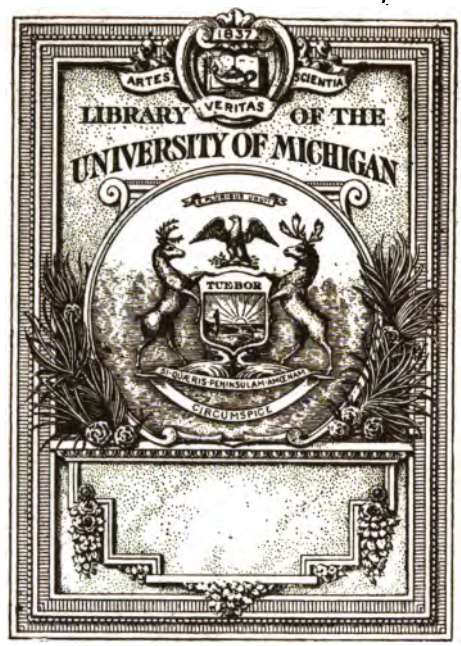
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THE

NEWER REMEDIES

INCLUDING THEIR SYNONYMS, SOURCES, METHODS OF PREPARATION, TESTS, SOLUBILITIES, INCOMPATIBLES, MEDICINAL PROPERTIES, AND DOSES AS FAR AS KNOWN, TOGETHER WITH SECTIONS ON ORGANO-THERAPEUTIC AGENTS AND INDIFFERENT COMPOUNDS OF IRON

A REFERENCE MANUAL

FOR

PHYSICIANS, PHARMACISTS, AND STUDENTS

BY

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Third Edition

Revised and very much Enlarged

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PREFACE TO THIRD EDITION.

If we consider the introduction of Kairin in 1882 as the beginning of the era of modern synthetic medication, and that up to 1896 such products, in addition to various proprietary combinations of similar character, numbered about 800, with a further addition of about 1200 during the last three years, the future of this subject appears to be entirely beyond all conjecture. The class of true synthetics, although they represent only a comparatively small fraction of the above number, has received many valuable additions since the last edition of this book, in 1896, as the following résumé of some of the more important groups will show. The para-phenetidin nucleus, which furnishes us with the valuable antipyretics Phenacetin, Phenocoll, Lactophenin, etc., has been drawn upon for such new combinations as Kyrofin, Phesin, Oxyphenacetin, and Vanillin-para-phenetidin.

The introduction of Eucaine "A," Eucaine "B," Holocain, Pyrocain, Ortho-form, and Guaiacyl furnishes some formidable competitors for cocain. Among the newest synthetic mydriatics are Euphthalmin and Mydrol, the former being a mandelic acid derivative of the local anesthetic Eucaine "B."

The number of local and intestinal antiseptics with iodoform substitutes has assumed formidable proportions, new compounds and combinations being almost of daily occurrence.

The increased interest in the silver antiseptic treatment may be shown by the addition of such organic combinations as Hydrogol, Protargol, Largin, Actol, Itrol, and Argentol. Among the newer nutrient and tonic albuminoids are Alueronate, Carniferrol, Casein-peptone, Eucasin, Nutrose, Protogen, and Sanose.

Of late years the subjects of animal remedial preparations and indifferent iron albumin compounds have attracted sufficient attention to induce the author to add a chapter devoted to a general explanation of the subjects as far as the scope of this condensed work permits.

In addition to giving as complete a list of all modern medicinal synthetics as possible, the author has endeavored to include all such proprietary combinations as are made up of mixtures containing one or more of these synthetics; also such other preparations as employ specially coined titles, many of which are deceptively similar to those of well-known chemic compounds.

The original orthography of all titles has been retained, excepting in cases in which a foreign manufacturer has made a slight change for the benefit of our market—as, for example, in Eucaine and Antipyrine, where a terminal "*e*" has been added. In all other cases the author has adopted, so far as possible, the rules of chemic orthography as sanctioned by the A. A. A. S. in 1891.

The composition of all proprietary combinations is given according to published analyses. Wherever possible, among the patented synthetics, the author has

endeavored to include the name of the patentees, the following being a list of the various contractions employed :

D. R. P.,	Deutsches Reichs Patent.
A. G. F. Anilinfabr.,	Aktiengesellschaft für Anilinfabrikation in Berlin.
Basel,	Basler Chemische Fabrik Bindschedler, Basel.
Bayer,	Farbenfabriken vorm. F. Bayer & Co. in Elberfeld.
Boehringer,	C. F. Boehringer u. Söhne, Waldhof b. Mannheim.
v. Heyden,	Chemische Fabrik von Heyden in Radebeul.
Hoechst,	Farbwerke vorm. Meister, Lucius, und Brüning in Hoechst a. M.
Kalle,	Kalle u. Co., Biebrich a. Rhein.
Knoll,	Knoll u. Co., Ludwigshafen a. Rhein.
Marquart,	Dr. L. C. Marquart, Bonn a. Rhein.
Merck,	Chemische Fabrik E. Merck in Darmstadt.
Rhenania,	Chemische Fabrik Rhenania in Aachen.
Riedel,	Chemische Fabrik J. D. Riedel in Berlin.
Schering,	Chemische Fabrik a. Aktien vorm. E. Schering in Berlin.
Trommsdorff,	Chemische Fabrik H. Trommsdorff in Erfurt.
Zimmer,	Zimmer u. Co. in Frankfurt a. M.

NEW YORK CITY, *May, 1899.*

THE NEWER REMEDIES.

ABIABA. The bark of the *Lucuma caimito*, a Brazilian Sapotaceæ, which is used as a tonic, antidysenteric, and antiseptic. Dose, 0.1–0.15 Gm.; as antiperiodic, 0.2–0.5 Gm.

ABRASTOL. (ASAPROL.) $(C_{10}H_6OH.SO_3)_2Ca + 3H_2O$.

The calcium salt of beta-napthol-sulfonic acid. It is a soluble white powder, and because of its antiseptic properties is employed as a preservative agent for foods. It is also employed as an intestinal antiseptic in doses of 1–2 Gm. (15–30 gr.). Also employed in influenza, typhus, muscular rheumatism, and neuralgia, in daily doses of 4–6 Gm.

ABRIN. (JEQUIRITIN.)

Abrin is the most potent principle contained in the Jequirity seed (*Abrus precatorius*). It partakes of the nature of an albuminoid and is very poisonous. It is a brownish-yellow soluble powder; is employed to limited extent for producing artificial conjunctivitis. Fatal dose is $\frac{1}{25}$ gr.

ACERDOL. MnO_2K_2 KOH.

An oxidation product of potassa and powdered manganese. Used as an oxidizer, disinfectant, etc.

ACETAL. CH_3–CH $(OC_2H_5)_2$. *Synonyms:* Ethyliden-di-ethyl-ether; Di-ethyl-acetal.

This body is obtained by the reaction between acetic-aldehyd and alcohol in presence of dehydrating agents, whereby water separates. It is a colorless liquid, boiling at 104°–106° C. (219°–222° F.). Soluble in 18 parts of water (25° C.) and very soluble in alcohol. It is employed as a sedative and hypnotic. Dose is from 5–10 Gm. (77–154 gr.), usually in form of an emulsion.

ACETAL. Composition stated to be as follows:

Acetic ether, 15 Gm.; oil of orange, thyme, clove, and lavender, of each, 3 drops; oil of lemon, 6 drops; oil of rosemary, 7 drops; oil of bergamot, 10 drops; menthol, 5 Gm.; abs. alcohol, 150 Gm. Used for headache.

ACETAMIDO-ANTIPYRINE.

By the action of nitric acid antipyrine is converted into nitro-antipyrine; this is reduced by means of zinc and acetic acid to amido-antipyrine. This latter compound, when heated with sodium acetate and acetic anhydrid, is converted into acet-amido-antipyrine, which forms yellow crystals, melting at 109° C. (228° F.), and soluble in water and alcohol. It is recommended as an antipyretic in the same doses as antipyrine.

ACETAMINOL. $C_6H_3(OCH_3)(C_3H_5)O$–CO. $C_6H_4NHCOCH_3$. *Synonym:* p-Acetamido-benzoyl-eugenol. (Merck.)

By interaction between p-nitrobenzoylchlorid and eugenol-sodium in molecular proportions p-nitrobenzoyleugenol is formed; this upon reduction yields the corresponding p-Amidobenzoyl-eugenol, which is acetylated by means of acetic anhydrid. This compound appears in the form of white scales or a crystalline powder, of melting-point 160° C. It is almost insoluble in water, quite soluble in alcohol.

It is employed in treatment of phthisis.

ACETANILID. C_6H_5 NH.$COCH_3$. *Synonyms:* Antifebrin; Phenylacetamid.

Obtained by prolonged interaction between pure anilin and glacial acetic acid at boiling temperature. Twenty Gm. of anilin are boiled with 30 Gm. of glacial acetic acid under an inverted condenser for from six to ten hours, till a sample of the mixture when removed solidifies on cooling to a crystalline mass. The fused mass is poured into cold water, and the crystals which separate are filtered off and recrystallized from hot water or alcohol. When pure, acetanilid forms lustrous rhombic tables without odor or color, melting at 113° C. (235.4° F.), soluble at 15° C. (59° F.) in 194 parts of water, and in 5 parts of alcohol; in 18 parts of boiling water, and in 0.4 part of boiling alcohol. Acetanilid should not be left in contact with spirits of niter any great length of time; with antipyrine it forms a pasty mass; in aqueous solution with the alkali bromids and iodids it forms insoluble compounds.

Its properties are those of an antipyretic. (See U. S. Disp.) The average dose is from 0.2–0.5 Gm. (3–8 gr.). The various derivatives of acetanilid employed in medicine are Asepsin, Iodantifebrin, Antinervin, Benzanilid, Exalgin.

Among the various remedies which are supposed to contain acetanilid as one of their constituents are Ammonol, Antikamnia, Phenolid, Exodyne, Antikol, Pyretin, Phenatol, Kaputin, Phenalgene, etc.

ACETANILID, AMMONIATED.

The following mixture has been recommended as causing less depression or collapse than acetanilid alone: Acetanilid, 25 parts; ammonium carbonate, 10 parts; sodium bicarbonate, 5 parts; sugar of milk, 60 parts. It stimulates the heart and the vaso-motor system and is used in dysmenorrhea, gastralgia, hyperacidity of the stomach, and atonic dyspepsia.

ACETO-AMIDO-PHENOL. ($C_6H_4OH.NH.C_2H_3O$). *Synonym:* Hydroxyantifebrin.

An oxidation product of acetanilid.

ACETOCAUSTIN.

A 50 per cent. solution of trichloracetic acid. A clear fluid of penetrating odor which, on boiling, splits up into chloroform; finally, formic and carbonic acids. Used as a caustic for corns, etc.

ACETOL.

A remedy for toothache found by Dr. Aufrecht to consist of acetic acid, 8.46; alum, 3.07; and water, 88.5 per cent., with small quantities of the essential oils of sage, peppermint, and clove.

ACETON.

A proprietary "grip" and headache remedy. Not to be confounded with acetone.

ACETONAL.

Aluminum sodium acetate.

ACETONE. CH_3–CO–CH_3. *Synonym:* Di-methyl-ketone.

This is prepared by the dry distillation of calcium acetate; it boils at 56° C. (132.8° F.), has a peculiar ethereal odor, and sharp burning taste. Miscible with water, alcohol, and ether.

It is employed as a nervine in doses of 5–15 minims, in water or infusion of valerian.

ACETONE COLLODION.

This has the advantage of greater elasticity over ordinary flexible collodion, is prepared from 5 parts guncotton, 10 parts ether, 10 parts alcohol, 20 parts acetone, and 6 parts castor oil.

ACETONE RESORCIN. $C_6H_4:O_2:C(CH_3)_2$.

A combination of two molecules of resorcin and one of acetone. Used as an antiseptic. Small anhydrous prisms, soluble in alkalies, insoluble in water and alcohol; melts at 212° C. (413.6° F.).

ACETO-ORTHO-AMIDO-CHINOLIN. ($C_9H_6N(NHCH_3CO)$).

Obtained by reduction of ortho-nitro-chinolin to ortho-amido-chinolin; this latter is acetylated by means of acetyl chlorid. Forms colorless crystals, which were intended as antipyretic without result.

ACETOPHENONE. See Hypnone.

ACETO-PHENONE-ORTHO-OXY-QUINOLIN. $C_9H_6NO.CH_2.CO.C_6H_5$.

Obtained by interaction between a halogen compound of aceto-phenone and ortho-quinolin in the presence of solvents and an alkali. The compound is an energetic base forming well-defined salts, soluble in all volatile solvents. Melts at 130° C. It is decidedly hypnotic and antineuralgic, being superior to aceto-phenone in that it is inodorous, tasteless, and non-irritating. (D. R. P. Zimmer & Co.)

ACET-ORTHO-TOLUID. $C_6H_4(CH_3)NH\,COCH_3$. *Synonym:* Ortho-tolyl-acetamid.

This is an isomeride of exalgin, obtained by prolonged interaction between ortho-toluidin and glacial acetic acid at boiling temperature. It occurs in colorless needles; melting-point, 107° C. (224.6° F.). Soluble in hot water, alcohol, and ether; almost insoluble in cold water.

It is employed as an antipyretic; its action is more rapid than that of acetanilid, yet being less toxic. The dose, although there is no authority upon the subject, would be from 0.1–0.3 Gm. (2–5 gr.).

ACET-PARA-AMIDO-SALOL. See Salophen.

ACET-PARA-TOLUID. $C_6H_4(CH_3)NH.\ COCH_3$. *Synonym:* Para-tolyl-acetamid.

This is obtained by prolonged interaction between para-toluidin and glacial acetic acid at boiling temperature. It occurs in colorless crystals of melting-point 149° C. (300.2° F.). It is almost insoluble in water, and readily soluble in alcohol.

It is employed as an antipyretic in doses of from 1–2 Gm. (15–30 gr.).

ACETYL-AMIDO-ANTIPYRINE. See under Antipyrine.

ACETYL-ETHYL-PHENYL-HYDRAZIN. ($C_{18}H_{22}N_4O_2$).

Obtained by heating a solution of ethylene-phenyl-hydrazin with an excess of acetic anhydrid. Forms colorless needles, recommended as antipyretic.

ACETYL-PARA-AMIDO-PHENYL-SALICYLATE. See Salophen.

ACETYL-PARA-ETHOXY-PHENYL-URETHANE. See Thermodin.

ACETYL-PHENYL-HYDRAZINE. See Hydracetin.

ACETYL-TANNIN. See Tannigen.

ACETYL-THYMOL. $C_{12}H_{16}O_2$ or $C_{10}H_{13}O$–CH_3CO. *Synonym:* Thymyl Acetate.

This constitutes a colorless liquid of pungent taste, sp. gr. 1.009 at 0° C. Boils at 244.4° C. (472° F.). Employed as an antiseptic.

ACID, AGARIC. See Agaricin.
ALPHA-OXY-NAPTHOIC. See Alpha-oxy-napthoic Acid.
ALPHA TOLUIC. See Phenylacetic Acid.
ANACARDIC. See Anacardic Acid.
ANGELIC. See Angelic Acid.
ALGINIC. See Alginic Acid.
ANISIC. See Anisic Acid.
ANISOPHENYLIC. See Anisophenylic Acid.
ASEPTIC. See Aseptic Acid.
BENZOYL-AMIDO-PHENYL-ACETIC. See Benzoyl-amido-p-acetic Acid.
BETA-PHENYL-SALICYLIC. See Beta-phenyl-salicylic Acid.
BETA-PHENYL-PROPIONIC. See Beta-phenyl-propionic Acid.
BOROCITRIC. See Borocitric Acid.
BOROPHENYLIC. See Borophenylic Acid.
BOROSALICYLIC. See Borosalicylic Acid.
BURSINIC. See Bursinic Acid.
CAINCIC. See Caincic Acid.
CAINCINIC. See Caincinic Acid.
CAMPHORIC. See Camphoric Acid.
CAMPHORONIC. See Camphoronic Acid.
CARBOLIC, CAMPHORATED. See Carbolic Acid, Camphorated.
CARBOLIC, IODIZED. See Iodo-phenol.
CATECHU-TANNIC. See Catechu-tannic Acid.
CATHARTIC. See Cathartic Acid.
CHINOPICRIC. See Chinopicric Acid.
CINNAMYLIC. See Cinnamic Acid.
COLUTINIC. See Colutinic Acid.
CRESOTINIC. See Cresotinic Acid.
CRESYLIC. See Cresol.
CROTONOLIC. See Crotonolic Acid.
CUBEBIC. See Cubebic Acid.
DI-CHLOR-ACETIC. See Di-chlor-acetic Acid.
DI-IODO-SALICYLIC. See Di-iodo-salicylic Acid.
DITHIOCHLORSALICYLIC. See Di-thio-chlor-salicylic Acid.
DI-THIO-SALICYLIC. See Di-thio-salicylic Acid.
EMBELIC. See Embelic Acid.
FILICIC. See Filicic Acid.
FRANGULIC. See Frangulic Acid.
GLYCERINO-PHOSPHORIC. See Glycerin-phosphoric Acid.
GUAIACOL, CARBONIC. See Guaiacol Carbonate.
GYMNEMIC. See Gymnemic Acid.
GYNOCARDIC. See Gynocardic Acid.
HOMO-TOLUIC. See Phenyl-propionic Acid.
HYDRO-CYNNAMIC. See Phenyl-propionic Acid.
IODIC and COMPOUNDS. See Iodic Acid.
IODO-SALICYLIC. See Iodo-salicylic Acid.
IODOSO-BENZOIC. See Iodoso-benzoic Acid.
NAPTHIONIC. See Napthionic Acid.
ORTHO-AMIDO-SALICYLIC. See Ortho-amido-salicylic Acid.
OSMIC. See Osmic Acid.
OXY-NAPTHOIC. See Oxy-napthoic Acid.
PHENYL-ACETIC. See Phenyl-acetic Acid.
PHENYL-BORIC. See Phenyl-boric Acid.
PHENYL-PROPIONIC. See Hydro-cinnamic Acid.
PHENYL-SALICYLIC. See Phenyl-salicylic Acid.
PIPITZAHOINIC. See Pipitzahoinic Acid.
QUILLAYAIC. See Quillayaic Acid.
SALICYLO-ACETIC. See Salicylo-acetic Acid.
SALICYLOUS. See Salicylic Aldehyde.
SCLEROTIC (Sclerotinic). See Sclerotic Acid.
SOZALIC. See Aseptol.
SOZOIODIC. See Sozoiodic Acid.
SOZOLIC. See Aseptol.

ACID, SUCCINIC-ETHYLENE-PHENYLHYDRAZINE. See Ethylene-phenylhydrazin-succinic Acid.

SULFANILIC. See Sulfanilic Acid.

SULFO-TUMENOLIC. See Tumenol.

TETRA-THIO-DICHLOR-SALICYLIC. See Tetra-thio-dichlor-salicylic Acid.

THIOLINIC. See Thiolinic Acid.

TRI-CHLOR-ACETIC. See Tri-chlor-acetic Acid.

TRI-CHLOR-CARBOLIC. See Chlor Phenol (Tri).

TRI-CHLOR-PHENIC. See Chlor Phenol (Tri).

ACOCANTHERIN.

See Ouabain.

ACODINE.

A dental preparation consisting of aconite, iodin, tannic acid, and glycerin.

ACTOL. $AgC_3H_5O_3 + H_2O$. (Silver Lactate.)

A white inodorous and tasteless powder, soluble in water (1 : 20), recommended as a surgical antiseptic. An aqueous solution (1 : 1000) destroys within five minutes all pathogenic microbes. As hypodermic injection in erysipelas, 0.3 Gm. to 100 Cc. of water; as wash, a teaspoonful of the solution (1 : 50) to a glass of water.

ADEPS LANÆ. *Synonyms:* Lanolin; Adeps Lanæ Hydrosus, U. S. P.; Anasalpin.

"The purified fat of the wool of sheep . . . mixed with not more than 30 per cent. of water," U. S. P.

The wool of sheep contains a large per cent. of fats (about 45 per cent.), which it is necessary to remove before it can be used in manufacturing. These fats consist of a mixture of fatty esters of cholesterin and isocholesterin. The crude wool-fat, which is usually obtained by washing the wool with benzine, acetone, or some similar solvent, and evaporating, is emulsionized with a weak alkaline solution, then separating the creamy mixture in centrifugal machines; the upper layer of fluid contains the cholesterin fats, while the lower layer consists of a soap solution of the impure fatty acids. The upper fluid is drawn off and the cholesterin fats set free by the addition of a solution of calcium chlorid; the impure lanolin thus obtained is purified by repeated melting and washing, finally extracting with acetone.

Anhydrous wool-fat is of a pale yellow color, somewhat translucent, melting at 36° C. (96.8° F.), readily soluble in benzine, ether, chloroform, acetone, but only partly soluble in alcohol. When mixed with 30 per cent. of water it constitutes the hydrous wool-fat of the Pharmacopœia.

Hydrous wool-fat occurs as a nearly white, unctuous mass, the surface of which, on standing, becomes of an orange color, due to loss of water. Its melting-point is about 40° C. (104° F.); it is miscible with twice its weight of water without losing its ointment-like character. Wool-fat is employed as a base for the preparation of ointments, pomades, creams, etc.

ADEPS OSSIUM.

See Ossalin.

ADHÆSIOVUM HAUSMANN.

A thick, rose-colored fluid, consisting chiefly of collodion, which is employed in all instances where the latter is indicated.

ADHÆSOL.

An antiseptic varnish, recommended as a substitute for stéresol. It contains 350 parts copal resin, 30 parts of benzoin, 30 parts of tolu balsam, 20 parts of thyme oil, 3 parts of alpha-napthol, and 1000 parts of ether.

ADIPATUM.

An ointment vehicle the composition of which is presumed to be as follows: Lanolin anhyd., 35 parts; vaselin, 35 parts; paraffin, 7 parts; water, 5 parts.

ADONIDIN.

A glucosid of the *Adonis vernàlis*. It forms a hygroscopic, inodorous, amorphous powder, intensely bitter. It is employed as a cardiac stimulant and mild diuretic in doses of 0.004–0.016 Gm. ($\frac{1}{16}$–$\frac{1}{4}$ gr.).

ADONIN.

A glucosidal principle obtained from the herb *Adonis vernalis*. It is a bitter, yellowish-white, hygroscopic powder, soluble in water and alcohol, insoluble in ether. Employed as a cardiac stimulant, being feebly diuretic. Dose, 0.01–0.06 Gm. ($\frac{1}{6}$–1 gr.).

ADONIS ÆSTIVALIS.

Recommended in place of digitalis and adonis vernalis in treatment of fatty degeneration of the heart.

ADONIS VERNALIS.

The roots and leaves of this plant are employed in diseases of the heart. The aqueous or alcoholic extract is given in doses of 0.5–1 Gm.

ADULSA VASACA.

The leaves and stems of the *Adhatoda vesica* Nees., an East Indian Acanthaceæ, which are used in form of powder or as tincture (1 : 5) in phthisis, asthma, and other diseases of the respiratory organs. Dose, 0.25 Gm. of the powder or 2–4 Gm. of the tincture three times daily.

ÆROZOL.

Essential oils containing 25 volumes of ozone.

ÆSCULIN. $C_{15}H_{16}O_9 + 1\frac{1}{2}$ Aq.

A glucosid obtained from the bark of the horse chestnut (*Æsculus hippocastanum*). After precipitating the tannin and coloring-matter from the hot aqueous extract by means of alum and ammonia the filtrate is evaporated to dryness and the residue extracted with alcohol and purified by recrystallization. Æsculin forms inodorous, fine, needle-like crystals, of bitter taste, almost insoluble in cold and quite soluble in hot water, its aqueous solution having a strong blue fluorescence. Recommended as antiperiodic.

ÆTHER ANÆSTHETICUS (Koenig).

A mixture of ether 20 parts, rhigolene 80 parts, and petroleum ether 80 parts; used as local anesthetic. Another formula gives absolute alcohol and ether, each 1 volume, and petroleum ether, 4 parts.

ÆTHER CHLORATUS. See Ethyl Chlorid.

ÆTHYL, ÆTHYLEN, ÆTHYLIDEN, ETC., COMPOUNDS. See under Ethyl, Ethylene, Ethylidene, etc.

AFRAL.

Scaly hygroscopic crystals, difficultly soluble in cold water, readily so in hot water and alcohol. Used as preservative agent for beer, wine, cider, etc., like salicylic acid; 5 Gm. of the latter corresponds to 10 Gm. of afral.

AFTANNIN.

This is a dirty-brown liquid used in veterinary practice, consisting, according to Dr. Aufrecht, of an infusion of herbs, mixed with 5 per cent. of glycerin and about 1.5 per cent. of formaldehyd.

AGARIC ACID. See Agaricin.

AGARICIN. $C_{14}H_{27}OH\ (CO_2H)\ H_2O$. *Synonym:* Agaric Acid.

The active principle of the fungus *Agaricus albus* or *Polyporus officinalis*, obtained by extraction with alcohol. It forms a white, crystalline powder, melting at 140° C. (284° F.). Almost insoluble in cold water, soluble in 130 parts of alcohol.

Agaricin is employed in the treatment of night-sweats of phthisis; also in combating the sudorific effect of the synthetic antipyretics. Dose, 0.005–0.01 Gm. ($\frac{1}{12}$–$\frac{1}{6}$ gr.).

AGATHIN. $C_6H_5(CH_3)N\text{-}N : CH.C_6H_4\ (OH)$. *Synonym:* Salicyl-α-methyl-phenyl-hydrazone; Cosmin.

Agathin is obtained by reaction between salicylic aldehyd and the base methyl-phenyl-hydrazone. It forms colorless, crystalline flakes, inodorous and tasteless, insoluble in water, but soluble in alcohol and ether. Its melting-point is 74° C. (165.2° F.).

Agathin is employed as an antineuralgic and antirheumatic in doses of 0.12–0.5 Gm. (2–8 gr.).

AGHARA (Gaskaral-H

An astringent and diuretic used in dysentery, menorrhagia, diarrhea, and dropsy, in doses of 50–60 Cc. of the infusion (1:20). Externally used in insect bites.

AGNINE.

Adeps lanæ.

AGNOLIN.

A purified wool-fat. Adeps lanæ.

AGONIADINUM. $C_{10}H_{14}O_{12}$.

A glucoid obtained from the bark of the *Plumeria succuba*, given in doses of 0.12–0.25 Gm. in treatment of intermittent fever.

AGOPYRIN.

A secret remedy which appears in the form of tablets containing ammonium chlorid $\frac{1}{8}$ gr., cinchonin sulfate $\frac{1}{8}$ gr., and salicin 4 gr.

AILANTUS GLANDULOSA.

The extract from the leaves is recommended as anthelmintic. It is claimed to be of value in epilepsy.

AIODIN (Roche).

A preparation of the thyroid glands, constituting an inodorous and tasteless powder, of which each gram represents 10 Gm. of the fresh gland, contains 0.4 per cent. of iodin; used in myxedema.

AIROFORM.

Is identical with airol. These are trade-names for bismuth oxy-gallate.

AIROL.

An oxyiodid of bismuth subgallate, patented by the firm of Hoffmann, Traub & Co., of Basel. This compound possesses the absorbent properties of subgallate of bismuth as well as the antiseptic properties of its iodin combination. Airol forms a greenish-gray, fine, voluminous, inodorous, and tasteless powder. Light produces no effect, while moist air causes the powder to turn a red color, with loss of iodin. In contact with water, particularly when heated, the powder undergoes slow decomposition, changing to a red color, with loss of iodin. Dilute alkalies and acids dissolve this compound readily. The formula ascribed is:

$$C_6H_2\begin{cases}-OH\\-OH\\-OH\\-COO\ Bi<^{OH}_{I.}\end{cases}$$

That is, it is a basic bismuth gallate in which a hydroxyl group is replaced by iodin. Airol is applied as a dusting-powder over wounds, sores, etc.

AJACOL. See Guæthol.

ALANGINUM LAMARKII.

The root of an Indian Cornaceæ which possesses emetic, diaphoretic, and antipyretic properties. Claimed to be an excellent substitute for ipecac in all diseases where the latter is indicated except in dysentery. Dymock recommends alanginum in leprosy, syphilis, and skin diseases.

ALANGINUM. The active principle of the above, which is amorphous, soluble in alcohol, ether, and chloroform. Used as febrifuge and emetic.

ALANT-CAMPHOR. See under Alantol.

ALANTOL. $C_{10}H_{16}O$.

Elecampane root (*Inula helenium*) contains, aside from inulin, resinous, waxy, and extractive matter; alantol, a liquid stearoptene; alantic anhydrid, a crystalline body, and a solid stearoptene called helenin.

Helenin or Alant-camphor. C_6H_8O. This occurs in colorless, inodorous, crystalline needles, insoluble in water, but soluble in alcohol and ether, melting at 110° C. (155°–158° F.). It is employed as an antiseptic in the treatment of malaria, tuberculosis, diarrhea, etc., in frequent doses of 0.01 Gm. (⅙ gr.).

ALANTOL is an aromatic liquid, of a peppermint-like odor, boiling at 200° C. (392° F.). It is employed as an antiseptic in treatment of tuberculous diseases.

ALANTOL CIGARETTES are prepared from a certain variety of tobacco grown in Asia Minor, which is nearly free from nicotin. The tobacco is treated with an essence of elecampane root, which improves the flavor and masks the taste of the paper. These cigarettes are recommended particularly to those afflicted with throat and lung troubles, to whom ordinary tobacco in any form is always injurious, in that it causes irritation and increases the symptoms of the disease.

ALAPURIN.

A purified wool-fat.

ALBOLENE.

This is a refined product of petroleum, free from any definite chemic or physiologic action; it can not become rancid, and is introduced as a colorless, odorless base for ointments, cerates, salves, pomades, etc., especially in hot climates.

Albolene liquid is a colorless, odorless, tasteless fluid, with a specific gravity of 0.865 at 60° F., obtained from petroleum and afterward specially treated. It does not saponify or become rancid, neither is it decomposed by acids or alkalies. It can be vaporized in a brine bath at zero, indicating the absence of solid paraffin, and is free from petroleum ethers. Its lightness makes it very diffusible as vapor or as a solvent for drugs used in oleaginous solution for spraying the naso-pharyngeal passages.

ALCARNOSE.

An artificial predigested food-product. Dose, 10–15 capsules of 12 Gm. (3 drams) daily, taken in cocoa or bouillon.

ALEUVONAT.

A patented vegetable albuminoid. Forms a tasteless, inodorous powder containing 80 per cent. of albumen and 7 per cent. of carbohydrates.

ALGAROBIA GLANDULOSA. See Mezquite.

ALGINIC ACID, METALLIC COMPOUNDS OF.

Stanford has produced a number of combinations of metals with alginic acid which are insoluble, and are claimed to possess medicinal properties. The following are the most important:

ALGINOID IRON, or iron alginate, is prepared by adding a solution of sodium alginate to a solution of ferric chlorid. The salt is tasteless and non-astringent, possessing, on the contrary, cathartic properties. It may be given where other iron salts are not tolerated. Its color is brown. It contains 10.97 per cent. of metallic iron, and is soluble in ammonia water, from which solution it is precipitated out upon concentration as an insoluble body. Its formula is $C_{76}H_{77}Fe_2N_2O_{22}$. It is given in doses of 0.15–1.0 Gm.

ALGINOID ANTIMONY is obtained by the precipitation of antimony chlorid by sodium alginate. This is a white powder containing 4.5 per cent. antimony. Its ammoniacal solution retains the salt in a soluble form upon concentration.

ALGINOID ARSENIC is obtained in a similar manner to the preceding, employing arsenic chlorid. Its aqueous solution is suggested as a substitute for Fowler's solution.

ALGINOID MAGNESIUM. This is soluble in water without intervention of ammonia, and results from the action of alginic acid or magnesium carbonate. According to its formula, $Mg_5(C_{76}H_{77}N_2O_{22})_2$, it contains 4.2 per cent. of magnesium. In 40 per cent. aqueous solution it is said to possess excellent adhesive properties.

ALGINOID MORPHIN contains 35 per cent. of morphin. Alginic acid unites with alkaloids, forming salts soluble in water.

ALGINOID MERCUROUS OXID is gray in color, becoming black with ammonia-water. It is obtained by interaction between mercurous nitrate and sodium alginate. It contains 33 per cent. of mercury.

ALGINOID MERCURIC OXID. This can not be obtained by interaction between mercuric chlorid and sodium alginate, no precipitation occurring (difference from action of albumins and mercuric chlorid). It is obtained by treating a solution of mercuric nitrate with sodium alginate. The resulting product is grayish-white, and is soluble in ammonia. The latter solution does not attack steel instruments, rendering it of value for purposes of sterilization of these.

ALGINOID STRYCHNIN contains 50 per cent. of the alkaloid.

ALGINOID BISMUTH is a yellow powder, and contains 32 per cent. of metallic bismuth. It is obtained by precipitating a solution of bismuth nitrate by sodium alginate. Its ammoniacal solution remains clear upon evaporation, and is miscible with water. This solution is termed "liquor bismuthi alginici."

ALGOSINE.

A proprietary analgesic for headaches.

ALISMA PLANTAGO.

The roots and tops of this plant are used as antidote to the rattle-snake bite. Lately recommended in tetanus.

ALIZARIN-YELLOW-C. See Gallacetophenon.

ALKALI ALBUMINATE.

A pale brown, alkaline, soluble powder which is used in promoting cultures of cholera and diphtheria bacilli.

ALKASAL. See Aluminum-potassium Salicylate.

ALLYL-MUSTARD OIL. See Oleum Sinapis Volatile.

ALLYL-SULFID. $(C_3H_5)_2S$. *Synonym:* Oil of Garlic.

An artificially prepared organic compound which smells strongly of garlic. Used internally also as an enema in treatment of cholera, subcutaneously in ½ per cent. solution in sterilized olive oil in phthisis. In the latter case 1 Cc. of a ½ per cent. solution is injected daily, increased later to 2 Cc. Internal dose, one tablespoonful of a 1 : 600 mixture every half hour.

ALLYL-SULFO-CARBAMIDE. See Thiosinamine.

ALLYL-SULFO-UREA. See Thiosinamine.

ALLYL-THIO-UREA. See Thiosinamine.

ALLYL TRIBROMID. $(C_3H_5Br_3)$.

A colorless or slightly yellowish liquid, insoluble in water, soluble in ether. Recommended as a sedative and anodyne in hysteria, asthma, whooping-cough, etc.; in doses of 2-4 drops dissolved in ether, hypodermically.

ALPHA-CREOSOTE.

This artificial product is prepared by mixing together the several constituents as found in normal creosote in such proportions that it contains 25 per cent. crystalline guaiacol.

ALPHA-EUCAINE. See under Eucaine.

ALPHA-GUAIACOL.

A crystalline, synthetic guaiacol. This name is applied to distinguish it from the commercial guaiacol.

ALPHA TOLUIC ACID. See Phenylacetic Acid.

ALPHOL. See Betol.

ALSOL. See Aluminum Aceto-tartrate.

ALSTONIA CONSTRICTA.

The bark of this apocynaceous plant is given in doses of 0.25 Gm., as a febrifuge.

ALSTONIN.

An alkaloid obtained from the bark of the *Alstonia constricta* (Apocynaceæ).

Alstonin forms white, crystalline needles, insoluble in water; soluble in alcohol, ether, and chloroform. To hot water it imparts an intensely bitter taste.

ALUMINUM-ACETO-TARTRATE. (ALSOL.)

White, glossy crystals of bitter taste, insoluble in water, soluble in alcohol. Used as disinfectant and astringent.

It occurs in yellowish granules, with an acid, astringent taste, slightly soluble in water. Alsol is recommended as a non-toxic substitute for potassium chlorate, carbolic acid, or corrosive sublimate, and more particularly as a gargle in 0.5–2 per cent. solution containing glycerin and sugar. It is in the market also in form of a 50 per cent. solution. The salt is prepared by a patented process as follows: Five parts of basic aluminum acetate are dissolved in water with the aid of three parts of tartaric acid. The solution is evaporated to dryness, the residue dissolved in a little water, and the double salt precipitated with alcohol. Alsol is composed of alumina, 25.35 per cent.; acetic acid, 27.83 per cent.; tartaric acid, 27.78 per cent.; and water, 18.81 per cent. It is an astringent and disinfectant in nasal and laryngeal affections. Apply in ½-2 per cent. solutions, or as a snuff with 2 parts of boric acid.

ALUMINUM-AMMONIUM-SALICYLATE. See Salumin (soluble).

ALUMINUM-BASIC-GALLATE. See under Gallal.

ALUMINUM-BASIC-TANNATE. See Tannal (insoluble).

ALUMINUM-BETA-NAPTHOL-DISULFONATE. See Alumnol.

ALUMINUM-BORO-FORMATE.

It is thus made: Mix 2 parts formic acid, 1 part boric acid, and 6 or 7 parts of water, and in the mixture dissolve fresh precipitated aluminum hydrate; filter, allow to crystallize; or it may be employed in a solution of sp. gr. 1.064 (10 per cent.) or sp. gr. 1.110 (20 per cent.), reduced by careful evaporation. It is employed as a mild antiseptic and astringent.

ALUMINUM-BORO-TANNO-TARTRATE. See Cutal.

ALUMINUM-BORO-TARTRATE. See Boral.

ALUMINUM BROMID. $AlBr_3$.

A white, hygroscopic mass, recommended by Dickenshied in diphtheria, the following solution being painted over the parts or taken internally in doses of 5–10 drops, or, as a gargle, 1–7. Aluminum bromid, 15 Gm.; aluminum chlorid, 30 Gm.; hot water, 180 Gm.

ALUMINUM OLEATE.

Obtained as a soft mass on mixing aqueous solutions of Castile soap and alum.

ALUMINUM-PARA-PHENOL-SULFONATE. See Sozal.

ALUMINUM-POTASSIUM-PARA-PHENOL-SULFONATE. $Al_2K_2(C_6H_4(OH)SO_3)_3$.

This compound is obtained by saturating para-phenol sulfonic acid with a solution of potassium aluminate. It forms colorless crystals, soluble in water. Its properties are those of an antiseptic and astringent; it is employed chiefly as a wash for indolent ulcers, etc., in 5 per cent. solution.

ALUMINUM-POTASSIUM SALICYLATE. (ALKASAL.)

This double salt is produced by a process recently patented by Athenstedt, in which hot potassium acetate is made to act on aluminum salicylate. It contains a large proportion of alumina, and is said to be a powerful astringent as well as possessing strong antiseptic properties.

ALUMINUM SALICYLATE. See Salumin (insoluble).

ALUMINUM SOZOIODOLATE. $\left(C_6H_2\begin{matrix}OH\\SO_3\\I_2\end{matrix}\right)_2 Al + 3H_2O$.

Forms light, needle-like crystals which are very soluble in water and alcohol. Used as antiseptic wash in 2–3 per cent. solution.

ALUMINUM TANNATE (Basic). See Tannal.

ALUMINUM TANNO-TARTRATE. See Tannal (soluble).

ALUMNOL. $[(C_{10}H_5(OH)(SO_3)_2]_3Al_2$. *Synonym:* Beta-naphtol-disulfonate of Aluminum.

Alumnol is obtained by reaction between the barium compound of beta-naphtol-disulfonic acid and aluminum sulfate. It forms a colorless powder, readily soluble in water and glycerin, but only slightly soluble in alcohol. Aqueous solutions are incompatible with alkaline solutions, the hydrate of alumina being precipitated. Likewise it precipitates albuminoid and gelatinous bodies from solution, the precipitate being soluble in excess of albumin or gelatin. Alumnol should not be brought in contact with ammoniacal compounds.

Alumnol is employed as an antiseptic and astringent. As a wash for purulent surfaces, it is employed in from 1–5 per cent. solution. Mixed with powdered talc or starch (10–20 per cent.), it forms an astringent dusting-powder. (D. R. P. Hoechst.)

AMAROL.

Is another name for Ingestol. A German proprietary stomachic mixture.

AMIDO-ACET-PHENETIDIN. See Phenocoll.

AMIDO-ANTIPYRINE.

This occurs in yellow needles which melt at 109° C. (288° F.). It is obtained by the reduction of isonitroso-antipyrine, which results from the action of nitrous acid on antipyrine.

AMIDO-CINNAMIC ESTERS.

These derivatives of cinnamic acid are claimed to have anesthetic power in addition to the antiseptic properties of the cinnamates. The ethyl ester of meta-amido-cinnamic acid is prepared by passing hydrochloric acid gas into a solution of the acid in absolute alcohol and the methyl ester in a similar manner by substituting methyl alcohol. The ethyl compound crystallizes from dilute alcohol in prisms melting at 63°–64° C. It is soluble in alcohol, ether, and chloroform, insoluble in water and ligroin. The corresponding methyl compound melts at 84°.

AMIDO-GUAIACOL.

