1 | 83.0 | 8.3 | 4.6 | 4.0 | 347 |
| 2-1 | 80.7 | 6.4 | 9.0 | 3.9 | 357 | 3 | 76.8 | 7.7 | 4.3 | 11.2 | 375 |
| 3 | 74.8 | 6.0 | 8.3 | 10.9 | 385 | 2-1 | 79.3 | 8.0 | 8.8 | 3.9 | 363 |
| 5 | 69.7 | 5.6 | 7.7 | 17.0 | 413 | 4-3 | 68.1 | 6.8 | 15.1 | 9.9 | 423 |
| 3-1 | 77.2 | 6.2 | 12.9 | 3.7 | 373 | 7-1 | 65.0 | 6.6 | 25.3 | 3.1 | 443 |
| 3 | 71.8 | 5.7 | 12.0 | 10.5 | 401 | 8-1 | 62.7 | 6.3 | 27.9 | 3.0 | 459 |
| 4-1 | 74.0 | 5.9 | 16.4 | 3.6 | 389 | 42-11 | 25.2 | 2.5 | 56.8 | 13.5 | 1143 |
| 3 | 69.1 | 5.5 | 15.3 | 10.1 | 417 | 24-30-1-2 | 79.6 | 8.3 | 4.4 | 7.7 | 362 |
| 6-3 | 64.1 | 5.1 | 21.4 | 9.4 | 449 | 2-2 | 76.2 | 7.9 | 8.5 | 7.4 | 378 |
| 8-1 | 63.6 | 5.1 | 28.2 | 3.1 | 453 | 3-2 | 73.1 | 7.6 | 12.2 | 7.1 | 394 |
| 24-24-1-2 | 80.9 | 6.7 | 4.5 | 7.9 | 356 | 4 | 68.2 | 7.1 | 11.4 | 13.3 | 422 |
| 4 | 75.0 | 6.2 | 4.2 | 14.6 | 384 | 6 | 64.0 | 6.7 | 10.7 | 18.6 | 450 |
| 2-2 | 77.4 | 6.4 | 8.6 | 7.5 | 372 | 4-2 | 70.2 | 7.3 | 15.6 | 6.8 | 410 |
| 6 | 67.3 | 5.6 | 7.5 | 19.6 | 428 | 4 | 65.7 | 6.8 | 14.6 | 12.8 | 438 |
| 3-2 | 74.2 | 6.2 | 12.4 | 7.2 | 388 | 5-2 | 67.6 | 7.0 | 18.8 | 6.6 | 426 |
| 4 | 69.2 | 5.8 | 11.5 | 13.5 | 416 | 6-2 | 65.2 | 6.8 | 21.7 | 6.3 | 442 |
| 6 | 64.9 | 5.4 | 10.8 | 18.9 | 444 | 8-4 | 57.4 | 6.0 | 25.5 | 11.1 | 502 |
| 4-4 | 66.7 | 5.6 | 14.8 | 12.9 | 432 | 24-31-1-1 | 82.5 | 8.9 | 4.6 | 4.0 | 349 |
| 6 | 62.6 | 5.2 | 13.9 | 18.3 | 460 | 2-1 | 78.9 | 8.5 | 8.8 | 3.8 | 365 |
| 6-4 | 62.1 | 5.2 | 20.7 | 12.0 | 464 | 6-1 | 67.1 | 7.2 | 22.4 | 3.3 | 429 |
| 6 | 58.5 | 4.9 | 19.5 | 17.1 | 492 | 24-32-1-2 | 79.1 | 8.8 | 4.4 | 7.7 | 364 |
| 8-2 | 61.6 | 5.1 | 27.3 | 6.0 | 468 | 2-2 | 75.8 | 8.4 | 8.4 | 7.3 | 380 |
| 11-2 | 55.8 | 4.6 | 34.1 | 5.4 | 516 | 4-2 | 69.9 | 7.8 | 15.5 | 6.8 | 412 |
| 24-25-1-1 | 83.9 | 7.3 | 4.6 | 4.1 | 343 | 9-4 | 55.4 | 6.1 | 27.7 | 10.8 | 520 |
| 3 | 77.6 | 6.7 | 4.3 | 11.3 | 371 | 24-33-1-1 | 82.1 | 9.4 | 4.5 | 4.0 | 351 |
| 3-1 | 76.8 | 6.7 | 12.8 | 3.7 | 375 | 2-1 | 78.5 | 9.0 | 8.7 | 3.8 | 367 |
| 4-1 | 73.6 | 6.4 | 16.4 | 3.6 | 391 | 24-34-1-2 | 78.7 | 9.3 | 4.4 | 7.6 | 366 |
| 5-1 | 70.8 | 6.1 | 19.7 | 3.4 | 407 | 2-2 | 75.3 | 8.9 | 8.4 | 7.3 | 382 |
| 6-1 | 68.1 | 5.9 | 22.7 | 3.3 | 423 | 12-6 | 48.1 | 5.7 | 32.1 | 14.0 | 598 |
| 8-1 | 63.3 | 5.5 | 28.1 | 3.1 | 455 | 24-35-1-1 | 81.6 | 9.9 | 4.5 | 4.0 | 353 |
| 16-1 | 49.4 | 4.3 | 43.9 | 2.4 | 583 | 2-1 | 78.0 | 9.5 | 8.7 | 3.8 | 369 |
| 24-26-1-2 | 80.4 | 7.2 | 4.5 | 7.8 | 358 | 24-36-1-2 | 78.3 | 9.8 | 4.3 | 7.6 | 368 |
| 4 | 74.6 | 6.7 | 4.1 | 14.5 | 386 | 2-2 | 75.0 | 9.4 | 8.3 | 7.3 | 384 |
| 2-2 | 77.0 | 6.9 | 8.5 | 7.5 | 374 | 6-2 | 60.0 | 7.5 | 26.7 | 5.8 | 480 |
| 4 | 71.6 | 6.5 | 8.0 | 13.9 | 402 | 24-37-1-1 | 81.1 | 10.4 | 4.5 | 3.9 | 355 |
| 3-2 | 73.8 | 6.7 | 12.3 | 7.2 | 390 | 2-1 | 77.6 | 10.0 | 8.6 | 3.8 | 371 |
| 4-2 | 70.9 | 6.4 | 15.8 | 6.9 | 406 | 5-3 | 64.4 | 8.3 | 17.9 | 9.4 | 447 |
| 5-2 | 68.2 | 6.2 | 18.9 | 6.6 | 422 | 9-1 | 59.6 | 7.7 | 29.8 | 2.9 | 483 |
| 4 | 64.0 | 5.8 | 17.8 | 12.4 | 450 | 24-38-1-2 | 77.8 | 10.2 | 4.3 | 7.6 | 370 |
| 6-2 | 65.7 | 5.9 | 21.9 | 6.4 | 438 | 2-2 | 74.6 | 9.8 | 8.3 | 7.2 | 386 |
| 4 | 61.8 | 5.6 | 20.6 | 12.0 | 466 | 24-39-1-1 | 80.7 | 10.9 | 4.5 | 3.9 | 357 |
| 7-8 | 53.5 | 4.8 | 20.8 | 20.8 | 538 | 2-1 | 77.2 | 10.4 | 8.6 | 3.7 | 373 |
| 8-4 | 57.8 | 5.2 | 25.7 | 11.2 | 498 | 10-1 | 57.5 | 7.8 | 21.9 | 2.8 | 501 |
| 24-27-1-1 | 83.5 | 7.8 | 4.6 | 4.1 | 345 | 24-40-1-2 | 77.4 | 10.7 | 4.3 | 7.5 | 372 |
| 2-1 | 79.8 | 7.5 | 8.8 | 3.9 | 361 | 2-2 | 74.2 | 10.3 | 8.2 | 7.2 | 388 |
| 3 | 74.0 | 6.9 | 8.2 | 10.8 | 389 | 3-2 | 71.3 | 9.9 | 11.9 | 6.0 | 404 |
| 3-1 | 76.4 | 7.2 | 12.7 | 3.7 | 377 | 10-6 | 50.3 | 7.0 | 28.0 | 14.7 | 572 |
| 4-1 | 73.2 | 6.9 | 16.3 | 3.6 | 393 | 15-6 | 44.2 | 6.1 | 36.8 | 12.9 | 652 |
| 5-1 | 70.4 | 6.6 | 19.6 | 3.3 | 409 | 24-41-1-1 | 80.2 | 11.4 | 4.5 | 3.9 | 359 |
| 7-1 | 65.3 | 6.1 | 25.4 | 3.2 | 441 | 2-1 | 76.8 | 10.9 | 8.5 | 3.7 | 375 |
| 13-3 | 51.0 | 4.8 | 36.8 | 7.4 | 565 | 4-1 | 60.8 | 10.1 | 15.7 | 3.4 | 407 |
| 24-28-1-2 | 80.0 | 7.8 | 4.4 | 7.8 | 360 | 9-1 | 59.1 | 8.4 | 29.6 | 2.9 | 487 |
| 2-2 | 76.6 | 7.4 | 8.5 | 7.4 | 376 | 24-42-1-2 | 77.0 | 11.2 | 4.3 | 7.5 | 374 |
| 4 | 71.3 | 6.9 | 7.9 | 13.9 | 404 | 2-2 | 73.8 | 10.8 | 8.2 | 7.2 | 390 |
| 4-2 | 70.6 | 6.8 | 15.7 | 6.8 | 408 | 12-6 | 47.5 | 6.9 | 31.7 | 13.8 | 606 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|-----|------|------|------|
| 24-43-1-1 | 79.8 | 11.9 | 4.4 | 3.9 | 361 | 25-21-1-3 | 79.1 | 5.5 | 4.2 | 11.1 | 379 |
| 2-1 | 76.4 | 11.4 | 8.5 | 3.7 | 377 | 2-1 | 81.7 | 5.7 | 8.7 | 3.8 | 367 |
| 24-44-1-2 | 76.6 | 11.7 | 4.3 | 7.4 | 376 | 3 | 75.9 | 5.3 | 8.1 | 10.6 | 395 |
| 2-2 | 73.4 | 11.2 | 8.2 | 7.1 | 392 | 5 | 70.9 | 5.0 | 7.6 | 16.5 | 423 |
| 24-45-1-1 | 79.3 | 12.4 | 4.4 | 3.9 | 363 | 3-1 | 78.3 | 5.5 | 12.5 | 3.7 | 383 |
| 2-1 | 76.0 | 11.9 | 8.4 | 3.7 | 379 | 3 | 73.0 | 5.1 | 11.7 | 10.2 | 411 |
| 24-46-1-2 | 76.2 | 12.2 | 4.2 | 7.4 | 378 | 4-3 | 70.3 | 4.9 | 15.0 | 9.8 | 427 |
| 2-2 | 73.1 | 11.7 | 8.1 | 7.1 | 394 | 5-1 | 72.3 | 5.0 | 19.3 | 3.4 | 415 |
| 24-47-1-1 | 78.9 | 12.9 | 4.4 | 3.8 | 365 | 25-22-1-2 | 82.0 | 6.0 | 4.4 | 7.6 | 366 |
| 2-1 | 75.6 | 12.6 | 8.4 | 3.6 | 381 | 2-2 | 78.5 | 5.8 | 8.4 | 7.3 | 382 |
| 3-1 | 72.5 | 11.8 | 12.1 | 3.5 | 397 | 3-2 | 75.4 | 5.5 | 12.1 | 7.0 | 398 |
| 24-48-1-2 | 75.8 | 12.6 | 4.2 | 7.4 | 380 | 6-2 | 67.3 | 4.9 | 21.5 | 6.3 | 446 |
| 2-2 | 72.7 | 12.1 | 8.1 | 7.1 | 396 | 25-23-1-1 | 85.0 | 6.5 | 4.5 | 4.0 | 353 |
| 24-49-1-1 | 78.5 | 13.4 | 4.3 | 3.8 | 367 | 5 | 73.4 | 5.6 | 3.9 | 17.1 | 409 |
| 2-1 | 75.2 | 12.8 | 8.4 | 3.6 | 383 | 2-1 | 81.3 | 6.2 | 8.7 | 3.8 | 369 |
| 24-50-1-2 | 75.4 | 13.1 | 4.2 | 7.3 | 382 | 3 | 75.6 | 5.8 | 8.0 | 10.6 | 397 |
| 2-2 | 72.3 | 12.6 | 8.0 | 7.1 | 398 | 3-1 | 77.9 | 6.0 | 12.5 | 3.6 | 385 |
| 25-14-6-6 | 57.0 | 2.7 | 24.3 | 16.0 | 526 | 4-1 | 74.8 | 5.7 | 15.9 | 3.5 | 401 |
| 17-8 | 43.0 | 2.0 | 39.0 | 16.0 | 698 | 5-1 | 71.9 | 5.5 | 19.2 | 3.4 | 417 |
| 25-15-1-1 | 87.0 | 4.3 | 4.6 | 4.1 | 345 | 7-3 | 62.9 | 4.8 | 23.5 | 8.8 | 477 |
| 2-1 | 83.1 | 4.1 | 8.9 | 3.9 | 361 | 25-24-1-2 | 81.5 | 6.5 | 4.3 | 7.6 | 368 |
| 4-1 | 76.3 | 3.8 | 16.3 | 3.5 | 393 | 2-2 | 78.1 | 6.2 | 8.3 | 7.3 | 384 |
| 25-16-1-2 | 83.3 | 4.4 | 4.4 | 7.8 | 360 | 4-2 | 72.1 | 5.8 | 15.4 | 6.7 | 416 |
| 2-2 | 79.8 | 4.3 | 8.5 | 7.4 | 376 | 4 | 67.6 | 5.4 | 14.4 | 12.6 | 444 |
| 3-2 | 76.5 | 4.1 | 12.2 | 7.1 | 392 | 25-25-1-1 | 84.5 | 7.0 | 4.5 | 3.9 | 355 |
| 4-4 | 68.8 | 3.7 | 14.7 | 12.8 | 436 | 3 | 78.3 | 6.5 | 4.2 | 11.0 | 383 |
| 8-4 | 60.0 | 3.2 | 25.6 | 11.2 | 500 | 2-1 | 80.8 | 6.7 | 8.6 | 3.8 | 371 |
| 10-6 | 53.6 | 2.8 | 28.6 | 15.0 | 560 | 3-3 | 72.3 | 6.0 | 11.6 | 10.1 | 415 |
| 25-17-1-1 | 86.5 | 4.9 | 4.6 | 4.0 | 347 | 4-1 | 74.4 | 6.2 | 15.9 | 3.5 | 403 |
| 3 | 80.0 | 4.5 | 4.3 | 11.2 | 375 | 3 | 69.6 | 5.8 | 14.8 | 9.7 | 431 |
| 2-1 | 82.6 | 4.7 | 8.8 | 3.9 | 363 | 7-1 | 66.5 | 5.5 | 24.8 | 3.1 | 451 |
| 3 | 76.7 | 4.3 | 8.2 | 10.7 | 391 | 25-26-1-2 | 81.1 | 7.0 | 4.3 | 7.6 | 370 |
| 25-18-1-2 | 82.9 | 5.0 | 4.4 | 7.7 | 362 | 2-2 | 77.8 | 6.7 | 8.3 | 7.2 | 386 |
| 4 | 76.9 | 4.6 | 4.1 | 14.4 | 390 | 3-2 | 74.6 | 6.5 | 11.9 | 7.0 | 402 |
| 2-2 | 79.4 | 4.8 | 8.4 | 7.4 | 378 | 4 | 69.8 | 6.0 | 11.2 | 13.0 | 430 |
| 4 | 73.9 | 4.4 | 7.9 | 13.8 | 406 | 4-2 | 71.8 | 6.2 | 15.3 | 6.7 | 448 |
| 3-4 | 71.1 | 4.2 | 11.4 | 13.3 | 422 | 5-2 | 69.1 | 6.0 | 18.4 | 6.4 | 434 |
| 4-2 | 73.2 | 4.4 | 15.6 | 6.8 | 410 | 25-27-1-1 | 84.0 | 7.6 | 4.5 | 3.9 | 357 |
| 4 | 68.5 | 4.1 | 14.6 | 12.8 | 438 | 5 | 72.6 | 6.5 | 3.9 | 16.9 | 413 |
| 5-4 | 66.1 | 4.0 | 17.6 | 12.3 | 454 | 2-1 | 80.4 | 7.2 | 8.6 | 3.7 | 373 |
| 6-4 | 63.8 | 3.8 | 20.4 | 11.9 | 470 | 3 | 74.8 | 6.7 | 8.0 | 10.5 | 401 |
| 25-19-1-1 | 85.9 | 5.4 | 4.6 | 4.0 | 349 | 4-1 | 74.1 | 6.7 | 15.8 | 3.4 | 405 |
| 3 | 79.6 | 5.0 | 4.2 | 11.1 | 377 | 6-1 | 68.6 | 6.2 | 22.0 | 3.2 | 437 |
| 2-1 | 82.2 | 5.2 | 8.8 | 3.8 | 365 | 25-28-1-2 | 80.6 | 7.5 | 4.3 | 7.5 | 372 |
| 3 | 76.3 | 4.8 | 8.1 | 10.7 | 393 | 2-2 | 77.3 | 7.2 | 8.2 | 7.2 | 388 |
| 5 | 71.2 | 4.5 | 7.6 | 16.6 | 421 | 4-8 | 59.5 | 5.6 | 12.7 | 22.2 | 504 |
| 3-1 | 78.7 | 5.0 | 12.6 | 3.7 | 381 | 5-2 | 68.8 | 6.4 | 18.3 | 6.1 | 436 |
| 4-1 | 75.6 | 4.8 | 16.1 | 3.5 | 397 | 7-2 | 64.1 | 6.0 | 23.9 | 6.0 | 468 |
| 3 | 70.6 | 4.5 | 15.0 | 9.9 | 425 | 25-29-1-1 | 83.6 | 8.1 | 4.4 | 3.9 | 359 |
| 6-1 | 69.9 | 4.4 | 22.4 | 3.3 | 429 | 3 | 77.5 | 7.5 | 4.1 | 10.9 | 387 |
| 25-20-1-2 | 82.4 | 5.5 | 4.4 | 7.7 | 364 | 2-1 | 80.0 | 7.7 | 8.5 | 3.7 | 375 |
| 4 | 76.5 | 5.1 | 4.1 | 14.3 | 392 | 3 | 74.4 | 7.2 | 7.9 | 10.4 | 403 |
| 6 | 71.4 | 4.8 | 3.8 | 20.0 | 420 | 4-3 | 69.0 | 6.7 | 14.7 | 9.6 | 435 |
| 2-2 | 78.9 | 5.3 | 8.4 | 7.1 | 380 | 7-3 | 62.1 | 6.0 | 23.2 | 8.7 | 483 |
| 4 | 73.5 | 4.9 | 7.8 | 13.7 | 408 | 25-30-1-2 | 80.2 | 8.0 | 4.3 | 7.5 | 374 |
| 4-2 | 72.8 | 4.8 | 15.5 | 6.8 | 412 | 4 | 74.6 | 7.5 | 4.0 | 13.9 | 402 |
| 7-6 | 58.1 | 3.9 | 21.7 | 16.3 | 516 | 2-2 | 76.9 | 7.7 | 8.2 | 7.2 | 390 |
| 8-8 | 53.6 | 3.5 | 22.8 | 20.0 | 590 | 3-2 | 73.9 | 7.4 | 11.8 | 6.9 | 406 |
| 25-21-1-1 | 85.5 | 6.0 | 4.5 | 4.0 | 351 | 4-4 | 66.7 | 6.7 | 14.2 | 12.4 | 450 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|------|------|------|------|
| 25-30-5-2 | 68.5 | 6.8 | 18.3 | 6.4 | 438 | 25-51-1-1 | 78.7 | 13.4 | 4.2 | 3.7 | 381 |
| 6 | 60.7 | 6.1 | 16.2 | 17.0 | 494 | 2-1 | 75.6 | 12.8 | 8.1 | 3.5 | 397 |
| 6-2 | 66.1 | 6.6 | 21.1 | 6.2 | 454 | 25-52-1-2 | 75.7 | 13.1 | 4.0 | 7.1 | 396 |
| 25-31-1-1 | 83.1 | 8.6 | 4.4 | 3.9 | 361 | 2-2 | 72.8 | 12.6 | 7.8 | 6.8 | 412 |
| 3 | 77.1 | 8.0 | 4.1 | 10.8 | 389 | 8-2 | 70.1 | 12.1 | 11.2 | 6.5 | 428 |
| 2-1 | 79.6 | 8.2 | 8.5 | 3.7 | 377 | 4-8 | 56.8 | 9.8 | 12.1 | 21.2 | 528 |
| 3-1 | 76.3 | 7.9 | 12.2 | 3.6 | 393 | 25-54-4-2 | 67.3 | 12.1 | 14.3 | 6.3 | 446 |
| 4-1 | 73.3 | 7.6 | 15.6 | 3.4 | 409 | 4 | 63.3 | 11.4 | 13.5 | 11.8 | 474 |
| 5-1 | 70.6 | 7.3 | 18.8 | 3.3 | 425 | 6 | 59.8 | 10.7 | 12.7 | 16.7 | 502 |
| 7-3 | 61.9 | 6.4 | 23.1 | 8.6 | 485 | 8 | 56.6 | 10.2 | 12.1 | 21.1 | 530 |
| 8-1 | 63.4 | 6.6 | 27.1 | 2.9 | 473 | 26-15-6-1 | 71.4 | 3.4 | 22.0 | 3.2 | 437 |
| 25-32-1-2 | 79.8 | 8.5 | 4.2 | 7.4 | 376 | 26-16-1-2 | 83.9 | 4.3 | 4.3 | 7.5 | 372 |
| 6 | 69.4 | 7.4 | 3.7 | 19.4 | 432 | 2-2 | 80.4 | 4.1 | 8.2 | 7.2 | 388 |
| 2-2 | 76.5 | 8.2 | 8.2 | 7.1 | 392 | 4-6 | 65.6 | 3.4 | 13.4 | 17.6 | 476 |
| 5-2 | 68.2 | 7.3 | 18.2 | 6.3 | 440 | 6-4 | 65.0 | 3.3 | 20.0 | 11.7 | 480 |
| 25-33-1-1 | 82.6 | 9.1 | 4.4 | 3.9 | 363 | 8-2 | 64.5 | 3.3 | 26.4 | 5.8 | 484 |
| 2-1 | 79.1 | 8.7 | 8.4 | 3.7 | 379 | 4 | 60.9 | 3.1 | 25.0 | 10.9 | 512 |
| 5-1 | 70.3 | 7.7 | 18.7 | 3.3 | 427 | 9-4 | 59.1 | 3.0 | 27.3 | 10.6 | 528 |
| 25-34-1-2 | 79.4 | 9.0 | 4.2 | 7.4 | 378 | 10-4 | 57.3 | 2.9 | 29.4 | 10.3 | 544 |
| 2-2 | 76.1 | 8.6 | 8.1 | 7.1 | 394 | 26-17-1-1 | 86.9 | 4.7 | 4.5 | 3.9 | 359 |
| 5-2 | 67.9 | 7.7 | 18.1 | 6.3 | 442 | 3 | 80.6 | 4.4 | 4.1 | 10.9 | 387 |
| 11-4 | 53.0 | 6.0 | 7.3 | 15.9 | 439 | 2-1 | 83.2 | 4.5 | 8.5 | 3.7 | 375 |
| 25-35-1-1 | 82.2 | 9.6 | 4.4 | 3.8 | 365 | 3-5 | 69.8 | 3.8 | 10.7 | 15.7 | 447 |
| 2-1 | 78.7 | 9.2 | 8.4 | 3.7 | 381 | 4-1 | 76.7 | 4.2 | 15.7 | 3.4 | 407 |
| 25-36-1-2 | 78.9 | 9.5 | 4.2 | 7.4 | 380 | 7-3 | 64.6 | 3.5 | 23.2 | 8.7 | 483 |
| 2-2 | 75.7 | 9.1 | 8.1 | 7.1 | 396 | 8-3 | 62.5 | 3.4 | 25.6 | 8.4 | 499 |
| 25-37-1-1 | 81.7 | 10.1 | 4.4 | 3.8 | 367 | 26-18-1-2 | 83.4 | 4.8 | 4.3 | 7.5 | 374 |
| 2-1 | 78.3 | 9.7 | 8.4 | 3.6 | 383 | 2-2 | 80.0 | 4.6 | 8.2 | 7.2 | 390 |
| 6-3 | 63.1 | 7.8 | 20.2 | 8.8 | 475 | 3-2 | 76.8 | 4.4 | 11.8 | 6.9 | 406 |
| 25-38-1-2 | 78.5 | 9.9 | 4.2 | 7.3 | 382 | 4-4 | 69.3 | 4.0 | 14.2 | 12.4 | 450 |
| 2-2 | 75.4 | 9.5 | 8.0 | 7.0 | 398 | 5-4 | 66.9 | 3.9 | 17.2 | 12.0 | 466 |
| 25-39-1-1 | 81.3 | 10.6 | 4.3 | 3.8 | 369 | 6-2 | 68.7 | 3.9 | 21.1 | 6.2 | 454 |
| 8-1 | 62.4 | 8.1 | 26.6 | 2.9 | 481 | 4 | 64.7 | 3.7 | 19.9 | 11.6 | 482 |
| 25-1 | 39.8 | 5.2 | 53.1 | 1.8 | 753 | 8-4 | 60.7 | 3.5 | 24.9 | 10.9 | 514 |
| 25-40-1-2 | 78.1 | 10.4 | 4.2 | 7.3 | 384 | 26-19-1-1 | 86.4 | 5.3 | 4.4 | 3.9 | 361 |
| 2-2 | 75.0 | 10.0 | 8.0 | 7.0 | 400 | 3 | 80.2 | 4.9 | 4.1 | 10.8 | 389 |
| 25-41-1-1 | 80.8 | 11.0 | 4.3 | 3.8 | 371 | 2-1 | 82.8 | 5.0 | 8.5 | 3.7 | 377 |
| 2-1 | 77.5 | 10.6 | 8.3 | 3.6 | 387 | 3-1 | 79.4 | 4.8 | 12.2 | 3.6 | 393 |
| 25-42-1-2 | 77.7 | 10.9 | 4.1 | 7.3 | 386 | 3 | 74.1 | 4.5 | 11.4 | 10.0 | 421 |
| 2-2 | 74.6 | 10.4 | 8.0 | 7.0 | 402 | 4-1 | 76.3 | 4.6 | 15.6 | 3.4 | 409 |
| 9-6 | 52.6 | 7.4 | 25.3 | 14.7 | 570 | 26-20-1-2 | 83.0 | 5.3 | 4.3 | 7.4 | 376 |
| 25-43-1-1 | 80.4 | 11.5 | 4.3 | 3.8 | 373 | 4 | 77.2 | 5.0 | 4.0 | 13.8 | 404 |
| 2-1 | 77.1 | 11.0 | 8.2 | 3.6 | 389 | 2-2 | 79.6 | 5.1 | 8.2 | 7.1 | 392 |
| 25-44-1-2 | 77.3 | 11.3 | 4.1 | 7.2 | 388 | 4 | 74.3 | 4.8 | 7.6 | 13.3 | 420 |
| 2-2 | 74.2 | 10.9 | 7.9 | 6.9 | 404 | 3-2 | 76.5 | 4.9 | 11.8 | 6.8 | 408 |
| 4-2 | 68.8 | 10.1 | 14.7 | 6.4 | 436 | 4 | 71.6 | 4.6 | 11.0 | 12.8 | 436 |
| 8 | 57.7 | 8.5 | 12.3 | 21.5 | 520 | 4-2 | 73.6 | 4.7 | 15.1 | 6.6 | 424 |
| 25-45-1-1 | 80.0 | 12.0 | 4.3 | 3.7 | 375 | 6 | 65.0 | 4.2 | 13.3 | 17.5 | 480 |
| 2-1 | 76.7 | 11.5 | 8.2 | 3.6 | 391 | 6-6 | 60.9 | 3.9 | 18.7 | 16.4 | 512 |
| 25-46-1-2 | 76.9 | 11.8 | 4.1 | 7.2 | 390 | 7-2 | 66.1 | 4.2 | 23.7 | 5.9 | 472 |
| 2-2 | 73.9 | 11.3 | 7.9 | 6.9 | 406 | 26-21-1-1 | 86.0 | 5.8 | 4.4 | 3.8 | 363 |
| 25-47-1-1 | 79.6 | 12.5 | 4.2 | 3.7 | 377 | 3 | 79.8 | 5.4 | 4.1 | 10.7 | 391 |
| 2-1 | 76.3 | 12.0 | 8.1 | 3.6 | 393 | 2-1 | 82.3 | 5.5 | 8.4 | 3.7 | 379 |
| 25-48-1-2 | 76.5 | 12.2 | 4.1 | 7.1 | 392 | 3 | 76.7 | 5.2 | 7.8 | 10.3 | 407 |
| 2-2 | 73.4 | 11.8 | 7.8 | 6.9 | 408 | 4-3 | 71.1 | 4.8 | 14.6 | 9.5 | 439 |
| 25-49-1-1 | 79.1 | 12.9 | 4.2 | 3.7 | 379 | 5 | 66.8 | 4.5 | 13.7 | 15.0 | 467 |
| 2-1 | 75.9 | 12.4 | 8.1 | 3.5 | 395 | 26-22-1-2 | 82.5 | 5.8 | 4.2 | 7.4 | 378 |
| 25-50-1-2 | 76.1 | 12.7 | 4.1 | 7.1 | 394 | 4 | 76.8 | 5.4 | 3.9 | 13.8 | 406 |
| 2-2 | 73.2 | 12.2 | 7.8 | 6.8 | 410 | 6 | 71.9 | 5.1 | 3.7 | 19.3 | 434 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 26-22-2-2 | 79.2 | 5.6 | 8.1 | 7.1 | 394 | 26-30-4-8 | 60.2 | 5.8 | 12.4 | 21.6 | 518 |
| 4 | 73.9 | 5.2 | 7.6 | 13.3 | 422 | 6-4 | 63.1 | 6.1 | 19.4 | 11.3 | 494 |
| 3-2 | 76.1 | 5.4 | 11.7 | 6.8 | 410 | 7-2 | 64.7 | 6.2 | 23.2 | 5.8 | 482 |
| 4-2 | 73.2 | 5.2 | 15.0 | 6.6 | 426 | 8-4 | 59.3 | 5.7 | 24.3 | 10.6 | 526 |
| 4 | 68.7 | 4.8 | 14.1 | 12.3 | 454 | 26-31-1-1 | 83.6 | 8.3 | 4.3 | 3.7 | 373 |
| 5-2 | 70.5 | 5.0 | 18.1 | 6.3 | 442 | 3 | 77.8 | 7.7 | 4.0 | 10.5 | 401 |
| 6-4 | 64.2 | 4.5 | 19.7 | 11.5 | 486 | 2-1 | 80.2 | 8.0 | 8.2 | 3.6 | 389 |
| 7-2 | 65.8 | 4.6 | 23.6 | 5.9 | 474 | 3 | 74.8 | 7.4 | 7.7 | 10.1 | 417 |
| 26-23-1-1 | 85.5 | 6.3 | 4.4 | 3.8 | 365 | 4-1 | 74.1 | 7.4 | 15.2 | 3.3 | 421 |
| 3 | 79.4 | 5.8 | 4.1 | 10.7 | 393 | 17-1 | 49.6 | 4.9 | 43.2 | 2.2 | 629 |
| 2-1 | 81.9 | 6.0 | 8.4 | 3.7 | 381 | 26-32-1-2 | 80.4 | 8.2 | 4.1 | 7.2 | 388 |
| 3 | 76.3 | 5.6 | 7.8 | 10.3 | 409 | 2-2 | 77.2 | 7.9 | 7.9 | 6.9 | 404 |
| 3-3 | 73.3 | 5.4 | 11.3 | 9.9 | 425 | 5-2 | 69.0 | 7.1 | 17.7 | 6.2 | 452 |
| 6-3 | 66.0 | 4.8 | 20.3 | 8.9 | 473 | 8-2 | 62.4 | 6.4 | 25.6 | 5.6 | 500 |
| 26-24-1-2 | 82.1 | 6.3 | 4.2 | 7.4 | 380 | 26-33-1-1 | 83.2 | 8.8 | 4.3 | 3.7 | 375 |
| 2-2 | 78.8 | 6.0 | 8.1 | 7.1 | 396 | 3 | 77.4 | 8.2 | 4.0 | 10.4 | 403 |
| 4 | 73.6 | 5.7 | 7.5 | 13.2 | 424 | 2-1 | 79.8 | 8.4 | 8.2 | 3.6 | 391 |
| 6 | 69.0 | 5.3 | 7.1 | 18.6 | 452 | 3-1 | 76.7 | 8.1 | 11.8 | 3.4 | 407 |
| 3-2 | 75.7 | 5.8 | 11.6 | 6.8 | 412 | 26-34-1-2 | 80.0 | 8.7 | 4.1 | 7.2 | 390 |
| 4-2 | 72.9 | 5.6 | 15.0 | 6.5 | 428 | 2-2 | 76.8 | 8.4 | 7.9 | 6.9 | 406 |
| 5-2 | 70.3 | 5.4 | 18.0 | 16.3 | 444 | 3-2 | 73.9 | 8.1 | 11.4 | 6.6 | 422 |
| 6-2 | 68.8 | 5.2 | 20.9 | 6.1 | 460 | 4-2 | 71.2 | 7.7 | 14.6 | 6.4 | 438 |
| 26-25-1-1 | 85.0 | 6.8 | 4.4 | 3.8 | 367 | 4 | 67.0 | 7.3 | 13.7 | 12.0 | 466 |
| 3 | 79.0 | 6.3 | 4.0 | 10.6 | 395 | 26-35-1-1 | 82.8 | 9.3 | 4.2 | 3.7 | 377 |
| 5 | 73.8 | 5.9 | 3.8 | 16.5 | 423 | 2-1 | 79.4 | 8.9 | 8.1 | 3.6 | 393 |
| 2-1 | 81.5 | 6.5 | 8.3 | 3.6 | 383 | 6-1 | 68.3 | 7.6 | 21.0 | 3.1 | 457 |
| 3 | 75.9 | 6.1 | 7.8 | 10.2 | 411 | 26-36-1-2 | 79.6 | 9.2 | 4.1 | 7.1 | 392 |
| 3-1 | 78.2 | 6.3 | 12.0 | 3.5 | 399 | 2-2 | 76.5 | 8.8 | 7.8 | 6.9 | 408 |
| 3 | 73.1 | 5.8 | 11.2 | 9.9 | 427 | 6-4 | 62.4 | 7.2 | 19.2 | 11.2 | 500 |
| 4-3 | 70.4 | 5.6 | 14.4 | 9.5 | 443 | 8 | 56.1 | 6.5 | 17.3 | 20.1 | 556 |
| 5-1 | 72.4 | 5.8 | 18.6 | 3.2 | 431 | 7-4 | 60.5 | 7.0 | 21.7 | 10.8 | 516 |
| 26-26-1-2 | 81.7 | 6.8 | 4.2 | 7.3 | 382 | 8-2 | 61.9 | 7.1 | 25.4 | 5.6 | 504 |
| 2-2 | 78.4 | 6.5 | 8.0 | 7.0 | 398 | 26-37-1-1 | 82.3 | 9.8 | 4.2 | 3.7 | 379 |
| 4 | 73.2 | 6.1 | 7.5 | 13.1 | 426 | 2-1 | 79.0 | 9.4 | 8.1 | 3.5 | 395 |
| 3-4 | 70.6 | 5.9 | 10.8 | 12.7 | 442 | 3-1 | 75.9 | 9.0 | 11.7 | 3.4 | 411 |
| 4-6 | 64.2 | 5.3 | 13.2 | 17.3 | 486 | 26-38-1-2 | 79.2 | 9.6 | 4.1 | 7.1 | 394 |
| 5-2 | 69.9 | 5.8 | 17.9 | 6.3 | 446 | 2-2 | 76.1 | 9.3 | 7.8 | 6.8 | 410 |
| 7-6 | 58.4 | 4.9 | 21.0 | 15.7 | 534 | 26-39-1-1 | 81.9 | 10.2 | 4.2 | 3.7 | 381 |
| 10-4 | 56.3 | 4.7 | 28.9 | 10.1 | 554 | 2-1 | 78.6 | 9.8 | 8.1 | 3.5 | 397 |
| 26-27-1-1 | 84.5 | 7.3 | 4.3 | 3.8 | 369 | 3-1 | 75.5 | 9.4 | 11.6 | 3.4 | 413 |
| 2-1 | 81.0 | 7.0 | 8.3 | 3.6 | 385 | 4-1 | 72.7 | 9.1 | 14.9 | 3.3 | 429 |
| 7-1 | 67.1 | 5.8 | 24.1 | 3.0 | 465 | 11-1 | 57.6 | 7.2 | 32.5 | 2.6 | 541 |
| 26-28-1-2 | 81.2 | 7.3 | 4.2 | 7.3 | 384 | 26-40-1-2 | 78.8 | 10.1 | 4.0 | 7.1 | 396 |
| 6 | 70.9 | 6.4 | 3.6 | 19.1 | 440 | 2-2 | 75.7 | 9.7 | 7.8 | 6.8 | 412 |
| 2-2 | 78.0 | 7.0 | 8.0 | 7.0 | 400 | 26-41-1-1 | 81.5 | 10.7 | 4.2 | 3.6 | 383 |
| 6 | 68.4 | 6.1 | 7.0 | 18.4 | 456 | 2-1 | 78.2 | 10.3 | 8.0 | 3.5 | 399 |
| 4-2 | 72.2 | 6.5 | 14.8 | 6.5 | 432 | 5-1 | 69.8 | 9.2 | 17.9 | 3.1 | 447 |
| 6 | 63.9 | 5.7 | 13.1 | 17.2 | 488 | 10-1 | 59.2 | 7.8 | 30.4 | 2.6 | 527 |
| 5-2 | 69.6 | 6.2 | 17.9 | 6.2 | 448 | 26-42-1-2 | 78.4 | 10.5 | 4.0 | 7.0 | 398 |
| 26-29-1-1 | 84.1 | 7.8 | 4.3 | 3.8 | 371 | 2-2 | 75.4 | 10.1 | 7.7 | 6.8 | 414 |
| 2-1 | 80.6 | 7.5 | 8.3 | 3.6 | 387 | 5-2 | 67.5 | 9.1 | 17.3 | 6.1 | 462 |
| 3 | 75.2 | 7.0 | 7.7 | 10.1 | 415 | 26-43-1-1 | 81.0 | 11.2 | 4.1 | 3.6 | 385 |
| 3-3 | 72.4 | 6.7 | 11.1 | 9.7 | 431 | 2-1 | 77.8 | 10.7 | 8.0 | 3.5 | 401 |
| 4-1 | 74.4 | 6.9 | 15.3 | 3.3 | 419 | 4-1 | 72.1 | 9.9 | 14.8 | 3.2 | 433 |
| 26-30-1-2 | 80.8 | 7.8 | 4.1 | 7.2 | 386 | 5-1 | 69.5 | 9.6 | 17.8 | 3.1 | 449 |
| 2-2 | 77.6 | 7.4 | 8.0 | 7.0 | 402 | 6-1 | 67.1 | 9.2 | 20.6 | 3.0 | 465 |
| 4 | 72.6 | 7.0 | 7.4 | 13.0 | 430 | 26-44-1-2 | 78.0 | 10.0 | 4.0 | 7.0 | 400 |
| 3-2 | 74.6 | 7.2 | 11.5 | 6.7 | 418 | 2-2 | 75.0 | 10.6 | 7.7 | 6.7 | 416 |
| 4-2 | 71.9 | 6.9 | 14.7 | 6.4 | 434 | 26-45-1-1 | 80.6 | 11.6 | 4.1 | 3.6 | 387 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|-----------|------|-----|------|------|------|
| 26-45-2-1 | 77.4 | 11.2 | 7.9 | 3.5 | 403 | 27-22-3-2 | 76.8 | 5.2 | 11.4 | 6.6 | 422 |
| 4-1 | 71.7 | 10.3 | 14.7 | 3.2 | 435 | 4-2 | 74.0 | 5.0 | 14.6 | 6.4 | 438 |
| 8-1 | 62.5 | 9.0 | 25.6 | 2.8 | 499 | 5-4 | 67.2 | 4.6 | 16.6 | 11.6 | 482 |
| 26-46-1-2 | 77.6 | 11.4 | 4.0 | 7.0 | 402 | 6-4 | 65.1 | 4.4 | 19.3 | 11.2 | 498 |
| 2-2 | 74.6 | 11.0 | 7.6 | 6.7 | 418 | 27-23-1-1 | 85.9 | 6.1 | 4.2 | 3.7 | 377 |
| 26-47-1-1 | 80.2 | 12.1 | 4.1 | 3.6 | 389 | 2-1 | 82.4 | 5.8 | 8.1 | 3.6 | 393 |
| 2-1 | 77.0 | 11.6 | 7.9 | 3.4 | 405 | 3 | 77.0 | 5.5 | 7.6 | 9.9 | 421 |
| 26-48-1-2 | 77.2 | 11.9 | 4.0 | 6.9 | 404 | 4-1 | 76.2 | 5.4 | 15.1 | 3.3 | 425 |
| 2-2 | 74.3 | 11.4 | 7.6 | 6.7 | 420 | 3 | 71.5 | 5.1 | 14.1 | 9.3 | 453 |
| 26-49-1-1 | 79.8 | 12.5 | 4.1 | 3.6 | 391 | 6-1 | 70.9 | 5.0 | 21.0 | 3.1 | 457 |
| 2-1 | 76.6 | 12.0 | 7.9 | 3.4 | 407 | 27-24-1-2 | 82.6 | 6.1 | 4.1 | 7.1 | 392 |
| 7-3 | 60.6 | 9.5 | 21.7 | 8.2 | 515 | 4 | 77.1 | 5.7 | 3.8 | 13.3 | 428 |
| 26-50-1-2 | 76.8 | 12.3 | 3.9 | 6.9 | 406 | 6 | 72.3 | 5.4 | 3.6 | 18.7 | 440 |
| 2-2 | 73.9 | 11.8 | 7.6 | 6.6 | 422 | 2-2 | 79.4 | 5.9 | 7.8 | 6.9 | 408 |
| 26-51-1-1 | 79.4 | 13.0 | 4.1 | 3.5 | 393 | 4 | 74.3 | 5.5 | 7.3 | 12.8 | 436 |
| 2-1 | 76.3 | 12.5 | 7.8 | 3.4 | 409 | 3-4 | 71.7 | 5.3 | 10.6 | 12.4 | 452 |
| 3-1 | 73.4 | 12.0 | 11.3 | 3.3 | 425 | 6 | 67.5 | 5.0 | 10.0 | 17.5 | 480 |
| 26-52-1-2 | 76.5 | 12.7 | 3.9 | 6.9 | 408 | 6-2 | 68.6 | 5.1 | 20.3 | 5.9 | 472 |
| 2-2 | 73.6 | 12.3 | 7.5 | 6.6 | 424 | 6 | 61.3 | 4.5 | 18.2 | 15.9 | 528 |
| 26-53-1-1 | 79.0 | 13.4 | 4.1 | 3.5 | 395 | 12-4 | 54.4 | 4.0 | 32.2 | 9.4 | 596 |
| 2-1 | 75.9 | 12.9 | 7.8 | 3.4 | 411 | 27-25-1-1 | 85.5 | 6.6 | 4.2 | 3.7 | 379 |
| 26-54-1-2 | 76.1 | 13.2 | 3.9 | 6.8 | 410 | 2-1 | 82.0 | 6.3 | 8.1 | 3.5 | 395 |
| 2-2 | 73.2 | 12.7 | 7.5 | 6.6 | 426 | 3-1 | 78.8 | 6.1 | 11.7 | 3.4 | 411 |
| 27-17-3-1 | 70.4 | 4.2 | 11.9 | 3.5 | 403 | 4-1 | 67.1 | 5.2 | 13.2 | 14.5 | 483 |
| 4-1 | 77.3 | 4.1 | 15.3 | 3.3 | 419 | 27-26-1-2 | 82.2 | 6.6 | 4.1 | 7.1 | 394 |
| 6-3 | 67.6 | 3.6 | 20.0 | 8.8 | 479 | 2-2 | 79.0 | 6.3 | 7.8 | 6.8 | 410 |
| 27-18-1-2 | 83.9 | 4.7 | 4.1 | 7.2 | 386 | 3-2 | 76.1 | 6.1 | 11.2 | 6.6 | 426 |
| 4 | 78.3 | 4.3 | 3.9 | 13.5 | 414 | 4-2 | 73.3 | 5.9 | 14.5 | 6.3 | 442 |
| 2-2 | 80.6 | 4.5 | 8.0 | 6.9 | 402 | 27-27-1-1 | 85.0 | 7.1 | 4.2 | 3.7 | 381 |
| 3-2 | 77.5 | 4.3 | 11.5 | 6.7 | 418 | 2-1 | 81.6 | 6.8 | 8.1 | 3.5 | 397 |
| 4-4 | 70.1 | 3.9 | 13.8 | 12.1 | 462 | 3-3 | 73.5 | 6.1 | 10.9 | 9.5 | 441 |
| 5-4 | 67.8 | 3.8 | 16.7 | 11.7 | 478 | 4-1 | 75.5 | 6.3 | 14.9 | 3.3 | 429 |
| 6-6 | 62.1 | 3.4 | 18.4 | 16.1 | 522 | 3 | 70.9 | 5.9 | 14.0 | 9.2 | 457 |
| 7-2 | 67.2 | 3.7 | 23.2 | 5.8 | 482 | 5-3 | 68.5 | 5.7 | 16.9 | 8.9 | 473 |
| 4 | 63.5 | 3.5 | 22.0 | 11.0 | 510 | 6-1 | 70.3 | 5.9 | 20.8 | 3.0 | 461 |
| 27-19-1-1 | 86.9 | 5.1 | 4.3 | 3.7 | 373 | 7-3 | 64.1 | 5.3 | 22.2 | 8.3 | 505 |
| 3 | 80.8 | 4.7 | 4.0 | 10.5 | 401 | 27-28-1-2 | 81.8 | 7.1 | 4.0 | 7.1 | 396 |
| 2-1 | 83.3 | 4.9 | 8.2 | 3.6 | 389 | 2-2 | 78.6 | 6.8 | 7.8 | 6.8 | 412 |
| 3 | 77.7 | 4.6 | 7.7 | 10.0 | 417 | 3-2 | 75.7 | 6.5 | 11.2 | 6.5 | 428 |
| 3-1 | 80.0 | 4.7 | 11.8 | 3.5 | 405 | 4-2 | 73.0 | 6.3 | 14.4 | 6.3 | 444 |
| 3 | 74.8 | 4.4 | 11.1 | 9.7 | 433 | 4 | 68.7 | 5.9 | 13.6 | 11.8 | 472 |
| 4-1 | 76.9 | 4.5 | 15.2 | 3.3 | 421 | 7-2 | 65.9 | 5.7 | 22.7 | 5.7 | 492 |
| 7-3 | 65.2 | 3.8 | 22.5 | 8.4 | 497 | 27-29-1-1 | 84.6 | 7.6 | 4.2 | 3.6 | 383 |
| 27-20-1-2 | 83.5 | 5.2 | 4.1 | 7.2 | 388 | 2-1 | 81.2 | 7.3 | 8.0 | 3.5 | 399 |
| 2-2 | 80.2 | 4.9 | 7.9 | 6.9 | 404 | 4-3 | 70.6 | 6.3 | 13.9 | 9.2 | 459 |
| 4 | 75.0 | 4.6 | 7.4 | 13.0 | 432 | 5-1 | 72.5 | 6.5 | 17.9 | 3.1 | 447 |
| 4-2 | 74.3 | 4.6 | 14.7 | 6.4 | 436 | 3 | 68.2 | 6.1 | 16.8 | 8.8 | 475 |
| 5-2 | 71.7 | 4.4 | 17.7 | 6.2 | 452 | 10-1 | 61.5 | 5.5 | 30.3 | 2.6 | 527 |
| 6-4 | 65.3 | 4.0 | 19.3 | 11.3 | 496 | 27-30-1-2 | 81.4 | 7.5 | 4.0 | 7.0 | 398 |
| 27-21-1-1 | 86.4 | 5.6 | 4.3 | 3.7 | 375 | 2-2 | 78.3 | 7.2 | 7.7 | 6.8 | 414 |
| 3 | 80.4 | 5.2 | 4.0 | 10.4 | 403 | 4 | 73.3 | 6.8 | 7.2 | 12.7 | 442 |
| 2-1 | 82.8 | 5.4 | 8.2 | 3.6 | 391 | 3-2 | 75.4 | 7.0 | 11.1 | 6.5 | 430 |
| 3 | 77.3 | 5.0 | 7.6 | 10.0 | 419 | 4 | 70.7 | 6.5 | 10.5 | 12.2 | 458 |
| 3-1 | 79.6 | 5.2 | 11.8 | 3.4 | 407 | 4-4 | 68.4 | 6.3 | 13.5 | 11.8 | 474 |
| 3 | 74.5 | 4.8 | 11.0 | 9.7 | 435 | 6 | 64.5 | 6.0 | 12.7 | 16.7 | 502 |
| 6-3 | 67.1 | 4.3 | 19.9 | 8.7 | 483 | 27-31-1-1 | 84.1 | 8.0 | 4.2 | 3.6 | 385 |
| 9-3 | 61.0 | 3.9 | 27.1 | 7.9 | 531 | 2-1 | 80.8 | 7.7 | 8.0 | 3.5 | 401 |
| 27-22-1-2 | 83.1 | 5.6 | 7.1 | 7.2 | 390 | 27-32-1-2 | 81.0 | 8.0 | 4.0 | 7.0 | 400 |
| 2-2 | 79.8 | 5.4 | 7.9 | 6.9 | 406 | 4 | 75.7 | 7.5 | 3.7 | 13.1 | 428 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|------------|------|------|------|------|------|
| 27-32-2-2 | 77.9 | 7.7 | 7.7 | 6.7 | 416 | 27-53-1-1 | 79.6 | 13.0 | 3.9 | 3.4 | 407 |
| 4-2 | 72.3 | 7.1 | 14.3 | 6.2 | 448 | 2-1 | 76.6 | 12.5 | 7.5 | 3.3 | 423 |
| 15-2 | 51.9 | 5.1 | 38.4 | 4.5 | 624 | 27-54-1-2 | 76.8 | 12.8 | 3.8 | 6.6 | 422 |
| 27-33-1-1 | 83.7 | 8.5 | 4.1 | 3.6 | 387 | 2-2 | 74.0 | 12.3 | 7.3 | 6.4 | 438 |
| 2-1 | 80.4 | 8.2 | 7.9 | 3.5 | 403 | 27-55-1-1 | 79.2 | 13.4 | 3.9 | 3.4 | 409 |
| 3 | 75.2 | 7.6 | 7.4 | 9.7 | 431 | 2-1 | 76.2 | 12.9 | 7.5 | 3.3 | 425 |
| 6-1 | 69.4 | 7.0 | 20.6 | 3.0 | 467 | 27-56-1-2 | 76.4 | 13.2 | 3.8 | 6.6 | 424 |
| 13-1 | 56.0 | 5.7 | 35.9 | 2.4 | 579 | 2-2 | 73.6 | 12.7 | 7.3 | 6.4 | 440 |
| 27-34-1-2 | 80.6 | 8.4 | 4.0 | 7.0 | 402 | 28-12-14-4 | 53.5 | 1.9 | 35.7 | 8.9 | 628 |
| 2-2 | 77.5 | 8.1 | 7.6 | 6.7 | 418 | 28-14-8-4 | 62.9 | 2.6 | 24.0 | 10.5 | 534 |
| 5-2 | 69.5 | 7.3 | 17.2 | 6.0 | 466 | 28-15-5-1 | 75.5 | 3.4 | 18.0 | 3.1 | 445 |
| 6-2 | 67.2 | 7.1 | 19.9 | 5.8 | 482 | 7-3 | 66.5 | 3.0 | 22.2 | 8.3 | 505 |
| 27-35-1-1 | 83.3 | 9.0 | 4.1 | 3.6 | 389 | 18-7 | 45.6 | 2.0 | 39.1 | 13.3 | 737 |
| 2-1 | 80.0 | 8.6 | 7.9 | 3.5 | 405 | 28-16-1-2 | 84.8 | 4.0 | 4.0 | 7.2 | 396 |
| 27-36-1-2 | 80.2 | 8.9 | 4.0 | 6.9 | 404 | 2-2 | 81.5 | 3.9 | 7.8 | 6.8 | 412 |
| 2-2 | 77.1 | 8.6 | 7.6 | 6.7 | 420 | 3-2 | 78.5 | 3.7 | 11.2 | 6.5 | 428 |
| 6-2 | 66.9 | 7.4 | 19.8 | 5.8 | 484 | 4-2 | 75.7 | 3.6 | 14.4 | 6.3 | 444 |
| 27-37-1-1 | 82.9 | 9.4 | 4.1 | 3.6 | 391 | 5-2 | 73.0 | 3.5 | 17.1 | 6.1 | 460 |
| 2-1 | 79.6 | 9.1 | 7.9 | 3.4 | 407 | 6-2 | 70.6 | 3.4 | 20.1 | 5.9 | 476 |
| 27-38-1-2 | 79.8 | 9.4 | 3.9 | 6.9 | 406 | 4 | 66.7 | 3.2 | 19.0 | 11.1 | 504 |
| 2-2 | 76.8 | 9.0 | 7.6 | 6.6 | 422 | 6 | 63.2 | 3.0 | 18.0 | 15.8 | 532 |
| 27-39-1-1 | 82.4 | 9.9 | 4.1 | 3.6 | 393 | 8-6 | 59.6 | 2.8 | 22.7 | 14.9 | 566 |
| 2-1 | 79.2 | 9.5 | 7.8 | 3.4 | 409 | 16-12 | 43.3 | 2.1 | 33.0 | 21.6 | 774 |
| 5-3 | 66.8 | 8.0 | 16.5 | 8.7 | 485 | 28-17-1-1 | 87.7 | 4.4 | 4.2 | 3.7 | 383 |
| 5 | 63.1 | 7.6 | 15.6 | 13.6 | 513 | 2-1 | 84.2 | 4.3 | 8.0 | 3.5 | 399 |
| 8-1 | 64.2 | 7.7 | 25.3 | 2.8 | 505 | 4-3 | 73.3 | 3.7 | 13.9 | 9.1 | 459 |
| 27-40-1-2 | 79.4 | 9.8 | 3.9 | 6.9 | 408 | 8-3 | 64.2 | 3.2 | 24.5 | 8.0 | 523 |
| 2-2 | 76.4 | 9.4 | 7.6 | 6.6 | 424 | 5 | 61.0 | 3.1 | 23.2 | 12.7 | 551 |
| 27-41-1-1 | 82.0 | 10.4 | 4.0 | 3.5 | 395 | 9-3 | 62.3 | 3.1 | 26.7 | 7.8 | 539 |
| 2-1 | 78.8 | 10.0 | 7.8 | 3.4 | 411 | 12-3 | 57.2 | 2.9 | 32.7 | 7.1 | 587 |
| 9-1 | 61.9 | 7.8 | 27.5 | 2.7 | 523 | 28-18-1-2 | 84.4 | 4.5 | 4.0 | 7.1 | 398 |
| 27-42-1-2 | 79.0 | 10.2 | 3.9 | 6.8 | 410 | 2-2 | 81.2 | 4.3 | 7.7 | 6.8 | 414 |
| 2-2 | 76.1 | 9.8 | 7.5 | 6.6 | 426 | 4 | 76.0 | 4.1 | 7.2 | 12.7 | 442 |
| 27-43-1-1 | 81.6 | 10.8 | 4.0 | 3.5 | 397 | 6-2 | 71.4 | 3.7 | 20.1 | 5.8 | 478 |
| 2-1 | 78.4 | 10.4 | 7.7 | 3.4 | 413 | 7-2 | 68.0 | 3.6 | 22.7 | 5.7 | 494 |
| 3 | 73.5 | 9.8 | 7.2 | 9.5 | 441 | 4 | 64.4 | 3.5 | 21.4 | 10.7 | 522 |
| 5-1 | 70.3 | 9.3 | 17.3 | 3.0 | 461 | 9-8 | 55.1 | 2.9 | 23.6 | 18.4 | 610 |
| 8-1 | 63.6 | 8.4 | 25.1 | 2.8 | 509 | 12-4 | 53.8 | 3.0 | 31.9 | 9.3 | 602 |
| 27-44-1-2 | 78.6 | 10.7 | 3.9 | 6.8 | 412 | 28-19-1-1 | 87.3 | 4.9 | 4.2 | 3.6 | 385 |
| 2-2 | 75.7 | 10.3 | 7.5 | 6.5 | 428 | 3 | 71.3 | 4.6 | 3.9 | 10.2 | 413 |
| 27-45-1-1 | 81.2 | 11.3 | 4.0 | 3.5 | 399 | 2-1 | 83.8 | 4.7 | 8.0 | 3.5 | 401 |
| 2-1 | 78.1 | 10.8 | 7.7 | 3.4 | 415 | 4-1 | 77.6 | 4.4 | 14.8 | 3.2 | 433 |
| 8-1 | 63.4 | 8.8 | 25.0 | 2.7 | 511 | 6-1 | 72.2 | 4.1 | 20.6 | 3.0 | 465 |
| 27-46-1-2 | 78.3 | 11.1 | 3.8 | 6.8 | 414 | 28-20-1-2 | 84.0 | 5.0 | 4.0 | 17.0 | 400 |
| 2-2 | 75.4 | 10.7 | 7.4 | 6.5 | 430 | 2-2 | 80.8 | 4.8 | 7.7 | 6.7 | 416 |
| 3-2 | 72.6 | 10.3 | 10.8 | 6.3 | 446 | 4 | 75.7 | 4.5 | 7.2 | 12.6 | 444 |
| 4-2 | 70.1 | 10.0 | 13.8 | 6.1 | 462 | 3-2 | 77.8 | 4.6 | 11.1 | 6.5 | 432 |
| 27-47-1-1 | 80.8 | 11.7 | 4.0 | 3.5 | 401 | 4 | 73.0 | 4.3 | 10.4 | 12.2 | 460 |
| 2-1 | 77.7 | 11.3 | 7.7 | 3.3 | 417 | 4-2 | 75.0 | 4.5 | 14.3 | 6.2 | 448 |
| 27-48-1-2 | 77.9 | 11.5 | 3.8 | 6.7 | 416 | 6-2 | 70.0 | 4.2 | 20.0 | 5.8 | 480 |
| 2-2 | 75.0 | 11.1 | 7.4 | 6.5 | 432 | 8-8 | 56.4 | 3.3 | 21.5 | 18.8 | 596 |
| 27-49-1-1 | 80.4 | 12.1 | 4.0 | 3.5 | 403 | 13-10 | 47.7 | 2.8 | 29.5 | 19.9 | 704 |
| 2-1 | 77.3 | 11.7 | 7.6 | 3.3 | 419 | 28-21-1-1 | 86.8 | 5.4 | 4.1 | 3.6 | 387 |
| 27-50-1-2 | 77.5 | 12.0 | 3.8 | 6.7 | 418 | 5 | 75.9 | 4.7 | 3.6 | 15.8 | 443 |
| 2-2 | 74.6 | 11.5 | 7.4 | 6.4 | 434 | 2-1 | 83.4 | 5.2 | 7.9 | 3.5 | 403 |
| 27-51-1-1 | 80.0 | 12.6 | 3.9 | 3.4 | 405 | 3 | 78.0 | 4.9 | 7.4 | 9.7 | 431 |
| 2-1 | 77.0 | 12.1 | 7.6 | 3.3 | 421 | 5 | 73.2 | 4.6 | 7.0 | 15.2 | 459 |
| 27-52-1-2 | 77.1 | 12.4 | 3.8 | 6.7 | 420 | 3-1 | 80.2 | 5.0 | 11.4 | 3.3 | 419 |
| 2-2 | 74.3 | 11.9 | 7.3 | 6.4 | 436 | 3 | 75.2 | 4.7 | 10.7 | 9.4 | 447 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|-----|------|------|------|-----------|------|------|------|------|------|
| 28-21-4-1 | 77.2 | 4.8 | 14.7 | 3.2 | 435 | 28-28-5-2 | 71.2 | 5.9 | 17.0 | 5.9 | 472 |
| 5-1 | 74.5 | 4.6 | 17.7 | 3.1 | 451 | 6-2 | 68.8 | 5.7 | 19.7 | 5.7 | 488 |
| 8-5 | 60.5 | 3.8 | 23.1 | 12.6 | 555 | 9-6 | 56.7 | 4.7 | 24.3 | 14.2 | 592 |
| 28-22-1-2 | 83.6 | 5.5 | 4.0 | 6.9 | 402 | 28-29-1-1 | 85.0 | 7.3 | 4.1 | 3.5 | 395 |
| 4 | 78.1 | 5.1 | 3.7 | 13.0 | 430 | 2-1 | 81.7 | 7.1 | 7.8 | 3.4 | 411 |
| 1-6 | 73.4 | 4.8 | 3.5 | 18.3 | 458 | 5-3 | 69.0 | 5.9 | 16.4 | 8.6 | 487 |
| 2-2 | 80.4 | 5.2 | 7.6 | 6.7 | 418 | 6-1 | 70.7 | 6.1 | 20.2 | 2.9 | 475 |
| 4 | 75.3 | 4.9 | 7.2 | 12.6 | 446 | 7-1 | 68.4 | 5.9 | 22.8 | 2.8 | 491 |
| 3-2 | 77.4 | 5.1 | 11.0 | 6.4 | 434 | 28-30-1-2 | 81.9 | 7.3 | 3.9 | 6.8 | 410 |
| 4-2 | 74.7 | 4.9 | 14.2 | 6.2 | 450 | 4 | 76.7 | 6.8 | 3.6 | 12.8 | 438 |
| 6-4 | 65.9 | 4.3 | 18.8 | 11.0 | 510 | 8 | 68.0 | 6.1 | 3.2 | 22.7 | 494 |
| 6 | 62.4 | 4.1 | 17.8 | 15.6 | 538 | 2-2 | 78.9 | 7.0 | 7.5 | 6.6 | 426 |
| 7-4 | 63.9 | 4.2 | 21.3 | 10.6 | 526 | 3-2 | 76.0 | 6.8 | 10.9 | 6.3 | 442 |
| 8-2 | 65.4 | 4.3 | 24.9 | 5.4 | 514 | 4-4 | 69.1 | 6.2 | 13.2 | 11.5 | 486 |
| 28-23-1-1 | 86.4 | 5.9 | 4.1 | 3.6 | 389 | 6-2 | 68.6 | 6.1 | 19.6 | 5.7 | 490 |
| 2-1 | 83.0 | 5.7 | 7.9 | 3.4 | 405 | 12-6 | 52.3 | 4.7 | 29.9 | 13.1 | 642 |
| 3 | 77.6 | 5.3 | 7.4 | 9.7 | 433 | 28-31-1-1 | 84.6 | 7.8 | 4.0 | 3.5 | 397 |
| 3-1 | 79.8 | 5.5 | 11.4 | 3.3 | 421 | 3 | 79.0 | 7.3 | 3.8 | 9.9 | 425 |
| 4-7 | 64.5 | 4.4 | 12.3 | 18.8 | 521 | 2-1 | 81.3 | 7.5 | 7.7 | 3.4 | 413 |
| 28-24-1-2 | 83.2 | 5.9 | 4.0 | 6.9 | 404 | 10-1 | 62.1 | 5.7 | 29.6 | 2.6 | 541 |
| 4 | 77.8 | 5.5 | 3.7 | 13.0 | 432 | 28-32-1-2 | 81.5 | 7.8 | 3.9 | 6.8 | 412 |
| 2-2 | 80.0 | 5.7 | 7.6 | 6.7 | 420 | 2-2 | 78.5 | 7.5 | 7.5 | 6.5 | 428 |
| 4 | 75.0 | 5.4 | 7.1 | 12.5 | 448 | 5-2 | 70.6 | 6.7 | 16.8 | 5.9 | 476 |
| 3-2 | 77.1 | 5.5 | 11.0 | 6.4 | 436 | 8-2 | 64.1 | 6.1 | 24.4 | 5.3 | 524 |
| 4 | 72.4 | 5.2 | 10.3 | 12.1 | 464 | 4 | 60.9 | 5.8 | 23.2 | 10.1 | 552 |
| 4-2 | 74.3 | 5.3 | 14.1 | 6.2 | 452 | 2-1 | 81.0 | 8.0 | 7.0 | 3.3 | 415 |
| 4 | 70.0 | 5.0 | 13.3 | 11.7 | 480 | 3-3 | 73.2 | 7.2 | 10.5 | 9.1 | 459 |
| 6-2 | 69.4 | 5.0 | 19.8 | 5.8 | 484 | 4-9 | 60.1 | 5.9 | 11.4 | 22.5 | 559 |
| 7-2 | 67.2 | 4.8 | 22.4 | 5.6 | 500 | 28-34-1-2 | 81.1 | 8.2 | 3.9 | 6.8 | 414 |
| 8-4 | 61.8 | 4.4 | 23.5 | 10.3 | 544 | 2-2 | 78.1 | 7.9 | 7.4 | 6.5 | 430 |
| 28-25-1-1 | 85.9 | 6.4 | 4.1 | 3.6 | 391 | 4-2 | 72.7 | 7.4 | 13.8 | 6.1 | 462 |
| 3 | 80.2 | 6.0 | 3.8 | 10.0 | 419 | 6-2 | 61.1 | 6.2 | 17.4 | 15.3 | 550 |
| 2-1 | 82.6 | 6.1 | 7.9 | 3.4 | 407 | 28-35-1-1 | 83.8 | 8.7 | 4.0 | 3.5 | 401 |
| 3 | 77.2 | 5.7 | 7.4 | 9.7 | 435 | 2-1 | 80.6 | 8.4 | 7.7 | 3.3 | 417 |
| 3-3 | 74.5 | 5.5 | 10.6 | 9.3 | 451 | 6-1 | 69.8 | 7.3 | 20.0 | 2.9 | 481 |
| 4-1 | 76.5 | 5.7 | 14.6 | 3.2 | 439 | 28-36-1-2 | 80.8 | 8.6 | 3.8 | 6.7 | 416 |
| 3 | 71.9 | 5.3 | 13.7 | 9.0 | 467 | 2-2 | 77.8 | 8.3 | 7.4 | 6.5 | 432 |
| 28-26-1-2 | 82.8 | 6.4 | 3.9 | 6.9 | 406 | 5-10 | 56.7 | 6.1 | 13.5 | 23.6 | 592 |
| 2-2 | 79.6 | 6.2 | 7.6 | 6.6 | 422 | 8-2 | 54.9 | 5.9 | 20.9 | 18.3 | 612 |
| 4 | 74.6 | 5.8 | 7.1 | 12.4 | 450 | 28-37-1-1 | 83.3 | 9.2 | 4.0 | 3.5 | 403 |
| 3-2 | 76.7 | 5.9 | 10.9 | 6.4 | 438 | 2-1 | 80.2 | 8.8 | 7.6 | 3.3 | 419 |
| 4-2 | 74.0 | 5.7 | 14.1 | 6.2 | 454 | 28-38-1-2 | 80.4 | 9.0 | 3.8 | 6.7 | 418 |
| 4 | 69.7 | 5.4 | 13.3 | 11.6 | 482 | 2-2 | 77.4 | 8.7 | 7.4 | 6.4 | 434 |
| 5-4 | 67.5 | 5.2 | 16.1 | 11.2 | 498 | 4-2 | 73.3 | 8.3 | 12.2 | 6.1 | 458 |
| 6-2 | 69.1 | 5.3 | 19.8 | 5.8 | 486 | 5-2 | 69.7 | 7.9 | 16.6 | 5.8 | 482 |
| 8-18 | 45.3 | 3.5 | 17.2 | 34.0 | 742 | 28-39-1-1 | 83.0 | 9.6 | 3.9 | 3.4 | 405 |
| 28-27-1-1 | 85.5 | 6.8 | 4.1 | 3.6 | 393 | 2-1 | 79.8 | 9.3 | 7.6 | 3.3 | 421 |
| 3 | 79.8 | 6.4 | 3.8 | 10.0 | 421 | 28-40-1-2 | 80.0 | 9.5 | 3.8 | 6.7 | 420 |
| 2-1 | 82.1 | 6.6 | 7.8 | 3.4 | 409 | 2-2 | 77.1 | 9.2 | 7.3 | 6.4 | 436 |
| 3 | 76.9 | 6.2 | 7.3 | 9.6 | 437 | 5-2 | 69.4 | 8.3 | 16.5 | 5.8 | 484 |
| 6-1 | 71.0 | 5.7 | 20.3 | 3.0 | 473 | 28-41-1-1 | 82.6 | 10.1 | 3.9 | 3.4 | 407 |
| 28-28-1-2 | 82.3 | 6.9 | 3.9 | 6.9 | 408 | 2-1 | 79.4 | 9.7 | 7.6 | 3.3 | 423 |
| 2-2 | 79.2 | 6.6 | 7.6 | 6.6 | 424 | 28-42-1-2 | 79.6 | 10.0 | 3.8 | 6.6 | 422 |
| 4 | 74.3 | 6.2 | 7.1 | 12.4 | 452 | 2-2 | 76.7 | 9.6 | 7.3 | 6.4 | 438 |
| 6 | 70.0 | 5.8 | 6.7 | 17.5 | 480 | 28-43-1-1 | 82.2 | 10.5 | 3.9 | 3.4 | 409 |
| 3-2 | 76.3 | 6.4 | 10.9 | 6.4 | 440 | 2-1 | 79.1 | 10.1 | 7.5 | 3.3 | 425 |
| 4 | 71.8 | 6.0 | 10.3 | 11.9 | 468 | 5-1 | 71.1 | 9.1 | 16.9 | 2.9 | 473 |
| 4-2 | 73.7 | 6.1 | 14.0 | 6.1 | 456 | 7-1 | 66.5 | 8.5 | 22.2 | 2.8 | 505 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-----------|------|------|------|------|------|------------|------|------|------|------|------|
| 28-44-1-2 | 79.2 | 10.4 | 3.8 | 6.6 | 424 | 29-28-2-4 | 75.0 | 6.0 | 6.9 | 12.1 | 464 |
| 2-2 | 76.3 | 10.0 | 7.3 | 6.4 | 440 | 3-4 | 72.5 | 5.8 | 10.0 | 11.7 | 480 |
| 26-45-1-1 | 81.7 | 10.9 | 3.9 | 3.4 | 411 | 29-29-10-5 | 57.3 | 4.8 | 26.3 | 11.5 | 607 |
| 2-1 | 78.7 | 10.5 | 7.5 | 3.3 | 427 | 29-30-4-2 | 74.0 | 6.4 | 13.6 | 6.0 | 470 |
| 8-1 | 64.2 | 8.6 | 24.5 | 2.7 | 523 | 4 | 69.9 | 6.0 | 12.9 | 11.2 | 498 |
| 26-46-1-2 | 78.9 | 10.8 | 3.7 | 6.6 | 426 | 8-2 | 65.2 | 5.6 | 24.0 | 5.2 | 534 |
| 2-2 | 76.0 | 10.4 | 7.2 | 6.3 | 442 | 29-31-1-3 | 79.6 | 7.1 | 3.7 | 9.6 | 437 |
| 28-47-1-1 | 81.3 | 11.4 | 3.9 | 3.4 | 413 | 8-3 | 63.4 | 5.6 | 23.3 | 7.6 | 549 |
| 6-1 | 68.2 | 9.5 | 19.5 | 2.8 | 493 | 29-32-3-4 | 71.9 | 6.6 | 9.9 | 11.6 | 484 |
| 28-48-1-2 | 78.5 | 11.2 | 3.7 | 6.5 | 428 | 4-4 | 69.6 | 6.4 | 12.8 | 11.2 | 500 |
| 2-2 | 75.7 | 10.8 | 7.2 | 6.3 | 444 | 29-36-1-2 | 81.3 | 8.4 | 3.7 | 6.5 | 428 |
| 28-49-1-1 | 81.0 | 11.8 | 3.8 | 3.4 | 415 | 29-37-2-3 | 75.8 | 8.1 | 7.0 | 9.1 | 459 |
| 2-1 | 78.0 | 11.4 | 7.4 | 3.2 | 431 | 29-38-6-2 | 68.2 | 7.4 | 18.8 | 5.5 | 510 |
| 28-50-1-2 | 78.1 | 11.6 | 3.7 | 6.5 | 430 | 29-40-4-4 | 68.5 | 7.9 | 12.6 | 11.0 | 508 |
| 2-2 | 75.3 | 11.2 | 7.2 | 6.3 | 446 | 29-42-2-2 | 77.3 | 9.3 | 7.1 | 6.3 | 450 |
| 28-51-1-1 | 80.6 | 12.2 | 3.8 | 3.4 | 417 | 4-2 | 72.2 | 8.7 | 13.3 | 5.8 | 482 |
| 2-1 | 77.6 | 11.8 | 7.4 | 3.2 | 433 | 29-43-7-1 | 67.3 | 8.4 | 21.6 | 2.7 | 517 |
| 21-11 | 38.3 | 5.8 | 38.3 | 17.6 | 877 | 29-44-2-2 | 77.0 | 9.7 | 7.1 | 6.2 | 452 |
| 28-52-1-2 | 77.8 | 12.0 | 3.7 | 6.5 | 432 | 29-46-1-2 | 79.4 | 10.5 | 3.6 | 6.4 | 438 |
| 2-2 | 75.0 | 11.6 | 7.1 | 6.2 | 448 | 4-2 | 71.6 | 9.5 | 13.2 | 5.7 | 486 |
| 28-53-1-1 | 80.2 | 12.6 | 3.8 | 3.3 | 419 | 29-51-8-1 | 64.3 | 9.4 | 23.6 | 2.6 | 541 |
| 2-1 | 77.2 | 12.2 | 7.4 | 3.2 | 435 | 30-15-6-3 | 70.2 | 2.9 | 18.7 | 8.2 | 513 |
| 28-54-1-2 | 77.4 | 12.4 | 3.7 | 6.3 | 434 | 7-3 | 68.0 | 2.8 | 21.2 | 7.9 | 529 |
| 2-2 | 74.7 | 12.0 | 7.1 | 6.2 | 450 | 30-18-1-2 | 85.3 | 4.3 | 3.8 | 6.6 | 422 |
| 28-55-1-1 | 79.8 | 13.1 | 3.8 | 3.3 | 421 | 2-2 | 82.2 | 4.1 | 7.3 | 6.4 | 438 |
| 2-1 | 76.9 | 12.6 | 7.3 | 3.2 | 437 | 4 | 77.2 | 3.9 | 6.9 | 12.0 | 466 |
| 28-56-1-2 | 77.1 | 12.8 | 3.7 | 6.4 | 436 | 4-2 | 76.6 | 3.8 | 13.6 | 6.0 | 470 |
| 2-2 | 74.3 | 12.4 | 7.1 | 6.2 | 452 | 30-19-1-3 | 82.4 | 4.3 | 3.7 | 9.6 | 437 |
| 28-57-1-1 | 79.4 | 13.5 | 3.8 | 3.3 | 423 | 30-20-1-2 | 84.9 | 4.7 | 3.8 | 6.6 | 424 |
| 2-1 | 76.5 | 13.0 | 7.3 | 3.2 | 439 | 2-2 | 81.8 | 4.5 | 7.3 | 6.4 | 440 |
| 28-58-1-2 | 76.7 | 13.2 | 3.6 | 6.4 | 438 | 4-2 | 76.3 | 4.2 | 13.6 | 5.9 | 472 |
| 2-2 | 74.0 | 12.8 | 7.0 | 6.2 | 454 | 8-6 | 60.8 | 3.4 | 21.6 | 14.2 | 592 |
| 3-2 | 71.5 | 12.4 | 10.2 | 5.9 | 470 | 9-2 | 65.2 | 3.6 | 26.1 | 5.1 | 552 |
| 28-62-1-6 | 67.5 | 12.4 | 3.2 | 16.9 | 498 | 30-21-2-5 | 74.5 | 4.3 | 6.6 | 14.5 | 483 |
| 29-20-5-2 | 73.1 | 4.2 | 16.8 | 5.9 | 476 | 10-3 | 61.7 | 3.6 | 27.4 | 7.2 | 583 |
| 6-4 | 66.9 | 3.8 | 18.5 | 10.8 | 520 | 30-22-1-2 | 84.5 | 5.2 | 3.7 | 6.6 | 426 |
| 29-21-1-3 | 81.5 | 4.9 | 3.7 | 9.8 | 427 | 4 | 79.3 | 4.8 | 3.5 | 12.3 | 454 |
| 5 | 76.5 | 4.6 | 3.5 | 15.4 | 455 | 2-2 | 81.4 | 5.0 | 7.2 | 6.3 | 442 |
| 3-3 | 75.8 | 4.6 | 10.5 | 9.1 | 459 | 4 | 76.6 | 4.7 | 6.8 | 11.9 | 470 |
| 29-22-1-2 | 84.0 | 5.3 | 3.9 | 6.8 | 414 | 4-2 | 75.9 | 4.6 | 13.5 | 5.9 | 474 |
| 2-4 | 76.0 | 4.8 | 7.0 | 12.2 | 458 | 4 | 71.7 | 4.4 | 12.7 | 11.2 | 502 |
| 4-2 | 75.3 | 4.8 | 13.8 | 6.1 | 462 | 5-2 | 73.5 | 4.5 | 16.3 | 5.7 | 490 |
| 29-23-1-1 | 86.8 | 5.7 | 4.0 | 3.5 | 401 | 7-4 | 65.4 | 4.0 | 20.4 | 10.2 | 550 |
| 2-1 | 83.4 | 5.5 | 7.7 | 3.4 | 417 | 9-8 | 56.4 | 3.4 | 22.6 | 17.6 | 638 |
| 3 | 78.2 | 5.2 | 7.2 | 9.4 | 445 | 30-23-1-1 | 87.2 | 5.5 | 3.9 | 3.4 | 413 |
| 29-24-1-4 | 78.4 | 5.4 | 3.6 | 12.6 | 444 | 5 | 76.7 | 4.9 | 3.4 | 14.9 | 469 |
| 2-2 | 80.6 | 5.5 | 7.4 | 6.5 | 432 | 30-24-1-4 | 79.0 | 5.2 | 3.5 | 12.3 | 456 |
| 3-2 | 77.7 | 5.3 | 10.7 | 6.2 | 448 | 2-2 | 81.1 | 5.4 | 7.2 | 6.3 | 444 |
| 4-2 | 75.0 | 5.2 | 13.8 | 6.0 | 464 | 4-2 | 75.6 | 5.0 | 13.4 | 5.9 | 476 |
| 6-4 | 66.4 | 4.6 | 18.3 | 10.7 | 524 | 4 | 71.4 | 4.8 | 12.7 | 11.1 | 504 |
| 29-25-2-1 | 83.0 | 6.0 | 7.6 | 3.3 | 419 | 5-4 | 69.2 | 4.6 | 15.4 | 10.8 | 520 |
| 4-1 | 77.1 | 5.5 | 14.2 | 3.1 | 451 | 6-2 | 70.9 | 4.7 | 18.9 | 5.5 | 508 |
| 3 | 72.7 | 5.2 | 13.3 | 8.8 | 479 | 4 | 67.2 | 4.5 | 17.9 | 10.4 | 536 |
| 29-26-2-2 | 80.2 | 6.0 | 7.4 | 6.4 | 434 | 7-4 | 65.2 | 4.3 | 20.3 | 10.1 | 552 |
| 5-4 | 68.2 | 5.1 | 15.7 | 11.0 | 510 | 8-4 | 63.4 | 4.2 | 22.5 | 9.9 | 568 |
| 29-27-1-3 | 80.4 | 6.2 | 3.6 | 9.7 | 433 | 30-25-1-5 | 76.4 | 5.3 | 3.4 | 14.9 | 471 |
| 4-3 | 72.3 | 5.6 | 13.3 | 8.7 | 481 | 2-1 | 83.5 | 5.8 | 7.4 | 3.2 | 431 |
| 5-3 | 70.0 | 5.4 | 16.1 | 8.4 | 497 | 4-1 | 77.8 | 5.4 | 13.8 | 3.0 | 463 |
| 29-28-1-2 | 82.8 | 6.7 | 3.8 | 6.7 | 420 | 30-26-1-2 | 86.5 | 6.2 | 3.8 | 3.4 | 416 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|------------|------|------|------|------|------|-------------|------|------|------|------|------|
| 30-26-1-4 | 78.6 | 5.7 | 3.5 | 12.2 | 458 | 31-24-1-2 | 84.6 | 5.4 | 3.6 | 6.4 | 440 |
| 2-2 | 80.7 | 5.8 | 7.2 | 6.3 | 446 | 2-4 | 76.8 | 5.0 | 6.6 | 11.6 | 484 |
| 3-2 | 77.9 | 5.6 | 10.1 | 6.0 | 462 | 9-4 | 62.4 | 4.0 | 24.2 | 9.4 | 596 |
| 6-4 | 66.9 | 4.8 | 17.8 | 10.4 | 538 | 31-25-2-3 | 78.9 | 5.3 | 6.8 | 9.0 | 471 |
| 8-4 | 63.2 | 4.6 | 22.4 | 9.8 | 570 | 3-3 | 76.4 | 5.1 | 9.9 | 8.6 | 487 |
| 30-27-2-1 | 83.2 | 6.2 | 7.4 | 3.2 | 433 | 31-26-1-2 | 84.1 | 5.9 | 3.6 | 6.3 | 442 |
| 3-3 | 75.5 | 5.7 | 10.0 | 8.8 | 477 | 4 | 79.2 | 5.5 | 3.4 | 11.9 | 470 |
| 15-5 | 51.6 | 3.9 | 34.4 | 10.0 | 697 | 3-8 | 66.7 | 4.6 | 8.6 | 20.1 | 558 |
| 30-28-2-2 | 80.4 | 6.2 | 7.1 | 6.2 | 448 | 31-27-5-1 | 75.5 | 5.5 | 16.2 | 2.8 | 493 |
| 4 | 75.6 | 5.9 | 6.7 | 11.8 | 476 | 31-28-5-2 | 73.2 | 5.5 | 15.7 | 5.5 | 508 |
| 3-2 | 77.9 | 6.0 | 10.3 | 6.0 | 464 | 31-30-1-8 | 70.2 | 5.7 | 3.0 | 21.1 | 530 |
| 4 | 73.2 | 5.7 | 9.7 | 11.4 | 492 | 2-2 | 80.5 | 6.5 | 6.9 | 6.1 | 462 |
| 6 | 69.2 | 5.4 | 9.2 | 16.1 | 520 | 4-2 | 75.3 | 6.1 | 12.9 | 5.7 | 494 |
| 4-2 | 75.0 | 5.8 | 13.3 | 5.8 | 480 | 31-31-2-1 | 82.8 | 6.9 | 7.1 | 3.1 | 449 |
| 6 | 67.2 | 5.2 | 11.9 | 15.7 | 536 | 31-33-3-3 | 75.1 | 6.7 | 9.7 | 8.5 | 495 |
| 8 | 63.8 | 5.0 | 11.3 | 19.8 | 564 | 31-34-4-8 | 63.9 | 5.8 | 11.0 | 19.2 | 582 |
| 5-4 | 68.7 | 5.3 | 15.3 | 10.7 | 524 | 6-2 | 70.2 | 6.4 | 18.1 | 5.3 | 530 |
| 12-2 | 59.2 | 4.6 | 31.6 | 4.6 | 608 | 31-36-4-6 | 66.9 | 6.5 | 11.5 | 15.1 | 556 |
| 30-29-3-5 | 71.0 | 5.7 | 9.5 | 13.8 | 507 | 8-2 | 65.9 | 6.4 | 22.7 | 5.0 | 564 |
| 6-5 | 64.9 | 5.2 | 17.3 | 12.6 | 555 | 31-37-4-3 | 72.2 | 7.2 | 12.4 | 8.2 | 515 |
| 13-1 | 58.9 | 4.7 | 34.0 | 2.3 | 611 | 31-41-10-1 | 63.4 | 7.0 | 27.2 | 2.4 | 587 |
| 30-30-1-4 | 77.9 | 6.5 | 3.5 | 12.1 | 462 | 31-43-10-1 | 63.2 | 7.3 | 27.2 | 2.3 | 589 |
| 3-2 | 77.3 | 6.4 | 10.3 | 6.0 | 466 | 11-1 | 61.5 | 7.1 | 29.1 | 2.3 | 605 |
| 6 | 68.9 | 5.7 | 9.2 | 16.1 | 422 | 31-48-9-2 | 62.8 | 8.1 | 24.3 | 4.7 | 592 |
| 4-2 | 34.7 | 6.2 | 13.3 | 5.8 | 482 | 31-50-16-30 | 33.9 | 4.5 | 23.3 | 38.3 | 1086 |
| 8 | 63.6 | 5.3 | 11.3 | 19.8 | 566 | 31-58-16-6 | 48.3 | 7.5 | 33.3 | 10.9 | 770 |
| 11-2 | 60.6 | 5.0 | 29.6 | 4.7 | 594 | 31-63-1-1 | 80.0 | 13.5 | 3.4 | 3.0 | 465 |
| 30-31-1-3 | 80.2 | 6.9 | 3.6 | 9.3 | 449 | 32-18-6-2 | 73.0 | 3.4 | 18.2 | 5.3 | 526 |
| 5-3 | 70.2 | 6.0 | 15.6 | 8.2 | 513 | 32-20-1-4 | 80.7 | 4.2 | 3.4 | 11.7 | 476 |
| 30-32-3-2 | 76.9 | 6.8 | 10.3 | 6.0 | 468 | 5-4 | 71.1 | 3.7 | 14.8 | 10.4 | 540 |
| 4-2 | 74.4 | 6.6 | 13.2 | 5.8 | 484 | 32-21-1-3 | 82.9 | 4.5 | 3.4 | 9.1 | 463 |
| 4 | 70.3 | 6.2 | 12.5 | 10.9 | 512 | 8-5 | 63.7 | 3.4 | 21.2 | 11.7 | 603 |
| 14-2 | 55.9 | 5.0 | 34.8 | 4.3 | 644 | 32-22-1-4 | 80.3 | 4.6 | 3.3 | 11.7 | 478 |
| 30-34-3-4 | 72.3 | 6.8 | 9.6 | 11.2 | 498 | 2-2 | 82.4 | 4.7 | 6.9 | 6.0 | 466 |
| 30-36-4-2 | 73.8 | 7.4 | 13.1 | 5.7 | 488 | 4 | 77.7 | 4.4 | 6.5 | 11.3 | 494 |
| 10-2 | 61.6 | 6.2 | 27.4 | 4.8 | 584 | 6 | 73.6 | 4.2 | 6.1 | 16.1 | 522 |
| 30-38-3-2 | 76.0 | 8.0 | 10.1 | 5.9 | 474 | 3-2 | 77.4 | 4.4 | 9.7 | 8.5 | 496 |
| 49-12 | 26.7 | 2.8 | 58.1 | 12.4 | 1350 | 6 | 71.4 | 4.1 | 8.9 | 15.6 | 538 |
| 30-40-5-2 | 70.8 | 7.9 | 15.7 | 5.5 | 508 | 4-4 | 73.0 | 4.2 | 12.2 | 10.6 | 526 |
| 30-41-15-9 | 46.9 | 5.3 | 31.3 | 16.4 | 767 | 5-4 | 70.8 | 4.1 | 14.8 | 10.3 | 542 |
| 30-44-2-2 | 77.6 | 9.5 | 6.9 | 6.0 | 464 | 13-2 | 59.8 | 3.4 | 32.4 | 4.4 | 642 |
| 4-2 | 72.6 | 8.9 | 12.9 | 5.6 | 496 | 32-24-2-2 | 82.0 | 5.1 | 6.8 | 6.0 | 468 |
| 30-45-9-3 | 60.9 | 7.6 | 24.4 | 7.1 | 591 | 3-4 | 75.0 | 4.7 | 9.4 | 10.9 | 512 |
| 30-46-10-2 | 60.6 | 7.7 | 26.9 | 4.7 | 594 | 5-2 | 74.4 | 4.6 | 15.5 | 5.4 | 516 |
| 30-48-3-2 | 74.4 | 9.9 | 9.9 | 5.8 | 484 | 4 | 70.6 | 4.4 | 14.7 | 10.3 | 544 |
| 30-49-1-1 | 82.0 | 11.2 | 3.6 | 3.2 | 439 | 6-2 | 72.1 | 4.5 | 18.0 | 5.3 | 532 |
| 21-1 | 47.4 | 6.4 | 44.3 | 1.8 | 759 | 32-25-1-5 | 77.6 | 5.0 | 3.2 | 14.1 | 495 |
| 30-57-6-17 | 47.9 | 7.6 | 12.8 | 31.7 | 751 | 32-26-2-2 | 81.7 | 5.5 | 6.8 | 6.0 | 470 |
| 30-60-6-18 | 46.9 | 7.8 | 12.5 | 32.8 | 768 | 4 | 77.1 | 5.2 | 6.4 | 11.2 | 498 |
| 30-61-1-1 | 79.8 | 13.5 | 3.6 | 3.1 | 451 | 8 | 69.3 | 4.7 | 5.8 | 20.2 | 554 |
| 2-1 | 77.1 | 13.1 | 6.8 | 3.0 | 467 | 4-2 | 76.5 | 5.2 | 12.7 | 5.6 | 502 |
| 81-17 | 18.4 | 3.1 | 66.3 | 12.2 | 1955 | 4 | 72.5 | 4.9 | 12.1 | 10.5 | 530 |
| 31-17-6-1 | 74.5 | 3.3 | 19.2 | 2.8 | 499 | 5-4 | 70.3 | 4.8 | 14.6 | 10.2 | 546 |
| 31-20-1-4 | 80.2 | 4.3 | 3.4 | 12.1 | 464 | 6-4 | 68.3 | 4.6 | 17.1 | 10.0 | 562 |
| 6-4 | 68.4 | 3.7 | 17.6 | 10.3 | 544 | 6 | 65.1 | 4.4 | 16.3 | 14.2 | 594 |
| 31-22-1-4 | 79.8 | 4.7 | 3.4 | 12.0 | 466 | 17-8 | 48.4 | 3.3 | 34.2 | 14.1 | 740 |
| 4-2 | 76.5 | 4.5 | 13.2 | 5.7 | 486 | 32-27-1-3 | 81.9 | 5.7 | 3.4 | 9.0 | 469 |
| 31-23-3-3 | 76.7 | 4.7 | 9.9 | 8.7 | 485 | 32-28-2-2 | 81.4 | 5.9 | 6.8 | 5.9 | 472 |
| 6-1 | 73.7 | 4.5 | 19.0 | 2.8 | 505 | 3-2 | 78.7 | 5.7 | 9.8 | 5.7 | 488 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|------------|------|------|------|------|------|------------|------|-----|------|------|------|
| 32-28-3-4 | 74,4 | 5,4 | 9,3 | 10,9 | 516 | 33-33-1-3 | 81,3 | 6,8 | 3,3 | 8,6 | 487 |
| 4-4 | 72,2 | 5,3 | 12,2 | 10,5 | 532 | 3-3 | 76,3 | 6,3 | 9,2 | 8,1 | 519 |
| 5-4 | 70,1 | 5,1 | 14,6 | 10,2 | 548 | 6-3 | 69,8 | 5,8 | 16,9 | 7,4 | 567 |
| 6-2 | 71,6 | 5,2 | 17,9 | 5,2 | 536 | 33-34-2-2 | 80,8 | 6,9 | 6,5 | 5,7 | 490 |
| 8-2 | 67,6 | 4,9 | 22,5 | 4,9 | 568 | 8-2 | 67,6 | 5,8 | 21,8 | 4,8 | 586 |
| 32-29-1-3 | 81,5 | 6,1 | 3,4 | 9,0 | 471 | 33-36-6-2 | 71,2 | 6,5 | 17,3 | 5,0 | 556 |
| 3-1 | 80,8 | 6,1 | 10,1 | 2,9 | 475 | 33-38-7-2 | 69,0 | 6,6 | 19,5 | 4,9 | 574 |
| 32-30-2-2 | 81,0 | 6,3 | 6,7 | 5,9 | 474 | 12-2 | 60,5 | 5,8 | 29,3 | 4,3 | 654 |
| 4-2 | 75,9 | 5,9 | 12,6 | 5,5 | 506 | 33-39-3-3 | 75,4 | 7,4 | 9,1 | 8,0 | 525 |
| 4 | 71,9 | 5,6 | 12,0 | 10,5 | 534 | 33-41-4-3 | 72,9 | 7,5 | 11,8 | 7,7 | 543 |
| 6-2 | 71,4 | 5,6 | 17,8 | 5,2 | 538 | 33-43-11-1 | 63,0 | 6,8 | 28,0 | 12,2 | 629 |
| 4 | 67,8 | 5,3 | 17,0 | 9,9 | 566 | 33-46-1-2 | 81,4 | 9,5 | 3,3 | 5,8 | 486 |
| 8-4 | 64,2 | 5,0 | 21,4 | 9,4 | 598 | 33-51-10-1 | 63,6 | 8,5 | 25,7 | 2,2 | 623 |
| 32-32-2-2 | 81,0 | 6,3 | 6,7 | 5,9 | 474 | 34-20-4-4 | 74,5 | 3,6 | 11,7 | 10,2 | 548 |
| 4 | 76,2 | 6,3 | 6,3 | 11,1 | 504 | 34-22-2-6 | 74,7 | 4,1 | 5,8 | 15,4 | 546 |
| 3-6 | 70,1 | 5,8 | 8,8 | 15,3 | 548 | 4-4 | 74,2 | 4,0 | 11,6 | 10,2 | 550 |
| 8-2 | 67,1 | 5,6 | 22,4 | 4,9 | 572 | 6-4 | 70,1 | 3,8 | 16,5 | 9,6 | 582 |
| 32-34-1-2 | 83,1 | 7,4 | 3,5 | 6,0 | 462 | 7-2 | 71,6 | 3,8 | 19,7 | 4,9 | 570 |
| 2-4 | 75,9 | 6,3 | 6,7 | 11,1 | 506 | 9-2 | 67,8 | 3,6 | 23,9 | 4,6 | 602 |
| 4-2 | 75,3 | 6,6 | 12,6 | 5,5 | 510 | 34-23-7-1 | 73,3 | 4,1 | 20,1 | 2,5 | 557 |
| 4 | 71,4 | 6,3 | 11,9 | 10,4 | 538 | 34-24-4-2 | 77,8 | 4,6 | 12,2 | 5,3 | 524 |
| 8 | 64,6 | 5,7 | 19,8 | 18,8 | 594 | 5-2 | 75,6 | 4,4 | 14,8 | 5,2 | 540 |
| 5-4 | 69,3 | 6,1 | 14,4 | 10,1 | 554 | 6-2 | 73,4 | 4,3 | 17,3 | 5,0 | 556 |
| 6-4 | 67,4 | 6,0 | 16,8 | 9,8 | 570 | 34-25-3-3 | 78,0 | 4,8 | 9,2 | 8,0 | 523 |
| 8-2 | 66,9 | 5,9 | 22,3 | 4,9 | 574 | 5-3 | 73,5 | 4,5 | 14,4 | 7,6 | 555 |
| 12-6 | 55,3 | 4,9 | 27,7 | 12,1 | 694 | 34-26-2-6 | 74,2 | 4,7 | 5,8 | 15,3 | 550 |
| 32-35-1-3 | 80,5 | 7,3 | 3,3 | 8,8 | 477 | 4-4 | 73,6 | 4,7 | 11,5 | 10,1 | 554 |
| 2-3 | 77,9 | 7,1 | 6,5 | 8,5 | 493 | 5-2 | 75,3 | 4,8 | 14,8 | 5,1 | 542 |
| 32-36-4-2 | 75,0 | 7,0 | 12,5 | 5,5 | 512 | 34-27-2-3 | 80,1 | 5,3 | 6,3 | 8,2 | 509 |
| 7-4 | 65,3 | 6,1 | 19,0 | 9,5 | 585 | 5-5 | 69,7 | 4,6 | 13,7 | 12,0 | 585 |
| 8-4 | 63,6 | 5,9 | 21,2 | 9,3 | 604 | 34-28-1-2 | 87,6 | 6,0 | 3,4 | 3,0 | 466 |
| 12-4 | 57,3 | 5,7 | 28,7 | 8,3 | 670 | 2-2 | 82,3 | 5,6 | 6,4 | 5,6 | 496 |
| 32-40-7-4 | 64,8 | 6,8 | 18,9 | 9,4 | 592 | 4-6 | 69,8 | 4,8 | 10,9 | 14,4 | 584 |
| 32-41-2-3 | 76,9 | 8,2 | 6,4 | 8,4 | 499 | 34-29-2-5 | 75,7 | 5,4 | 5,9 | 13,0 | 539 |
| 32-42-4-2 | 74,1 | 8,1 | 12,3 | 5,4 | 518 | 6-3 | 71,0 | 5,0 | 16,7 | 7,3 | 575 |
| 25-18 | 35,6 | 3,9 | 37,1 | 23,4 | 1078 | 34-30-1-6 | 75,8 | 5,6 | 3,0 | 15,6 | 538 |
| 32-45-11-1 | 62,0 | 7,3 | 28,4 | 2,3 | 619 | 6-4 | 69,1 | 5,1 | 16,3 | 9,5 | 590 |
| 32-46-6-2 | 69,3 | 8,3 | 17,3 | 5,1 | 554 | 9-4 | 63,9 | 4,7 | 22,6 | 8,8 | 638 |
| 32-47-4-1 | 75,4 | 9,2 | 12,6 | 2,7 | 569 | 14-2 | 59,2 | 4,3 | 32,5 | 4,0 | 690 |
| 14-1 | 57,4 | 7,0 | 33,5 | 2,1 | 669 | 34-31-6-3 | 70,7 | 5,4 | 16,6 | 7,3 | 577 |
| 32-48-2-2 | 78,1 | 9,7 | 6,5 | 5,7 | 492 | 34-32-4-2 | 76,7 | 6,0 | 12,0 | 5,3 | 532 |
| 32-49-9-1 | 65,0 | 8,3 | 24,3 | 2,4 | 591 | 34-33-3-3 | 76,8 | 6,2 | 9,3 | 7,9 | 531 |
| 32-50-1-2 | 80,3 | 10,5 | 3,3 | 5,9 | 478 | 34-34-2-2 | 81,3 | 6,8 | 6,3 | 5,6 | 502 |
| 32-51-11-1 | 61,4 | 8,2 | 28,2 | 2,2 | 625 | 3-4 | 74,7 | 6,2 | 8,8 | 10,3 | 546 |
| 32-52-3-2 | 75,0 | 10,1 | 9,4 | 5,5 | 512 | 4-4 | 72,6 | 6,0 | 11,4 | 10,9 | 562 |
| 33-20-3-2 | 80,5 | 4,1 | 9,6 | 5,7 | 492 | 5-4 | 70,6 | 5,9 | 13,8 | 9,7 | 578 |
| 33-21-3-3 | 78,1 | 4,1 | 9,5 | 8,3 | 507 | 34-35-1-3 | 81,4 | 7,0 | 3,2 | 8,4 | 501 |
| 10-7 | 58,6 | 3,1 | 23,7 | 14,5 | 675 | 9-7 | 59,6 | 5,1 | 21,0 | 14,3 | 685 |
| 33-24-1-2 | 85,3 | 5,2 | 3,4 | 6,0 | 464 | 34-36-4-4 | 72,3 | 6,4 | 11,3 | 9,9 | 564 |
| 2-4 | 77,9 | 4,7 | 6,3 | 11,0 | 568 | 6-2 | 71,8 | 6,3 | 16,9 | 4,9 | 568 |
| 4-2 | 77,3 | 4,7 | 12,5 | 5,5 | 512 | 9-2 | 66,2 | 5,8 | 23,4 | 4,5 | 616 |
| 4 | 73,3 | 4,4 | 11,8 | 10,4 | 540 | 34-38-9-10 | 55,9 | 5,2 | 19,7 | 19,2 | 730 |
| 33-26-1-4 | 80,2 | 5,3 | 3,2 | 11,3 | 494 | 34-40-7-2 | 62,0 | 6,1 | 17,0 | 14,9 | 658 |
| 2-2 | 82,2 | 5,4 | 6,6 | 5,8 | 482 | 25-10 | 41,3 | 4,0 | 40,5 | 14,2 | 988 |
| 33-27-2-3 | 79,7 | 5,4 | 6,4 | 8,4 | 497 | 34-41-18-1 | 54,3 | 5,4 | 38,3 | 1,9 | 751 |
| 4-5 | 71,1 | 4,8 | 11,5 | 12,6 | 557 | 34-45-10-1 | 65,1 | 7,2 | 25,5 | 2,2 | 627 |
| 33-28-2-4 | 77,3 | 5,5 | 6,2 | 10,9 | 512 | 34-47-11-1 | 63,2 | 7,3 | 27,3 | 2,2 | 645 |
| 4 | 72,8 | 5,1 | 11,8 | 10,3 | 544 | 34-48-8-2 | 66,7 | 7,8 | 20,9 | 4,6 | 612 |
| 33-31-6-3 | 70,1 | 5,5 | 17,0 | 7,4 | 565 | 34-50-1-2 | 81,3 | 9,9 | 3,2 | 5,6 | 502 |