Aceto-o-anisidin, on treatment with nitric acid, yields nitro-aceto-o-anisidin, which, on boiling with alkalies, undergoes saponification, yielding an alkali salt of nitro-guaiacol. By the action of zinc and hydrochloric acid or other reducing agents, this nitro-guaiacol is converted into amido-guaiacol. This base melts at 184° C. (363.2° F.); its hydrochlorid at 242° C. (467.6° F.). The salts of amido-guaiacol are employed in the preparation of colors and medicinal agents.

AMIDO-SUCCINAMIDE. See Asparagin.

AMINOFORM.

A new name given by Lederer to urotropin, or hexa-methylene tetramine. This is a compound resulting from the interaction of formaldehyd and ammonia. A fine, crystalline,

insoluble powder which is not affected by alkalies, but, on warming with diluted mineral acids, is decomposed with liberation of formaldehyd.

Aminoform is recommended in treatment of gouty affections, 1–2 Gm. being taken in half a liter of water mornings; it is also used as an antiseptic.

AMINOL.

A liquid disinfectant, possessing an alkaline reaction and a strong, fishy odor. One liter of aminol is said to contain 1.52 Gm. of calcium hydrate, 3.516 Gm. of sodium chlorid, and 0.29 Gm. of trimethylamin.

AMMONIUM BORATE (Biborate). $2(NH_4HB_2O_4) + 3H_2O$.

Recommended by Laskierich for relieving expectoration in phthisis. Dose, 0.25 Gm. three times daily, alone or combined with opium or hyoscyamus.

AMMONIUM BORO-FLUORID and AMMONIUM SILICO-FLUORID.

Excellent antiseptics in the treatment of all infectious diseases of the nose and throat, by inhalation. The latter has been found particularly effective in tuberculosis, diabetes, and gout. It penetrates deep into the lungs and is diffused throughout the body. Similar effects are yielded by the combinations of ammonia with bromin, iodin, formic and tri-chlor-acetic acids.

AMMONIUM CAMPHORATE.

White, soluble crystals, given in doses of 0.1–0.2 Gm., as a nerve sedative.

AMMONIUM EMBELICUM. $C_9H_{13}O_2.NH_4$.

This is the ammonium salt of embelic acid, the latter being prepared from the *Embelia ribes*, Burm. (Myrsinaceæ).

It is a brick-red powder, readily soluble in diluted alcohol.

It is employed as a teniafuge, in doses from 0.18 Gm. (2.8 gr.), for children, to 0.4 Gm. (6 gr.), for adults.

AMMONIUM FLUORID.

Used chiefly in enlargement of the spleen; also recommended as antipyretic and anti-periodic. Dose, beginning with 5 drops, increasing to 30 of a solution containing 4 grains to the ounce.

AMMONIUM GLYCERINO-PHOSPHATE. $(NH_4)_2PO{=}\begin{matrix}O.C_3H_5(OH)_2\\ ONH_4\\ ONH_4\end{matrix}$

A translucent soluble mass. Given in doses of 0.2–0.25 Gm. (3–4 gr.) in treatment of neurasthenia, Addison's disease, phosphaturia, etc. See Glycerino-phosphoric Acid.

AMMONIUM-ICHTHYOL-SULFONATE. See Ichthyol.

AMMONIUM PERSULFATE. $(NH_4)_2S_2O_8$.

Colorless crystals which give a turbid solution in water. Used as strong antiseptic in ½–2 per cent. solutions. Also used for preserving food products and preparing mouth-washes.

AMMONIUM PHENYL-ACETAMID. See Ammonol.

AMMONIUM PICRATE.

Used in fever-free malaria, in doses of 0.01–0.1 Gm. Specific in whooping-cough.

AMMONIUM SALICYLATE. $C_6H_4(OH)COONH_4$.

This compound is obtained by neutralizing salicylic acid with ammonium carbonate, evaporating and crystallizing. It forms a white, crystalline powder, of sweet taste and very soluble in water.

Ammonium salicylate is recommended as an expectorant, the dose being the same as the other salicylates, 0.13–1.3 Gm. (2–10 gr.).

AMMONIUM SILICO-FLUORID. See under Ammonium Boro-fluorid.

AMMONIUM SUCCINATE. $C_4H_4O_4(NH_4)_2$.

Colorless, soluble crystals, recommended by Remy as a specific in cramp colic. Ammon. succin., 1 part; aqua, 120 parts; syr. coffea, 20 parts. One tablespoonful every fifteen minutes.

AMMONIUM SULFO-ICHTHYOLATE. See Ichthyol.

AMMONIUM URATE. $NH_4C_5H_3N_4O_3$.

A white powder, almost insoluble in water. Used as antiseptic in dermic affections in 4 per cent. ointment.

AMMONOL. (AMMONIUM PHENYL ACETAMID.)

A proprietary remedy recommended as an antipyretic and analgesic. It is also claimed to possess antiseptic properties. Dose, 0.3–1.3 Gm. (5–20 gr.).

AMMONOL SALICYLATE.

Stated to have the composition of ammonium-phenyl-acetamid salicylate, is recommended as a desirable substitute for the customary headache preparation in the treatment of nervous, anemic females, in doses of 0.5 Gm. (8 gr.).

AMYGDOPHENIN. $C_6H_4(OC_2H_5).NH.OC.CH(OH)C_6H_5$. *Synonym:* Phenyl-glycolyl-phenetidin.

A paramidophenol derivative in which one of the hydrogen atoms of the amid group is replaced by an ester of amygdalic acid, and the hydrogen atom in the hydroxyl group is replaced by ethyl carbonate. It has been commended as an antirheumatic by Dr. Stueve, of Frankfort, who administered it in doses of 1 Gm. (15 gr.) from one to six times daily, in a powder or tablet. Amygdophenin occurs as a grayish-white, light, crystalline powder, very difficultly soluble in water.

AMYL-ALCOHOL, TERTIARY. See Amylene Hydrate.

AMYLENE. See Pental.

AMYLENE-CHLORAL.

This is dimethyl-ethyl-carbinol-chloral, prepared by fusing together molecular quantities of chloral and amylene hydrate. It is an oily liquid, having a camphor-like odor and a burning, then cooling, taste. It is insoluble in water, but miscible to form clear solutions with alcohol, ether, fatty and ethereal oils. Recommended as a harmless hypnotic.

AMYLENE HYDRATE. $(CH_3)_2:C:(C_2H_5)OH$. *Synonyms:* Tertiary Amyl Alcohol; Amylenum Hydratum; Dimethyl-ethyl-carbinol.

This is one of the eight possible alcohols of the general formula $C_5H_{11}OH$; it is prepared by the action of sulfuric acid upon amylene (C_5H_{10}), the latter being obtained by the action of dehydrating agents on isobutylcarbinol.

Amylene hydrate is a colorless, limpid fluid of peculiar penetrating odor, similar to that of peppermint. Its specific gravity is 0.815, and boiling-point is between 99°–103° C. (210°–217° F.). It dissolves in eight parts of water, and is miscible with alcohol, ether, glycerin, and the fatty oils.

Tertiary amyl alcohol is employed as a hypnotic in doses of 2–4 Gm. (30–60 gr.).

AMYL HYDRIDE. See Hydramyl.

AMYL IODID. $C_5H_{11}I$.

Obtained by distilling a mixture of iodin, iso-amyl alcohol, and red phosphorus, washing, drying, and fractionating the distillate. Inhalant in treatment of dyspnea and heart affections.

AMYL NITRITE, TERTIARY. $(CH_3)_2C_2H_5.C.O:NO$.

According to Bals and Broglio, this tertiary nitrite possesses the same action as the ordinary amyl nitrite, but is free from the toxic character of the latter. Given in 5-drop doses, taken on sugar.

AMYLOCARBOL.

An antiseptic solution consisting of crude phenol, 9 parts; soap, 150 parts; amyl alcohol, 160 parts; water to make 1 liter.

AMYLOFORM.

A condensation product of formaldehyd with starch. It forms a white, inodorous, non-toxic powder, insoluble in all solvents; does not undergo decomposition under 180° C. Recommended as an antiseptic in place of iodoform. (D. R. P. Rhenania.)

AMYLOIODOFORM.

A compound of starch, iodin, and formaldehyd, which constitutes a blue-black antiseptic powder.

AMYL-VALERIANATE. $C_5H_9O_2C_5H_{11}$. *Synonyms:* Apple Oil; Iso-amyl-valerianate.

This well-known ester is a colorless, ethereal liquid, which boils between 188° and 190° C. It possesses a solvent action on cholesterin; also exerts a specific stimulating and sedative action on the liver in gall-stone colic. Usually administered in gelatin capsules containing 0.15 Gm. (2.3 gr.).

ANACARDIC ACID. $C_{22}H_{32}O_3$.

A crystalline principle obtained from the *Anacardium occidentale* (cashew nut). It forms hygroscopic, crystalline masses, readily soluble in alcohol, melting at 26° C. (78.8° F.). Anacardic acid is used as an anthelmintic, usually in the form of the ammonium salt.

ANADOL.

A proprietary antipyretic.

ANÆSIN. (ANESON.)

A 1 per cent. aqueous solution of acetonchloroform which, according to Dr. Vámossy, is equivalent to a 28 per cent. solution of cocain as local anesthetic. When dropped upon the cornea, local anesthesia lasted some time, subcutaneous injection rendered the parts entirely insensible. Its use is free from all danger. In doses of 0.5 Gm. (8 gr.) it is an effective hypnotic.

ANÆSTHESIN.

An anesthetic introduced by the Farbenwerken in Hoechst.

ANÆSTHETIC ETHER. See Æther Anæstheticus.

ANÆSTHYL. (ANESTYLE.)

A mixture of 5 parts of ethyl chlorid and 1 part of methyl-chlorid. Employed as a local anesthetic spray.

ANAGYRINE HYDROBROMID. $C_{14}H_{18}N_2O_3HBr$.

This is a salt of the alkaloid obtained from the seed of *Anagyris fœtida*. It occurs as small, white, shining scales, which are soluble in water and alcohol, and melt between 265° and 266° C. Physiologic investigations by Hardy and others have proved anagyrin to be toxic. Used as a heart-stimulant.

ANAL.

A remedy for piles.

ANALGENE. $C_2H_5(OC_2H_5)(NHCOC_6H_5)N$. *Synonyms:* Benzanalgene; Ortho-ethoxy-ana-mono-benzoyl-amido-chinolin; Ethoxy-ana-benzoyl-amido-chinolin; Quinalgene; Labordin.

This body is obtained by introducing an ethyl and amido group into ortho-oxy-chinolin; into the resulting ortho-oxyethyl-amido-chinolin the benzoyl group is introduced by the action of benzoyl chlorid.

Analgene forms white, tasteless crystals, melting at 208° C. (406.4° F.), insoluble in water, readily soluble in alcohol. It is employed as an antineuralgic in doses of 0.5 to 1.0 Gm. (8–15 gr.). (D. R. P. Bayer.)

ANALGESIN. See Antipyrine.

ANALGIA.

Proprietary analgesic and antipyretic.

ANARCOTINE. Synonym for Narcotine.

ANASALPIN. Synonym for anhydrous wool-fat.

ANASPALINE.

This consists of a mixture of wool-fat, with about 25 per cent. of petrolatum.

ANAZYME.

A chemic combination of boric and carbolic acids. Recommended as a succedaneum for iodoform.

ANDA ASSU.

The fruit and seeds of a Brazilian euphorbiaceous plant. The seed is used as purgative in liver affections, jaundice, dropsy, etc. Dose, 2 seeds beaten with water to an emulsion.

ANDIRA INERMIS.

A papilionaceous plant found in Mexico. Used as anthelmintic, purgative, and febrifuge. Dose, ½–1 ounce of a decoction; 3–10 parts to 100 of water.

ANDUNEA.

A proprietary analgesic.

ANECTASIN. *Synonym:* Ectasin.

A product of bacterial action, having a contrary influence on the vaso-motor nerves.

ANEMIOPSIS CALIFORNICA. See Mansa.

ANEMONIN. $C_{10}H_8O_4$. ($C_{15}H_{12}O_6$?) *Synonym:* Pulsatilla Camphor.

This is the active principle of the herbs *Anemone pulsatilla*, *A. pratensis*, and *Ranunculus acer*, obtained by distilling an aqueous extract of the herb.

It occurs in colorless, crystalline needles, which melt at 152° C. (305.6° F.), and readily dissolve in warm alcohol, ether, and the oils, being almost insoluble in water. Anemonin is employed in treatment of whooping-cough, bronchitis, and asthma, in doses of 0.04–0.1 Gm. (0.6–1.5 gr.).

ANESIME. See Aneson.

ANESIN. See Aneson.

ANESLEA FEBRIFUGA.

An extract of the above-named plant, given in doses of 2 Gm. in treatment of malaria.

ANESON. $(CH_3)_2:COH.CCl_3$.

A trade name for tertiary tri-chlor-butyl alcohol or acetone-chloroform, which has been brought out as a local anesthetic. After establishing its anesthetic powers and non-toxicity on animals, experiments were made with 1–2 per cent. solutions on human subjects. It was found useful in affections of the nose and larynx, in ophthalmology, minor surgery, and dentistry. Without being comparable to the effect produced by a 5 per cent. solution of cocain hydrochlorid, it has sufficient anesthetic power to permit many operations. The solution has no irritating action on the eyes, does not affect the iris, and causes no general inconvenience when injected in quantities of 10–12 Pravaz syringefuls.

ANESTILE BENGNÉ.

A mixture of methyl and ethyl chlorids (1:5) which is used as a local anesthetic. More certain and less dangerous than ethyl chlorid alone.

ANETHOL. $C_3H_5-C_6H_4-O-CH_3$. *Synonyms:* Para-allyl-phenyl-methyl-ether; Anise Camphor.

Anethol constitutes the main constituent of oil of anise. It occurs in colorless crystals, melting at 22° C. (71.6° F.) and boiling at 234° C. (453° F.), soluble in alcohol and the oils, but insoluble in water.

Anethol is employed as an antiseptic, also as a flavoring constituent in liquors, etc.

ANGELIC ACID. $CH_2\,(CH)_2\,CH_3COOH$.

A principle prepared from the root of *Angelica archangelica*. It forms monoclinic prisms, of spicy odor, soluble in alcohol, ether, and hot water; melts at 45° C. (113° F.). Used as an aromatic tonic.

ANGIONEUROSIN. See Nitroglycerin.

ANHALONINE. ($C_{12}H_{15}NO_3$).

An alkaloid from the Mexican cactacea *Anhalonium lewinii*, which contains it in both amorphous and crystalline forms. The crystalline base melts at 85° C. (185° F.), soluble in alcohol and ether; the hydrochlorate is deliquescent and very soluble in water. Anhalonine is of value in the treatment of angina pectoris, asthmatic dyspnea, and pneumothorax.

ANHYDRO-GLUCO-CHLORAL. See Chloralose.

ANILIPYRIN.

A condensation of one equivalent of acetanilid and two equivalents of antipyrine, the product being more soluble in water and less toxic than acetanilid. The dose is 0.5 Gm., 3 to 4 times daily as an antipyretic and analgesic.

ANIMAL EXTRACTS. See Organo-therapeutic Agents (Addenda).

Severally designated by Dr. W. A. Hammond as *Cardine*, *Cerebrine*, *Medulline*, *Musculine*, *Ovarine*, *Testine*, and *Thyroidine*, are light-colored, clear liquids obtained by prolonged digestion of the respective finely chopped organs of healthy animals in glycerin and alcohol with boric acid. The uniform dose for them all is 5 drops, to be taken on the tongue and allowed to be absorbed; or, as they are strictly aseptic, to be administered hypodermatically, 5 drops of the extract diluted with an equal quantity of distilled water. Thus the peculiar principles in animal preparations are not subjected to impairment by the gastric juice.

ANISE-CAMPHOR. See Anethol.

ANISIC ACID. $C_6H_4(OCH_3)COOH$. *Synonym:* Para-methoxy-benzoic Acid.

This is an isomer of methyl-salicylic acid, obtained by oxidation of anethol, a constituent of oils of anise and fennel. It forms colorless, prismatic crystals, which melt at 185° C. (365° F.). It is insoluble in cold water, but very soluble in alcohol. Employed externally it possesses antiseptic properties. Internally it exerts antipyretic and anti-rheumatic properties. It is usually administered as the sodium salt.

SODIUM ANISATE. This is obtained by neutralizing anisic acid with sodium carbonate or bicarbonate. The commercial salt constitutes a hygroscopic, crystalline powder of less disagreeable taste than the acid.

The dose is 1 Gm. (15 gr.).

PHENYLESTER OF ANISIC ACID. $C_6H_4(OCH_3)CO_2C_6H_5$. This compound bears the same relationship to anisic acid as salol does to salicylic acid. It is obtained by the action of phosphorus pentachlorid on a mixture of anisic acid and phenol.

It occurs as colorless crystals, which melt at 75° C. (167° F.), insoluble in water, but very soluble in alcohol and ether.

It is employed in the treatment of neuralgia and rheumatism, in doses from 0.5–1 Gm. (8–15 gr.).

ANISIDIN-CITRIC-ACID.

An analogous compound to phenetidin-citric acid. Used as analgesic in like doses.

ANNIDALIN. See Aristol.

ANODYNIN. (ANODIN.) See Antipyrin.

ANOZOL. *Synonym:* Deodorous Iodoform.

A mixture of iodoform and thymol.

ANTALGIA.

A proprietary antipyretic and analgesic.

ANTA-PA-NA.

A proprietary demulcent and febrifuge.

ANTHION.

Potassium persulfate, used for removing the last traces of thiosulfate (Hypo) from photographic plates or prints.

ANTHRAROBIN. $C_6H_4 <\begin{matrix}C\,(OH)\\|\\CH\end{matrix}> C_6H_2(OH)_2$. *Synonyms:* Dioxyanthrol; Desoxy-alizarin; Leuko-alizarin.

A phenol derivative related to chrysophanic acid, obtained by the reduction of alizarin.

Anthrarobin is a yellowish-white powder, insoluble in water, but very soluble in aqueous solutions of the alkalies and alkaline earths. These alkaline solutions rapidly turn green, then blue, through absorption of oxygen from the air, alizarin being reformed.

It is employed as a substitute for chrysarobin in skin diseases, usually as a 10–20 per cent. ointment.

ANTIARTHRIN.

According to Thoms, this consists of 90 per cent. of salicin, to which has been added, in view of masking the taste, roasted horse-chestnuts which have been treated with a little hydrochloric acid. Thoms considers it possible that a ferment might be present. Antiarthrin forms a fawn-brown colored powder which has a strong, bitter taste and an empyreumatic odor. Used in uric acid diathesis in doses of 1 Gm.

ANTI-BACILLARE.

A remedy for phthisis, consisting of a mixture of creosote, tolu balsam, glycerin, codein, and sodium arsenate. Dose not known.

ANTIBACILLIN.

A proprietary disinfectant.

ANTIBACTERIN.

According to Aufrecht, this contains boric acid, 6.25 parts; liquor ferri chloridi, 1.5 parts; and spr. ætheris chlorati to make 100 parts. It is a pale yellow acid fluid, of agreeable odor and burning taste. Recommended as antiseptic inhaling agent in treatment of tuberculosis, beginning with 10 Gm. (150 gr.) daily, increasing to 10 or 12 times the quantity.

Another preparation of this name consists of crude aluminum sulfate and soot.

ANTIBRULE.

A proprietary analgesic, antiseptic, and keratoplastic.

ANTICANCRIN.

A cancer serum.

ANTICAUSTICON.

A preparation of soluble glass.

ANTICHLORIN.

A proprietary article used in anemic conditions. It is known to contain bismuth formiate, sodium bicarbonate, and glucose.

ANTICHLOROS.

A hematinic, used in chlorosis.

ANTICOL. See Antikol.

ANTICORNUTIN. See Topasol.

ANTICORVIN. See Topasol.

ANTIDIABETICUM. (GLYCOSOLVEOL.)

A preparation recommended for diabetes has been analyzed by Dr. Aufrecht and found to be composed of about 82 per cent. of wheat starch, sulfur, sugar of milk, powdered senna leaves, and fennel. According to the prospectus of the manufacturer, the remedy is the result of a reaction between oxy-phenyl-propionic acid and peptone, and of a combination of theobromin with the zymogen of trypsin.

ANTIDIABETINUM.

A mixture of mannite and saccharin, which is sold in three different strengths, indicated by the numbers 70, 10, and 1, which give its intensity of sweetness as compared to sugar. Used as a sugar substitute in diabetes.

ANTIDIPHTHERIN.

A sterilized solution containing cultures of diphtheria-bacillus, in addition 0.2 per cent. of ortho-cresol and some glycerin. It occurs in commerce in two concentrations, one double and the other four times the strength of the original culture-fluid. The stronger solution is employed for painting the affected parts, while the weaker is used for hypodermic injection (½ Cc.).

ANTIDIPHTHERIN (Klebs).

This preparation is designated by the letters A. D., and a given volume of it is ten times as strong as the original culture-fluid. It is obtained from this, after removal of the bacilli, by precipitation with alcohol.

ANTIDIPHTHERITICON.

Bokai's mixture of oil of birch (5), oil of beech (3), alcohol (90), potassium carbonate (1), and potassium sulfid (5). Used as a diphtheria remedy.

ANTIDOLOR.

A proprietary anodyne.

ANTIDYSENTERICUM (Schwarz).

Consists of pills containing myrobolans powder, pelletierin, extracts of rose and pomegranate, and gum arabic. It is employed in dysentery and chronic diarrhea.

ANTIDYSPEPTICUM.

A bitartrate, containing also sodium carbonate, magnesia, ammonium chlorid, and quinin. Recommended in sea-sickness.

ANTIFEBRIN. See Acetanilid.

ANTIFETOR.

A proprietary deodorizing powder.

ANTIFUNGIN.

A white powder, soluble in hot water, used as gargle in diphtheria.

ANTIHEMICRANIN. See Antimigraine.

ANTIHYDROPIN.

A crystalline body supposed to be derived from the common cockroach, recommended as a diuretic in daily doses of 0.6–1.3 Gm. (10–20 gr.).

ANTIKAMNIA.

A proprietary remedy employed as an antipyretic and analgesic. Various analyses have shown the presence of acetanilid, sodium bicarbonate, and caffein. Its dose is given as 0.3–0.6 Gm. (5–10 gr.).

ANTIKOL.

A powder said to be a mixture of acetanilid, 75 parts; sodium bicarbonate, 17.5 parts; and tartaric acid, 7.5 parts (Goldman). Dose, 0.2–0.6 Gm. (3–10 gr.).

ANTIMIGRAINE. *Synonym:* Antihemicranin.

A mixture of caffein, antipyrine, and sugar. Dose, 1½ Gm. (22 gr.); for children under twelve, one-half the above.

ANTIMUCORIN. See Topasol.

ANTI-NAUSEA.

A remedy for sea-sickness, said to contain cocain and antipyrine.

ANTINERVIN.

A powder consisting of acetanilid, 50 parts; ammonium bromid, 25 parts; and salicylic acid, 25 parts (Squibb).

It is employed as an antinervin and antipyretic, in doses of 0.5 Gm. (8 gr.).

ANTINONNIN.

Consists chiefly of the potassium salt of ortho-di-nitro-cresol. See under Cresol.

ANTINOSIN.

The sodium salt of nosophen. See under Nosophen.

ANTIPARASITIN.

An insect exterminator, containing potassium dinitrocresol.

ANTIPERONOSPORIN. See Topasol.

ANTIPHTHISIN. (SOZALBUMOSE.)

A fluid prepared from tubercular bacilli cultures after a patented process, to which 0.5 per cent. of cresol has been added. To be used in tuberculosis.

ANTIPHYTOSIN.

A tuberculin-like preparation used by Prof. Klebs.

ANTIPYLUS.

A preparation for removing hair without pain or injury.

ANTIPYONIN. *Synonym:* Sodium Tetraborate.

A polyborate of sodium, recommended as a remedy in inflammation of the cornea and conjunctiva. It is a fine white powder of greasy feeling, freely soluble in water, and devoid of caustic action.

ANTIPYRALGOS.

A proprietary antipyretic and anodyne.

ANTIPYRINE. $C_{11}H_{12}N_2O$. *Synonyms:* Analgesin; Anodynin; Parodyn; Oxy-dimethyl-chiuizin; Phenazon; Phenyl-dimethyl-pyrazolon; Phenylon; Salazolon; Sedatin; Di-methyl phenyl-pyrazolon; Methozine; Pyrazine; Pyrazolin. (D. R. P. Hoechst.)

This is a synthetic base, obtained by the action of aceto-acetic-ester on phenyl-hydrazin, the resulting phenyl-methyl-pyrazolon being methylated.

Antipyrine occurs in colorless and odorless crystals, which melt between 112°–113° C. (233.6°–235.4° F.), and are readily soluble in water and alcohol.

Its solutions are turned a green color on addition of nitrous acid (Sp. Ætheris Nitrosi), and a deep red color on addition of ferric chlorid (Tr. Ferri Chloridi). Because of its strongly basic properties antipyrine presents a number of incompatibles.

The following is a list of the more important of these:

Acidum Hydrocyanicum Dil.

Acidum Tannicum. All galenic preparations free from alcohol containing tannin form insoluble precipitates.

Acidum Carbolicum; either one precipitates the other from solution.

Chloral Hydrate and Butyl Chloral.

Ferri Sulfas.

Ferric Salts in solution (red color). Does not interfere with medicinal properties.

Liquor Arsenii et Hydrargyri Iodidi; insoluble precipitate.

Mercurous and Mercuric Chlorid. Calomel when triturated with antipyrine yields corrosive sublimate.

Nitrites in solution (green color). Iso-nitroso-antipyrine formed; medicinal action same as antipyrine.

Sodii Bicarbonas.

Tinctura Iodi; insoluble precipitate.

When triturated with chloral, phenyl-urethane, beta-napthol, or sodium salicylate, it forms a pasty or liquid mass.

Antipyrine increases the solubility of caffein and quinin salts in water.

Internally it is employed as an antipyretic, antirheumatic, and antineuralgic in doses of 1–2 Gm. (15–30 gr.) for adults, and 0.2–0.5 Gm. (3–8 gr.) for children. Externally, antipyrine is used as an antiseptic and hemostatic.

Antipyrine, being a basic body, readily unites with acids to form salts, a number of which have been introduced into medicine.

ANTIPYRINE BICHLORAL. See Dichloral-antipyrine.

ANTIPYRINE MANDELATE. See Tussol.

ANTIPYRINE-META-OXYBENZOATE.

Prepared by mixing a concentrated alcoholic solution of meta-oxybenzoic acid with an aqueous solution of antipyrine. It is a liquid under ordinary conditions.

ANTIPYRINE-PARA-OXYBENZOATE.

Prepared in a manner similar to the meta-oxybenzoate. It forms crystals, which melt between 78° and 82° C. Soluble in 130 parts of cold water, very soluble in boiling water and alcohol, slightly soluble in ether.

ANTIPYRINE SALICYLATE. See Salipyrin, under Antipyrin.

ANTIPYRINE-SALOL.

Obtained by fusing together equal quantities of salol and antipyrine, and heating until the fluid turns a brown color and remains fluid on cooling. It is recommended as an antiseptic; also as a valuable hemostatic in uterine hemorrhages, applied by means of cotton tampons.

ANTIPYRINE TANNATE.

Prepared as follows: 3.3 Gm. of antipyrine are dissolved in 10 Cc. of distilled water and 1.88 Gm. of tannin are separately dissolved in a like quantity of distilled water. The two solutions are then mixed, when the tannate is thrown down as a white, caseous precipitate. This precipitate is then dried by means of a gentle heat, and reduced to powder by trituration. The result is a yellowish, tasteless powder, insoluble in water. This powder is decomposed into its constituent parts on the addition of acids. It is said to contain 37 per cent. of antipyrine and 67 per cent. of tannin.

ANTIRHEUMATICUM (Kamm).

This compound of sodium salicylate and methylene-blue (q. v.) forms blue, prismatic crystals, soluble in water and alcohol. Recommended as an antirheumatic, in doses of 0.06–0.09 Gm. (1–1½ gr.).

ANTIRHEUMATIN.

An ointment containing fluorphenetol, 1 part; difluordiphenyl, 4 parts; vaselin, 10 parts; and wool-fat, 85 parts; used in rheumatism, lumbago, and influenza. Not to be confused with "Antirheumaticum" (Kamm).

ANTISCABIN.

A secret remedy for the itch, which has been found to consist of balsam Peru, soap, glycerin, boric acid, alcohol, and beta-napthol. It is a soap-like mass, directed to be used externally two or three times daily.

ANTISEMICRANIN.

A mixture of antipyrine, caffein, and sugar.

ANTISEPSINE. $C_6H_4BrNH\text{-}CH_3CO$. *Synonyms:* Asepsine; Para-brom-acetanilid; p-Monobrom-phenyl-acetamid.

Antisepsine is obtained by adding bromin, in molecular proportions, to a solution of acetanilid in glacial acetic acid; the white precipitate formed is recrystallized from alcohol. It forms colorless crystals, which melt between 165° and 166° C. (329°–330.8° F.). It is but slightly soluble in water, more so in alcohol. Its properties are those of an antipyretic, in doses of 3–10 gr.; it is also of value in muscular rheumatism and neuralgia. Not to be confounded with a mixture of zinc sulfate, zinc iodid, thymol, and boric acid, called "Antiseptin."

ANTISEPTIC LAMINARIA PENCILS.

Prepared by impregnation with a solution of 10 parts of iodoform in 100 parts of ether, or with a 1 per cent. solution of corrosive sublimate in absolute alcohol or ether.

ANTISEPTIC VARNISH.

Nicaise recommends as a substitute for collodion the following mixture: Pulverized lac, 60 parts; balsam of tolu, 5 parts; thymol, 1.5 parts; alcohol, 50 parts; ether, 100 parts.

ANTISEPTIKON.

A dental antiseptic.

ANTISEPTIN (Radlauer).

A mixture containing about 85 parts of zinc sulfate, 2.5 parts of thymol, 2.5 parts of zinc iodid, and 10 parts of boric acid. Recommended as an antiseptic. This should not be confounded with antisepsin or antiseptol.

ANTISEPTIN.

Another preparation having this name is a patented mixture of sodium or potassium silicate (2 parts) and a 0.1 per cent. solution of mercuric chlorid (1 part), intended for the preservation of wood by impregnation.

ANTISEPTOL. (Chemic formula uncertain.) *Synonyms:* Antiseptolum; Cinchonin-herapathit; Cinchonin Iodosulfate.

To a solution of 25 parts of cinchonin sulfate in 2000 parts of water is added a solution of 10 parts of iodin and 10 parts of potassium iodid in water. The precipitate, collected, washed, and dried, constitutes a red-brown powder, which is insoluble in water, but very soluble in alcohol and chloroform. It contains about 50 per cent. of iodin.

Antiseptol is employed as a substitute for iodoform.

ANTISPASMIN. $C_{22}H_{26}NO_3Na + 3C_6H_4(OH)COONa$.

This is a double salt of narcein sodium and salicylate of sodium. It forms a white, slightly hygroscopic powder, which dissolves readily in water. The compound contains about 50 per cent. of narcein and has an alkaline reaction. Antispasmin is a hypnotic and sedative, being administered in doses of 0.01–0.1 Gm. (⅙–1½ gr.).

ANTISTREPTOCOCCIN (Marmorekin).

A serum-preparation used as a remedy against erysipelas.

ANTISUDORIN.

Composed of boric, citric, and salicylic acids, borax, glycerin, alcohol, several ethers, and distilled water. Used for perspiring feet.

ANTITETRAIZIN.

A derivative of quinin, recommended by Zambeletti in treatment of neuralgia, influenza, etc., in doses of 0.2–0.25 Gm. (3–4 gr.).

ANTITHERMAL.

A proprietary febrifuge.

ANTITHERMIN. $CH_3C(C_6H_5N_2H)C_2H_4COOH$. *Synonym:* Phenylhydrazin-levulinic Acid.

This compound is obtained by interaction between a solution of phenylhydrazin in acetic acid and levulinic acid. It occurs in colorless, tasteless crystals, which melt at 108° C. (226.4° F.); almost insoluble in cold water.

Antithermin is employed as an antipyretic in pulmonary phthisis and morbus Brightii, the dose being 0.2 Gm. (3 gr.).

ANTITOXIN. See Diphtheria Antitoxin.

ANTITOXIN, ARTIFICIAL.

An antitoxin prepared by passing an electric current through a toxic bouillon. Employed in diphtheria.

ANTITOXINE.

A proprietary antipyretic, not to be confounded with the generic term "Antitoxin," the blood-serum of immunized animals.

ANTITUSSIN. $(C_6H_4F)_2$. *Synonym:* Difluordiphenyl.

Used in whooping-cough as a calmative and hypnotic, only externally, in form of ointment.

ANTIVENIN. (ANTIVENENE.)

Prepared from the serum of animals immunized to snake poison. Used as antidote for snake bites.

ANTROPHORE.

Medicated bougies prepared after following formula: Tannin, 5 per cent.; resorcin, 5 per cent.; thallin sulf., 2–5 per cent.; zinc sulf., 0.5 per cent. Make into bougies with cacao-butter.

ANUSOL.

Suppositories which contain cacao-butter, balsam of Peru, zinc oxid, resorcin, and bismuth oxy-iodid. Recommended in tenesmus, catarrh of the rectal mucosa, anal fissure, pruritus, etc.

ANYTIN.

A 33 per cent. solution of ichthyolsulfonic acid and an aromatic, oily, sulfo-compound present in ichthyol. Forms a brownish-black, hygroscopic powder, which is very soluble in water and contains 16.5 per cent. of sulfur and 4.5 per cent. of ammonia. Incompatible (in solution) with acids and alkalies.

ANYTOL.

A preparation similar to creolin (Artmann); used as antiseptic and disinfectant. Otherwise stated to be a purified ichthyol.

APHANIZON.

A paste for removing spots from clothing, put up in tin tubes containing about ½ oz. A preparation closely resembling it and equally efficacious may be made from burnt magnesia, exsiccated alum, powdered soap, napthalin, benzol, and alcohol. Powdered sodium stearate may be used instead of soap.

APIOL. $C_{12}H_{14}O_4$.

A stearoptene obtained from the fruit of *Petroselinum sativum*. The alcoholic extract of the fruit is reduced to extractive consistence and the extract washed with ether, in which the apiol dissolves, and on evaporation of the ether crystallizes. The so-called *liquid apiol* is merely an alcoholic extract of the parsley fruit.

Apiol forms colorless needles, of feeble, parsley-like odor, melting at 32° C. (89.6° F.), insoluble in water, very soluble in alcohol, ether, fixed and volatile oils.

It is employed as an antiperiodic and in dysmenorrhea. Dose, 0.25 Gm. (4 gr.).

APIOLIN.

Obtained by saponifying and distilling the impure oil of the *Apiolum viride*. A yellow, neutral fluid, of sp. gr. 1.135 and boiling-point 280°–300° C., soluble in alcohol. Recommended in menostatic troubles in doses of 2 or 3 capsules daily; each capsule contains 0.2 Gm.

APOCODEIN HYDROCHLORID. $C_{18}H_{19}NO_3$-HCl. *Synonym:* Apocodeinum Hydrochloricum.

This is prepared from codein in a manner analogous to the manufacture of apomorphin from morphin. Apocodein hydrochlorid forms an amorphous, yellowish powder, soluble in alcohol and water. Its properties are similar to those of apomorphin, it being employed as an expectorant in doses of 0.06–0.08 Gm. (1–1¼ gr.).

APOCYNUM CANNABINUM.

This remedy consists of an alcoholic extract of the roots of the above plant. Used in place of digitalis, decreasing the pulse action and increasing the secretion of urine.

APOLYSIN. $C_6H_4<^{OC_2H_5}_{NH.CO.C_3H_4(OH)(COOH)_2}$. Mono-phenetidin-citric Acid. (D. R. P. v. Heyden.)

A substance approaching phenacetin very closely in its chemic composition, containing the citric acid radical instead of acetic, as in phenacetin. It appears as a yellowish-white crystalline powder, soluble in 50 parts of cold and 25 parts of hot water, in glycerin, concentrated nitric and sulfuric acids, etc. In its physiologic action, etc., it resembles phenacetin very closely, lowering the temperature and allaying pain, and is said to be free from the unpleasant after-effects of that substance (phenacetin). Dose, 0.5–1.5–6 Gm. (8.24–90 gr.) a day.

APON.

A concentrated extract of capsicum, recommended by Poulet as external application in rheumatism.

APYONIN.

A yellow, crystalline powder, introduced as a substitute for auramin for use in ophthalmic surgery. It is slightly soluble in water and readily in alcohol. Used in 1 per cent. solution.

AQUOZON.

A 2.5 per cent. aqueous solution of ozone, containing hypophosphites.

ARABINOCHLORALOSE.

A hypnotic prepared by Richel, which is free from the tetanic effect of chloralose.

ARAN'S ETHER. See Ethylidene Chlorid.

ARBUTIN. $(C_{12}H_{16}O_7)_2 + H_2O$.

A glucosid obtained from the leaves of the bearberry (*Arctostaphylos uva ursi*).

It occurs in colorless, silky needles, which melt at 170° C. (338° F.), soluble in 8 parts of cold water and 16 parts of alcohol. Arbutin is employed in diseases of the kidneys and urinary tract, being given in doses up to 5 Gm. (75 gr.).

ARECOLIN. $C_8H_{13}NO_2$.

A liquid alkaloid obtained from the betel-nut (*Areca catechu*). It is a strongly alkaline liquid, miscible with water, alcohol, or ether; boiling at 220° C. (428° F.).

Arecolin is employed as an anthelmintic, in doses of 0.003–0.004 Gm. ($\frac{1}{20}$–$\frac{1}{15}$ gr.). Great care should be observed in its administration, as it is a powerful heart poison.

The *hydrochlorid of arecolin*, a soluble crystalline salt melting at 167° C., is also employed for the same purposes as the above.

It is in the market only in the form of hydrobromid. Arecolin is stated to be ten times stronger as a laxative than pilocarpin, and fully as powerful as eserin. It also contracts the pupil of the eye; used for this purpose in 1 per cent. solution of the hydrobromid.

ARGENTAMIN. *Synonym:* Ethylene-diamin-silver-phosphate. (D. R. P. Schering.)

An antiseptic, employed in gonorrhea. It is a solution of silver phosphate in aqueous solution of ethylendiamin. In the preparation of this the manufacturers have sought to present an antiseptic which does not precipitate albumin, held in solution in a non-corrosive and non-toxic solvent. It has been found that the antiseptic power of strong alkaline solvents is greater than simple aqueous solutions, since the alkalies dissolve the membrane of the microorganism; as organic bases adapted to this purpose are ethylendiamin and alkyl derivatives, piperazin, etc. As antiseptics which, in conjunction with these organic bases, do not precipitate albumin, are phenol, cresol, thymol, napthol, guaiacol, and silver salts. The solutions are prepared thus, after the patent: 10 parts of ethylendiamin are dissolved in 500 parts of water, adding 10 parts of freshly dissolved cresol. Where creosote or guaiacol is employed, it is better to use a larger amount of the base (ethylendiamin). For the preparation of the silver solutions 10 parts of silver phosphate (nitrate or chlorid) are added slowly, with constant stirring, to a solution of 10 parts of the base in 100 parts of water. Solution is made 1 : 1000 or 5000.

ARGENTOL. $C_9H_5N.OH.SO_3Ag$. *Synonym:* Oxy-chinolin-sulfonate of silver.

A compound of quinaseptol and silver. Succedaneum for iodoform for wounds, skin diseases, syphilitic sores, etc., in ointment (1 or 2 : 100) and in solution (1 to 3 : 1000), for gonorrhea. In presence of septic matters, it is split up into oxy-quinolin and metallic silver.

ARGININE. $C_6H_{14}N_4O_2$.

A substance produced by the action of hydrochloric acid on proteins; also found in plants

ARGONIN. (D. R. P. Hoechst.)

A compound of silver (4 per cent.), casein, and alkali, prepared by adding a solution of the sodium compound of casein to a solution of silver nitrate, and precipitating the newly formed body by the addition of alcohol. The resulting white powder must be free from nitric acid and alkali. Argonin is insoluble in cold, but readily soluble in hot water; its solutions must be kept away from the light. It is incompatible with acids. Employed as a powerful bactericide in gonorrhea, etc. Strength of solution employed is from 1 to 7 : 1000.

ARISTOL. $\frac{C_3H_7}{CH_3}>C_6H_2(OI)-(OI)H_2C_6<\frac{C_3H_7}{CH_3}$. *Synonyms:* Annidalin; Di-iodo-dithymol; Di-thymol-iodid. (D. R. P. Bayer.)

To a solution of 5 parts of thymol and 1.2 parts of sodium-hydrate in 10 parts of water, add gradually, with constant stirring, a solution of 6 parts of iodin and 9 parts of potassium iodid in 10 parts of water. The precipitate is washed with water and dried at low temperature. See also Proceed. Am. Phar. Ass'n, 1892, p. 983. Aristol forms a pale chocolate-colored amorphous powder, insoluble in water and glycerin, slightly soluble in alcohol, readily in ether and collodion; light and heat cause its decomposition. Aristol contains 45.8 per cent. of iodin. This compound was introduced as a substitute for iodoform, possessing the advantage of being odorless. Ointments containing it are usually prepared of the strength of 5 to 10 per cent.; other forms of applying it are solutions in oils, ether, and collodion.

AROMATIN.

A preparation intended to replace hops. Said to be scraped gentian root.

AROPHENE.

A proprietary dental anesthetic.

ARSEN-HEMOL.

A preparation of hemol, containing 1 per cent. of arsenous acid. It forms a brown powder that behaves chemically like the other metallic compounds of hemol. It is highly recommended in neurologic and dermatologic practice. Best administered in pills of 0.1 Gm. (1½ gr.), made with extract of licorice. Dose, 3–10 pills daily. See also under Hemol.

ARTHRITICIN. $C_6H_4.(O.C_2H_5).N:(CH_2).NH(CH_2).NH_2.CO$.

Appears in tablets, insoluble in cold, soluble in hot, water; used as disinfectant.

ASAPROL. $(C_{10}H_6.OH.SO_3)_2Ca + 3H_2O$. *Synonyms:* Beta-napthol-alpha-mono-sulfonate of calcium; Abrastol.

This is prepared by saturating an aqueous solution of beta-napthol-*a*-monosulfonic acid with calcium carbonate, evaporating, and crystallizing the salt. Asaprol forms a colorless to pale reddish inodorous powder, which is soluble in 1½ parts of water and 3 parts of alcohol.

It is employed as an antipyretic and analgesic, particularly in acute muscular rheumatism and typhus, in doses of 0.3–1 Gm. (5–15 gr.) four or five times daily. Incompatibles are sulfates, bicarbonates, iodids, antipyrine, and quinin.

ASBOLINE.

Prepared from pine-root. Yellowish oil consisting principally of pyrocatechol and its homologues. Antitubercular.

ASEPSINE. See Antisepsine.

ASEPTIC ACID.

This should not be confounded with aseptol, asepsin, or antisepsin. Aseptic acid is an aqueous solution of 5 Gm. boric acid in 1000 Gm. of hydrogen peroxid (1.5 per cent.) with or without the addition of 3 Gm. of salicylic acid (Thoms).

The properties of this solution are antiseptic.

ASEPTOL. $C_6H_4<\frac{OH}{SO_3H.}\ \frac{(1).}{(2).}$ *Synonyms:* Acidum Sozolicum; Sozolic Acid; Ortho-phenol-sulfonic Acid; Ortho-sulfo-carbolic Acid.

Equal parts of concentrated sulfuric acid and phenol are mixed, the two liquids being kept at as low a temperature as possible; otherwise, at higher temperature the para-acid forms instead of the ortho. After standing several days it is poured into water and neutralized with barium carbonate; the barium sulfate is filtered off, the filtrate containing the barium salt of sozolic acid. The barium is removed from this compound by careful addition of sulfuric acid.

Aseptol is a 33⅓ per cent. solution of ortho-phenol-sulfonic acid, its specific gravity being 1.155; it possesses a feeble odor resembling phenol. On long standing it gradually goes over into the para compound. Aseptol is employed as an antiseptic wash in 10 per cent. solution. Its solutions in glycerin, oil, or alcohol are inactive. It is administered internally as an antifermentive in like doses as salicylic acid.

ASEPTOLIN.

A solution which contains 2.74 per cent. of phenol and 0.018 per cent. of pilocarpin. Used subcutaneously in phthisis.

ASIMINUM.

A white, inodorous, and tasteless powder, insoluble in water, soluble in ether and alcohol. Used as emetic, dose unknown.

ASPARAGIN. $C_2H_3(NH_2)<\frac{CONH_2}{COOH} + H_2O$. *Synonyms:* Asparamid; Amido-succino-amid.

A crystalline principle which occurs in asparagus and marshmallow root, being obtained from the latter by evaporating the aqueous extract to a concentrated volume and crystallizing.

Asparagin forms colorless crystals, which are only slightly soluble in cold water and alcohol.

It is employed as a diuretic in doses of 0.05–0.1 Gm. (0.7–1.5 gr.).

ASPARAMID. See Asparagin.

ASPAROL.

A liquid extract of *Asparagus officinalis*, of dark brown color, a pleasant, faintly alcoholic odor, and a sweetish, saline taste.

It should not be confounded with Asaprol, an entirely different substance.

ASPIDIN. ($C_{22}H_{27}O_7$).

A poisonous constituent of the ethereal extract of male fern. Uses not known.

ASPIDOSPERMIN. $C_{20}H_{20}N_2O_2$.

An alkaloid isolated from the bark of *Aspidosperma quebracho*. It occurs in colorless crystals, which are insoluble in water but soluble in about 48 parts of alcohol. It is employed in the treatment of asthma, dyspnea, emphysema, etc., in doses of 0.0015 Gm. ($\frac{1}{40}$ gr.).

ATHANON.

A proprietary disinfectant.

ATHEROSPERMA MOSCHATA. (AUSTRALIAN SASSAFRAS TREE.)

The bark serves as diuretic, diaphoretic, and sedative in asthma, bronchitis, and heart diseases. Dose of tincture, 30–60 drops. The oil of the bark, in doses of 1–3 drops every 6 hours, acts as a diaphoretic and diuretic.

ATROPIN STEARATE. $C_{17}H_{23}NO_3$. $C_{17}H_{35}CO.OH$.

Obtained either by direct combination of atropin and stearic acid, or by double decomposition of atropin hydrochlorid and sodium stearate. It contains, when pure, 50.4 per cent. of atropin. A 0.2 per cent. solution in almond oil is considered an excellent substitute for oil of belladonna or oil of hyoscyamus, and for extract of belladonna in ointments (0.1 Gm. of stearate to 50 Gm. of petrolatum) and in suppositories (0.002 Gm. to 2.5 Gm. of cacao-butter).

ATROSCIN. $C_{17}H_{21}NO_4$.

An alkaloid obtained from *Scopolia atropoides*, isomeric with hyoscin. It is characterized by having a lower rotatory power than the latter, and in being from 2 to 4 times stronger in mydriatic effect. In cases of iritis it is also more powerful.

AURAMINE. See Pyoktaninum Aureum.

AUREOL.

Contains menthol, 1 per cent.; amido-phenol-chlorhydrate, 0.3 per cent.; mono-amido-diphenylamin, 0.6 per cent.; dissolved in 50 per cent. alcohol which contains 1–2 per cent. of sodium sulfite. Used as a hair dye; prepared by Schwarzlose Soehne, Berlin.

AURUM CYANATUM. AuCn. *Synonyms:* Gold Cyanid; Aurous Cyanid.

A yellow, insoluble powder, given in doses of 0.004–0.016 Gm. in "tabes dorsalis."

AURUM KALIUM BROMATUM. See Potassio Auric Bromid.

AURUM MONOBROMATUM. AuBr.

A yellowish-green, readily pulverizable mass, insoluble in water. Recommended as specific in epilepsy in adult doses of 8–12 mg. daily; for children, 3–6 mg.

AURUM TRICYANATUM. $Au(Cn)_3 + 3H_2O$.

Forms large, colorless, soluble crystals. Used in lung tuberculosis. Dose, 0.004 to 0.016 Gm. several times daily.

AURUM VEGETABILE. See Pipitzahoinic Acid.

AYAPANA.

This drug consists of the leaves of *Eupatorium triplinerve*, better known as *Eupatorium ayapana*. The habitat of the plant is tropic America. It is used there, particularly in Brazil, as a universal household remedy, and is even recommended for snake bite and cholera. In the dry state it has an agreeable odor and a feebly aromatic, slightly bitter, and astringent taste. Wherever introduced, its use in form of infusion is adhered to. In Java, Mauritius, Ceylon, India, and other countries it is used in that form externally for wounds and abscesses; internally, for stomach disturbances. The action of the drug is stimulant, diaphoretic, and stomachic. It is recommended as a substitute for tea, coffee, or cocoa.

BACILLIN.

A proprietary deodorizer and disinfectant.

BALSAMUM CAPARRAPI.

An aromatic balsam, obtained from the *Laurus giganteus*. Used in chronic catarrh.

BARIUM LORETINATE, NEUTRAL. $Ba(I.OH.C_9H_4N.SO_3)_2 + 2\frac{1}{2}H_2O$.

Lustrous, orange-colored needles, readily soluble in water. See Loretin.

BAVAROL.

A reddish-brown liquid of aromatic tarry odor, recommended as a disinfectant in 5 per cent. solution.

BEBEERIN. $C_{19}H_{21}NO_3$. *Synonyms:* Bibrin; Buxin; Pelosin.

An alkaloid prepared from the *Buxus sempervirens*. A white, amorphous powder, bitter taste, insoluble in water, readily so in alcohol. Used as substitute for quinin. Dose, 0.05–0.1 Gm. (0.7–1.5 gr.). Bebeerin sulfate is readily soluble in water.

BENSOLYPTUS.

An alkaline, antiseptic, and prophylactic fluid, recommended as a wash in treatment of catarrhal affections of the mucous membranes.

BENZACETIN. $C_6H_4\begin{cases}OC_2H_5\\COOH\\NH.CH_3CO.\end{cases}$ *Synonym:* Acet-amido-ethyl-salicylic Acid.

This compound forms colorless crystals, melting at 205° C. (401° F.), and almost insoluble in water. Recommended as an antineuralgic, in doses of 0.5–1 Gm. (8–15 gr.).

BENZANALGENE. See Analgene.

BENZANILID. $C_6H_5NHCOC_6H_5$. *Synonym:* Benzoyl-anilid.

Obtained by the action of benzoyl chlorid on anilin in the presence of caustic soda. It forms colorless crystals, insoluble in water, soluble in alcohol, melting at 163° C. (325.4° F.).

Benzanilid is employed as an antipyretic suitable for children, the dose being 0.1–0.5 Gm. (1.5–8 gr.), according to age.

BENZO-IODO-HYDRIN. *Synonym:* Glyceryl-chlor-iodo-benzoate.

Prepared by mixing benzoyl iodid and epichlorhydrin. It is a brown, fatty mass, soluble in ether, alcohol, and petroleum oils, insoluble in glycerin. When heated to 100° C. (212° F.), it is decomposed with separation of iodin. It is proposed as a substitute for potassium iodid. Mixed in proportion of 32.5 parts with 1000 parts of sugar, a teaspoonful of the mixture is equivalent to 1 Gm. of potassium iodid. Stated to be equal in therapeutic effect to the latter, and not to cause iodism. Given in the same doses as potassium iodid.

BENZO-NAPTHALIN. See Napthalin Benzoate.

BENZO-NAPTHOL. $C_6H_5CO_2{-}C_{10}H_7$. *Synonyms:* Beta-napthol Benzoate; Benzoyl-beta-napthol.

This compound is analogous to betol (naptho-salol), being a napthyl ester of benzoic acid ($C_6H_5CO_2H$), and is obtained by the action of benzoyl chlorid on beta-napthol. Benzo-napthol occurs in crystalline needles, or powder, inodorous, tasteless, insoluble in water, soluble in alcohol and chloroform, melts at 110° C. (230° F.). Employed as an intestinal antiseptic in doses of 0.25–0.5 Gm. (4–8 gr.), being split up in the intestines into beta-napthol and benzoic acid.

BENZO-PARA-CRESOL. $C_6H_4(CH_3)(CO{-}C_6H_5)$.

Prepared by action of benzoyl chlorid on the sodium salt of para-cresol. Insoluble in water; soluble in ether and hot alcohol; melts at 70° C. (158° F.). Properties antiseptic. Dose, 0.25 Gm. (4 gr.).

BENZO-PHENONEID.

Non-irritant germicide similar to pyoktanin. Used in corneal ulcers, purulent keratitis, etc. Soluble in 100 parts of water.

BENZOSOL. $C_6H_4{<}\begin{matrix}O.CH_3\\O{-}C_6H_5.CO.\end{matrix}$ *Synonyms:* Guaiacol Benzoate; Benzoyl-guaiacol. (D. R. P. Hoechst.)

This is a compound of guaiacol, in which a hydrogen atom of its hydroxyl is replaced by benzoyl. It is obtained by the action of benzoyl chlorid on the sodium salt of guaiacol. Benzosol occurs as a colorless, crystalline powder, inodorous, tasteless, melting at 59° C. (138.2° F.); insoluble in water, readily soluble in alcohol. It contains 54 per cent. of guaiacol.

It is employed as an antiseptic in the treatment of phthisis, the dose being 0.25–0.5 Gm. (4–8 gr.).

BENZOYL-AMIDO-PHENYL-ACETIC ACID.

Obtained by adding benzoyl chlorid to a warmed solution of amido-phenyl acetic acid in a 25 per cent. solution of sodium hydrate, then pouring the product into well-diluted hydrochloric acid. The resulting precipitate is washed and dried. This compound forms white needles, the alkali salts of which are very soluble and exert a disinfecting action upon the intestinal tract.

BENZOYL-ANILID. See Benzanilid.

BENZOYL-BETA-NAPTHOL. See Benzo-napthol.

BENZOYL-EUGENOL. $(C_3H_5.C_6H_3(OCH_3)CO_2C_6H_5)$.

Prepared by the action of benzoic acid on eugenol; it occurs in acicular crystals, melting at 70.5° C. (159° F.), free from odor and taste, insoluble in water, readily soluble in alcohol and ether. Recommended as an anti-tubercular. Dose, 0.5–1 Gm. (7.5–15 gr.).

BENZOYL-GLYCOCOLL. See Hippuric Acid.

BENZOYL-GUAIACOL. See Benzosol.

BENZOYL-MORPHIN. See Peronin.

BENZOYL-PARA-CRESOL. *Synonym:* Benzo-para-cresol. $C_6H_4(CH_3)COO.C_6H_5$.

Obtained by the action of benzoyl chlorid on para-cresol in alkaline solution. Occurs in colorless crystals melting at 70° C. (158° F.), insoluble in water and slightly soluble in alcohol. Recommended as intestinal antiseptic in doses of 0.25 Gm. (4 gr.).

BENZOYL-PSEUDO-TROPEIN HYDROCHLORID. See Tropa-cocain Hydrochlorid.

BENZOYL-SULFONIC-IMID. See Saccharin.

BENZOYL-TANNATE.
Forms a yellowish, granular, insoluble powder.

BENZOYL-TROPEINE.
Silky needles forming soluble salts. Local anesthetic.

BENZOYL-VINYL-DIACETONE-ALKAMIN. See Eucaine B.

BETA EUCAINE. See under Eucaine.

BETA-NAPTHOL-ANTIPYRINE. See Napthopyrine.

BETA-NAPTHOL-BENZOATE. See Benzo-napthol.

BETA-NAPTHOL-CAMPHOR. See Napthol-camphor.

BETA-NAPTHOL-CARBONATE. See Napthol-carbonate.

BETA-NAPTHOL-DISULFONATE OF ALUMINUM. See Alumnol.

BETA-NAPTHOL-MONOSULFONATE OF CALCIUM. See Asaprol.

BETA-PHENETIDYL-CROTONIC-ETHYL ESTER. See Phenetidyl.

BETA-PHENYL-ACRYLIC ACID. See Phenyl Acrylic Acid.

BETA-PHENYL-PROPIONIC ACID. See Phenyl Propionic Acid.

BETA-RESALGIN. See Resalgin.

BETOL. $C_6H_4(OH)COO.C_{10}H_7$. *Synonyms:* Napthalol; Napthosalol; Salinapthol; Salicylic-napthylether.

Salol and betol are derivatives of salicylic acid, differing from one another in that in the former a hydrogen atom of the salicylic acid is replaced by a phenyl group (C_6H_5), while in the latter it is replaced by a napthyl group ($C_{10}H_7$). Betol is prepared by heating together a mixture of beta-napthol-sodium, sodium salicylate, and phosphorus oxychlorid. It forms a white, inodorous, and tasteless, crystalline powder, which melts at 95° C. (203° F.), almost insoluble in water, but dissolving readily in alcohol and ether. Betol is employed as an intestinal antiseptic; it is also of value in treatment of vesical catarrh and articular rheumatism. The dose is 0.3–0.5 Gm. (5–8 gr.).

ALPHOL is the corresponding salicylic ester of alpha-napthol.
It is employed in doses of 0.5–1 Gm. (8–15 gr.) in treatment of articular rheumatism and gonorrheic affections.

BETULINAR.
This is a solution bearing the following formula on the label: Solution of salicyl-menthol-betulin, 11 parts; boroglycerin, 19 parts; tincture of birch, 20 parts; aromatic birch water, 50 parts.

BIBRIN. See Bebeerin.

BI-CHLORAL-ANTIPYRINE. See under Antipyrine.

BILINEURIN. See Cholin.

BISMAL. $4C_{15}H_{12}O_{10} + 3Bi(OH)_3$. (D. R. P. Merck.)

The bismuth salt of methylene-digallic acid, the latter being a condensation product of formaldehyd and gallic acid. Bismal is prepared by digesting methylene-digallic acid and freshly precipitated bismuth hydrate together. It forms a bluish-gray, voluminous powder, soluble in alkalies, with a yellow color, from which solution it is precipitated upon the addition of acids. Used internally as astringent in doses of 0.1–0.3 Gm. from three times daily to every three hours.

BISMUTAL. *Synonym:* Bismuthol.

A mixture of bismuth sodium phosphate (bismuth phosphate) and sodium salicylate. Recommended as an antiseptic. When used as a dusting-powder it is diluted with 5 parts of starch, or as a solution, 1–4 per cent; as an ointment, 10–20 per cent.

BISMUTAN. *Synonym:* Isutan.

A canary-yellow, odorless powder, insoluble in water, consisting of bismuth, resorcin, and tannin. It is recommended for intestinal catarrh in doses of 0.5–1 Gm. (8–15 gr.) for adults; for children in teaspoonful doses of a mixture containing 1.5–2.5 Gm. (23–38 gr.) in 100 Gm. (3 troy ounces).

BISMUTH COMPOUNDS.

The various organic salts of bismuth are prepared by interaction between a solution of bismuth nitrate [$Bi(NO_3)_3$] and a salt of the organic acid, the resulting bismuth compound precipitating. In order to obtain a clear aqueous solution of bismuth nitrate it is necessary either to dissolve the crystals, first in glycerin, then diluting with water, or to add sufficient nitric acid to the mixture of bismuth nitrate and water to effect a clear solution; in the latter instance the solution of organic salt should be slightly alkaline. Bismuth nitrate may be also dissolved in a 25 per cent. sodium chlorid solution or in acetic or diluted nitric acid. Another method consists in digesting a mixture of the organic acid and finely powdered bismuth nitrate [$Bi(NO_3)_3$] or freshly precipitated hydroxid in the presence of water until change of color takes place. The bismuth nitrate on contact with water is converted into the basic or subnitrate, which, at the moment of its formation, readily combines with organic acids. The commercial subnitrate ($BiONO_3$) is not available for this purpose unless it is first dissolved in nitric acid and set aside to crystallize, thus forming the trinitrate ($Bi(NO_3)_3$. These basic bismuth compounds are decomposed by acids.

ALBUMINATE. A pale gray or white insoluble powder, containing about 9 per cent. of bismuth. Employed in gastric and intestinal cramps, in doses of 0.5–1 Gm. (8–15 gr.).

BENZOATE (Sub-benzoate). $(Bi(C_6H_5CO_2)_2$–$Bi(OH)_3$. By the heat of a water-bath, 20 parts of bismuth nitrate, $Bi(NO_3)_3$, are dissolved in 30 parts of glycerin, then diluted with 70 parts of water, and poured slowly into a solution of 20 parts of sodium benzoate in 1000 parts of water. (This order must not be reversed.) The resulting precipitate is washed with warm water until the washings no longer react for nitric acid (Diphenylamine T. S. See U. S. P.), then dried at a temperature not above 80° C. Bismuth benzoate forms a white, insoluble powder, which is employed as a dusting-powder for torpid ulcers; also used internally, being preferred by many to bismuth salicylate. Dose, 0.3–1 gm.

BETA-NAPTHOL BISMUTH. See Orphol.

BORATE. Obtained by fusing bismuth trinitrate and boric acid. A yellowish-white insoluble powder, used like the subnitrate.

BORO-PHENATE. $Bi_2O_3B(C_6H_5)CO_3.3H_2O$. *Synonym:* Markasol. An antiseptic recommended as a substitute for iodoform, as a non-irritating dry dressing for wounds, ulcers, excoriations, burns, etc.

CERIUM-SALICYLATE forms an insoluble, pink-colored powder, being a valuable remedy in the treatment of diseases of the gastric and intestinal mucous membranes. Dose, 1–2 Gm. (15–30 gr.).

CHRYSOPHANATE (Dermol). A yellowish-brown powder recommended in pityriasis and herpes.

CRESOLATE. A grayish-white powder, free from odor and taste, insoluble in water and alcohol. Used internally as an intestinal antiseptic, externally as iodoform substitute.

DITHIOSALICYLATE, or *THIOFORM.* See under Dithiosalicylic Acid.

LORETINATE. A combination of bismuth and loretin obtained by precipitating loretin sodium solution with a solution of bismuth trinitrate in glycerin and water, used as astringent and antiseptic in diarrhea of phthisis. Dose, 0.5 Gm. Externally as dusting-powder for wounds, as ointment in eczema, psoriasis, etc.

NAPTHO-GLYCERITE. Recommended as a specific for gonorrhea. Composition unknown.

NAPTHOLATE. Obtained by adding a solution of beta-napthol in an alkali to a solution of bismuth nitrate, the latter being dissolved by aid of glycerin (see above) or a dilute acid. The precipitated bismuth naptholate is well washed and dried at low temperature. It forms a brownish, tasteless powder, insoluble in water; it is employed as an intestinal antiseptic, in doses of 1–2 Gm. (15–30 gr.).

OLEATE, $(C_{17}H_{33}CO_2)_3Bi$. Obtained by precipitating a solution of sodi... solution of an equivalent amount of bismuth trinitrate; the solu... pared as above directed. An insoluble powder possessing en... erties; employed in various skin diseases.

OXY-BROMID. An impalpable, faintly yellowish po... with tragacanth. Serviceable in nervous dyspepsia.

OXY-CHLORID (Sub-chlorid). This is made by pouri... in diluted nitric acid into a solution of common salt. The wh... then dried. Its medicinal uses are the same as those of the su...

OXY-IODID, SUB-IODID, or *BASIC IODID*, Bi OI. ... Gm. is dissolved in 120 Cc. of glacial acetic acid; this solut... stirring, into a solution of 33.2 Gm. of potassium iodid and 50 ... of water. The precipitated oxyiodid is then washed by deca... 100° C. This is a reddish-brown, heavy powder, insoluble in a... solutions, by which it is decomposed. Recommended as an a... ing the action of iodin and bismuth.

OXY-IODO-GALLATE, or *AIROL*, $C_6H_2(OH)_3CO_2Bi$... applied in ointment (water-free lard or lanolin) or dusted on ... grayish-green in color; has no odor or taste.

OXY-IODO-METHYL-GALLOL. See Iodogallicin.

OXY-IODO-PYROGALLOL. Prepared by prolonged digestion of bismuth oxyiodid with pyrogallol, or by precipitating a solution of iodids and pyrogallol by means of a solution of bismuth nitrate in acetic acid. It is a fine, amorphous, yellowish-red powder, insoluble in the usual solvents, and permanent in air and light. It is recommended as a powerful surgical antiseptic.

PANCREATINIZED. Used in dyspepsia. Dose, 1–5 Gm.

PEPTONATE. Used in dyspepsia and gastralgia. Dose, 1–5 Gm.

PERMANGANATE (Basic). Used as dry antiseptic dusting-powder.

PHENOLATE, or *CARBOLATE*, $Bi(OH)_2.C_6H_5O$. Prepared by interaction between a solution of bismuth trinitrate (see above) and a solution of sodium phenolate. Gray colored, insoluble, inodorous powder, used as an intestinal antiseptic in doses of 0.5–1 Gm. (8–15 gr.), also externally as an antiseptic dusting-powder.

PHOSPHATE (Soluble). Obtained by fusing together bismuth oxid, caustic soda, and phosphoric acid, pulverizing the resulting mass. This product contains 20 per cent. Bi_2O_3, and is very soluble in water; its solutions are rendered turbid by the addition of acids, alkalies, or by boiling. Recommended as an intestinal disinfectant, also in treatment of catarrh of the stomach, in doses of 0.2–0.5 Gm. (3–8 gr.).

PYROGALLATE (Helcosol). $C_6H_3(OH)_2OBiO$. Prepared by dissolving 150 parts of pyrogallic acid in 650 parts of a 25 per cent. sodium chlorid solution, and adding this solution to 316 parts of bismuth trichlorid dissolved in 1000 parts of a salt solution of the same strength. After digesting on a water-bath for a half hour, the solution is poured into water, and the basic bismuth salt thus precipitated is washed with water acidulated with nitric acid until the wash-

ings are free from chlorids. Forms a yellow, insoluble powder (60 per cent. Bi), which is recommended as an internal and external antiseptic. Helcosol (Merck) has a slightly different constitution, the formula being $(C_6H_3(OH)_2O)_2BiOH$; it contains 48 per cent. of metallic bismuth and is of a greenish-yellow color. Dose, 0.3–1 Gm.

RESORCINATE. A solution of bismuth trinitrate is added to a solution of resorcin in excess of alkali. It forms a yellowish-brown powder, which contains about 40 per cent. of Bi_2O_3. This compound is employed in the treatment of chronic and acute catarrh of the stomach. The dose is not known.

SALICYLATE (Basic). $Bi(C_7H_5O_3)_3 . Bi_2O_3$. The following process of L. Wolmann yields a bismuth salicylate of constant composition. Twenty-five parts of metallic bismuth in coarse powder are added in small portions to 125 parts of nitric acid (sp. gr. 1.20), heated to from 75° to 90° C.; toward the end of the operation the temperature is increased to boiling. After standing several days the fluid is decanted and evaporated to small bulk and crystallized. The crystals of bismuth nitrate are washed with a little water containing nitric acid, and, after draining, 48.6 parts of the crystals are dissolved in about 200 parts of dilute acetic acid and the solution rendered alkaline by the addition of aqua ammonia. The precipitate is well washed by decantation, until the wash-water ceases to give a blue color on addition of a piece of zinc and a few drops of iodid of starch solution. The precipitate is brought to a paste by triturating with a little water in a mortar, 13.8 parts of salicylic acid added, and heated on a water-bath until the blue-white color changes into that of a yellow-white. The mass is then collected on a muslin strainer, pressed, and dried at a temperature not above 75° C. The bismuth salicylate thus obtained is a white, inodorous, tasteless, and insoluble powder containing 64.65 per cent. of Bi_2O_3. Used as intestinal antiseptic in intestinal disorders. Dose, 0.3–1 Gm. several times daily. Also employed externally as a dusting-powder.

SUBGALLATE. See Dermatol.

SUBTANNATE. Used for like purposes as the subgallate. For method of preparation, see "Proceed. Amer. Phar. Assn.," 1896, p. 797.

SULFITE. Prepared by interaction between solutions of sodium sulfite and bismuth trinitrate, the latter being brought into solution by means of glycerin. Bismuth sulfite possesses an antiseptic and antifermentive action, being employed as such in intestinal disorders. Dose same as the subnitrate.

SULFOCARBOLATE. A purple-red powder. Recommended as an intestinal antiseptic.

TRI-BROM-CARBOLATE. See Xeroform.

VALERIANATE (Valerate). This is made by mixing 32 parts of bismuth subnitrate, made into a thick paste with water, with a solution of sodium carbonate 11 parts, valeric acid 9 parts, and water 80 parts; this mixture is allowed to digest for one hour, frequently stirring; the undissolved precipitate is collected, washed with cold water, and dried at 30° C. It forms a [illegible] powder, possessing a strong valerian-like odor. Bismuth valerianate possesses [illegible] in addition to the anodyne action of the valeric acid. Dose is 0.05–

[illegible]

[illegible] bismuth containing about 20 per cent. of bismuth oxid. Used in [illegible] of the alimentary tract.

[illegible] of a cinchona alkaloid. It somewhat resembles atropin in phy[illegible]ious. Has been used with success in hay fever, influenza, colds, [illegible]every hour.

[illegible]m the leaves of the *Boldoa chiliensis*. It is a white, amorphous, [illegible]e in water, readily soluble in alcohol, ether, and chloroform. [illegible]pnotic. Dose, 0.064 Gm. (1 gr.).

BOMBAX MALA[illegible] A. See Mocharas.

BONDUCIN. $C_{14}H_{15}O_5$.

A white, bitter powder, soluble in alcohol, chloroform, fats, and oils. Insoluble in water. Used as a febrifuge in doses of 0.1–0.2 Gm. (1.5–3 gr.) in wafers.

BORAL. *Synonym:* Aluminum Boro-tartrate.

Through the interaction between aqueous solutions of borax and aluminum sulfate, aluminum borate is obtained according to the following equation: $3Na_2B_4O_7 + Al_2(SO_4)_3 = 3Na_2SO_4 + Al_2(B_4O_7)_3$. The resulting precipitate is washed with water till free from sodium sulfate, then 1 part of this aluminum borate is dissolved by the heat of the water-bath in 10 parts of water, by means of 1 part of tartaric acid, and evaporated to dryness at not above 40° C. The resulting aluminum-boro-tartrate (Boral) forms a soluble crystalline powder, which is recommended as an astringent antiseptic, either dry or in aqueous solution.

BORALID.

A mixture of equal parts of boric acid and antifebrin. Used as antiseptic in skin diseases.

BORICIN.

A mixture of borax and boric acid.

BORO-CITRIC ACID.

This combination of boro and citric acids forms a white, soluble powder, which is employed as a solvent for urates and phosphates in urinary calculi, gout, etc. Dose, 0.3–1.3 Gm. (5–20 gr.).

ALBUMINATE. A pale gray or white insoluble powder, containing about 9 per cent. of bismuth. Employed in gastric and intestinal cramps, in doses of 0.5–1 Gm. (8–15 gr.).

BENZOATE (Sub-benzoate). $(Bi(C_6H_5CO_2)_2-Bi(OH)_3$. By the heat of a water-bath, 20 parts of bismuth nitrate, $Bi(NO_3)_3$, are dissolved in 30 parts of glycerin, then diluted with 70 parts of water, and poured slowly into a solution of 20 parts of sodium benzoate in 1000 parts of water. (This order must not be reversed.) The resulting precipitate is washed with warm water until the washings no longer react for nitric acid (Diphenylamine T. S. See U. S. P.), then dried at a temperature not above 80° C. Bismuth benzoate forms a white, insoluble powder, which is employed as a dusting-powder for torpid ulcers; also used internally, being preferred by many to bismuth salicylate. Dose, 0.3–1 gm.

BETA-NAPTHOL BISMUTH. See Orphol.

BORATE. Obtained by fusing bismuth trinitrate and boric acid. A yellowish-white insoluble powder, used like the subnitrate.

BORO-PHENATE. $Bi_2O_3B(C_6H_5)CO_3.3H_2O$. *Synonym:* Markasol. An antiseptic recommended as a substitute for iodoform, as a non-irritating dry dressing for wounds, ulcers, excoriations, burns, etc.

CERIUM-SALICYLATE forms an insoluble, pink-colored powder, being a valuable remedy in the treatment of diseases of the gastric and intestinal mucous membranes. Dose, 1–2 Gm. (15–30 gr.).

CHRYSOPHANATE (Dermol). A yellowish-brown powder recommended in pityriasis and herpes.

CRESOLATE. A grayish-white powder, free from odor and taste, insoluble in water and alcohol. Used internally as an intestinal antiseptic, externally as iodoform substitute.

DITHIOSALICYLATE, or *THIOFORM.* See under Dithiosalicylic Acid.

LORETINATE. A combination of bismuth and loretin obtained by precipitating loretin sodium solution with a solution of bismuth trinitrate in glycerin and water, used as astringent and antiseptic in diarrhea of phthisis. Dose, 0.5 Gm. Externally as dusting-powder for wounds, as ointment in eczema, psoriasis, etc.

NAPTHO-GLYCERITE. Recommended as a specific for gonorrhea. Composition unknown.

NAPTHOLATE. Obtained by adding a solution of beta-napthol in an alkali to a solution of bismuth nitrate, the latter being dissolved by aid of glycerin (see above) or a dilute acid. The precipitated bismuth naptholate is well washed and dried at low temperature. It forms a brownish, tasteless powder, insoluble in water; it is employed as an intestinal antiseptic, in doses of 1–2 Gm. (15–30 gr.).

OLEATE, $(C_{17}H_{33}CO_2)_3Bi$. Obtained by precipitating a solution of sodium oleate with a solution of an equivalent amount of bismuth trinitrate; the solution of the latter being prepared as above directed. An insoluble powder possessing emollient and mild astringent properties; employed in various skin diseases.

OXY-BROMID. An impalpable, faintly yellowish powder, that forms a good emulsion with tragacanth. Serviceable in nervous dyspepsia.

OXY-CHLORID (Sub-chlorid). This is made by pouring a solution of bismuth trinitrate in diluted nitric acid into a solution of common salt. The white precipitate is well washed and then dried. Its medicinal uses are the same as those of the subnitrate.

OXY-IODID, SUB-IODID, or *BASIC IODID*, Bi OI. Crystalline bismuth trinitrate 95.4 Gm. is dissolved in 120 Cc. of glacial acetic acid; this solution is then poured, with constant stirring, into a solution of 33.2 Gm. of potassium iodid and 50 Gm. of sodium acetate in two liters of water. The precipitated oxyiodid is then washed by decantation, strained off, and dried at 100° C. This is a reddish-brown, heavy powder, insoluble in all solvents, except acid and alkali solutions, by which it is decomposed. Recommended as an antiseptic dusting-powder, combining the action of iodin and bismuth.

OXY-IODO-GALLATE, or *AIROL*, $C_6H_2(OH)_3CO_2BiOHI$, is a substitute for iodoform, applied in ointment (water-free lard or lanolin) or dusted on in powder. It is light grayish-green in color; has no odor or taste.

OXY-IODO-METHYL-GALLOL. See Iodogallicin.

OXY-IODO-PYROGALLOL. Prepared by prolonged digestion of bismuth oxyiodid with pyrogallol, or by precipitating a solution of iodids and pyrogallol by means of a solution of bismuth nitrate in acetic acid. It is a fine, amorphous, yellowish-red powder, insoluble in the usual solvents, and permanent in air and light. It is recommended as a powerful surgical antiseptic.

PANCREATINIZED. Used in dyspepsia. Dose, 1–5 Gm.

PEPTONATE. Used in dyspepsia and gastralgia. Dose, 1–5 Gm.

PERMANGANATE (Basic). Used as dry antiseptic dusting-powder.

PHENOLATE, or *CARBOLATE*, $Bi(OH)_2.C_6H_5O$. Prepared by interaction between a solution of bismuth trinitrate (see above) and a solution of sodium phenolate. Gray colored, insoluble, inodorous powder, used as an intestinal antiseptic in doses of 0.5–1 Gm. (8–15 gr.), also externally as an antiseptic dusting-powder.

PHOSPHATE (Soluble). Obtained by fusing together bismuth oxid, caustic soda, and phosphoric acid, pulverizing the resulting mass. This product contains 20 per cent. Bi_2O_3, and is very soluble in water; its solutions are rendered turbid by the addition of acids, alkalies, or by boiling. Recommended as an intestinal disinfectant, also in treatment of catarrh of the stomach, in doses of 0.2–0.5 Gm. (3–8 gr.).

PYROGALLATE (Helcosol). $C_6H_3(OH)_2OBiO$. Prepared by dissolving 150 parts of pyrogallic acid in 650 parts of a 25 per cent. sodium chlorid solution, and adding this solution to 316 parts of bismuth trichlorid dissolved in 1000 parts of a salt solution of the same strength. After digesting on a water-bath for a half hour, the solution is poured into water, and the basic bismuth salt thus precipitated is washed with water acidulated with nitric acid until the wash-

ings are free from chlorids. Forms a yellow, insoluble powder (60 per cent. Bi), which is
recommended as an internal and external antiseptic. Helcosol (Merck) has a slightly different
constitution, the formula being $(C_6H_3(OH)_2O)_2BiOH$; it contains 48 per cent. of metallic bis-
muth and is of a greenish-yellow color. Dose, 0.3–1 Gm.

RESORCINATE. A solution of bismuth trinitrate is added to a solution of resorcin in
excess of alkali. It forms a yellowish-brown powder, which contains about 40 per cent. of Bi_2O_3.
This compound is employed in the treatment of chronic and acute catarrh of the stomach. The
dose is not known.

SALICYLATE (Basic). $Bi (C_7H_5O_3)_3 . Bi_2O_3$. The following process of L. Wolmann yields
a bismuth salicylate of constant composition. Twenty-five parts of metallic bismuth in coarse
powder are added in small portions to 125 parts of nitric acid (sp. gr. 1.20), heated to from 75° to
90° C.; toward the end of the operation the temperature is increased to boiling. After standing
several days the fluid is decanted and evaporated to small bulk and crystallized. The crystals
of bismuth nitrate are washed with a little water containing nitric acid, and, after draining, 48.6
parts of the crystals are dissolved in about 200 parts of dilute acetic acid and the solution ren-
dered alkaline by the addition of aqua ammonia. The precipitate is well washed by decantation,
until the wash-water ceases to give a blue color on addition of a piece of zinc and a few drops of
iodid of starch solution. The precipitate is brought to a paste by triturating with a little water
in a mortar, 13.8 parts of salicylic acid added, and heated on a water-bath until the blue-white
color changes into that of a yellow-white. The mass is then collected on a muslin strainer,
pressed, and dried at a temperature not above 75° C. The bismuth salicylate thus obtained is a
white, inodorous, tasteless, and insoluble powder containing 64.65 per cent. of Bi_2O_3. Used as
intestinal antiseptic in intestinal disorders. Dose, 0.3–1 Gm. several times daily. Also em-
ployed externally as a dusting-powder.

SUBGALLATE. See Dermatol.

SUBTANNATE. Used for like purposes as the subgallate. For method of preparation,
see "Proceed. Amer. Phar. Assn.," 1896, p. 797.

SULFITE. Prepared by interaction between solutions of sodium sulfite and bismuth
trinitrate, the latter being brought into solution by means of glycerin. Bismuth sulfite pos-
sesses an antiseptic and antifermentive action, being employed as such in intestinal disorders.
Dose same as the subnitrate.

SULFOCARBOLATE. A purple-red powder. Recommended as an intestinal antiseptic.

TRI-BROM-CARBOLATE. See Xeroform.

VALERIANATE (Valerate). This is made by mixing 32 parts of bismuth subnitrate,
made into a thick paste with water, with a solution of sodium carbonate 11 parts, valeric acid
9 parts, and water 30 parts; this mixture is allowed to digest for one hour, frequently stirring;
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[Coblentz—"Newer Remedies."]

ERRATUM.

Page 31. **Blennostasin**: 3d line, Dose—For 1 to 4 Gm.
read *1 to 4 Grains.*

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·olds,

bitter powder, almost insoluble in water, readily soluble in alcohol, ether, a... ...ous,
Employed as a tonic, also as hypnotic. Dose, 0.064 Gm. (1 gr.). ...n.

BOMBAX MALABARICA. See Mocharas.

BONDUCIN. $C_{14}H_{15}O_5$.

A white, bitter powder, soluble in alcohol, chloroform, fats, and oils. Insol...
Used as a febrifuge in doses of 0.1–0.2 Gm. (1.5–3 gr.) in wafers.

BORAL. *Synonym:* Aluminum Boro-tartrate.

Through the interaction between aqueous solutions of borax and aluminum sulf...
num borate is obtained according to the following equation: $3Na_2B_4O_7 + Al_2 (SO_4)_3$ =...
$+ Al_2 (B_4O_7)_3$. The resulting precipitate is washed with water till free from sodium sul...
1 part of this aluminum borate is dissolved by the heat of the water-bath in 10 parts of ...
means of 1 part of tartaric acid, and evaporated to dryness at not above 40° C. The ...
aluminum-boro-tartrate (Boral) forms a soluble crystalline powder, which is recommend...
astringent antiseptic, either dry or in aqueous solution.

BORALID.

A mixture of equal parts of boric acid and antifebrin. Used as antiseptic in skin dis...

BORICIN.

A mixture of borax and boric acid.

BORO-CITRIC ACID.

This combination of boro and citric acids forms a white, soluble powder, which is employed
as a solvent for urates and phosphates in urinary calculi, gout, etc. Dose, 0.3–1.3 Gm. (5–20 gr.).

ALBUMINATE. A pale gray or white insoluble powder, containing about 9 per cent. of bismuth. Employed in gastric and intestinal cramps, in doses of 0.5–1 Gm. (8–15 gr.).

BENZOATE (Sub-benzoate). $(Bi(C_6H_5CO_2)_3{-}Bi(OH)_3$. By the heat of a water-bath, 20 parts of bismuth nitrate, $Bi(NO_3)_3$, are dissolved in 30 parts of glycerin, then diluted with 70 parts of water, and poured slowly into a solution of 20 parts of sodium benzoate in 1000 parts of water. (This order must not be reversed.) The resulting precipitate is washed with warm water until the washings no longer react for nitric acid (Diphenylamine T. S. See U. S. P.), then dried at a temperature not above 80° C. Bismuth benzoate forms a white, insoluble powder, which is employed as a dusting-powder for torpid ulcers; also used internally, being preferred by many to bismuth salicylate. Dose, 0.3–1 gm.