BISCHER, Loc. d. Kohlenstoffver.

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | G.M. |
|------------|------|------|------|------|------|------------|------|------|------|------|------|
| 34-53-8-1 | 68.7 | 8.8 | 21.2 | 2.3 | 603 | 36-51-6-1 | 72.8 | 8.6 | 16.2 | 2.4 | 593 |
| 34-60-5-2 | 70.8 | 10.4 | 13.9 | 4.9 | 576 | 36-54-6-2 | 70.8 | 8.8 | 15.7 | 4.6 | 610 |
| 35-19-10-1 | 68.5 | 3.1 | 26.1 | 2.3 | 613 | 20-2 | 51.8 | 6.5 | 38.4 | 3.3 | 834 |
| 35-22-7-2 | 72.2 | 3.8 | 19.2 | 4.8 | 582 | 36-57-13-1 | 60.8 | 7.9 | 29.2 | 2.0 | 711 |
| 35-24-1-4 | 81.4 | 4.6 | 3.1 | 10.9 | 516 | 36-69-7-19 | 49.1 | 7.8 | 12.7 | 30.3 | 879 |
| 35-26-1-2 | 85.7 | 5.3 | 3.3 | 5.7 | 490 | 36-72-2-2 | 76.6 | 12.8 | 5.7 | 4.9 | 564 |
| 2-2 | 83.0 | 5.1 | 6.3 | 5.5 | 506 | 37-25-1-3 | 84.3 | 4.7 | 3.0 | 8.0 | 527 |
| 3-4 | 76.3 | 4.7 | 8.7 | 10.2 | 550 | 37-26-1-2 | 86.4 | 5.1 | 3.1 | 5.4 | 514 |
| 35-27-4-1 | 80.0 | 5.1 | 12.2 | 2.7 | 525 | 4-6 | 71.8 | 4.2 | 10.4 | 13.6 | 618 |
| 6-5 | 68.5 | 4.4 | 15.7 | 11.4 | 613 | 37-27-1-5 | 79.7 | 4.8 | 2.9 | 12.6 | 557 |
| 35-28-1-2 | 85.4 | 5.7 | 3.2 | 5.7 | 492 | 37-28-2-4 | 79.3 | 5.0 | 5.7 | 10.0 | 560 |
| 3-2 | 80.1 | 5.3 | 9.2 | 5.3 | 524 | 37-30-3-2 | 80.7 | 5.4 | 8.7 | 5.1 | 550 |
| 4-4 | 74.0 | 4.9 | 11.3 | 9.8 | 568 | 37-32-4-2 | 78.2 | 5.6 | 11.3 | 4.9 | 568 |
| 35-29-3-3 | 77.9 | 5.4 | 8.9 | 7.8 | 539 | 4 | 74.5 | 5.4 | 10.7 | 9.4 | 596 |
| 4-3 | 75.7 | 5.2 | 11.5 | 7.6 | 555 | 37-33-4-3 | 76.1 | 5.7 | 11.0 | 7.2 | 583 |
| 35-30-1-2 | 85.0 | 6.1 | 3.2 | 5.7 | 494 | 37-34-1-4 | 80.7 | 6.2 | 2.9 | 10.2 | 550 |
| 2-2 | 82.3 | 5.9 | 6.3 | 5.5 | 510 | 2-4 | 78.4 | 6.0 | 5.6 | 9.9 | 566 |
| 35-32-3-4 | 75.6 | 5.7 | 8.6 | 10.0 | 556 | 37-36-9-2 | 68.1 | 5.5 | 22.1 | 4.3 | 652 |
| 35-33-5-1 | 76.8 | 6.0 | 14.6 | 2.6 | 547 | 37-38-9-2 | 67.9 | 5.8 | 22.0 | 4.3 | 654 |
| 35-36-5-2 | 74.5 | 6.4 | 14.2 | 4.9 | 564 | 37-47-13-1 | 62.3 | 6.6 | 29.2 | 1.9 | 713 |
| 9-2 | 66.9 | 5.7 | 22.9 | 4.5 | 628 | 37-49-14-1 | 60.7 | 6.7 | 30.6 | 1.9 | 731 |
| 35-38-6-2 | 72.1 | 6.5 | 16.5 | 4.8 | 582 | 37-53-11-1 | 64.6 | 7.7 | 25.6 | 2.0 | 687 |
| 35-40-6-4 | 68.6 | 6.5 | 15.7 | 9.1 | 612 | 38-24-4-2 | 79.7 | 4.2 | 11.2 | 4.9 | 572 |
| 35-45-6-3 | 69.6 | 7.5 | 15.9 | 7.0 | 603 | 38-28-3-4 | 77.5 | 4.8 | 8.2 | 9.5 | 588 |
| 12-1 | 62.6 | 6.7 | 26.6 | 2.1 | 671 | 38-33-1-3 | 83.4 | 6.0 | 2.9 | 7.7 | 547 |
| 35-47-13-1 | 61.0 | 6.8 | 30.2 | 2.0 | 689 | 38-34-5-2 | 76.1 | 5.7 | 13.4 | 4.7 | 598 |
| 35-69-3-1 | 76.2 | 12.5 | 8.7 | 2.5 | 551 | 38-40-1-8 | 73.1 | 6.4 | 2.6 | 17.9 | 624 |
| 35-71-1-1 | 80.6 | 13.6 | 3.1 | 2.7 | 521 | 38-44-2-4 | 77.5 | 7.5 | 5.4 | 9.5 | 588 |
| 35-72-1-2 | 78.4 | 13.4 | 3.0 | 5.2 | 536 | 12-2 | 63.3 | 6.1 | 26.7 | 3.9 | 720 |
| 36-6-27-14 | 40.5 | 0.6 | 40.5 | 18.4 | 1066 | 38-46-2-4 | 77.3 | 7.8 | 5.4 | 9.5 | 599 |
| 36-20-7-4 | 69.7 | 3.2 | 18.1 | 9.0 | 620 | 38-47-12-1 | 64.3 | 6.6 | 27.1 | 2.0 | 709 |
| 36-24-2-6 | 75.5 | 4.2 | 5.6 | 14.7 | 572 | 38-49-12-1 | 64.1 | 6.9 | 27.0 | 2.0 | 711 |
| 36-25-10-3 | 65.5 | 3.8 | 24.3 | 6.4 | 659 | 38-51-13-1 | 62.6 | 7.0 | 28.5 | 1.9 | 729 |
| 36-26-4-4 | 74.7 | 4.5 | 11.1 | 9.7 | 578 | 39-28-4-4 | 76.0 | 4.5 | 10.4 | 9.1 | 616 |
| 36-27-1-3 | 83.5 | 5.2 | 3.1 | 8.1 | 517 | 39-32-1-6 | 78.0 | 5.3 | 2.7 | 14.0 | 600 |
| 36-28-2-2 | 83.1 | 5.4 | 6.1 | 5.4 | 520 | 6-4 | 71.8 | 4.9 | 14.7 | 8.6 | 652 |
| 5-2 | 76.1 | 4.9 | 14.1 | 4.9 | 568 | 39-35-3-3 | 78.9 | 5.9 | 8.1 | 7.1 | 593 |
| 6-4 | 70.6 | 4.6 | 15.7 | 9.1 | 612 | 39-40-2-4 | 78.5 | 6.7 | 5.4 | 9.4 | 596 |
| 9-14 | 54.0 | 3.5 | 18.0 | 24.5 | 800 | 11-2 | 65.7 | 5.6 | 24.7 | 3.9 | 712 |
| 36-29-4-3 | 76.2 | 5.1 | 11.3 | 7.4 | 567 | 39-46-3-4 | 75.7 | 7.4 | 7.8 | 9.1 | 618 |
| 10-3 | 65.2 | 4.4 | 24.1 | 6.3 | 663 | 39-48-4-4 | 73.6 | 7.5 | 10.1 | 8.8 | 636 |
| 36-30-1-4 | 80.9 | 5.6 | 3.0 | 10.5 | 534 | 39-51-15-1 | 60.5 | 6.6 | 31.0 | 1.8 | 773 |
| 2-4 | 78.5 | 5.4 | 5.8 | 10.2 | 550 | 39-53-10-1 | 67.3 | 7.6 | 23.0 | 2.0 | 695 |
| 4-2 | 78.0 | 5.4 | 11.5 | 5.1 | 554 | 40-26-16-8 | 54.9 | 3.0 | 29.3 | 12.8 | 874 |
| 7-2 | 71.7 | 5.0 | 18.6 | 4.6 | 602 | 40-27-1-3 | 85.0 | 4.8 | 2.8 | 7.4 | 565 |
| 9-4 | 65.2 | 4.5 | 21.8 | 8.5 | 662 | 40-28-2-2 | 84.5 | 4.9 | 5.6 | 4.9 | 568 |
| 36-33-12-3 | 61.8 | 4.7 | 27.5 | 6.0 | 466 | 4-2 | 80.0 | 4.7 | 10.6 | 4.7 | 600 |
| 36-36-6-2 | 73.0 | 6.1 | 16.2 | 4.7 | 592 | 40-30-6-4 | 72.5 | 4.5 | 14.5 | 8.5 | 662 |
| 6 | 66.7 | 5.6 | 14.8 | 12.9 | 648 | 40-31-6-1 | 77.3 | 5.0 | 15.5 | 2.2 | 621 |
| 36-38-5-4 | 71.3 | 6.3 | 13.2 | 9.2 | 606 | 40-32-8-4 | 69.0 | 4.6 | 18.4 | 8.0 | 696 |
| 36-39-16-3 | 56.2 | 5.1 | 33.3 | 5.4 | 769 | 40-33-2-1 | 85.9 | 5.9 | 5.7 | 2.5 | 559 |
| 36-40-6-2 | 72.5 | 6.7 | 16.1 | 4.7 | 596 | 40-34-12-4 | 63.0 | 4.5 | 25.2 | 7.3 | 762 |
| 7-2 | 70.6 | 6.5 | 18.3 | 4.6 | 612 | 40-36-4-2 | 79.0 | 5.9 | 10.5 | 4.6 | 608 |
| 36-42-6-2 | 72.2 | 7.0 | 16.0 | 4.7 | 598 | 40-38-1-4 | 81.4 | 6.4 | 2.7 | 9.5 | 590 |
| 36-43-10-7 | 58.9 | 5.8 | 21.8 | 13.4 | 733 | 8-4 | 68.4 | 5.4 | 18.2 | 8.0 | 702 |
| 36-44-8-2 | 68.3 | 7.0 | 20.2 | 4.4 | 632 | 40-40-6-6 | 68.6 | 5.7 | 13.7 | 12.0 | 700 |
| 36-46-6-4 | 68.6 | 7.3 | 15.2 | 8.9 | 630 | 40-41-9-3 | 67.9 | 5.8 | 20.4 | 5.9 | 707 |
| 36-47-11-1 | 64.6 | 7.1 | 26.3 | 2.1 | 669 | 40-42-9-8 | 61.7 | 5.4 | 18.5 | 14.4 | 778 |
| 36-49-12-1 | 62.9 | 7.1 | 28.0 | 2.0 | 687 | 40-46-3-4 | 76.2 | 7.3 | 7.6 | 8.9 | 630 |

| C-H-O-N | C% | H% | O% | N% | M.G. | C-H-O-N | C% | H% | O% | N% | M.G. |
|-------------|------|------|------|------|------|-------------|------|------|------|------|------|
| 40-46-8-2 | 70,4 | 6,7 | 11,8 | 4,1 | 682 | 44-65-4-1 | 78,8 | 9,7 | 9,5 | 2,0 | 671 |
| 9-12 | 57,3 | 5,5 | 17,2 | 20,0 | 898 | 44-84-4-2 | 75,0 | 11,9 | 9,1 | 4,0 | 704 |
| 40-47-6-11 | 61,8 | 6,0 | 12,3 | 19,9 | 777 | 45-33-3-3 | 81,4 | 5,0 | 7,2 | 6,3 | 663 |
| 12-1 | 65,5 | 6,4 | 26,2 | 1,9 | 733 | 45-34-9-18 | 55,7 | 3,5 | 14,8 | 26,0 | 970 |
| 40-48-4-4 | 74,1 | 7,4 | 9,9 | 8,6 | 648 | 45-44-2-6 | 77,1 | 6,3 | 4,6 | 12,0 | 700 |
| 6 | 71,0 | 7,1 | 9,5 | 12,4 | 676 | 45-48-10-6 | 62,8 | 5,6 | 18,6 | 13,0 | 860 |
| 10 | 65,6 | 6,5 | 8,7 | 19,1 | 732 | 45-53-18-5 | 56,8 | 5,6 | 30,3 | 7,3 | 951 |
| 40-49-4-11 | 64,3 | 6,6 | 8,6 | 20,5 | 747 | 46-35-6-3 | 76,1 | 4,8 | 13,2 | 5,8 | 725 |
| 40-50-4-4 | 73,9 | 7,7 | 9,8 | 8,6 | 650 | 46-37-6-3 | 75,9 | 5,1 | 13,2 | 5,8 | 727 |
| 40-52-5-2 | 75,0 | 8,1 | 12,5 | 4,4 | 640 | 46-45-3-7 | 74,3 | 6,0 | 6,5 | 13,2 | 743 |
| 40-53-14-1 | 62,3 | 6,9 | 29,0 | 1,8 | 771 | 46-46-9-8 | 64,6 | 5,4 | 16,9 | 13,1 | 854 |
| 40-54-8-4 | 66,8 | 7,5 | 17,8 | 7,8 | 718 | 46-54-7-4 | 71,3 | 7,0 | 14,5 | 7,2 | 774 |
| 40-56-12-2 | 63,5 | 7,4 | 26,4 | 3,7 | 756 | 46-60-3-4 | 77,1 | 8,4 | 6,7 | 7,8 | 716 |
| 21-4 | 51,7 | 6,0 | 36,2 | 6,0 | 928 | 46-74-4-2 | 76,9 | 10,3 | 8,9 | 3,9 | 718 |
| 40-61-2-1 | 81,8 | 10,4 | 5,4 | 2,4 | 587 | 46-83-15-1 | 62,1 | 9,3 | 27,0 | 1,6 | 889 |
| 40-64-4-2 | 75,5 | 10,0 | 10,0 | 4,4 | 636 | 47-36-4-4 | 78,3 | 6,0 | 8,8 | 7,8 | 720 |
| 41-26-1-2 | 87,2 | 5,0 | 2,8 | 5,0 | 564 | 47-44-3-6 | 76,2 | 5,9 | 6,5 | 11,3 | 740 |
| 41-32-4-2 | 79,9 | 5,2 | 10,4 | 4,5 | 616 | 47-70-19-4 | 56,7 | 7,0 | 30,6 | 5,6 | 994 |
| 41-33-10-1 | 70,4 | 4,7 | 22,9 | 2,0 | 699 | 48-32-19-6 | 57,8 | 3,2 | 30,5 | 8,4 | 996 |
| 41-35-10-5 | 65,0 | 4,6 | 21,1 | 9,2 | 757 | 48-38-5-4 | 76,8 | 5,1 | 10,7 | 7,4 | 750 |
| 41-37-10-5 | 64,8 | 4,8 | 21,1 | 9,2 | 759 | 48-39-3-3 | 81,7 | 5,5 | 6,8 | 6,0 | 705 |
| 41-39-1-3 | 83,5 | 6,6 | 2,8 | 7,1 | 589 | 9-11 | 63,1 | 4,3 | 15,8 | 16,8 | 913 |
| 11-5 | 63,3 | 5,0 | 22,6 | 9,0 | 777 | 10-1 | 73,0 | 4,9 | 20,3 | 1,8 | 789 |
| 41-41-4-3 | 77,0 | 6,4 | 10,0 | 6,6 | 639 | 18-1 | 62,8 | 4,3 | 31,4 | 1,5 | 917 |
| 41-42-6-6 | 68,9 | 5,9 | 13,4 | 11,8 | 714 | 48-42-27-4 | 52,1 | 3,8 | 39,0 | 5,1 | 1106 |
| 41-44-9-2 | 69,5 | 6,2 | 20,3 | 4,0 | 708 | 48-44-8-2 | 74,2 | 5,7 | 16,5 | 3,6 | 776 |
| 41-47-10-1 | 69,0 | 6,6 | 22,5 | 1,9 | 713 | 48-48-2-4 | 80,9 | 6,7 | 4,5 | 7,9 | 712 |
| 41-50-4-10 | 65,9 | 6,7 | 8,6 | 18,8 | 746 | 48-58-13-16 | 54,0 | 5,4 | 19,5 | 21,0 | 1066 |
| 41-56-6-12 | 59,1 | 9,1 | 11,5 | 20,2 | 832 | 48-60-9-2 | 71,3 | 7,4 | 17,8 | 3,5 | 808 |
| 41-81-9-1 | 67,3 | 11,1 | 19,7 | 1,9 | 731 | 49-37-6-7 | 71,8 | 4,5 | 11,7 | 12,0 | 819 |
| 41-84-6-12 | 58,5 | 10,0 | 11,4 | 20,0 | 840 | 50-33-2-5 | 81,6 | 4,5 | 4,3 | 9,5 | 735 |
| 42-21-3-1 | 68,9 | 3,6 | 8,2 | 2,3 | 587 | 50-47-17-11 | 55,9 | 4,4 | 25,3 | 14,3 | 1073 |
| 42-28-2-6 | 77,8 | 4,3 | 4,9 | 13,0 | 648 | 50-60-5-4 | 75,4 | 7,5 | 10,0 | 7,0 | 796 |
| 42-29-6-7 | 69,3 | 4,0 | 13,2 | 13,5 | 727 | 50-64-5-4 | 75,0 | 8,0 | 10,0 | 7,0 | 800 |
| 42-32-6-2 | 76,4 | 4,8 | 14,5 | 4,2 | 660 | 51-48-6-6 | 72,8 | 5,7 | 11,4 | 10,0 | 840 |
| 42-34-4-4 | 76,6 | 5,2 | 9,7 | 8,5 | 658 | 51-57-9-3 | 71,6 | 6,7 | 16,8 | 4,9 | 855 |
| 8-4 | 69,8 | 4,7 | 17,7 | 7,8 | 722 | 52-29-12-1 | 72,6 | 3,4 | 22,4 | 1,6 | 859 |
| 42-37-2-3 | 82,0 | 6,0 | 5,2 | 6,8 | 615 | 52-57-7-7 | 70,0 | 6,4 | 12,5 | 11,0 | 891 |
| 42-40-17-10 | 52,7 | 4,2 | 28,4 | 14,6 | 956 | 52-83-13-1 | 67,2 | 8,9 | 22,4 | 1,5 | 929 |
| 42-42-7-6 | 67,9 | 5,7 | 15,1 | 11,3 | 742 | 52-93-18-1 | 61,2 | 9,1 | 28,3 | 1,4 | 1019 |
| 42-44-6-6 | 69,2 | 6,0 | 13,2 | 11,5 | 728 | 52-95-15-1 | 64,1 | 9,8 | 24,6 | 1,4 | 973 |
| 42-46-5-4 | 73,5 | 6,7 | 11,7 | 8,1 | 686 | 53-38-6-4 | 77,0 | 4,6 | 11,6 | 6,8 | 826 |
| 7-4 | 70,2 | 6,4 | 15,6 | 7,8 | 718 | 53-42-9-2 | 74,8 | 4,9 | 16,9 | 3,3 | 850 |
| 42-48-10-10 | 59,1 | 5,6 | 18,8 | 16,4 | 852 | 54-56-9-2 | 74,0 | 6,4 | 16,4 | 3,2 | 876 |
| 42-52-8-4 | 68,1 | 7,0 | 17,3 | 7,6 | 740 | 54-59-15-1 | 67,4 | 6,1 | 25,0 | 1,4 | 961 |
| 42-54-6-4 | 71,0 | 7,6 | 13,5 | 7,8 | 710 | 54-63-9-3 | 72,2 | 7,0 | 16,0 | 4,7 | 897 |
| 42-63-14-1 | 62,6 | 7,8 | 27,8 | 1,7 | 805 | 54-78-45-4 | 43,1 | 5,2 | 47,9 | 3,7 | 1502 |
| 42-68-7-2 | 70,8 | 9,6 | 15,7 | 3,9 | 712 | 54-87-21-1 | 59,7 | 8,0 | 31,0 | 1,2 | 1065 |
| 43-51-12-1 | 66,7 | 6,6 | 34,8 | 1,8 | 773 | 55-43-1-3 | 86,7 | 5,6 | 2,1 | 5,5 | 761 |
| 44-29-10-3 | 69,6 | 3,8 | 21,1 | 5,5 | 759 | 55-46-9-2 | 75,2 | 5,2 | 16,4 | 3,2 | 878 |
| 44-30-2-4 | 81,7 | 4,6 | 4,9 | 8,7 | 846 | 55-85-22-17 | 49,4 | 6,4 | 26,4 | 17,8 | 1335 |
| 44-32-2-2 | 85,1 | 5,2 | 5,2 | 4,5 | 620 | 55-92-16-2 | 63,7 | 8,9 | 24,7 | 2,7 | 1036 |
| 44-34-2-4 | 81,3 | 5,2 | 4,9 | 8,6 | 650 | 55-109-22-9 | 52,9 | 8,7 | 28,2 | 10,1 | 1247 |
| 44-36-4-2 | 80,6 | 5,5 | 9,8 | 4,3 | 656 | 56-47-4-3 | 81,5 | 5,7 | 7,7 | 5,1 | 825 |
| 44-39-3-3 | 80,4 | 5,9 | 7,3 | 6,4 | 657 | 56-54-17-12 | 57,6 | 4,6 | 23,3 | 14,4 | 1166 |
| 44-47-2-3 | 81,4 | 7,2 | 4,9 | 6,5 | 649 | 21-12 | 54,6 | 4,4 | 27,3 | 13,7 | 1230 |
| 44-52-9-2 | 70,2 | 6,9 | 19,1 | 3,7 | 752 | 56-56-11-2 | 72,1 | 6,0 | 18,9 | 3,0 | 932 |
| 44-60-12-2 | 65,3 | 7,4 | 23,8 | 3,5 | 808 | 56-103-15-1 | 65,3 | 10,0 | 23,3 | 1,3 | 1029 |
| 44-63-18-1 | 59,1 | 7,0 | 32,2 | 1,6 | 893 | 57-110-15-2 | 64,4 | 10,4 | 22,6 | 2,6 | 1062 |

| C—H—O—N | C% | H% | O% | N% | M.G. | C—H—O—N | C% | H% | O% | N% | M.G. |
|--------------|------|------|------|------|------|---------------|------|------|------|------|------|
| 60—48—11—9 | 67,3 | 4,5 | 16,4 | 11,8 | 1070 | 80—34—36—16 | 53,5 | 1,9 | 32,1 | 12,5 | 1794 |
| 60—86—15—4 | 65,3 | 7,8 | 21,8 | 5,1 | 1102 | 80—43—24—11 | 62,3 | 2,8 | 24,9 | 10,0 | 1541 |
| 64—100—20—16 | 54,4 | 7,1 | 22,7 | 15,8 | 1412 | 80—82—17—16 | 62,4 | 5,3 | 17,7 | 14,6 | 1538 |
| 65—128—19—2 | 62,9 | 10,3 | 24,5 | 2,3 | 1240 | 80—86—17—20 | 60,1 | 5,4 | 17,0 | 17,5 | 1598 |
| 66—51—21—1 | 66,4 | 4,3 | 28,2 | 1,1 | 1193 | 80—90—17—24 | 57,9 | 5,4 | 16,4 | 20,3 | 1658 |
| 66—88—21—2 | 63,7 | 7,1 | 27,0 | 2,2 | 1244 | 80—92—16—4 | 70,4 | 6,7 | 18,8 | 4,1 | 1364 |
| 68—68—17—4 | 60,3 | 5,0 | 20,1 | 14,5 | 1352 | 98—94—17—16 | 66,6 | 5,3 | 15,4 | 12,7 | 1766 |
| 68—76—12—4 | 71,6 | 6,7 | 16,8 | 4,9 | 1140 | 102—149—38—31 | 56,7 | 6,2 | 25,2 | 17,9 | 2415 |
| 68—78—7—8 | 73,0 | 7,0 | 10,0 | 10,0 | 1118 | 102—151—39—31 | 50,3 | 6,2 | 25,6 | 17,8 | 2433 |
| 68—80—10—4 | 73,4 | 7,2 | 14,4 | 5,0 | 1112 | 102—208—19—4 | 68,4 | 11,5 | 17,0 | 3,1 | 1790 |
| 68—88—10—4 | 72,9 | 7,8 | 14,3 | 5,0 | 1120 | 104—98—17—16 | 67,8 | 5,3 | 14,8 | 12,1 | 1842 |
| 70—138—12—2 | 70,1 | 11,5 | 16,0 | 2,3 | 1198 | 108—104—29—28 | 55,2 | 8,3 | 19,8 | 16,7 | 2346 |
| 70—140—13—2 | 69,1 | 11,5 | 17,1 | 2,3 | 1216 | 110—102—17—16 | 68,8 | 5,3 | 14,2 | 11,7 | 1918 |
| 72—84—12—4 | 72,2 | 7,0 | 16,1 | 4,7 | 1196 | 136—136—16—8 | 76,4 | 6,4 | 11,9 | 5,2 | 2136 |
| 76—124—29—24 | 49,7 | 6,8 | 25,3 | 18,2 | 1836 | 136—148—22—8 | 72,7 | 6,6 | 15,7 | 5,0 | 2244 |
| 78—180—32—24 | 47,6 | 9,2 | 26,1 | 17,1 | 1964 | | | | | | |

Register der Eigennamen.

| | | |
|--|---|--|
| Abietin C ₄₄ H ₅₀ | Achroglobulin | Akridinsäure C ₁₁ H ₇ O ₄ N |
| — C ₄₄ H ₅₂ | — C ₄₃₉ H ₇₀₂ O ₁₅₃ N ₁₆₅ S | Akridon C ₁₂ H ₉ ON |
| — C ₄₄ H ₅₄ | — C ₂₂₁ H ₃₁₇ O ₁₀₃ N ₁₀₄ S | Akrit C ₈ H ₁₀ O ₂ |
| — C ₄₄ H ₅₆ | Achroodextrin C ₆ H ₁₀ O ₅ | Akrolein C ₃ H ₂ O |
| — C ₄₄ H ₅₈ | — C ₉₀ H ₁₄₇ O ₄₁ | Akropinakon C ₈ H ₁₀ O ₂ |
| — C ₄₄ H ₆₀ | Achrooglykogen C ₅ H ₁₀ O ₅ | Akrosamin C ₈ H ₁₃ O ₂ N |
| Abietinsäure C ₁₉ H ₂₉ O ₂ | Aconin C ₂₄ H ₃₂ O ₁₀ N | Akrose C ₆ H ₁₂ O ₆ |
| Abrotin C ₂₁ H ₂₉ O ₂ N ₂ | Aconitin C ₂₄ H ₄₇ O ₁₁ N | Akrosan C ₈ H ₁₀ O ₂ |
| Abainthiin C ₁₄ H ₂₀ O ₄ | Adenin C ₅ H ₅ N ₅ | Akrothialdin C ₈ H ₁₂ NS ₂ |
| — C ₁₀ H ₁₄ O ₄ | Adipinsäure C ₈ H ₁₆ O ₄ | Akryliureid C ₃ H ₁₀ O ₂ N ₂ |
| Acekaffin C ₈ H ₁₁ O ₂ N ₂ | Adipinsäure C ₈ H ₁₆ O ₄ | Akrylkolloid C ₂ H ₂ O ₂ |
| Acekonitsäure C ₈ H ₈ O ₆ | Adipomalsäure C ₈ H ₁₀ O ₅ | Akrylmilchsäure C ₂ H ₃ O ₂ |
| Acenaphthen C ₁₂ H ₁₀ | Adipoweiensäure C ₈ H ₁₀ O ₆ | Akrylsäure C ₃ H ₄ O ₂ |
| Acenaphthylen C ₁₂ H ₈ | Adonin C ₇ H ₁₀ O ₂ | Alakreatin C ₄ H ₉ O ₂ N ₂ |
| Acetal C ₆ H ₁₂ O ₂ | Adonit C ₅ H ₁₂ O ₅ | Alakreatinin C ₄ H ₇ ON ₂ |
| Acetaldehydglykose C ₅ H ₁₀ O ₇ | Aeolosomin | Alanin C ₂ H ₅ O ₂ N |
| Acetaldehydin C ₁₀ H ₁₂ N ₂ | C ₂₉₀ H ₄₃₀ O ₁₃₃ N ₁₀₉ S ₂ Fe | Alantol C ₁₀ H ₁₆ O |
| Acetodiphosphorig Säure | Aepfelsäure C ₄ H ₆ O ₅ | Alantolsäure C ₁₂ H ₂₂ O ₂ |
| C ₂ H ₂ O ₂ P ₂ | Aescigenin C ₁₇ H ₂₀ O ₂ | Alantsäure C ₁₁ H ₂₂ O ₂ |
| Acetoguanamid C ₄ H ₇ O ₂ N ₂ | Aescinsäure C ₂₄ H ₄₀ O ₁₂ | Albamin C ₂₇ H ₄₉ O ₆ N ₂ |
| Acetoguanid C ₄ H ₆ ON ₄ | Aescioxalsäure C ₇ H ₈ O ₄ | Alban C ₁₀ H ₁₀ O |
| Acetol C ₃ H ₈ O ₂ | Aeskorcein C ₅ H ₇ O ₂ N | Albaspidin C ₂₂ H ₂₆ O ₇ |
| Aceton C ₂ H ₆ O | Aeskorcin C ₆ H ₈ O ₄ | Albopannin C ₂₁ H ₂₄ O ₇ |
| Acetonbenzil C ₁₇ H ₁₆ O ₂ | Aeskuletin C ₉ H ₁₀ O ₄ | Albumin C ₇₂ H ₁₁₃ O ₂₇₈ N ₁₆ S |
| Acetonbrenztraubensäure | Aeskuletinsäure C ₉ H ₁₂ O ₇ | — C ₉₀ H ₁₅₆ O ₂₉₈ N ₂₂ S |
| C ₂ H ₁₀ O ₂ | Aeskulin C ₁₉ H ₁₆ O ₆ | — C ₁₄₄ H ₂₇₀ O ₄₆₈ N ₂₄ S |
| Acetonchloroform C ₂ H ₃ Cl ₃ | Aesthesin C ₁₀ H ₁₆ O ₂ N | — C ₂₀₄ H ₃₂₂ O ₆₆₈ N ₃₇ S |
| Acetondicisigsäure C ₇ H ₁₀ O ₅ | Aethan C ₂ H ₆ | — C ₂₂₈ H ₃₆₈ O ₇₂₈ N ₃₅ S |
| Acetondioxaläure C ₇ H ₈ O ₇ | Aethebenin C ₁₀ H ₂₀ O ₂ N | Aldehydblau C ₃₇ H ₅₀ O ₈ N ₂ Cl ₂ |
| Acetonin C ₉ H ₁₈ N ₂ | Aethebenol C ₁₀ H ₁₄ O ₂ | Aldehydbromal C ₄ H ₆ O ₂ Br ₂ |
| Acetonrhamosid C ₈ H ₁₀ O ₂ | Aethen C ₂ H ₄ | Aldehydcollidin C ₈ H ₁₁ N |
| Acetonsäure C ₂ H ₄ O ₂ | Aethionsäure C ₂ H ₂ O ₂ S ₂ | Aldehydgrün C ₃₁ H ₅₅ O ₃ N ₂ S ₂ |
| Acetonuraminsäure | Aethocodin C ₂₀ H ₂₅ O ₃ N | — C ₃₂ H ₅₀ O ₃ N ₂ S |
| C ₈ H ₁₀ O ₂ N ₂ | Aethylchinovosid C ₈ H ₁₆ O ₅ | Aldehydharz C ₁₅ H ₁₆ O |
| Acetonybiuret C ₈ H ₁₀ N ₂ | Aethylgalaktosid C ₈ H ₁₆ O ₆ | — C ₄₈ H ₆₀ O ₂ |
| Acetonylengenol C ₁₅ H ₁₆ O ₂ | Aethylglykosid C ₈ H ₁₆ O ₅ | — C ₄₈ H ₆₀ O ₁₀ |
| Acetonylisoeugenol C ₁₃ H ₁₆ O ₃ | Aethylidenurethan | — C ₄₈ H ₆₄ O ₁₇ |
| Acetophenin C ₂₂ H ₁₇ N | C ₄ H ₁₀ O ₂ N ₂ | Aldehydovanillinsäure |
| Acetophenon C ₈ H ₁₀ O | Aethylrhamosid C ₈ H ₁₀ O ₅ | C ₉ H ₈ O ₅ |
| Acetophenonvanillin C ₁₆ H ₁₄ O ₄ | Aethylscfölyxyd | Alfol C ₄ H ₈ O ₂ |
| Acetovanillon C ₂ H ₁₀ O ₂ | C ₃ H ₁₀ ON ₂ S ₂ | Aleuritinsäure C ₁₈ H ₂₆ O ₄ |
| Acetoveratron C ₁₀ H ₁₂ O ₂ | Agaricinsäure C ₁₀ H ₈ O ₂ | Alizarin C ₁₄ H ₈ O ₄ |
| Acetuluminsäure C ₇ H ₁₂ O ₂ | Agaricol C ₁₀ H ₁₆ O | Alizarinamid C ₁₄ H ₁₀ O ₂ N |
| Aceturssäure C ₈ H ₇ O ₂ N | Agavose C ₁₂ H ₂₂ O ₁₁ | Alizarinblau C ₁₄ H ₈ O ₂ N |
| Acetylän C ₂ H ₄ | Azoninadin C ₁₀ H ₁₄ O ₂ | Alizarinblauamid C ₁₇ H ₁₀ O ₂ N ₂ |
| Achillein C ₂₀ H ₂₈ O ₁₅ N ₂ | Akonitanilsäure C ₁₉ H ₁₉ O ₄ N | Alizarincyanin C ₁₄ H ₈ O ₂ |
| Achillethin C ₁₁ H ₁₇ O ₄ N | Akonitsäure C ₈ H ₈ O ₆ | Alizaringelb C ₁₃ H ₁₀ O ₇ |
| Achrodäscin C ₃₇ H ₄₇ O ₂₃ | Akonsäure C ₈ H ₁₀ O ₄ | Alizarin grün C ₁₇ H ₁₀ O ₄ NS |
| | Akridin C ₁₃ H ₉ N | |