BETA-NAPTHOL BISMUTH. See Orphol.

BORATE. Obtained by fusing bismuth trinitrate and boric acid. A yellowish-white insoluble powder, used like the subnitrate.

BORO-PHENATE. $Bi_2O_3B(C_6H_5)CO_3.3H_2O$. *Synonym:* Markasol. An antiseptic recommended as a substitute for iodoform, as a non-irritating dry dressing for wounds, ulcers, excoriations, burns, etc.

CERIUM-SALICYLATE forms an insoluble, pink-colored powder, being a valuable remedy in the treatment of diseases of the gastric and intestinal mucous membranes. Dose, 1–2 Gm. (15–30 gr.).

CHRYSOPHANATE (Dermol). A yellowish-brown powder recommended in pityriasis and herpes.

CRESOLATE. A grayish-white powder, free from odor and taste, insoluble in water and alcohol. Used internally as an intestinal antiseptic, externally as iodoform substitute.

DITHIOSALICYLATE, or *THIOFORM.* See under Dithiosalicylic Acid.

LORETINATE. A combination of bismuth and loretin obtained by precipitating loretin sodium solution with a solution of bismuth trinitrate in glycerin and water, used as astringent and antiseptic in diarrhea of phthisis. Dose, 0.5 Gm. Externally as dusting-powder for wounds, as ointment in eczema, psoriasis, etc.

NAPTHO-GLYCERITE. Recommended as a specific for gonorrhea. Composition unknown.

NAPTHOLATE. Obtained by adding a solution of beta-napthol in an alkali to a solution of bismuth nitrate, the latter being dissolved by aid of glycerin (see above) or a dilute acid. The precipitated bismuth naptholate is well washed and dried at low temperature. It forms a br[illegible] of

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XY-IODO-GALLATE, or *AIROL,* $C_6H_2(OH)_3CO_2BiOHI$, is a substitute for iodoform, in ointment (water-free lard or lanolin) or dusted on in powder. It is light grayish-n color; has no odor or taste.

OXY-IODO-METHYL-GALLOL. See Iodogallicin.

OXY-IODO-PYROGALLOL. Prepared by prolonged digestion of bismuth oxyiodid pyrogallol, or by precipitating a solution of iodids and pyrogallol by means of a solution bismuth nitrate in acetic acid. It is a fine, amorphous, yellowish-red powder, insoluble in the ual solvents, and permanent in air and light. It is recommended as a powerful surgical anti-eptic.

PANCREATINIZED. Used in dyspepsia. Dose, 1–5 Gm.

PEPTONATE. Used in dyspepsia and gastralgia. Dose, 1–5 Gm.

PERMANGANATE (Basic). Used as dry antiseptic dusting-powder.

PHENOLATE, or *CARBOLATE,* $Bi(OH)_2.C_6H_5O$. Prepared by interaction between a solution of bismuth trinitrate (see above) and a solution of sodium phenolate. Gray colored, insoluble, inodorous powder, used as an intestinal antiseptic in doses of 0.5–1 Gm. (8–15 gr.), also externally as an antiseptic dusting-powder.

PHOSPHATE (Soluble). Obtained by fusing together bismuth oxid, caustic soda, and phosphoric acid, pulverizing the resulting mass. This product contains 20 per cent. Bi_2O_3, and is very soluble in water; its solutions are rendered turbid by the addition of acids, alkalies, or by boiling. Recommended as an intestinal disinfectant, also in treatment of catarrh of the stomach, in doses of 0.2–0.5 Gm. (3–8 gr.).

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RESORCINATE. A solution of bismuth trinitrate is added to a solution of resorcin in excess of alkali. It forms a yellowish-brown powder, which contains about 40 per cent. of Bi_2O_3. This compound is employed in the treatment of chronic and acute catarrh of the stomach. The dose is not known.

SALICYLATE (Basic). $Bi(C_7H_5O_3)_3 . Bi_2O_3$. The following process of L. Wolmann yields a bismuth salicylate of constant composition. Twenty-five parts of metallic bismuth in coarse powder are added in small portions to 125 parts of nitric acid (sp. gr. 1.20), heated to from 75° to 90° C.; toward the end of the operation the temperature is increased to boiling. After standing several days the fluid is decanted and evaporated to small bulk and crystallized. The crystals of bismuth nitrate are washed with a little water containing nitric acid, and, after draining, 48.6 parts of the crystals are dissolved in about 200 parts of dilute acetic acid and the solution rendered alkaline by the addition of aqua ammonia. The precipitate is well washed by decantation, until the wash-water ceases to give a blue color on addition of a piece of zinc and a few drops of iodid of starch solution. The precipitate is brought to a paste by triturating with a little water in a mortar, 13.8 parts of salicylic acid added, and heated on a water-bath until the blue-white color changes into that of a yellow-white. The mass is then collected on a muslin strainer, pressed, and dried at a temperature not above 75° C. The bismuth salicylate thus obtained is a white, inodorous, tasteless, and insoluble powder containing 64.65 per cent. of Bi_2O_3. Used as intestinal antiseptic in intestinal disorders. Dose, 0.3–1 Gm. several times daily. Also employed externally as a dusting-powder.

SUBGALLATE. See Dermatol.

SUBTANNATE. Used for like purposes as the subgallate. For method of preparation, see "Proceed. Amer. Phar. Assn.," 1896, p. 797.

SULFITE. Prepared by interaction between solutions of sodium sulfite and bismuth trinitrate, the latter being brought into solution by means of glycerin. Bismuth sulfite possesses an antiseptic and antifermentive action, being employed as such in intestinal disorders. Dose same as the subnitrate.

SULFOCARBOLATE. A purple-red powder. Recommended as an intestinal antiseptic.

TRI-BROM-CARBOLATE. See Xeroform.

VALERIANATE (Valerate). This is made by mixing 32 parts of bismuth subnitrate, made into a thick paste with water, with a solution of sodium carbonate 11 parts, valeric acid 9 parts, and water 80 parts; this mixture is allowed to digest for one hour, frequently stirring; the undissolved precipitate is collected, washed with cold water, and dried at 30° C. It forms a white, insoluble powder, possessing a strong valerian-like odor. Bismuth valerianate possesses the effect of the bismuth salts in addition to the anodyne action of the valeric acid. Dose is 0.05–0.25 Gm. (1–4 gr.).

BISMUTHOL.

See Bismutal.

BISOL.

A soluble phosphate of bismuth containing about 20 per cent. of bismuth oxid. Used in gastralgia and other irritations of the alimentary tract.

BLENNOSTASIN.

Claimed to be a derivative of a cinchona alkaloid. It somewhat resembles atropin in physiologic action, but is not poisonous. Has been used with success in hay fever, influenza, colds, etc. Dose, 1–4 Gm. (15–60 gr.) every hour.

BOLDIN.

A principle obtained from the leaves of the *Boldoa chiliensis*. It is a white, amorphous, bitter powder, almost insoluble in water, readily soluble in alcohol, ether, and chloroform. Employed as a tonic, also as hypnotic. Dose, 0.064 Gm. (1 gr.).

BOMBAX MALABARICA.

See Mocharas.

BONDUCIN. $C_{14}H_{15}O_6$.

A white, bitter powder, soluble in alcohol, chloroform, fats, and oils. Insoluble in water. Used as a febrifuge in doses of 0.1–0.2 Gm. (1.5–3 gr.) in wafers.

BORAL. *Synonym:* Aluminum Boro-tartrate.

Through the interaction between aqueous solutions of borax and aluminum sulfate, aluminum borate is obtained according to the following equation: $3Na_2B_4O_7 + Al_2(SO_4)_3 = 3Na_2SO_4 + Al_2(B_4O_7)_3$. The resulting precipitate is washed with water till free from sodium sulfate, then 1 part of this aluminum borate is dissolved by the heat of the water-bath in 10 parts of water, by means of 1 part of tartaric acid, and evaporated to dryness at not above 40° C. The resulting aluminum-boro-tartrate (Boral) forms a soluble crystalline powder, which is recommended as an astringent antiseptic, either dry or in aqueous solution.

BORALID.

A mixture of equal parts of boric acid and antifebrin. Used as antiseptic in skin diseases.

BORICIN.

A mixture of borax and boric acid.

BORO-CITRIC ACID.

This combination of boro and citric acids forms a white, soluble powder, which is employed as a solvent for urates and phosphates in urinary calculi, gout, etc. Dose, 0.3–1.3 Gm. (5–20 gr.).

BORO-FORMALIN. *Synonym:* Boro-formol.

Obtained by dissolving aluminum hydrate in a solution of 2 parts of formic acid and 1 part of boric acid, evaporating to crystallization. It forms soluble white glossy scales. Used as antiseptic, deodorant, and prophylactic.

BORO-FORMOL. See Boro-formalin.

BOROL. $SO_2<^{OBo}_{OK\ (or\ Na)}$. *Synonym:* Sodium or Potassium Borosulfate.

Occurs in colorless, inodorous, vitreous pieces, soluble in 5 parts of water. A powerful antiseptic, used internally and externally in infectious diseases. In diphtheria the nose and pharynx are sprayed with a 1–2 per cent. solution. Dose, for adults, 30–50 drops of a 20 per cent. aqueous solution 5 or 6 times daily, in water; for children, 10–20 drops. Used also internally in torticollis, bronchitis, septicemia, erysipelas, etc., both internally and externally in erysipelas, psoriasis, chilblains, ozena; externally in gonorrhea, burns, contusions, and wounds. In the form of a 20 per cent. solution it is useful in cleansing barrels. The solution should not be brought into contact with metals.

BOROPHENYLIC ACID. *Synonym:* Phenyl Boric Acid. $C_6H_5.B(OH)_2$.

Obtained by the action of phosphorus oxychlorid on a mixture of boric acid and phenol. Forms a soluble white powder of mild, aromatic taste; difficultly soluble in water; melts at 204° C. (400° F.). Employed as a preservative agent (1:5000); used as an antiseptic.

BORO-SALICYLATE OF GLYCERIN.

Boric and salicylic acids, when heated in the presence of glycerin, dissolve in large proportions, but, on cooling, the mixture soon becomes turbid, forming a thick and granular mass. If this mixture be heated anew until it boils, and a small quantity of calcined magnesia be then added, the solution after cooling remains perfectly limpid. The product thus obtained is miscible with water in all proportions. This boro-salicylate of glycerin enables the operator to obtain extemporaneously a solution containing equal parts of the two acids at a degree of concentration impossible with any other method. Moreover, the microbicide and antiseptic properties of the salicylic and boric acids are in nowise affected by their being transformed into a neutral or basic salt. The following is the formula:

Boric acid,	10 Gm.
Salicylic acid,	10 "
Distilled water,	10 "
Thirty per cent. dist. glycerin,	40 "

Heat the mass in a flask until it boils, and then add 1 Gm. calcined magnesia; reduce the fire and evaporate all the water, obtaining, after cooling, 50 Cc. of the glycerol or boro-salicylate, 5 Cc. of which will contain exactly 1 Gm. each of salicylic and boric acids.

BORO-SALICYLIC ACID. $BOH(OC_6H_4COOH)_2$.

A combination of boric and salicylic acids in molecular proportions. Recommended as an antiseptic instead of salicylic acid.

BOROSOL.

A colorless liquid of acid reaction, containing, according to various analyses, aluminum tartrate, boric acid, salicylic acid, glycerin, and free tartaric acid in aqueous solution. Borosol is recommended as a wash for perspiring feet.

BOROTARTROL.

An antiseptic consisting of neutral sodium tartrate and boric acid.

BOR-SALICYLATE. *Synonym:* Borsalyl.

A soluble and harmless antiseptic obtained by triturating together 32 parts of sodium salicylate and 25 parts of boric acid with a small amount of water; the mass soon becomes hard, when it is dried and powdered.

BORSALYL. See Bor-salicylate.

BORSYL.

This is a combination of boric acid, borax, talcum, and spermaceti. It is recommended as a remedy for excessive perspiration of the feet as a dusting-powder.

BOVININ.

Is the name of a preparation consisting of ox blood, a little cognac, and dried egg albumen. It is recommended for anemia, nervous exhaustion, and defective nutrition. The dose is 15 Gm. (about ½ oz.) 4 to 6 times daily, before meals. To increase the keeping qualities of the preparation, 0.1 per cent. of boric acid is added. Bovinin is also used subcutaneously and externally, in the treatment of abscesses.

BRASSICON.

A new headache remedy, a green-colored mixture, consisting, according to the "Süddeutsche Apotheker Zeitung," of 2 Gm. oil of peppermint, 6 Gm. camphor, 4 Gm. ether, 12 Gm. alcohol, and 6 drops of mustard oil. Is applied locally.

BRENZCAIN. $C_6H_4(OCH_3).OCH_2.C_6H_5$. *Synonym:* Guaiacol Benzyl Ester.

This is free from the caustic action of guaiacol and is used for producing local anesthesia by means of cataphoresis. The compound occurs in crystals, which are soluble in alcohol and ether. It combines readily with vasogen, with which it is diluted in the same manner as other guaiacol preparations.

BROMALBUMIN. See Bromo-albumin.

BROMAL-HYDRATE. $CBr_3COH + H_2O$. *Synonym:* Tri-brom-aldehyd-hydrate.

A mixture of alcohol 1 part and bromin 4 parts is heated to 140° C., then allowed to cool slowly; on standing, crystals of bromalhydrate separate. It forms colorless crystals, soluble in water, melting at 53.5° C. (128.3° F.); when heated to 100° C. it is decomposed into bromin and water.

Bromal-hydrate is employed as a sedative and antispasmodic, its action being the same as that of chloral hydrate, being given, however, in smaller doses [0.1–1 Gm. (1½–15 gr.)].

BROMALIN. $((CH_2)_6N_4.C_2H_5Br)$. *Synonyms:* Hexamethylene-tetramin-brom-ethylate; Brom-ethyl-formin.

This compound appears in colorless scales, or as a white, crystalline powder, readily soluble in water. It is administered to women and children in doses of 2–4 Gm. (30–60 gr.) as a nervine and sedative. Does not cause bromism.

BROMAMIDE. $C_6H_2Br_3.NH_2.HBr$. *Synonym:* Tri-brom-anilin Hydrobromid.

Nitrotribrombenzol is reduced by means of nascent hydrogen, the resulting product being treated with hydrobromic acid. This occurs in colorless, tasteless crystals, melting at 117° C. (242.6° F.), being employed as an antineuralgic in doses of 0.6 Gm. (10 gr.).

BROM-ANILIN. See Serosine.

BROM-ANTIFEBRIN. See Antisepsin.

BROM-HEMOL. See under Hemol.

BROMIDIA.

According to the "Phar. Post," Vienna, this contains potassium bromid, chloral hydrate, of each 30 parts; ext. hyoscyamus, ext. cannabis ind., of each 0.25 parts; ext. liquor. fld., 90 parts; ol. aurant. cort., gtt. v.

BROMIDIN.

Consists of chloral hydrate, ext. cannabis ind., and ext. hyoscyamus. Used as hypnotic.

BROMIPIN.

This is stated to be a 10 per cent. combination of bromin with oil of sesame, which retains almost entirely the physical properties of the oil and does not in the least suggest by its odor or taste the presence of so caustic a substance as bromin, of which it contains 10 per cent. The preparation causes no disturbances of stomach nor intestines, even after long-continued use. It is stated to be of particular value in epilepsy and neurasthenia. Dose, 1–3 teaspoonfuls daily.

BROMO-ALBUMIN. *Synonym:* Bromosine.

A compound of bromin and albumin obtained by the action of bromin on peptone, albumoses, or protogen. Used in epilepsy. Contains 10 per cent. of bromin.

BROMOFORM. $CHBr_3$. *Synonyms:* Tri-brom-methane; Formyl Bromid.

This analogue of chloroform is prepared by the action of sodium hypobromite on acetone. It forms a clear, colorless liquid, of chloroformic odor and taste; its specific gravity is 2.9 and boiling-point 148° C. (298.5° F.). Bromoform is only very slightly soluble in water, but readily in alcohol. It is employed in treatment of whooping-cough in daily doses of 5–20 drops.

BROMOL. $C_6H_2Br_3OH$. *Synonyms:* Tri-brom-phenol; Bromo-phenol.

This compound is obtained by pouring an aqueous solution of bromin in an aqueous solution of phenol, a white, crystalline precipitate resulting. The precipitate is washed and crystallized from alcohol. Bromol forms colorless crystals, which are insoluble in water, very soluble in alcohol, fatty and volatile oils. It is employed externally as an antiseptic in solution (1 : 30 olive oil), or ointment (1 : 10), or as a dusting-powder. In the treatment of diphtheria it is used in a 4 per cent. glycerin solution. Internally, as intestinal antiseptic, in doses of 0.1 Gm (1.5 gr.).

BROMO-PHENOL. C_6H_4BrOH. *Synonym:* Ortho-bromo-phenol.

This is a dull, violet-colored liquid, having a phenol-like odor, obtained by treating phenol with bromin. It is employed in the form of a 1–2 per cent. ointment in the treatment of erysipelas.

BROMO-PHENOL. See Bromol.

BROMOPHTHARIN.

A mixture of zinc oxid, calcium oxid, calcium carbonate, sodium sulfate, and 5 per cent. of sand. Used technically as a disinfectant and deodorant.

BROMO-PYRINE. $C_{11}H_{11}BrN_2O$.

A mono-bromo-antipyrine which forms white crystalline needles, soluble in alcohol and hot water. Melts at 114° C. Used as antipyretic, like antipyrine. Another product sold under this title consists of a mixture of antipyrine, caffein, and sodium bromid.

BROMOSINE. See Bromo-albumin.

BROOKE'S PASTE.

Oleate of mercury, 28 parts; petrolatum, 14 parts; zinc oxid and starch, of each, 7 parts; ichthyol, 1 part; salicylic acid, 1.2 parts. Used in treatment of facial skin diseases.

BRYONIN. $C_{42}H_{30}O_9$.

A bitter principle from the roots of *Bryonia alba*. Yellow, amorphous, bitter powder, soluble in water and alcohol. Used in dropsy and congested condition of the liver. Furnished in granules, each containing 0.001 Gm.

BUGLE-WEED. See Lycopus Virginicus.

BURANHEM. See Monesia.

BURSIC ACID. See Bursinic Acid.

BURSINIC ACID.

Obtained by precipitating an aqueous extract of *Bursa pastoris* with lead acetate and ammonia; the precipitate is freed from lead when dissolved in an acid, and then evaporated to dryness. Forms a pale yellow, hygroscopic mass of astringent taste.

Bursinic acid is employed in aqueous solution hypodermically, like ergotin; also used internally.

BUTYL-CHLORAL-HYDRATE. $CH_3\text{-}CHCl\text{-}CCl_3\text{-}CH(OH)_2$. *Synonym:* Croton Chloral.

A current of chlorin gas is passed through paraldehyd until saturated; the resulting butyl-chloral is purified by distillation, and brought in contact with water. Butyl-chloral-hydrate forms colorless, crystalline scales, which melt at 78° C., soluble in 30 parts of cold water, readily soluble in alcohol and ether.

It is employed as a hypnotic, in doses of 1–1.5 Gm. (15–24 gr.).

BUTYL-HYPNAL.

A combination of butyl chloral and antipyrine, similar to that of the latter with chloral hydrate (see Hypnal). It forms colorless needles, melting at 70° C. (158° F.), soluble in 30 parts of water and readily soluble in alcohol.

BUTYROMEL.

A mixture of 2 parts of fresh unsalted butter and 1 part of honey; intended as a substitute for cod-liver oil.

BUXINE. $C_{18}H_{21}NO_3$. *Synonyms:* Beeberin; Bebirin; Bibirin; Pelosine.

An alkaloid from the bark of *Buxus sempervirens*, identical with berberin. Recommended as a tonic and febrifuge, in doses of 1–2 Gm. (15–30 gr.).

BYROLIN.

A mixture of lanolin, glycerin, and boric acid. Used in skin diseases.

CADMIUM SALICYLATE. $(C_6H_4(OH)CO_2)_2Cd$.

This salt is prepared by the action of salicylic acid upon cadmium carbonate, or by precipitating barium salicylate with cadmium sulfate. When prepared by the first method, molecular quantities of the two substances are heated together with water until solution takes place, then evaporated to small bulk and crystallized. Thus obtained, cadmium salicylate forms fine, white, tabular crystals, which melt at 300° C. (572° F.) and dissolve in 24 parts of water at 100° C., and 68 parts at 23° C.; also soluble in alcohol, ether, and glycerin. The latter method of preparation yields an amorphous powder. Cadmium salicylate possesses a more energetic antiseptic action than the other salts of cadmium, being recommended in treatment of purulent ophthalmia.

CÆSIUM-AMMONIUM BROMID. $CsBr + 3NH_4Br$.

A white, soluble powder, highly recommended as anti-epileptic.

CÆSIUM BITARTRATE. $Cs_2C_4H_4O_6$.

Forms colorless, prismatic, strongly refractive crystals, which are readily soluble in water. This and the corresponding Rubidium compound were recommended by Schaefer in nervous heart palpitation, in doses of 0.18–0.3 Gm.

CÆSIUM BROMID. $CsBr$.

White, granular powder, soluble in water. Used in nervous palpitation of the heart in doses of 0.18–0.3 Gm.

CÆSIUM CARBONATE. Cs_2CO_3.

White, granular, hygroscopic mass, soluble in water. Used as anti-epileptic.

CÆSIUM HYDROXID. $CsOH$.

A grayish, hygroscopic, soluble mass. Used as anti-epileptic.

CÆSIUM-RUBIDIUM-AMMONIUM BROMID. $(CsRb)Br_2 + 3NH_4Br$.

Used as anti-epileptic in doses of 2–3 Gm. (30–45 gr.), taken in evening.

CÆSIUM SULFATE. Cs_2SO_4.

Colorless, stable prisms, soluble in water. Used as anti-epileptic.

CAFFEIN SALTS (DOUBLE SALTS AND DERIVATIVES).

Among the large number of salts of caffein that have been introduced, a very few have received attention. Among the very important of these are the *carbolate*, *phthalate*, and *boro-citrate*, which are readily soluble, the former two being recommended for hypodermic use.

CAFFEIN BORO-CITRATE. A white powder, soluble in water, alcohol, and chloroform, which combines the physiologic effect of caffein with the antiseptic properties of boric acid.

CAFFEIN CHLORAL. $C_8H_{10}N_4O_2$–CCl_3COH. This is a combination of chloral and caffein in molecular proportions. It is crystalline and soluble in water. Caffein-chloral is a sedative and analgesic. Dose, 0.2–0.3 Gm. (3–5 gr.).

CAFFEIN HYDROBROMID. Used as diuretic subcutaneously. Injection of 4–10 m. of a solution of caffein hydrobromid, 10 parts; hydrobromic acid, 1 part; distilled water, 3 parts.

CAFFEIN NITRATE. Forms yellowish, needle-like crystals.

CAFFEIN PHENATE AND PHTALATE are used subcutaneously.

CAFFEIN-SODIUM BENZOATE is prepared by evaporating an aqueous solution of one part of caffein in one of sodium benzoate dissolved in 3 parts of water. It forms white, crystalline crusts. Owing to the ready solubility of this and the following double salts, they are especially suitable for subcutaneous use; subcutaneous dose double that of caffein.

CAFFEIN-SODIUM SALICYLATE and *CAFFEIN-SODIUM CINNAMATE* are prepared in the same manner as the above benzoate, employing equal parts of caffein and the respective organic sodium salts.

CAFFEIN-SODIUM SULFONATE. See Symphorol.

CAFFEIN TRI-IODID (Di-iodo-caffein-hydriodid). $(C_8H_{10}N_4O_2I_2HI)_2 + 3H_2O$. This is prepared by adding a solution of hydriodic acid to a weak alcoholic solution of caffein. It forms dark-green prisms, which are readily soluble in alcohol. Internally it acts like a weak preparation of iodin, the dose being 0.12–0.24 Gm. (2–4 gr.).

ETHOXY-CAFFEIN, $C_8H_9N_4O_2(OC_2H_5)$, is prepared by boiling mono-bromo-caffein with caustic potash. It forms crystalline needles, which are less soluble in water than caffein, melting at 140° C. (284° F.). Ethoxy-caffein has a similar action to caffein, being also narcotic. Dose is about 0.2 Gm. (3 gr.).

IODO-CAFFEIN is prepared by passing sulfuretted hydrogen into a solution of potassium iodid and caffein. Iodo-caffein forms colorless crystals soluble in water; unstable, decomposed by hot water; it is employed in cardiac affections in doses of about 0.3 Gm. (5 gr.).

IODOL-CAFFEIN. $C_8H_{10}N_4O_2C_4I_4NH$. A crystalline compound prepared by the interaction of molecular quantities of iodol and caffein. It has a gray color, is inodorous, tasteless, and practically insoluble in the ordinary solvents. Iodol-caffein is employed as an antiseptic, like iodol, of which it contains 75 per cent. Internally in place of KI; externally as a substitute for iodol.

IODO-THEOBROMIN is prepared in like manner to the above caffein compound. It is used as a diuretic, alterative, and in cardiac affections. Dose, 0.3–0.5 Gm. (5–8 gr.).

CAFFENOL. ALGOPHEN.

CAHINCIN. See Caincic Acid.

CAINCIC ACID. $C_{40}H_{64}O_{19}$. *Synonyms:* Cahincic Acid; Cahincin.

A crystalline principle obtained from the root of the *Chiococca anguifuga* (cainca root). Forms crystalline flakes, inodorous, of a bitter, astringent taste, soluble in water and alcohol. Given in doses of 2–4 gr. (0.13–0.25 Gm.) as a diuretic and cathartic; as an emetic, in doses of 0.5–1 Gm. (8–15 gr.).

CAINCINIC ACID. See Caincic Acid.

CAJUPUTOL. See Eucalyptol.

CALAYA.

An extract of the fruit of *Anneslea febrifugo.* Used in malaria. Dose, 2 Gm. (30 gr.) every two hours.

CALCIUM BISULFITE (FLUID).

A colorless fluid, smelling strongly of sulfurous acid. Used as antiseptic wash or gargle when diluted with four to five times its volume of water.

CALCIUM BORATE. CaB_4O_7.

Obtained by interaction between aqueous solutions of borax and calcium chlorid. Recommended as an antiseptic dusting-powder in treatment of moist eczema, burns, etc.; likewise internally in doses of 0.2–0.4 Gm. (3–6 gr.) for diarrhea of children.

CALCIUM BOROGLYCERID.

Calcium borate and glycerin are heated together, stirring constantly, until when a drop is removed it congeals to a hard mass. The mass is then poured out on a slab and allowed to congeal. Forms a glassy, transparent, fragile mass, hygroscopic, soluble in water and alcohol. Used as antiseptic.

CALCIUM-CHLORHYDRO-PHOSPHATE, SYRUP OF. See Chlorhydrophosphate of Calcium.

CALCIUM CRESYLATE.

Obtained by treating calcium hydrate with cresol. A syrupy fluid, miscible with water. Used as disinfectant in place of carbolic acid.

CALCIUM FERRO-PHOSPHO-LACTATE.

Used in scrofula and rachitis in doses of 0.2–0.5 Gm.

CALCIUM GLYCERO-PHOSPHATE. See under Glycero-phosphoric Acid.

CALCIUM HIPPURATE.

Forms a white soluble powder. Used to remove excess of uric acid in the organism. Dose, 0.5 Gm.

CALCIUM IODATE. $Ca(IO_3)_2 + 6H_2O$.

Forms glossy crystals, almost insoluble in water, insoluble in alcohol. Used as antiseptic wash for cleansing the bladder.

CALCIUM LACTATE. $Ca(C_3H_5O_3)_2 + 5H_2O$.

Forms warty-like crystalline masses, soluble in water and hot alcohol. Used in treatment of rachitis and scrofula, in doses of 0.2–0.5 Gm.

CALCIUM LACTO-PHOSPHATE.

To a mixture of calcium phosphate with 25 times its weight of hot water, lactic acid is added till solution takes place; then it is evaporated to crystallization. Used in rachitis of children. Dose, 0.2–0.65 Gm. (3–10 gr.).

CALCIUM LORETINATE, BASIC. $Ca(I.O.C_9H_4N.SO_3)$.

Fine, cream-colored needles, nearly insoluble in water.

CALCIUM LORETINATE, NORMAL. $Ca(I.OH.C_9H_4N.SO_3)_2.H_2O$.

Used as antiseptic. An orange-red, crystalline powder, slightly soluble in water.

CALCIUM PERMANGANATE. $Ca(MnO_4)_2 + 5H_2O$.

Forms crystals similar to the potassium salt, which are very soluble in water. Its antibacterial and antiseptic properties are given as being 100 times stronger than the potassium salt, hence is especially adapted to the purification of drinking water. Recommended as antiseptic wash in gynecology, and also in dentistry for cleansing cavities in the teeth of decayed matter.

CALCIUM SALICYLATE. $\left[C_6H_4<^{OH}_{COO}\right]_2Ca + 2H_2O$.

Salicylic acid is neutralized with an equivalent amount of calcium carbonate (free from iron) in the presence of hot water, the filtered solution is then evaporated and crystallized. Calcium salicylate forms a white, crystalline powder, inodorous and tasteless, almost insoluble in cold water. Used in gastro-enteritis in doses of 0.6–2 Gm. (10–30 gr.).

CALCIUM SANTONATE.

A white, inodorous, tasteless, insoluble powder. Used as anthelmintic in doses of 0.05 Gm.

CALCIUM SULFOPHENATE. (Sulfocarbolate.) $(C_6H_4.OH.SO_3)_2Ca$.

Prepared by neutralizing sulfocarbolic acid with calcium carbonate. It forms a white, almost inodorous, stable, astringent, bitter powder, freely soluble in water and alcohol. Recommended because of its strong antiseptic, disinfectant, and astringent properties; given internally in 1 per cent. aqueous solution. Dose, 1 tablespoonful every 3 hours.

CALOLACTOSE.

An intestinal disinfectant, said to consist of a mixture of calomel (1), bismuth subnitrate (1), and lactose (8).

CALPHENOL.

An antiseptic surgical dressing.

CAMPHENOL.

A combination of camphor, cresols, and phenols. Used as disinfectant and germicide.

CAMPHOID.

This is prepared by dissolving pyroxylon, 1 part, in a solution of 20 parts of camphor in alcohol. It is a thick, colorless fluid, which, because of its rapidity in drying, leaving a thin film when applied to the skin, serves as an excellent vehicle for iodoform, chrysarobin, etc.

CAMPHO-PYRAZOLON. $C_{17}H_{20}N_2O$.

This is a compound of phenyl-hydrazin and campho-carboxylic acid. It occurs in fine crystalline needles, melting at 132° C. (269.6° F.), insoluble in water and ether, soluble in alcohol. Campho-pyrazolon is proposed as a substitute for camphor.

CAMPHOR, NAPTHOL. See Beta-napthol Camphor.

CAMPHOR, PHENYLATED. See Phenol Camphor.

CAMPHOR, RESORCINATED. See Resorcin-camphor.

CAMPHOR SALICYLATE.

This is prepared by fusing together 84 parts of camphor and 65 parts of salicylic acid, which solidify to a crystalline mass. It may be obtained in well-formed crystals by recrystallization from benzol. Soluble 1 : 20 in the fatty oils; almost insoluble in water and glycerin. Employed externally in ointment-form as an application in lupus and various skin diseases, internally in treatment of certain diarrheal complaints. Dose, 0.05–0.25 Gm. (⅞–4 gr.).

CAMPHOR, SALOL. See under Salol.

CAMPHOR, THYMOLATED. See Thymol-camphor.

CAMPHORIC ACID. $C_8H_{14}(COOH)_2$.

This is a dibasic acid obtained by the action of hot nitric acid on camphor. It forms white, scaly crystals, odorless, melting at 186.5° C. (368° F.). It is soluble in 200 parts of cold and 10 parts of boiling water; very soluble in alcohol. It is employed in treatment of night-sweats of phthisis, likewise in acute and chronic diseases of the respiratory tract. The dose is from 1–1.5 Gm. (15–24 gr.). When applied topically it is used in a solution of from 1–4 per cent. strength.

CAMPHORONIC ACID. $C_8H_{11}(COOH)_3$. *Synonym:* Iso-propyl-carballylic Acid.

Obtained by the oxidation of campholic acid. It forms soluble white needles, hygroscopic; melts at 136° C. (276.8° F.). Recommended as an antiseptic.

CAMPHOROXAL.

A solution of hydrogen dioxid, containing camphor and alcohol.

CANNABIN.

An alkaloid isolated from *Cannabis sativa*, or Indian Hemp. Cannabin forms a brown, syrupy liquid, which is employed as a hypnotic, the dose being 0.06–0.3 Gm. (1–5 gr.).

CANNABIN TANNATE forms a yellowish-gray colored powder of bitter and slightly astringent taste, only slightly soluble in water, alcohol, and ether, very soluble in acidulated water. It is employed as a hypnotic in nervous sleeplessness, the dose being 0.25–1 Gm. (3–15 gr.).

CANNABINOL.

An oil extracted from *Cannabis indica*, claimed to be the sole active constituent of the drug.

CANNABINON (Merck).

A resinous body obtained from the flowering tops of *Cannabis sativa*. Cannabinon appears in form of a dark-brown, soft resin, insoluble in water; soluble in alcohol, ether, chloroform, fatty and volatile oils. Recommended as a sedative and hypnotic, in doses of 0.03–0.1 Gm. (½–1½ gr.). Women, half this dose.

CANNONIN.

A proprietary disinfectant.

CANTHARIDIN. $C_{10}H_{12}O_4$.

The active vesicating principle obtained from the *Cantharis vesicatoria* and other members of the family of *Coleoptera*. Cantharidin forms colorless crystals which are insoluble in water, but very soluble in chloroform; it dissolves quite readily in ether and the fatty oils; with caustic alkalies it forms salts soluble in water. This principle is frequently employed in place of cantharides. The salts, or cantharidates, are employed hypodermically in treatment of tuberculosis, 0.2 Gm. of cantharidin and 0.4 Gm. of potassium hydrate being dissolved in 1000 Cc. of distilled water; of this solution 0.2–0.4 Cc. (0.0001–0.0002 Gm.) is employed for a subcutaneous injection.

CAPITCURA.

A proprietary antipyretic and analgesic.

CAPTOL.

An antiseborrheic and medicinal cosmetic preparation, used for dandruff, etc. A condensation product of tannin and chloral, free from the disagreeable effects of the components. It is a dark-brown powder, soluble in warm water and in alcohol. Best applied in form of lotion, as follows: Captol, 2 parts; chloral hydrate, 2 parts; tartaric acid, 2 parts; castor oil, 1 part; 65-per-cent. alcohol, 200 parts. This mixture is in the market under the name of "Compound Spirit of Captol."

CARBAMID. See Urea.

CARBOLIC ACID, CAMPHORATED.

A mixture of carbolic acid, 1 part, and camphor, 3 parts. A clear, colorless fluid, which on standing becomes red.

CARBO-SAPOL.

A disinfectant prepared by G. T. Beatson. It consists of 50 parts of carbolic acid, 25 parts of yellow soda soap, and 25 parts of soft potash soap. These ingredients are warmed together on a water-bath until a clear solution is obtained. Carbo-sapol is readily miscible with water, yielding an oily liquid. A 1 per cent. solution does not attack the hands. The antiseptic power of this preparation is about the same as that of corrosive sublimate.

CARBUCICCHIO. See Neuralgin.

CARDINE (Hammond).

A clear, yellow fluid (sterilized) prepared by digesting the finely chopped hearts of sheep with an equal quantity of glycerin and boric acid solution in a well-closed vessel, and subsequently filtering. Employed subcutaneously in 3–5 Cc. doses as a heart tonic and diuretic. See Animal Extracts; also Appendix.

CARDOL.

A blistering oil obtained from the pericarps of the *Anacardium occidentale*, by extraction with ether. Employed externally as a vesicant.

CARISSIN.

A glucosid obtained from the bark of *Carissa ovata*. Resembles strophanthin in action.

CARNIFERRIN. (D. R. P. Hoechst.)

This is a meat preparation, of German production, being a tasteless combination of phosphocarnic acid and iron (30 per cent.). It is given in 3–5 gr. doses for children and 8 gr. for adults. It is readily absorbed and tasteless, and mixes well with acid or alkaline solutions.

CARNIFERROL. *Synonym:* Liquor Carnis Ferro-peptonatus.

An iron preparation of meat peptone, used as a stimulant dietetic.

CARNOLIN.

An aqueous solution containing 1.5 per cent. of formaldehyd; specific gravity 1.0035. Recommended as a harmless disinfectant and preservative for food.

CARNOSE AND NUTRIMENTOSE.

These preparations have been placed on the market in France as dietetics. In their composition they closely resemble sanose, which consists approximately of 80 per cent. of casein and 20 per cent. of albumins.

CARPAIN. $C_{14}H_{27}NO_2$.

An alkaloid obtained from the leaves of *Carica papaya*. Carpain forms handsome, colorless crystals of a bitter taste, melting at 121° C. (249.8° F.); it readily unites with acids, forming crystalline salts.

This alkaloid is employed as a substitute for digitalis, being given in doses, hypodermically, of 0.006–0.01 Gm. ($\frac{1}{10}$–$\frac{1}{6}$ gr.).

CARPOSID.

A glucosid obtained from *Carica papaya*. It is a white, crystalline, hygroscopic mass.

CARVACROL. $C_{10}H_{13}OH$.

A phenol found in the essential oil of *Origanum species*. It forms a thick fluid, which boils at 235° C. Carvacrol possesses powerful antiseptic properties.

CARVACROL IODID. $C_{10}H_{12}OI$. *Synonym:* Iodocrol. This is prepared analogous to aristol by the action of iodin upon an alkaline solution of carvacrol. It constitutes a brown-colored powder, which becomes soft at 50° C. (122° F.), melting at 90° C. (194° F.) to a brown fluid. It is insoluble in water, slightly soluble in alcohol, readily in ether, chloroform, and olive oil.

Carvacrol iodid is employed as a substitute for iodoform.

CARYOPHYLLUM GLYCYPHLŒUM. See Monesia.

CASANTHROL.

This is the name given by Unna to a mixture of casein ointment with 10 per cent. of the ether and benzol-soluble constituents of coal tar. It belongs to the group of so-called water-soluble varnishes, and is a thick and tenacious emulsion, from which no fat separates even on warming. Upon the skin it forms after a few minutes a dry, elastic covering, which, however, does not hinder the perspiration, but rather tends to increase it. It has a neutral reaction, and may be mixed with any substance that does not coagulate casein, and can therefore be mixed only with small quantities of mineral and acid salts, not exceeding 1 per cent. Dr. S. Beck recommends casanthrol in eczemas of children, prurigo, etc., where it causes no unpleasant secondary effects. It is the only tar preparation that can be used in strong concentration (10 per cent.) on the inflamed skin to advantage.

CASCARINE.

A principle isolated from *Cascara sagrada;* it is also identical with *rhamnoxanthine*, which occurs in *Rhamnus frangula*. This principle occurs in colorless, tasteless needles, melting at 200° C. (392° F.), insoluble in water, but soluble in alcohol. Cascarine is recommended in doses of 2–3 gr. (0.15–0.2 Gm.) daily in treatment of habitual constipation.

CASEIN-MERCURY.

A solution of neutral casein-alkali and mercuric chlorid is concentrated by evaporation or by precipitation with alcohol. The compound obtained differs from a similar one prepared from casein and mercuric oxid, in that it is soluble in alkalies. Soluble in water on the addition of traces of ammonia, sodium bicarbonate, etc. Intended for use as antiseptic.

CASEIN OINTMENT.

Contains, according to Unna, casein, 14 parts; potassium and sodium hydrates (4 : 1), 0.43 parts; glycerin, 7 parts; vaselin, 21 parts; salicylic acid (or borax), 1 part; water, 56–57 parts. It forms a thick, white emulsion, and is intended as a base for ointments.

CASEIN-PEPTONE. (MILK-PEPTONE.)

A light-brown powder, easily soluble in water. A nutrient for convalescents, given with beer, wine, beef-tea, etc., or as rectal injection.

CASEIN-SODIUM.

A soluble, chemically pure albuminoid body, which may be dissolved in milk, cocoa, bouillon, etc., without in the least interfering with the taste of these. Ten Gm. of this preparation represent 500 Gm. of milk. Casein-sodium is obtained by evaporating and drying the calculated amounts of casein and sodium hydrate in vacuo.

CASEOIODIN.

A substance similar to thyroiodine, prepared from periodocasein. It is a white powder containing 8.7 per cent. of iodin. Has been used with good results in struma.

CATECHU-TANNIC ACID.

A reddish-brown powder obtained from the *Acacia catechu*. It is employed as an astringent to check diarrhea, hemorrhage; also bleeding gums, ulcerated nipples, epistaxis, etc.

CATHARTIC ACID.

The cathartic principle of senna, which forms brown, hygroscopic scales, readily soluble in water and dilute alcohol. Dose: for adults, 0.25–0.4 Gm.; for children, 0.12–0.2 Gm.

CEARIN.

This is a new ointment vehicle that is capable of taking up a large proportion of water. It consists of bleached carnauba wax and paraffin. Carnauba wax can not be bleached in the pure state, but it may be accomplished by mixing it with beeswax, Japan wax, ceresin, or paraffin. The several commercial grades of white carnauba wax are not all equally adapted to pharmaceutic purposes. Those prepared with Japan or beeswax should be rejected, as they readily become rancid. For the preparation of the new ointment vehicle, Issleib recommends a mixture of one-fourth carnauba wax and three-fourths paraffin, bleached by exposure to sunlight only. This is fused and mixed with four times its weight of liquid petrolatum (sp. gr., 0.88), and the mixture stirred until cold. It is capable of taking up 15 per cent. of water.

CEDRIN.

Yellow crystals, of persistent bitter taste, obtained from the seeds of *Simaba cedron;* soluble in water. Recommended by Baillon as febrifuge.

CELLOIDIN.

A highly concentrated collodion obtained by distilling the alcohol off from collodion. Forms translucent scales soluble in alcohol-ether. Yields a firmer film than collodion.

CEPHALINE.

This is a proprietary medicament composed of antipyrine and powdered, roasted coffee, of each 5 parts; caffein and sodium salicylate, of each 2 parts. The mixture is deliquescent. This preparation must not be confounded with an alkaloid bearing a similar name (cephælin), recently discovered in ipecac.

CERAL.

Copyrighted synonym for "Pasta Cerata Schleich."

CEREBRIN ALPHA. See Cerebrinin.

CEREBRINE (Hammond).

The sterilized extract of the brain of the ox. Used in epilepsy, brain diseases, etc. See Animal Extracts; also Appendix.

CEREBRININ. *Synonyms:* Cerebrin Alpha; Liquor Cerebri Sterilisatus.

A fluid extract of fresh calves' brains. Used in chorea and mental diseases. See Appendix.

CEREBRUM EXSICCATUM.

The dried and powdered gray substance of the brain of calves, which has been previously extracted with ether to remove fat. Used in neurasthenia, chorea, and brain diseases. One part represents 5 parts of the fresh organ. Dose, 2–4 Gm. per day. Can also be had in tablet form, each one containing 0.1 Gm. of active substance. See Appendix.

CERES POWDER.

A substance advertised as a preventive of grain smuts. According to the analyses of Hollerung and other German investigators, it is only crude potassium sulfid, sold under another name and at a much higher price.

CETRARIN. $C_{18}H_{16}O_8$.

A bitter principle obtained from Iceland moss (*Cetraria islandica*). It forms colorless crystals of a bitter taste, difficultly soluble in cold, but very soluble in hot, alcohol.

Cetrarin increases peristalsis, likewise the secretion of saliva, bile, and pancreatic juice. Internal dose is 0.1–0.2 Gm. (1.5–3 gr.).

CHAMPAGNE-MILK.

A new beverage bearing this name has recently been put on the market by a Frenchman It is stated to be prepared in the following manner: Cream is sweetened with syrup, placed in a closed vessel, in which it is sterilized by passing a current of oxygen through it, and then charged with carbonic acid.

CHELEN. See Ethyl Chlorid.

CHELIDONIUM SALTS (Phosphate; Sulfate; Tannate).

The two former salts are readily soluble; the latter, which contains 53.5 per cent. of alkaloid, is only soluble in alcohol. Used as a mild narcotic in cancerous conditions of the stomach and enteralgia, in doses of 0.05–0.2 Gm. of the sulfate and 0.2 Gm. of the tannate.

CHEMIA.

A proprietary antiseptic.

CHINAPTHOL. *Synonym:* Beta-napthol-alpha-monosulfonate of Quinin.

A yellow, crystalline, bitter powder, insoluble in cold, but somewhat so in hot, water and alcohol. In the intestines, chinapthol decomposes into quinin and napthol-sulfonic acid. Used as intestinal antiseptic in abdominal typhus, dysentery, intestinal tuberculosis, puerperal conditions, etc., in daily doses of 0.5–to 5 Gm.

CHINASEPTOL. See under Chinolin.

CHINIDIN AND SALTS. See Quinidin.

CHININ AND SALTS. See Quinin.

CHININUM BIMURIATICUM CARBAMIDATUM. See Quinin Dihydrochlorid-carbamate.

CHINOFORM.

A compound of formaldehyd with cincho-tannic acid, obtained by precipitating an aqueous extract of cinchona bark (to which formaldehyd has been added), by the addition of hydrochloric acid. Uses, same as those of tannoform.

CHINOL. $C_9H_7N.HCl$. *Synonyms:* Chinolin or Quinolin Monohydrochlorid.

White, crystalline, odorless powder, soluble in water and alcohol. Antiseptic like chinolin.

CHINOLIN. C_9H_7N. (QUINOLIN.)

A tertiary amin, obtained by the distillation of quinin or cinchonin with potassium hydrate, or, as synthesized by Skraup, by heating a mixture of nitrobenzol, anilin, glycerin, and sulfuric acid. Pure chinolin is a yellowish-colored liquid, of aromatic odor, sp. gr. 1.084, and boiling at 237° C. (458.6° F.). It is almost insoluble in water, very soluble in alcohol and ether. Chinolin is antiseptic, antizymotic, and antipyretic; being employed chiefly as a tooth- and mouth-wash (0.2 per cent.).

Chinolin unites readily with the acids, forming soluble crystalline salts.

ACETO-ORTHO-AMIDO-CHINOLIN. $C_9H_6N(NHCH_3CO)$. This preparation is an analogue of acetanilid, in which chinolin replaces the phenyl radicle. It forms colorless crystals, which melt at 102.5° C. It possesses antipyretic properties.

CHINOLIN, ACETO-ORTHO-AMIDO. See Aceto-ortho-amido-chinolin.

CHINOLIN SALICYLATE. $C_9H_7NC_7H_6O_3$. A white crystalline powder, soluble in 80 parts of water, very soluble in alcohol, ether, glycerin, and the oils. Antifebrile and antiseptic in doses of 0.5–1 Gm. (8–15 gr.).

CHINOLIN TARTRATE. $(C_9H_7N)_3(C_4H_6O_6)_4$. Occurs in colorless, rhombic crystals, soluble in 80 parts of cold water, less so in hot water, soluble in 150 parts of alcohol. Its properties and doses are similar to the above.

DIAPHTHERIN (OXY-CHIN-ASEPTOL). $HO.C_9H_6N.HSO_3.C_6H_4.OH.C_9H_6N.OH$. This is a compound of one molecule of oxychinolin with one molecule of phenolsulfonate of oxychinolin. It forms clear, yellow crystals, soluble in water and melting at 85° C. (185° F.). Diaphtherin possesses antiseptic properties equal to those of carbolic acid, as also the advantages of solubility and of being non-poisonous. It is employed in ⅓–1 per cent. solution. The solution readily attacks surgical instruments.

By authority of Professor Emmerich, diaphtherin is superior to phenol or lysol as antiseptic.

DIAPHTOL (CHINASEPTOL). $C_9H_5(OH)(SO_3H)N$. This is an ortho-oxychinolin-meta-sulfonic acid, bearing the same relation to chinolin as phenol-sulfonic acid does to benzol. It forms yellowish-colored crystals, which are only slightly soluble in cold water, melting at 295° C. (563° F.). Its aqueous solution, like that of diaphtherin, gives a green color with ferric chlorid. The properties of diaphtol are similar to those of diaphtherin; also used as a substitute for salol.

KAIRIN. $C_9H_{10}(C_2H_5)NO.HCl$. *Synonyms:* Ethyl Kairin; Kairin A; Oxy-chinolin-ethylhydrid. This is a derivative of chinolin; its method of preparation is complicated. Kairin was the first synthetic substitute for quinin. It was recommended as an antipyretic in doses of 0.5–1 Gm. (8–15 gr.).

KAIROLIN. $C_9H_{10}(C_2H_5)N.H_2SO_4$. *Synonyms:* Kairolin A and M; Chinolin-ethylhydrid (A); Chinolinmethylhydrid (M). Kairin M is the hydrochlorid of *alpha*-oxy-chinolin-methyltetrahydrid, while kairolin A and M are the acid sulfates of ethyl-chinolin-tetrahydrid and methyl-chinolin-tetrahydrid, respectively. These remedies are not employed since the discovery of other antipyretics.

LORETIN. This is a meta-iodo-ortho-oxychinolin-ana-sulfonic acid ($C_9H_4IOH\text{-}SO_3H\text{-}N$), a powerful antiseptic discovered by Claus. It forms a yellow, inodorous, crystalline powder, which is only very slightly soluble in water (1:1000), insoluble in ether and the oils, melting at about 270° C. (518° F.). Loretin forms a valuable substitute for iodoform, having the advantage of being free from odor and toxic effect. It is employed as a dusting-powder, either alone or diluted, in 5–10 per cent. ointments and 0.1–0.2 per cent. aqueous solutions. (D. R. P. Hoechst.)

LORETIN METHYL. See Methyl Loretin.

RHODANATE (Sulfocyanate). $C_9H_7N{<}^{H}_{SCN}$. Forms white crystals, melting at 140° C. (284° F.), soluble in cold water to the extent of 3.5 per cent., very soluble in hot water. A powerful bactericide in 0.3–3 per cent. solutions.

SULFOCYANATE. See Chinolin Rhodanate.

THERMIFUGIN. $C_9H_7N(CH_3)(OH)COONa$. *Synonym:* Methyl-trihydro-oxychinolin-carboxylate of Sodium.

This compound forms colorless crystals, which are readily soluble in water, the solution becoming brown on standing. Employed as an antipyretic in doses of 0.1–0.25 Gm. (1.5–3.8 gr.).

CHINOPICRIC ACID.

A quinin compound of doubtful activity.

CHINOPYRINE. See Quinopyrine.

CHINORAL. See Guinoral.

CHINOSOL. $C_9H_6NO.SO_3K$ + Aq. *Synonym:* Oxy-chinolin sulfonate of potassium.

Forms a yellow powder which is soluble in water, insoluble in alcohol and ether. Its aqueous solution gives a green color with ferric chlorid. Used as antiseptic, astringent, and styptic externally; internally as antipyretic. A solution 1 : 40,000 prevents bacterial development.

Pulv. chinosol Co. consists of chinosol, chinaseptol, talc, and silica.

CHLORAL-ACETOPHENON-OXIME. ($C_6H_5.CH_3.C = NO.CH.OH\ C\ Cl_3$).

Obtained by the interaction between molecular quantities of chloral and aceto-phenon-oxime at low temperature. This body forms colorless, prismatic crystals, soluble in alcohol and ether, melting at 81° C. (177.8° F.), and when brought into contact with acids decomposes into its constituents. This remedy is used in treatment of epilepsy and tetanus.

CHLORALAMID. $CCl_3\ CH.OH.NH.COH$. *Synonym:* Chloral-formamid.

This is prepared by interaction between chloral (CCl_3COH) and formamid ($HCONH_2$). Chloralamid forms colorless crystals, which melt at 115° C. (239° F.), soluble in 20 parts of cold water and about 1½ of alcohol; it should not be heated with water. (D. R. P. Schering.)

It is employed as a substitute for chloral hydrate, in doses of 1–3 Gm. (15–45 gr.).

CHLORAL-AMMONIUM. $CCl_3CH.OH.NH_2$.

This should not be confused with *Chloralamid.* Chloral-ammonium is obtained by passing a current of dry ammonia gas into a solution of chloral in chloroform. It forms colorless needles, which melt at 84° C. (183.2° F.), almost insoluble in water; when boiled with water it is decomposed into chloroform and ammonium formate.

It is used as a hypnotic and analgesic in doses of from 1–2 Gm. (15–30 gr.).

CHLORAL AMYL.

A mixture of chloroform and amyl nitrite. Used as anesthetic.

CHLORAL-ANTIPYRINE. (MONO-CHLOR-ANTIPYRINE.) See under Antipyrine.

CHLORAL-CAFFEIN.

A combination of chloral and caffein in aqueous or alcoholic solution, prepared by a patented process, possessing (over caffein) the advantage of ready solubility.

CHLORAL CYANHYDRATE. $CCl_3CHO.HCN$. *Synonyms:* Chloral Hydrocyanin; Chloral Cyanhydrin.

White, rhombic plates, with odor of hydrocyanic acid and chloral. Soluble in water, alcohol, and ether. Fairly stable in solution. Decomposed by alkalies. 1.29 parts dissolved in 9 parts distilled water equivalent to U. S. P. 2 per cent. hydrocyanic acid; 6 parts in 1000 parts water = bitter almond water of Germ. Pharm.; 646 parts hydrocyanid contain 1 part pure HCN. Recommended as substitute for hydrocyanic acid or bitter almond water.

CHLORAL FORMAMID. (D. R. P. Schering.) See Chloralamid.

CHLORALIMID. $CCl_3CH\text{-}NH$. (D. R. P. Schering.)

This body is obtained by heating chloral-ammonium. Chloralimid is a crystalline powder, which is almost insoluble in water, easily in alcohol; mineral acids decompose it into chloroform and ammonia salt. Its properties are those of a hypnotic, in doses of 1–4 Gm. (15–60 gr.). Decomposed by mineral acids.

CHLORALIN.

A fluid which contains mono- and tri-chloro-phenol. Used as antiseptic in 2–3 per cent. solution in gynecology; also as a gargle in ½–1 per cent. solution.

CHLORALOSE. $C_8H_{11}Cl_3O_6$. *Synonym:* Anhydrogluco-chloral.

This is a compound of chloral with grape sugar. Chloralose forms fine colorless needles, which melt at 184°–186° C. (363.2°–366.8° F.), soluble in 170 parts of cold water, readily so in alcohol. It is employed as a hypnotic (substitute for chloral), in doses of 0.2–0.5 Gm. (3–8 gr.).

CHLORALOXIMES.

These are a class of bodies which consist of compounds of chloral with various oximes. Among the more important of these are *chloralacetoxime, chloral camphoroxime, chloral acetaldoxime, chloral benzaldoxime, chloral nitroso-beta-napthol,* etc. These compounds are soluble in alcohol and decomposed by heating with water. They are intended as hypnotics, the dosage not having been determined.

CHLORAL PHENOL.

A mixture of 1 part of chloral hydrate and 3 parts of phenol.

CHLORAL THYMOL.

A mixture of equal parts of chloral hydrate and thymol.

CHLORAL URETHANE. See Uralium.

CHLOR-ETHYL. See Ethyl Chlorid.

CHLOR-ETHYLIDEN. See Ethyliden Chlorid.

CHLORHYDROPHOSPHATE OF CALCIUM, SYRUP.

Each dose contains creosote (or guaiacol), 0.1 Gm.; calcium chlorhydrophosphate, 0.5 Gm.; tolu balsam, 0.2 Gm. This preparation is used in the treatment of rachitis.

CHLORIDEN. See Ethyliden Chlorid.

CHLOR-METHYL. See Methyl Chlorid.

CHLORO-ALBUMIN.

A compound obtained by the action of chlorin on peptone, albumoses, or protogen.

CHLOROBROM.

A solution of 6 parts each of chloralimid and potassium bromid in 58 parts of water. Used as a hypnotic, especially in the treatment of the insane. Dose, one tablespoonful.

CHLOROFORM (Anschütz). $\left(C_6H_4<\begin{matrix}CO\\O\end{matrix}\right)_4 . 2CHCl_3$. *Synonym:* Salicylid Chloroform.

A crystalline salicylid-chloroform, which yields chloroform in a very pure state on application of gentle heat, to be liberated at the time when wanted for use.

CHLOROFORM (Pictet).

A very pure chloroform obtained by crystallization at very low temperature.

CHLOROGENIN. See Alstonin.

CHLOROIODOLIPOL.

A mixture of chlorinated phenols and creosote. Used as strong disinfectant for closets, sputa of consumptives, etc., also as antiseptic in surgery and gynecology. In latter instances a 2–3 per cent. solution is employed. For inhalation in diseases of the air-passages, a 5 per cent. solution is used.

CHLOROL.

A solution of 1 part each of corrosive sublimate, sodium chlorid, and hydrochloric acid, and 3 per cent. of copper sulfate in 100 parts of water. Used as disinfectant and antiseptic.

CHLOROLIN.

An antiseptic solution containing chiefly mono- and tri-chloro-phenol. It is recommended as an effectual disinfectant for cesspools, closets, hospitals, etc. As an antiseptic wash in surgical operations a 2–3 per cent. solution is strong enough. An antiseptic soap is also prepared from it.

CHLORO-NAPTHOL.

A non-poisonous substitute for carbolic acid as disinfectant. It is said to be a combination creosote with an alkali.

CHLORO-PHENOL (Mono). $C_6H_4<\begin{matrix}Cl\ (1).\\OH\ (2).\end{matrix}$ *Synonyms:* Mono-chloro-phenol; Ortho-mono-chloro-phenol.

The preparation employed under this name consists of a mixture of ortho-mono-chlorphenol (7 parts) and alcohol, eugenol, and menthol (together 3 parts). This liquid is employed in diseases of the respiratory organs, from 16–30 drops being inhaled daily.

PARA-MONO-CHLORO-PHENOL. $C_6H_4(Cl).OH(1:4)$. This is a crystalline body resulting from the chlorination of phenol, possessing greater antiseptic power than the other two isomers. It melts at 40° C. (104° F.), is readily soluble in alcohol, but sparingly in water; it is employed as a 1–2 per cent. ointment in treatment of erysipelas.

TRI-CHLOR-PHENOL. $C_6H_2(Cl_3).OH$. *Synonym:* Omal. This is a derivative of carbolic acid, in which 3 atoms of hydrogen are replaced by chlorin; it occurs in the form of colorless, needle-like crystals, with an odor of phenol; melts at 68° C. (154.4° F.). It is employed as a 1–2 per cent. ointment in treatment of erysipelas.

CHLOROSIN.

A chlorin compound of albumin. Used in gastric affections (catarrh and carcinoma).

CHLOR-SALOL. $C_6H_4(OH)CO.OC_6H_4Cl$. *Synonyms:* Chlorophenol Salicylate; Salicylic-chlorophenol-ester.

This is prepared by the action of phosphorus penta-chlorid on a mixture of ortho- and para-chlorophenol. Chloro-salol—that is, the ortho-chloro-phenyl-ester—forms colorless crystals, which melt at 55° C. (131° F.), while those of the para-phenyl-ester melt at 72° C. (161.6° F.). Both are insoluble in water and soluble in alcohol. The *ortho-* compound is used as an antiseptic in surgery, while the *para-* is used internally in place of salol. Daily dose, 4–6 Gm. (60–90 gr.).

CHLORYL. *Synonym:* Coryl.

This name has been applied to a mixture of methyl and ethyl chlorids. It is a liquid at 0° C.; employed as an anesthetic, being milder in effect than ethyl chlorid. Also local anesthetic.

CHOLESTERIN AND BILIARY SALTS AS ANTIDOTES FOR SNAKE POISONS.

It has recently been shown that minute quantities of the gall of snakes or mammals are capable of neutralizing fatal doses of snake poison. C. Phisalix has further determined that cholesterin and the salts contained in gall possess an immunizing power against snake venom, but lose this power when they have been heated to 120° C. The action is not that of antitoxins. It is an interesting fact that cholesterin has this power notwithstanding its sparing solubility and feeble chemic affinities. This action is at present difficult to explain, and appears to be the first example of a definite chemic compound behaving like a lymph.

CHOLIN. $C_5H_{15}NO_2$. *Synonyms:* Bilineurin; Sinkolin.

A 5 per cent. solution of this base is used in diphtheritis.

CHROATOL. $C_{10}H_{16}.2HI$. *Synonym:* Terpin-iodo-hydrate.

Greenish-yellow aromatic crystals, insoluble in water, slightly in ether and chloroform. Quite soluble in alcohol, benzol, and acetic ether. Dermal application in psoriasis, alopecia, etc., in powder or ointment.

CHROMOSOT.

Said to consist chiefly of sodium sulfite and sulfate. Used as a disinfectant.

CHRYSAROBIN. $C_{30}H_{26}O_7$.

A principle obtained from Goa powder, which is a concretion found in the stem and branches of *Andira araroba*. It is a light yellow, crystalline powder, very slightly soluble in water, slightly soluble in alcohol, ether, and chloroform, freely soluble in alkalies. By oxidation chrysarobin is converted into chrysophanic acid. It is employed chiefly in treatment of various skin diseases, in ointment of 10 per cent. strength.

CHRYSOIDIN. ($C_6H_5 - N = N - C_6H_3(NH_2)_2HCl$). *Synonym:* Diamido-azo-benzol Hydrochlorid.

A red-brown, crystalline powder, which dissolves in water with a brown color. Used as disinfectant mouth-wash.

CHRYSOTOXIN.

According to Jacobi, this principle, isolated from ergot, is identical to "spasmotin," and represents all the activity of the drug. The soluble sodium salt is used subcutaneously.

CINCHONIN-HERAPATHIT. See Antiseptol.

CINCHONIN-IODOSULFATE. See Antiseptol.

CINEOL. See Eucalyptol.

CINNAMIC ACID. $C_6H_5.CH = CH.COOH$. *Synonyms:* Acid Cinnamic; Beta-phenyl-acrylic Acid.

This occurs naturally in Peru and tolu balsams; it is obtained synthetically by heating benzaldehyd and acetyl-chlorid together under pressure. It forms colorless to yellowish, glossy plates, of melting-point 133° C. (271.4° F.). Insoluble in cold, but quite soluble in boiling water.

It is employed, in form of an emulsion or alcoholic solution, as hypodermic injection in the treatment of tubercular affections.

℞ Acid cinnamylic., ... 5. Gm.
Ol. amygdal. dulc., ... 10. "
Vitelli ovi, ... No. 1.
Solut. natrii chlorati (0.7 per cent.), ... q. s.
Misce et fiat emulsio.
D. S. injection, 0.1–1 Cc.

CINNAMOL. See Styrol.

CINNAMYL-EUGENOL. See under Eugenol.

CINNAMYL-GUAIACOL. See under Guaiacol.

CITROPHEN. $C_3H_4(OH)(CO.NH.C_6H_4OC_2H_5)_3$. (D. R. P. Hoechst.)

A compound of citric acid and para-phenetidin, $(C_6H_4{<}^{OC_2H_5}_{NH_2})$, with three phenetidin groups to one molecule of citric acid. It forms a white, crystalline powder of acidulous taste, soluble in about 40 parts of cold water (which recommends it for subcutaneous injections); melts at 181° C. (358° F.). Citrophen is recommended as an antipyretic and antineuralgic in doses of 0.5–1 Gm. (8–15 gr.).

CITRUREA. (CITRULEA?)

Tablets containing urea, citric acid, and lithium bromid. Used in uric acid diathesis.

COBALT SALIPYRINE. (ANTIPYRINE COBALT SALICYLATE.)

A pale red powder, which becomes blue when fused.

COCAIN SALTS. $C_{17}H_{21}NO_4AC$.

Only the more important of the new combinations will be given. The doses are essentially the same as in that of the hydrochlorid.

COCAIN-ALUMINUM CITRATE. A double salt consisting of 3 molecules of aluminum citrate and 1 of cocain. A crystalline salt readily soluble in hot water, insoluble in alcohol. Used as astringent; local anesthetic.

COCAIN-ALUMINUM SULFATE. This double compound of cocain and aluminum sulfate is obtained by mixing together solutions of cocain and aluminum sulfate, evaporating and crystallizing. Used same as above Cocain-aluminum Citrate.

COCAIN BORATE is employed for subcutaneous injections and eye douches. It is preferable to all other salts of cocain, because of the stability of its aqueous solutions and the indifference of the boric acid.

COCAIN CANTHARIDATE is a white inodorous powder, somewhat soluble in hot water, insoluble in alcohol. Used subcutaneously in tuberculosis of larynx and catarrhal processes of the upper air-passages.

COCAIN LACTATE is a soft mass, readily soluble in water; it is of value in treatment of cystitis. Daily, 1 Gm. in 9 Gm. water injected into bladder after evacuation.

COCAIN NITRATE is employed in combination with silver nitrate in treatment of diseases of the genito-urinary tract.

COCAIN PHENATE, or *CARBOLATE*, forms a soft mass, insoluble in water, very soluble in alcohol. This salt is employed subcutaneously as a local anesthetic, also as a local application; stronger solutions are required to produce the same degree of anesthesia as with the hydrochlorid.

COCAIN SACCHARATE forms hygroscopic, crystalline plates. A 5 per cent. solution of this salt corresponds to a 4 per cent. solution of the hydrochlorid. Because of its sweet taste it is preferred for throat applications.

COCAIN SALICYLATE forms thick plates readily soluble in water and alcohol. Used subcutaneously in spasmodic asthma. Dose, 0.3 Gm.

COCAIN STEARATE, ($C_{11}H_{21}NO_4.C_{17}H_{35}COOH$), obtained directly from its components or by interaction between sodium stearate and cocain hydrochlorid. Applied in oleaginous solution, 0.5 Gm. dissolved in 50 Gm. almond oil; in ointments, 0.5 Gm. to 50 Gm. of vaselin; in suppositories, 0.02 Gm. of the stearate to 2.5 Gm. of cacao-butter. Used in place of the oleate in ointments and suppositories.

COCAPYRINE.

A mixture of 100 parts of antipyrine and 1 part of cocain. Administered in pastilles, each containing 0.2 Gm. (3 gr.) of antipyrine and 0.002 Gm. ($\frac{1}{33}$ of a gr.) of cocain.

CODEIN HYDRIODID. See Iodic Acid.

CODEIN PHOSPHATE. $C_{18}H_{21}NO_3.H_3PO_4 + 2H_2O$.

This salt occurs in fine colorless needles, has a bitter taste, is readily soluble in water and sparingly in alcohol. Codein phosphate is adapted as a substitute for morphin for administration to children; also employed in most affections of the respiratory organs, etc. Dose, 0.025–0.05 Gm. ($\frac{1}{3}$–$\frac{3}{4}$ gr.); subcutaneously, 0.02–0.05 Gm.

CODOL. See Retinol.

COLCHICEIN. $C_{21}H_{22}(OH)NO_5 + \frac{1}{2}Aq$.

When colchicin is boiled with dilute sulfuric acid it is converted into colchicein and methyl alcohol. Colchicein forms white crystals, which are soluble in water and alcohol. It should be dispensed with caution, the dose being 0.0005–0.001 Gm. ($\frac{1}{120}$–$\frac{1}{60}$ gr.) subcutaneously.

COLCHICINE. $C_{22}H_{25}NO_6$.

An alkaloid obtained from *Colchicum autumnale*. Colchicine forms a yellowish-white amorphous powder, which is readily soluble in water and alcohol; melts at 145° C. (293° F.). It is employed in treatment of rheumatism, sciatica, etc., in doses of $\frac{1}{120}$–$\frac{1}{60}$ gr.

COLCHICINE-SALICYLATE. See Colchisal.

COLCHISAL. (COLCHICINE SALICYLATE.)

A yellow, amorphous powder, soluble in water, alcohol, and ether. It is a remedy for arthritis, rheuma, and gout, in doses of 0.00075 Gm. ($\frac{1}{100}$ gr.).

COLEY'S FLUID.

A mixture of erysipelas and prodigiosus toxins, recommended for the treatment of tumors.

COLLÆTINA.

A proprietary lanolin-rubber adhesive plaster.

COLLAFORM.

A formaldehyd-gelatin preparation intended as a vulnerary.

COLLIGAMEN.

A bandage prepared with glycerin and a glycerin-zinc paste and impregnated with medicaments to suit varying conditions.

COLOCYNTHIN.

A white to yellow powder. Used as laxative in doses of 0.05–0.1 Gm.

COLUTINIC ACID.

Occurs in white needles, soluble in alcohol, insoluble in water.

CONIIN HYDROBROMID. $C_8H_{17}N.HBr$.

This is the hydrobromid of the liquid alkaloid Coniin, which is obtained from the seeds of *Conium maculatum*. It forms colorless crystals, which are soluble in water. Employed in the treatment of cardiac asthma in doses of 0.003–0.005 Gm. ($\frac{1}{20}$–$\frac{1}{12}$ gr.).

CONTRADOLIN.

"Combination of salicylic acids and phenol with acetamid." Antizymotic, analgesic, antineurotic, and anodyne. Dose, 0.25–0.5 Gm. (4–8 gr.) hourly.

CONVALLAMARIN. $C_{23}H_{44}O_{12}$.

A glucosid obtained from roots of *Convallaria majalis*. It is a white powder, very bitter, soluble in water and alcohol. Employed as a cardiac stimulant in doses of 0.05 Gm. ($\frac{3}{4}$ gr.).

CONVALLARIN.

Glucosid from *Convallaria majalis*, not to be confounded with convallamarin. Crystals very soluble in alcohol, insoluble in water. Drastic purgative.

CONVOLVULIN.

A glucosid obtained from the root of *Ipomœa purga* and other plants of the same genus. An amorphous mass, insoluble in water, readily so in alcohol and acetic acid. Convolvulin is a powerful purgative. Dose, 0.06–0.13 Gm. (1–2 gr.).

COPRAOL.

A fat similar to cacao-butter, presumably prepared from coca-nut oil, melting at 30.3° C., and congealing at 21° C. When mixed with glycerin copraol is used in making suppositories.

CORDEINE. See Methyl-tri-bromo-salol, under Salol.

CORDOL. See Tri-bromo-salol, under Salol.

CORDYL. See Acetyl-tribromo-salol, under Salol.

CORNESIN.

"An oil recommended as a cure for cataracts, and claimed to be a product of the muscle-substance of a rare deep-sea fish, caught only at a certain time of the year in South American waters." The remedy bears a very close resemblance to cod-liver oil.

CORNUTIN (Kobert-Keller).

One of the active principles of ergot. A reddish to yellowish-colored powder (Kobert's), or white crystals (Keller's), which readily forms salts with acids. It is recommended to relieve hemorrhage arising from abortion, also to increase the vigor of labor-pains. The dose is 0.005 Gm. ($\frac{1}{12}$ gr.).

CORONILLIN.

A glucosid obtained from the seeds of *Coronilla scorpioides;* forms a pale yellow, bitter powder, soluble in water and alcohol, almost insoluble in ether. Strengthens the action of the pulse and increases diuresis. Dose, 0.06–0.13 Gm. (1–2 gr.).

CORYL. See Chloryl.

COSAPRIN. $\left(C_6H_4<^{NH(CO.CH_3)}_{SO_2Na}\right)$. (D. R. P. Hoffmann-LaRoche.)

The acetyl compound of sodium sulfanilate. Forms white, crystalline mass, soluble in water, slightly so in alcohol; when heated with acids it undergoes decomposition. It is an energetic antipyretic, claimed to have several advantages over acetanilid.

COSMIN. See Agathin.

COTARNIN HYDROCHLORID. "STYPTICIN." $C_{12}H_{15}NO_4.HCl.H_2O$.

Yellow, water-soluble crystals, obtained by the oxidation of narcotin, melting at 132° C., used as a styptic. In styptic action it resembles hydrastinin, but is also sedative and analgesic. It is used in violent hemorrhages by subcutaneous injection in the gluteal region, particularly in hemorrhages of the uterus, excessive menstruation, etc. It is not suitable as a preventative of abortion. Dose, for excessive menstruation, 0.025 Gm. ($\frac{2}{5}$ gr.) in gelatin capsules five times daily, during four or five days before menstruation, and during the first days of the flow 0.05 Gm. ($\frac{4}{5}$ gr.) four or five times daily; subcutaneously, 0.2 Gm. (3 gr.) in 10 per cent. solution.

COTOIN. $C_{22}H_{16}O_6$.

A neutral principle obtained from the coto bark. It forms an amorphous or crystalline powder, which melts at 130° C. (266° F.), slightly soluble in water, freely soluble in alcohol and ether. Cotoin is employed in treatment of cholera, dysentery, etc.; it is also said to relieve night-sweats. The dose is 0.03–0.3 Gm. ($\frac{1}{2}$–5 gr.). Contraindicated in intestinal hyperemia with tendency to bleeding.

COTOIN-PARA. (PARA-COTOIN.)

Yellow crystalline substance melts at 150° C. (302° F.). Used same as true cotoin, but only one-half as strong.

COUMARIN. See Cumarin.

CREALBIN.

An albumin compound of creolin belonging to the same class as "tannalbin" and "ichthalbin." It is prepared by adding a mixture of 100 parts of Pearson's creolin and 1000 parts of water to 1000 parts of a 10 per cent. albumin solution. After thoroughly agitating, sufficient 10 per cent. hydrochloric acid is added to completely precipitate the crealbin formed. The precipitate is collected upon a strainer, washed, dried, first upon a water-bath, then finally between 115° and 120° C. This preparation is intended as a form of creolin for internal use.

CREATIN. *Synonyms:* Kreatin; Methyl-guanidine-acetic Acid. $NH:C(NH_2)N.(CH_3)CH_2.COOH + H_2O$.

Constituent of muscular tissue. Opaque, white solid, with bitter, acrid taste. The monohydrate occurs in transparent prisms. Soluble in 70 water. Muscular, heart, and digestive tonic. Dose, 1½ gr., 3 to 5 times daily.

CREOFORM. See under Geoform.

CREOLALBIN.

A synonym for crealbin, a creolin-albumin compound for internal use.

CREOLIN. See under Cresol.

CREOLINUM VIENNENSE ABASICUM.

According to Garvalowski, this contains phenols, 25.2 per cent.; resins and fatty acids, 5.3 per cent.; indifferent hydrocarbons, 65.3 per cent.; ash, 0.9 per cent.; water, 3.3 per cent.

CREOSAL. (TANNOSAL.)

The tannic acid ester of creosote, containing 60 per cent. of the latter. A compound obtained by heating a mixture of equal parts of tannin and creosote at 80° C., then adding phosphorus oxychlorid and continuing the heat until gas ceases to be evolved. The mass is mixed with dilute sodium hydrate solution, whereby creosal separates; this is well washed and dried. Creosal is a hygroscopic, dark-brown powder, which is readily soluble in water, alcohol, and glycerin. Creosal is recommended in powder-form or aqueous solution in place of creosote, being decomposed in the intestines into tannin and creosote. Dose, 1–9 Gm. daily. The commercial solution contains 1 Gm. tannosal in each tablespoonful.

CREOSOFORM.

A combination of creosote and formaldehyd; possessed of powerful antiseptic properties.

CREOSOL. $C_6H_3.CH_3(OH)(O.CH_3)$. *Synonyms:* Homo-pyrocatechin-methyl Ether; Homo-guaiacol.

This occurs, along with guaiacol, as a constituent of beech-wood tar creosote. It is an oily-like liquid, of aromatic odor, boiling at 220° C. (428° F.), only slightly soluble in water. Recommended as an antiseptic.

CREOSO-MAGNESOL.

Composed of potassium hydroxid, creosote, and calcined magnesia. Forms a hard mass, readily pulverizable, made into pills with honey; each pill contains 0.06 Gm. creosote.

CREOSOTAL.

This compound is analogous to guaiacol carbonate, but is prepared directly from beech-wood creosote, instead of guaiacol. It forms a thick, brownish, inodorous oil, insoluble in water. Creosotal is preferred to creosote for internal administration, since it is readily absorbed and free from all disturbing symptoms which accompany creosote itself. Dose is 3–15 minims. (D. R. P. v. Heyden.)

CREOSOTE (Beechwood). See U. S. P.

CREOSOTE (Coal Tar).

Impure carbolic acid boiling between 200°–225° C. It is poisonous, hence should never be substituted for the comparatively harmless wood-creosote.

CREOSOTE-CALCIUM-CHLORHYDRO-PHOSPHATE.

A white, syrupy mass, consisting of a mixture of creosote carbonate and calcium-chlorhydro-phosphate. Recommended in phthisis and scrofula. Dose, 5–10 gr.

℞. Creosote-calc.-chlorhyd.-phosp.,	5–10	Gm.
Mucilag. chondri,	15	"
Ol. amyg. dulc.,	25	"
Syr. tolutani,	25	"
Aq. flor. aurant.,	75	"

M. f. emulsio.

Dose, two teaspoonfuls daily.

CREOSOTE CARBONATE. See under Guaiacol.

CREOSOTE-MAGNESIA. See Magnesia Creosotata.

CREOSOTE OLEATE.

A pale-yellowish, almost inodorous oil, of perceptible creosote taste, insoluble in water. Used for same purposes as creosote. Dose, for adults, 3–10 Gm.

CREOSOTE PHOSPHATE. $(PO_4(C_6H_7)_3)$. *Synonym:* Tri-creosote phosphate.

Obtained by interaction between creosote and phosphoric anhydrid in presence of sodium. A fluid containing 75 per cent. of creosote and smelling like the latter, insoluble in water, soluble in alcohol. Proposed as a substitute for creosote.

CREOSOTE VALERATE. *Synonym:* Eosot.

A non-caustic fluid, which boils at 240° C. Used in tuberculosis and intestinal diseases. Dose, 0.2 Gm., in capsule.

CREOSOTIC ACID. $C_6H_3\begin{cases}CH_3\\OH\\COOH.\end{cases}$ *Synonyms:* Cresotinic Acid; Oxytoluic Acid; Homo-salicylic Acid.

This may exist as an ortho-, meta-, or para- modification, hence is frequently designated in the plural, as creosotic acids. They bear the same relation to toluene ($C_6H_5CH_3$) that salicylic acid does to benzene (C_6H_6), being then hydroxytoluic acid. They are prepared from the sodium cresylates by a process (Kolbe's) analogous to that used in the manufacture of salicylic acid. The para compound, which crystallizes in white needles, melting at 151° C. (303.8° F.), is the only one that is employed in medicine in the form of a sodium salt.

CRESALOLS. $C_6H_4(OH)CO_2C_6H_4.CH_3$. *Synonyms:* Cresol Salicylates; Cresol Salols.

Ortho-, meta-, and para-cresalol are the salicylic esters of the cresols, analogous to betol and salol, and prepared in a similar manner. A mixture of sodium salicylate and cresylate, in molecular proportions, is heated with phosphorus oxychlorid; either ortho-, meta-, or para-cresalol is obtained, according to the sodium salt used. These three isomeric cresalols form bulky, white, crystalline powders, insoluble in water, soluble in alcohol and ether, and sparingly so in oils. The ortho-cresalol melts at 35° C. (95° F.), the meta-cresalol at 74° C. (165.2° F.), and the para-cresalol at 39° C. (102.2° F.).

Externally the cresalols are recommended as antiseptic dusting-powders, also internally as a substitute for salol, being split up in the system into cresol and salicylic acid. Dose, 0.25–2 Gm. See also Salol.

CRESAMINE.

This body is a mixture of ethylene diamin and tricresol (containing ortho-, meta-, and para-cresol). It is said to be a very powerful germicide and antiseptic.

CRESAPROL.

Closely allied to cresin, and consists of a solution of cresol in a solution of sodium cresoxyl-acetate.

CRESIN. (CRESAPROL.)

Obtained by dissolving cresol (25 per cent.) in a solution of sodium cresoxyl-acetate. Brown, clear fluid, soluble in water and alcohol. Said to be less toxic than phenol. Used as wound disinfectant in ½–1 per cent. solution.

CRESOCHIN.

Composed of neutral chinolin-tricresyl-sulfonate, and a compound of chinolin with tricresol. Soluble to the extent of 5 per cent. in water, and contains 30 per cent. of chinolin and 17 per cent. of tricresol. Used chiefly for disinfecting instruments, also in gynecology, in 0.1–0.2 per cent. solutions.

CRESOL SALICYLATE. See Cresalols.

CRESOL SALOLS. See Cresalols.

CRESOL, or THE CRESOLS. $C_6H_4{<}^{OCH_3(1).}_{OH\ (3).}$ *Synonyms:* Cresylic Acid; Meta-cresol; Kresol.

The cresols, of which three isomerides exist (ortho-, meta-, para-), are homologues of phenol and derivatives of toluene. They are obtained by the fractional distillation of that portion of coal-tar oil which comes over between 190°–210° C. The three isomerides are exceedingly difficult to separate; of these the meta-cresol is the most powerful antiseptic. All the cresols possess a creosote-like odor, their antiseptic properties are superior to those of carbolic acid, and they are far less poisonous. The only hindrance to their general employment is their insolubility in water. During the past few years various soluble preparations introduced have again brought them into notice; in these the cresol (o-m-p) is rendered soluble by the addition of soap (*Sapocarbol, Lysol, Creolin, Phenolin, Saprocresol*, etc.), or an alkali forming soluble cresylates (*Solveol, Solutol*), or by conversion into soluble sulfonic acid derivatives (*Artmann's Creolin*).

The following are preparations of cresol which have been introduced as antiseptics in surgery:

ANTINONNIN is a preparation of ortho-dinitro-cresol potassium, appearing in trade in the form of a soap. It is employed in a 1 : 1000 solution for the destruction of insects and fungi.