- Alizarinimid $C_{14}H_7O_2N$
 Alizarinindigblau $C_{17}H_9O_2N$
 Alkalchlorophyll $C_{57}H_{57}O_7N_7$
 Alkannin $C_8H_7O_4$
 Allansäure $C_4H_7O_2N_3$
 Allantoin $C_4H_6O_2N_2$
 Allantoininsäure $C_4H_5O_4N_2$
 Allantoinsäure $C_2H_3O_2N_3$
 Allantoxansäure $C_4H_5O_4N_3$
 Allantursäure $C_2H_3O_2N_3$
 Allitursäure $C_6H_9O_4N_4$
 Allocampholytischesäure
 $C_9H_7O_2$
 Allocinchonin $C_{19}H_{27}ON_2$
 Allofluorescein $C_{14}H_9O_6$
 — $C_{20}H_{11}O_6$
 Allokaffein $C_8H_9O_2N_3$
 Allokaffursäure $C_7H_{11}O_4N_3$
 Allolemonal $C_{10}H_{15}O$
 Allophanensäure $C_4H_7O_2N_2$
 Allophanylweinsäure
 $C_6H_8O_5N_2$
 Alloschleimsäure $C_6H_{10}O_4$
 Alloxan $C_4H_3O_2N_3$
 Alloxansäure $C_4H_3O_5N_3$
 Alloxantin $C_4H_3O_2N_3$
 Alloxantinharzstoff
 $C_{12}H_{10}O_{11}N_3$
 Alloxazin $C_4H_3O_2N_4$
 — $C_{10}H_8O_2N_4$
 Alloximmsäure $C_4H_5O_4$
 Allursäure $C_3H_4O_2N_4$
 — $C_4H_3O_2N_4$
 Allylcu C_2H_4
 Alloresinsäure $C_7H_5O_6N$
 — $C_8H_{14}O_7$
 Aloëretinsäure $C_{20}H_{31}O_{15}$
 Aloëtinsäure $C_8H_{14}O_2N_4$
 Aloëxanthin $C_{12}H_{10}O_6$
 Aloin $C_{17}H_{15}O_7$
 Alonigrin $C_{22}H_{18}O_8$
 Alorcinsäure $C_8H_{10}O_3$
 Aloresittanol $C_{22}H_{25}O_6$
 Alpinin $C_{17}H_{19}O_4$
 Alstonin $C_{21}H_{30}O_2N_2$
 Amalinsäure $C_7H_{14}O_2N_4$
 Amanitin $C_8H_{13}O_2N$
 — $C_{15}H_{18}O_6$
 Amaril $C_{21}H_{18}N_3$
 Amaror $C_{28}H_{20}N_2$
 Amarsäure $C_{23}H_{27}O_3$
 Amasantin $C_8H_7O_2N_4$
 Ambraïn $C_{25}H_{18}O$
 Amcensäure CH_2O_7
 Amethensäure $C_7H_{11}O_2$
 Amidoazophenyl $C_8H_5N_2$
 Amisatin $C_{10}H_{15}O_6N_{11}$
 Ammelid $C_8H_9O_2N_3$
 Ammelidoxisigsäure
 $C_2H_4O_2N_3$
 Ammelin $C_8H_9ON_2$
 Ammoncheldonsäure
 C_7H_5ON
 Ammoresittanol $C_{11}H_{20}O_3$
- Amphelochroänsäure**
 $C_{17}H_{18}O_{10}$
 — $C_{15}H_{16}O_{10}$
 — $C_{14}H_{12}O_{16}$
 Amphikraämin $C_8H_{19}O_4N_7$
 Amphopepton
 $C_{108}H_{178}O_{45}N_{50}S$
 Amydekyensäure $C_{10}H_{18}O_2$
 Amygdalin $C_{20}H_{27}O_{11}N$
 Amygdalinsäure $C_{20}H_{19}O_{13}$
 Amygdophenin $C_{17}H_{17}O_3N$
 Amylan $C_6H_{10}O_5$
 Amylen C_2H_5O
 Amylvaleron $C_{14}H_{26}O$
 Amylodextrin $C_{36}H_{67}O_{31}$
 Amyloid $C_{17}H_{30}O_{15}$
 Amylum $C_3H_3O_{10}$
 Amyrilen $C_{20}H_{28}$
 Amyrin $C_{20}H_{26}O$
 Amyron $C_{26}H_{46}O$
 Anabinthin $C_{18}H_{21}O_4$
 Anacardsäure $C_{22}H_{37}O_5$
 Anagyrin $C_{14}H_{15}O_2N_2$
 Anamirtin $C_{10}H_{14}O_{10}$
 Andromedotoxin $C_{31}H_{50}O_{10}$
 Anemonin $C_{10}H_8O_4$
 Anemonolsäure $C_8H_{11}O_4$
 Anemonsäure $C_{10}H_{10}O_5$
 Anethol $C_{10}H_{12}O$
 Angelaktinsäure $C_3H_5O_3$
 Angelikasäure $C_5H_8O_2$
 Anglicerinsäure $C_8H_{10}O_4$
 Angosturin $C_8H_{12}O_3$
 Angusturöl $C_{12}H_{24}O$
 Anhalin $C_9H_{17}ON$
 Anhalonidin $C_{11}H_{15}O_2N$
 Anhalonin $C_{11}H_{15}O_2N$
 Anhydrocicutin $C_{33}H_{45}O_2N$
 Anhydrocaprinsäure
 $C_{14}H_{18}O_{11}$
 Anhydrodigitoxigenin
 $C_{23}H_{30}O_3$
 Anhydrodigitssäure $C_{10}H_{14}O_2$
 — $C_{11}H_{17}O_2$
 Anhydroecgonin $C_8H_{11}O_2N$
 Anhydrocneathepit $C_5H_{10}O_2$
 Anhydrogeraniol $C_{16}H_{18}O$
 Anhydrogkopyrogallol
 $C_4H_6O_4$
 Anhydrohomocoininsäure
 $C_8H_{15}ON$
 Anhydrolupinin $C_{21}H_{25}ON_2$
 Anilbenzyl $C_{20}H_{25}ON$
 Anilbenzoin $C_{20}H_{27}ON$
 Anilin C_6H_7N
 Anilinalloxan $C_{10}H_6O_4N_3$
 Anilinschwarz $C_{20}H_{25}N_5$
 Anilpapaverinsäure
 $C_{21}H_{18}O_2N_2$
 Anilvitoninsäure $C_{11}H_7O_2N$
 Anilylmelamin $C_7H_{21}N_6$
 Anisalcuranarin $C_{16}H_{19}O_3$
 Anisaldehyd $C_8H_8O_2$
 Anisalpaenol $C_{17}H_{18}O_4$
- Anisamidin $C_8H_{10}ON_2$
 Aniscampher $C_{17}H_{26}O$
 Anisumhin $C_{12}H_{14}O_2$
 Anishydramid $C_{21}H_{24}O_2N_2$
 Anisil $C_6H_5O_4$
 Anisiläure $C_{16}H_{16}O_3$
 Anisin $C_9H_9O_2N_2$
 Anisodiureid $C_{10}H_{14}O_2N_4$
 Anisoïn $C_{10}H_{11}O_4$
 — $C_{16}H_{16}O_4$
 Anisol C_8H_8O
 Anisolisatin $C_{23}H_{19}O_2N$
 Anissäure $C_8H_8O_2$
 Anisuraminsäure $C_9H_{10}O_2N_2$
 Anisylcoein $C_{18}H_{23}O_5N$
 Anisyltegonin $C_{17}H_{21}O_2N$
 Anisylhydroresorcin $C_{13}H_{14}O_3$
 Anol C_9H_8O
 Anthemen $C_{18}H_{26}$
 Anthemol $C_{13}H_{12}O$
 Anthracen $C_{14}H_{10}$
 Anthrachinolin $C_{17}H_{11}N$
 Anthrachinon $C_{14}H_8O_2$
 Anthrachryson $C_{18}H_{12}O_6$
 Anthracumarin $C_{18}H_{12}O_2$
 Anthraflavinsäure $C_{14}H_8O_4$
 Anthragallol $C_{14}H_8O_5$
 Anthranil C_8H_7ON
 Anthranilcarbonsäure
 $C_8H_7O_2N$
 Anthranilsäure $C_7H_7O_2N$
 Anthrapurpurin $C_{13}H_8O_3$
 Anthrapyridin $C_{10}H_6N$
 Anthrapyridinchinon
 $C_7H_5O_2N$
 Anthraurufin $C_8H_8O_4$
 Anthrol C_7H_7O
 Anthroxanaldehyd $C_8H_5O_2N$
 Anthroxansäure $C_8H_5O_2N$
 Antiaharz $C_4H_5O_2$
 Antialbumid $C_{100}H_{117}O_{37}N_{27}S$
 Antiarigin $C_{31}H_{36}O_3$
 Antiarin $C_{27}H_{37}O_{10}$
 Antiarol $C_8H_7O_4$
 Antiarose $C_8H_7O_2$
 Antiepton $C_{10}H_{15}O_2N_3$
 — $C_{108}H_{128}O_{43}N_{50}S$
 Antipyrin $C_{11}H_{11}ON$
 Antipyrinalloxan $C_{15}H_{14}O_2N_4$
 Apigenin $C_{15}H_{10}O_5$
 Apiin $C_{27}H_{32}O_{10}$
 Apiol $C_{12}H_{14}O_4$
 Apioleure $C_{18}H_{16}O_6$
 Apion $C_8H_6O_4$
 Apionakrylsäure $C_{12}H_{17}O_6$
 Apionerostinsäure $C_{13}H_{14}O_6$
 Apionylglyoxylsäure
 $C_{11}H_{10}O_7$
 Apocanitin $C_{23}H_{25}O_{11}N$
 Apocatin $C_{15}H_{21}O_2N$
 Apocinamin $C_{18}H_{27}ON_2$
 Apocchin $C_{15}H_{27}O_2N_2$
 Apocinchen $C_{19}H_{19}ON$
 Apocinchonin $C_{19}H_{27}ON_2$

Apocinchonidin $C_{10}H_{19}ON_2$
 Apocinchonin $C_{19}H_{29}ON_2$
 Apocodin $C_{14}H_{19}O_2N$
 Apoconchinin $C_{10}H_{17}O_2N_2$
 Apogluceinsäure $C_6H_{10}O_5$
 — $C_{18}H_{23}O_{11}$
 Apoharin $C_4H_7N_2$
 Apoisinchonin $C_{19}H_{29}ON_2$
 Apokaffein $C_8H_7O_2N_3$
 Apokotinin $C_8H_9ON_2$
 Apomorphin $C_{17}H_{17}O_2N$
 Aponsäure $C_{14}H_{17}O_2$
 Apophyllensäure $C_4H_7O_4N$
 Apopseudonocin $C_{27}H_{35}O_8N$
 Apopseudonocinin
 $C_{26}H_{47}O_{11}N$
 Aposafraun $C_{15}H_{13}N_2$
 Aposafraun $C_{14}H_{12}ON_2$
 Aposorbinsäure $C_8H_7O_2$
 Apothebromin $C_8H_7O_5N_3$
 Apovellosidin $C_{12}H_{15}O_2N_1$
 Apovellosin $C_{46}H_51O_2N_4$
 Apovellosol $C_{47}H_{56}O_2N_4$
 Arabin $C_{10}H_{15}O_9$
 Arabinochloral $C_7H_7O_2Cl$
 Arabinon $C_{10}H_{15}O_9$
 Arabinosamin $C_8H_{11}ON$
 Arabinosäure $C_8H_{15}O_5$
 — $C_{22}H_{38}O_{27}$
 — $C_{29}H_{45}O_{37}$
 — $C_{35}H_{55}O_{52}$
 — $C_{41}H_{66}O_{67}$
 — $C_{71}H_{112}O_{120}$
 Arabinoseäthylmerkaptal
 $C_8H_{14}O_2S_2$
 Arabinosecarbonsäure
 $C_6H_{12}O_7$
 Arabinosidoglykousäure
 $C_{11}H_{20}O_{11}$
 Arabinsäure $C_{10}H_{18}O_9$
 — $C_{20}H_{41}O_{17.4}$
 Arabit $C_8H_{12}O_5$
 Arabonsäure $C_8H_{15}O_5$
 Arachinsäure $C_{23}H_{45}O_2$
 Arbutin $C_{12}H_{18}O_7$
 Arekaidin $C_7H_{11}O_2N$
 Arekain $C_8H_{11}O_2N$
 Arekolin $C_8H_{13}O_2N$
 Arginin $C_6H_{14}O_2N_4$
 Argyräscetin $C_7H_{10}O_4$
 Argyräscin $C_{27}H_{42}O_{12}$
 Arbin $C_{27}H_{30}N_4$
 Aricin $C_{23}H_{26}O_4N_2$
 Aristidinsäure $C_8H_{17}O_2N$
 Aristinsäure $C_{18}H_{13}O_2N$
 Aristofin $C_{15}H_{26}O_3$
 Aristolochin $C_{22}H_{29}O_{17}N_2$
 Aristolsäure $C_7H_{11}O_2N$
 Arnicin $C_8H_{10}O_2$
 Aromadendrin $C_{29}H_{37}O_{12}$
 Arsenobenzol $C_{12}H_{10}As_2$
 Arsenonaphthalin $C_{20}H_{14}As_2$
 Artarin $C_{27}H_{21}O_4N$
 Artemisin $C_{15}H_{18}O_4$

Artolin $C_{183}H_{268}O_{28}N_{50}S$
 Asaresinotannol $C_{71}H_{111}O_5$
 Asaron $C_{10}H_{16}O_2$
 Asaronsäure $C_{10}H_{12}O_5$
 Asclepin $C_{20}H_{15}O_4$
 Asebofascin $C_{18}H_{18}O_1$
 Asebofenin $C_{18}H_{18}O_2$
 Asebotin $C_{24}H_{29}O_{12}$
 Asebotoxin $C_{27}H_{50}O_{10}$
 Asellin $C_{28}H_{32}N_4$
 Asellinsäure $C_{17}H_{25}O_2$
 Asparacemsäure $C_8H_9O_4N$
 Asparagin $C_8H_9O_3N_2$
 Asparaginsäure $C_{11}H_{17}O_4N$
 Aspidin $C_{20}H_{32}O_7$
 Aspidinol $C_{12}H_{14}O_4$
 Aspidosamin $C_{22}H_{29}O_2N_7$
 Aspidospermatin $C_{32}H_{46}O_2N_2$
 Aspidospermin $C_{22}H_{30}O_2N_2$
 Assamar $C_{20}H_{27}O_{11}$
 Athamantia $C_7H_{10}O_2$
 Atisin $C_{22}H_{27}O_2N$
 — $C_{26}H_{47}O_2N_2$
 Atisinhidrat $C_{22}H_{33}O_3N$
 Atractylen $C_{20}H_{30}O_6$
 Atractylsäure $C_{20}H_{25}O_{15}S_2$
 Atranorin $C_{10}H_{10}O_8$
 Atraurinsäure $C_8H_9O_5$
 — $C_8H_{10}O_4$
 — $C_{18}H_{18}O_9$
 Atrarsäure $C_{10}H_{16}O_8$
 Atripasäure $C_8H_{10}O_{12}$
 Atroglucosinsäure $C_8H_{10}O_4$
 Atrolaktinsäure $C_9H_{10}O_5$
 Atronol $C_{10}H_{14}$
 Atronsäure $C_{17}H_{14}O_7$
 Atropasäure $C_9H_9O_3$
 Atropin $C_{17}H_{23}O_2N$
 Atropyltropolin $C_{17}H_{21}O_2N$
 Atrosein $C_{17}H_{21}O_2N$
 Atroxindol C_8H_9ON
 Auramin $C_{17}H_{21}N_3$
 Auranthiol $C_{10}H_{16}O$
 Aurantiamarinsäure $C_{10}H_{12}O_4$
 Aurantiin $C_{21}H_{26}O_{11}$
 Aurin $C_{19}H_{14}O_3$
 Auron $C_{26}H_{30}O_6$
 Austracampfen $C_{10}H_{16}$
 Axinsäure $C_{18}H_{25}O_2$
 Azelänketon C_8H_9O
 Azelänsäure $C_8H_{10}O_4$
 Azelal $C_8H_{10}O$
 Azelaon $C_8H_{11}O$
 Azelomalsäure $C_9H_{10}O_5$
 Azimidobenzoësäure
 $C_7H_7O_2N_3$
 Azimidobenzol $C_7H_7N_3$
 Azimidol C_8H_9ON
 Azimidotoluol C_7H_9N
 Azinbernsteinsäure $C_8H_9O_2N_2$
 Azoanissäure $C_{15}H_{11}O_6N_2$
 Azobenzil $C_{21}H_{15}ON$
 Azobenzol $C_{17}H_{13}N_3$
 Azobenzol $C_{17}H_{13}N_3$

Azobenzoyl $C_{22}H_{16}N_2$
 Azocamphanon $C_{14}H_{19}O_2N_2$
 Azocinhydrin $C_{18}H_{16}ON_2$
 Azocynol $C_{20}H_{20}N_2$
 Azodicarbonsäure $C_7H_7O_4N_2$
 Azodioxindol $C_8H_{10}O_2N_2$
 Azolidiphenylblau $C_{18}H_{15}N_3$
 Azoidimokaffein $C_{18}H_{15}O_2N_2$
 Azoisatin $C_8H_9ON_2$
 Azomekoninessigsäure
 $C_24H_{27}O_{11}N_2$
 Azomesitylen $C_{18}H_{23}N_2$
 Azoncarbonsäure $C_8H_9O_3N$
 Azopiansäure $C_{10}H_{15}O_2N_2$
 — $C_{20}H_{116}O_{10}N_2$
 — $C_{28}H_{205}O_9N_2$
 Azoorcin $C_{14}H_{17}O_2N$
 Azophenin $C_{20}H_{15}N_4$
 Azophenylen $C_{12}H_{11}N_2$
 Azophenylmethansäure
 $C_8H_8O_4N$
 Azopseudonocin $C_{18}H_{23}N_2$
 Azoresorcin $C_{12}H_{11}O_2N$
 Azoresorbyl $C_{24}H_{17}O_2N_2Cl_2$
 Azostyrol $C_{16}H_{14}N_2$
 Azotetrazol $C_8H_8N_{10}$
 Azotriazol $C_4H_4N_4$
 Azoxybenzol $C_8H_9ON_2$
 Azulminsäure $C_8H_{10}ON_2$
 — $C_8H_9ON_2$
 Azulmoxin $C_8H_9O_2N_2$
 Azurilsäure $C_8H_9O_2N_2$
 Azurin $C_{25}H_{21}O_2N_4$
Balata $C_{10}H_{10}$
 Baphiasäure $C_{24}H_{22}O_{10}$
 Baphin $C_{12}H_{10}O_2$
 Baphinitin $C_{10}H_{10}$
 Baphinon $C_{20}H_{26}O_6$
 Baphitigenin $C_{12}H_{10}O_4$
 Baphitigenin $C_{12}H_{10}O_6$
 Baptisin $C_{20}H_{22}O_4$
 Barbaloin $C_{16}H_{16}O_7$
 — $C_{12}H_{16}O_7$
 Barbatin $C_9H_{14}O$
 Barbatinsäure $C_{10}H_{12}O_7$
 — $C_{27}H_{21}O_2$
 Barbitursäure $C_4H_4O_2N_2$
 Basiliccampher $C_{15}H_{22}O$
 Bassorin $C_8H_{10}O_5$
 Bastin $C_{15}H_{22}O_2$
 Bebeerin $C_8H_{11}O_2N$
 Behrin $C_{18}H_{21}O_3N$
 Behenolsäure $C_{22}H_{41}O_2$
 Behensäure $C_{22}H_{41}O_2$
 Belladonin $C_{27}H_{21}O_2N$
 Bellatropin $C_{11}H_{15}O_2N$
 Benylen C_7H_{10}
 Benzacin $C_8H_9ON_3$
 Benzalazin $C_7H_{12}N_2$
 Benzaldiacetonamin
 $C_{13}H_{17}ON$
 Benzaldiacetonin $C_{13}H_{17}N$

Campherimidazolone
 $C_{11}H_{16}ON_2$
 Campherimin $C_{15}H_{17}N$
 Campherol $C_{10}H_{16}O_2$
 Campheroxalsäure $C_{17}H_{16}O_4$
 Campherphoron $C_8H_{14}O$
 Campherpinakon $C_{20}H_{34}O_2$
 Camphersäure $C_{16}H_{16}O_4$
 Camphilen $C_{10}H_{16}$
 Camphimid $C_{15}H_{15}N$
 Camphin $C_{10}H_{16}$
 Camphinsäure $C_{10}H_{12}O_2$
 Camphocarbonsäure $C_{11}H_{16}O_3$
 Camphoglykuronsäure
 $C_{14}H_{14}O_6$
 Campholakton $C_8H_{14}O_2$
 Campholaktensäure $C_8H_{16}O_3$
 Campholalkohol $C_{10}H_{18}O$
 Campholamin $C_{10}H_{21}N$
 Campholen C_9H_{14}
 — C_9H_{16}
 — $C_{10}H_{16}$
 Campholenlakton $C_{10}H_{14}O_2$
 Camphoxydalsäure
 $C_{10}H_{16}O_2$
 Camphonsäure $C_{10}H_{16}O_2$
 Campholid $C_{10}H_{17}O_2$
 Campholonsäure $C_{10}H_{16}O_3$
 Campholsäure $C_{10}H_{16}O_2$
 Campholytischesäure $C_9H_{14}O_2$
 Camphoransäure $C_9H_{12}O_4$
 — $C_9H_{14}O_7$
 Camphorensäure $C_{10}H_{16}O_2$
 Camphorogenol $C_{10}H_{16}O_2$
 Camphoronilsäure
 $C_{15}H_{19}ON$
 Camphoronsäure $C_8H_{14}O_6$
 Camphorylodein $C_{28}H_{36}O_8N$
 Camphotereben $C_{20}H_{32}$
 Camphotricarbonsäure
 $C_{10}H_{14}O_4$
 Camphylamin $C_{10}H_{16}N$
 Camphylisoxazol $C_{11}H_{11}ON$
 Camphylsäure $C_9H_{12}O_2$
 Canadin $C_{20}H_{31}O_4N$
 Cancerin $C_8H_8O_2N$
 Cannabidon $C_8H_{12}O$
 Cannabinol $C_{21}H_{36}O_2$
 Cannabinolaktin $C_{11}H_{12}O_2$
 Cannabinolaktensäure
 $C_{11}H_{16}O_4$
 Cantharen C_8H_{12}
 Cantharidin $C_{10}H_{12}O_4$
 Cantharidinimid $C_{15}H_{15}O_3N$
 Cantharidinsäure $C_{10}H_{11}O_5$
 Cantharsäure $C_{10}H_{12}O_4$
 Caparrapen $C_{15}H_{24}$
 Caparrapinsäure $C_{15}H_{28}O_3$
 Caparrapiol $C_{17}H_{26}O$
 Caperratid $C_{22}H_{36}O_7$
 Caperatsäure $C_{27}H_{44}O_4$
 Caperidin $C_{27}H_{46}O_2$
 Caperin $C_{20}H_{30}O_3$
 Capranid $C_{14}H_{23}O_{10}$

Capransäure $C_{20}H_{26}O_{10}$
 Capransäure $C_{14}H_{20}O_{12}$
 Caprinon $C_{10}H_{20}O$
 Caprinsäure $C_{10}H_{20}O_2$
 Caprolakton $C_8H_{16}O_2$
 Capron $C_{11}H_{22}O$
 Capronsäure $C_8H_{12}O_2$
 Caprylidin C_8H_{14}
 Caprylon $C_{15}H_{30}O$
 Caprylsäure $C_8H_{16}O_2$
 Capsacutin $C_{28}H_{54}O_4N_8$
 Capsaicin $C_8H_{14}O_2$
 — $C_{18}H_{28}O_2N$
 Capsuläscinsäure $C_{18}H_{12}O_8$
 Caramelan $C_{17}H_{14}O_9$
 Caramelen $C_{28}H_{80}O_{25}$
 Caramelin $C_8H_8O_2$
 — $C_7H_8O_2$
 — $C_{17}H_{16}O_{13}$
 — $C_{24}H_{30}O_{15}$
 Carbacetoxyalsäure $C_2H_4O_4$
 Carbamid CH_5ON_2
 Carbamidin CH_2N_2
 Carhaminsäure CH_2O_2N
 Carbanil C_7H_7ON
 Carbazokridon $C_{13}H_9ON$
 Carbazol C_8H_7N
 Carbazolhäu $C_{27}H_{25}ON_3$
 Carbazolin $C_{12}H_{12}N$
 Carbazolsäure $C_{13}H_9O_2N$
 Carboacrolaktensäure
 $C_7H_{10}O_4$
 Carbocinchomeronsäure
 $C_8H_8O_2N$
 Carbodiphenylimid $C_{12}H_{10}N_2$
 Carbohydrazid $CH_2O_2N_2$
 Carbohydrazimin $C_8H_8N_6$
 Carbomesyl $C_{10}H_{11}ON$
 Carbondinikotinsäure
 $C_8H_8O_2N$
 Carbonpimelinsäure $C_8H_{12}O_6$
 Carbonyldiburet $C_5H_4O_2N_6$
 Carbonyldipiperazin
 $C_9H_{10}ON_4$
 Carbonyldiurethan
 $C_7H_{12}O_2N_2$
 Carbopetrocen $C_{24}H_{16}$
 Carbopyrotitransäure $C_8H_8O_2$
 Carbostyryl $C_{11}H_{11}ON$
 Carbothialdin $C_8H_{10}N_2S_2$
 Carbousinsäure $C_{15}H_{16}O_2$
 Carbovaleraldin $C_{11}H_{22}N_2S_2$
 Carbovalerolaktensäure
 $C_8H_8O_4$
 Carboxamidohippursäure
 $C_9H_{14}O_7N_4$
 Carbuinsäure $C_8H_{10}O_3$
 Carbylodiacetonamin
 $C_7H_{14}ON_2$
 Carden C_8H_8
 Cardensäure $C_{10}H_{20}O_7$
 Cardol $C_{27}H_{30}O_2$
 — $C_{25}H_{30}O_3$
 Cardolsäure $C_{15}H_{22}O_7$

Cardesäure $C_{12}H_{22}O_2$
 Carminroth $C_{17}H_{19}O_2$
 Carminsäure $C_{17}H_{19}O_{10}$
 — $C_{17}H_{14}O_{12}$
 Carminzucker $C_8H_{16}O_4$
 — $C_8H_{10}O_5$
 Carmufelsäure $C_{13}H_{20}O_{16}$
 Carmaubasäure $C_7H_{14}O_8$
 Carmaubylalkohol $C_{14}H_{26}O$
 Carmin $C_7H_8O_2N_4$
 Caron $C_{10}H_{16}O$
 Carotin $C_{40}H_{56}$
 Carpain $C_{14}H_{25}O_2N$
 Carpen C_8H_{14}
 Carrageenschleim $C_6H_{10}O_6$
 Carthamin $C_{24}H_{16}O_7$
 Carubin $C_8H_{16}O_2$
 Carubinosäure $C_8H_{16}O_3$
 Carvakrol $C_{10}H_{14}O$
 Carvakrolinsäure $C_{11}H_{14}O_3$
 Carvakraylamin $C_{12}H_{15}N$
 Carvanol $C_{10}H_{20}O$
 Carvanon $C_{10}H_{16}O$
 Carvenolid $C_{12}H_{14}O_2$
 Carvenolsäure $C_{10}H_{16}O_3$
 Carveol $C_{10}H_{16}O_2$
 Carven $C_{10}H_{16}$
 Carvenol $C_{10}H_{16}O$
 Carvenon $C_{10}H_{16}O$
 Carvestin $C_{12}H_{16}O$
 Carvelin $C_{20}H_{15}ON$
 Carvon $C_{10}H_{14}O$
 Carvonpinakon $C_{20}H_{26}O_2$
 Carvotanacetin $C_{16}H_{18}O$
 Carvylamin $C_{10}H_{17}N$
 — $C_{10}H_{19}N$
 Caryophyllen $C_{14}H_{24}$
 Caryophyllenhydrat $C_{15}H_{26}O$
 Caryophyllin $C_{28}H_{32}O_2$
 Caryophyllinsäure $C_{20}H_{24}O_6$
 Cascarillin $C_{17}H_{18}O_4$
 Cascarin $C_{17}H_{16}O_3$
 Casein $C_{120}H_{192}O_{28}N_{24}$
 Cassonsäure $C_8H_{10}O_2$
 Catalpinsäure $C_7H_{14}O_6$
 Caulosterin $C_{25}H_{44}O$
 Cederencampher $C_{15}H_{26}O$
 Cedren $C_{12}H_{24}$
 Cedret $C_{11}H_{19}O_6$
 Cedrol $C_{15}H_{26}O$
 Cedron $C_{15}H_{24}O$
 Cellulose $C_6H_{10}O_5$
 — $C_6H_{17}O_{16}$
 Cellulosin $C_8H_{10}O_3$
 Cephaelin $C_{11}H_{21}O_2N$
 Cephalin $C_{42}H_{79}O_{11}NP$
 Cerasinosäure $C_8H_{12}O_6$
 Cerberin $C_{27}H_{46}O_2$
 Cerberitin $C_{19}H_{30}O_4$
 Cerbertin $C_{19}H_{36}O_4$
 Cerebrin $C_{20}H_{40}O_{13}N_2$
 Cerebrosäure $C_8H_{12}O_6$
 Cerebrosische Säure $C_8H_{12}O_6$
 Cerin $C_{17}H_{28}O$

- Cerin $C_{30}H_{52}O$
 — $C_{29}H_{50}O_4$
 — $C_{30}H_{50}O_2$
 Cerinssäure $C_{30}H_{50}O_4$
 Ceropinsäure $C_{30}H_{48}O_5$
 Cerosin $C_{34}H_{48}O$
 Cerosinsäure $C_{34}H_{48}O_2$
 Cerotol $C_{27}H_{54}$
 Cerotonin $C_{28}H_{100}O$
 Cerotinsäure $C_{28}H_{100}O_2$
 — $C_{28}H_{102}O_2$
 — $C_{27}H_{104}O_4$
 Cerotolsäure $C_{27}H_{102}O_2$
 Cerylalkohol $C_{30}H_{62}O$
 — $C_{27}H_{56}O$
 Cespin $C_5H_{11}N$
 Cetan $C_{16}H_{34}$
 Ceten $C_{16}H_{32}$
 Cetrapsinsäure $C_{18}H_{17}O_6$
 Cetrarsäure $C_{18}H_{16}O_6$
 — $C_{20}H_{30}O_{17}$
 Cetylalkohol $C_{16}H_{34}O$
 Cetylen $C_{16}H_{30}$
 Cetylid $C_{22}H_{45}O_5$
 Cevadillin $C_8H_{15}O_3N$
 Cevadin $C_{27}H_{49}O_8N$
 Cevin $C_{27}H_{45}O_4N$
 Chairamin $C_{28}H_{50}O_2N_2$
 Chairamin $C_{28}H_{50}O_4N_2$
 Champakol $C_{15}H_{30}O$
 — $C_{17}H_{30}O$
 Chavicol $C_9H_{10}O$
 Chebulinsäure $C_{11}H_{11}O_{10}$
 — $C_{26}H_{24}O_{10}$
 Chekenin $C_{17}H_{11}O_3$
 Chekenitin $C_8H_7O_6$
 Chekon $C_{20}H_{29}O_7$
 Chelerythrin $C_{21}H_{17}O_7N$
 Chelidamsäure $C_7H_8O_5N$
 Chelidonin $C_{20}H_{15}O_5N$
 Chelidonsäure $C_7H_8O_5$
 Chenocholsäure $C_{27}H_{44}O_4$
 Chinacetophenon $C_8H_8O_3$
 Chinäthonsäure $C_{14}H_{18}O_6$
 Chinakridin $C_{20}H_{17}N_2$
 Chinaldin $C_{10}H_8N$
 Chinaldinalkin $C_{11}H_{11}ON$
 Chinaldinoxalsäure
 $C_{12}H_8O_5N$
 Chinaldinsäure $C_{10}H_7O_2N$
 Chinalizarin $C_{14}H_8O_6$
 Chinamicin $C_{19}H_{21}O_2N_2$
 Chinamicin $C_{19}H_{21}O_2N_2$
 Chinanin $C_{19}H_{14}O_4N_2$
 Chinanisol $C_{19}H_{18}ON$
 Chinaroth $C_{12}H_{14}O_7$
 — $C_{28}H_{22}O_{14}$
 Chinasäure $C_8H_{12}O_5$
 Chinazolin $C_8H_8N_2$
 Chinocin $C_{20}H_{28}ON_2$
 Chinhydron $C_8H_{10}O_4$
 Chincin $C_8H_{12}O_2N_2$
 Chinid $C_7H_{10}O_3$
 Chinidin $C_{26}H_{44}O_7N_2$
 Chinin $C_{20}H_{24}O_2N_2$
 Chinindolin $C_{15}H_{16}N_2$
 Chininsäure $C_{11}H_8O_4N$
 Chinisatinsäure $C_{11}H_8O_4N$
 Chinisatoxim $C_9H_8O_3N_2$
 Chinit $C_8H_{12}O_2$
 Chinizarin $C_{14}H_{16}O_4$
 Chinoäthylin $C_{27}H_{30}O_2N_2$
 Chinoisoamylin $C_{24}H_{32}O_2N_2$
 Chinoisopropylin $C_{22}H_{28}O_2N_2$
 Chinolin C_9H_7N
 Chinolinchloral $C_{11}H_8ONCl_3$
 Chinolingelb $C_{18}H_{11}O_7N$
 Chinolinhydrochinon
 $C_{14}H_{20}O_2N_2$
 Chinolinresorcin $C_{22}H_{20}O_2N_2$
 Chinolinsäure $C_9H_8O_4N$
 — $C_9H_8O_4N$
 Chinolsäure $C_9H_8O_4N$
 Chinonphenolazin $C_{11}H_8O_2N_2$
 Chinophtalon $C_{18}H_{11}O_2N$
 Chinophenol C_9H_7ON
 Chinopropylin $C_{27}H_{28}O_2N_2$
 Chinoterpen $C_{10}H_{14}$
 Chinoxalphenazin $C_{14}H_8N_4$
 Chinovagerbsäure $C_{14}H_{11}O_6$
 Chinovarothe $C_{28}H_{20}O_{12}$
 Chinovasäure $C_{28}H_{48}O_6$
 Chinovin $C_{28}H_{48}O_5$
 Chinovit $C_8H_{10}O_5$
 Chinovose $C_8H_{10}O_5$
 — $C_8H_{11}O_5$
 Chinoxalin $C_8H_8N_2$
 Chiratin $C_{26}H_{16}O_{15}$
 Chiratozin $C_{11}H_{14}O_3$
 Chironol $C_{24}H_{48}O$
 Chironolsäure $C_{28}H_{48}O_4$
 Chitaminsäure $C_6H_{13}O_6N$
 Chitarsäure $C_6H_{10}O_6$
 Chitenol $C_{18}H_{17}O_4N_2$
 Chitenidin $C_{10}H_{13}O_2N_2$
 Chitenin $C_{19}H_{22}O_2N_2$
 Chitin $C_{15}H_{20}O_{16}N_2$
 Chitonsäure $C_6H_{11}O_7$
 Chitosamin $C_8H_{13}O_4N$
 Chitosan $C_{11}H_{20}O_{10}N_2$
 Chloräthylaminsäure
 $C_8H_8O_3Cl$
 Chloral C_2HOCl_3
 Chloralacetton $C_8H_7O_2Cl_3$
 Chloralacetophenon
 $C_{10}H_9O_2Cl_3$
 Chloralaldol $C_8H_8O_2Cl_3$
 Chloralchinin $C_7H_{13}O_2N_2Cl_3$
 Chloralglykolat $C_8H_8O_2Cl_3$
 Chloralharbstoff $C_{11}H_8O_2N_2Cl_3$
 Chloralid $C_8H_8O_2Cl_3$
 Chloralimid $C_8H_7NCl_3$
 Chloralose $C_8H_{11}O_2Cl_3$
 Chloralosedischwefelsäure
 $C_8H_{11}O_2S_2Cl_3$
 Chloralsäure $C_7H_8O_2Cl_3$
 Chloralurethan $C_5H_8O_2NCl_3$
 Chloramil $C_8O_2Cl_4$
 Chloranilaminsäure
 $C_8H_8O_2NCl_3$
 Chlorkyaminsäure
 $C_8H_8O_2NCl_3$
 Chlorocrocin
 $C_{748}H_{1416}O_{157}N_{148}S_3Fe$
 Chloroform $CHCl_3$
 Chlorogenin $C_{20}H_{20}O_2N_2$
 Chlorophyll $C_{20}H_{16}O_7N_7$
 — $C_{20}H_{16}O_4N_7$
 Chlorophyllinsäure
 $C_{28}H_{37}O_7N_7$
 Chloroxyaphthalinsäure
 $C_{10}H_8O_3Cl$
 Cholanensäure $C_{26}H_{46}O_7$
 Cholecampfersäure $C_{10}H_{16}O_4$
 Choleinsäure $C_{24}H_{40}O_4$
 Cholesten $C_{26}H_{48}$
 Cholestensäure $C_{27}H_{46}O_4$
 Cholesterilen $C_{27}H_{48}$
 — $C_{27}H_{44}$
 Cholesterin $C_{27}H_{46}O$
 Cholesterinsäure $C_{17}H_{16}O_7$
 Cholesteron $C_{27}H_{42}$
 Cholesterylläther $C_{34}H_{60}O$
 Cholest $C_{27}H_{48}O$
 Cholestrophan $C_{28}H_{48}O_2$
 Cholestrophan $C_8H_8O_2N_2$
 Choletelin $C_{13}H_{15}O_6N_2$
 Cholin $C_5H_{15}O_3N$
 Chologlykolsäure $C_{26}H_{42}O_7$
 Choloindansäure $C_{15}H_{16}O_4$
 — $C_{15}H_{25}O_7$
 Cholphosphinsäure
 $C_{27}H_{11}O_{15}P_2$
 Cholsäure $C_{26}H_{46}O_5$
 — $C_{26}H_{46}O_5$
 Chondroitin $C_{11}H_{17}O_{14}N$
 Chondronsäure $C_{12}H_{16}O_5$
 — $C_{12}H_{16}O_5$
 Chondrosin $C_{15}H_{21}O_{11}N$
 Chryiodin $C_{26}H_{40}O_{14}N_5$
 Chrysammidsäure
 $C_{14}H_8O_{11}N_5$
 Chrysanilin $C_{10}H_{12}N_2$
 Chrysanthem $C_{14}H_{20}O_3N_2$
 Chrysarobin $C_{30}H_{36}O_7$
 Chrysatinsäure $C_{28}H_{20}O_{19}N_6$
 Chrystropasäure $C_{10}H_{16}O_4$
 Chryszazin $C_8H_8O_2$
 Chryszazol $C_8H_{12}O_2$
 Chrysean $C_8H_8N_2S_1$
 Chrysen $C_{18}H_{12}$
 Chrysensäure $C_{17}H_{12}O_2$
 Chrysidin $C_{17}H_{11}N$
 Chrysin $C_{15}H_{10}O_4$
 Chrysoacetarsäure $C_{10}H_{11}O_6$
 Chrysochinon $C_{18}H_{12}O_2$
 Chrysocyanaminsäure
 $C_{14}H_8O_{12}N_5$
 Chrysofluoren $C_{17}H_{12}$
 Chrysoidin $C_{17}H_{12}N_4$
 Chrysoidinharbstoff
 $C_{12}H_{10}ON_4$

Chrysoketon $C_{17}H_{16}O$
 Chrysokekratin $C_8H_8ON_2$
 Chrysonaphthazin $C_{28}H_{18}N_2$
 Chrysonaphthanthron
 $C_{12}H_{10}O_2$
 Chrysoaphansäure $C_{12}H_{10}O_4$
 Chrysoaphenol $C_{12}H_{10}ON_2$
 Chrysoapiin $C_{20}H_{17}N_2$
 Chrysoatoluzin $C_{22}H_{16}N_2$
 Chrysoatoluidin $C_{21}H_{15}N_2$
 Chrysoatoxin $C_8H_{12}O_9$
 Chrysoxyessigsäure $C_{13}H_{11}O_5$
 Chryssaminsäure $C_{11}H_{11}O_{12}N_4$
 Cicuten $C_{10}H_{16}$
 Ciliansäure $C_{20}H_{30}O_{10}$
 Cimnicinsäure $C_{15}H_{28}O_2$
 Cinchamidin $C_{19}H_{21}ON_7$
 Cinchon $C_{19}H_{23}N_9$
 Cinchol C_8H_7O
 Cincholepidin $C_{12}H_9N$
 Cincholin $C_{19}H_{21}N$
 Cincholoipon $C_9H_{11}O_2N$
 Cincholoiponsäure $C_9H_{11}O_4N$
 Cinchomeronsäure $C_8H_7O_2N$
 Cinchonamin $C_{19}H_{21}ON_7$
 Cinchonbin $C_{19}H_{23}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonidin $C_{19}H_{23}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinchonin $C_{19}H_{21}ON_7$
 Cinen C_8H_{16}
 Cineol $C_{10}H_{18}O$
 Cineolensäure $C_8H_{16}O_2$
 Cineolsäure $C_{15}H_{18}O_2$
 Cinnaménylangelhasäure
 $C_{12}H_{14}O_2$
 Cinnimabeuzil $C_{27}H_{30}O_2N_2$
 Cinnolin $C_8H_6N_2$
 Citracetsäure $C_8H_{16}O_8$
 Citrakonfluorescein $C_{17}H_{15}O_3$
 Citrakonsäure $C_5H_8O_4$
 Citral $C_{10}H_{16}O$
 Citramalsäure $C_6H_{10}O_5$
 Citramethan $C_8H_{14}O_2N_2$
 Citramilsäure $C_{17}H_{15}O_2N$
 Citraweinsäure $C_8H_{16}O_8$
 Citrazinsäure $C_8H_{16}O_4N$
 Citron C_8H_{16}
 Citriodoralddehyd $C_{15}H_{16}O$
 Citrobenzidylsäure
 $C_{18}H_{16}O_5N_2$
 Citrodiglycerin $C_{17}H_{15}O_{10}$
 Citromannitan $C_{17}H_{14}O_9$
 Citronell $C_{10}H_{18}O$
 Citronellalsäure $C_{10}H_{18}O_2$

Citronellol $C_{10}H_{18}O$
 Citrouelloterpen $C_{10}H_{18}$
 Citronensäure $C_6H_8O_7$
 Citronentellurigesäure
 $C_{12}H_{14}O_{12}Te$
 Clatoniensäure $C_{18}H_{18}O_7$
 Cloven $C_{15}H_{24}$
 Clupein $C_{20}H_{32}O_8N_{17}$
 Cloicin $C_{18}H_{26}O_{15}$
 Cocäthylin $C_{18}H_{21}O_4N$
 Cocain $C_{17}H_{19}O_4N$
 Cocamin $C_{19}H_{21}O_2N$
 Cocasäure $C_{12}H_{16}O_4$
 Cocayloxyessigsäure
 $C_8H_{12}O_5N$
 Coccealsäure $C_{20}H_{22}O_7$
 Coccerylalkohol $C_{30}H_{62}O_4$
 Coccinin $C_{11}H_{11}O_5$
 Cocciensäure $C_8H_{10}O_5$
 Coccoquin $C_{20}H_{32}O_8$
 Cocculin $C_{19}H_{26}O_{10}$
 Cocerinsäure $C_{21}H_{42}O_2$
 Cochenillesäure $C_{10}H_{12}O_7$
 Codäthylin $C_{10}H_{15}O_2N$
 Codamin $C_{20}H_{27}O_4N$
 Codein $C_{18}H_{21}O_2N$
 Codeinviolet $C_{28}H_{31}O_4N$
 Coerulein $C_{30}H_{40}O_4$
 Coc-rulignon $C_{18}H_{16}O_6$
 Cocculin $C_{20}H_{31}O_6$
 Coffein $C_{12}H_{16}O_4N_2$
 Colchicein $C_{27}H_{23}O_6N$
 Colchicin $C_{27}H_{23}O_6N$
 Colchicinsäure $C_{16}H_{15}O_5N$
 Colein $C_{20}H_{28}O_4$
 Coleopterin $C_8H_{10}O_2N$
 Collagen $C_{102}H_{140}O_{24}N_{31}$
 Collidin $C_8H_{11}N$
 Collidinearbonsäure
 $C_8H_{11}O_2N$
 Collidinpiperidin $C_{11}H_{19}N_3$
 Colocynthein $C_{14}H_{16}O_{12}$
 Colocyntin $C_{28}H_{44}O_{23}$
 Colloidin $C_{18}H_{25}O_{17}N_2$
 Colombosäure $C_{27}H_{32}O_6$
 Colophalumina $C_{10}H_{16}O_2$
 Colophaluminasäure $C_{10}H_{16}O_4$
 Colophen $C_{20}H_{27}$
 Colophonin $C_{10}H_{12}O_4$
 Colophthalmin $C_{11}H_{10}$
 Columbin $C_{21}H_{27}O_4$
 $C_{21}H_{27}O_4$
 Columbosäure $C_{21}H_{27}O_5$
 Conchairamidin $C_{27}H_{38}O_4N_7$
 Conchairamin $C_{27}H_{38}O_4N_7$
 Conchairamin $C_{27}H_{38}O_4N_7$
 Conchinin $C_{20}H_{21}O_2N_2$
 Conchiolin $C_{20}H_{21}O_{11}N_2$
 Concusconin $C_{25}H_{36}O_4N_2$
 Condurangin $C_{11}H_{17}O_7$
 $C_{10}H_{17}O_7$
 Conduransterin $C_{30}H_{50}O_4$
 Conessin $C_{27}H_{40}N_2$
 Couhydrin $C_8H_{11}ON$

Coniceidin $C_{14}H_{22}N_7$
 Conicein $C_{15}H_{22}$
 Coniferin $C_{18}H_{24}O_4$
 Coniferylalkohol $C_{10}H_{12}O_2$
 Coniin $C_8H_{17}N$
 Coniinsäure $C_8H_{15}O_2N$
 Conimen $C_{12}H_{24}$
 Convallamaretin $C_{24}H_{36}O_4$
 Convallamarin $C_{27}H_{44}O_{12}$
 Convallarin $C_{24}H_{36}O_{11}$
 Convincin $C_{10}H_{15}O_2N$
 Convolvulin $C_{29}H_{42}O_{18}$
 Convolvulinolsäure $C_{13}H_{22}O_2$
 $C_{13}H_{22}O_2$
 Convolvulinsäure $C_{25}H_{40}O_{28}$
 Convolvulin $C_{25}H_{40}O_{27}$
 Conylen C_8H_{14}
 Conylenglykol $C_8H_{16}O_2$
 Conylurethan $C_{11}H_{21}O_2N$
 Conyryn $C_8H_{14}N$
 Copafvaöldhydrat $C_{60}H_{90}O$
 Copafvasäure $C_{20}H_{30}O_2$
 Copalresin $C_{21}H_{38}O_4$
 $C_{13}H_{22}O_4$
 Copellidin $C_8H_{17}N$
 Corallinphthalin $C_{20}H_{11}O_4$
 Cordol $C_{12}H_{12}O_2Br_2$
 Cornaryrtin $C_{23}H_{36}O_{10}$
 Coriandrol $C_{10}H_{16}O$
 Coridin $C_{10}H_{15}N$
 Cornein $C_{20}H_{30}O_{12}N_9$
 Cornicarsäure $C_{17}H_{14}O_2$
 Cornollin $C_8H_{15}O_2$
 Corriin $C_8H_{10}O_2N_2$
 Corticinsäure $C_{11}H_{15}O_6$
 Corybulbin $C_8H_{17}O_2N$
 Corycavin $C_{27}H_{39}O_6N$
 Corydalin $C_{11}H_{15}O_2N$
 $C_{27}H_{39}O_6N$
 Corydalinsäure $C_8H_{11}O_{17}N$
 Corydalsäure $C_8H_{10}O_6$
 Corydinsäure $C_8H_{11}O_2N$
 Corybuterin $C_{10}H_{16}O_2$
 Cotarnlakonsäure $C_{11}H_{15}O_7$
 Cotarnaminsäure $C_{13}H_{11}O_5N$
 Cotarin $C_{13}H_{15}O_2N$
 Cotaruinsäure $C_{11}H_{15}O_5$
 Cotaron $C_{11}H_{15}O_2$
 Cotarsäure $C_{10}H_{11}O_4$
 Cotogenin $C_{10}H_{15}O_6$
 Cotoin $C_7H_{11}O_2$
 Cotoinazobeuzol $C_{10}H_{16}O_2N_2$
 Crocetin $C_31H_{48}O_9$
 $C_{31}H_{48}O_{11}$
 Crocin $C_{18}H_{18}O_8$
 $C_{40}H_{70}O_{29}$
 $C_{44}H_{70}O_{28}$
 $C_{28}H_{46}O_{21}$
 Croதாகonsäure $C_8H_{10}O_4$
 Crotonharz $C_8H_{11}O_2$
 Crotonsäure $C_8H_{16}O_2$
 Crotonylen C_8H_{16}
 Crotylalkohol $C_8H_{16}O$
 Cryptopin $C_{31}H_{48}O_8N$

Cnbeben $C_{18}H_{24}$
 Cubebenampfer $C_{18}H_{26}O$
 Cubebensäure $C_{18}H_{14}O_2$
 — $C_{20}H_{20}O_7$
 Cubebin $C_{19}H_{10}O_5$
 Cumalin $C_9H_8O_2$
 Cumalinsäure $C_9H_8O_4$
 Cumarilsäure $C_9H_8O_5$
 Cumarin $C_9H_8O_2$
 Cumaron C_8H_8O
 Cumaroxysäure $C_{11}H_{10}O_5$
 Cumarsäure $C_9H_8O_3$
 Cumenylcrotonsäure
 $C_{13}H_{16}O_2$
 Cumidin $C_9H_{12}N$
 Cumidinsäure $C_{10}H_{10}O_4$
 Cuminalkohol $C_{10}H_{14}O$
 Cuminalmalonsäure $C_{11}H_{14}O_4$
 Cumindureid $C_{17}H_{18}O_2N_4$
 Cuminilsäure $C_{10}H_{14}O_3$
 Cuminoin $C_{10}H_{14}O_2$
 Cumino $C_{10}H_{12}O$
 Cuminolacton $C_{11}H_{12}O$
 Cuminolglykose $C_{16}H_{24}O_7$
 Cuminsäure $C_{10}H_{10}O_4$
 — $C_{12}H_{16}O_2N$
 Cumochinolin $C_{13}H_{13}N$
 Cumol C_9H_{12}
 Cumylamin $C_{10}H_{15}N$
 Cumylmalonsäure $C_{13}H_{16}O_4$
 Cumylsäure $C_{10}H_{12}O_2$
 Cuprein $C_{15}H_{18}ON$
 — $C_{19}H_{20}O_2N_2$
 Cupreol $C_{27}H_{34}O$
 Caprin $C_7H_{11}O_2N$
 Capronin $C_{10}H_{15}O_2N_2$
 Curarin $C_{10}H_{15}N$
 — $C_{19}H_{20}ON_2$
 Curcum $C_{14}H_{14}O_4$
 — $C_{21}H_{26}O_6$
 Curin $C_{10}H_{10}O_2N$
 Cusconin $C_{20}H_{26}O_4N_2$
 Cuskhygrin $C_{13}H_{17}ON_2$
 Cuspidin $C_9H_{17}O_2N$
 Cusparin $C_{10}H_{17}O_5N$
 — $C_{20}H_{19}O_5N$
 Cyalbidin $C_{20}H_{112}O_{26}N_2S$
 Cyamelid CHON
 Cyamellon $C_8H_8N_{12}$
 Cyamelursäure $C_8H_8O_2N_7$
 Cyamidomalinsäure
 $C_{13}H_{14}O_6N_6$
 Cyan C_2N_2
 Cyanätholin C_2H_3ON
 Cyanamid CH_2N_2
 Cyanuamin $C_8H_{10}O_2N_4$
 Cyananilin $C_6H_7N_2$
 Cyanilsäure $C_8H_8O_2N_2$
 Cyanin $C_{20}H_{26}N_4J$
 Cyanmelamidin $C_8H_{15}ON_{13}$
 Cyanmethazonsäure
 $C_8H_8O_2N_4$
 Cyanoforn CHN_3
 Cyanomaklurin $C_{12}H_{11}O_6$

Cyanosalicyl $C_9H_8O_2N$
 Cyansäure CHON
 Cyanuromalsäure $C_8H_8O_2N_4$
 Cyannrsäure $C_7H_8O_2N_2$
 Cyclamin $C_{20}H_{24}O_{10}$
 — $C_{27}H_{32}O_{13}$
 Cyclamiretin $C_{11}H_{10}O_2$
 — $C_{15}H_{22}O_2$
 Cyclamose $C_{12}H_{22}O_{11}$
 — $C_{20}H_{42}O_{31}$
 Cyclamsäure $C_{20}H_{40}O_{13}$
 Cyclopiaroth $C_{19}H_{27}O_{10}$
 Cyclopin $C_{22}H_{30}O_{13}$
 Cyclopiofluorescin $C_{14}H_{18}O_{17}$
 Cyclopsäure $C_7H_8O_4$
 Cykloalinaloolen $C_{10}H_{16}$
 Cymenotinsäure $C_{11}H_{11}O_5$
 Cymidin $C_{10}H_{13}N$
 Cymol $C_{10}H_{14}$
 Cynanchin $C_{10}H_{14}O$
 Cynanchocerin $C_{12}H_{24}O$
 Cynanchol $C_{15}H_{24}O$
 Cynoctonin $C_{20}H_{30}O_{12}N_2$
 Cystein $C_3H_7O_2NS$
 Cystin $C_6H_{11}O_4N_2S$
 Cystisin $C_{11}H_{17}ON_2$
 Cytosin $C_{11}H_{15}O_4N_6$

Dahlia $C_{22}H_{28}N_4$
 Damalursäure $C_7H_{12}O_2$
 Damascenin $C_{10}H_{16}O_2N$
 Dambonit $C_8H_{10}O_2$
 Damböse $C_8H_{10}O_2$
 Damaran $C_{26}H_{42}O_2$
 Dammaresen $C_{11}H_{17}O$
 Dammarolsäure $C_{18}H_{30}O_8$
 Dammarsäure $C_{40}H_{62}O_7$
 Dammaryl $C_{45}H_{72}$
 Dammarylsäure $C_{45}H_{72}O_2$
 Damolsäure $C_{13}H_{20}O_2$
 Danaidin $C_{27}H_{30}O_8$
 Danain $C_7H_{11}O_2$
 Daphnetin $C_9H_8O_4$
 Daphnin $C_{12}H_{18}O_6$
 Datisectin $C_{15}H_{21}O_8$
 Datiscin $C_{21}H_{24}O_{11}$
 Daturinsäure $C_{17}H_{24}O_2$
 Daturon $C_{25}H_{40}O$
 Decarbousnin $C_{17}H_{18}O_6$
 Decarbousinsäure $C_8H_{10}O_6$
 Decarbusuein $C_{17}H_{24}O_8$
 Dehydraceticarbonsäure
 $C_3H_6O_6$
 Dehydracetsäure $C_6H_8O_4$
 Dehydroacetylphenol
 $C_{11}H_{10}O_5$
 Dehydroamarsäure $C_{20}H_{30}O_5$
 Dehydrocamphenylsäure
 $C_{10}H_{14}O_2$
 Dehydrocampher $C_{10}H_{14}O$
 Dehydrochinon $C_{20}H_{20}ON_2$
 Dehydrocholeinsäure
 $C_24H_{34}O_4$

Dehydrocholeinsäure
 $C_{24}H_{34}O_4$
 Dehydrocholsäure $C_8H_{12}O_4$
 Dehydrocinchon $C_{19}H_{24}O_2$
 Dehydrocinchonin $C_{19}H_{20}ON_2$
 Dehydrodedsäure $C_8H_{10}O_2$
 Dehydrodivanillin $C_{14}H_{14}O_4$
 Dehydromorphin $C_{17}H_{19}O_2N_2$
 Dehydrophotosantonsäure
 $C_{12}H_{20}O_4$
 Dehydroschleimsäure $C_6H_8O_2$
 Dehydrostaptein $C_{12}H_{14}N_2$
 Dehydrothiohydantoinessig-
 säure $C_5H_8O_2NS$
 Dehydrotriacetamin
 $C_9H_{10}N$
 Dekakrylsäure $C_{10}H_{16}O_2$
 Dekamethylenimin $C_{10}H_{21}N$
 Dekanapthen $C_{12}H_{20}$
 Delokansäure $C_{15}H_{16}O_2$
 Delphinin $C_{27}H_{38}O_6N$
 Delphinoidin $C_{27}H_{38}O_7N_2$
 Delphinin $C_{27}H_{40}O_2N_2$
 Desamidoabminsäure
 $C_{166}H_{220}O_{65}N_{27}S_2$
 Desaurin $C_{18}H_{16}OS$
 Desmotroposantonigesäure
 $C_{12}H_{20}O_7$
 Desmotroposantonin
 $C_{11}H_{18}O_3$
 Desmotroposantoninsäure
 $C_{15}H_{20}O_4$
 Deoxalinsäure $C_8H_8O_6$
 Deoxyamalsäure
 $C_{15}H_{14}O_4N_4$
 Deoxyanisoin $C_{10}H_{10}O_2$
 Deoxybenzoin $C_{14}H_{12}O_2$
 Deoxychinin $C_{20}H_{24}ON_2$
 Deoxycholsäure $C_{24}H_{40}O_8$
 Deoxycinchonidin $C_{19}H_{22}N_2$
 Deoxycinchonin $C_{19}H_{22}N_2$
 Deoxycodein $C_{18}H_{21}O_2N$
 Deoxyconchinin $C_{20}H_{24}ON_2$
 Deoxydigitogensäure
 $C_{14}H_{22}O_3$
 Deoxyfulminsäure
 $C_2H_2O_2N_2$
 Deoxyfuroin $C_{12}H_{16}O_2$
 Deoxyisoantraflavinsäure
 $C_{14}H_{10}O_2$
 Deoxykaffein $C_8H_{10}O_2N_4$
 Desoxymesityloxyd $C_{17}H_{20}O$
 Desoxymorphin $C_{17}H_{19}O_2N$
 Desoxyphoron $C_{15}H_{21}O$
 Desoxyphoropinakon
 $C_{46}H_{56}O_2$
 Desoxystrychninsäure
 $C_{21}H_{28}O_2N_2$
 Desoxytoluoin $C_{12}H_{18}O$
 Desylamin $C_{14}H_{21}ON$
 Desylenessigsäure $C_{12}H_{12}O_3$
 Desylenmalonsäure $C_{17}H_{17}O_4$
 Desylessigsäure $C_8H_{14}O_4$
 Desylphenol $C_{20}H_{16}O_2$

Deuteroalbumose

- $C_{108}H_{150}O_{31}N_{36}S$
 — $C_{106}H_{170}O_{36}N_{36}S$
 $C_{111}H_{176}O_{36}N_{36}S$
- Dextran $C_6H_{10}O_5$
 Dextrin $C_6H_{10}O_5$
 — $C_{12}H_{20}O_{10}$
 $C_{12}H_{20}O_{10}$
- Dextronsäure $C_6H_{10}O_5$
 Dextropimarsäure $C_{20}H_{30}O_4$
 Dextrose $C_6H_{12}O_6$
- Diacetonecarbonensäure $C_7H_{14}O_3$
 Diacetonalkamin $C_8H_{16}ON$
 Diacetonalkohol $C_8H_{16}O_2$
 Diacetonamin $C_8H_{16}ON$
 Diacetonolulcit $C_{12}H_{22}O_6$
 Diacetonsenfil $C_7H_{11}ONS$
- Diacetyl $C_4H_8O_2$
 Diäthylen C_4H_8
 Diäthylparanilin $C_{16}H_{27}N_2$
 Diäthylsäure $C_8H_{16}O_4$
 Dialdan $C_8H_{14}O_2$
 Dialdalanalkohol $C_8H_{16}O_2$
 Dialdansaure $C_8H_{14}O_4$
 Diallylen C_8H_{16}
 Dialursäure $C_8H_{10}O_2N_2$
 Diamidocyanurwasserstoff
 $C_2H_2N_4$
- Dianthranol $C_{23}H_{20}O_2$
 Dianthrylensäure
 $C_{24}H_{24}O_2N_4$
- Dipapochinon $C_{18}H_{22}ON_2$
 Diapoteramorphin
 $C_{121}H_{140}O_{22}N_8$
- Diarbutin $C_{32}H_{52}O_{14}$
 Diateribiensäure $C_7H_{10}O_6$
 Diateribiensäure $C_7H_{10}O_6$
 Diaterpensäure $C_8H_{11}O_5$
 Diazimidobenzoensäure
 $C_7H_7O_3N_3$
- Diazimidobenzol $C_6H_6N_2$
 Diazin $C_2H_4N_2$
 Diazoacetophenon $C_8H_8ON_2$
 Diazoamidobenzol $C_{17}H_{11}N_3$
 Diazobenzol $C_6H_7ON_2$
 Diazobenzolimid $C_8H_9N_2$
 Diazobenzolsäure $C_8H_7O_3N_2$
 Diazocampfer $C_{10}H_{11}ON_2$
 Diazoresorcin $C_{12}H_7O_2N$
 Diazoresorufin $C_{13}H_{11}O_2N$
 Diazosantonsäure $C_{27}H_{25}O_4N_4$
- Dibarbitursäure $C_8H_8O_6N_4$
 Dibenzilsäure $C_{14}H_{12}O_4$
 Dibenzthiazol $C_{14}H_8N_2S_2$
 Diboräyl $C_{20}H_{16}O_4$
 Dibutylalkohol $C_8H_{18}O_2$
 Dibutyräldin $C_8H_{17}ON$
 Dibutyräyl $C_{10}H_{20}O_4$
- Dicamphanensäure $C_{30}H_{52}O_4$
 Dicamphanazin $C_{30}H_{50}N_2$
 Dicampher $C_{30}H_{50}O_2$
 Dicampherylsäure $C_{18}H_{20}O_6$
 Dichromochinon $C_{20}H_{18}O_2$
 Dicampholyl $C_{30}H_{54}O_2$
 Dicaerin $C_{77}H_{120}O_6$
- Dicaprylen $C_{26}H_{52}$
 Dicarbocaprolaktin $C_8H_{16}O_6$
 Dicarbothionsäure $C_7H_8O_2S$
 Dicarvelon $C_{20}H_{40}O_2$
 Diethyl $C_{22}H_{46}$
 Dichinaldin $C_{20}H_{40}N_2$
 Dichinolin $C_{16}H_{11}N_3$
 — $C_{20}H_{11}N_3$
- Dichinoylimid $C_8H_{10}O_4N_2$
 Dichromatinsäure $C_{20}H_{24}O_8$
 Dicinchonin $C_{28}H_{44}O_4N_4$
 Dicinen $C_{20}H_{42}$
 Diodäthin $C_{20}H_{40}O_2N_2$
 Diodofin $C_{20}H_{40}O_2N_2$
 Diconchinin $C_{16}H_{26}O_2N_4$
 Dicotin $C_{20}H_{38}O_6$
 Dicumarin $C_{18}H_{16}O_4$
- Didenlaktamidsäure
 $C_8H_{11}O_4N$
- Didesmotroposantonigesäure
 $C_{20}H_{36}O_6$
- Diemycylin $C_{20}H_{18}O_2N_2$
 Diepichlorhydrin $C_8H_{10}O_2Cl_2$
 Diepiphrylamid $C_8H_{14}O_2N_2$
 Diepiphodhydrin $C_8H_{10}O_2J_2$
 Diepinsäure $C_2H_4O_4$
 Dieucarvelon $C_{20}H_{30}O_2$
 Diffuan $C_8H_8O_2N_2$
- Diformaldehydharnsäure
 $C_7H_8O_4N_4$
- Diformazyl $C_{28}H_{22}N_2$
 Difaraltriureid $C_{18}H_{16}O_6N_6$
- Digallussäure $C_{14}H_{10}O_8$
 Digitalin $C_{27}H_{38}O_{15}$
 Digitaligenin $C_{27}H_{38}O_8$
 Digitalin $C_8H_8O_4$
 — $C_{21}H_{22}O_{10}$
 $C_{27}H_{38}O_{15}$
 $C_{28}H_{40}O_{14}$
- Digitaliretin $C_{28}H_{38}O_5$
 — $C_{18}H_{26}O_3$
- Digitalkrin $C_{11}H_{22}O_2$
 Digitalonsäure $C_7H_{14}O_6$
 Digitin $C_8H_8O_4$
 Digitoflavon $C_{18}H_{10}O_6$
 Digitogenin $C_{14}H_{24}O_4$
 Digitogensäure $C_{14}H_{22}O_4$
 Digitonin $C_{27}H_{46}O_{14}$
 — $C_{21}H_{32}O_{17}$
- Digitosäure $C_{18}H_{20}O_5$
 Digitoxenin $C_{21}H_{28}O_4$
 Digitoxigenin $C_{27}H_{38}O_4$
 Digitoxin $C_{28}H_{46}O_{10}$
 — $C_{21}H_{26}O_{10}$
 $C_{24}H_{34}O_{11}$
- Digitoxose $C_8H_{10}O_7$
 — $C_8H_{10}O_6$
- Digitoxosecarbonensäure
 $C_7H_{12}O_5$
- Digitsäure $C_{10}H_{16}O_4$
 Diglycerin $C_8H_{18}O_5$
 Diglykolsäure $C_4H_8O_5$
 Diglykose $C_8H_{16}O_6$
 — $C_{12}H_{22}O_{11}$
- Digsäure $C_8H_{12}O_3$
 Diguamid $C_8H_{12}N_2$
 Dihexolaktin $C_{17}H_{18}O_6$
 Dihexonsäure $C_{12}H_{20}O_4$
 Dihydrakrylsäure $C_6H_{10}O_5$
 Dihydrokrotharmin $C_8H_{10}O_2N_2$
 Diindol $C_{18}H_{11}N_2$
 — $C_{20}H_{11}N_2$
- Diisäthionsäure $C_8H_{10}O_2S_2$
 Diisatinsäure $C_{18}H_{16}O_2N_2$
 — $C_{16}H_{14}O_6N_2$
- Diisocrotyl C_8H_{14}
 Diisoegenol $C_{30}H_{24}O_4$
 Diisohexolaktin $C_{17}H_{18}O_6$
 Diisohexonsäure $C_{12}H_{20}O_4$
 Diisopren $C_{10}H_{16}$
 Diisopropenyl C_8H_{10}
 Diisosafohl $C_{20}H_{30}O_4$
 Dikohlenhexamerkaptid
 $C_4H_{10}S_6$
- Dikonylenalkohol $C_{16}H_{20}O_2$
 Dikonylenalkohol $C_{16}H_{20}O_2$
 Dilaktamsäure $C_8H_{11}O_4N$
 Dilaktylsäure $C_8H_{11}O_5$
 Dialurylalkohol $C_{28}H_{48}O$
 Dilepidin $C_{20}H_{32}O_2$
 Dilutursäure $C_8H_{10}O_2N_2$
 Dimesityl $C_{16}H_{22}$
 Dinaphthakridon $C_{21}H_{13}ON$
 Dinaphthazin $C_{20}H_{12}N_2$
 Dinaphthylin $C_{20}H_{16}N_2$
 Dinikotinsäure $C_8H_8O_4N$
 Diönanthaldehyd $C_8H_{12}O$
 Diönansäure $C_{14}H_{20}O_2$
 Diorsellensäure $C_{16}H_{11}O_4$
 Dioseorin $C_{13}H_{15}O_2N$
 Diosmelactopen $C_{10}H_{14}O$
 Diosphenol $C_{18}H_{16}O_2$
 Diosphenolsäure $C_{12}H_{16}O_3$
 Diostearepton $C_{10}H_{16}O$
- Dioxiindol $C_8H_8O_2N$
 Dipenten $C_{10}H_{16}$
 Dipentin $C_{10}H_{16}$
 Diphenacyl $C_{16}H_{14}O_2$
 Dipheniu $C_{12}H_{14}N_4$
 Dipensensäure $C_{14}H_{18}O_4$
 Diphenylaminblau
 $C_{27}H_{26}N_2Cl$
- Diphenylenimid $C_{20}H_{12}N$
 Diphrorogluccincarbon-säure
 $C_{14}H_{16}O_6$
- Diphosphobenzol $C_6H_8OP_2$
 Diphtalylsäure $C_{16}H_{10}O_6$
 Dipiperallylalkin $C_{18}H_{18}ON_2$
 Dipiperidin $C_{10}H_{18}N_2$
 Dipiperidinhydrin $C_{14}H_{20}ON_2$
 Dipiperidyl $C_{10}H_{16}N_2$
 Dipropargyl C_8H_8
 Dipropenyl C_8H_{10}
 Diprotocatechusäure
 $C_{14}H_{10}O_7$
- Dipseudocumol $C_{18}H_{20}O_2$
 Dipulvinsäure $C_{20}H_{28}O_2$
 Dipyrroloalcarbonensäure
 $C_{14}H_{10}O_9$

Dipropentylen $C_{10}H_{11}$
 Dipyrotartraceton $C_8H_{11}O_2$
 Dipyrvintrifreid $C_8H_{12}O_2N_2$
 Diresorciphtalin $C_{20}H_{14}O_6$
 Diricinusölsäure $C_{20}H_{36}O_5$
 Disakryl C_8H_8O
 Disautonigostäure $C_{20}H_{35}O_8$
 Dispolin $C_{11}H_{11}N$
 Distyreensäure $C_{17}H_{16}O_2$
 Distyrol $C_{10}H_{10}$
 Ditain $C_{27}H_{26}O_2N_2$
 Ditamin $C_{10}H_{10}O_2N$
 Ditartrylsäure $C_8H_{10}O_{11}$
 Diterbenthyll $C_{20}H_{20}$
 Diterbenthylen $C_{20}H_{26}$
 Diterpen $C_{22}H_{32}$
 Diterpilen $C_{20}H_{32}$
 Diterpodilakton $C_{15}H_{22}O_4$
 Diterpolaktensäure $C_8H_{14}O_4$
 Diterpoxylsäure $C_{15}H_{16}O_7$
 Diterpylsäure $C_{12}H_8O_7$
 Diterrollarustoff $C_9H_8O_2$
 Dithiényl $C_8H_8S_2$
 Dithioammeld $C_6H_8N_{10}S_2$
 Dithiobrenzweinsäure
 $C_9H_{14}O_2S_2$
 Dithioearbanilsäure $C_8H_7NS_2$
 Dithiodilaktylsäure
 $C_8H_{10}O_2S_2$
 Dithiodiphtalyl $C_{10}H_8O_2S_2$
 Dithiophthalid $C_8H_8O_2$
 Dithiopropansäure
 $C_8H_7N_2S_2$
 Ditolauazotil $C_{28}H_{20}N_2$
 Ditriazobenzol $C_6H_7N_2$
 Diuudekylensäure $C_{27}H_{46}O_4$
 Divalerylen C_8H_{18}
 Divalerylenhydrat $C_{10}H_{18}O$
 Divalolaktin $C_{10}H_{14}O_3$
 Divalonsäure $C_{10}H_{16}O_4$
 Divaricatsäure $C_{27}H_{26}O_7$
 Divicia $C_8H_{10}O_{16}N_{20}$
 Divinyl C_4H_6
 Dixanthon $C_{27}H_{10}O_4$
 Dixyliton $C_{21}H_{26}O_2$
 Döglinsäure $C_{19}H_{30}O_7$
 Dokosan $C_{27}H_{46}$
 Dotriakontan $C_{27}H_{46}$
 Dracalban $C_{10}H_{12}O_4$
 Dracoresan $C_{26}H_{44}O_6$
 Draocresantanon $C_8H_{14}O$
 Drimim $C_8H_{14}O_4$
 Drimol $C_{20}H_{36}O_2$
 Drupose $C_{17}H_{26}O_2$
 Düngersäure $C_3H_{30}O_{11}N_2$
 Dulcamarin $C_{10}H_{16}O_6$
 Dulcamarin $C_{22}H_{34}O_{10}$
 Dulcid $C_8H_{12}O_4$
 Dulcit $C_8H_{10}O_5$
 Dulcitanin $C_8H_{15}O_5N$
 Dulcitan $C_8H_{10}O_5$
 Dulcitsweinsäure $C_{11}H_{20}O_{13}$
 Dumasin $C_8H_{10}O$
 Duplodithioacetone $C_8H_{12}S_4$

Duplothioacetone $C_8H_{12}S_4$
 Durol $C_{10}H_{14}$
 Durolhydrochinon $C_{10}H_{14}O_2$
 Durylsäure $C_{16}H_{12}O_2$
 Dypnon $C_{12}H_{14}O$
 Dypnopinakolen $C_{22}H_{24}$
 Dypnopinakolin $C_{22}H_{26}O$
 Dypnopinakon $C_{22}H_{26}O_2$
 Dypnopinalkohol $C_{22}H_{28}O$
 Dysfibrinose $C_{105}H_{156}O_{83}N_{20}S$
 Dyslysin $C_{21}H_{26}O_3$
 Dyslyt $C_8H_8O_6N_4$

Eegoniu $C_9H_{15}O_2N$
 Eegoninamid $C_9H_{16}O_2N_2$
 Eegoninsäure $C_7H_{11}O_3N$
 Echicerin $C_{22}H_{45}O_2$
 Echicerinsäure $C_{20}H_{40}O_4$
 Echlikautschin $C_{25}H_{40}O_2$
 Echinochrom
 $C_{102}H_{100}O_{11}N_{12}S_2Fe$
 Echiretin $C_{27}H_{30}O_2$
 Echitamin $C_{27}H_{28}O_4N_2$
 Echitelin $C_{27}H_{28}O_2$
 Echitenin $C_{10}H_{12}O_4N$
 Echitin $C_{37}H_{62}O_{10}$
 Eichengerbsäure $C_{14}H_{14}O_7$
 — $C_{17}H_{16}O_7$
 — $C_{19}H_{18}O_{10}$
 — $C_{20}H_{20}O_{10}$
 — $C_{25}H_{26}O_{14}$
 — $C_{26}H_{32}O_{15}$

Eichenrindengerbsäure

$C_{28}H_{26}O_{14}$
 Eichenroth $C_{14}H_{10}O_8$
 — $C_{16}H_{12}O_{12}$
 — $C_{26}H_{18}O_{17}$
 — $C_{31}H_{26}O_{15}$
 — $C_{38}H_{36}O_{17}$

Eichentaunform $C_{72}H_{72}O_{14}$

Eieralbumin $C_{80}H_{127}O_{21}N_{20}S$
 Eikosan $C_{20}H_{42}$
 Eikosylen $C_{20}H_{38}$
 Eiweiss $C_{24}H_{100}O_{25}N_{16}$
 Ekzemim $C_7H_{12}ON$
 Elaeolsäure $C_{17}H_{30}O_2$
 Elaeomargarinsäure $C_{17}H_{30}O_2$
 Elaeostearinsäure $C_{17}H_{30}O_2$
 Elaidsäure $C_{18}H_{34}O_2$
 Elaifäure $C_{19}H_{38}O_2$
 Elaterin $C_{20}H_{38}O_5$
 Elenisäure $C_{25}H_{50}O_4$
 Ellagengerbsäure $C_{14}H_{10}O_{10}$
 Ellagsäure $C_{14}H_{10}O_8$
 Emetin $C_{13}H_{22}O_2N$
 — $C_{30}H_{40}O_8N_2$
 — $C_{30}H_{44}O_8N_2$
 Emodin $C_{15}H_{16}O_5$
 Enkephalin $C_{107}H_{200}O_{19}N_4$
 Eosin $C_{20}H_8O_2Br_4$
 Epichlorhydrinimid
 $C_{12}H_{27}O_2N_3Cl_2$

Epicyanhydrin $C_9H_{10}O_2N_2$
 Epiglyceerindweinsäure

$C_{11}H_{14}O_2$
 Epiguacin $C_8H_8ON_5$
 Epiphydracarbonsäure
 $C_4H_8O_2$
 Episarkin $C_4H_8ON_3$
 Ericolin $C_{24}H_{32}O_{21}$
 Ergosterin $C_{28}H_{44}O$
 Ergotinin $C_{25}H_{40}O_3N_4$
 Erlenroth $C_{22}H_{22}O_2$
 Erucasäure $C_{27}H_{48}O_2$
 Erysipelin $C_8H_{15}O_2N$
 Erythran $C_8H_8O_3$
 Erythrin C_6H_6
 Erythrin $C_{20}H_{42}O_{13}$
 — $C_{21}H_4O_{10}$
 Erythrit $C_8H_{10}O_4$
 Erythritsäure $C_8H_8O_5$
 Erythritschwefelsäure
 $C_8H_{14}O_8S_2$
 Erythritweinsäure $C_{12}H_{16}O_{14}$
 Erythroäthylnitrolsäure
 $C_8H_8O_2N_2$
 Erythrocentaurin $C_{27}H_{32}O_6$
 Erythroextrin $C_{218}H_{360}O_{140}$
 Erythroglycerin $C_4H_{10}O_4$
 Erythroglycerinsäure $C_4H_8O_5$
 Erythrol $C_8H_8O_3$
 Erythrolactin $C_{13}H_{10}O_8$
 Erythrobleuin $C_{26}H_{48}O_7N$
 Erythrobleuinsäure $C_{27}H_{40}O_8$
 Erythroresinotannol
 $C_49H_{40}O_{10}$
 Estragol $C_{10}H_{12}O$
 Escrin $C_{15}H_{21}O_2N_3$
 Essigsäure $H_2H_4O_2$
 Ettidin $C_{10}H_{15}N$
 Eucalypten $C_{10}H_{16}$
 Eucalyptol $C_{10}H_{18}O$
 Encarvol $C_{10}H_{10}$
 Euearvon $C_{10}H_{10}O$
 Euechin $C_{22}H_{28}O_4N_2$
 Euchronsäure $C_{17}H_{18}O_8N_2$
 Eudesmin $C_{20}H_{30}O_5$
 Eugenol $C_{10}H_{12}O_2$
 Eugenolchinin $C_{20}H_{26}O_2N_2$
 Eugenolglykosid $C_{16}H_{22}O_7$
 Eugensäure $C_{11}H_{12}O_4$
 Eukaly $C_8H_{12}O_4$
 Eulyt $C_8H_8O_2N_4$
 Eupatorin $C_{23}H_{32}O_{36}$
 Euphorbon $C_{15}H_{14}O$
 — $C_{20}H_{26}O$
 Euphthalmim $C_{17}H_{26}O_3N$
 Euphthalmisäure $C_{27}H_{28}O_9$
 Eurhodin $C_{17}H_{13}N_3$
 Eurhodol $C_{16}H_{18}O_7N_7Cl_3$
 Euterpen $C_{10}H_{16}$
 Euxanthonsäure $C_{13}H_{18}O_{11}$
 Euxanthon $C_{12}H_{16}O_4$
 Euxanthonsäure $C_{11}H_{16}O_8$
 Evernin $C_8H_{14}O_7$

Everminsäure $C_{19}H_{16}O_4$
 Eversäure $C_{17}H_{16}O_7$
 Excretin $C_{30}H_{48}O$

Fabianol $C_{24}H_{40}O_4$
 Fabianaresen $C_{54}H_{90}O_6$
 Fellensäure $C_{29}H_{38}O_4$
 Fenchelen $C_{10}H_{16}$
 Fenchel $C_{10}H_{16}$
 Fenchol $C_{10}H_{16}O$
 Fenchocamphorol $C_{10}H_{16}O$
 Fenchocamphoron $C_{10}H_{16}O$
 Fenchocarbonsäure $C_{11}H_{18}O_2$
 Fencholenalkohol $C_{10}H_{16}O$
 Fencholenamin $C_{10}H_{16}N$
 Fencholensäure $C_{10}H_{16}O_4$
 Fenchon $C_{10}H_{16}O$
 Fenchonimin $C_{10}H_{17}N$
 Fenchylalkohol $C_{10}H_{18}O$
 Fenchylamin $C_{10}H_{17}N$
 Ferulasäure $C_{15}H_{16}O_4$
 Fibrin $C_{104}H_{183}O_{31}N_{20}S$
 Fibrinogen $C_{111}H_{165}O_{35}N_{20}S$
 Fibrinoglobulin

$C_{117}H_{176}O_{37}N_{20}S$
 Fibrin $C_{12}H_{22}O_6N_5$
 Fichtelit $C_{18}H_{32}$
 — $C_{10}H_{16}$
 Fichtenroth $C_{12}H_{22}O_{17}$
 Filixroth $C_{28}H_{46}O_{17}$
 Filixsäure $C_{11}H_{18}O_6$
 Fisetin $C_{15}H_{10}O_6$
 Flavilin $C_{18}H_{14}N_2$
 Flavaspidsäure $C_{23}H_{34}O_6$
 Flavancwasserstoff $C_7H_{12}N_2S$
 Flavonol $C_{16}H_{12}ON$
 Flavindin $C_{21}H_{15}ON$
 Flavindulin $C_{25}H_{17}N_2Cl$
 Flavobuxin $C_{16}H_{12}O_5N$
 Flavochinolin $C_{19}H_{14}N_2$
 Flavol $C_{18}H_{12}O_2$
 Flavolin $C_{18}H_{13}N$
 Flavon $C_{15}H_{10}O_2$
 Flavopannin $C_{41}H_{56}O_7$
 Flavopurpurin $C_{14}H_{10}O_5$
 Flemingin $C_{17}H_{12}O_2$
 Flohsamenschleim $C_{32}H_{58}O_{29}$
 Flavil $C_{20}H_{22}O$
 Fluoflavin $C_{17}H_{10}N_4$
 Fluoran $C_{20}H_{17}O_2$
 Fluoranthen $C_{15}H_{10}$
 Fluoren $C_{12}H_{10}$
 Fluorenalkohol $C_{13}H_{10}O$
 Fluorenamin $C_{17}H_{11}N$
 Fluorencinon $C_{13}H_8O_2$
 Fluorescein $C_{20}H_{12}O_5$
 Fluorescin $C_{20}H_{14}O_5$
 Fluoroform CHF_3
 Fluorolin $C_{12}H_{13}N$
 Formalizin $C_3H_7N_2$
 Formazyloxybenzol $C_{10}H_{12}N_2$
 Formazyloxybenzolkäure
 $C_{14}H_{12}O_4N_4$

Formazyloxybenzolkäure
 $C_{17}H_{14}ON_4$
 Formazyloxywasserstoff
 $C_{13}H_{12}N_4$
 Formomelamin $C_4H_6ON_6$
 Formonetin $C_{27}H_{20}O_6$
 Formose $C_6H_{12}O_5$
 Frangulin $C_{27}H_{30}O_5$
 Fraxetin $C_{16}H_8O_5$
 Fraxin $C_{16}H_{18}O_{10}$
 Fraxinusgerbsäure $C_{28}H_{32}O_{14}$
 Fruchtzucker $C_6H_{12}O_6$
 Fruktose $C_6H_{12}O_5$
 Fruktosediaceton $C_{12}H_{20}O_6$
 Fruktoseketazin $C_{12}H_{14}O_{10}N_2$
 Fucusamid $C_{15}H_{13}O_3N_2$
 Fucusin $C_{12}H_{17}O_3N_2$
 Fukose $C_6H_{12}O_5$
 Fulminursäure $C_3H_2O_5N_2$
 Fulmitetragnanurat
 $C_7H_{12}O_8N_{11}$
 Fulmitrignanurat $C_5H_{11}O_5N_9$
 Fumarin $C_7H_{10}O_2N$
 Fumarsäure $C_4H_4O_4$
 Furalacetophenon $C_{12}H_{10}O_2$
 Furalävlavinsäure $C_{10}H_{16}O_4$
 Furan C_4H_4O
 Farazanpropionsäure
 $C_7H_8O_2N_2$
 Furberneinstäure $C_6H_8O_3$
 Furfurakrolein $C_5H_6O_3$
 Furfuralkohol $C_5H_8O_2$
 Furfurangelikensäure $C_9H_{10}O_5$
 Furfurin $C_{15}H_{12}O_3N_2$
 Furfurisolphtalsäure $C_{12}H_8O_5$
 Furfurolo $C_5H_6O_2$
 Furfurolyglykose $C_{11}H_{16}O_6$
 Furfurolurethan $C_{11}H_{16}O_5N_2$
 Furfurostilben $C_{10}H_8O_2$
 Fural $C_{10}H_8O_4$
 Fursäure $C_{10}H_8O_5$
 Furoin $C_5H_8O_2$
 — $C_{10}H_8O_4$
 Furonsäure $C_7H_8O_5$
 Furylamin C_2H_3ON
 Furylurethan $C_8H_{11}O_3N$
 Fusocphlobaphen $C_{27}H_{24}O_{17}$
 Fuscusol $C_8H_8O_2$
 Fustin $C_{56}H_{46}O_{23}$

Gadinin $C_7H_{10}ON_2$
 Gaidinsäure $C_{16}H_{26}O_2$
 Galabepit $C_7H_{10}O_7$
 Galaheptonsäure $C_7H_{14}O_5$
 Galaheptose $C_7H_{14}O_7$
 Galaktan $C_6H_{10}O_5$
 Galaktid $C_6H_{10}O_7$
 Galaktin $C_6H_{10}O_5$
 — $C_24H_{27}O_{25}N_4$
 Galaktin $C_{12}H_{21}O_{11}$
 Galaktensäure $C_6H_{10}O_7$
 Galaktosamin $C_6H_{12}O_5N$
 Galaktose $C_6H_{12}O_6$

Galaktosecarbonsäure
 $C_7H_{10}O_8$
 Galaktosidoglykensäure
 $C_2H_2O_2$
 Galauzu $C_{10}H_{16}O_2$
 Galaktid $C_7H_{10}O_7$
 Galaktensäure $C_6H_{10}O_7$
 Galaktose $C_6H_{12}O_6$
 Galgantol $C_{10}H_{16}O$
 Galpen $C_{15}H_{24}$
 Galpein $C_{29}H_{21}O_3N$
 Galipidin $C_{10}H_{16}O_2N$
 Gallacetol $C_{10}H_{16}O_4$
 Gallacetophenon $C_9H_8O_2$
 Gallacetophenon $C_9H_8O_4$
 Gallactueon C_4H_8O
 Gallapfgerbsäure $C_{17}H_{10}O_6$
 Gallaktinsäure $C_{15}H_{10}O_2$
 Gallamid $C_7H_8O_4N$
 Galteu $C_{20}H_{16}O_7$
 Gallin $C_{20}H_{16}O_7$
 Gallisin $C_{12}H_{18}O_{11}$
 Galloccarbonsäure $C_8H_8O_7$
 Galloccerin $C_{30}H_{38}O_2$
 Gallocyanin $C_{15}H_{10}O_2N_2$
 Galloidiacetophenon $C_{10}H_{10}O_2$
 Galloffavin $C_{15}H_8O_9$
 Gallol $C_{20}H_{16}O_7$
 Gallussäure $C_8H_8O_5$
 Gallusschwefelsäure:
 $C_7H_8O_8S$
 Galsäure $C_7H_{12}O_{13}$
 Galtose $C_6H_{12}O_5$
 Gardensäure $C_4H_{10}O_6$
 Gardenin $C_11H_{12}O_5$
 Gautherin $C_{14}H_{10}O_8$
 Geissospermin $C_{19}H_{21}O_7N_2$
 Gelatine $C_{78}H_{100}N_{22}O_{24}$
 Gelose $C_6H_{10}O_5$
 Gelsemin $C_{27}H_{30}O_8N_2$
 Gelseminin $C_{27}H_{30}O_8N_2$
 Gentianin $C_{18}H_{16}O_5$
 Gentianose $C_{26}H_{46}O_{51}$
 Gentiogenin $C_{14}H_{18}O_5$
 Gentiol $C_{26}H_{46}O_5$
 Gentiopikrin $C_{20}H_{26}O_{12}$
 Gentisein $C_{17}H_{14}O_5$
 Gentisin $C_{14}H_{10}O_5$
 Gentisinsäure $C_7H_8O_4$
 Geoceraïn $C_{28}H_{36}O_2$
 Geocerinsäure $C_8H_{16}O_2$
 Geomyricin $C_{24}H_{40}O_2$
 Georetinsäure $C_{12}H_{22}O_4$
 Geranial $C_{10}H_{16}O$
 Geranien $C_{10}H_{16}O$
 Geraniol $C_{10}H_{16}O$
 Geraniolen $C_9H_{10}O$
 Geraniumsäure $C_{10}H_{16}O_2$
 Geronsäure $C_9H_{10}O_2$
 Gerontin $C_8H_{14}N_2$
 Gingkosäure $C_{21}H_{34}O_2$
 Glaucoinsäure $C_21H_{30}O_6N_2$
 Glaukocydroellagsäure
 $C_{14}H_{10}O_7$

- Glaukomelansäure $C_{12}H_8O_7$
 Glaukophansäure $C_{27}H_{26}O_{18}$
 Globularin C_3H_4O
 Globularin $C_{15}H_{20}O_8$
 Globulin $C_{231}H_{341}O_{140}N_{178}S$
 Glucoprotein $C_3H_4O_2N_2$
 Glutaminsäure $C_5H_8O_4$
 Glutaminsäure $C_5H_8O_4N$
 Glutarsäure $C_5H_8O_4$
 Glutazin $C_5H_8O_2N_2$
 Glutimid $C_5H_8O_2N_2$
 Glutaminsäure $C_5H_8O_2N$
 Glutinsäure $C_5H_8O_4$
 Glutolin $C_{203}H_{333}O_{79}N_{30}S$
 Glucose $C_6H_{12}O_5$
 Glycerin $C_3H_8O_3$
 Glycerindiweinsäure
 $C_{11}H_{14}O_5$
 Glycerinsäure $C_3H_6O_4$
 Glycid $C_2H_4O_2$
 Glycidssäure $C_2H_4O_3$
 Glycin $C_2H_5O_2N$
 Glycinphthaloylessigsäure
 $C_{10}H_8O_8N$
 Glycerinsäure $C_3H_7O_4$
 Glycyphyllin $C_{71}H_{84}O_8$
 Glycyrrhetin $C_{25}H_{47}O_8N$
 Glycyrrhizinsäure
 $C_{24}H_{40}O_{12}N$
 Glykoeholonsäure $C_{26}H_{41}O_5N$
 Glykoeholsäure $C_{26}H_{41}O_5N$
 Glykoemarakkohol $C_{14}H_{19}O_7$
 Glykoeyaminid $C_8H_9ON_3$
 Glykoeyamin $C_8H_9O_2N_3$
 Glykoldrupose $C_{24}H_{36}O_{16}$
 Glykodylsäuren $C_{24}H_{36}O_4N$
 Glykoferulaaldehyd $C_{16}H_{20}O_4$
 Glykogen $C_6H_{10}O_5$
 $C_{15}H_{21}O_{10}$
 Glykogensäure $C_6H_{10}O_7$
 Glykoeptit $C_7H_{16}O_7$
 Glykoheptonsäure $C_7H_{16}O_8$
 Glykoheptose $C_7H_{14}O_7$
 Glykokoll $C_2H_5O_2N$
 Glykolignose $C_{20}H_{46}O_{21}$
 Glykolid $C_4H_8O_4$
 Glykolin $C_3H_6N_2$
 $C_8H_{10}N_2$
 Glykolsäure $C_2H_4O_3$
 Glykolurein $C_2H_4O_2N_2$
 Glykoluril $C_4H_8O_4N_4$
 Glykolytharistoff $C_4H_8O_7N_2$
 Glykonomit $C_8H_{10}O_5$
 Glykonononsäure $C_9H_{18}O_{13}$
 Glykononose $C_8H_{16}O_8$
 Glykossäure $C_8H_{17}O_7$
 Glykooktid $C_8H_{16}O_4$
 Glykooktonsäure $C_8H_{16}O_6$
 Glykooktose $C_8H_{16}O_5$
 Glykosaccharinsäure $C_8H_{16}O_4$
 Glykosamin $C_{11}H_{15}O_2N$
 Glykosan $C_6H_{10}O_5$
 Glykose $C_6H_{12}O_5$
 Glykoseacetat $C_8H_{14}O_6$
 Glykosealdazin $C_{12}H_{24}O_{15}N_3$
 Glykosedineton $C_{12}H_{20}O_{16}$
 Glykosediwensäure
 $C_{14}H_{18}O_{15}$
 Glykosidoglykossäure
 $C_{11}H_{22}O_{12}$
 Glykosin $C_6H_8N_4$
 $C_6H_8N_4$
 $C_{11}H_{12}N_2$
 Glykosen $C_6H_{10}O_5$
 Glykosyringasäure $C_{15}H_{26}O_{10}$
 Glykotannin $C_{23}H_{30}O_{22}$
 Glykovanillin $C_{14}H_{18}O_5$
 Glykovanillinsäure $C_{14}H_{18}O_6$
 Glykovanillylalkohol
 $C_{14}H_{20}O_3$
 Glykuronsäure $C_6H_{12}O_7$
 Glykuvinsäure $C_6H_8O_4$
 $C_6H_{10}O_5$
 Glyoxalin $C_2H_4N_2$
 Glyoxim $C_2H_4O_2N_2$
 Glyoxal $C_2H_2O_2$
 Glyoxalbenzidin $C_8H_{11}O_2N_2$
 Glyoxyldiurid $C_8H_8O_2N_4$
 Glyoxylsäure $C_2H_2O_3$
 Guoskopin $C_{27}H_{30}O_4N$
 Gossypose $C_{18}H_{27}O_{16}$
 Grammin $C_8H_{10}O_5$
 Granatanin $C_8H_{15}N$
 Granatenin $C_8H_{15}N$
 Granatgerbsäure $C_{30}H_{18}O_{14}$
 Granatol $C_8H_{11}O$
 Granatolin $C_8H_{11}ON$
 Granatsäure $C_8H_{11}O_2N$
 Graphitoxyl $C_7H_8O_4$
 $C_{20}H_{26}O_{13}$
 Graphitsäure $C_{11}H_8O_5$
 $C_{11}H_8O_5$
 Gratioleretin $C_{17}H_{26}O_5$
 Gratiolietin $C_{17}H_{26}O_5$
 Gratiolin $C_{20}H_{34}O_7$
 Gratiololetin $C_{24}H_{42}O_7$
 Gratiololetin $C_{26}H_{46}O_{11}$
 Gratiolosin $C_{24}H_{44}O_{20}$
 Grönhartin $C_{15}H_{14}O_5$
 Guäthol $C_8H_{10}O_2$
 Guajacinsäure $C_{21}H_{22}O_7$
 Guajakblau $C_{20}H_{20}O_5$
 Guajakgelb $C_{20}H_{20}O_7$
 Guajakharzsäure $C_{20}H_{21}O_4$
 Guajakol $C_7H_8O_2$
 Guajakonsäure $C_{16}H_{20}O_5$
 $C_{20}H_{24}O_5$
 Guajaperol $C_{10}H_{17}O_4N$
 Guajen $C_{12}H_{15}$
 Guajenehinon $C_{12}H_{10}O_2$
 Guajol C_8H_8O
 $C_{12}H_{22}O$
 Guanazol $C_7H_8N_2$
 Guanidin CH_5N_3
 Guanidinsarkosin $C_4H_{12}O_2N_4$
 Guanin $C_5H_7ON_2$
 Guanolin $C_2H_5O_2N_2$
 Guanytharistoff $C_3H_8ON_4$
 Guanylsäure $C_{20}H_{40}O_{17}N_{10}P$
 Gulonsäure $C_8H_{14}O_7$
 Gulose $C_6H_{12}O_5$
 Gurjunsäure $C_{27}H_{34}O_4$
 Guvacin $C_8H_8O_2N$
 Gyrophorsäure $C_{18}H_{20}O_7$
 $C_{26}H_{30}O_{15}$
Hämäteïn $C_{10}H_{12}O_6$
 $C_{24}H_{26}O_{13}N$
Hämätin $C_{26}H_{32}O_5N_4Fe$
 $C_{23}H_{27}O_5N_4Fe$
Hämätinsäure $C_8H_8O_2$
 $C_8H_8O_2N$
Hämätoidin $C_{17}H_{19}O_5N_4$
Hämätolin $C_{26}H_{30}O_5N_4$
Hämatomminsäure $C_{27}H_{37}O_{10}$
Hämätoporphyrin $C_{16}H_{12}O_5N_2$
 $C_{23}H_{24}O_5N_4$
 $C_{24}H_{24}O_5N_4$
Hämatoxylin $C_{14}H_{10}O_6$
Hämatoxylinphthalin
 $C_{26}H_{26}O_{14}$
Hämin $C_{27}H_{30}O_5N_4Fe$
 $C_{25}H_{28}O_5N_4CHFe$
Häminsäure $C_{27}H_{30}O_{10}N_4Fe_2$
Hämochromogen
 $C_{24}H_{24}O_5N_4Fe$
Hämocyanin
 $C_{267}H_{1302}O_{288}N_{273}S_4Cu$
Hämoglobin
 $C_{256}H_{1095}O_{190}N_{164}S_3Fe$
 $C_{256}H_{1095}O_{215}N_{166}S_3Fe$
Hämosterin $C_{20}H_{29}O$
Hamamelitannin $C_8H_{11}O_5$
Hamathionsäure $C_{12}H_{18}O_{16}S$
Hanföl $C_{16}H_{24}$
Hanfölsäure $C_{17}H_{22}O_2$
Harmalin $C_{13}H_{14}ON_2$
Harmalol $C_{13}H_{15}ON_2$
Harmin $C_{14}H_{15}ON_2$
Harminsäure $C_{12}H_{13}O_2N_2$
Harmol $C_{17}H_{20}N_2$
Harmolsäure $C_{16}H_{17}O_2N_2$
Harnsäure $C_4H_8O_2N_4$
Harnstoff CH_4ON_2
Hartin $C_{10}H_{14}O$
Hartit $C_{12}H_6$
Hautfibrin $C_{12}H_{20}O_2N_2$
Hedersäure $C_{16}H_{20}O_4$
Hefegummi $C_{15}H_{27}O_{11}$
Helenin $C_{12}H_{20}O_2$
Helianthem $C_{27}H_{30}O_{40}$
Helianthin $C_{14}H_{15}O_2N_2S$
Heliantensäure $C_{14}H_{18}O_6$
Helicin $C_8H_{10}O_2$
Helicinyglykose $C_{12}H_{22}O_{13}$
Helicoidin $C_{22}H_{34}O_{14}$
Helleboreïn $C_{23}H_{34}O_{13}$
 $C_{27}H_{36}O_{13}$
Helleborezin $C_{26}H_{38}O_5$
Helleboretin $C_{14}H_{20}O_5$
 $C_{16}H_{20}O_5$