BENZOYL-PARA-CRESOL (Para-cresol benzoate), $C_6H_5COO.C_6H_4(CH_3)$, is prepared by the reaction of phosphorus oxychlorid on a mixture of benzoic acid and para-cresol. It forms a crystalline compound, which melts at 70° C. (158° F.), insoluble in water, readily soluble in alcohol and ether. It is used as an antiseptic. As intestinal antiseptic, 0.25 Gm. (4 gr.)

CREOLIN (Cresoline, Sanatol). This is said to be an emulsion of cresol, containing some of the higher boiling-point hydrocarbons of coal-tar, obtained by means of resin soap. It is a brownish-black, syrupy liquid, which, when mixed with water, forms a more or less turbid mixture; with alcohol, ether, and chloroform it forms a clear solution. Creolin is employed in the pure condition as a 1–2 per cent. solution; in ointments, dusting-powder, or dressings, 10 per cent. Commercially there are two varieties of creolin—namely, Artmann's, which is obtained by action of sulfuric acid on a crude cresol, and Pearson's, which is a resin soap as above described.

CRESOL IODID. Very light, yellow powder, with disagreeable odor, readily soluble in alcohol, ether, chloroform, and oils, insoluble in water. Adheres to hands, instruments, etc., like resin. Antiseptic, allaying inflammation in nasal diseases.

DISINFECTOL. A mixture of tar hydrocarbons with crude cresol which has been made soluble by addition of resin, soap, and alkalies; with water it forms a milky fluid.

IODO CRESOL. See under Traumatol.

IZAL. According to Squibb, this consists of an emulsion containing about 30 per cent. of a new oil produced by a patent process employed in the manufacture of a special form of coke. It is claimed that its antiseptic power is greater than that of carbolic acid, while it is practically non-poisonous.

KRESAPROL. See Kresin.

KRESIN. This is a clear brown liquid, containing 25 per cent. of cresol and 25 per cent. of sodium cres-oxyacetate. It is miscible in all proportions with water. Is stated to be four times as active as carbolic acid. As antiseptic wash a 1 per cent. solution is used.

LYSOL, the fraction of coal-tar oil which boils between 190°–200° C. is dissolved in fat, and subsequently saponified. It forms a clear, brown, syrupy liquid, containing 50 per cent. of the cresols; it is miscible with water, forming a clear, saponaceous, frothing liquid. With all other solvents it is miscible in all proportions. Experiments have shown lysol to be five times stronger than carbolic acid in antiseptic power. The strength of the solution employed is usually 0.3, 1, or 2 per cent.

PARACRESOL is a patent disinfectant, which is said to mix with water in every proportion, yielding a neutral and almost odorless solution.

PHENOLIN. A soluble disinfectant, similar to Sapocarbol.

PHENOSALYL. This is a solution of carbolic, salicylic, and benzoic acids (which have been fused together) in lactic acid. It forms a thick, syrupy liquid, which is soluble in cold water to the extent of 7 per cent., readily in warm water, also in alcohol and ether. In antiseptic power it is superior to carbolic acid, being at the same time less toxic. It is employed in 1–2 per cent. aqueous solutions. According to Sibut, Phenosalyl is prepared by melting together 8 parts of carbolic acid, 1 part of salicylic acid, and 2 parts of lactic acid, and adding to the fused mixture 0.1 part of menthol. It is proposed as an antiseptic in 0.2–1 per cent. solutions.

PIXOL and *RESOL* are solutions of wood-tar in soap.

SAPOCARBOL, KRESAPOL, and *PHENOLIN* are solutions of crude cresols in soap (potash).

SAPROL is a dark brown, oily substance, consisting of a mixture of the crude cresols (40 per cent.) in an excess of hydrocarbons, obtained from the refining of petroleum. A drawback to its use is its inflammability; also that it does not mix with water. Used as disinfectant.

SOLUTOL. This is an alkaline solution of sodium-cresol in an excess of cresol. It is not suited for surgical dressings or like uses, because of its caustic alkalinity. It is a valuable disinfectant for use in the household and hospital, effectually disinfecting water-closets, sinks, cesspools, etc., 250 Cc. to 10 liters of water.

SOLVEOL is a solution of cresol in sodium cresotate; it forms a useful disinfectant

analogous to creolin, lysol, saprol, and solutol. It is less caustic than solutol, possessing the advantage over creolin and lysol of not exhibiting the greasiness characteristic of these. It is a dark-colored liquid, nearly odorless, of a neutral reaction, and miscible with water in all proportions. It is especially applicable to surgical uses, a ¼ per cent. solution being employed in dressings, and a 1 : 12 for spray apparatus. It is claimed that a ¼ per cent. solution is more active than a 2 per cent. solution of carbolic acid.

SOLUTOL and *SOLVEOL.* (D. R. P. v. Heyden.)

TRICRESOL is a concentrated preparation of the three cresols (ortho-, meta-, para-), free from all impurities. It forms a clear, colorless liquid, of specific gravity 1.045, and soluble to the extent of 2⅔ per cent. in water. A 1 per cent. solution of tricresol corresponds to a 3 per cent. solution of carbolic acid, having, therefore, three times the disinfectant value of the latter.

CRESOTINIC ACID. ($C_6H_3 . COOH . OH . CH_3$).

Obtained by action of carbonic acid on sodium cresols. A pale rose, inodorous, almost insoluble stimulatory powder.

A solution of 20 Gm. in 100 liters of water is used as a disinfectant wash for animals.

CRESYLIC ACID. See Cresol.

CROTIN.

A mixture of the toxic albuminoids—croton-globulin and croton-allin—found in the croton seed.

CROTON CHLORAL. See Butyl-chloral-hydrate.

CROTON-CHLORAL-HYDRATE. See Butyl-chloral-hydrate.

CROTONOLIC ACID. (CROTONOLUM.)

A toxic oleaginous fluid of irritating odor and taste. It is the irritating constituent of croton oil, and when applied externally it produces blisters; internally it acts as a powerful drastic cathartic.

Kobert recommends the glycerid of crotonolic acid for internal use, because of absence of irritating action on the mucous membranes of the mouth and stomach. Internally the drastic dose of crotonic acid is 5–10 Mg. in keratin-coated pills.

CRYOSTASE.

A mixture of equal parts of carbolic acid, camphor, saponin, and traces of oil of turpentine. Becomes solid when heated, and liquid when cooled to below 0° C. Recommended as an antiseptic.

CRYSTALLIN.

A solution of pyroxylin, in which the ether and alcohol are replaced by wood spirit and amyl acetate. It is prepared by dissolving 1 part of pyroxylin in a mixture of 4 parts of wood spirit and 15 parts of amyl acetate. By adding 5 parts of castor oil and 10 parts of Canada balsam to 20 parts of crystallin "elastic crystallin" is obtained. Crystallin is claimed to have the advantage of drying less rapidly than collodion and leaving a clear, transparent film.

CRYSTALLOSE.

A name applied to a very soluble crystalline sodium salt of pure saccharin. In consequence of the presence of water of crystallization, the sweetening power, compared with that of cane-sugar, is reduced to 400 times the latter, instead of 500 times, as is the case in the pure saccharin.

CUBEBIC ACID. $C_{28}H_{30}O_7$.

A principle obtained from the cubeb by extraction with caustic alkalies and afterward liberated on addition of an acid. Cubebic acid forms a waxy-like body, readily soluble in alcohol and ether, becoming brown on exposure to the air. According to Bernatzik, it possesses the antiblennorrhagic properties of cubebs. Dose, 0.3–1 Gm. (4–15 gr.).

CUMARIN. *Synonym:* Coumarin.

The crystallizable, odorous constituent of the *Tonca bean*, also prepared synthetically. It melts at 67° C. (152.6° F.); is only slightly soluble in water, readily in alcohol and ether. Cumarin is employed as a flavoring agent, also for the purpose of masking the odor of medicinal agents, such as iodoform, etc.

CUPRAM.

A solution of copper carbonate in ammonia water. Used as a fungicide.

CUPRATIN.

A copper albuminoid preparation, analogous to Ferratin.

CUPRESSIN.

An oil of cypress, used in whooping-cough.

CUPROHEMOL. See under Hemol.

CURANGIN.

A glucosid obtained from *Curanga amara.* Used as a febrifuge in India.

CURARIN. ($C_{18}H_{35}N$).

This alkaloid, which belongs to the strychnos family, forms a yellow, amorphous, hygroscopic powder, soluble in water and alcohol. The pure alkaloid is given in doses of 0.25–0.7 Mg. ($\frac{1}{250}$–$\frac{1}{90}$ gr.) to relieve attacks of tetanus. Hypodermically, 1 Cc. (16 ♏) or less of a solution of 25 Cg. (3¾ gr.) of curarin, in 5 Gm. (1¼ ʒ) each of glycerin and distilled water.

CUTAL. (CUTOL.) *Synonym:* Aluminum Boro-tanno-tartrate.

Obtained by pouring a mixture of 5 parts of an aqueous tannin solution (1:4) and 80 parts of an aqueous borax solution (1:19) into a solution of 3 parts of aluminum sulfate in 12 parts of water, stirring constantly. The resulting precipitate is filtered off, washed, spread on glass plates, and dried at low temperature. This preparation is insoluble in water; hence in order to render it soluble, 1 part of it is dissolved in 10 parts of water by means of 1.2 parts of tartaric acid; the solution evaporated to dryness at a low temperature yields a soluble aluminum boro-tanno-tartrate, or cutal. This is recommended as an astringent antiseptic, either in dry form or in aqueous solution. For skin diseases a 10–20 per cent. ointment is used.

CUTIN.

A name applied to a soft material which is intended as a substitute for silk or catgut, and which may also be employed to prevent gauze from adhering to wounds. It is prepared from the gut of cattle by carefully removing the serous and mucous membranes from the muscular layer, and digesting the latter in a 2 per cent. solution of pepsin. It is then treated with trioxybenzoic acid and hydrogen peroxid, which harden the membrane. Thus prepared, cutin is very soft, adheres smoothly to the wound, is capable of being absorbed, and may be sterilized by dry heat.

CUTOL. See Cutal.

CYPRIPEDIN.

Used as a nerve stimulant and tonic, also in nervous affections of the eye. Dose, 0.03–0.2 Gm. (½–3 gr.).

CYTISIN. $C_{11}H_{14}N_2O$. (ULEXINE.)

An alkaloid obtained from *Cystisus laburnum*, which forms white, deliquescent crystals, soluble in water and alcohol, and melting at 155° C. The hydrochlorid of cytisin is used as a nervine, given in paralytic migraine, whooping-cough, asthma, in doses of 0.003–0.005 Gm. (1/20–1/12 gr.) subcutaneously.

DATURIN. See Hyoscyamin.

DELPHININ.

An alkaloid obtained from the seed of *Delphinium staphisagria*. Forms small crystals of a bitter taste, insoluble in water and soluble in alcohol and ether. Exerts a powerful action on the heart, like aconitin; employed in treatment of spasmodic asthma, dropsical affections, pediculosis, and facial neuralgia in doses of 0.001 Gm. (1/64 gr.) gradually increased to 0.05 Gm. (¾ gr.) a day. For application a 1–2 per cent. ointment.

DENTOLA.

A solution recommended for painting on swollen gums, consisting of cocain hydrochlorid, 1 part; potassium bromid, 10 parts; glycerin, 200 parts; water, 200 parts.

DEODOROUS IODOFORM. See Anozol.

DERMATIN.

A new skin-protecting preparation used in dermatology and consisting of from 5–7 parts of salicylic acid, 7–15 parts of starch, 25–50 parts of talc, 30–60 parts of silicic acid, and 3–9 parts of kaolin, according to the strength desired.

DERMATOL. $C_6H_2(OH)_3COOBi(OH)_2$. *Synonyms:* Subgallate of Bismuth; Basic Gallate of Bismuth.

To a solution of 15 parts of crystallized bismuth trinitrate in 30 parts of glacial acetic acid (or glycerin) diluted with about 200 parts of water, is added with constant stirring a warm solution of 5 parts of gallic acid in 250 parts of water. The yellow precipitate is washed until free from nitric acid, then dried on porous plates, or the following method may be employed: Take 57.2 Gm. of bismuth subnitrate (assaying 81.4 per cent. of Bi_2O_3), dissolve with the aid of heat in 71 Gm. of commercial nitric acid (sp. gr., 1.36), and dilute with 12 Cc. of water. After cooling this solution it is gradually diluted with 75 Cc. of water, which should not cause precipitation, otherwise add HNO_3 in traces till solution results. The solution is filtered and precipitated by pouring into it under constant stirring a solution consisting of 37.8 Gm. (theory requires 37.6 Gm.) of gallic acid in 800 Cc. of water. The gallic acid is dissolved with the aid of heat, but the solution is cooled to about 30° C. before being used. The resulting precipitate is washed by decantation until the washings are but faintly acid. It is then collected on a filter and washed with the aid of suction until the washings no longer give a perceptible reaction with diphenylamin T. S. (See U. S. P.) The subgallate is then dried at about 55° C. and sifted, when a soft, bright yellow powder results. Or, according to Sieker, 466 parts of bismuth trinitrate ($Bi(NO_3)_3$) are triturated and digested with a solution of 188 parts of gallic acid in 4000 parts of water at 40° C. See "Proceed. Amer. Phar. Assn.," 1896, page 797. Dermatol is entirely soluble in sodium hydroxid solution, and therefore free from subnitrate. When treated with diphenylamin T. S. according to Fischer's method, it does not give a reaction for nitric acid. Dermatol forms a bright yellow, inodorous, and tasteless powder, insoluble in the usual solvents. It is an excellent dry antiseptic in all branches of surgical practice. Internally in doses of 0.25–0.5 Gm. (4–8 gr.) in treatment of diarrhea.

DERMOL. $Bi(C_{15}H_9O_4)_3Bi_2O_3$. *Synonym:* Bismuth Chrysophanate.

This is described by Trojescru as an amorphous yellow-colored powder, insoluble in all of the usual solvents, consisting of a mixture of chrysarobin and bismuth hydroxid obtained by precipitating a solution of chrysophanic acid neutralized by soda, with a solution of bismuth nitrate. It is used as an antiseptic application in various skin diseases.

DESICHTHOL.

Dr. O. Helmers has succeeded in removing from ichthyol the substance causing the disagreeable odor, without otherwise changing the physical properties or its appearance, by a treatment with steam, under proper precautions. About 0.5 per cent. of a volatile oil was separated, to which the disagreeable odor was due. This oil is stated to possess strong chemic affinities

and therefore probably plays an essential part in the therapeutic action of ichthyol, and a modification of the curative value may be expected in the deodorized preparation. This is placed on the market under the name "Desichthol."

DESOXY-ALIZARIN. See Anthrarobin.

DEXTROFORM.

A condensation product of dextrin and formaldehyd. An antiseptic powder, soluble in water, which gives off formaldehyd more readily than "amyloform."

DEXTRO-SACCHARIN.

This consists of a mixture of saccharin 1 part and glucose 2000 parts.

DIABETIC MILK.

A milk which contains a large percentage of fat and a small percentage of milk-sugar; prepared after a special process.

DIABETICO.

A beverage resembling champagne, recommended in diabetes. Contains alcohol, 8.25 per cent.; extractive, 3.27 per cent.; tartaric acid, 0.56 per cent.; phosphoric acid, 0.025 per cent.; sulfuric acid, 0.036 per cent.; saccharin, 0.023 per cent.; glycerin, 0.82 per cent.

DIABETIN. $C_6H_{12}O_6$. *Synonyms:* Levulose; Fruit Sugar.

Fruit Sugar (*Fructose*) is found in most sweet fruits, together with an equal amount of grape sugar; it is formed, together with grape sugar, in the so-called *inversion*, or decomposition, of cane sugar by boiling with acids; the mixture of the two is called *invert sugar*. Diabetin is prepared from invert sugar by mixing the latter with calcium-hydroxid, the liquid lime compound of dextrose is removed, and the residual solid is the lime compound of levulose; this latter calcium salt is decomposed with carbonic acid, liberating the levulose. This is a colorless, odorless, crystalline powder, readily soluble in water and alcohol. Diabetin is recommended as a sweetening agent for diabetic patients.

DIACETANILID. $C_6H_5N\,(C_2H_3O_2)_2$.

It is prepared by heating acetanilid with glacial acetic acid in autoclaves at 200°–250° C. The reaction-product is taken up by hot petroleum ether and crystallized, while the unaltered acetanilid remains behind undissolved. The physiologic action of this compound is similar to, but stronger than, that of acetanilid.

DIACETYL TANNIN. See Tannigen.

DIALYSATA-GOLAZ.

A Swiss firm, Golaz & Cie, has placed on the market a new class of galenic preparations, which are called dialysates. They are liquid plant extracts that are not obtained by the customary extraction and percolation processes, but by a new dialyzation method, the details of which are not given. Fresh plants are used whenever possible, and are worked up immediately after collection. All solvents and reagents that could possibly bring about molecular changes in the plant constituents are avoided. The dialysates are of the strength of our official fluid extracts, one part of product representing one part of the drug. Wherever possible, especially in the cases of narcotic drugs, the extracts are standardized to a fixed percentage of active constituents, by chemic and pharmacodynamic methods. The dialyzation process extracts alkaloids, glucosids, ethereal oils, tannins, and certain ferments related to albumin. In addition to simple dialysates, preparations corresponding to compound powders and fluid extracts are offered.

DIAMIN. (SULFATE.) $H_2SO_4 . H_2N . H_2N : NH_2 . NH_2 . H_2SO_4$. *Synonym:* Hydrazin Sulfate.

Occurs in colorless crystals, analogous to hydroxylamin hydrochlorid. Powerful reducing agent. A general poison to animal and vegetable life, destroying germs, bacteria, etc.

DIAPHTHERIN. See under Chinolin.

DIAPHTHOL. See under Chinolin.

DI-BROMO-GALLIC ACID. See Gallobromol.

DICAMPHENDION. See under Dicamphor.

DICAMPHOR. $(C_{10}H_{15}O)_2$.

Obtained simultaneously with dicamphendion, $(C_{10}H_{14}O)_2$, by the action of metallic sodium on bromo-camphor. The principal products of the reaction are dicamphor, $(C_{10}H_{15}O)_2$, and dicamphendion, $(C_{10}H_{14}O)_2$. These are separated from each other by crystallizing from diluted alcohol and ligroin. Dicamphor crystallizes in colorless needles, melting at 165°–166° C., and dicamphendion in yellow, flat, prismatic needles, melting at 192°–193° C.

DI-CHLORACETIC ACID. $CHCl_2COOH$.

This is obtained by the action of chlorin gas on glacial acetic acid. It forms a colorless, pungent fluid, of boiling-point 190° C. (374° F.). Is employed as a cauterizing agent.

DI-CHLORAL-ANTIPYRINE. $(C_{11}H_{12}N_2O + 2(CCl_3CH(OH)_2)$.

Obtained by triturating 94 parts of antipyrine with 165.5 parts of chloral hydrate until a mass is obtained, which is crystallized from hot water. Its medicinal properties are like those of monochloralantipyrine. Maximum dose, 3 Gm. (45 gr.).

DI-CHLOR-METHANE. See Methylene Chlorid.

DICODEYLMETHANE.

The hydrochlorid of a condensation product of two molecules of codein with one molecule of formaldehyd. A mass which is readily soluble in water and alcohol, melting at 140° C.

DIDYMIN TABLETS.

Used as aphrodisiac in doses of 0.3 Gm.; in larger doses act as hypnotic.

DIDYMIUM CHLORID.

Obtained as a by-product in the preparation of the rare earths for Welsbach lights. It is recommended as an energetic disinfectant and preservative, as it prevents every decomposition-process in solutions of 1 : 500 to 1 : 1000, thus showing its superiority over all known antiseptics. The salt comes into the market in form of an odorless solution containing 25–30 per cent. It is free from caustic action. The sulfate is also recommended as a disinfectant, to be used in form of dusting-powder.

DIETHYL ACETAL. See Acetal.

DI-ETHYLENE-DIAMIN. See Piperazin.

DI-ETHYL-SULFON-DI-ETHYL-METHANE. See Tetronal.

DI-ETHYL-SULFON-DI-METHYL-METHANE. See Sulfonal.

DI-ETHYL-SULFON-METHYL-ETHYL-METHANE. See Trional.

DI-FLUOR-DIPHENYL. $C_6H_4F - C_6H_4F$.

A white, crystalline powder, melting at 86° C., insoluble in water, readily soluble in alcohol, ether, chloroform, and fixed oils. It has a pleasant aromatic odor, recalling that of dillseed. Used in 10 per cent. dusting-powder, mixed with talcum, or in 10 per cent. ointment with wool fat as antiseptic.

DIGITALIN. (DIGITALINUM.)

A glucosid obtained from the leaves of *Digitalis purpurea*. Commercial digitalin is of variable composition and physiologic activity. The following represent some of the better known products, the doses of which should be accurately noted, since there is considerable variance in activity:

DIGITALEIN (Schmiedeberg). A yellowish-white, amorphous powder of intensely bitter taste, soluble in water and alcohol. Used as a cardiac tonic and diuretic, like digitalis. Dose, 0.001–0.002 Gm. ($\frac{1}{60}$–$\frac{1}{30}$ gr.).

DIGITALIN ("German," Merck). White to yellowish-white powder, soluble in water and alcohol. A non-cumulative heart tonic and diuretic. Dose, 0.001–0.002 Gm. ($\frac{1}{60}$–$\frac{1}{30}$ gr.).

DIGITALIN-KILIANI (Digitalinum Verum Kiliani). According to Kiliani, this consists of the most active constituent of the German digitalis. Occurs as a white, amorphous powder, soluble in 1000 parts of water and in 100 parts of dilute alcohol. It melts at 217° C. (422.6° F.). This digitalin "verum" exerts the characteristic effects of digitalis leaves (Bohm and Pfaff), being administered in doses of 0.00025 Gm. ($\frac{1}{250}$ gr.).

DIGITALIN-NATIVELLE forms fine crystalline needles, which are almost insoluble in water and soluble in alcohol. It has been recommended in treatment of inflammation of the lungs, and also feebleness of the heart's action. Dose, 0.00065–0.001 Gm. ($\frac{1}{100}$–$\frac{1}{60}$ gr.).

DIGITALIN ("French," Merck; Homolle's or French Digitalin). A yellowish, bitter powder, soluble in water and alcohol. Uses, same as digitoxin. Dose, 0.00026 Gm. ($\frac{1}{250}$ gr.), rapidly increased to 0.0015 Gm. ($\frac{1}{40}$ gr.), daily.

DIGITONIN.

Constitutes colorless crystals, soluble in 600 parts of water and 50 parts of dilute alcohol. Without cardiac action; resembles saponin.

DIGITOXIN. $C_{31}H_{52}O_7$.

According to Schmiedeberg, digitoxin is the most active of the several glucosids which constitute commercial "digitalin," being essentially identical with "Nativelle's digitalin." Digitoxin forms white crystalline needles, which are insoluble in water, a prompt, reliable, powerful heart-tonic of uniform therapeutic activity. Used in valvular lesions, myocarditis, etc., the dose being 0.00033–0.00065 Gm. ($\frac{1}{300}$–$\frac{1}{150}$ gr.).

DI-HYDRO-RESORCIN.

This is prepared by the action of sodium amalgam on a solution of resorcin in boiling water, carbonic acid gas being passed through the solution during the reaction. The unconverted resorcin is removed by shaking the solution with ether, then, after acidulating, the solution is shaken a second time with ether, which extracts the dihydroresorcin, which remains as a syrup-like liquid on the evaporation of the ether. It soon congeals to a solid mass on standing, which, by recrystallization, yields glossy prisms, which melt at 104°–106° C. (219.2°–222.8° F.), very soluble in water, alcohol, and chloroform. Di-hydro-resorcin is recommended as an antiseptic.

DI-IODO-CARBAZOL. $C_{12}H_6I_2:NH$.

This is prepared by heating a solution of carbazol to the boiling-point and adding iodin. It occurs in yellow, odorless laminæ, which melt at 184° C. (363.2° F.), insoluble in water but readily soluble in alcohol, chloroform, etc. Recommended as an antiseptic.

DI-IODOFORM. $C_2H_2I_4$. *Synonym:* Ethylene periodid.

This is obtained by the action of iodin on a solution of acetylene iodid in carbon disulfid. It forms bright yellow, inodorous, crystalline needles, which are insoluble in water, sparingly soluble in alcohol, and readily so in chloroform; melting at 192° C. (377.6° F.). Di-iodoform contains 95.5 per cent. of iodin, and is recommended as a substitute for iodoform. Exposure to light causes its decomposition, hence it should be kept in a dark place.

DI-IODO-NAPTHOL (Beta). $C_{10}H_6I_2O_2$.

A greenish-yellow powder, insoluble in water, soluble in alcohol. Used in all cases where iodoform is indicated.

DI-IODO-PHENOL IODID. See Phenol Diiodid.

DI-IODO-RESORCIN.

A chocolate-brown powder, inodorous, insoluble in water and diluted acids, soluble in alcohol and ether. Used as antiseptic in place of aristol.

DI-IODO-SALICYLIC ACID. $C_6H_2I_2(OH)COOH$.

This is obtained by the action of iodin and iodic acid on salicylic acid. It forms a white crystalline powder, of sweet taste, melting between 220°–230° C. (428°–446° F.), almost insoluble in cold water, slightly soluble in hot water, and very soluble in alcohol and ether. It as well as the sodium salt is employed as an analgesic and antipyretic. Dose, 1.5–4 Gm. (24–60 gr.) a day.

DI-IODO-SALICYLIC-METHYL-ESTER. See Sanoform.

DI-IODO-SALICYLIC-PHENYL-ESTER. $C_6H_2I_2(OH)CO_2C_6H_5$. (D. R. P. E. Herzfeld.)

Obtained by interaction between salol and iodin in alcoholic solution, the liberated hydriodic acid is taken up by mercuric oxid. This compound forms colorless needles, soluble in alcohol, melting at 135° C. Used as substitute for iodoform externally, internally as substitute for sodium salicylate and potassium iodid.

DI-IODO-SALOL. See under Salol.

DI-IODO-THIO-RESORCIN. $C_6H_2O_2I_2S_2$.

A brown powder insoluble in water, soluble in alcohol. Claimed to be superior to aristol as dry antiseptic.

DI-METHYL-ACETAL. CH_3-$CH(OCH_3)_2$. *Synonym:* Æthyliden-di-methyl-ether.

This is obtained by the oxidation of a mixture of ethyl and methyl alcohols. It forms a colorless, ethereal liquid of sp. gr. 0.867, boiling at 64° C. (147.2° F.). Di-methyl-acetal is employed as an anesthetic, either alone or mixed with half its volume of chloroform.

DI-METHYL-AMIDO-ANTIPYRINE. See Pyramidon.

DI-METHYL-AMIDOPHENYL-DIMETHYL-PYRAZOLON. See Pyramidon.

DI-METHYL-BENZOL. See Xylol.

DI-METHYL-ETHYL-CARBINOL. See Amylene Hydrate.

DI-METHYL-KETONE. See Acetone.

DI-METHYL-PIPERAZIN. See Lupetazin.

DI-METHYL-PIPERAZIN TARTRATE. See under Piperazin.

DIONIN. $C_2H_5.O.(OH).C_{17}H_{17}NO.HCl + H_2O$.

The hydrochlorid of the mono-ethyl-ester of morphin, which appears as a fine white crystalline powder, melts at 123°–125° C., and is very soluble in water, thus adapting it for subcutaneous use. Dionin exhibits the narcotic properties of morphin without attaining its intensity, being used in phthisis, bronchial affections, pneumonia, etc., in same doses as codein. Dionin is recommended in treatment of the morphin habit, since tolerance is not established through its continued use.

DI-OXY-ANTHRANOL. See Anthrarobin.

DI-OXY-BENZENE (Para). See Hydrochinon.

DI-PHENYL-METHANE. See Phenylmethane.

DIPHTHERIA ANTITOXIN.

Behring's curative serum is the blood-serum of animals immunized by the injection of the diphtheria-toxin.

All infectious diseases like diphtheria are produced by bacteria, which secrete very poisonous substances called "toxins" that eventually cause death. By the use of certain agents the action of these toxins may be counteracted, rendering the organism insensible to their poisonous effect. This insensibility or immunity may be acquired by a gradual habituation to a given poison. To Prof. Behring is due the credit of discovering that during this process of habituation an antitoxin is produced in the blood, which, when isolated and injected into the blood of a patient, effects a change in the susceptibility of the living organs to the action of the poison (toxins). The antitoxin is prepared as follows: A colony of diphtheria-bacilli, after being placed in a suitable medium and under favorable conditions, multiply with great rapidity, secreting at the same time their poison or toxins. After a few weeks, when sufficient of the toxin has formed, the bacilli are destroyed by means of carbolic acid, and by filtering through porous plates of clay the dead bacilli are removed from the solution of toxins. Of this solution small amounts are injected into the blood of a healthy horse, producing a mild attack of the disease; this procedure is then repeated for several months, the doses of toxin being steadily increased until the animal becomes habituated to the poison. Then a quantity of blood is withdrawn from the animal, and the serum, or aqueous portion, is separated from the red blood-corpuscles, this serum constituting a light yellow liquid which contains the antitoxin of diphtheria. This serum is standardized by determining the quantity required for injection to neutralize a fatal dose of diphtheritic poison in a guinea-pig; the ratio between the quantity of antitoxin and the body-weight of the animal furnishes a means of indicating in definite units the strength of the solution.

DIPHTHERIA-ANTITOXIN SOLUTION.

BEHRING'S. No. 1 equals 600 immunizing units; No. 2, 1000; No. 3, 1500. Hyp. inj., one-fourth of a vial. No. 1 as prophylactic, regular treatment full contents of either strength, according to case. In ½-oz. vials, varying measure but full unit-value.

GIBIER'S. (N. Y. Pasteur Institute.) Identical with *Roux's.* Immunizing-power 1:100,000—*i. e.*, ⅓ Cc. prophylactic up to 110 pounds; regular treatment 5–15 Cc. a day.

ROUX'S. Same description as *Gibier's.*

SCHERING-ARONSON. This preparation is supplied in vials containing 5 Cc., equivalent to 500 antitoxic normal units. The contents of a single vial is injected subcutaneously in mild cases, or at the onset of severer cases. The quantity contained in two vials (10 Cc.) may be used in cases that present very severe symptoms from the first, or in cases in which this method of treatment has not from the first been carried out.

In malignant cases, particularly where there are laryngeal symptoms, three or four doses may be used (15–20 Cc.), depending on the age of the patient. For purposes of immunization the injection of 1 Cc. for small children and 2 Cc. for grown children and adults will be found sufficient. This preparation is a very permanent one, being rendered so by the addition of 4 per cent. Tricresol.

DIPHTHERICIDE.

Pastilles containing thymol, sodium-benzoate, and saccharin. Used as prophylactic against diphtheria.

DISINFECTIN.

This is made by treating 5 parts of "masut" (the residue of naptha-distillation) with 1 part of concentrated sulfuric acid; the resulting sulfonated product is then treated with 5 parts of 10 per cent. soda solution. A brown liquid results, which, when diluted with water, is used as a disinfectant.

DISINFECTOL.

A mixture of hydrocarbons and crude creosols rendered soluble by the addition of alkali. It is a dark-brown liquid which gives a milky-like solution with water. It is employed as a disinfectant diluted with water.

DISPERMIN. See Piperazin.

DI-THIO-CHLOR-SALICYLIC ACID. ($S_2C_6H.Cl.OH.COOH$).

Obtained by heating a mixture of 27.6 parts of salicylic acid and 55 parts of sulfur chlorid to 120° C. (248° F.), finally raising to 140° C. (284° F.). It forms a reddish-yellow powder, which is recommended as an antiseptic.

DITHION. See under Dithiosalicylic Acids.

DI-THIO-SALICYLIC ACIDS.

$$\begin{matrix} S\text{-}C_6H_3\,(OH)\,COOH. \\ | \\ S\text{-}C_6H_3\,(OH)\,COOH. \end{matrix}$$

(D. R. P. v. Heyden.)

Of these acids nine isomers are possible, but only two of them have been introduced in medicine in the form of sodium and lithium salts, being distinguished as No. 1 and No. 2.

Salicylic acid and sulfuryl chlorid, in molecular proportions, are heated together at 150° C. (302° F.), the resulting resinous-like mass is dissolved in a solution of soda, to which in turn a solution of sodium chlorid is added, resulting in the precipitation of sodium dithiosalicylate No. 1, while the sodium salt No. 2 remains in solution. The acids are liberated from their corresponding sodium salts by the addition of hydrochloric acid.

SODIUM DITHIOSALICYLATE, No. 1. Forms a yellowish, amorphous, soluble powder, which is employed as an antiseptic in veterinary practice, either as a wash (3–5 per cent.), or mixed with talcum or starch (5–50 per cent.) as a dusting-powder.

SODIUM DITHIOSALICYLATE, No. 2. Forms a gray, amorphous, hygroscopic, and soluble powder, which is employed internally in treatment of muscular rheumatism and rheumatic fever; in antiseptic activity it is superior to sodium salicylate. Dose is 0.2–1 Gm. (3–15 gr.).

DITHION. Is a mixture of the two sodium salts of dithiosalicylic acid. It is employed as an antiseptic wash (5–10 per cent.) and dusting-powder in veterinary practice.

THIOFORM. A basic bismuth salt of dithiosalicylic acid, introduced as a substitute for iodoform. It is prepared by adding a solution of sodium dithiosalicylate (1 and 2) to a solution of bismuth trinitrate, the latter salt being first dissolved in a little glycerin before diluting with water. The resulting precipitate, after washing and drying, constitutes a voluminous, yellow, insoluble, inodorous powder. Used in veterinary practice as substitute for iodoform in treatment of wounds, in eczema, erysipelas, etc. It is also recommended in diseases of eye and ear, to anesthetize the cornea, and in treatment of conjunctivitis and keratitis. Further, it is employed in nose and throat diseases and in dentistry. It is used as dusting-powder or in form of an ointment.

DI-THYMOL-DIIODID. See Aristol.

DI-THYMOL-IODID. See Aristol.

DIURETIN. $C_7H_7N_4O_2Na + C_6H_4\,(OH)\,COONa$. *Synonym:* Sodio-theobromin Salicylate.

The active constituent of this body is theobromin, an alkaloid which is closely related to caffein. Diuretin is prepared by mixing aqueous solutions of sodio-theobromin and sodium salicylate in molecular proportions, and evaporating to dryness. It constitutes a white, amorphous powder, very soluble in water, decomposed by acid solutions. It is employed as a diuretic in scarlet fever, nephritis, in dyspnea, in doses of 0.5–1.5 Gm. (8–23 gr.) for children, and 1.5–3 Gm. (23–45 gr.) for adults.

UROPHERIN (Lithium-diuretin). Is analogous to diuretin, being the corresponding lithio-theobromin salicylate. It is a white powder, soluble in 5 parts of water, being employed as a diuretic in doses of 1 Gm. (15.5 gr.).

DORMIOL.

An aqueous solution placed on the market as a hypnotic. It is said to contain camphor and chloroform.

DORMITIO.

A preparation consisting of extract of lettuce, oil of anise, sugar, and diluted alcohol. Used as a sedative.

DOURAHINA.

A Brazilian drug, used as a diuretic and diaphoretic, and as a substitute for digitalis.

DROSERA.

Used as antiasthmatic, also in whooping-cough. Dose, 20–40 drops of the tincture, or 0.05 Gm. of the extract.

DUBOISIN. $C_{17}H_{23}NO_3$.

This alkaloid, obtained from the leaves of *Duboisia myoporoides*, is, according to Ladenburg, chemically identical with hyoscin; according to others, identical with hyoscyamin. It is employed as a mydriatic, acting more rapidly and being less irritating than atropin; also employed as a hypnotic and sedative in treatment of hysteria and epilepsy. The *sulfate* occurs in hygroscopic crystals, being used in aqueous solution (0.065 Gm. to 30 Cc.) for the eye. The dose of the alkaloid is 0.0008–0.002 Gm. ($\frac{1}{80}$–$\frac{1}{30}$ gr.).

DULCIN. $CO(NH_2)NH.C_6H_4.OC_2H_5$. *Synonyms:* Sucrol; Valzin; Para-phenetolcarbamid.

By the action of para-phenetidin on phosgene, dissolved in toluol, phenetidin-carbon-oxychlorid is formed; this product on treatment with ammonia yields dulcin—a sweetening agent, forming colorless crystals which melt at 173° C. (343.4° F.), soluble in 800 parts of water at 15° C. (59° F.), and 55 parts of water at 100° C. (212° F.); it is soluble in 25 parts of alcohol, also in ether. Its sweetening power is about 200 times that of cane-sugar. Dulcin is employed as a sweetening agent for the food of diabetics. (D. R. P. Riedel.)

DUOTAL. See Guaiacol Carbonate, under Guaiacol.

DURAMYL.

A colorless powder said to be obtained by action of ozone on potato starch. Intended as a substitute for casein and glue in industrial arts.

DYNAMOGEN.

A preparation resembling hematogen and used similarly in anemia, etc.

DYSPHAGIE-TABLETS.

Each tablet contains 0.005 Gm. of cocain hydrochlorid and 0.01 Gm. menthol. Relieves difficulty of swallowing.

ECTASIN. See Anectasin.

EIGON PREPARATIONS.

Compounds of albumin and iodin of constant composition, introduced into medicine by E. Dieterich. They are placed on the market in three fundamental forms, which are used either alone or in combination: (1) *Alpha-eigon*, or albumin iodatum, is a light brown powder containing about 20 per cent. of iodin; insoluble in water and entirely odorless and tasteless. The iodin is split off by alkalies, and more readily by acids. (2) *Alpha-eigon-sodium*, or sodium iodo-albuminatum, is a nearly white, odorless, and almost tasteless powder, containing about 15 per cent. of iodin. It is readily soluble in hot and cold water. Both compounds keep indefinitely. (3) *Beta-eigon*, or peptonum iodatum, resembles the preceding compound in properties and also contains 15 per cent. of iodin. The advantage of this compound is that the iodin is combined with "predigested" albumin, and is recommended whenever an easy and rapid absorption of iodin in large quantities is desired in disturbances of the digestive tract. Both alpha- and beta-eigon are found of value in external wound treatment. They have no direct disinfectant action, but check the development of bacteria in 5–10 per cent. solutions. Over iodoform they have the advantage of freedom from odor, ready decomposition, and combining power. A more rapid healing is effected than with iodoform. This is particularly the case with a 10–30 per cent. eigon and talcum dusting-powder, which is a good deodorizer. For internal use both preparations were found non-toxic in large doses, but very effective medicinally. In one case of malignant syphilis doses gradually increasing from 3–10 Gm. (45–150 gr.) daily were given for weeks without a symptom of iodin intoxication. Eigon may also be administered in form of a 3 per cent. eigon malt extract, or as a wine containing 0.03 per cent. In scrofula it is given to advantage as follows: Cod-liver oil, 65 parts; malt extract, 35 parts; alpha-eigon, 0.05 part. In general, eigon is preferable to potassium iodid as an antisyphilitic, as also in the treatment of scrofula. On the other hand, it may be looked upon as a substitute for iodoform.

EKA-IODOFORM.

Iodoform to which is added 0.05 per cent. of paraformaldehyd to increase its power of destroying bacteria. This is said to dissociate in presence of iodoform, with the formation of gaseous formaldehyd. Good results in treatment of wounds are reported.

EKZEMIN.

An ointment of precipitated sulfur, containing vegetable red coloring-matter and perfume.

EMBELIC ACID. $C_9H_{14}O_2$.

A crystalline principle obtained from the fruit of *Embelia ribes*. It forms orange, crystalline scales, inodorous, tasteless, soluble in alcohol and water, melts at 140° C. (284° F.). The ammonium salt when mixed with honey is given in doses of 0.2–0.4 Gm. (3–6 gr.). For the expulsion of tapeworm.

EMETIN.

The expectorant and emetic principle of ipecac. Forms a white, bitter, inodorous powder, insoluble in water, readily so in alcohol. Dose, as emetic, 0.005–0.01 Gm.; as expectorant, 0.001–0.002 Gm.

EMOL.

A kind of earth containing steatite with traces of lime and iron oxid, appearing as a soft, pink, impalpable powder. Recommended to be applied as a paste to remove epidermal masses, as well as horny epidermis in certain cases of eczema of the palm and sole.

ENTEROL.

A mixture of three isomeric creosols (pure) in the same proportions as they occur, as physiologic products, in the intestinal tract. Enterol is recommended as an intestinal antiseptic. It possesses an unpleasant odor, and is usually administered in pills or capsules. A solution of 0.02 Gm. in 100 Gm. of water is administered in doses of 1–5 Gm. (15–75 gr.) a day. Usually combined with a laxative.

ENTEROROSE.

A dietetic recommended in gastro-intestinal catarrh. Dose, 8 Gm. (2 drachms) several times daily; for children, one-half the above. Stated to contain the alimentary constituents in the necessary proportions. A faintly yellowish, permanent powder, miscible with water.