Helleborin C_7H_8O
 — $C_{24}H_{42}O_6$
 Hemellith C_8H_{12}
 Hemellithsäure $C_9H_{12}O_2$
 Hemialbumin $C_7H_{40}O_{10}N_6$
 Hemialbumose
 $C_{109}H_{186}O_{31}N_{30}S$
 Hemicollin $C_{47}H_{70}O_{19}N_{14}$
 Hemimellithen C_8H_{12}
 Hemimellithsäure $C_9H_{12}O_2$
 Hemipepton $C_{111}H_{175}O_{44}N_{30}S$
 Hemipinsäure $C_{10}H_{16}O_6$
 Hemiproteidin $C_{24}H_{41}O_{12}N_6$
 Hemlockgerbsäure $C_{30}H_{41}O_{10}$
 Hemlockroth $C_{40}H_{30}O_{17}$
 Hencikosan $C_{31}H_{44}$
 Hentriakontan $C_{31}H_{44}$
 Heptakosan $C_{27}H_{38}$
 Heptauaphylen C_8H_{12}
 Heptinsäure $C_8H_{12}O_2$
 Heraclin $C_{37}H_{72}O_{10}$
 Hermerythrin
 $C_{127}H_{201}O_{133}N_{135}S_2Fe$
 Herniarin $C_{19}H_{26}O_{10}$
 Heroin $C_{21}H_{23}O_3N$
 Hesperetol $C_9H_{12}O_2$
 Hesperiden $C_{18}H_{16}$
 Hesperidin $C_{21}H_{26}O_{11}$
 — $C_{27}H_{36}O_{12}$
 Hesperinsäure $C_{23}H_{25}O_7$
 Hesperitin $C_{16}H_{14}O_6$
 — $C_{27}H_{28}O_{12}$
 Heteroalbumose
 $C_{111}H_{193}O_{38}N_{30}S$
 Heterofibrinose
 $C_{120}H_{130}O_{31}N_{30}S$
 Heteroxanthin $C_8H_{10}O_2N$
 Heven $C_{13}H_{24}$
 Hexakosan $C_{26}H_{44}$
 Hexakroisäure $C_{18}H_{24}O_6$
 Hexopinsäure $C_8H_{12}O_2$
 Hexerinsäure $C_8H_{12}O_2$
 Hexinsäure $C_7H_{10}O_2$
 Hexoylen C_8H_{10}
 Hipparaflin $C_{18}H_{15}O_7N_2$
 Hipparin $C_8H_{10}O_2N$
 Hippenylcarbanil $C_9H_8O_2N_2$
 Hippokoprosterin $C_{37}H_{54}O$
 Hippuroflavin $C_8H_{10}O_2N_2$
 Hippursäure $C_9H_{10}O_3N$
 Hippuryltropin $C_{17}H_{21}O_3N_2$
 Hirseölsäure $C_{18}H_{26}O_2$
 Histidin $C_8H_{10}O_2N_2$
 — $C_{17}H_{20}O_4N_2$
 Holocain $C_{16}H_{22}O_2N_2$
 Holzmannin $C_6H_{10}O_3$
 Homoapocinchen $C_{17}H_{15}ON$
 Homoasparagin $C_8H_{10}O_6N_2$
 Homoasparaginsäure
 $C_8H_8O_6N_2$
 Homoatropin $C_{16}H_{21}O_3N$
 Homobenzhydriamin
 $C_{14}H_{15}N$
 Homobetaïn $C_8H_{15}O_3N$

Homobrenzkatechin $C_7H_8O_2$
 Homocampfersäure $C_{11}H_{14}O_4$
 Homocerebrin $C_{26}H_{42}O_{12}N$
 Homochelidonin $C_{27}H_{41}O_5N$
 Homocholesterin $C_{26}H_{46}O$
 Homocholin $C_8H_{11}O_2N$
 Homocichonidin $C_{19}H_{27}ON_2$
 Homocinchonin $C_{19}H_{27}ON_2$
 Homococasäure $C_9H_8O_2$
 Homococoin $C_9H_8O_2N$
 Homococoinensäure $C_9H_{11}O_4N$
 Homocumarinsäure $C_{10}H_{16}O_3$
 Homocuminsäure $C_{11}H_{14}O_2$
 Homoferulasäure $C_{11}H_{12}O_4$
 Homoflemingin $C_{12}H_{13}O_2$
 Homofluorindin $C_{18}H_{12}N_2$
 Homogentisinsäure $C_8H_8O_4$
 Homohydroprotoprin
 $C_{18}H_{21}O_3N$
 Homohydroquercinsäure
 $C_{16}H_{18}O_6$
 Homoisoatsäure $C_9H_{10}O_3N$
 Homoisococasin $C_9H_{10}O_2$
 Homoisophtalsäure $C_9H_8O_4$
 Homoitakonsäure $C_8H_8O_4$
 Homokaffeidincarbonsäure
 $C_9H_{10}O_6N_4$
 Homokreatin $C_8H_{11}O_3N_3$
 Homolavulinsäure $C_8H_{10}O_3$
 Homolinalool $C_{11}H_{20}O$
 Homomesakonsäure $C_8H_8O_4$
 Homomethylenblau
 $C_{17}H_{29}N_8ClS$
 Homonikotinsäure $C_7H_7O_2N$
 Homophthalmidsäure
 $C_9H_9O_3N$
 Homophthalsäure $C_9H_8O_4$
 Homopiperonylsäure $C_9H_8O_6$
 Homoprotokatechusäure
 $C_8H_8O_4$
 Homoptocarpin $C_{21}H_{14}O_6$
 Homopyrrol C_5H_7N
 Homorottlerin $C_{23}H_{36}O_6$
 Homosalicylsäure $C_8H_8O_3$
 Homosaligenin $C_8H_{10}O_2$
 Homoscupolamin $C_{16}H_{19}O_3N$
 Homoterpenoylameisensäure
 $C_{10}H_{14}O_5$
 Homoterpenylsäure $C_9H_{11}O_4$
 Homoterphthalsäure $C_9H_{10}O_4$
 Homoumbelliferon $C_{10}H_8O_2$
 Homovanillinsäure $C_8H_{10}O_4$
 Homovitexin $C_{12}H_{11}O_7$
 Hopfenöl $C_{10}H_{16}O$
 Hordeinsäure $C_{12}H_{14}O_2$
 Huminsäure $C_{28}H_{27}O_{10}$
 Humulen $C_{15}H_{24}$
 Humussäure $C_{24}H_{10}O_{10}$
 — $C_{20}H_{34}O_{27}$
 Hyenasäure $C_{22}H_{26}O_2$
 Hydantoin $C_5H_8O_2N_2$
 Hydantoinensäure $C_5H_8O_3N_2$
 Hydracetamid $C_8H_{12}N_2$
 Hydräskuletin $C_{18}H_{14}O_2$

Hydrakrylsäure $C_5H_8O_3$
 Hydranison $C_{14}H_{18}O_4$
 Hydrastal $C_{16}H_{20}O_2$
 Hydrastiminsäure $C_{11}H_9O_6N$
 Hydrastin $C_{21}H_{21}O_6N$
 Hydrastinin $C_{11}H_{11}O_2N$
 — $C_{11}H_{13}O_2N$
 Hydrastlakton $C_{15}H_{12}O_2$
 Hydrastonsäure $C_{26}H_{18}O_7$
 Hydrastsäure $C_9H_8O_6$
 Hydratropasäure $C_9H_{10}O_2$
 Hydroazoxaly $C_8H_{10}O_4N_4$
 Hydroazobenzol $C_{12}H_{12}N_2$
 Hydrozoinatin $C_8H_7ON_3$
 Hydrozotriazol $C_8H_7N_3$
 Hydrozotriazol $C_8H_7N_3$
 Hydrazulinin $C_{14}H_{16}N_2$
 Hydrindin $C_{27}H_{27}O_5N$
 Hydrindinsäure $C_8H_8O_2N$
 Hydrindon $C_8H_{10}O$
 Hydrisalizarin $C_{28}H_{18}O_2$
 Hydrobietetinsäure $C_{24}H_{16}O_6$
 Hydrobenzoin $C_{14}H_{11}O_2$
 Hydroberberin $C_{23}H_{21}O_2N$
 Hydrobilirubin $C_{23}H_{40}O_7N_4$
 Hydrocarotin $C_{18}H_{20}O$
 Hydrocarpol $C_{15}H_{20}O$
 Hydrocellulose $C_{12}H_{22}O_{11}$
 Hydrochelonidaminsäure
 $C_8H_{11}O_4N$
 Hydrochelidoninsäure $C_8H_{10}O_4$
 Hydrochinolin $C_{19}H_{18}N_2$
 Hydrochinon $C_6H_6O_2$
 Hydrocinnamin $C_{17}H_{17}N_2$
 Hydrocotarin $C_{17}H_{15}O_3N$
 Hydrocumarin C_8H_8O
 Hydrocumarinsäure $C_{10}H_{10}O_6$
 Hydrocyanalidin $C_8H_7N_1$
 Hydrocyanauramin $C_{18}H_{17}N_4$
 Hydrocyanrosanilin $C_{20}H_{17}N_4$
 Hydrodicotarin $C_{21}H_{20}O_6N_2$
 Hydrodigitosäure $C_{11}H_{17}O_5$
 Hydroegonidin $C_9H_8O_2N$
 Hydroeuliochronsäure
 $C_8H_8O_{10}S_2$
 Hydrofluoransäure $C_{20}H_{14}O_3$
 Hydrofuronsäure $C_7H_{10}O_5$
 Hydrogardieninsäure $C_{11}H_{11}O_6$
 Hydrogratioleretin $C_9H_{26}O_{11}$
 Hydrohydrastinin $C_{11}H_{13}O_2N$
 Hydroisatin $C_8H_7O_2N$
 Hydrojuglon $C_{12}H_8O$
 Hydrokaffursäure $C_8H_8O_3N_3$
 Hydrokrokonensäure $C_5H_8O_3$
 Hydrokrurin $C_{18}H_{20}O_2N_2$
 Hydrolapachosäure $C_{18}H_{18}O_5$
 Hydromellosephansäure
 $C_{10}H_{10}O_6$
 Hydroptilid $C_8H_8O_2$
 Hydroperiferin $C_{16}H_{14}O_6$
 Hydroplumeriasäure $C_{10}H_{11}O_5$
 Hydropropylsäure $C_{10}H_{11}O_4$
 Hydropreliminsäure $C_{10}H_{10}O_6$

Hydropyromellithsäure
 $C_{10}H_{10}O_4$
 Hydroquercinsäure $C_{12}H_{16}O_6$
 Hydroresorufin $C_{17}H_{15}O_3N$
 Hydroxylfallylsäure
 $C_9H_{10}O_2$
 Hydrasontonsäure $C_{13}H_{18}O_4$
 Hydrodenolidcarbonsäure
 $C_{12}H_{20}O_4$
 Hydroshikiminsäure $C_7H_{12}O_5$
 Hydrosparlein $C_{15}H_{26}N_2$
 Hydrothiokrokonsäure
 $C_6H_8O_5S$
 Hydrotinsäure $C_9H_{10}O_7N$
 Hydrotropidin $C_8H_{12}N$
 Hydrotropilidencarbonsäure
 $C_9H_{16}O_2$
 Hydrotropin $C_8H_{17}ON$
 Hydroumbellensäure $C_8H_{10}O_4$
 Hydrovaleritrin $C_{15}H_{19}N$
 Hydroxonsäure $C_8H_{15}O_7N_6$
 Hydrozaminsäure $C_8H_{11}O_2$
 Hydrurinsäure $C_8H_{11}O_7$
 Hydurilsäure $C_8H_8O_8N_4$
 Hydrinphosphorsäure
 $C_4H_8O_5NP$
 Hygrin $C_8H_{14}ON$
 Hygrinsäure $C_8H_{11}O_8N$
 Hymatomelansäure $C_{28}H_{40}O_5$
 — $C_{28}H_{41}O_5$
 Hymenodictin $C_{32}H_{40}O_7N_7$
 Hyocholsäure $C_{34}H_{40}O_4$
 — $C_{32}H_{40}O_4$
 Hyoglykochohlsäure
 $C_{26}H_{40}O_5NS$
 Hyoscin $C_{17}H_{21}O_4N$
 — $C_{17}H_{23}O_2N$
 Hyoscyamin $C_{17}H_{23}O_5N$
 Hyotaurocholsäure
 $C_{27}H_{40}O_6NS$
 Hypnal $C_{13}H_{15}O_3N_3Cl_3$
 Hypnoacetin $C_{16}H_{15}O_5N$
 Hypoäthylthecobromin
 $C_7H_9O_3N_2$
 Hypogähsäure $C_{16}H_{20}O_2$
 Hypoquebractin $C_{27}H_{32}O_7N_7$
 Hyposantonigsäure $C_{15}H_{26}O_2$
 Hyposantonin $C_{15}H_{18}O_2$
 Hyposantoninsäure $C_{15}H_{20}O_2$
 Hyposantonigsäure $C_{15}H_{20}O_2$
 Hypoxanthin $C_8H_9ON_4$
 Hystazarin $C_{14}H_8O_4$

Iecin $C_{14}H_{16}O$
 Idit $C_8H_{14}O_5$
 Idonsäure $C_8H_{12}O_7$
 Idose $C_8H_{12}O_6$
 Idozuckersäure $C_8H_{10}O_6$
 Idrialin $C_{10}H_{15}O_4$
 Idryl $C_{15}H_{19}$
 Ilicin $C_{35}H_{60}$
 Ilicylalkohol $C_{27}H_{38}O$

Ilicylalkohol $C_{27}H_{38}O$
 Ilixanthin $C_{17}H_{15}O_{11}$
 Ilnabenzil $C_{22}H_{26}O_4N_2$
 Ilnasatin $C_{18}H_{11}O_5N_2$
 Ilnesatin $C_8H_8ON_2$
 Imidazol $C_4H_6N_2$
 Imidotriacetamin
 $C_9H_{14}ON_2$
 Imperatorin $C_{16}H_{16}O_4$
 Imperialin $C_{26}H_{40}O_4N$
 Indazin $C_{26}H_{27}N_4$
 Indazol $C_7H_6N_2$
 Indazolesigsäure $C_7H_6O_2N_2$
 Inden C_9H_8
 Indenigo $C_{12}H_4O_4$
 Indenoxybromid C_9H_8OBr
 Indenoxychlorid C_9H_8OCl
 Indifuscin $C_{27}H_{30}O_6N_2$
 Indiglycin $C_8H_{10}O_6$
 Indigoblau $C_{16}H_{16}O_7N_2$
 Indigotin $C_{16}H_{16}O_7N_2$
 Indigopurpurin $C_{14}H_{10}O_2N_2$
 Indigweiß $C_{16}H_{11}O_5N_2$
 Indihumin $C_{10}H_8O_5N$
 Indikan $C_{26}H_{31}O_{17}N$
 Indikanin $C_{20}H_{23}O_{17}N$
 Induleucin $C_{16}H_{12}ON_2$
 Indin $C_{10}H_{10}O_2N_2$
 Indiretin $C_{16}H_{16}O_4N_2$
 — $C_{16}H_{15}O_4N$
 Indirubin $C_{16}H_{16}O_2N_2$
 Indoïn $C_{27}H_{20}O_5N_4$
 Indol C_8H_7N
 Indolin $C_{16}H_{11}N_7$
 Indophan $C_{27}H_{19}O_2N_4$
 Indophenazin $C_8H_8N_2$
 Indophenin $C_{16}H_{11}ONS$
 Indoxin $C_{16}H_{15}O_4N_2$
 Indoxyl C_8H_7ON
 Inosinsäure $C_{16}H_{15}O_8N_4P$
 Inosit $C_6H_{12}O_6$
 Inulin $C_{60}H_{104}O_{52}$
 Inulin $C_{12}H_{20}O_{10}$
 — $C_{30}H_{52}O_{31}$
 Inuloid $C_2H_2O_2$
 Ipecacuminsäure $C_{14}H_{14}O_7$
 Ipomisäure $C_{10}H_{16}O_4$
 Iren $C_{13}H_{18}$
 Iretol $C_8H_8O_4$
 Iridin $C_4H_8O_{11}$
 Iridinsäure $C_{16}H_{17}O_5$
 Iridol $C_8H_{11}O_2$
 Iridolin $C_{10}H_9N$
 Itrigenin $C_{18}H_{18}O_8$
 Itriscampher $C_8H_{16}O_2$
 Irisin $C_8H_{10}O_2$
 Iron $C_{12}H_{20}O$
 Isathionsäure $C_8H_8O_5N$
 Isamid $C_{14}H_{14}O_2N_2$
 Isamsäure $C_{16}H_{15}O_4N_2$
 Isansäure $C_{14}H_{20}O_2$
 Isaphensäure $C_{18}H_{11}O_3N$
 Isatan $C_{27}H_{26}O_8N_4$
 Isatilin $C_{24}H_{16}O_5N_4$

Isatimid $C_{24}H_{17}O_4N_5$
 Isatin $C_8H_8O_2N$
 Isatinblau $C_{26}H_{20}O_4N_5$
 Isatincarbonsäure $C_8H_5O_4N$
 Isatinchlorid C_8H_8ONCl
 Isatinindogen $C_{16}H_{16}O_2N_2$
 Isatinsäure $C_8H_8O_2N$
 Isatinschwefelsäure
 $C_8H_8O_5NS$
 Isatothylloxin $C_{16}H_{10}O_2N_2$
 Isatochlorin $C_{22}H_{14}O_3N_4$
 Isatogensäure $C_8H_5O_4N$
 Isaton $C_{27}H_{21}O_3N_4$
 Isatopurpurin $C_{22}H_{22}O_2N_4$
 Isatonsäure $C_8H_8O_2N$
 Isatoxim $C_8H_8O_2N_2$
 Isatyd $C_{16}H_{12}O_2N_2$
 Isoäpfelsäure $C_4H_6O_5$
 Isoakonitsäure $C_8H_8O_6$
 Isoalizarin $C_4H_4O_2$
 Isoalohansäure $C_8H_{10}O_2N_2$
 Isoamarin $C_{21}H_{11}N_2$
 Isoamethol $C_{10}H_{10}O$
 Isoanthracen $C_{14}H_{10}$
 Isoanthrachinon $C_8H_8O_2$
 Isoanthraflavinsäure $C_{14}H_8O_4$
 Isoantipyrrin $C_{11}H_{12}ON_2$
 Isoapiof $C_{12}H_{11}O_4$
 Isoapocinchonin $C_{19}H_{23}ON_2$
 Isoapogluconsäure $C_8H_{10}O_5$
 Isoarabinsäure $C_6H_{10}O_5$
 Isoatronsäure $C_{17}H_{14}O_2$
 Isoatropasäure $C_{28}H_{46}O_4$
 Isoarbatolin $C_{16}H_{16}O_7$
 Isoarbitursäure $C_8H_8O_4N_2$
 Isobenzamaron $C_{25}H_{28}O_2$
 Isobenzidin $C_{12}H_{11}N_2$
 Isobenzoylcol $C_8H_8O_2$
 Isobenzol $C_{11}H_{10}O_2$
 Isobenzopyron $C_{26}H_{26}O_2$
 Isoberberal $C_{26}H_{17}O_2N$
 Isobernstainsäure $C_4H_8O_4$
 Isobidesyl $C_{28}H_{27}O_2$
 Isobiliansäure $C_{28}H_{30}O_6$
 Isoborneol $C_{10}H_{16}O$
 Isobrenzschleimsäure $C_8H_8O_2$
 Isobrenzterebinsäure $C_8H_{10}O_2$
 Isobrenzweinsäure $C_8H_8O_4$
 Isobutakonsäure $C_8H_{17}O_4$
 Isobuttersäure $C_8H_8O_2$
 Isobutyraldin $C_{14}H_{25}NS_2$
 Isocajuputen $C_{12}H_{16}$
 Isocamphenon $C_{10}H_{14}O$
 Isocampher $C_{10}H_{16}O$
 Isocampherphoron C_8H_8O
 Isocamphersäure $C_{10}H_{16}O_2$
 Isocampholaktin $C_8H_{14}O_2$
 Isocampholen C_8H_{16}
 Isocampholsäure $C_8H_{16}O_2$
 Isocampholytischesäure
 $C_9H_{14}O_2$
 Isocamphoronsäure $C_9H_{12}O_6$
 Isocamphoronsäure $C_9H_{14}O_6$
 Isocantharidin $C_{16}H_{11}O_4$

Lanugininsäure $C_{15}H_{30}O_{16}N_6$
 Lapachan $C_{15}H_{16}O$
 Lapachol $C_{15}H_{14}O$
 Lapachon $C_{15}H_{16}O_3$
 Lapachonin $C_{15}H_{16}O_3$
 Lappaconit $C_{34}H_{48}O_8N_2$
 Laricresinol $C_{18}H_{22}O_2$
 Larixinsäure $C_{18}H_{16}O_5$
 Laserol $C_{11}H_{16}O$
 Laserpittin $C_{17}H_{22}O_4$
 — $C_{21}H_{28}O_7$
 Laudanidin $C_{20}H_{22}O_4N$
 Laudanin $C_{20}H_{22}O_4N$
 Laudanosin $C_{21}H_{27}O_4N$
 Laurin $C_{17}H_{34}O_2$
 Laurinsäure $C_{17}H_{34}O_2$
 Lauro $C_{17}H_{34}$
 Laurolein $C_{17}H_{34}$
 Lauron $C_{17}H_{34}O$
 Lauronolensäure $C_{17}H_{32}O_2$
 Laurotetanin $C_{19}H_{24}O_2N$
 Lauroxylsäure $C_{17}H_{32}O_3$
 Lavendol $C_{15}H_{16}O$
 Lecanorol $C_{27}H_{30}O_2$
 Lecanorsäure $C_{18}H_{24}O_7$
 Lecasterid $C_{12}H_{16}O_3$
 Lecasterinsäure $C_{10}H_{12}O_4$
 Lecidinsäure $C_{24}H_{30}O_6$
 Lecithin $C_{26}H_{44}O_8NP$
 Leden $C_{11}H_{14}$
 Leditansäure $C_{12}H_{20}O_5$
 Ledixanthin $C_{20}H_{24}O_4$
 Ledumcampher $C_{15}H_{26}O$
 Leim $C_7H_{12}O_2N_2$
 — $C_{10}H_{16}O_2N_2$
 Leinölsäure $C_{18}H_{32}O_2$
 Leinsamenschleim $C_8H_{16}O_8$
 Leken CH_2
 Lepamin $C_{20}H_{22}N_2$
 Lepargylsäure $C_8H_{14}O_4$
 Lepidin $C_{20}H_{22}O_2$
 Lepidin $C_{19}H_{20}N$
 Lepidopterynsäure
 — $C_{11}H_{12}O_2N_2$
 Lepirarin $C_{26}H_{46}O_{17}$
 Leucin $C_6H_{12}O_2N$
 Leucinimid $C_6H_{11}ON$
 Leucinsäure $C_6H_{12}O_2$
 Leucodrin $C_{14}H_{22}O_2$
 Leukanilin $C_{17}H_{17}N_3$
 — $C_{20}H_{21}N_3$
 Leukauramin $C_{17}H_{23}N_2$
 Leukaurin $C_{12}H_{16}O_3$
 Leukoäthylmethylsäure
 — $C_8H_8O_2N_2$
 Lenkodrin $C_{18}H_{24}O_2$
 Leukogallol $C_{14}H_{16}O_{15}Cl_{12}$
 Leukoglykodrin $C_{17}H_{22}O_{10}$
 Leukolinsäure $C_9H_{16}O_2N$
 Leukomalachitgrün $C_{23}H_{26}N_2$
 Leukonsäure $C_8H_8O_2$
 Leukophtalgrün $C_8H_{12}ON_2$
 Leukorosal $C_{14}H_{22}O_4$
 Leukotursäure $C_8H_8O_4N_2$

Licareol $C_{16}H_{18}O$
 Licarhodol $C_{15}H_{18}O$
 Licarhodoläther $C_{30}H_{44}O$
 Licarinsäure $C_{10}H_{16}O_2$
 Lichenin $C_8H_{10}O_8$
 Lichenstearinsäure $C_{14}H_{24}O_8$
 — $C_{17}H_{26}O_4$
 Licheatearinsäure $C_{17}H_{26}O_4$
 — $C_{19}H_{28}O_4$
 Lichesterylsäure $C_{18}H_{34}O_2$
 Lignin $C_{18}H_{24}O_{19}$
 Lignocellulose $C_{12}H_{20}O_{19}$
 Lignocerinsäure $C_{24}H_{46}O_8$
 Lignon $C_{18}H_{22}O_2$
 Lignonblau $C_{26}H_{28}O_4N_2$
 Lignose $C_{18}H_{26}O_{11}$
 Likareal $C_{15}H_{16}O$
 Limettin $C_{17}H_{16}O_2$
 Limettsäure $C_{11}H_{16}O_6$
 Limonen $C_{10}H_{16}$
 Limonetrin $C_{10}H_{16}O_4$
 Limonin $C_{27}H_{36}O_2$
 Linalool $C_{12}H_{18}O$
 Linaloolen $C_{16}H_{22}$
 Linolensäure $C_{18}H_{30}O_2$
 Linolsäure $C_{18}H_{32}O_2$
 Linusinsäure $C_{18}H_{30}O_2$
 Lithobilinsäure $C_{20}H_{34}O_6$
 Lithofellinsäure $C_{20}H_{34}O_6$
 Lithursäure $C_{18}H_{26}O_6N$
 Lobarsäure $C_{17}H_{16}O_5$
 Loganin $C_{28}H_{34}O_{14}$
 Loiponsäure $C_7H_{11}O_4N$
 Lokaetin C_8H_{10}
 Lokaïn $C_{26}H_{34}O_{17}$
 Lokansäure $C_{26}H_{36}O_{21}$
 Lokaonsäure $C_{18}H_{26}O_{27}$
 Lokaose $C_6H_{12}O_6$
 Lomatol $C_{11}H_{14}O_4$
 Lophin $C_{21}H_{18}N_2$
 Lophophorin $C_{17}H_{17}O_2N$
 Lorenit $C_8H_8O_2NJS$
 Loretin $C_8H_8O_2NJS$
 Loxopterygin $C_{26}H_{27}O_2N_2$
 Lupamin $C_{14}H_{24}ON_2$
 Lupeol $C_{26}H_{48}O$
 Lupeose $C_{12}H_{22}O_{11}$
 Lupigenin $C_{17}H_{18}O_4$
 Lupiniidin $C_8H_{15}N$
 Lupinin $C_{11}H_{15}O_2N_2$
 — $C_{27}H_{27}O_{10}$
 Lupulinsäure $C_{22}H_{36}O_4$
 Luteinsäure $C_{20}H_{26}O_{13}$
 Luteol $C_{27}H_{18}ON_2Cl$
 Luteolin $C_{15}H_{10}O_6$
 Lutidin C_7H_8N
 Lutidincarbonensäure $C_7H_8O_2N$
 — $C_8H_8O_4N$
 Lutidinsäure $C_7H_8O_4N$
 Lutidincarbonensäure $C_8H_8O_4N$
 Lyaconitin $C_{27}H_{34}O_8N_2$
 — $C_{44}H_{60}O_{12}N_2$
 Lyciu $C_8H_{11}O_2N$
 Lycoctonin $C_{21}H_{31}O_7N$

Lycoctoninsäure $C_{17}H_{16}O_4N_2$
 — $C_{27}H_{34}O_8N_2$
 Lycopodin $C_{27}H_{34}O_8N_2$
 Lycopodiumsäure $C_{16}H_{20}O_2$
 Lycoserin $C_8H_{10}O$
 Lycosin $C_{23}H_{22}O_2N_2$
 Lycostearon $C_{12}H_{16}O_2$
 Lysoatin $C_8H_{11}O_2N_2$
 Lysidin $C_8H_{11}N$
 Lysin $C_6H_{11}O_2N_2$
 Lysursäure $C_{27}H_{22}O_2N_2$
 Lyxonsäure $C_8H_{10}O_8$
 Lyxose $C_8H_{10}O_8$

Macchiron $C_{14}H_{10}O_3$
 Macleoin $C_{29}H_{17}O_2N$
 Magdalaroth $C_{20}H_{20}N_2$
 Mairogallol $C_{17}H_{17}O_{12}Cl_{11}$
 Maklurin $C_{18}H_{16}O_2$
 Malaminsäure $C_6H_8O_4N$
 Malanilsäure $C_{10}H_{11}O_2N$
 Maleinfluoereacelin $C_{16}H_{12}O_8$
 Maleinsäure $C_4H_4O_4$
 Maleinursäure $C_6H_8O_4N_2$
 Malobirsäure $C_8H_8O_4N_2$
 Malondibenzamsäure
 — $C_{17}H_{14}O_4N_2$
 Malonsäure $C_3H_4O_4$
 Malonylbiuret $C_8H_8O_4N_2$
 Maltobionsäure $C_{10}H_{11}O_2N$
 Maltodextrin $C_{24}H_{40}O_{21}$
 — $C_{26}H_{38}O_{21}$
 Maltol $C_6H_8O_2$
 Maltosaccharinsäure $C_8H_{12}O_2$
 Maltosamin $C_{17}H_{27}O_{10}N$
 Maltose $C_{12}H_{22}O_{11}$
 Maltosecarbonsäure $C_{13}H_{24}O_{12}$
 Malylyureid $C_8H_8O_2N$
 Malylyureidsäure $C_8H_8O_4N_2$
 Mandelsäure $C_8H_8O_2$
 Mandragorin $C_{17}H_{22}O_5N$
 Mangosin $C_{20}H_{27}O_5$
 Mannan $C_6H_{10}O_5$
 Mannid $C_6H_{10}O_4$
 Mannit $C_6H_{10}O_6$
 Mannitäther $C_{12}H_{20}O_{11}$
 Mannitan $C_8H_{14}O_2$
 Mannitborsäure $C_8H_{11}O_2B$
 Mannitin $C_6H_{12}N_2$
 Mannitose $C_6H_{12}O_6$
 Mannitursäure $C_6H_{12}O_7$
 Mannitweinsäure $C_{20}H_{36}O_{25}$
 Mannohexit $C_7H_{14}O_2$
 Mannohexose $C_7H_{14}O_6$
 Mannohexose $C_7H_{14}O_6$
 Mannohexose $C_7H_{14}O_6$
 Mannononsäure $C_9H_{16}O_{10}$
 Mannose $C_6H_{12}O_6$
 Mannonsäure $C_6H_{12}O_7$
 Mannooktid $C_8H_{12}O_8$
 Mannooktose $C_8H_{12}O_8$
 Mannose $C_6H_{12}O_6$
 Mannosecarbonsäure $C_7H_{14}O_8$
 Mannozuckersäure $C_8H_{16}O_8$

Margarinsäure $C_{17}H_{34}O_2$
 Masopin $C_{27}H_{48}O$
 — $C_{27}H_{48}O$
 Matezit $C_{15}H_{30}O_5$
 Matezodambrose $C_8H_{12}O_6$
 — $C_8H_{12}O_5$
 Maticocampher $C_{17}H_{20}O$
 Matrin $C_{12}H_{24}ON_2$
 Mauvanilin $C_{16}H_{17}N_3$
 Mauvein $C_{27}H_{44}N_4$
 Mauvondin $C_9H_{17}ON_3$
 Medicagol $C_{20}H_{42}O$
 Medicagophyll $C_{45}H_{83}O_{14}N$
 Medullinsäure $C_{31}H_{60}O_2$
 Mekonidin $C_{11}H_{21}O_4N$
 Mekouin $C_{20}H_{40}O_4$
 Mekouinessigsäure $C_{12}H_{11}O_4$
 Mekoninsäure $C_8H_{15}O_5$
 Mekonoinin $C_8H_{10}O_3$
 Mekonsäure $C_7H_{10}O_2$
 Melam $C_8H_{15}N_{11}$
 Melamin $C_3H_6N_6$
 Melampyrit $C_8H_{14}O_6$
 Melanilin $C_{11}H_{13}N_3$
 Melamin $C_3H_6O_2N_2$
 — $C_{10}H_{17}O_{26}N_{10}S$
 Melanofidinsäure
 $C_{240}H_{421}O_{35}N_{17}S_2$
 Melanoximid $C_{15}H_{11}O_2N_3$
 Melansäure $C_8H_{12}O_5$
 Melanthigenin $C_{14}H_{23}O_4$
 Melanthin $C_{20}H_{38}O_7$
 — $C_{20}H_{38}O_{10}$
 Melanurensäure $C_8H_{10}O_2N_4$
 Melassinsäure $C_{12}H_{16}O_5$
 Melem $C_8H_{16}N_{10}$
 Melen $C_{30}H_{60}$
 Melezitose $C_{18}H_{32}O_{16}$
 Melibiose $C_{12}H_{22}O_{11}$
 Melidoessigsäure $C_5H_8O_2N_6$
 Melilotol $C_8H_{10}O_2$
 Melilotsäure $C_8H_{10}O_3$
 Melissenöl $C_{10}H_{18}O$
 Melissinsäure $C_{30}H_{60}O_2$
 — $C_{31}H_{62}O_2$
 Melitose $C_{12}H_{22}O_{16}$
 Melitriose $C_{18}H_{34}O_{14}$
 Mellithsäure $C_{12}H_{18}O_{12}$
 Melligen $C_{11}H_{14}O_4$
 Mellon $C_8H_8N_9$
 Mellonwasserstoff $C_8H_8N_{13}$
 Mellophansäure $C_{10}H_8O_3$
 Melonanthin $C_8H_{17}O_2N_2S$
 Menispermicin $C_{13}H_{24}O_2N_2$
 Menthen $C_{10}H_{18}$
 Menthenol $C_{10}H_{18}O$
 Menthocitronellal $C_{10}H_{18}O$
 Menthocitronellol $C_{10}H_{20}O$
 Menthodicarbonsäure
 $C_{12}H_{18}O_5$
 Mentholglykol $C_{10}H_{20}O_2$
 Menthol $C_{10}H_{20}O$
 Menthon $C_{10}H_{18}O$
 Menthonensäure $C_{10}H_{18}O_2$

Menthopinakon $C_{20}H_{30}O_2$
 Menthyllamin $C_{10}H_{21}N$
 Menthoximsäure $C_{10}H_{19}O_2N$
 Menthylamin $C_{10}H_{21}N$
 Mentonaphten $C_{10}H_{20}$
 Menyanthin $C_{28}H_{46}O_{14}$
 Menyanthol C_8H_8O
 Merochinen $C_8H_{15}O_2N$
 Mesakonsäure $C_8H_{14}O_4$
 Mesicerin $C_8H_{10}O_2$
 Mesidin $C_7H_{17}N$
 Mesitenlaktol $C_7H_8O_2$
 Mesitenlaktonecarbonensäure
 $C_8H_8O_4$
 Mesitol $C_9H_{15}O$
 Mesitonsäure $C_7H_{12}O_3$
 Mesitylen C_8H_{12}
 Mesitylensäure $C_8H_{10}O_2$
 Mesityloxyd $C_8H_{10}O$
 Mesityloxydoxalsäure
 $C_8H_{10}O_4$
 Mesitylsäure $C_8H_{12}O_3N$
 Mesocamphersäure $C_{10}H_{16}O_4$
 Mesorcin $C_9H_{15}O_2$
 Mesowensäure $C_8H_{10}O_6$
 Mesoxalsäure $C_8H_{10}O_6$
 Mesoxalylharstoff $C_8H_8O_4N_2$
 Metachloral C_2HOCl_3
 Metacopaivasäure $C_{20}H_{30}O_2$
 — $C_{22}H_{32}O_2$
 Metafulminursäure $C_8H_8O_2N_3$
 Metakrolein $C_5H_8O_2$
 — $C_5H_{12}O_3$
 Metalddehyd $C_8H_{15}O_3$
 Metanethol $C_{10}H_{19}O$
 Metanikotin $C_{11}H_{14}N_2$
 Metapektin $C_{22}H_{46}O_{37}$
 Metapimelinsäure $C_7H_{12}O_4$
 Metapropionaldehyd $C_8H_{14}O_3$
 Metapurpursäure $C_7H_8O_4N_3$
 Metarabin $C_{12}H_{22}O_{11}$
 Metasaccharin $C_8H_{10}O_5$
 Metasaccharinsäure $C_8H_{12}O_6$
 Metasantonin $C_{13}H_{19}O_3$
 Metasantonsäure $C_{13}H_{20}O_4$
 Metastyrol C_8H_8
 Metaterebenten $C_{20}H_{32}$
 Metatropin $C_8H_{13}ON$
 Metawensäure $C_8H_{10}O_6$
 Metazuckersäure $C_8H_{10}O_8$
 Methakrylsäure $C_4H_8O_2$
 Methan CH_4
 Methanthren $C_{10}H_{12}$
 Methanthrol $C_{11}H_{15}O$
 Methazonsäure $C_7H_{11}O_2N_2$
 Methebinin $C_{10}H_{21}O_3N$
 Methionsäure $CH_3O_2S_2$
 Methocodol $C_{10}H_{22}O_3N$
 Methose $C_8H_{12}O_5$
 Methronol $C_{10}H_{20}$
 Methronsäure $C_8H_8O_2$
 Methyllummonchelonensäure
 $C_8H_8O_5N$
 Methylarabinosid $C_8H_{12}O_6$

Methylenazur $C_{10}H_{10}O_2N_2JS$
 Methylenbisantipyridin
 $C_8H_{14}O_2N_4$
 Methylenblau $C_{16}H_{18}N_3ClS$
 Methylenlengallussäure
 $C_{15}H_{12}O_{10}$
 Methylenlindkresotinsäure
 $C_{17}H_{14}O_8$
 Methylenlindsalicylsäure
 $C_{15}H_{12}O_8$
 Methylenitan $C_8H_{10}O_2$
 — $C_7H_{14}O_6$
 Methylenroth $C_8H_8N_2ClS_2$
 Methylenviolett $C_{14}H_{13}ON_3S$
 Methylglykokoheptosid $C_8H_{16}O_7$
 Methylguanicol $C_8H_{10}ON_3$
 Methylkaffursäure
 $C_8H_{11}O_3N_3$
 Methylphthalhydrazid
 $C_8H_8O_2N_2$
 Methylpyridin C_8H_8N
 Methyltaurocyamin
 $C_8H_{11}O_2N_2S$
 Methyltetrose $C_8H_{14}O_4$
 Methyltropin $C_8H_{13}N$
 Methyltropin C_8H_8ON
 Methylulvinsäure $C_8H_{10}O_2$
 Methylulvinsäure $C_{22}H_{31}ON_2$
 Methylxylosid $C_8H_{12}O_5$
 Methylstical $C_{12}H_{14}O_2$
 Metinulin $C_8H_8O_2$
 Metol C_2H_5ON
 Mezalin $C_{11}H_{17}O_2N$
 Milchsäure $C_3H_4O_3$
 Milchzucker $C_{12}H_{22}O_{11}$
 Mochylalkohol $C_{28}H_{46}O$
 Monothiodiprussiamsäure
 $C_2H_2N_8S$
 Moradin $C_{14}H_{14}O_8$
 Morin $C_{15}H_{16}O_7$
 Morindin $C_8H_{13}O_{14}$
 Morindon $C_{15}H_{16}O_5$
 Moringersäure $C_{13}H_{16}O_6$
 Morinsäure $C_{18}H_{16}O_7$
 Morphenol $C_7H_8O_2$
 Morphin $C_{17}H_{19}O_3N$
 Morphinviolett $C_{28}H_{20}O_4N_2$
 Morpholin C_4H_8ON
 Morphothebain $C_{17}H_{17}O_3N$
 — $C_{18}H_{16}O_5N$
 Morrenol $C_{14}H_{22}O$
 Morrhuin $C_8H_7N_2$
 Morrhuinsäure $C_8H_9O_3N$
 Moschatin $C_7H_7O_2N$
 Mucin $C_{160}H_{256}O_{96}N_{32}S_2$
 Mucobromsäure $C_8H_8O_2Br_2$
 Mucochlorsäure $C_8H_8O_2Cl_2$
 Mukolaktonsäure $C_8H_8O_4$
 Mukonsäure $C_8H_8O_2$
 Murexan $C_8H_8O_2N_2$
 Murexid $C_8H_8O_3N_2$
 Murexoin $C_7H_7O_2N_6$
 Murrayetin $C_{13}H_{15}O_5$
 Murrayin $C_{18}H_{21}O_6$

Muscariin $C_8H_{15}O_5N$
 — $C_{11}H_{14}O_5N_2$
 Mydatoxin $C_8H_7O_5N_2$
 Mydin C_8H_7ON
 Mykomeliäsure $C_4H_4O_2N_4$
 Mykoprotein $C_{25}H_{44}O_5N_6$
 Mykose $C_{17}H_{35}O_{11}$
 Myoconin $C_{37}H_{54}O_6N_2$
 — $C_{40}H_{56}O_{17}N_3$
 Myoglobulin $C_{114}H_{177}O_{25}N_{30}S$
 Myosin $C_{106}H_{172}O_{25}N_{35}S$
 Myren $C_{10}H_{16}$
 Myricetin $C_{15}H_{10}O_6$
 Myricylalkohol $C_{20}H_{30}O$
 Myristicin $C_{17}H_{14}O_2$
 Myristicinsäure $C_9H_{16}O_5$
 Myristicil $C_{10}H_{16}O$
 Myristinsäure $C_{14}H_{26}O_2$
 Myristolsäure $C_{14}H_{24}O_2$
 Myriston $C_{27}H_{54}O$
 Myronsäure $C_{10}H_{17}O_9NS_2$
 Myroxin $C_{23}H_{36}O$
 Myroxocarpiu $C_{14}H_{14}O_3$
 Myroxocerin $C_{17}H_{20}O$
 Myroxofluorin $C_{12}H_{14}O_{10}$
 Myroxol $C_{44}H_{66}O_{10}$
 Myroxosen $C_7H_{10}O$
 Myricolorin $C_{27}H_{32}O_{16}$
 Mytiitoxiu $C_8H_{15}O_2N$

Napellin $C_{29}H_{43}O_{11}N$
 Naphtacein $C_{18}H_{12}$
 Naphtalazin $C_{27}H_{16}N_2$
 Naphtaleosin $C_{24}H_{16}O_4Br$
 Naphtalhydroxamsäure
 $C_{12}H_8O_2N$
 Naphtalin $C_{10}H_8$
 Naphtaloxazin $C_8H_7O_7N_4$
 Naphtalsäure $C_{12}H_8O_4$
 Naphtanthracen $C_{18}H_{12}$
 Naphtanthrachinon $C_{18}H_{16}O_2$
 Naphtazarin $C_{10}H_8O_4$
 Naphtazin $C_{20}H_{12}N_2$
 Naphtdiazin $C_{12}H_8N_2$
 Naphtidin $C_{20}H_{16}N_2$
 Naphtilbenzil $C_{21}H_{17}ON$
 Naphtimidazol $C_{11}H_8N_2$
 Naphtindol $C_{17}H_{12}N$
 Naphtindon $C_{20}H_{16}ON_2$
 Naphtindopenazin $C_{18}H_{11}N_2$
 Naphtindulin $C_{20}H_{12}N_2$
 Naphtidiazol $C_{10}H_8N_2S$
 Naphtisatin $C_{17}H_{10}ON$
 Naphtisodiazin $C_{17}H_{12}N_2$
 Naphtisoselendiazol
 $C_{10}H_8N_2Se$
 Naphtisotriazol $C_{10}H_{12}N_2$
 Naphtochinaldin $C_8H_{11}N$
 Naphtochinhydrin $C_{20}H_{14}O_4$
 Naphtochinolin $C_{13}H_8N$
 Naphtochinonphenaziu
 $C_{16}H_{10}O_7N_2$
 Naphtochinoxalin $C_{12}H_8N_2$

Naphtocumarin $C_{12}H_8O_7$
 Naphtocumarsäure $C_{12}H_{10}O_7$
 Naphtodiphenazin $C_{27}H_{17}N_4$
 Naphtoesäure $C_{11}H_8O_2$
 Naphtoflavon $C_{17}H_{12}O_2$
 Naphtofluoran $C_{20}H_{16}O_3$
 Naphtofuran $C_{12}H_8O$
 Naphtoglaucinsäure
 $C_{46}H_{56}O_8N_3$
 Naphtol $C_{10}H_8O$
 Naphtolbenzein $C_{24}H_{36}O_5$
 Naphtolblau $C_{10}H_{16}ON_2$
 Naphtolfurazan $C_{10}H_8O_2N_2$
 Naphtolphtalein $C_{20}H_{16}O_2$
 — $C_{20}H_{16}O_4$
 Naphtolviolet $C_{11}H_{16}ON_2$
 Naphtophenanthrazin
 $C_{24}H_{14}N_2$
 Naphtophenazin $C_{16}H_{10}N_2$
 Naphtophenosofranin
 $C_{27}H_{17}N_2Cl$
 Naphtopisaelenol $C_{10}H_8N_2S$
 Naphtopiazthiol $C_{10}H_8N_2S$
 Naphtopyron $C_{18}H_{12}O_2$
 Naphtosafrol $C_{27}H_{14}O_2N_2$
 Naphtostyrl $C_{11}H_7ON$
 Naphtostyrylechinon $C_{11}H_8O_2N$
 Naphtostyryllatazin
 $C_{12}H_{11}ON_2$
 Naphtoxalsäure $C_{10}H_8O_2$
 Naphtoxidiazol $C_{10}H_8ON_2$
 Naphtoxidol $C_{12}H_8ON$
 Naphtotriazol $C_{10}H_8N_2$
 Naphtursäure $C_{13}H_{11}O_5N$
 Naphtylblau $C_{26}H_{26}N_4$
 Naphtylindigo $C_{23}H_{14}O_2N_2$
 Naphtylthio $C_{26}H_{18}N_4$
 Naphtylviolet $C_{22}H_{22}N_4$
 Narcein $C_{27}H_{27}O_2N$
 Narceinsäure $C_{15}H_{15}O_2N$
 Narceonsäure $C_{21}H_{20}O_4$
 Naringenin $C_{15}H_{12}O_5$
 Naringin $C_{27}H_{36}O_{11}$
 Narkotin $C_{17}H_{21}ON$
 Nartiusäure $C_{20}H_{16}O_6N_2$
 Nataloin $C_{25}H_{28}O_{11}$
 Naudinin $C_{19}H_{16}O_4N$
 Neobornylamin $C_{10}H_{19}N$
 Nepalin $C_{17}H_{14}O_4$
 Nephren $C_{20}H_{32}$
 Nephromin $C_{16}H_{12}O_6$
 Nepodin $C_{18}H_{16}O_4$
 Nerolin $C_{11}H_{16}O$
 Nerolol $C_{10}H_{16}O$
 Neuridin $C_{11}H_{17}N_2$
 Neurin $C_5H_{13}ON$
 Neurostearinsäure $C_{18}H_{36}O_2$
 Niehin $C_{15}H_{24}O_2N_2$
 Nigrosin $C_{26}H_{37}N_2$
 Nikotidin $C_{10}H_{14}N_2$
 Nikotin $C_{10}H_{14}N_2$
 Nikotinsäure $C_8H_8O_2N$
 Nikotol $C_{10}H_{14}ON_2$
 Nikoton $C_{10}H_{14}ON_2$

Nikotytrin $C_{10}H_{10}N_2$
 Nipekotinsäure $C_8H_{11}O_7N$
 Nithialin $C_{17}H_{16}ON_2S$
 Nitridiacetonamin
 $C_8H_7ON_2$
 Nononaphen $C_{10}H_8$
 Nononaphylalkohol $C_9H_{15}O$
 Nononaphylen $C_{10}H_{16}$
 Nopinon $C_9H_{14}O$
 Nopinsäure $C_{10}H_{16}O_2$
 Norcaperatsäure $C_{21}H_{36}O_4$
 Norecginon $C_8H_{11}O_2N$
 Norgranatenin $C_8H_{12}N$
 Norguajakharzäure $C_{12}H_{27}O_4$
 Norhemipinsäure $C_8H_8O_2$
 Norhydrotropidin $C_7H_{13}N$
 Norisozuckersäure $C_8H_{10}O_2$
 Normekoninsäure
 $C_{10}H_{16}O_2$
 Norrnarkotin $C_{18}H_{17}O_7N$
 Noropianmethyläthersäure
 $C_6H_8O_2$
 Noropiansäure $C_8H_8O_2$
 Noropiazon $C_8H_{10}O_2N_2$
 Norpinsäure $C_8H_{17}O_4$
 Norrangiformsäure $C_{20}H_{34}O_6$
 Norrhizocarpsäure $C_{20}H_{18}O_7$
 Northebenol $C_8H_{11}O_3$
 Nortropinon $C_8H_{11}ON$
 Noryohimbinsäure
 $C_{19}H_{20}O_2N_2$
 Nucien $C_{19}H_{16}O_3$
 Nuclein $C_{29}H_{40}O_{13}N_9P_3$
 Nucleosin $C_5H_8O_2N_2$
 Nupharin $C_{18}H_{24}O_2N_2$

Oelsäure $C_{18}H_{34}O_2$
 Oenanthin C_8H_{12}
 Oenanthodithioureid
 $C_9H_{20}N_4S_2$
 Oenanthodiureid $C_{12}H_{20}O_7N_2$
 Oenanthohexureid
 $C_{41}H_{64}O_8N_{12}$
 Oenanthol $C_8H_{14}O$
 Oenantholanilin $C_{14}H_{17}ON$
 Oenantholschwefigesäure
 $C_7H_{14}O_2S$
 Oenanthon $C_{13}H_{20}O$
 Oenanthotetrureid
 $C_{25}H_{52}O_4N_8$
 Oenanthothaldin $C_{27}H_{43}N_2S_2$
 Oenanthsäure $C_8H_{14}O_2$
 Oenanthyliden C_7H_{12}
 Oenocarpol $C_{27}H_{43}O_3$
 Oenogluclin $C_8H_{16}O_2$
 Oktaspartid $C_{21}H_{34}O_{17}N_8$
 Oktaspartin $C_{27}H_{42}O_{23}N_8$
 Oktakosan $C_{28}H_{58}$
 Oktonaphensäure $C_8H_{11}O_2$
 Oktylerytrin $C_8H_{16}O_2$
 Olefinsäure $C_{18}H_{34}O_2$
 Oleocutinsäure $C_{14}H_{25}O_4$
 Olibanoresen $C_{11}H_{20}O$

Öliben $C_{10}H_{16}$
 Olivil $C_{14}H_{18}O_2$
 Omicholin $C_{21}H_{30}O_2N$
 Onocerin $C_{20}H_{44}O_2$
 Onocel $C_{20}H_{44}O_2$
 Onoketon $C_{20}H_{40}O_2$
 Ononetin $C_{22}H_{30}O_6$
 Ononin $C_{25}H_{44}O_{13}$
 Onospin $C_{29}H_{54}O_{12}$
 Opalisin $C_{150}H_{297}O_{225}N_{43}S_6P$
 Opheliasäure $C_{12}H_{20}O_{10}$
 Ophioxilin $C_{16}H_{12}O_8$
 Opiummon $C_{28}H_{30}O_8N$
 Opiananthranilsäure
 $C_{17}H_{15}O_8N$
 Opianbarnstoff $C_{11}H_{12}O_5N_2$
 Opianin $C_{29}H_{27}O_7N$
 Opiansäure $C_{10}H_{10}O_3$
 Opianschwefeligsäure
 $C_{10}H_{12}O_5S$
 Opianyllessigsäure $C_{12}H_{14}O_7$
 Opiaurin $C_{20}H_{16}O_4$
 Opiazon $C_{10}H_{16}O_2N_2$
 Opinsäure $C_{12}H_{16}O_5$
 Orange III $C_{14}H_{13}O_3N_3S$
 Oracacetin $C_{15}H_{18}O_4$
 Oracetophenon $C_8H_{10}O_3$
 Orcein $C_{22}H_{24}O_7N_2$
 Orcendialdehyd $C_8H_8O_4$
 Orcin $C_8H_8O_2$
 $- C_8H_{10}O_2$
 Orcinaurin $C_{22}H_{18}O_5$
 Orcindichroin $C_{11}H_{11}O_3N$
 Orcinphthalin $C_{27}H_{16}O_5$
 Orcinphthalin $C_{29}H_{18}O_5$
 Orcinsäure $C_8H_8O_4$
 Orcirufamin $C_{25}H_{11}O_2N_2$
 Orcirufin $C_{11}H_{11}O_2N$
 Orcylaldehyd $C_8H_8O_3$
 Oreoselon $C_{11}H_{10}O_3$
 Oreosolin $C_{11}H_{11}O_4$
 Orexin $C_{11}H_{11}N_2$
 Ornithin $C_6H_{12}O_2N_2$
 Ornithursäure $C_{10}H_{20}O_4N_2$
 Orsellinsäure $C_8H_8O_4$
 Orylsäure $C_{12}H_{20}O_8N_4$
 Oscin $C_8H_{11}O_2N$
 Osmitesöl $C_{10}H_{16}O$
 Osoatriazol $C_{21}H_{18}N_3$
 Osthin $C_{15}H_{16}O_3$
 Ostruthin $C_{15}H_{16}O_3$
 Oxyritrin $C_{27}H_{26}O_{17}$
 Obotit $C_8H_{16}O_5$
 Oubaün $C_{20}H_{40}O_{13}$
 Oxalan $C_2H_2O_2N$
 Oxalantin $C_2H_2O_4N_4$
 Oxalidibenzamsäure
 $C_{10}H_{12}O_8N_2$
 Oxallessigsäure $C_4H_4O_6$
 Oxaldehydroxamsäure
 $C_2H_2O_2N_2$
 Oxalsäure $C_2H_2O_4$
 Oxaluranilid $C_8H_8O_2N_2$
 Oxalursäure $C_2H_2O_4N_2$

Oxalyldiaceton $C_8H_{10}O_4$
 Oxalyldiureid $C_8H_{10}O_4N_4$
 Oxalylmalondiureid
 $C_8H_{10}O_4N_4$
 Oxamäthan $C_4H_6O_2N$
 Oxamethylan C_2H_5ON
 Oxamid $C_2H_5O_2N_2$
 Oxamidin $C_2H_4N_2$
 Oxaminsäure $C_2H_5O_2N$
 Oxanilinsäure $C_8H_{10}O_2N$
 Oxatylsäure $C_{10}H_{10}O_3$
 Oxeton $C_2H_{12}O_2$
 Oxetoncarbonsäure $C_2H_{12}O_4$
 Oximid C_2H_4ON
 Oxindol C_2H_5ON
 Oxoketonol $C_2H_{10}O_2$
 Oxonsäure $C_2H_5O_2N_2$
 Oxy cannabin $C_{10}H_{10}O_4N$
 $- C_{20}H_{20}O_2N_2$
 Oxybinhydrin $C_{12}H_{16}O_6$
 Oxyconicein $C_8H_{10}O_2N$
 Oxydiaterpensäure $C_8H_{14}O_2$
 Oxydigitogensäure $C_{14}H_{20}O_4$
 Oxygranatanin $C_8H_{10}ON$
 Oxyhämoglobin
 $C_{285}H_{457}O_{140}N_{140}S_2Fe$
 $- C_{112}H_{1130}O_{245}N_{214}S_2Fe$
 Oxykomazin $C_{10}H_{10}O_2N_2$
 Oxylucefin $C_8H_{14}O_2N_2$
 Oxymercabiid $C_2H_4O_2Hg_2$
 Oxymentendicarbonsäure
 $C_8H_{10}O_2$
 Oxyperceon $C_{15}H_{20}O_4$
 Oxypeucedanin $C_{11}H_{12}O_7$
 $- C_{20}H_{20}O_6$
 Oxyprothulfonsäure
 $- C_2H_{11}O_2O_{26}N_{12}S$
 $- C_{20}H_{19}O_7N_{20}S$
 Oxyrocellulose $C_{17}H_{32}O_6$
 Oxytetraldin $C_8H_{13}ON$
 Oxytraldin $C_8H_{11}ON$
 Oxytropin $C_8H_{11}O_2N$
 Oxywrightin $C_{17}H_{21}ON$
 Ozobenzol $C_8H_8O_6$
 Ozotoluol $C_8H_8O_6$

Pachymose $C_{10}H_{24}O_4$
 $- C_{10}H_{16}O_{20}$
 Pflonol $C_8H_{10}O_4$
 Palmitinsäure $C_{16}H_{32}O_2$
 Palmitolsäure $C_{16}H_{32}O_2$
 Palmiton $C_{16}H_{32}O_2$
 Palmitoxylsäure $C_{16}H_{32}O_4$
 Panakon $C_{10}H_{18}O_7$
 Panaquilon $C_{20}H_{42}O_{15}$
 Panacesitannol $C_{21}H_{30}O_6$
 Panaxresen $C_{27}H_{52}O_4$
 $- C_{27}H_{52}O_4$
 Panicol $C_{13}H_{26}O$
 Pannasäure $C_{11}H_{11}O_4$
 Pannol $C_8H_8O_4$
 Papaveraldin $C_{20}H_{19}O_2N$
 Papaverin $C_{20}H_{21}O_4N$

Papaverinaminsäure
 $C_{16}H_{14}O_6N_2$
 Papaverinsäure $C_{16}H_{14}O_7N$
 Papaverolin $C_{16}H_{13}O_4N$
 Paraßkuletin $C_8H_8O_4$
 Parabansäure $C_8H_8O_2N_2$
 Paracajeputen $C_{20}H_{19}$
 Paracamphersäure $C_{10}H_{16}O_4$
 Paracatol $C_{20}H_{20}O_2$
 Parachloralose $C_3H_{11}O_5Cl_2$
 Parachloralosedischwefel-
 säure $C_3H_{11}O_{15}Cl_2S_2$
 Parachloralsäure $C_2H_5O_6Cl_3$
 Paracholesterin $C_{20}H_{44}O$
 Paracoilin $C_8H_{11}N$
 Paraconin $C_8H_{11}N$
 Paracoten $C_{11}H_{15}$
 $- C_{12}H_{15}$
 Paracotoin $C_{11}H_{15}O_4$
 Paracotoinsäure $C_{17}H_{18}O_2$
 Paracotol $C_{12}H_{16}O$
 Paracumarhydrin $C_8H_8O_2$
 Paracumaron C_8H_8O
 Paracyan C_6N_6
 Paradatisetin $C_{15}H_{10}O_6$
 Paradextran $C_6H_{12}O_5$
 Paradiconin $C_{16}H_{27}N$
 Paradinimalsäure $C_8H_{12}O_4$
 Paradinpinsäure $C_8H_{10}O_2$
 Paraffinsäure $C_2H_5H_2O_2N$
 $- C_2H_5O_2$
 Paragalaktan $C_8H_{10}O_5$
 Paraglobulin $C_{17}H_{13}O_{20}N_{20}S$
 Paraglukonsäure $C_6H_{12}O_7$
 Paraglykoeholsäure
 $C_8H_{14}O_2N$
 Parahydrocyanalidin $C_5H_{12}N_2$
 Paranden C_8H_8
 Parandextran $C_8H_{10}O_6$
 Parakonsäure $C_8H_8O_4$
 Parakrylsäure $C_8H_8O_4$
 Paraldehyd $C_2H_2O_2$
 Paraldehydblau
 $C_3H_2O_2N_2Cl_2$
 Paraldimin $C_8H_{10}O_2N$
 Paraldol $C_2H_4O_4$
 Paramenispermin $C_{15}H_{24}O_2N_2$
 Paramilsäure $C_8H_{10}O_2$
 Paramorin $C_{12}H_{16}O_2$
 Paramylum $C_8H_{10}O_2$
 Paranthracen $C_{20}H_{20}$
 Paraozellinsäure $C_8H_8O_4$
 Parapektin $C_{25}H_{46}O_{23}$
 Parapektinsäure $C_2H_2O_2N_2$
 Parapepton $C_{144}H_{174}O_{45}N_{36}S$
 Paraphytosterin $C_{24}H_{40}O$
 $- C_{26}H_{44}O$
 Parapropionaldehyd $C_4H_8O_2$
 Parapulegon $C_{10}H_{16}O$
 Parapyruvinsäure $C_4H_4O_6$
 Pararabin $C_{11}H_{16}O_{11}$
 Parareducin $C_2H_2ON_2$
 Parasaccharinsäure $C_2H_2O_6$
 Parasaffranin $C_{20}H_{18}N_4$

- Parasalicyl $C_7H_{10}O_6$
 Parasantonid $C_{15}H_{18}O_6$
 Parasantoninsäure $C_{15}H_{18}O_7$
 Parasitosterin $C_{27}H_{44}O_6$
 Parasorbinsäure $C_8H_8O_2$
 Paratropin C_8H_8ON
 Paraxanthin $C_8H_8O_3N_2$
 Paraxanthensäure $C_8H_8O_4$
 Parellinsäure $C_{18}H_{14}O_8$
 Parellinsäure $C_8H_{14}O_8$
 — $C_{20}H_{14}O_8$
 — $C_{22}H_{14}O_8$
 Parisin $C_{14}H_{18}ON_2$
 Paridii $C_{14}H_{20}O_7$
 Paridol $C_{20}H_{40}O_9$
 Parigenin $C_8H_{10}O_4$
 Pariglin $C_{18}H_{26}O_6$
 Parillin $C_{42}H_{70}O_{16}$
 Pariatylphnin $C_{32}H_{64}O_{18}$
 Parmelin $C_{15}H_{18}O_5$
 Parpevolin $C_9H_{10}N$
 Parvulin $C_8H_8N_2$
 Patellarsäure $C_{17}H_{26}O_6$
 Patentblau $C_{27}H_{37}O_7N_7S_2$
 Patschoulien $C_{18}H_{14}$
 Patschoulienampher $C_{12}H_{16}O$
 Paucin $C_{27}H_{30}O_5N_3$
 Paytamin $C_{21}H_{30}ON_2$
 Pxytin $C_{21}H_{34}ON_2$
 Pektin $C_{11}H_{14}O_8$
 — $C_{28}H_{30}O_{24}$
 — $C_{22}H_{30}O_{22}$
 Pektinsäure $C_{14}H_{20}O_{13}$
 — $C_{16}H_{22}O_{15}$
 Pektolaktinsäure $C_5H_8O_3$
 Pektosinsäure $C_{27}H_{46}O_{21}$
 Pelagin $C_{20}H_{17}O_7N$
 Pelargonsäure $C_9H_{18}O_2$
 Pellieterin $C_8H_{10}ON$
 Pellitorin $C_8H_{11}O_2N$
 Pellotin $C_{11}H_{15}O_2N$
 Pellutein $C_{13}H_{19}O_2N$
 Pelosin $C_{11}H_{21}O_2N$
 Pentaerythrit $C_4H_{10}O_4$
 Pentaglykol $C_5H_{12}O_2$
 Pentahirolin $C_{13}H_{15}N$
 Pentakosan $C_{30}H_{58}$
 Pentatriakontan $C_{35}H_{72}$
 Pentinsäure $C_5H_8O_2$
 Pepton $C_{72}H_{117}O_{22}N_{15}S$
 Pereirin $C_{19}H_{25}ON_2$
 Pererinon $C_{13}H_{19}O_3$
 Perezou $C_{13}H_{20}O_3$
 Periphloein $C_{20}H_{24}O_{17}$
 Periplogenin $C_{14}H_{14}O_5$
 Perlatin $C_{21}H_{24}O_7$
 Pernitrosocamphenon
 $C_{10}H_{14}O_2N_2$
 Perscit $C_7H_{14}O_2$
 Persulfocyanlykolsäure
 $C_8H_8O_4N_2S_3$
 Persulfocyanssäure $C_7H_7N_2S_3$
 Pertusarin $C_{30}H_{50}O_2$
 Pertusarsäure $C_{31}H_{50}O_6$
 Peruresinotannol $C_{18}H_{20}O_5$
 Petinin $C_8H_{11}N$
 Petrocin $C_{17}H_{14}$
 Petrolin $C_{20}H_{25}$
 Petroleumssäure $C_{11}H_{20}O_2$
 Peucedanin $C_{14}H_{16}O_4$
 — $C_{15}H_{17}O_4$
 Pharbitose $C_{17}H_{25}O_{11}$
 Phasfomannit $C_8H_{11}O_6$
 Phasol $C_{15}H_{22}O$
 Phellandren $C_{10}H_{16}$
 Phellonsäure $C_{27}H_{38}O_3$
 Phellylalkohol $C_{17}H_{26}O$
 Phenacetin $C_{14}H_{19}O_2$
 Phenacetin $C_{15}H_{21}O_2N$
 Phenanthraquin $C_{12}H_{10}N_2$
 Phenanthren $C_{14}H_{10}$
 Phenanthrenchinon $C_{14}H_{10}O_2$
 Phenanthridin $C_{13}H_9N$
 Phenanthridon $C_{13}H_9ON$
 Phenanthrolin $C_{13}H_9N_2$
 Phenanthron $C_{14}H_{10}O$
 Phenanthrophenazin
 $C_7H_{12}N_2$
 Phenazin $C_{12}H_8N_2$
 Phenazon $C_{12}H_8N_2$
 Phenazoxin $C_{17}H_8ON$
 Phenetol $C_8H_{14}O$
 Phenmiazin $C_8H_8N_2$
 Phenmorpholin C_8H_8ON
 Phenochinon $C_{13}H_{10}O_4$
 Phenochinoxanthon
 $C_{13}H_8O_2N$
 Phenocyanin C_8H_8ON
 Phenoglucin $C_8H_8O_3$
 Phenoiazin $C_8H_8N_2$
 Phenol C_6H_6O
 Phenolblau C_6H_7ON
 — $C_{14}H_{11}ON_2$
 Phenoleorallin $C_{20}H_{16}O_4$
 Phenoldichroin $C_{18}H_{15}O_3N$
 Phenolglykosid $C_{17}H_{16}O_6$
 Phenolhemicaampher
 $C_{27}H_{26}O_3$
 Phenolisatin $C_{20}H_{15}O_2N$
 Phenolphthalcin $C_{20}H_{14}O_4$
 — $C_{18}H_{10}O_4$
 Phenolphthalidein $C_{20}H_{14}O_4$
 Phenolphthalol $C_{20}H_{16}O_4$
 Phenonaphthakridin $C_{17}H_{11}N$
 Phenosaframin $C_{18}H_{14}ON_2$
 Phenose $C_8H_{12}O_4$
 Phenothymochinon $C_{27}H_{24}O_4$
 Phenotolurbinon $C_{12}H_{16}O_4$
 Phenotripyridin $C_{15}H_9N_3$
 Phenoxazin $C_{12}H_8ON$
 Phenuvinsäure $C_{17}H_{10}O_3$
 Phenylidithiobiuret $C_8H_6N_2S_2$
 Phenylenharbstoff $C_8H_8ON_2$
 Phenylizidioxweinsäure
 $C_{10}H_8O_2N_2$
 Phenyltetrose $C_{10}H_{12}O_4$
 Phenylthronsäure $C_{12}H_{10}O_5$
 Phyllirin $C_{27}H_4O_{11}$
 Phlecin $C_8H_{10}O_2$
 Phlobaphen $C_{28}H_{34}O_{12}$
 Phloramin $C_8H_8O_2N$
 Phlorein $C_{13}H_{11}O_2N$
 Phloretin $C_{13}H_{11}O_2$
 Phloretinsäure $C_8H_{10}O_3$
 Phloridizin $C_{27}H_{30}O_{14}N_2$
 Phloridzin $C_{27}H_{30}O_{10}$
 Phlorobromin $C_8O_2Br_2$
 Phloroglucin $C_6H_4O_2$
 Phloroglucid $C_{17}H_{15}O_5$
 Phloroglucein $C_8H_8O_2$
 Phlorogluceincarbonsäure
 $C_7H_6O_4$
 Phlorogluceinphtalin $C_{10}H_{14}O_2$
 Phlorogluceinvauillein
 $C_{20}H_{18}O_6$
 Phloroglucein $C_8H_{17}O_8$
 Phlorol $C_8H_{16}O$
 Phloron $C_8H_8O_2$
 Phlorose $C_8H_{12}O_4$
 Phlorotanninroth $C_{11}H_9O_4$
 Phloron $C_8H_{14}O$
 Phoronidessigsäure $C_{11}H_{17}O_2$
 Phoronpyrrrolin $C_{13}H_{10}N$
 Phoronsäure $C_9H_{16}O_2$
 — $C_{11}H_{18}O_4$
 Phosen $C_{14}H_{10}$
 Phosgen $COCl_2$
 Phosphazencolpiperidid
 $C_{11}H_{17}N_6P$
 Phosphinobenzol C_6H_5OP
 Phosphinobenzol $C_6H_5O_2P$
 Phosphobenzol $C_{12}H_{10}P_2$
 Phosphorbetain $C_8H_{11}O_4P$
 Phosphorsäure
 $C_{40}H_{28}O_{24}P_4$
 Photoanethol $C_{10}H_{12}O$
 Photosantonid $C_{13}H_{17}O_4$
 Photosantoninsäure $C_{13}H_{15}O_5$
 Phrenosinhydrat $C_{41}H_{51}O_9N$
 Phtalacen $C_{21}H_{16}$
 Phtalacensäure $C_{21}H_{16}O_2$
 Phtalaldehydsäure $C_8H_6O_4$
 Phtalalkohol $C_8H_{10}O_2$
 Phtalazin $C_8H_8N_2$
 Phtalazon $C_8H_8ON_2$
 Phtalgrün $C_{27}H_{34}O_2N_2$
 — $C_{37}H_{35}O_2N_2$
 Phtalylazoxamsäure
 $C_8H_8O_2N_2$
 Phtalid $C_8H_8O_2$
 Phtalimid $C_8H_8O_2N$
 Phtalimidin C_8H_8ON
 Phtalonsäure $C_8H_8O_3$
 Phtalophenon $C_{20}H_{14}O_2$
 Phtalensäure $C_8H_8O_4$
 Phtalureid $C_8H_8O_2N_2$
 Phtalursäure $C_8H_8O_2N_2$
 Phtalylasparaginsäure
 $C_{17}H_{12}O_4N_2$
 Phtalylchlorid $C_8H_8O_2Cl_2$
 Phtalylidessigsäure $C_{17}H_{16}O_4$

Phtalylhomotaurin
 $C_7H_7O_2NS$
 Phtalylpinakon $C_{16}H_{15}O_4$
 Phycit $C_8H_{10}O_4$
 Phylläscitannin $C_{26}H_{24}O_{13}$
 Phylligenin $C_{21}H_{24}O_6$
 Phyllinsäure $C_{26}H_{64}O_6$
 Phylloxyaninsäure
 $C_7H_{12}O_2N_2$
 Phylloporphyrin $C_{37}H_{42}O_2N_4$
 Phyllostannin $C_{40}H_{40}O_8N_6$
 Physalin $C_{14}H_{16}O_5$
 Physcianin $C_{15}H_{12}O_4$
 Physciasäure $C_{12}H_{12}O_5$
 Physchydron $C_{16}H_{14}O_4$
 Physciol $C_8H_8O_2$
 — $C_7H_8O_4$
 Physcion $C_{16}H_{11}O_3$
 Physconsäure $C_{16}H_8O_6$
 Physetölsäure $C_{16}H_{20}O_2$
 Physodien $C_{10}H_{10}O_6$
 Physodin $C_{16}H_{10}O_2$
 Physoidsäure $C_{20}H_{22}O_4$
 Physol $C_{25}H_{24}O_2$
 Physostigmin $C_{14}H_{21}O_3N_3$
 Phytolaccotoxin $C_{24}H_{30}O_8$
 Phytosterin $C_{29}H_{48}O$
 Piaselenol $C_8H_4N_2Se$
 Piazhannol $C_8H_4N_2S$
 Picelin $C_{11}H_{18}O_2$
 Pieen $C_{27}H_{14}$
 Pieenchinon $C_{22}H_{12}O_2$
 Piecenekosilyhydrür $C_{22}H_{34}$
 Pieensäure $C_{21}H_{14}O_2$
 Piecol $C_8H_8O_2$
 Pikolin C_8H_7N
 Pikolinsäure $C_8H_8O_3N$
 Pikramid $C_8H_8O_6N_4$
 Piktirinsäure $C_8H_8O_2N_2$
 Piktrocantuin $C_{21}H_{24}O_{11}N$
 Piktrocrocian $C_{16}H_{20}O_{17}$
 Piktroyaminsäure $C_{11}H_8O_6N_4$
 Piktroerythrin $C_{17}H_{16}O_7$
 — $C_{13}H_{16}O_6$
 Piktroliechenin $C_{13}H_{20}O_6$
 Piktropodophyllin $C_{13}H_{11}O_6$
 — $C_{23}H_{21}O_6$
 Piktropseudoacatinin
 $C_{24}H_{47}O_{11}N$
 Piktrococellin $C_{27}H_{30}O_5N_3$
 Piktrotin $C_{15}H_{16}O_7$
 Piktrotoxid $C_{15}H_{16}O_8$
 Piktrototoxin $C_{15}H_{16}O_8$
 Piktrotoxinin $C_{16}H_{16}O_6$
 Piktrotoxininsäure $C_{15}H_{15}O_7$
 Piktrotoxinsäure $C_{15}H_{15}O_7$
 Piktroylvanillin $C_{11}H_9O_5N_3$
 Piktroylvanillinsäure
 $C_{11}H_9O_5N_3$
 Pillijamin $C_{18}H_{24}ON_2$
 Pilocarpen $C_7H_{11}O_5$
 Pilocarpidin $C_{10}H_{14}O_2N_2$
 Pilocarpin $C_{11}H_{17}O_2N_2$
 Pimelinsäure $C_7H_{12}O_4$

Pimpinellin $C_{14}H_{12}O_5$
 Pinakolin C_8H_8O
 Pinakolinalkohol $C_8H_{14}O$
 Pinakon $C_8H_{14}O_2$
 Pinakonon $C_{10}H_{12}$
 Pinakonon $C_{20}H_{20}$
 Pinarin $C_{15}H_{14}O_5$
 Pinastrinsäure $C_{15}H_{14}O_6$
 Pinen $C_{10}H_{16}$
 Pinenglykol $C_{10}H_{18}O_2$
 Pinipikrin $C_{22}H_{26}O_{11}$
 Pinit $C_8H_{12}O_5$
 — $C_7H_{11}O_6$
 Pinitweinsäure $C_{30}H_{36}O_{25}$
 Pinnaglobin
 $C_{722}H_{860}O_{210}N_{12}S_6Mn$
 Pinnitansäure $C_7H_8O_4$
 Pinocampheol $C_{16}H_{18}O$
 Pinocampphon $C_{15}H_{16}O$
 Pinocarveol $C_{12}H_{16}O$
 Pinocarvon $C_{10}H_{14}O$
 Pinol $C_{10}H_{16}O$
 Pinolglykol $C_{10}H_{18}O_2$
 Pinolhydrat $C_{10}H_{14}O_2$
 Pinononsäure $C_8H_{14}O_5$
 Pinonsäure $C_{10}H_{16}O_2$
 Pinophansäure $C_{10}H_{16}O_4$
 Pinosesinol $C_{15}H_{18}O_2$
 Pinosesinotannol $C_{27}H_{36}O_5$
 Pinoylameisensäure $C_{10}H_{14}O_5$
 Pinsäure $C_8H_{14}O_4$
 Pinyllamin $C_{13}H_{17}N$
 Pipekolin $C_8H_{13}N$
 Pipekolinsäure $C_8H_{11}O_2N$
 Pipekolylyfurylalkin
 $C_{11}H_{17}O_3N$
 Piperazin $C_4H_{10}N_2$
 Piperhydrolykton $C_{17}H_{12}O_4$
 Piperhydronsäure $C_{15}H_{14}O_4$
 Piperidin $C_4H_{11}N$
 Piperidinsäure $C_8H_8O_2N$
 Piperidoacetal $C_{11}H_{22}O_2N$
 Piperidoessigsäure $C_7H_{15}O_3N$
 Piperidon C_8H_8ON
 Piperidylkaffeïn $C_{13}H_{10}O_2N_5$
 Piperin $C_{17}H_{19}O_3N$
 Piperinsäure $C_{17}H_{16}O_4$
 Piperoketonsäure $C_{13}H_{11}O_5$
 Piperonal $C_8H_8O_2$
 Piperonalchlorid $C_8H_6O_2Cl_2$
 Piperonalhydrocyanid
 $C_9H_7O_2N$
 Piperonalpaeonol $C_{17}H_{14}O_5$
 Piperonanilid $C_{14}H_{11}O_3N$
 Piperonylakrylsäure $C_{16}H_{14}O_4$
 Piperonylalkohol $C_8H_8O_2$
 Piperonylenbrenztrauben-
 säure $C_{11}H_{10}O_5$
 Piperonylenmalonsäure
 $C_{13}H_{10}O_6$
 Piperonyloin $C_{15}H_{12}O_6$
 Piperonylsäure $C_8H_8O_2$
 Piperovatin $C_{16}H_{21}O_2N$
 Piperyleen C_8H_8

Piperyleenphtalamidsäure
 $C_{23}H_{16}O_2N$
 Pipitzahoinensäure $C_{15}H_{20}O_4$
 Pirylen C_8H_8
 Pisceidin $C_{27}H_{24}O_5$
 Piturin C_8H_8N
 Pleuricin $C_8H_8O_2N_2$
 Plumeriasäure $C_{16}H_{19}O_5$
 Podocarpinsäure $C_{21}H_{27}O_3$
 Podophylloquerctin
 $C_{23}H_{16}O_{10}$
 Podophylloloxin $C_{12}H_{14}O_6$
 — $C_{22}H_{24}O_6$
 Podophyllsäure $C_{13}H_{16}O_7$
 — $C_{20}H_{24}O_6$
 Polychloral C_2HOCl_3
 Polychroit $C_8H_6O_{10}$
 Polygonin $C_9H_{20}O_{16}$
 Polymethakrylsäure
 $C_{22}H_{18}O_4$
 Polyporsäure $C_{18}H_{14}O_4$
 Polysalicylid $C_{18}H_{14}O_2$
 Polystichalbin $C_{27}H_{28}O_9$
 Polystichin $C_{27}H_{28}O_9$
 Polystichinin $C_{18}H_{22}O_2$
 Polystichinol $C_{21}H_{26}O_2$
 Polystichocitrin $C_{15}H_{22}O_9$
 Polystichofavin $C_{27}H_{28}O_{11}$
 Polystichumsture $C_{27}H_{24}O_9$
 Polythiofurfural $C_{16}H_8O_7S_2$
 Polythiofurfuralsäure $C_{11}H_{10}O_7S_2$
 Populin $C_{25}H_{22}O_2$
 Porphyrin $C_{21}H_{25}O_2N_3$
 Prehnit $C_{10}H_{14}$
 Prehnitsäure $C_{10}H_8O_4$
 Prehnomalensäure $C_{15}H_{18}O_9$
 Primulacampier $C_{17}H_{12}O_5$
 Propargylalkohol C_3H_4O
 Propargylsäure $C_3H_2O_2$
 Propenbiuret $C_8H_8O_2N_2$
 Properehin $C_{26}H_{20}O_2$
 Proporetin $C_{26}H_{20}O_4$
 Propoilsäure $C_3H_4O_2$
 Propioilsäure $C_3H_4O_2$
 Propioïn $C_4H_8O_2$
 Propioneumarin $C_{12}H_{12}O_2$
 Propionsäure $C_3H_6O_2$
 Propylaldehydin $C_3H_7O_2N$
 Propylglykosid $C_{11}H_{14}O_4$
 Protagon $C_{160}H_{200}O_{35}N_5P$
 Protalbumose
 — $C_{196}H_{174}O_{34}N_{30}S_8$
 — $C_{111}H_{120}O_{26}N_{20}S_8$
 Protamin $C_{16}H_{24}O_2N_8$
 — $C_{16}H_{24}O_2N_8$
 Proteacin $C_{12}H_{12}O_2$
 Proteasäure $C_9H_8O_4$
 Proteinochrom $C_{30}H_{15}O_3N_{21}S$
 Proteïnsäure $C_8H_8O_5N_2$
 Prothebin $C_{21}H_{20}O_2N$
 Prothebenol $C_{28}H_{20}O_2$
 Protoctetransäure $C_{26}H_{22}O_{15}$
 Protochinamin $C_{17}H_{20}O_2N_2$
 Protoctoin $C_{16}H_{14}O_6$

- Protocurarin $C_{12}H_{20}O_2N$
 Protocuridin $C_{19}H_{31}O_2N$
 Protocuriin $C_{20}H_{33}O_2N$
 Protobifrinose
 $C_{129}H_{200}O_{21}N_{20}S$
 Protokatechusäure $C_7H_6O_4$
 Protophysichydron $C_{13}H_{17}O_4$
 Protophysicon $C_5H_{10}O_3$
 Protopin $C_{20}H_{17}O_2N$
 Protoveratridin $C_{22}H_{45}O_8N$
 Protoveratriin $C_{29}H_{51}O_{11}N$
 Pseudoaconin $C_{23}H_{39}O_4N$
 Pseudoaconitin $C_{28}H_{49}O_{11}N$
 Pseudoaconitsäure $C_{14}H_{18}O_6$
 Pseudotropin $C_{17}H_{23}O_2N$
 Pseudobaptigenin $C_{15}H_{19}O_5$
 Pseudobaptisin $C_{27}H_{39}O_{14}$
 Pseudobrenzterebinsäure
 $C_8H_8O_2$
 Pseudobutylen C_4H_8
 Pseudoconiphersäure
 $C_{14}H_{18}O_4$
 Pseudoampholaktonsäure
 $C_9H_{14}O_3$
 Pseudocholidonsäure
 $C_{16}H_{17}O_7$
 $C_{23}H_{36}O_{10}$
 Pseudocinchonin $C_{19}H_{21}ON_7$
 Pseudococöfin $C_{13}H_{21}O_4N$
 Pseudoconhydrin $C_8H_{11}ON$
 Pseudocubelin $C_{20}H_{29}O_6$
 Pseudocumarin $C_7H_8O_2$
 Pseudocumenol $C_9H_{12}O$
 Pseudocumidin $C_9H_{12}N$
 Pseudocumol C_9H_{12}
 Pseudocicutin $C_{25}H_{30}O_7$
 Pseudocuphrin $C_{16}H_{18}ON$
 Pseudoflavulin $C_{16}H_{14}N_2$
 Pseudoflavonol $C_{16}H_{15}ON$
 Pseudoflavolin $C_{16}H_{15}N$
 Pseudofruktose $C_6H_{12}O_5$
 Pseudoharnsäure $C_5H_8O_4N_4$
 Pseudohomostropin
 $C_{14}H_{21}O_2N$
 Pseudohomonarcefin
 $C_7H_{10}O_2N$
 Pseudoinulin $C_{98}H_{167}O_{31}$
 Pseudojervin $C_{22}H_{43}O_7N$
 Pseudojonin $C_{12}H_{20}O$
 Pseudolucikanilin $C_{15}H_{19}N_3$
 Pseudolulidostyrylcarbon-
 säure $C_8H_8O_2N$
 Pseudomavefin $C_{24}H_{18}N_4$
 Pseudomekonin $C_{18}H_{10}O_4$
 Pseudomekoninsäure
 $C_{16}H_{17}O_5$
 Pseudomorphin $C_{24}H_{36}O_4N_2$
 Pseudonarcefin $C_{27}H_{37}O_4N_2$
 Pseudonichin $C_{29}H_{25}O_2N_2$
 Pseudoopiansäure $C_{16}H_{16}O_5$
 Pseudopelletierin $C_8H_{11}ON$
 Pseudophenanthrin $C_{16}H_{15}$
 Pseudophenanthrolin $C_{17}H_{15}N_2$
 Pseudophtalimidin C_8H_7ON
 Pseudoricinolsäure $C_{12}H_{16}O_4$
 Pseudosaccharinchlorid
 $C_7H_8O_2NClS$
 Pseudostyrylyhdantoin
 $C_{17}H_{16}O_2N_2$
 Pseudotagatose $C_6H_{12}O_5$
 Pseudotheobromin $C_7H_8O_2N_4$
 Pseudotriacetonalamin
 $C_9H_{19}ON$
 Pseudotriacetin $C_8H_{11}N$
 Pseudotropigenin $C_7H_{11}ON$
 Pseudotropin $C_8H_{14}O_2N$
 $C_7H_{11}ON$
 Pseudotropylamin $C_8H_{12}N_2$
 Pseudoxanthin $C_{12}H_8O_5$
 $C_{11}O_7N_4$
 Psoromsäure $C_{20}H_{11}O_5$
 Psychosin $C_{22}H_{45}O_7N$
 Psyllostearalkohol $C_{22}H_{46}O_2$
 Pterocarpin $C_{20}H_{16}O_3$
 Pulegenolid $C_{19}H_{24}O_2$
 Pulegensäure $C_{10}H_{12}O_2$
 Pulegol $C_{12}H_{12}O$
 Pulegon $C_{16}H_{16}O$
 Pulegouamin $C_{10}H_{19}N$
 $C_{10}H_{15}ON$
 Pulvinaminsäure $C_{13}H_{17}O_4N$
 Pulvinon $C_{17}H_{17}O_3$
 Pulvinipiperidinsäure
 $C_{22}H_{21}O_4N$
 Pulvinsäure $C_7H_{12}O_5$
 Pupin $C_{11}H_{20}O_2N_2$
 Purginsäure $C_{22}H_{46}O_{11}$
 Purin $C_5H_4N_4$
 Purpurin $C_{14}H_{16}O_5$
 Purpurinamid $C_5H_8O_5N$
 Purpurgallin $C_{16}H_{14}O_5$
 $C_{26}H_{16}O_5$
 Purpuroxanthin $C_{11}H_8O_4$
 Purpursäure $C_8H_8O_5N_3$
 Putrescin $C_4H_8N_2$
 Pyogenin $C_{65}H_{76}O_{19}N_2$
 Pyosin $C_{27}H_{119}O_{15}N_2$
 Pyrantin $C_{12}H_{13}O_2N$
 Pyrazin $C_4H_4N_2$
 Pyrazol $C_2H_4N_2$
 Pyrazolblau $C_{26}H_{15}O_2N_4$
 Pyrazolin $C_2H_5N_2$
 Pyren $C_{16}H_{10}$
 Pyrenolin $C_{19}H_{11}N$
 Pyrensäure $C_{13}H_8O_5$
 Pyridanthrilsäure $C_{15}H_{10}O_7N_2$
 Pyridazin $C_4H_4N_2$
 Pyridin C_5H_5N
 Pyridinbetafin $C_7H_7O_2N$
 Pyridinphthalid $C_8H_7O_2N$
 Pyridinursäure $C_8H_8O_2N_2$
 Pyridochoin $C_8H_7O_2N$
 Pyroaconin $C_{24}H_{27}O_9N$
 Pyroaconitin $C_{21}H_{24}O_{10}N$
 Pyroamarsäure $C_{10}H_{14}O_2$
 Pyrocampfersäure $C_{20}H_{14}O_4$
 Pyrocholesterinsäure
 $C_{11}H_{16}O_5$
 Pyrocinchonsäure $C_8H_8O_3$
 $C_8H_8O_4$
 Pyroextrin $C_{46}H_{81}O_{27}$
 Pyrogallaurin $C_{19}H_{14}O_5$
 Pyrogallein $C_{13}H_{10}O_{12}N_5$
 Pyrogallochin $C_{12}H_{14}O_5$
 Pyrogallol $C_6H_6O_3$
 Pyrogallolbenzein $C_{28}H_{24}O_{11}$
 Pyrogallolcarbonsäure
 $C_7H_8O_5$
 Pyrogallolvanillin $C_{20}H_{12}O_5$
 Pyroglutaminsäure $C_5H_7O_2N$
 Pyroglycerin $C_8H_{14}O_5$
 Pyroglycid $C_8H_{12}O_4$
 Pyrographitoxid $C_{26}H_6O_5$
 Pyroguajacin $C_{12}H_{14}O_2$
 $C_{10}H_{21}O_2$
 Pyroinulin $C_9H_{10}O_5$
 Pyrosomalsäure $C_6H_8O_3$
 Pyrokokoll $C_{15}H_8O_2N_2$
 Pyrokokollidon $C_{20}H_{28}O_{10}N_{12}$
 Pyrokokonin $C_8H_8O_5$
 Pyrokomenaminsäure
 $C_8H_8O_2N$
 Pyrokressol $C_{13}H_{14}O$
 Pyroklivulinsäure $C_8H_8O_5$
 Pyroolithellinsäure $C_{20}H_{24}O_2$
 Pyromekazon $C_8H_8O_2N$
 Pyromekazonhydrat
 $C_8H_8O_2N$
 Pyromekazonsäure $C_8H_8O_2N$
 Pyromekonsäure $C_8H_8O_2$
 Pyromellitinsäure $C_8H_8O_5$
 Pyromucicorinthursäure
 $C_{15}H_{14}O_2N_2$
 Pyron $C_5H_6O_2$
 Pyronin $C_{17}H_{21}ON_2Cl$
 Pyropapaverinsäure
 $C_{12}H_{12}O_2N$
 Pyrophotosantonsäure
 $C_4H_8O_2$
 Pyrophthalon $C_7H_8O_2N$
 Pyroschleimsäure $C_8H_8O_5$
 Pyrotritätsäure $C_8H_8O_5$
 Pyrourethinsäure $C_4H_4O_4$
 Pyrourethinsäure $C_{12}H_{11}O_5$
 Pyroxanthin $C_{17}H_{12}O_5$
 Pyrrhodiazol $C_5H_5N_2$
 Pyrrol C_4H_7N
 Pyrrolalloxan $C_8H_7O_4N_2$
 Pyrrolenphthalid $C_{12}H_{10}O_2N$
 Pyrrolidin C_4H_7N
 Pyrrolin C_4H_7N
 Pyrrolith $C_7H_{11}ON_2$
 Pyrrolylen C_4H_6
 Pyrron $C_8H_8O_2$
 Pyrrylmesoxylamid
 $C_7H_8O_2N_2$
 Pyruvin $C_3H_4O_3$
 Pyruvinderid $C_{12}H_{11}O_2N_2$
 Pyruvyl $C_3H_4O_2N$
 Quabañsäure $C_{20}H_{16}O_{12}$
 Quassiansäure $C_{20}H_{18}O_{10}$

Quassid $C_{27}H_{40}O_9$
 Quassin $C_{27}H_{42}O_{10}$
 Quassol $C_{40}H_{52}O$
 Quebrachin $C_{21}H_{26}O_2N_2$
 Quebrachit $C_7H_{14}O_6$
 Quebrachogerbsäure
 $C_{28}H_{34}O_{10}$
 Quebrachol $C_{30}H_{34}O_4$
 Quercetageitin $C_{27}H_{32}O_{13}$
 Quercetin $C_{15}H_{10}O_7$
 Quercetinsäure $C_{15}H_{12}O_8$
 Quercimerinsäure $C_8H_6O_7$
 Quercin $C_8H_{12}O_5$
 — $C_{15}H_{12}O_9$
 Quercinsäure $C_{15}H_{12}O_9$
 Quercit $C_8H_{12}O_5$
 Quercitan $C_8H_{16}O_4$
 Quercitrin $C_{21}H_{22}O_{12}$
 Querlaktin $C_8H_8O_2$
 Quittenschleim $C_{18}H_{22}O_{11}$