EOSOT. See Creosote Valerate (Valerianate).

EPHEDRIN. $C_{10}H_{15}ON$.

An alkaloid obtained from the leaves of *Ephedra vulgaris*. The hydrochlorid of this base, which melts at 116° C., forms colorless, soluble crystals, is recommended as a mydriatic to replace homatropin. Instillation of one or two drops of a 10 per cent. solution into the eye produces marked dilatation of the pupil, which lasts from five to twenty hours; for daily application, 2 or 3 drops of a 1 per cent. solution is sufficient.

EPIDERMIN.

According to Kremel this is prepared by adding 60 Gm. of acacia mucilage to 40 Gm. of white wax, which has been fused on a water-bath, stirring till cool. To increase stability 10 per cent. of glycerin is added.

EPITHEMA.

A local anesthetic employed in dental practice.

ERGOTIN.

A name applied to various active extracts of ergot. (See U. S. D.)

ERGOTININ (Tanret).

This is a feeble basic principle obtained from ergot, of which, according to Tanret, it is the active principle. It occurs in colorless needles, which, on exposure to light, rapidly darken. According to Kobert, this principle, when pure, is inert; it is probably identical with Cornutin. As styptic, dose is 0.001–0.005 Gm. ($\frac{1}{12}$–$\frac{1}{84}$ gr.).

ERGOTINOL.

A liquor ammonii ergotinici. (See "Apoth. Ztg.," No. 24, 1897.)

ERODIUM CICUTARIUM.

A geraniaceous plant which is employed in uterine hemorrhages where ergotin fails. Dose, a tablespoonful of the infusion (1:12) every two hours.

ERONIMIN.

Colorless crystals, insoluble in water. Used like digitalin. Dose, 0.05 Gm.

ERYTHROL TETRA-NITRATE. $(CH_2.ONO_2)_2(CH.ONO_2)_2$.

Forms large scales, soluble in alcohol, insoluble in water, readily explode on percussion, melt at 61° C. (141.8° F.). Being a vaso-dilator, it is recommended in angina pectoris, asthma, heart disease, etc. Dose, according to Bradbury, 44 Cc. of an alcoholic solution (1:60) in a wineglass of water every four to six hours. Tablets containing 0.03 Gm. each are to be preferred, since there is no danger of explosion attending their use.

ERYTHROPHLEIN.

This is an alkaloid obtained from the Sassy-bark (*Erythrophlæum guineense*). The hydrochlorid of this base forms colorless crystals, which are soluble in water. This alkaloid has been recommended as a local anesthetic, internally as a cardiac stimulant. It greatly increases blood pressure, acting in a manner very similar to that of digitalis and of strophanthus. Subcutaneously, the lethal dose of erythrophlein hydrochlorid upon cats is about 0.003 Gm. ($\frac{1}{20}$ gr.), 0.01 Gm. ($\frac{1}{6}$ gr.) killing them within fifteen minutes. It is intensely poisonous.

ESCHSCHOLTIA CALIFORNICA.

A papaveraceous plant, which is used as anodyne and hypnotic in doses of 2.5–10 Gm. of the solid extract.

ESERIDIN. $C_{15}H_{23}N_3O_3$.

This is one of the alkaloids which occur in the calabar bean, along with physostigmine (eserin). Eseridin forms colorless crystals, melting at 132° C. (269.6° F.). Its physiologic action is similar to that of eserin, being, however, six times weaker in effect. It has been recommended as a purgative in veterinary practice. Subcutaneous dose, 0.01–0.02 Gm., sometimes to 0.1 Gm.

ESERIN-PILOCARPIN.
A readily soluble powder, used in horse colic, also as cathartic for herbivorous animals. Dose, 0.4 Gm. in 5 Cc. water, hypodermically.

ETHER, ANESTHETIC. See Æther Anæstheticus.

ETHER-MENTHOL-CHLOROFORM.
A mixture of ether, 15 parts, chloroform, 10 parts, and menthol, 1 part, which is used as an anesthetic spray.

ETHER, OZONIZED. See Ozone Ether.

ETHER, SULFURATED.
A mixture of 1 part of sulfur and 10 parts of ether. Given in teaspoonful doses mixed with carbonated water, in treatment of cholera.

ETHER, TEREBINTHINATED.
A mixture of ether, 4 parts, and oil of turpentine, 1–2 parts. Recommended in doses of 15–20 drops in treatment of gall-stone.

ETHOXY-CAFFEIN. See under Caffein.

ETHYLAMIN URATE.
A remedy for gout and vesical calculi. Easily soluble in water.

ETHYL BROMID. C_2H_5Br. *Synonyms:* Æther Bromatus; Brom-ethyl; Mono-bromo-ethane.
Ethyl bromid is obtained by the distillation of a mixture of ethyl-alcohol, sulfuric acid, and potassium bromid. It forms a colorless, limpid, inflammable liquid, of a sweet, chloroformic odor. It boils between 38° and 40° C. (100.4°–104° F.); its specific gravity lies between 1.445 and 1.450. It is not miscible with water, but freely with alcohol, ether, chloroform, and the oils.
This preparation should be cautiously preserved, for the action of light and air causes its decomposition into bromin and hydrobromic acid, which is evident by its brown color, acid reaction, and pungent odor; in this condition it should not be dispensed.
Ethyl bromid is employed as an anesthetic in minor surgical operations. Narcosis is produced in from ¼ to 1 minute, but lasts only a few minutes, unless fresh quantities are administered.

ETHYL CARBAMATE. See Urethane.

ETHYL CHLORID. C_2H_5Cl. *Synonyms:* Chlor-ethyl; Mono-chlor-ethane; Chelen. Æther Chloratus.
Ethyl chlorid is produced by the action of dry hydrochloric acid gas on absolute alcohol. At ordinary temperature it constitutes a gas, which is readily condensed to a liquid boiling at 10° C. (50° F.). Because of the intense cold (about —35° C.) produced by its evaporation, it is employed as a local anesthetic. This liquid appears in commerce in small hermetically sealed tubes, terminated by a capillary point. When used, the point of the capillary is broken off, and the tube held in the hand, the warmth of which is sufficient to expel the liquid through the small orifice in a stream; this is directed upon the surface where it is desired to produce local anesthesia.
Because of its great inflammability, operations should not be performed in the proximity of a gas flame.

ETHYL FORMATE. ($H.COOC_2H_5$). (FORMIC ETHER.)
The ethyl ester of formic acid. A fluid smelling like peach kernels, of sp. gr. 0.937, and boiling at 54.4° C. Soluble in 10 parts of water. Used as an antiseptic in treatment of diseases of the air-passages.

ETHYL IODID. C_2H_5I. *Synonyms:* Æther Iodatus; Mono-iodo-ethane.
Ethyl iodid is prepared by the action of iodin on a well-cooled mixture of amorphous phosphorous and absolute alcohol. This forms a colorless liquid which boils at 71° C. (160° F.); its specific gravity being 1.97.
Employed as an inhalation in treatment of bronchitis and dyspnea.

ETHYL KAIRIN. See Kairin.

ETHYL-METHYL ETHER. $CH_3.O.C_2H_5$.
Obtained by action of ethyl iodid on sodium methylate. Recommended by Richardson as an effectual anesthetic free from side effects.

ETHYL NATRIUM. See under Sodium Salts.

ETHYL PHENACETIN. See under Phenacetin.

ETHYL-PYOKTANIN. See under Pyoktannin (yellow).

ETHYL URETHANE. See Urethane.

ETHYLENE BROMID. $C_2H_4Br_2$. *Synonyms:* Æthylenum Bromatum; Brom-ethylene.
Ethylene bromid is prepared by passing ethylene gas through bromin. It forms a colorless, highly refractive liquid of chloroformic odor; its boiling-point is 131.5° C. (269° F.) and specific gravity 2.170. It is insoluble in water, but miscible with alcohol and the fatty oils.
This ethylene bromid should not be confused with ethyl bromid, as the former produces marked toxic effects when inhaled.
Ethylene bromid is employed as an anti-epileptic, in doses of 0.1–0.3 Gm. (1.5–5 gr.) or 6–12 minims, in form of an emulsion.

ETHYLENE CHLORID. $C_2H_4Cl_2$. *Synonyms:* Æthylenum Chloratum; Æthylen Chlorid; Chlor-æthylene; Elaylum Chloratum; Liquor Hollandicus.

Ethylene chlorid is produced by the action of chlorin on ethylene. It is a colorless ethereal liquid, of boiling-point of 85° C. (185° F.) and specific gravity of 1.254. It is employed as local application to relieve rheumatic and neuralgic pains.

ETHYLENE-DIAMIN-CRESOL.

A clear, colorless, almost non-toxic fluid which is recommended as an antiseptic for wounds, etc.

ETHYLENE-DIAMIN-SILVER-PHOSPHATE. See Argentamin.

ETHYLENE-DIAMIN TRICRESOL.

A mixture of 10 parts each of ethylene diamin and tricresol, dissolved in 500 parts of distilled water. It appears as a clear, colorless liquid, becoming slightly yellow on exposure to the air. It has an alkaline reaction, and metallic instruments are not attacked by it when in dilute solution. Used as antiseptic in $\frac{1}{10}$–1 per cent. solution.

ETHYLENE-GUAIACOL. See Guaiacol Ethylenatum.

ETHYLENE-IMIN. See Piperazin.

ETHYLENE-PHENYLHYDRAZIN-SUCCINIC ACID. ($C_{20}H_{22}N_4O_6$).

Obtained by boiling an alcoholic solution of ethylene-phenylhydrazin and succinic anhydrid. Forms crystalline needles soluble in water. Used as antipyretic.

ETHYLIDENE-CHLORID. CH_3CHCl_2. *Synonyms:* Æthylidenum Chloratum; Chlorethyliden; Aran's Ether; Wigger's Ether; Chloriden.

Ethylidene-chlorid is prepared by the action of chlorin on ethyl chlorid. It constitutes a colorless ethereal liquid, of an agreeable fruity odor, boiling-point being 57° C. (134.6° F.) and specific gravity 1.18. It is employed as an anesthetic in minor operations, producing rapid narcosis of short duration. Less dangerous than chloroform.

ETHYLIDENE-DI-ETHYL ETHER. See Acetal.

ETHYLIDENE-DI-METHYL-ETHER. See Dimethylacetal.

ETHYLIDENE-URETHANE.

Obtained by adding to an aldehyd-urethane solution diluted hydrochloric acid and precipitating with water. Forms white, glossy needles which are soluble in hot water, alcohol, and ether.

EUCAINE A, or ALPHA EUCAINE. ($C_{19}H_{27}NO_4$). (D. R. P. Schering.)

Chemically, a benzoyl-methyl-tetra-methyl-gamma-oxy-piperidin-carboxylic-methyl ester. Forms glossy prisms melting at 104° C., but because of the insolubility of the base, the *Hydrochlorid* is usually employed. Eucaine hydrochlorid is soluble 1 in 10 parts of water; its properties are that of a local anesthetic like cocain, but has an advantage over the latter in that it exhibits no action upon the heart; also, that it is not decomposed on boiling with water, which is necessary in sterilization. It possesses the disadvantage that in ophthalmology it produces considerable pain and burning, in which cases a 2 per cent. solution is used in conjunction with cocain (cocain. hydroc., eucaine hydroc., ää 0.05 Gm.; aqua, 5 Gm.). As application to nose and throat, 5–10 per cent. solution, in dental surgery 10 per cent. solution, of which 1–1½ Cc. are injected.

EUCAINE B, or BETA EUCAINE. ($C_{15}H_{21}NO_2.HCl$).

The hydrochlorid of benzoyl-vinyl-diacetonalkamin, used as substitute for cocain. Crystals are soluble in water, which, contrary to the older Eucaine A, are not decomposed on boiling like cocain; it melts at 263° C. (505.4° F.). Eucaine B is free from irritating action, far more active and less toxic than cocain. It is stated to be 3.75 times less toxic than Eucaine A.

Legrand makes use of a 2 per cent. solution in dental operations, which is entirely free from danger, and permits the operation to be performed immediately, while the employment of a 1 per cent. solution would necessitate a delay of five minutes. The patient may be allowed to go immediately after the operation, which is not possible when cocain is used. An injection of 1 Cc. of a 2 per cent. solution of Eucaine B suffices in most cases for the extraction of a large molar without pain. For general use the 2 per cent. solution is preferred.

EUCALINE.

A proprietary deodorant and disinfectant.

EUCALYPTEN HYDROCHLORID.

Used as intestinal antiseptic. Dose, 1.5–2 Gm.

EUCALYPTEOL. ($C_{10}H_{16}.HCl$).

A crystalline product, obtained by the action of hydrochloric acid gas on eucalyptol, which possesses strong antiseptic properties without being irritable, melts at 50° C., and boils at 115° C. Used in tuberculosis, bronchitis, influenza, etc., in doses of 1.5–2 Gm.

EUCALYPTOL. $C_{10}H_{18}O$. *Synonyms:* Cineol, Cajeputol.

Eucalyptol is an oxygenated body obtained from the volatile oil of various species of *Eucalyptus*. It is identical with *cajeputol* of oil of cajeput, and *cineol* of oil of wormseed. Eucalyptol forms a colorless liquid of camphoraceous odor, boiling at 176° C. (348.8° F.); sp. gr., 0.930. It is insoluble in water, but miscible with alcohol, ether, and the fatty oils. Eucalyptol, being the active constituent of oil of eucalyptus, is employed in all cases where the latter is applicable—that is, as an antiseptic, rubefacient, etc.; it is an effective agent in lung and bronchial affections, being introduced as a spray and inhalation. Its internal dose is 5 drops in capsule or as an emulsion.

EUCALYPTO-RESORCIN.

This compound is obtained by warming together molecular quantities of eucalyptol and resorcin; the resulting product is recrystallized from alcohol. It forms a white, crystalline powder, which is soluble in alcohol and ether; insoluble in water; melts at 90° C. Eucalypto-resorcin is an antiseptic, employed for inhalation (in alcoholic solution) in treatment of phthisis.

EUCASIN.

A compound of casein-ammonia made by passing ammonia over casein. It occurs as a fine powder, soluble in warm water. It is employed as a dietetic, and is said to be a much better nutritive than somatose, being better absorbed by the intestines. Usually given in soups, cocoa, etc. With wine and beer it is incompatible.

EUCHININ. ($C_2H_5O.CO.OC_{20}H_{23}N_2O$). (D. R. P. Zimmer.)

An ethylcarbonic ester of quinin produced by the action of ethyl carbonyl chlorid on quinin. It forms white, tasteless crystals, insoluble in water and soluble in alcohol, ether, and chloroform which melt at 95° C. Used in whooping-cough, hectic fever, pneumonia, and typhus in doses of 1–2 Gm.

Euchinin is now finding application as a remedy of equal value with quinin in treatment of various malarial complaints, possessing the advantage of being tasteless. According to v. Noorden, a dose of 1.5–2 Gm. of euchinin is of equal therapeutic value to 1 Gm. of quinin in whooping-cough. The hydrochlorid of euchinin is the most soluble, while the tannate is practically insoluble.

EUDERMOL.

This is the name given by a German manufacturer (Marquart) to nicotin salicylate. This salt crystallizes in colorless hexagonal tables melting at 117.5° C. and completely soluble in water. It contains 54 per cent. of nicotin, and is permanent if kept in closed containers. It has been recommended as a remedy in various skin diseases. For scabies, 3 or 4 applications are sufficient. The salt is soluble in water, alcohol, oil, traumaticin, etc. It is entirely non-irritant, does not cause albuminuria, is odorless, and does not soil the clothing when used in ointment form.

EUDOXIN. *Synonym:* Tetra-iodo-phenolphtalein Bismuth.

A bismuth salt of nosophen (tetraiodophenolphtalein) containing 52.9 per cent. of iodin and 14.5 per cent. of bismuth. It is said to be useful in stomachic and intestinal troubles, in doses of 0.2–0.5 Gm. (3–8 gr.) for adults; 0.1–0.2 Gm. (1½–3 gr.) for children of 5 to 10 years old, and for infants in doses up to 0.1 Gm.

EUFORMOL.

A proprietary antiseptic tablet form containing oils of eucalyptus and wintergreen, thymol, menthol, boric acid, fluid extract of wild indigo, and formaldehyd.

EUGALLOL. (PYROGALLOL-MONO-ACETATE.)

This has been recommended as a substitute for pyrogallol in the treatment of psoriasis. It is a thick, syrupy, transparent mass, of a brownish-yellow color and readily soluble in water. It is soluble in its own weight of acetone, and this solution can be applied to the skin by means of a pencil, and when the acetone evaporates a firm, elastic varnish will be left. Eugallol has been placed on the market in the form of a 33 per cent. solution in acetone.

EUGENOL. $C_6H_3.(C_3H_5)(O.CH_3)(OH)$. (METHYL-ESTER OF ALLYL-DIOXY-BENZENE.)

This is a phenol which occurs in various volatile oils, particularly those of clove (80–90 per cent.), allspice, cinnamon, sassafras, and bay. Oil of clove is treated with an excess of liquor sodæ, then shaken with ether to remove the terpenes; the aqueous solution of sodium eugenol is then decomposed by the addition of acid, when the eugenol separates as an oily fluid. It is an aromatic, colorless, oily liquid, which boils at 246° C. (474.8° F.); when exposed to the air it rapidly turns brown. Readily soluble in alcohol, almost insoluble in water; it unites with alkalies, forming soluble salts. Eugenol is a powerful antiseptic, being employed in dental surgery. It has also been recommended in treatment of tuberculosis in doses of 1–2 Gm. (15–30 gr.).

BENZOYL-EUGENOL. $C_6H_3(C_3H_5)(OCH_3)OOC.C_6H_5$. Prepared by the action of benzoyl chlorid on eugenol-sodium, occurs in colorless, inodorous crystals, which melt at 70.5° C. (159° F.); insoluble in water, soluble in alcohol, ether, and chloroform. This compound is recommended in place of Eugenol in phthisical conditions, also in neuralgic headaches. Dose, 0.5–1 Gm. (8–15 gr.).

CINNAMYL-EUGENOL. $C_6H_3(C_3H_5)(OCH_3)O\text{–}CO.C_2H_2.C_6H_5$. Prepared by interaction between cinnamyl-chlorid and eugenol sodium; it forms inodorous, colorless crystalline needles, which melt at 90°–91° C. (194°–195.8° F.); insoluble in water, soluble in alcohol, ether, and chloroform. This compound is likewise recommended for administering in place of Eugenol. 0.3–0.6 Gm. (4.5–9 gr.).

EUGENOL-ACETAMID. $C_6H_3(C_3H_5)(OCH_3)OCH_2.CONH_2$. Prepared by the interaction between eugenol-sodium and monochloracetic acid; the resulting eugenol acetic acid is converted into the amid by heating with ammonia. From water it crystallizes in shining plates, from alcohol in fine needles, which melt at 110° C. (230° F.). It is recommended in fine powder form as a local anesthetic, likewise as an antiseptic in treatment of wounds.

IODO-EUGENOL. $C_6H_2I(C_3H_5)(OCH_3)(OH)$. Obtained by the action of iodin on eugenol-sodium. It forms a yellowish-colored, inodorous, insoluble powder, which melts at 150° C. (302° F.). Iodo-eugenol is employed as an antiseptic.

EUGENOL-BENZOATE. See under Eugenol.

EUGENOL-CINNAMATE. See under Eugenol.

EULYPTOL. See Ulyptol.

EUNATROL. (EUNATRON?)

Sodium oleate in pill-form coated with chocolate. Recommended as excellent cholagogue in doses of 1 Gm. twice daily.

EUNOL.

A preparation which occurs in two modifications: "alpha" and "beta"-eunol. It is prepared from napthols and eucalyptols, and is intended for surgical purposes and the treatment of skin diseases. Very bitter, insoluble in water, readily soluble in ether, alcohol, chloroform, and olive oil.

EUONYMIN.

A glucosid obtained from the bark of the root of the Wahoo (*Euonymus atropurpureus*). It forms a brownish-colored powder of very bitter taste, slightly soluble in water and soluble in alcohol and ether. Its properties are purgative. Dose, 0.03–0.2 Gm. (½–3 gr.).

EUPHTHALMIN. ($C_{16}H_{25}NO_3.HCl$). (D. R. P. Schering.)

The hydrochlorid of (*n*)methyl-vinyl-diacetone-alkamine-phenyl-glycolyl, a synthetic alkaloid that has chemically the same relation to "Eucaine B" as homatropin has to tropacocain that is euphthalmin is the hydrochlorid of the mandelic acid derivative of "Eucaine B." It is stated to be a powerful mydriatic, having several advantages over the older mydriatic alkaloids. Used in 2 per cent. solution. Specially useful when only a short mydriasis without effect on the accommodation is desired.

EUPHORIN. $C_6H_5NH\text{-}CO\text{-}OC_2H_5$. *Synonym:* Phenyl-urethane.

The esters of carbamic acid, $CO<^{NH_2}_{OH}$, are called *Urethanes*, euphorin being a phenyl-ester. It is obtained by the interaction between anilin and mono-chloroformic ethyl-ester, forming a colorless crystalline powder, melting at 49°–50° C. (120.2°–122° F.), slightly soluble in cold, more readily in hot, water; soluble in alcohol, ether, and hydroalcoholic mixtures. Euphorin is employed as an antipyretic, antirheumatic, and analgesic, in doses of 0.13–0.5 Gm. (2–8 gr.); as an antiseptic it is used in the form of a dusting-powder in the treatment of ulcers, skin diseases, etc.

EUQUININ. See Euchinin.

EURESOL. (RESORCIN MONO-ACETATE.)

This is recommended, dissolved in acetone, as a remedy for skin diseases.

EUROBIN.

This is chrysarobin triacetate, which is recommended in light, chronic skin affections. It is usually combined with eugallol in a solution of acetone or chloroform, when the effects of pyrogallol and chrysarobin are desired; or with saligallol, when the effect of chrysarobin is chiefly wanted.

EUROPHEN. $C_6H_3CH_3(C_4H_9)O>_{C_6H_3(CH_3)(C_4H_9)O>}HI$. *Synonym:* Isobutyl-ortho-cresol-iodid.

This method of preparation is analogous to that employed in the manufacture of aristol, in which a solution of isobutyl-ortho-cresol in dilute alkali is precipitated by a solution of iodin in potassium iodid. Europhen forms a yellowish, amorphous powder, of aromatic odor, insoluble in water; easily soluble in alcohol, ether, and the fatty oils. It yields iodin to metallic salts. It should be preserved in a dry place, away from the action of light; water and alkalies decompose it. Europhen is employed as an antiseptic, being applied either as a dusting-powder or as a 5–10 per cent. ointment; for subcutaneous injection a 3–5 per cent. solution in olive oil is used. (D. R. P. Bayer.)

EURYTHROL.

An extract from the spleen of oxen, used in anemia and chlorosis. Dose, 1–2 teaspoonfuls in soup daily.

EUTHYMOL.

According to Parke, Davis & Co. this contains oil of wintergreen, eucalyptus, boric acid, thymol, menthol, extract. baptisia tinct. fluid. Used as antiseptic.

EXALGIN. $C_6H_5N(CH_3).(CH_3CO)$. *Synonym:* Methyl-acetanilid.

This compound, a methylated acetanilid, is prepared by the interaction between acetyl-chlorid and monomethyl-anilin. It forms acicular needles, which are difficultly soluble in cold water and readily in alcohol and diluted alcohol, melting at 100° C. (212° F.). Exalgin is an antineuralgic, being given in doses of 0.2–0.6 Gm. (3–10 gr.).

EXODYNE.

A commercial antipyretic which, according to Goldman, contains antifebrin, 90 per cent.; sodium salicylate, 5 per cent.; sodium bicarbonate, 5 per cent.

EXOL.

A local anesthetic, used in dental practice.

EXTRACTUM CORPUS CILIARIS LIQUIDUM.

An organo-therapeutic preparation obtained from the corpus ciliare of the ox. Used in eye diseases.

EXTRACTUM ERODII CICUTARII AQUOS. SPISS.

Used as a strong hemostatic. Ext. erod., 2–4 Gm.; aqua menth. pip., 150 Gm.; syr. spin. cerv., 60 Gm. Take teaspoonful 3 or 4 times daily.

EXTRACTUM KOLÆ SICC. BERGENAU.

Prepared by means of a solution of common salt as menstruum and the strength adjusted with milk sugar, to represent the drug weight for weight. The extract has the characteristic strong odor and taste of the nut, and is well suited as a basis for all kinds of kola preparations.

EXTRACTUM LACTIS.

An extract containing the inorganic constituents of milk (in nuclein-like combination), free from milk sugar, casein, and albumin, especially adapted as a means of administering calcium. One kilo of this "extract" represents 2000 liters of milk.

EXTRACTUM OSSIUM LIQUIDUM. See Ossin.

EXTRACTUM SUPRARENALE HÆMOSTATICUM (Merck).

A specially prepared aqueous extract from the suprarenal capsules. Forms brown powder, soluble in equal quantity of water. Its solution (1:1) in water produces an extraordinarily strong contraction of the blood-vessels when dropped upon mucous surfaces. Used in conjunction with cocain in eye operations, also as hemostatic in capillary hemorrhages.

FANGO.

Clay from the hot springs of Battaglio (Italy). Applied locally in treating rheumatism, gout, etc.

FAREOL.

A proprietary anodyne and antipyretic.

FELLITIN.

The trade name given by a German manufacturer to a preparation made from ox-gall for use in frost-bite. Its use is based on the popular application of fresh ox-gall to this purpose in Ireland, Russia, and certain parts of Germany.

FENTHOZON.

A deodorant and disinfectant, consisting of acetic acid, 26 Gm.; phenol, 2 Gm.; menthol, camphor, and oil of eucalyptus, of each 1 Gm.; and oils of lavender and verbena, each 0.5 Gm.

FERALDOID.

A peptonized albuminate of iron.

FERCREMOL.

A compound of hemoglobin and iron, containing 3 per cent. of iron. It forms a brown, tasteless powder, which dissolves in weak ammoniated water. The dose is 0.2–0.52 Gm. (3–8 gr.) three times a day.

FERMELIN.

A bread preparation claimed to make the dough rise better and to give the bread a thick crust, which prevents it from drying out too rapidly and so keeps it fresh longer. The active constituent appears to be a sort of diastase, which converts a portion of the starch into glucose. Dr. J. Colmann gives the following analysis:

	Per cent.
Water,	9.85
Mineral matter,	1.22
Fat,	1.85
Proteins,	10.22
Non-nitrogenous nutritive matter,	74.76
Cellulose,	1.10
	100.00

FERRALBUMOSE.

Prepared, according to Dokkum, from meat, which is cut fine after depriving it of fat, then treated with artificial gastric juice, the filtered solution freed from albumin, neutralized with sodium carbonate, again filtered, and evaporated to dryness in vacuo. Of this albumose, a 10 per cent. solution is made, and a 10 per cent. ferric chlorid solution added so long as a precipitate is formed. The precipitate is dried, powdered, and sifted.

FERRATIN. (D. R. P. Boehringer.)

Natural ferratin, a compound of iron found in the liver. May be obtained by extracting the liver of the hog with water; artificially by a patented process. One hundred grams of egg albumen are placed in a mixture of 21 Cc. of water and 70 Cc. of solution of caustic soda (10 per cent.). Twenty grams of tartrate of iron are dissolved in water, and, if acid, as it generally is, it is neutralized with sodium carbonate. The two solutions are mixed and left for five or six hours, and then transferred to the water-bath. The black coloration, due to the formation of sulfide of iron, will disappear toward the end of the process. After cooling, tartaric acid is added to faint acidity. The precipitate formed is dissolved by the addition of a little ammonia, and excess of this is driven off by exposure to the water-bath. It is then filtered, and when the filtrate is cold, the ferratin is precipitated by a solution of tartaric acid, which should only be added in just sufficient quantity. It is filtered off, washed with water, alcohol, and ether, and dried. Ferratin forms a reddish-brown, inodorous, and tasteless powder, insoluble in water or dilute acids, but soluble in water possessing a slight alkaline reaction. The preparation contains about 7 per cent. of iron. The commercial article appears in two forms, one being insoluble, as described above, and the other a soluble sodium compound. Ferratin is readily absorbed in the organism, without causing the slightest digestive disturbances. Dose, 0.5 Gm. (8 gr.); children, half this dose. See Indifferent Compounds of Iron in Addenda.

FERRIC SULFATE (as disinfectant).

E. Riecke has examined ferric sulfate (tersulfate of iron) for its disinfecting power, and has found that it may be used to better advantage than free acids. A 0.25 per cent. solution arrests the development of typhus and cholera bacilli, and the germs of these micro-organisms are destroyed in feces within one minute after applying this solution.

FERRIPTON.

An iron preparation for anemia, debility, etc. Administered per os or hypodermically.

FERRIPYRINE. See Ferropyrine.

FERRISALIPYRINE. (ANTIPYRINE FERROUS SALICYLATE.)

A yellowish-brown, indistinctly crystalline powder, showing a green fluorescence.

FERRO-HEMOL. See Hemol.

FERRO-MAGNESIUM-SULFATE. $FeSO_4.MgSO_4 + 6H_2O$.

A greenish-white powder, used in anemia and chlorosis. Dose, 0.5 Gm.

FERROPYRINE. $(C_{11}H_{12}N_2O)_3Fe_2Cl_6$.

A compound of three molecules of antipyrine and one molecule of ferric chlorid. This compound possesses the combined valuable properties of both its constituents, hence may be employed in the treatment of anemia, neuralgia, etc. Ferropyrin appears as an impalpable, orange-red colored powder, containing 64 per cent. of antipyrine, 12 per cent. of iron, and 24 per cent. of chlorin. Soluble in 5 parts of water at 15° C., and only 9 parts at 100° C., hence on boiling a cold saturated solution, ferropyrin separates in the form of ruby-red scales, which melt between 220° and 225° C. Very soluble in cold methyl-alcohol, from which it separates in orange-red shining scales; also very soluble in alcohol, and insoluble in ether. The addition of alkalies or alkali bicarbonates to its aqueous solution causes the precipitation of ferric hydrate. Used as styptic either in a 20 per cent. aqueous solution, applied with cotton tampons, or directly in powder form. Internal dose is given as 0.5 Gm. (8 gr.), used in anemic conditions accompanied by headache and gastralgia.

FERROSINE.

A preparation said to contain iron oxid, 70–75 per cent.; lime and albumin, 10–20 per cent.; and water, etc., 10–15 per cent. It occurs either as a granular or fine red powder, which is used as a pigment.

FERRO-SODIUM CITRO-ALBUMINATE.

Hematinic. Contains 30 per cent. of ferric oxid. Dose, 1.5 Gm. (23 gr.) for adults, 0.25–0.5 Gm. (4–8 gr.) for children, in soup or syrup.

FERROSOL.

A double saccharate of ferrous oxid and sodium chlorid. Ferrosol does not precipitate by the addition of acids, alkalies, salts, or changes of temperature; it contains 0.77 per cent. of iron. Employed in anemia, chlorosis, etc.

FERRO-SOMATOSE.

A mixture of somatose with 2 per cent. of an organic combination of iron. It is a brown, odorless, and tasteless powder, easily soluble in aqueous liquids, free from styptic taste, and does not injure the teeth. It has been used with success in anemia and chlorosis. Dose, 5–10 Gm. (75–150 gr.) daily, given in two or three portions, in any suitable vehicle, without changing habitual diet. In doses of 10 Gm. it is laxative. It may be sterilized and administered subcutaneously. See also under Somatose.

FERROSTYPTIN (Marquart).

A preparation of iron containing formaldehyd; forms dark yellow, cubic crystals, or crystalline powder, melting at 120° C., readily soluble in water. Used as hemostyptic antiseptic, non-caustic in dental and rhinologic practice. Dose, 0.3–0.5 Gm. (5–8 gr.).

FERROVIN.

A readily absorbable iron preparation, used in anemia.

FERRUM ALBUMINATUM. See Iron Albuminate.

FERRUM CASEINATUM. *Synonym:* Iron Nucleoalbuminate.

Recommended as a substitute for ferrum albuminatum, and contains 5.2 per cent. ferric oxid. It is prepared by precipitating a solution of iron lactate with a solution of calcium caseinate. Skimmed milk is diluted with water and the casein precipitated by the addition of acetic acid (avoiding excess). This is collected and repeatedly washed with warm water, finally with alcohol, followed by ether. One part of this purified casein is rubbed with one part of calcium carbonate and 100 parts of warm water; the resulting solution of calcium caseinate is filtered and treated with a slight excess of a freshly prepared 1 per cent. solution of ferrous lactate. The resulting precipitate of iron caseinate is at first colorless, but on drying turns a flesh color. It is devoid of odor and taste, and is soluble in water only when made alkaline with sodium carbonate.

FERRUM OXYDATUM SACCHARATUM SOLUBILE. See Iron, Saccharated Oxid.

FERRUM PEPTONATUM. See Iron Peptonate.

FERVIN.

A meat extract containing iron, placed on the market in gelatin capsules.

FILICIC ACID (Amorphous). $C_{35}H_{42}O_{13}$.

An amorphous principle obtained from the rhizome of the Male Fern (*Aspidium filix mas*). This forms a tasteless white powder, which is soluble in alcohol and the fatty oils; melts at 125° C. (257° F.). The anthelmintic properties of male fern extract are ascribed to this principle, which is given in doses of 0.5–1 Gm. (8–15 gr.). If absorbed into the system, amorphous filicic acid is toxic, hence it should not be administered with the fatty oils. The crystalline filicic acid is absolutely inert. (Poulsen.)

FILMOGEN. See Liquor Adhæsivus.

FLUORESCEIN. (RESORCIN-PHTHALEIN.) $C_{20}H_{12}O_5.H_2O$.

Phthalic acid anhydrid (75 parts) is fused with resorcin (100 parts), the mass well washed with hot water, and crystallized from alcohol. Fluorescein forms a yellowish-red, crystalline powder, insoluble in water, uniting with alkalies to form soluble salts. A 2 per cent. alkaline ($NaHCO_3$) solution is employed in diagnosis of corneal lesions, and detection of minute foreign bodies imbedded in that tissue. Those portions of the cornea which are devoid of their epithelium are colored green, while foreign bodies are surrounded by a green ring. (Straub.)

FLUOROL.

A sodium fluorid, which is recommended as an antiseptic of equal value to sublimate, potassium permanganate, and formaldehyd. It possesses the advantage of not coagulating albumin. Injections of a 1 : 200 solution of fluorol are neither painful nor caustic, and they produce no irritation whatever when applied to the mucous membranes, while they render the latter unfit for the propagation of micro-organisms.

FLUOROXYL. See Epidermin.

FLUORPHENETOL. See Antitussin.

FORMACOLL.

A new name for formaldehyd-gelatin.

FORMAGEN.

A dental cement.

FORMALDEHYD-CASEIN. (D. R. P. Merck.)

A compound of formaldehyd and casein. Constitutes an inodorous, tasteless, coarse, yellow powder. Surgical antiseptic.

FORMALDEHYD-TANNIN-ALBUMINATE.

It has been attempted to render tannin-albumin compounds more resistant to the action of the gastric juices by heating, by treating with alcohol or with acids. The same object may be attained by the action of formaldehyd on the finished tannin-albumin compound. The product is insoluble in the acid liquids of the stomach, also offers some resistance toward the alkaline fluids of the intestines, and is finally split up into three constituents when it reaches the lower intestines, and there exerts the astringent effect of the tannin, as also the antiseptic properties of the formaldehyd.

FORMALIN. $H.COH + xH_2O$. *Synonyms:* Formic Aldehyd; Formol.

This is a concentrated (40 per cent.) aqueous solution of formic aldehyd, the latter being obtained by passing the vapors of methyl alcohol over glowing coke or platinum spirals. This solution possesses a pungent odor and neutral reaction, its specific gravity being from 1.080–1.088. Formic aldehyd is a most powerful bactericide and antiseptic. The vapors of this destroy within a very short time the bacilli of cholera, typhus, diphtheria, anthrax, etc., hence a most valuable antiseptic. The solution can be sprayed about the room or over the infected objects without injury; where obtainable, the formaldehyd lamp is best, in which the vapors of the gas are generated directly from the imperfect oxidation of methyl alcohol. The vapors of formic aldehyd are irritating, hence cause sneezing and profuse flow of tears.

For sprinkling about, a 2–5 per cent. solution of formalin is usually employed.

A 1:10 solution of formol may be employed as a preservative fluid for anatomic and botanic specimens; also this same solution is used as a hardening agent for tissues.

A more convenient method of sick-room disinfection consists in employing the Schering's Formalin Lamp or the Formalin Disinfector.

FORMANILID. $C_6H_5NH.COH$.

This is obtained by digesting anilin with formic acid, or by rapidly heating it with oxalic acid. It forms colorless prismatic needles, melting at 46° C. (115° F.), readily soluble in water, alcohol, glycerin, and the oils. Formanilid is employed as an antipyretic and analgesic in doses of about 0.12–0.3 Gm. (2–5 gr.). When applied to the mucous membrane in powder form, or used in the form of a subcutaneous injection (1 Cc. of a 3 per cent. solution), it acts as a local anesthetic.

FORMATOL.

A disinfectant dusting-powder containing formaldehyd.

FORMIC ALDEHYD. See Formalin.

FORMIC ETHER. See Ethyl Formate.

FORMIN. $(CH_2)_6N_4$. *Synonyms:* Urotropin; Hexa-methylene-tetramin.

A condensation product of formaldehyd and ammonia which forms a white crystalline powder, readily soluble in water, insoluble in alcohol. Used in uric acid diathesis and cystitis. Dose, 1–1.5 Gm.

FORMIN SALICYLATE. See Saliformin.

FORMOCHLOR.

A solution of formaldehyd and calcium chlorid. Used as a disinfectant with an atomizer or by vaporizing with heat.

FORMOFORIN. *Synonym:* Formoform.

A mixture intended to relieve perspiring feet. It consists of formaldehyd 0.13 per cent., thymol 0.1 per cent., zinc oxid 34.44 per cent., and starch 65.27 per cent.; applied as a dusting-powder. If formaldehyd is omitted, the powder may be used as disinfectant for purulent wounds.

FORMOFORM. See Formoforin.

FORMOL. See Formalin.

FORMOLID.
A proprietary antiseptic, germicide, and prophylactic.

FORMOPYRINE.
Obtained by action of a 40 per cent. solution of formaldehyd on an aqueous solution of antipyrine. Forms white crystals; insoluble in cold, but soluble in hot water, alcohol, and acids; with the latter, salts are formed; melts at 156° C. (312.8° F.).

FORMYL BROMID. See Bromoform.

FORMYL CHLORID. See Chloroform.

FORMYL-PARA-AMIDO-PHENYL-ETHER.
Obtained by fusing together para-amido-phenyl-ether hydrochlorid, sodium formiate, and formic acid, extracting the mass with boiling water, and crystallizing. White, glossy, tasteless scales, soluble only in boiling water, alcohol, and ether. Recommended as a sure antidote to strychnin poisoning.

FORMYL-PHENACETIN. See under Phenacetin.

FORMYL-PIPERIDIN.
Prepared by interaction between formamid and piperidin. It is an oily liquid, which possesses an agreeable, aromatic odor. It boils at 220°–221° C. (428°–432° F.), and has its melting-point (as a platinum salt) at 171°–172° C. (339.8°–341.6° F.). It is soluble in water and in alcohol. On conducting hydrochloric acid gas through a solution of formyl-piperidin in absolute ether, hygroscopic crystalline needles having the structure $C_5H_{10}N.COH.HCl$ are produced.

FORMYL TRIBROMID. See Bromoform.

FORMYL TRIIODID. See Iodoform.

FOSSILIN.
A name given to a petroleum product similar to petrolatum, vaselin, etc.

FRANGULIC ACID. ($C_{14}H_8O_4 + 1\frac{1}{2}H_2O$).
Obtained by boiling frangulin with diluted acids. Orange yellow or brown needles or plates, insoluble in water, soluble in cold but slowly soluble in hot alcohol. Used as laxative.

FRAXININ. *Synonym:* Mannite.

FREJAROL.
An ethereal oil obtained from the frejar tree. It has an odor resembling that of pepper. Used for skin diseases in East India.

FROHMANN'S SOLUTION.
A local anesthetic used in dental practice, composed of cocain hydrochl. (0.2), morph. hydrochl. (0.25), steril. sodium chlorid (0.2), antipyrine (1–2), guaiacol (2 drops), distilled water (100).

FRUIT-SUGAR. See Diabetin.

FUCHSIN. *Synonyms:* Rosein; Rubin; Rosanilin Hydrochlorid.
Used in albuminuria of the kidneys. Dose, 0.05–0.2 Gm. in pill form.

FURFURON ("Ethereal Extract of Hayseed").
A liniment of dirty green color and strongly alkaline reaction; recommended for gout and rheumatism. According to "Ph. Ztg.," it consists principally of a soap, mixed with camphor, salicylic acid, acetic ether, ammonia, and an alcoholic extract of peppermint.