Raffinose $C_8H_{16}O_6$
 — $C_{18}H_{32}O_{16}$
 Ramalsäure $C_{17}H_{16}O_7$
 Randiaroth $C_{26}H_{32}O_{10}$
 Randiasäure $C_{26}H_{32}O_{10}$
 Rangiformsäure $C_{11}H_{18}O_3$
 — $C_{21}H_{32}O_6$
Raphanol $C_{29}H_{32}O_4$
 Rapsinsäure $C_{18}H_{32}O_2$
 Ratanhiaroth $C_{26}H_{32}O_6$
 — $C_{28}H_{32}O_{11}$
 Ratanhiatannin $C_{24}H_{34}O_{15}$
 Ratanhin $C_{26}H_{32}O_6N$
 Ratanölglykose $C_{17}H_{24}O_7$
 Reducin $C_8H_{11}O_4N_3$
 Regiansäure $C_8H_8O_2$
 Resacetin $C_{12}H_{17}O_4$
 Resacetophenon $C_8H_8O_3$
 Resacetsäure $C_{12}H_{17}O_5$
 Resaurin $C_{12}H_{14}O_5$
 Resazin $C_{24}H_{26}N_2$
 Resazoïn $C_{17}H_{17}O_4N$
 Resazurin $C_{12}H_{14}O_4N$
 Resinotannol $C_{18}H_{20}O_4$
 Rosodiacetophenon $C_{16}H_{14}O_4$
 Rosodicarbonsäure $C_8H_8O_6$
 Resorcin $C_{20}H_{20}O_7N_2$
 Resorcin $C_8H_8O_2$
 Resorciniäther $C_{12}H_{10}O_5$
 Resorcinbenzïn $C_{28}H_{20}O_9$
 Resorcimchinon $C_{12}H_{10}O_4$
 Resorcindiacetsäure $C_{16}H_{16}O_6$
 Resorcindiophan $C_8H_8O_4N_4$
 Resorcinsphthalïn $C_{14}H_{10}O_5$
 Resorcinsaccharin
 $C_{12}H_{10}O_2NS$
 Resoreydidaldehyd $C_8H_8O_4$
 Resoreylsäure $C_8H_8O_4$
 Resorufin $C_{12}H_{10}O_2N$
 Retamin $C_{12}H_{16}ON_2$
 Reten $C_{18}H_{18}$

Retenchinon $C_{18}H_{14}O_2$
 Retendiphensäure $C_{18}H_{14}O_4$
 Retenfluoren $C_{17}H_{16}$
 Retensäure $C_{17}H_{14}O_2$
 Retinindol C_8H_8ON
 Reuniol $C_{10}H_{16}O$
 Rhamnazin $C_{17}H_{14}O_7$
 Rhamnetin $C_{16}H_{14}O_{10}$
 Rhamnetin $C_{16}H_{12}O_7$
 Rhamnit $C_8H_8O_5$
 Rhamnoheptensäure $C_8H_{16}O_8$
 Rhamnoheptose $C_8H_{16}O_7$
 Rhamnohexit $C_7H_{16}O_6$
 Rhamnohexonsäure $C_7H_{14}O_7$
 Rhamnohexose $C_7H_{14}O_6$
 Rhamnonsäure $C_8H_{12}O_5$
 Rhamnooktonsäure $C_8H_{14}O_6$
 Rhamnosaccharin $C_8H_{10}O_5$
 Rhamnosamin $C_8H_{12}O_4N$
 Rhamnose $C_8H_{14}O_5$
 Rheïn $C_{18}H_{16}O_6$
 Rheumgerbsäure $C_{26}H_{26}O_{11}$
 Rheumsäure $C_{10}H_{12}O_4$
 Rhinacanthin $C_{14}H_{16}O_4$
 Rhinanthin $C_{22}H_{22}O_{20}$
 Rhizocarpinsäure $C_{26}H_{22}O_6$
 Rhizocarpsäure $C_{26}H_{22}O_6$
 — $C_{22}H_{22}O_7$
 Rhizoninsäure $C_{19}H_{17}O_4$
 Rhizonsäure $C_{18}H_{20}O_7$
 Rhizopogonsäure $C_{14}H_{15}O_2$
 Rhodanglykobrenzkatelchin
 $C_8H_7O_2NS$
 Rhodanglykopyrogallol
 $C_8H_7O_2NS$
 Rhodaninroth $C_8H_7O_2N_2S_2$
 Rhodaminsäure $C_8H_7ON_2S_2$
 Rhodanureessigsäure
 $C_9H_9O_2N_2S_2$
 Rhodinal $C_{10}H_{10}O$
 Rhodinol $C_{10}H_{10}O$
 — $C_{10}H_{20}O$
 Rhodizonsäure $C_8H_8O_6$
 Rhodotannsäure $C_{14}H_{14}O_8$
 Rhodoxantin $C_{14}H_{14}O_8$
 Rhoedin $C_{21}H_{21}O_5N$
 Rhoegenin $C_{21}H_{21}O_5N$
 Rhoedeoretin $C_{22}H_{22}O_{16}$
 Ribonsäure $C_8H_8O_6$
 Ribose $C_8H_{16}O_5$
 Ricidin $C_{14}H_{12}O_4N_6$
 Riccielaidsäure $C_{18}H_{24}O_2$
 Ricinin $C_{17}H_{18}O_4N_4$
 Ricininsäure $C_{15}H_{14}O_4N_4$
 Ricinolsäure $C_{18}H_{18}O_5$
 Ricinsäure $C_{18}H_{14}O_3$
 Ricinstearolsäure $C_{18}H_{22}O_2$
 Ricinstearoxylsäure $C_{15}H_{22}O_4$
 Robinin $C_{22}H_{20}O_{12}$
 Rocellsäure $C_{17}H_{12}O_7$
 Rocellaminsäure $C_{17}H_{22}O_3N$
 Rocellin $C_{18}H_{18}O_7$
 Rohrzucker $C_{12}H_{22}O_{11}$
 Rosanilin $C_{20}H_{21}ON_3$

Roseol $C_{10}H_{14}O$
 Rosindol $C_{22}H_{14}ON_2$
 Rosindonsäure $C_{21}H_{14}O_2N_2$
 Rosindulin $C_{22}H_{14}N_2$
 Rosindulin $C_{22}H_{14}ON_2$
 Rosol $C_{22}H_{20}O_2$
 Rosolsäure $C_{20}H_{12}O_5$
 Rothsäure $C_{11}H_{12}O_7$
 Rottlerin $C_{22}H_{20}O_6$
 Rottleron $C_{22}H_{20}O_4$
 Rubanidid C_8H_8ON
 Rubazonsäure $C_{20}H_{17}O_2N_5$
 — $C_{20}H_{21}O_4N_5$
 Rubbadin $C_{11}H_{22}O_8N_2$
 Rubeanwasserstoff $C_8H_4N_2S_2$
 Ruberythrininsäure $C_{26}H_{22}O_{11}$
 Rubiadin $C_{12}H_{10}O_4$
 Rubiadinylkosid $C_{11}H_{20}O_5$
 Rubidin $C_7H_8N_2$
 Rubifuscin $C_{24}H_{26}N_4$
 Rubijerin $C_{28}H_{24}O_2N$
 Rubrophlobaphen $C_{25}H_{24}O_{17}$
 Ruficarin $C_{12}H_{12}O_5$
 Ruficocin $C_{16}H_{15}O_5$
 Rufigallussäure $C_{14}H_{14}O_8$
 Rufimorinsäure $C_{16}H_{14}O_5$
 Rufin $C_{21}H_{20}O_2$
 Rufopin $C_8H_8O_2$
 Ruhydroellagsäure
 $C_{14}H_{10}O_5$
 Rufol $C_{14}H_{10}O_5$
 Runicin $C_{15}H_{15}O_4$
 Rutin $C_{27}H_{32}O_{16}$
 Rutylen $C_{10}H_{10}$
 Rutylden $C_{11}H_{20}$

Sabadin $C_{23}H_{21}O_2N$
 Sabinol $C_{12}H_{18}O$
 Saccharin $C_8H_{10}O_5$
 — $C_7H_{10}O_2NS$
 Saccharol $C_8H_8O_2$
 Saccharonsäure $C_8H_{10}O_7$
 Saccharose $C_{12}H_{22}O_{11}$
 Saccharumsäure $C_{14}H_{18}O_{11}$
 Sacculmin $C_{14}H_{26}O_5$
 Sacculminsäure $C_{11}H_{10}O_4$
 Safforgelb $C_{24}H_{26}O_{12}$
 Safraninon $C_{19}H_{17}ON_2$
 Safranol $C_{13}H_{11}O_2N_2$
 Safranon $C_{18}H_{17}ON_2$
 Safran $C_{10}H_{12}$
 Saffrol $C_{10}H_{10}O_2$
 Sagaresinotannol $C_{24}H_{28}O_5$
 Salhydranilid $C_{12}H_{11}ON$
 Salicin $C_{15}H_{14}O_5$
 Salicylaldehyd $C_8H_8O_2N$
 Salicylmilchsäure $C_8H_{10}O_4$
 Salicylorcinäther $C_{14}H_{10}O_5$
 Salicylsäure $C_8H_8O_3$
 Salicylschwefelsäure $C_8H_8O_5S$
 Saligenin $C_8H_8O_2$
 Saligeninglykolsäure $C_9H_{12}O_4$
 Saliretazin $C_{26}H_{24}O_8N$

Saliretin $C_{14}H_{14}O_3$
 — $C_{22}H_{28}O_5$
 Salireton $C_{17}H_{17}O_3$
 Salitannol $C_{14}H_{10}O_7$
 Salmiin $C_8H_{21}O_4N_9$
 — $C_{25}H_{32}O_4N_{17}$
 Salmonelactinsäure
 $C_{40}H_{54}O_{27}N_{14}P_4$
 Salol $C_{13}H_{10}O_2$
 Salviol $C_{18}H_{14}O$
 Salylsäure $C_{14}H_{14}O_8$
 — $C_{21}H_{27}O_4$
 Samandarin $C_{24}H_{26}O_2N_2$
 Sandarakolsäure $C_{45}H_{46}O_7$
 Santal $C_9H_8O_2$
 Santalal $C_{15}H_{14}O$
 Santalin $C_{15}H_{14}O_5$
 — $C_{17}H_{16}O_8$
 Santalol $C_{15}H_{16}O$
 Santalolsäure $C_{15}H_{14}O_8$
 Santinsäure $C_{15}H_{16}O_2$
 Santogenin $C_{15}H_{16}O_4$
 Santonid $C_{15}H_{16}O_2$
 Santonigesäure $C_{15}H_{16}O_4$
 Santonin $C_{15}H_{16}O_2$
 Santoninsäure $C_{15}H_{16}O_4$
 Sauton $C_{15}H_{16}$
 Santonon $C_{26}H_{34}O_4$
 Santononsäure $C_{26}H_{32}O_8$
 Santonsäure $C_{15}H_{16}O_4$
 Sapogenin $C_{14}H_{22}O_7$
 Saponin $C_{32}H_{52}O_{17}$
 Saporubin $C_{27}H_{42}O_{10}$
 Sapotin $C_{26}H_{35}O_{20}$
 Sapotiretin $C_{17}H_{32}O_{10}$
 Sappanin $C_{17}H_{16}O_4$
 Sarbadinin $C_{27}H_{45}O_4N$
 Sardinin $C_{11}H_{11}O_2N$
 Sarkin $C_8H_4O_3N_4$
 Sarkomelaminsäure
 — $C_{26}H_{61}O_{26}N_{10}S$
 — $C_{26}H_{67}O_{26}N_{10}S$
 Sarkosin $C_9H_{13}O_2N$
 Sarkosinanhidrid $C_8H_{10}O_2N_2$
 Sarkosinbarnsäure $C_8H_9O_4N_2$
 Sarkosinmesobarnsäure
 $C_8H_9O_4N_4$
 Sarkosinsäure $C_8H_7O_2N$
 Sativinsäure $C_{18}H_{18}O_6$
 Scatol C_8H_8N
 Scharlachsäure $C_8H_8O_2N_2S_2$
 Schleimsäure $C_8H_{10}O_8$
 Schwefelkohlenstoff CS_2
 Scombin $C_{28}H_{60}O_2N_{16}$
 Scoparin $C_{30}H_{40}O_{10}$
 Scopolamin $C_{17}H_{31}O_4N$
 Scopoletin $C_{16}H_{16}O_4$
 Scopoligenin $C_7H_{11}O_2N$
 Scopolin $C_8H_{13}O_2N$
 — $C_{14}H_{20}O_{15}$
 Scyllit $C_{11}H_{12}O_8$
 Scymmol $C_{27}H_{46}O_8$
 — $C_{29}H_{50}O_5$
 Sebacin $C_{16}H_{26}$

Sebacin $C_{16}H_{26}O_8$
 Sebacinssäure $C_{16}H_{18}O_4$
 Sebaminsäure $C_{16}H_{18}O_3N$
 Secalan $C_8H_{10}O_8$
 Secalin $C_8H_{10}O_4$
 — $C_{26}H_{32}O_{14}N_4$
 Secaliutoxin $C_{17}H_{24}O_2N_2$
 Sedanolid $C_{17}H_{18}O_2$
 Sedanolssäure $C_{17}H_{20}O_3$
 Sedanonsäure $C_{18}H_{17}O_3$
 Sekisamin $C_{24}H_{36}O_9N_2$
 Selenaldin $C_9H_{17}NSe_2$
 Selenanthren $C_{17}H_8Se_4$
 Selenophthalid $C_8H_8OS_2$
 Selenoxen C_8H_8Se
 Semicarbazid CH_5ON_3
 Semiglutin $C_{38}H_{45}O_{27}N_{17}$
 Seminoso $C_8H_{12}O_8$
 Senecionin $C_{18}H_{18}O_6N$
 Senegin $C_{26}H_{33}O_7$
 — $C_{26}H_{33}O_{17}$
 Senfölessigsäure $C_6H_8O_2NS$
 Senfölsulfonsäure $C_6H_8O_2NS_2$
 Septentrionalin $C_{31}H_{44}O_8N_2$
 Sericin $C_{15}H_{25}O_8N_4$
 Sericinsäure $C_{15}H_{26}O_7N_4$
 Serin $C_3H_7O_2N$
 Serumalbumin
 — $C_{78}H_{127}O_{54}N_{20}S$
 — $C_{72}H_{120}O_{70}N_{26}S$
 Sesamin $C_{18}H_{18}O_5$
 — $C_{22}H_{24}O_6$
 Sesquien $C_{15}H_{10}$
 Shikiminsäure $C_7H_{10}O_5$
 Shikimpipikrin $C_7H_{10}O_8$
 Shikimol $C_{10}H_{18}$
 — $C_{10}H_{18}O_2$
 Siarresitannol $C_{17}H_{14}O_2$
 Silicoessigsäure CH_3O_2Si
 Silicolheptylkohlensäure
 $C_7H_{16}O_2Si$
 Silicononylalkohol $C_8H_{20}OSi$
 Silicononylchlorid $C_8H_{19}ClSi$
 Sinalbin $C_{26}H_{45}O_{15}N_2S_2$
 Sinalbinsentol C_8H_7ONS
 Sinamin $C_8H_8N_2$
 Sinapin $C_{14}H_{21}O_2N$
 Sinapinsäure $C_{11}H_{13}O_5$
 Sinapolin $C_7H_{12}ON_2$
 Sinistriin $C_8H_{10}O_8$
 — $C_7H_{10}O_{10}$
 Sinkalin $C_8H_{15}O_2N$
 Siperin $C_{18}H_{18}O_8N$
 Sitosten C_7H_{14}
 Sitosterin $C_{27}H_{44}O$
 Skatolcarbonsäure $C_{10}H_8O_2N$
 Skatollessigsäure $C_{11}H_{11}O_2N$
 Skimmen $C_{10}H_{16}$
 Skimmetin $C_8H_8O_5$
 Skimmin $C_{15}H_{16}O_8$
 Smilacin $C_{16}H_{26}O_8$
 Sobreritrit $C_{16}H_{26}O_4$
 Sobrerol $C_{28}H_{46}O_2$
 Socaloin $C_{14}H_{26}O_{18}$

Socetrolöfin $C_{18}H_{18}O_7$
 Solanein $C_{25}H_{38}O_{12}N$
 Solanin $C_{26}H_{39}ON$
 Solanidin $C_8H_{61}O_2N$
 Solanin $C_{25}H_{39}O_2N$
 Solorinsäure $C_{15}H_{14}O_8$
 Sorbin $C_8H_{15}O_8$
 Sorbinose $C_8H_{12}O_6$
 Sorbinsäure $C_8H_{16}O_2$
 Sorbit $C_6H_{14}O_6$
 Sorbosamin $C_9H_{18}O_4N$
 Sorbose $C_6H_{12}O_6$
 Sordidsäure $C_8H_{16}O_4$
 Sordidin $C_{14}H_{16}O_6$
 — $C_{26}H_{26}O_{24}$
 Spartein $C_{15}H_{25}N_2$
 Spargulin $C_8H_7O_2$
 Spermin $C_8H_{15}N$
 — $C_8H_{12}N_3$
 — $C_{16}H_{26}N_8$
 Sphingosin $C_{17}H_{26}O_2N$
 Stachyose $C_{18}H_{32}O_{16}$
 Stachyrin $C_7H_{15}O_2N$
 Starke $C_6H_{10}O_5$
 — $C_{16}H_{32}O_{16}$
 — $C_{24}H_{44}O_2$
 Stärkeschwefelsäure
 $C_6H_{14}O_{10}S$
 Staphisagrin $C_{22}H_{30}O_2N$
 Stearinsäure $C_{18}H_{34}O_2$
 Stearocutinsäure $C_{26}H_{46}O_4$
 Stearolsäure $C_{18}H_{32}O_2$
 Stearon $C_{26}H_{46}O$
 Stearoxylsäure $C_{18}H_{32}O_4$
 Sterocin $C_{27}H_{46}O$
 Stereocaulsäure $C_8H_{10}O_2$
 Stilbazol $C_{12}H_{11}N$
 Stilbazolin $C_{12}H_{11}ON$
 Stilben $C_{12}H_{10}$
 Storein $C_{26}H_{50}O_2$
 Storesinol $C_{17}H_{18}O$
 Strophantidin $C_{19}H_{26}O_4$
 — $C_{26}H_{36}O_7$
 Strophantin $C_{21}H_{26}O_{12}$
 — $C_{27}H_{40}O_{14}$
 Strychnidin $C_{21}H_{24}ON_2$
 Strychnin $C_{21}H_{27}O_5N_2$
 Strychninsäure $C_{11}H_{11}O_2N$
 — $C_{11}H_{12}O_2N_2$
 Strychnolin $C_{21}H_{26}N_2$
 Stryphninsäure $C_8H_8O_2N_2$
 Sturin $C_8H_7ON_2$
 — $C_{26}H_{50}O_2N_{10}$
 Strycerin $C_2H_4O_2N_2$
 Styphninsäure $C_8H_8O_2N_2$
 Styrcin $C_{18}H_{16}O_3$
 Styrogallol $C_{14}H_{14}O_5$
 Styrol C_8H_8
 Styrolenalkohol $C_8H_{10}O_2$
 Styrolnitrosit $C_8H_8O_2N_2$
 Styron $C_8H_{10}O$
 Styryläther $C_{10}H_{10}O$
 Styrylarnstoft $C_8H_{10}ON_2$
 Styrylyhdantoin $C_{11}H_{10}O_4N_2$

Styrylhydatoinsäure

$C_{11}H_{15}O_3N_3$
 Suberaminsäure $C_8H_{12}O_2N$
 Suberan C_7H_{14}
 Suberaniilsäure $C_{14}H_{18}O_2N$
 Subereonsäure $C_8H_{12}O_4$
 Suberencarbonsäure $C_8H_{12}O_4$
 Suberensäure $C_8H_{12}O_4$
 Suberocarbonsäure $C_8H_{14}O_5$
 Suberomalsäure $C_8H_{14}O_5$
 Suberon $C_7H_{12}O$
 Suberonpinakon $C_{14}H_{20}O_2$
 Suberonsäure $C_8H_{14}O_2$
 Suberowinsäure $C_8H_{14}O_2$
 Suberylalkohol $C_7H_{14}O$
 Suberylamin $C_7H_{13}N$
 Suberylchlorid $C_7H_{12}Cl$
 Suberyl C_7H_{12}
 Suberyloxeyessigsäure
 $C_8H_{14}O_3$
 Succinoabietinol $C_{40}H_{60}O_2$
 Succinoabietinsäure
 $C_{40}H_{60}O_3$
 Succinoerinsinol $C_{15}H_{20}O$
 Succinosilvinsäure $C_{27}H_{36}O_2$
 Succinsäure $C_8H_{14}O_2N_2$
 Succinyldiharnstoff
 $C_8H_{10}O_4N_4$
 Succiteren $C_{12}H_{16}$
 Sulfasatonsäure $C_8H_8O_4NS$
 Sulfocampfersäure $C_8H_{12}O_5S$
 Sulfocinchen $C_{15}H_{20}O_2N_2S$
 Sulfocidil $C_{18}H_{21}O_2NS$
 Sulfhydrochlorin $C_{17}H_{16}O_4S_2$
 —
 $C_{17}H_{16}O_4S$
 Sulfoisatonsäure $C_8H_8O_4NS$
 Sulfonal $C_8H_{10}O_4S_2$
 Sulfophloretinsäure $C_8H_{10}O_4S$
 Sulfopiperidid $C_{10}H_{12}O_4N_2S$
 Sulfuvimursäure $C_8H_8O_4N_2S$
 Syccerylalkohol $C_{18}H_{30}O$
 Sylvan C_8H_8O
 Sylvancarbonsäure
 $C_8H_8O_2$
 Sylvanessigsäure $C_7H_8O_2$
 Sylvestren $C_{15}H_{16}$
 Sylvinsäure $C_{30}H_{40}O_2$
 Synanthren $C_{14}H_{10}$
 Synanthren $C_{14}H_{10}O_4$
 Synanthrose $C_8H_{10}O_5$
 Syntonin $C_{14}H_{12}O_{12}N_2S_2$
 Syringasäure $C_8H_{10}O_4$
 Syringenin $C_7H_8O_4$
 Syringin $C_{17}H_{24}O_9$

Tagatose $C_6H_{12}O_6$

Taguensäure $C_{15}H_{18}O_2$
 Talit $C_{12}H_{14}O_6$
 Talousäure $C_8H_{12}O_7$
 Taloschlicmsäure $C_8H_{10}O_4$
 Tampicin $C_{24}H_{34}O_{14}$
 Tampicinsäure $C_{24}H_{30}O_{17}$
 Tampikolsäure $C_{18}H_{24}O_4$

Tanacetin $C_{10}H_{16}$

Tanacetin $C_{11}H_{16}O_4$
 Tanacetketocarbonsäure
 $C_{10}H_{16}O_3$
 Tanacetketoaximcarbonsäure
 $C_{10}H_{17}O_2N$
 Tanacetogensäure $C_8H_{14}O_2$
 Tanaceton $C_{10}H_{16}O$
 Tanacetophoron $C_8H_{12}O$
 Tanacetumgerbsäure
 $C_{23}H_{30}O_3$
 Tanacetylalkohol $C_{10}H_{16}O$
 Tanacetylamin $C_{10}H_{16}ON$
 Tanginin $C_{27}H_{40}O_5$
 Tangsäure $C_{28}H_{40}O_4$
 Tannon $C_{16}H_{20}O_7N_4$
 Tannoforn $C_{29}H_{40}O_{18}$
 Tannomelansäure $C_8H_{12}O_3$
 Tannoxylsäure $C_7H_8O_5$
 Tarchonylalkohol $C_{10}H_{16}O$
 Taririnsäure $C_{12}H_{18}O_2$
 Tarkonin $C_{11}H_9O_2N$
 Tarkonsäure $C_{10}H_7O_2N$
 Tarnin $C_{11}H_9O_4N$
 Tartrabenzamsäure $C_{11}H_9O_6N$
 Tartrasäure $C_8H_{10}O_{11}$
 Tartranilsäure $C_{10}H_{11}O_5N$
 Tartrazin $C_{16}H_{17}O_2N_2S_2$
 Tartrazinsäure $C_{16}H_{17}O_2N_2S_2$
 Tartrelsäure $C_8H_{10}O_2$
 Tartronsäure $C_8H_{10}O_2$
 Tartrophtalsäure $C_8H_{12}O_6$
 Taurin $C_2H_5O_2NS$
 Tauroammelid $C_8H_8O_2N_2S$
 Taurobetaïn $C_8H_{12}O_2NS$
 Taurocarbaminsäure
 $C_8H_8O_2N_2S$
 Taurochenocholsäure
 $C_{29}H_{40}O_6NS$
 Taurocholsäure $C_{26}H_{34}O_6NS$
 Taurocyamin $C_8H_8O_2N_2S$
 Taurodiammellin
 $C_{10}H_{14}O_2N_6S_2$
 Tauroglykocyanin
 $C_9H_9O_2N_3S$
 Tantocinchonin $C_{19}H_{27}ON_2$
 Taxin $C_{27}H_{32}O_{10}N$
 Teetochrysin $C_{16}H_{17}O_4$
 Telaescin $C_{16}H_{16}O_7$
 Terakonsäure $C_8H_{10}O_4$
 Terakrylsäure $C_8H_{12}O_2$
 Terebenten $C_{10}H_{16}$
 Terebentilsäure $C_8H_{10}O_2$
 Terebentinsäure $C_8H_{11}O_5$
 Terebilensäure $C_7H_8O_4$
 Terebinsäure $C_7H_{10}O_4$
 Terechrynsäure $C_8H_8O_2$
 Terclaktonsäure $C_8H_{10}O_2$
 Terephthalamid $C_8H_{10}N_4$
 Terephthalophenon $C_{10}H_{14}O_2$
 Terephthalsäure $C_8H_8O_4$
 Teropiammon $C_{20}H_{26}O_{13}N$
 Terpadien $C_{10}H_{16}$
 Terpan $C_{10}H_{16}O$

Terpanol $C_{10}H_{20}O$

Terpenon $C_{10}H_{16}O$
 Terpentinsäure $C_8H_{12}O_5$
 Terpenylsäure $C_8H_{12}O_4$
 Terpin $C_{10}H_{16}$
 Terpin $C_{10}H_{16}$
 Terpinelol $C_{10}H_{16}O$
 Terpinen $C_{10}H_{16}$
 Terpineol $C_{10}H_{16}O$
 Terpinolen $C_{10}H_{16}$
 Terpinylen $C_{10}H_{16}$
 Tetanin $C_{12}H_{20}O_2N_2$
 Tetrabutylalidin $C_{16}H_{28}ON$
 Tetracodeïn $C_{27}H_{44}O_{12}N_4$
 Tetralirolin $C_{12}H_{18}N$
 Tetrakosan C_7H_{10}
 Tetralutidin $C_{28}H_{36}N_4$
 Tetramorphin $C_{26}H_{42}O_{12}N_4$
 Tetrasalicylid $C_{20}H_{16}O_4$
 —
 $C_8H_{10}O_4$
 Tetraspartid $C_{16}H_{18}O_2N_2$
 Tetraspartsäure $C_{16}H_{22}O_{12}N_2$
 Tetraterebenten $C_{10}H_{14}$
 Tetrathiopenton $C_{15}H_{22}S_4$
 Tetrazol CH_2N_4
 Tetraensäure $C_8H_{10}O_2$
 Petrol C_8H_8O
 Petrolidiamin $C_{16}H_{11}N_2$
 Petroliditoly $C_{16}H_{13}N_2$
 Petrolharnstoff $C_8H_{10}N_2$
 Petrolsäure $C_8H_{10}O_2$
 Petrolurethan $C_7H_8O_2N$
 Petronensäure $C_8H_{10}O_2$
 Tetrose $C_4H_8O_4$
 Teucin $C_8H_{12}O_{11}$
 Thallin $C_7H_{12}ON$
 Thapsiasäure $C_{16}H_{20}O_4$
 Thebaïn $C_{16}H_{18}O_2N$
 Thebaol $C_{18}H_{24}O_2N$
 Thebaolichinon $C_{16}H_{14}O_6$
 Thebenin $C_{18}H_{18}O_2N$
 Thebenol $C_{17}H_{14}O_2$
 Theïn $C_8H_{10}O_2N$
 Theobromin $C_8H_8O_2N_2$
 Theobromsäure $C_8H_8O_2N_2$
 Theophyllin $C_8H_8O_2N_2$
 Theursäure $C_{17}H_{18}O_2$
 Theveresin $C_{48}H_{76}O_{17}$
 Thevetin $C_{24}H_{34}O_{11}$
 Thiacetonin $C_8H_{10}NS_2$
 Thiacetouraminensäure
 $C_8H_8O_2NS$
 Thialdin $C_8H_{12}NS_2$
 Thianisolin $C_7H_8O_4S$
 Thianthren $C_{17}H_{14}S_2$
 —
 $C_8H_{12}S_2$
 Thiazol C_3H_4NS
 Thiazoltriazol $C_8H_8N_2S$
 Thiergummi $C_{12}H_{20}O_6$
 Thioacetophenon C_8H_8S
 Thiammellin C_8H_8NS
 Thioanilin $C_{12}H_{12}N_2S$
 Thioanisol $C_{14}H_{14}O_2S$
 Thiobarbitursäure $C_4H_4O_2N_2S$

Thiobenzhydrol $C_{11}H_{11}S$
 Thiobenzophenon $C_{13}H_{10}S$
 Thioburet $C_4H_6ON_2S$
 Thiocampher $C_{12}H_{16}S$
 Thiocarbamil $C_8H_{10}NS$
 Thiocarbamilid $C_{13}H_{12}N_2S$
 Thiochinanthren $C_{18}H_{10}N_2S_2$
 Thiochinosäure $C_8H_6O_17S_2$
 Thiocumarin C_9H_8OS
 Thiocumazon C_9H_8ONS
 Thiodialursäure $C_8H_6O_8N_2S$
 Thiodilaktylsäure $C_6H_{10}O_4S$
 Thiofucosyl C_8H_8OS
 Thiofurfuryl C_8H_8OS
 Thioglyoxylsäure $C_3H_4O_3S$
 Thiobarnstoff CH_4N_2S
 Thiohydantoinessigsäure
 $C_3H_4O_4N_2S$
 Thiohydantoinsäure
 $C_3H_4O_4N_2S$
 Thiokaffein $C_8H_{10}O_2N_2S$
 Thiopiden $C_8H_{10}S_2$
 Thionaphten $C_{10}H_8S$
 Thionaphtol $C_{10}H_8S$
 Thionessal $C_{10}H_{10}S$
 Thionin $C_{12}H_8N_2S$
 Thionion $C_{12}H_8ON_2S$
 Thionorsäure $C_4H_6O_4N_2S$
 Thioopiainsäure $C_{15}H_{16}O_2S$
 Thiophaminsäure $C_{17}H_{16}O_2$
 Thiophiansäure $C_{17}H_{16}O_2$
 Thiophen C_6H_6S
 Thiophengrün $C_{21}H_{14}ON_2S$
 Thiophenstilben $C_{16}H_{12}S_2$
 Thiophthalid $C_8H_8O_2$
 Thiophthen $C_8H_8S_2$
 Thiopseudoharnsäure
 $C_3H_4O_2N_2S$
 Thiorufinsäure $C_{10}H_{14}O_4S_2$
 —
 $C_{12}H_{10}O_4S_2$
 Thiozinamin $C_4H_6N_2S$
 Thiosuccinursäure
 $C_4H_6O_4N_2S$
 Thioisulfanilin $C_{11}H_{12}N_2S_2$
 Thiouramil $C_8H_{10}O_2N_2S$
 Thiourazol $C_8H_{10}ON_2S$
 Thioxanthon $C_{13}H_8OS$
 Thiuramdisulfid $C_4H_6N_2S_2$
 Thiuramsulfid $C_4H_6N_2S_2$
 Thiuret $C_2H_4N_2S_2$
 Thujaketonsäure $C_{10}H_{16}O_2$
 Thujaketoximsäure
 $C_{10}H_{12}ON$
 Thujamenthon $C_{10}H_{16}O$
 Thujamenthon $C_{10}H_{16}O$
 Thujen $C_{10}H_{16}$
 Thujetin $C_{14}H_{14}O_2$
 Thujetinsäure $C_8H_{12}O_{12}$
 Thujigenin $C_{11}H_{11}O_7$
 Thujin $C_{10}H_{16}O_2$
 Thujon $C_{10}H_{16}O$
 Thujonamin $C_{10}H_{16}N$
 Thujylalkohol $C_{10}H_{18}O$
 Thymen $C_{10}H_{16}$

Thymin $C_8H_{10}O_2N_2$
 Thyminsäure $C_{18}H_{20}O_{13}N_2P_2$
 Thymoakrylsäure $C_{15}H_{16}O_3$
 Thymochinon $C_{18}H_{12}O_2$
 Thymol $C_{10}H_{14}O$
 Thymolchroin $C_{16}H_{18}O_3N_2$
 Thymolglukosid $C_{16}H_{24}O_6$
 Thymoxycuminsäure
 $C_{12}H_{12}O_2$
 Thymophenochinon $C_{22}H_{24}O_4$
 Thymotid $C_{11}H_{14}O_2$
 Thymotinsäure $C_{11}H_{14}O_2$
 Thyreantitoxin $C_6H_{11}O_3N_2$
 Tiglicerinsäure $C_7H_{10}O_4$
 Tiglinsäure $C_5H_8O_2$
 Tolan C_4H_{10}
 Tolanurein $C_{15}H_{18}ON_2$
 Tolazon $C_{11}H_{12}N_2$
 Tolen $C_{10}H_{16}$
 Tolualloxazin $C_{11}H_8O_2N_4$
 Toluanisaldehydin
 $C_{22}H_{26}O_2N_2$
 Tolubenzaldehydin $C_{21}H_{18}N_2$
 Toluchinolin $C_{10}H_8N$
 Toluchinon $C_7H_8O_2$
 Tolfurfuraldehydin
 $C_7H_8O_2N_2$
 Toluidinschwarz $C_{26}H_{22}N_2$
 Toluidylmelamin $C_{24}H_{27}N_6$
 Toluidazin $C_{12}H_{11}N_3$
 Toluidophenazin $C_{15}H_{11}N_3$
 Toluisatin $C_{22}H_{15}ON$
 Tolunaphazin $C_{17}H_{12}N_2$
 Toluol C_7H_8
 Toluphenanthrazin $C_{21}H_{14}N_2$
 Toluresitannol $C_{17}H_{15}O_5$
 Tolursäure $C_{10}H_{11}O_2N_2$
 Tolusafranin $C_{21}H_{26}N_4$
 Tolulylenblau $C_{17}H_{18}O_4$
 Tolulylendioxamäthan
 $C_{13}H_{18}O_4N_2$
 Tolulylenoxamid $C_8H_{10}O_2N_2$
 Tolulylenroth $C_{15}H_{16}N_2$
 Tolulylenviolett $C_{11}H_{14}N_4$
 Tolulylsäure $C_8H_8O_3$
 Tolybenzil $C_{21}H_{17}ON$
 Tolyglycin $C_9H_{11}O_2N$
 Tolyguanazol $C_8H_{11}N_2$
 Tormentillroth $C_{26}H_{24}O_{11}$
 Toxigenon $C_{20}H_{26}O_5$
 Trachylolsäure $C_{26}H_{26}O_8$
 Traubensäure $C_6H_8O_6$
 Traubenzucker $C_6H_{12}O_6$
 Trehalose $C_{12}H_{22}O_{11}$
 Trehalum $C_{24}H_{42}O_{21}$
 Triacetodiamid $C_6H_{12}O_2N_2$
 Triacetonalalkamin $C_8H_{10}ON$
 Triacetondiamin $C_8H_{10}ON_2$
 Triacetonin C_8H_8N
 Triacetontrisulfon $C_8H_8O_6S_3$
 Trianilskulin $C_{23}H_{21}O_6N_3$
 Triazobenzol $C_6H_5N_3$
 Triazol $C_4H_5N_3$
 Triacapyren $C_{24}H_{26}$

Tricarbonimid $C_3H_4O_2N_2$
 Trichinoyl $C_8H_{16}O_2$
 Trichloralimid $C_2H_5N_2Cl_3$
 Tricitin $C_{12}H_{22}O_{11}$
 Tricocein $C_{25}H_{48}O_6N_2$
 Trieykloacetonsuperoxyd
 $C_6H_{10}O_6$
 Triepinsäure $C_7H_8O_5$
 Trigenensäure $C_7H_8O_2N_2$
 Trigonein $C_7H_8O_2N$
 Triguanid $C_7H_8O_2N_2$
 Triglycerin $C_{18}H_{36}O_2$
 Triglykolamidsäure $C_8H_8O_6N$
 Triglykolsäure $C_8H_{12}O_6$
 Trikosan $C_{23}H_{46}$
 Trimellithsäure $C_6H_6O_4$
 Trimesinsäure $C_6H_6O_6$
 Trimesitinsäure $C_6H_6O_4N$
 Trimorphin $C_{21}H_{27}O_9N_2$
 Trional $C_8H_{16}O_3S_2$
 Triphenidoxazin $C_{15}H_{16}O_2N_2$
 Tripyrrol $C_{17}H_{15}N_3$
 Tripyruvintetraureid
 $C_{12}H_{16}O_2N_2$
 Triresarin $C_{10}H_8O_4$
 Trisucinamid $C_8H_{12}O_6N_2$
 Trithioacetone $C_3H_4S_3$
 Trithiodilaktylsäure
 $C_6H_{10}O_4S_2$
 Trithiopyroglycid $C_6H_{12}OS_2$
 Trithiovanillin $C_8H_8O_2S_3$
 Tropacocain $C_{15}H_{19}O_2N$
 Tropäolin $D_1C_{15}H_{15}O_2N_2S$
 Tropan C_8H_9N
 Tropanin C_8H_9N
 Tropasäure $C_8H_{10}O_4$
 Tropidin $C_8H_{11}N$
 —
 $C_8H_{12}N$
 Tropigenin $C_{13}H_{15}ON$
 Tropinpinakon $C_{16}H_{20}O_2N_2$
 Tropiliden C_8H_{10}
 Tropiliden C_8H_8
 Tropin $C_{11}H_{13}ON$
 Tropinneurin $C_{10}H_{15}O_2N$
 Tropinon $C_8H_{13}ON$
 Tropinsäure $C_8H_{13}O_2N$
 Tropolin $C_8H_{12}ON$
 Tropyllamin $C_8H_{12}N_2$
 Tropylolepin $C_{17}H_{21}O_4N$
 Truxen $C_{15}H_{18}$
 —
 $C_{27}H_{34}$
 Truxillfluorescein $C_{30}H_{24}O_6$
 Truxillin $C_{19}H_{22}O_2N$
 Truxillsäure $C_{17}H_{16}O_4$
 Truxon C_8H_8O
 Tuberkulinsäure $C_7H_{10}O_4$
 Tuberon $C_{11}H_{20}O$
 Tubocurarin $C_{25}H_{21}O_2N$
 Tulucumin $C_{15}H_{14}O_4$
 Tunicin $C_6H_8O_2$
 Turanose $C_{12}H_{22}O_{11}$
 Turmerinsäure $C_7H_{16}O_2$
 Turmerol $C_{12}H_{18}O$
 Turpethin $C_{24}H_{36}O_{16}$

Turpethinsäure $C_{34}H_{60}O_{18}$
 Turpetholsäure $C_{16}H_{28}O_4$
 Typhotoxin $C_8H_{17}O_2N$
 Tyroleucin $C_8H_{17}O_2N$
 Tyrosin $C_9H_{11}O_2N$
 Tyrosinhydantoin
 $C_{10}H_{19}O_3N_2$
 Tyrosinhydantoin säure
 $C_{10}H_{17}O_4N_2$

Ueberkohlen säure $C_2H_2O_6$
 Ulexin $C_{11}H_{11}ON_2$
 Umbelliferon $C_9H_8O_3$
 Umbelliferonessigsäure
 $C_{11}H_{10}O_5$
 Umbellol $C_8H_{11}O$
 Umbellsäure $C_{10}H_{10}O_4$
 Umbellensäure $C_{11}H_{21}O_2$
 Undekolsäure $C_{11}H_{21}O_2$
 Undekylensäure $C_{11}H_{20}O_2$
 Uramil $C_8H_{13}O_3N_3$
 Uramilsäure $C_8H_9O_7N_3$
 Urazol $C_8H_8O_2N_2$
 Urechitin $C_{20}H_{47}O_2$
 Urechitoxin $C_{15}H_{29}O_4$
 Urethan $C_2H_5O_2N$
 Urethanoxylozamin
 $C_{13}H_{16}O_3N_2$
 Uretropin $C_{15}H_{30}O_4N_2$
 Urocinilsäure $C_8H_9O_6N_7$
 Urobilin $C_{22}H_{36}O_7N_4$
 Urobityrchloralsäure
 $C_{10}H_{15}O_7Cl_2$
 Urocanin $C_{11}H_{19}ON_4$
 Urocaninsäure $C_{13}H_{17}O_4N_4$
 Urochloralsäure $C_8H_{11}O_2Cl_2$
 Urofuscobämatin $C_{21}H_{27}O_8N_4$
 Uromelamin $C_{22}H_{33}O_{10}N_7$
 Uronitrotoluolsäure
 $C_{12}H_{15}O_3N$
 Uroprotsäure $C_{66}H_{116}O_{24}N_{30}S$
 Urorubrämatin
 $C_4H_{21}O_7N_2Fe$
 Urosulfinsäure $C_8H_9O_2N_3S$
 Uroxansäure $C_8H_9O_6N_4$
 Urson $C_{20}H_{35}O_2$
 Urushinsäure $C_{11}H_{15}O_2$
 Usnarsäure $C_{30}H_{47}O_{15}$
 Usneol $C_{11}H_{17}O_3$
 Usnetinsäure $C_9H_{16}O_3$
 Usnetol $C_{13}H_{14}O_4$
 Usninsäure $C_{13}H_{16}O_7$
 — $C_{15}H_{18}O_7$
 Usnolsäure $C_7H_{10}O_7$
 Uvinon $C_{11}H_{17}O_2$
 Uvinsäure $C_8H_9O_3$
 Uvitaminsäure $C_8H_{13}O_2N$

Uvitinsäure $C_9H_9O_4$
 Uvitoninsäure $C_8H_9O_4N$
 Uvitonsäure $C_9H_9O_4$

Valdivin $C_{18}H_{27}O_{10}$
 Valeraldin $C_{15}H_{23}NS_2$
 Valeraldol $C_{16}H_{25}O_2$
 Valeriansäure $C_5H_{10}O_2$
 Valeridin $C_{10}H_{19}N$
 Valeritrin $C_{11}H_{27}N$
 Valeron $C_8H_{11}O$
 Valerylen C_3H_{10}
 Validin $C_{16}H_3N$
 Valylen C_2H^9
 Vanillin $C_8H_8O_2$
 Vanillinaldoxim $C_8H_9O_2N$
 Vanillinsäure $C_8H_9O_4$
 Vanillicetamin
 $C_{15}H_{19}O_3N$
 Vanillylcarbonsäure $C_8H_9O_5$
 Vanillylalkohol $C_8H_{10}O_3$
 Vasculose $C_{24}H_{45}O_2$
 Vellosin $C_{24}H_{29}O_2N_2$
 Ventilagin $C_7H_{11}O_5$
 Veratralbin $C_8H_9O_3N$
 Veratrin $C_{25}H_{49}O_4N$
 — $C_{25}H_{53}O_{11}N$
 Veratrinksäure $C_{10}H_{15}O_5$
 Veratroin $C_{25}H_{37}O_{16}N_2$
 Veratrol $C_8H_{10}O_4$
 Veratrum säure $C_9H_{10}O_4$
 Verin $C_{25}H_{45}O_4N$
 — $C_{25}H_{49}O_{16}N_7$
 Vernin $C_{19}H_{29}O_4N_8$
 Vestrylammin $C_{16}H_{19}N$
 Vesuvin $C_{12}H_{13}N_3$
 Vicin $C_8H_{16}O_2N_3$
 Victoriablau B $C_{23}H_{23}N_9Cl$
 — $4R C_{21}H_{21}N_9Cl$
 Viktoriagelb $C_8H_9O_2N_2$
 Vinakonsäure $C_8H_9O_4$
 Vincetoxin $C_{16}H_{17}O_6$
 Vinylalkohol C_2H_5O
 Vinylacetamin C_8H_9ON
 Vinylacetonin $C_8H_{13}N$
 Violantin $C_8H_9O_2N$
 Violaquercitrin $C_{26}H_{30}O_{13}$
 Violar säure $C_8H_9O_4N_2$
 Viridin $C_{19}H_{19}N$
 Viscikautschin $C_8H_{10}O$
 Viscin $C_{19}H_{21}O_4$
 Viscose $C_6H_{10}O_5$
 Vitexin $C_{15}H_{14}O_7$
 Vitin $C_{20}H_{29}O_2$
 Vitol $C_{17}H_{19}O$
 Vitylglykol $C_{23}H_{41}O_2$
 Volemit $C_7H_{16}O_2$
 Vulpinsäure $C_{19}H_{14}O_5$

Weinsäure $C_4H_6O_6$
 Weinsäurechlorid
 $C_4H_5O_6Cl$
 Wrightin $C_{24}H_{40}N_2$

Xanthalin $C_7H_{10}O_5N_4$
 Xanthen $C_{15}H_{10}O$
 Xanthin $C_5H_7O_2N_4$
 Xanthin $C_5H_7O_2N_4$
 Xanthochelidonsäure $C_7H_9O_2$
 Xanthochinsäure $C_{10}H_9O_3N$
 Xanthogallol $C_{18}H_{11}O_2Br$
 Xanthogallolsäure
 $C_{19}H_{17}O_9Br_{11}$
 Xanthokreatin $C_5H_{10}ON_4$
 Xanthon $C_{15}H_8O_2$
 Xanthophansäure $C_{19}H_{20}O_5$
 Xanthopurpurin $C_{17}H_{11}O_4$
 Xanthorhammin $C_{25}H_{26}O_{22}$
 Xanthorocellin $C_{23}H_{17}O_2N_2$
 Xanthorrhoeazhar $C_{10}H_{10}O_2$
 Xanthostyrychnol $C_{27}H_{21}O_4N_2$
 Xanthoxylon $C_{18}H_{16}$
 Xanthoxylin $C_{12}H_{12}O_4$
 Xanthydrol $C_{18}H_{15}O_2$
 Xenylamin $C_8H_{11}N$
 Xeronsäure $C_8H_{11}O_4$
 Xylan $C_5H_{10}O_5$
 — $C_5H_8O_4$
 Xylylindimmin $C_{12}H_{18}N_2$
 Xylidinsäure $C_8H_9O_4$
 Xylit $C_8H_{13}O_5$
 Xylitol $C_{12}H_{22}O$
 Xylochinon $C_8H_8O_2$
 Xylochloral $C_2H_9O_5Cl_3$
 Xylol C_8H_{10}
 Xylonsäure $C_8H_9O_6$
 Xylorincarbon säure $C_9H_{10}O_4$
 Xylosamin $C_5H_7O_4N$
 Xylose $C_6H_{10}O_5$
 Xylolyformoxim $C_{12}H_{11}O_2N$
 Xylylglyoxylsäure $C_{10}H_{10}O_3$
 Xylylsäure $C_24H_{30}O_{17}$

Yohimbenin $C_{23}H_{35}O_6N_2$
 Yohimbin $C_{23}H_{37}O_4N_2$
 Yohimbinsäure $C_{23}H_{31}O_6N_2$
 Yuccasaponin $C_{24}H_{40}O_{10}$

Zeorin $C_{14}H_{27}O$
 Zerinin $C_{17}H_{34}O_2$
 Zimmtalkohol $C_9H_{10}O$
 Zimmtsäure $C_9H_8O_4$
 Zuckersäure $C_6H_{10}O_6$



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