GADUOL. *Synonyms:* Alcoholic Extract of Cod-liver Oil; Morrhuol.
Brownish-yellow, oily liquid, bitter, acrid taste, probably prepared by repeatedly extracting cod-liver oil with 90 per cent. alcohol, these extractions being concentrated by distilling off the alcohol. Same uses as cod-liver oil. Dose, 5–16 ℿ in capsules.

GALACTO CHLORAL. $C_6H_4Cl_3O_6$.
Obtained by heating a mixture of galactose and chloral in presence of hydrochloric acid. Forms glossy scales, soluble only in alcohol. Properties likely similar to chloralose.

GALIUM APARINA.
An extract prepared from the leaves of this rubiaceous plant. Used as antiscorbutic and diuretic in epilepsy, jaundice, and dropsy. Dose, 0.25–1 Gm.

GALLABROMOL. See Gallobromol.

GALLACETOPHENON. $CH_3.CO.C_6H_2(OH)_3$. *Synonyms:* Alizarin-yellow C; Methyl-keto-tri-oxy-benzene; Tri-oxy-aceto-phenon.
This derivative of pyrogallol is known commercially under the name of "alizarin-yellow C." It is prepared by interaction between pyrogallol, acetic acid, and zinc chlorid at 150° C. (302° F.). It forms a pale yellow powder, almost insoluble in cold water, readily soluble in hot water, alcohol, ether, and glycerin; melts at 170° C. (338° F.). Gallacetophenon is employed in dermatology (10 per cent. ointment) as a substitute for pyrogallol, which frequently gives rise to toxic symptoms.

GALLAL.

Basic aluminium gallate. An amorphous, brownish powder obtained by precipitating a solution of aluminum sulfate with a solution of gallic acid which has been nearly neutralized with sodium hydrate. Used as antiseptic dusting-powder.

GALLANILID. See Gallanol.

GALLANOL. $C_6H_5NH.CO.C_6H_2(OH)_3$. *Synonyms:* Gallic Acid Anilid; Gallinol; Gallanilid.

This compound, the anilid of gallic acid, is obtained by boiling tannin with anilin. It is a colorless, crystalline solid, with bitter taste, soluble in water, alcohol, and ether; possessing marked astringent properties. Gallanol is employed in skin diseases in place of chrysophanic acid and pyrogallol, being less irritating and without poisonous properties. The strength of the ointment varies from 3–20 per cent.; in some instances it is used as a dusting-powder when mixed with French chalk.

GALLIC ACID ANILID. See Gallanol.

GALLICIN. $C_6H_2<^{(OH)_3}_{COOCH_3}$.

A methyl ether of gallic acid, prepared by passing dry hydrochloric acid gas through a solution of gallic or tannic acid in methyl alcohol. Occurs either in rhombic prisms or fine needles which melt at 202° C., readily soluble in water and alcohol. Recommended as a non-toxic, antiseptic dusting-powder.

GALLINOL. See Gallanol.

GALLOBROMOL. $C_6Br_2(OH)_3COOH$. *Synonyms:* Di-bromo-gallic Acid; Gallabromol.

This compound, obtained by the action of bromin on gallic acid, occurs in fine white needles, almost insoluble in cold, but readily soluble in hot, water, also in alcohol and ether; melts at 205° C. (401° F.). It is used in neurasthenia and similar complaints as a sedative, in place of the alkali bromids, the dose being 2–3 Gm. (30–45 gr.) a day. Also employed in cystitis and epididymitis (by irrigation with 2–4 per cent. solutions), and in eczema madidum and crustosum (1–2 per cent. solutions, powders, or ointments).

℞. Gallobromol, ... 3 Gm.
Dist. water, ... 200 "

For injection 4 or 5 times a day (in gonorrhea, cystitis, and epididymitis, and as a lotion in eczema).

GALLOFORMIN.

A compound of formaldehyd and gallic acid which has been recommended on the ground that it is very unstable, and that when applied therapeutically, the formaldehyd is liberated under the influence of either acids or alkalies. It is produced by the action of gallic acid on hexamethylene-tetramin. It occurs as hard, opaque needles, soluble with difficulty in water, alcohol, ether, and glycerin, and insoluble in alcohol, benzol, and olive oil. It is decomposed by heat.

GASTROMYXIN.

A preparation of pepsin.

GELANTHUM.

A mixture of gelatin, tragacanth, and water, proposed as ointment-vehicle.

GELATOL.

An ointment-vehicle composed of a mixture of oil, glycerin, gelatin, and water.

GEOFORM AND CREOFORM.

Formed by the interaction of guaiacol and creosote, respectively, with formaldehyd. The combinations are free from odor and taste, are neither caustic nor irritant, and free from toxic effects. They are soluble in caustic potash solution and are reprecipitated on acidulating the solution. They are soluble in alcohol, ether, and hot benzol, insoluble in water and petroleum ether.

GEOSOT. (GUAIACOL VALERATE.)

The guaiacol ester of valeric acid, an oily liquid of specific gravity 1.037, used in tuberculosis. Dose, 0.2 Gm., taken in capsules, 3 to 9 daily.

GERMOL.

A clear, reddish-brown, oleaginous fluid, having an odor resembling that of creolin. Specific gravity 1.045 and boiling-point 190° C. Composition unknown. Used as an antiseptic, like cresol.

GICHTWASSER (Schering's).

Contains 1 Gm. each of phenocoll hydrochlorid and piperazin in 600 Cc. of carbonated water.

GLACIALIN.

A meat preservative consisting of borax 1 part and boric acid 3 parts.

GLANDULÆ PROSTATÆ SICC. PULV. See Organo-therapeutic Extracts in Addenda.

The purified, dried, and powdered prostate gland of the steer; each part represents 6 parts of the fresh gland. Used in hypertrophy of prostate gland in daily doses of 0.5 Gm.

GLANDULÆ SUPRARENALES SICC. PULV. See Organo-therapeutic Extracts in Addenda.

The selected suprarenal capsules of oxen and sheep which have been dried and powdered; 1 part of this powder represents 5 parts of the fresh organ. Used in Addison's disease, diabetes insipidus, neurasthenia, cyclic albuminuria, heart diseases, in doses of 0.2 Gm. two or three times daily.

GLANDULA THYMI SICC. PULV. See Organo-therapeutic Extracts in Addenda.

Prepared from fresh thymus gland of calves and sheep, 1 part representing 6 parts of fresh gland. Like the thyroid gland, it also contains iodin. Used in struma and Basedow's disease, in daily doses of 2.5–5 Gm.

GLANDULEN. See Organo-therapeutic Extracts in Addenda.

Prepared from the bronchial glands of sheep, in which, after extracting with water or alcohol, the active substance is precipitated with acids; this is then dried and made into tablets with sugar of milk. Each tablet represents ¼ Gm. of the fresh membrane. Recommended in tuberculosis.

GLOBULARIN ($C_{30}H_{44}O_{14}$) **and GLOBULARETIN** ($C_{12}H_{14}O_3$).

The former is a bitter principle from the *Globularia Alypum*, the latter a decomposition product resulting from the action of diluted acids upon globularin. Recommended in rheumatism, gout, and typhoid fevers. Globularin acts upon the heart and nervous system like caffein, diminishing the secretion and specific gravity of the urine. Globularetin, on the contrary, increases the secretion of urine and its total solid content to the extent of 33 per cent. This remedy also promotes a free secretion of gall to the extent of producing a diarrhea.

GLONOIN.

Nitroglycerin (see U. S. P.).

GLUCIN.

The sodium salt of amido-triazin-sulfonic acid, obtained by the action of aldehyds upon chrysoidin and conversion of the condensation products into their mono- and di-sulfonic acids. As regards sweetening power, glucin is inferior to saccharin, being about 100 times sweeter than cane-sugar. (D. R. P. A. G. f. Anilinfabr.)

GLUCOPHENETIDIN.

A condensation product of para-phenetidin and glucose. Occurs in white, needle-shaped crystals of silky luster, readily soluble in hot water and alcohol, less so in the cold solvents; melts at 165° C. It dissolves in concentrated sulfuric acid, at first with a greenish-yellow color, becoming green-black on standing; silver salts are readily reduced. Medicinal properties not as yet investigated.

GLUCUSIMIDE. See Saccharin.

GLUSIDE. See Saccharin.

GLUTINO-PEPTONATE OF MERCURY HYDROCHLORID. See Mercury Glutino-peptonate Hydrochlorid.

GLUTOFORM. See Glutol.

GLUTOID CAPSULES.

Gelatin capsules hardened with formaldehyd.

GLUTOL. *Synonyms:* Formaldehyd-gelatin; Glutoform.

A solution of 500 Gm. of gelatin is mixed with 25 drops of a 40 per cent. solution of formaldehyd; then the mixture is dried in presence of formaldehyd vapors, then powdered. Used as an antiseptic dusting-powder.

GLYBOLID. See Glybrid.

GLYBRID.

A paste consisting of a mixture of equal parts of boralid (a mixture of equal parts of boric acid and antifebrin) and glycerin. Used as antiseptic.

GLYCERIN-CHLORAL-CAMPHOR.

Chloral hydrate 5 parts, and camphor 3 parts, are triturated until fluid; then 25 Gm. of glycerin are added, and the mixture warmed. Recommended in ulcus molle.

GLYCERIN LACTO-CARBOLATE.

A mixture of glycerin with lactic and carbolic acids. Used as a topical application in laryngeal tuberculosis.

GLYCERIN SULFURATED.

A glycerin containing 5 per cent. of sulfur. Used for painting a diphtheritic throat.

GLYCERO-PHOSPHORIC ACID. $CH_2(OH).CH(OH).CH_2O.PO(OH)_2$.

Prepared by mixing phosphoric acid of sp. gr. 1.454 (1 part) and glycerin of sp. gr. 1.242 (1½ parts). This mixture is gradually heated over a Bunsen burner; at 120° C. the liquid assumes a straw color, and gradually darkens until 190° is reached, when the color is that of a dark amber, and vapors of acrolein are given off. It is, when pure, a yellow, odorless liquid of syrupy consistence and acid taste, soluble in water and alcohol. Employed in neurasthenia, tabes dorsalis, phosphaturia, etc., in doses of 0.1–0.3 Gm. (1½–5 gr.) three times daily. The salts are employed in similar cases and in the same doses.

CALCIUM GLYCERO-PHOSPHATE. $Ca\ C_3H_7PO_6 + 2H_2O$. Glycero-phosphoric acid is poured in small quantities at a time into a mixture of calcium carbonate and water. The glycero-phosphate formed is precipitated from the solution by addition of alcohol. It is purified by dissolving in water and reprecipitating with alcohol. Forms a white crystalline powder, soluble in cold water, insoluble in alcohol. Dose, 0.2–0.3 Gm. (3–4.5 gr.).

IRON GLYCERO-PHOSPHATE. A greenish-gray powder or yellow plates, soluble in 10 parts of warm water to form a brown solution of acid reaction. The solution is stable, even on warming, but is precipitated by carbonates, oxalates, phosphates, and lead salts. The salt contains 27–28 per cent. of phosphoric acid.

LITHIUM GLYCERO-PHOSPHATE. $Li_3C_3H_7PO_6$. A white powder, soluble in water; also occurs in the market as a 50 per cent. solution. Employed in the same cases as other lithium salts, especially when the tonic effect of glycero-phosphoric acid is desired. Dose, 0.5–1 Gm. (8–15 gr.).

SODIUM-GLYCERO-PHOSPHATE. $Na_2C_3H_7PO_6$. Appears in the market as a 50 per cent. solution. From 0.2–0.26 Gm. (3–4 gr.) are injected (subcutaneously) daily in sodium chlorid solution.

GLYCEROSE.

An aldehyd obtained by subjecting glycerin to electrolysis or oxidation with platinum sponge. Used as a developer in photography. Forms a pale yellow, aqueous fluid, which may be prepared as follows: In 2 kilos of anhydrous glycerin 130 Gm. of mercuric chlorid are dissolved, and the mixture heated in a retort over an oil bath to 150°–160° C. Glycerose distils slowly over, mixed with some side products. The distillate is neutralized with sodium carbonate and the aqueous solution extracted with benzin, which takes up the glycerose. Yield, about 1 kilo.

GLYCOBLASTOL.

A hair remedy. It is a yellow liquid of agreeable odor, containing, according to Dr. Weller: Alcohol, 35.22; glycerin, 61.64; and 0.19 per cent. of a substance, having a very pungent taste, probably capsicin.

GLYCOFORMAL.

Walter and Schlossmann have made critical tests of the efficiency of various methods of disinfection, and arrive at the conclusion that formaldehyd, in presence of a sufficient quantity of water, deserves preference over all other disinfecting agents. They regard vaporization of paraformaldehyd as inefficient, because of the absence of sufficient moisture and the rapid reconversion of the vapors into para-formaldehyd. A rational and practical disinfection requires that it take place rapidly, that the disinfectant thoroughly penetrate the objects under treatment, and does not injure them. These requirements are met, according to the authors, by a liquid which they name Glycoformal, when it is applied in sufficient quantity by means of a specially constructed atomizer. Glycoformal is a mixture of an aqueous solution of formaldehyd and glycerin. The glycerin is added for the purpose of attracting moisture, and thus rendering every smallest particle of formaldehyd effective. At the same time it acts as a solvent for the layer of fat, which is present almost everywhere. This method of disinfection is successful, not only in living rooms, but also in stables, which are rendered sterile in one-half to three hours.

GLYCOGELATIN.

An ointment-vehicle prepared from glycerin and gelatin.

GLYCOLINE.

A purified petroleum oil, for use in atomizers.

GLYCOSOLVOL.

Said to be a "peptonized oxypropionate-theobromin pepsin" (?), obtained by action of oxy-propionic acid on peptone and a compound of theobromin on trypsin (?). Recommended in diabetes mellitus. (Lindner, Dresden.)

GLYCOZONE.

A thick, syrupy liquid, which is made by saturating glycerin with ozone. It is administered in teaspoonful doses, diluted with water, in treatment of dyspepsia, etc.

GLYMOL.

A proprietary preparation, claimed to be a liquid hydrocarbon, of neutral reaction, obtained from crude petroleum; specific gravity, 0.865, at 60° F. Employed in nasal and bronchial diseases, gynecologic practice, etc.

GOA IPECACUANHA. See Narogamia.

GOLD AND POTASSIUM BROMID. See Potassio-auric Bromid.

GOLD CYANID. See Aurum Cyanatum.

GOLD MONOBROMID. AuBr.

Yellowish-gray, very friable mass, insoluble in water. Antiepileptic, antisyphilitic. Dose, ½–½ gr. Anodyne (migraine, etc.), $\frac{1}{10}$ gr. twice daily before meals.

GOLD TRIBROMID. $AuBr_3$.

Soluble in water. Therapeutics and dose same as monobromid.

GOLD TRICYANID. See Aurum Tricyanatum.

GONOPEPSIN.

A preparation stated to consist of boric acid, pepsin, infusion of cranberry, and water. Recommended as an injection in gonorrhea.

GONOROL.

A remedy for gonorrhea, which is stated to represent the active constituents of sandalwood oil. Gonorol is a colorless oil, having a feeble odor, suggesting its source.

GUACAMPHOL. (CAMPHORIC ACID ESTER OF GUAIACOL.)

A valuable remedy to combat night-sweats of phthisis as well as the form of diarrhea which accompanies the disease. It crystallizes in shape of white needles, which are devoid of odor and taste.

GUACETIN. See Guaiacetin.

GUACO. (HUACO.)

The leaves and stems of the South American *Aristolochia fragranguaco*, which are used in cholera, intermittent fever, and vaginitis. Dose, 1–5 Gm. of the powder, or 30 Cc. of infusion (2 : 100).

GUÆTHOL. $C_6H_4 <^{OC_2H_5\ (1).}_{OH\ (2).}$ *Synonyms:* Ajacol; Thanatol; Pyrocatechin-mono-ethyl-ether.

A homologue of guaiacol which forms an oleaginous fluid; when exposed to a low temperature congeals to a crystalline mass, soluble in alcohol and ether; melts at 26°–28° C. (78.8°–82.4° F.). Medicinal properties same as those of guaiacol. V. Mering claims guæthol to be superior to the former. Dose, 0.1–0.25 Gm. in capsules or mixed with wine. (D. R. P. Merck.)

GUAIACETIN. $\left(C_6H_4 <^{OCH_2COOH}_{OH}\right)$. *Synonym:* Pyrocatechin-mono-acetic Acid.

Obtained by the action of chloro-acetic acid on pyrocatechin. Forms a white, inodorous powder or crystals, readily soluble in water, melting at 131° C. (267.8° F.); this solution gives a deep blue color with ferric chlorid. Constitutes a colorless fluid of strong aromatic odor, almost insoluble in water, but readily so in alcohol. Used as a substitute for guaiacol in phthisis, etc. Dose, 0.5 Gm. in emulsion or capsules three times daily. (D. R. P. Majert.)

GUAIACOCAIN.

A dental anesthetic.

GUAIACOL. $C_6H_4(OCH_3)(OH)(1:2)$. *Synonyms:* Methyl-pyro-catechol; Methyl-pyrocatechin.

Beechwood tar creosote, which consists of a mixture of guaiacol, cresols, and creosol, is fractionated, collecting that portion which comes over between 200° and 205° C.; this product, on treatment with alcoholic potassium-hydrate, yields potassium-guaiacol, which, when decomposed with dilute acids, liberates guaiacol. When pure, guaiacol forms a crystalline solid, which melts at 28.5° C. (83.3° F.) (Merck), and boils at 205.1° C. (401.1° F.); purified liquid guaiacol is a colorless refractive liquid, of agreeable aromatic odor, having a specific gravity of about 1.143; soluble in 85 parts of water, readily in all proportions in alcohol and ether. Commercial guaiacol (generally of synthetic origin), an oily liquid, does not contain more than 90 per cent. of pure guaiacol, its gravity is lower, and color darkens on exposure to air. Guaiacol is a valuable remedy in phthisis, being given in doses of 0.05–0.1 Gm. (0.7–15 gr.) or 1 or 2 minims, which may be increased to 20 minims or more. (D. R. P. Merck.) It readily combines with acid radicals, forming crystalline compounds, among which are:

CREOSOTE CARBONATE. See Creosotal.

GUAIACOL BENZOATE. See Benzosol.

GUAIACOL BINIODID. Prepared by precipitating an aqueous solution of sodium guaiacol with a solution of iodin in potassium iodid. It forms a reddish-brown powder, possessing an odor of iodin; soluble in alcohol and the fatty oils. Nothing definite is known as to its dose.

GUAIACOL CARBONATE. $[CO_3(C_6H_4OCH_3)_2]$. *Synonym:* Duotal. The di-guaiacol ester of carbonic acid. Formed by the action of phosgene gas on guaiacol sodium. This forms an inodorous, neutral, crystalline powder (containing 91.5 per cent. of guaiacol), insoluble in water, slightly so in alcohol, glycerin, and the oils; melts at 86°–90° C. (186.8°–194° F.). The freedom from irritation produced by guaiacol, as well as creosote, has added to the popularity of this salt, which does not disturb the digestive functions, for, being insoluble, it passes unchanged through the stomach into the intestines, where it is split up. The dose is 0.3–0.5 Gm. (5–8 gr.), gradually increasing to 5 Gm. (75 gr.) daily.

GUAIACOL CARBONIC ACID. $(C_6H_3(OH)(OCH_3)COOH + 2H_2O)$. Prepared by passing carbonic acid over sodium-guaiacol heated to 100° C. (212° F.); the resulting product on treatment with acids yields the free acid. This forms a white, crystalline, inodorous powder of bitter taste; slightly soluble in water, readily in alcohol and ether, melting at 150° C. (302° F.). Guaiacol carbonic acid and its alkali salts have been recommended as antiseptics and antirheumatics. This compound should not be confused with Guaiacol Carbonate. (D. R. P. v. Heyden.)

GUAIACOL ETHYLENATE. $(CH_3O.C_6H_4O\text{–}C_2H_4\text{–}O.C_6H_4OCH_3)$. A guaiacol ethylene ester, which forms inodorous needles difficultly soluble in water, melting at 138° C. Used like guaiacol in doses of 0.5–1 Gm. twice daily.

GUAIACOL-PHOSPHAL, $P.(C_6H_4.OCH_3O)_3$, or *GUAIACOL PHOSPHITE.* The result of an attempt to prepare a compound in which the caustic properties of guaiacol might be mitigated, and at the same time containing a high percentage of guaiacol. The ester combination of phosphorous acid was chosen, partly for the reason that it enables the formation of a compound having the highest possible content of guaiacol, 92.2 per cent. (against 45.9 per cent. in the salicylate and 89.8 per cent. in the carbonate). On the other hand, much value is placed on the action of the phosphorus itself, which in the form of phosphite is almost completely assimilated, and is medicinally effective in the same diseases as guaiacol. Guaiacol-phosphal crystallizes in white needles that melt at 77.5° C. It is very soluble in strong alcohol, ether, and chloroform, less soluble in water, glycerin, fatty oils, and oil of turpentine. The daily dose is 1–2 Gm. (15–30 gr.).

GUAIACOL PHOSPHATE. $PO(C_6H_4OCH_3O)_3$. This salt is prepared by H. Dubois by making a solution of guaiacol in soda lye, cooling, and then adding phosphorus oxychlorid, drop by drop, in somewhat more than the theoretic quantity. After standing five or six hours an oily layer of the phosphate collects on the bottom of the vessel, which soon crystallizes, and is then purified by repeated washing with alcohol. It crystallizes in hard colorless tables, melting at 98° C. It is insoluble in water, alcohol, and petroleum ether, and easily soluble in chloroform and acetone. Recommended because of the combined therapeutic values of the components. In hectic fever the following is recommended: Guaiacol phosphate, 0.25 Gm. (4 gr.); powdered cinnamon, 0.1 Gm. (1½ gr.). One powder every three or four hours.

GUAIACOL PHOSPHITE. See Guaiacol-phosphal.

GUAIACOL SALICYLATE, or *GUAIACOL-SALOL.* $C_6H_4(OH)COO-C_6H_4(OCH_3)$. A compound analogous to salol. Prepared by the action of phosphorus oxychlorid on a mixture of guaiacol sodium and sodium salicylate. It forms a white, inodorous, tasteless, crystalline powder, melting at 65° C. (149° F.), almost insoluble in water, soluble in alcohol and ether. It is administered to phthisical patients to aid digestion; also as an intestinal antiseptic in doses of 1 Gm. (15 gr.).

GUAIACOL SALOL. See Guaiacol Salicylate.

GUAIACOL SUCCINATE. This new ester of guaiacol may be prepared either by treating a mixture of guaiacol and succinic acid with a definite quantity of phosphorus oxychlorid, or, preferably, by treating an aqueous soda solution of guaiacol, cooling it while treating with succinyl chlorid. It has the formula $C_4H_4O_4(C_6H_4OCH_3)_2$. It crystallizes in fine needles with a silken luster, melting at 136° C. It is insoluble in water, slightly soluble in ether and alcohol, and readily so in chloroform.

GUAIACOL VALERATE, or *VALERIANATE.* See Geosot.

OLEO-CREOSOTE. The oleic ester of creosote, prepared by combining creosote with oleic acid by means of phosphorus trichlorid. This is a yellow, oily liquid (35 per cent. creosote), insoluble in water and nearly so in alcohol, soluble in ether and in oils. It is used as an antiphthisic in doses of 15–16 minims.

GUAIACYL.

A sulfo-addition-product of guaiacol. According to André, a bluish-gray powder, soluble in alcohol and water, insoluble in fatty oils. Its taste is at first astringent, then sweet. It is neither toxic, nor caustic or irritant. The 5 per cent. aqueous solution is stable, and has a pale violet-red color. In local anesthetic value it is similar to guaiacol. It is injected in quantities of 0.5–1.5 Cc. of a 5 per cent. solution. Anesthesia takes place in five or six minutes.

GUAIACYL CALCIUM. This new preparation, which has given good results as a local anesthetic in minor surgery and dentistry, is made in the following manner: 100 Gm. of pure guaiacol are fused at a low heat in a flask and 100 Gm. of pure concentrated sulfuric acid gradually added in such a manner that no sudden rise of temperature takes place. After standing forty-eight hours at ordinary temperature, the contents of the flask have assumed a red color and the consistence of a thick syrup. This is diluted with six or seven times its weight of distilled water, heated to 80° C. on a water-bath, saturated with calcium carbonate, which is gradually added in small portions, then filtered and evaporated to dryness. The residue is dissolved in four to five times its weight of absolute alcohol, the solution filtered, again evaporated to dryness, and powdered. The product is the calcium salt of guaiacol-sulfonic acid, or guaiacyl. It is a gray-blue powder, easily soluble in water and alcohol, and insoluble in oils.

GUAIAMAR. $C_6H_4<^{OCH_3}_{O.CH_2.CHOH.CH_2OH}$. *Synonym:* Guaiacol Glyceryl Ether.

This forms a white, crystalline powder, melting at 75° C., soluble in alcohol, ether, glycerin, and 12 parts of water. Guaiamar is used as a substitute for guaiacol in the treatment of phthisis, also as an intestinal antiseptic; dose is from 5–20 gr., taken one hour before meals. The following formula is desirable: Guaiamar, 6 drachms; glycerin, 10 drachms; alcohol, 6 drachms; water, 2 ounces. Dose, ½–2 teaspoonfuls.

GUAIAPEROL. See Piperidin Guaiacolate.

GUAIAQUIN. $C_6H_4O_2CH_3HSO_3.C_{20}H_{24}N_2O_2$. *Synonym:* Quinin Guaiacol-bisulfonate.

Prepared by a combination of quinin and guaiacol-sulfonic acid. It is a yellowish solid of acid reaction and bitter taste, readily soluble in water, alcohol, and dilute acids. Offered as an odorless, non-caustic substitute for guaiacol.

GUARANIN. See Caffein.

GUAVACIN. $C_6H_9NO_2$.

Colorless crystals, soluble in water. Used as anthelmintic.

GUINORAL. *Synonym:* Chinoral.

An oleaginous bitter-tasting liquid, containing quinin and chloral. Dose as hypnotic is 0.05–1 Gm. (0.7–15 gr.); it is also used as an antiseptic.

GYMNEMIC ACID. $C_{32}H_{55}O_{12}$.

The active principle prepared from the leaves of *Gymnema silvestre.* It forms a greenish-white powder, of an acid, astringent taste, sparingly soluble in water, easily in alcohol. It produces a temporary ageusia to sweet and bitter tastes. Before partaking of bitter medicines, the mouth is rinsed out with a 12 per cent. hydro-alcoholic solution.

GYNOCARDIC ACID.

The active principle from the oil of the seeds of *Gynocardia odorata.* It forms a yellowish, unctuous solid, melting at about 30° C. (86° F.); it has a burning and acrid taste, and marked odor. Used internally and externally in treatment of leprosy and syphilis, and of gouty and rheumatic affections. Dose, ½–3 gr.; externally, as liniment, with oil (1 : 10–20).

GYNO-CYAN-AURIDZARIN. $(C_9H_{21}O_7)_2(KCNO)Au_3$.

A principle (crystalline) obtained from *Gynocardia lancifoliata.* It forms unstable crystals, insoluble in the usual solvents, soluble, 1 : 5000, in olive oil, the solubility being increased to 1 : 80 by the addition of cinnamic alcohol. This solution, which contains 0.00001 Gm. ($\frac{1}{655}$ gr.) to the minim, is recommended in doses of 3–20 minims in various forms of tubercular affections.

HEGOVIA.

A remedy for bed-wetting; stated by the manufacturer to consist of powdered snails, salol, and lithium salicylate.

HELCOSOL. See Bismuth Pyrogallate.

HELENIN. C_6H_8O. Compare Alantol.

A stearopten obtained from the root of *Inula helenium* (elecampane root) by exhaustion with alcohol and precipitating the resulting extract by pouring into water. It forms white, acicular crystals, which melt at 110° C. (230° F.), insoluble in water, readily soluble in hot alcohol, also in ether and the oils. Helenin is employed in treatment of whooping-cough, bronchitis, and tubercular coughs, in doses of 0.01 Gm. (⅙ gr.).

HELIOTROPIN. See Piperonal.

HELLEBOREIN. $C_{26}H_{44}O_{15}$.

Transparent granules, soluble in water, insoluble in alcohol. Proposed as substitute for digitalis. Recommended by Gasparini as active anesthetic for the cornea of the eye, 3–4 drops of a solution containing $\frac{1}{12}$ gr. to each drop. Dose, 0.01 Gm. (⅙ gr.).

HEMALBUMIN. See Indifferent Compounds of Iron in Addenda.

A predigested iron albuminate, 1 Gm. containing all the constituents which are found in 6 Gm. of fresh healthy blood, with exception of fibrin and such products as urea, kreatinin, etc. Also 1 Gm. of hemalbumin, aside from the readiness with which it is absorbed, is equal to 25 Gm. of liquor ferri albuminati. For infants, 1 Gm. dissolved in hot water, with sufficient sugar, is used. For adults the same quantity may be given in dry powder form several times daily. Used in chlorosis and various anemic conditions.

HEMANUTRID.

This represents, in a liquid form the sanguino tablets, and is intended for patients who rebel against taking tablets. The composition of the preparation is as follows: Hemoglobin, 70 per cent.; glycerin, 20 per cent.; and cognac, 10 per cent.

HEMATIN-ALBUMIN.

An albumin preparation containing iron obtained by drying blood fibrin. Forms a fine, brownish-red, stable, inodorous, and tasteless powder. Used in anemia in doses of 1–2 teaspoonfuls three times daily.

HEMATOGEN (Pio Marfori).

A yellowish powder, containing 7 per cent. of iron, or a liquid obtained by adding ferric citrate and acetic acid to an alkaline solution of albumin. This is employed in treatment of rachitis and scrofulous conditions, also as a tonic for anemics. Dose of the liquid is 1–4 teaspoonfuls, according to age.

HEMATOGEN (Hommel's).

Fresh beef blood is freed from fibrin, poured through a cloth, and agitated in a bottle with one-third of its volume of ether. The mixture is transferred to a separator and allowed to stand several days. The lower, aqueous layer is then drawn off and evaporated, at a temperature not exceeding 30° C., to three-fourths of its volume, under stirring. The product is mixed in the proportion of 7 parts with 2 parts of glycerin and 1 part of Malaga wine. Used in rachitis, anemia, and scrofulous conditions. Dose, 1–2 teaspoonfuls in milk for children, and 1–2 tablespoonfuls for adults.

HEMATROPIN.

A fluid preparation of hemoglobin.

HEMICRANIN.

Contains phenacetin, 5 parts; caffein, 1 part; citric acid, 1 part. Used in migraine.

HEMOFERROGEN.

The name which has been applied to "Hematogenum siccum," or dried hematogen, a Dutch preparation. It is a dry, odorless preparation, made from blood, which has been proposed as a remedy in chlorosis and other anemic conditions.

HEMOGALLOL. See Indifferent Compounds of Iron in Addenda.

A ferruginous blood preparation, obtained by the action of pyrogallol on the hemoglobin of blood (defibrinated blood), thus furnishing a compound which is easily assimilated, supplying those constituents of the blood which are found lacking in chlorosis and anemia. It forms a red-brown powder, insoluble and tasteless, being given in doses of 1–2 Gm. (15–30 gr.). (D. R. P. Merck.)

HEMOGLOBIN.

The red coloring-matter of the solid principles of the blood. It forms a red powder soluble in water and used in treatment of anemia and chlorosis in daily doses of 5–10 Gm. (75–150 gr.), taken usually in wine.

HEMOL. (D. R. P. Merck.) See Indifferent Preparations of Iron in Addenda.

A dark brown powder, closely allied to hemogallol, prepared by reducing defibrinated blood with zinc dust. An easily assimilable preparation of iron used in all anemic conditions in doses of 0.1–0.5 Gm. (1.5–6 gr.).

HEMOL ARSENIC.

A brown powder which contains in each 100 parts 1 part of arsenic. Used as a means of arsenic administration. Usually made into pill form; 50 pills contain 5 Gm. of arsenhemol; beginning with 3, the dose is gradually increased to 10 pills daily.

HEMOL, BROMO.

Hemol which contains 2.7 per cent. of bromin. Used in those cases where the continued effect of bromin is desirable. Dose, 1–2 Gm. several times daily.

HEMOL, CUPRO, or CUPRO-HEMOL. (COPPER HEMOL.)

A dark brown powder, containing 2 per cent. of copper in non-irritating form, and therefore an eligible succedaneum for the older copper compounds, in tuberculosis, scrofulosis, etc. Dose is 0.1–0.15 Gm. (1½–2 gr.), three times daily in pill form.

HEMOL, FERRO.

Hemol with about 3 per cent. of iron in organic combination. It forms a brown, almost tasteless powder, insoluble in water. Dose, 0.5 Gm. (8 gr.).

HEMOL, IODO.

Hemol containing 16.6 per cent. of iodin. Used in tertiary syphilis, scrofula, psoriasis, and all cases where iodin is indicated. Dose, 0.2 Gm. (3 gr.).

HEMOL MERCURIC IODID.

A hemol compound which contains 13 per cent. of mercury and 28 per cent. of iodin. Used in chronic cases of syphilis, after following formula: Hemol hydrarg.-iod., 10 Gm.; opium, 1. Gm.; ointment of glycerin, q. s. ad pil. 100. Dose, 1 pill three times daily. According to Kobert and Rille, this preparation is best given in combination with opium, to prevent diarrhea, stomach disturbances, and the pain during swallowing, which are sometimes caused by the compound.

HEMOL, ZINC.

A brown, almost insoluble powder, containing 1 per cent. of zinc. Recommended as a mild antidiarrheic in doses of 0.5 Gm. (8 gr.), three times daily.

HEMONEIN.

A beef extract with addition of the salts contained in normal blood. Used as a nutritive and tonic.

HEMOSTAT.

A remedy for nose-bleed, which is applied on the sides and the root of the nose. It consists of tannin, sulfate of quinin, and benzoated fat.

HEMOSTEROL.

A compound obtained from fresh animal blood.

HEPARADEN.

A remedy for jaundice, introduced in France, consisting of 2 parts of fresh liver and 1 part of milk sugar.

HEPAR SICCATUM.

The dried and powdered liver of the swine, deprived of its blood. Each one part of this preparation corresponds to 5 parts of the fresh organ. Used in atrophic cirrhosis of the liver. Dose, 20 Gm. a day.

HEPATICINE.

A proprietary liver regulator.

HERMITINE.

Electrolyzed sea water. Used as antiseptic and disinfectant for wounds.

HEROIN. $C_{17}H_{17}:(O.OC.CH_3)_2:NO$. (D. R. P. Bayer.)

An acetic ester of morphin which appears as a white, crystalline, inodorous powder of faint bitter taste; it is practically insoluble in water, but readily dissolves in the presence of dilute acids, precipitated upon the addition of alkalies; melting-point is 173° C. (343.4° F.). Heroin is proposed by Dreser as a substitute for codein in doses of 0.01 Gm. (⅙ gr.) in all cases where codein phosphate is usually prescribed, as a reliable remedy for coughs, pains in the chest, and particularly for catarrhal inflammations of the respiratory tract. It is given three or four times daily in powders of 0.005–0.01 Gm. (1/12–⅙ gr.), or in aqueous solutions with addition of a few drops of diluted acetic acid.

HETO-CRESOL.

Cinnamic acid meta-cresol ester has been recommended under the above name for use in the treatment of tuberculosis. Heto-cresol forms crystals which are soluble in hot alcohol, in ether, benzol, chloroform, and glacial acetic acid, but are insoluble in water. It is made by heating meta-cresol with cinnamic acid and a condensing agent, such as phospho-oxychlorid, in some neutral solvent, such as toluol. This ester, unlike that of carbolic acid, or ortho- and para-cresol, is not poisonous, and does not cause irritation even when applied direct to open wounds.

HETOL.

The name recently applied to sodium cinnamate, which has been recommended for use in the treatment of tuberculosis.

HEXA-METHYLENE TETRAMIN. See Urotropin.

HEXA-METHYLENE TETRAMIN SALICYLATE. See Saliformin.

HIPPURIC ACID. ($CH_2NH(C_6H_5CO)COOH$). *Synonym:* Benzoyl-glycocoll.

A crystalline principle which occurs in the urine of herbivorous animals. Forms colorless prisms soluble in water and alcohol. Used for like purposes as salicylic acid.

HOLGIN.

According to Aufrecht, it contains menthol, 1 part; formaldehyd, 17.5 parts; methyl alcohol, 81.5 parts. The discoverer claims a percentage of 60–70 of formaldehyd. Holgin forms a colorless fluid, of burning taste, odor resembling menthol, miscible with water. Because of its antibactericidal properties, it is used to preserve organic preparations.

HOLOCAÏN. $(OC_2H_5.C_6H_4.NH.C.CH_3:N.C_6H_4.O.C_2H_5)HCl$. *Synonym:* Para-dieth-oxy-ethenyl-diphenyl-amidin Hydrochlorid. (D. R. P. Hoechst.)

Obtained by uniting molecular quantities of phenacetin and para-phenetidin with separation of water. Forms insoluble crystals, melting at 121° C. The hydrochlorid is usually employed; this forms bitter-tasting crystals, soluble to the extent of 2½ per cent. in cold water. Used as substitute for cocain in ophthalmology. The introduction of 2–3 drops of a 1 per cent. solution is generally sufficient to produce local anesthesia in from fifteen seconds to ten minutes.

HOLZINOL.

According to Aufrecht, it contains formaldehyd, 2 parts; menthol, 40 parts; methyl alcohol, 58 parts. Recommended as a disinfectant in 3 per cent. solution.

HOMATROPIN HYDROBROMID. $C_{16}H_{21}NO_3.HBr$. *Synonym:* Oxy-toluyl-tropin Hydrobromid.

An artificial alkaloid (tropin mandelate), prepared synthetically by Ladenburg from mandelic acid and tropin, the two derivatives of atropin. This forms colorless, very hygroscopic crystals, slightly soluble in water. Its action is like that of atropin, but less persistent and weaker, causing, when applied to the eye, rapid dilatation of the pupil, which passes off sooner than that of atropin. Also given internally in treatment of the night-sweats of phthisis. The maximal internal dose is 0.001 Gm. ($\frac{1}{60}$ gr.); as application, in 1 per cent. solution. The salts of the alkaloid are preferred.

HOMO-ARECOLIN. $C_7H_{10}(C_2H_5)NO_2$. *Synonym:* Methyl-tetra-hydro-nicotinic Acid.

The ethyl ether of arecaidin, a derivative of arecolin. It forms a yellowish liquid, soluble in water, alcohol, and ether. Its hydrobromid occurs in colorless crystals, soluble in water and alcohol, melting at 118° to 119° C. Recommended as a substitute for arecolin.

HOMO-TOLUIC ACID. See Hydro-cinnamic Acid.

HUMINAL.

A peat extract.

HYDRACETIN. $C_6H_5NH\text{-}NHCH_3CO$. *Synonyms:* Pyrodin; Acetyl-phenyl-hydrazin.

This compound may be looked upon as hydrazin, $H_2N\text{-}NH_2$, in which a hydrogen in each of the NH_2 groups is replaced by a monovalent radical, one being a phenyl (C_6H_5), the other being an acetyl (CH_3CO) group, or it may be considered as being the acetyl derivative of phenyl-hydrazin. It is obtained by heating together acetic anhydrid and phenyl hydrazin. Hydracetin occurs in colorless, inodorous, and tasteless crystals, which melt at 128.5° C. (263.5° F.), soluble in 50 parts of water and readily so in alcohol. Its properties are those of an antipyretic and antirheumatic, in doses of 0.05–0.1 Gm. ($\frac{3}{4}$–1½ gr.). Care should be taken in administering this remedy, because of its toxic properties.

HYDRAMYL. *Synonyms:* Amylhydrid; Pentylene; Pentylhydrid.

A fractionated product of petroleum ether. Used as antiseptic.

HYDRAMYL-ETHER.

A mixture of equal parts of hydramyl and anhydrous ether. Used as local anesthetic.

HYDRARGYROL. *Synonym:* Para-phenyl-thionate of Mercury.

A new mercurial antiseptic. Its advantages over most other mercury compounds are stated to be perfect stability, great solubility in water, non-causticity, non-coagulation of albumin, and comparatively low toxicity. It does not attack metals.

HYDRARGYRO-SEPTOL. $(C_6H_6N.O.SO_3Hg + 2NaCl)$.

A compound of chinosol mercury with sodium chlorid. Used in treatment of syphilis.

HYDRARGYRUM AND COMPOUNDS. See under Mercury.

HYDRARGYRUM-KALIUM-HYPOSULFUROSUM.

Used in syphilis. Salt, 1.25 Gm.; aqua dist., 10 Gm.; every fifth day inject 1 Cc.

HYDRASTIN. $C_{21}H_{21}NO_6$.

An alkaloid obtained from the rhizome of *Hydrastis canadensis.* It occurs in white crystals, which melt at 132° C. (269.6° F.), of intensely bitter taste, insoluble in water, readily soluble in alcohol and ether. Hydrastin is employed in metrorrhagia, also as a tonic and antiperiodic in doses of 0.015–0.03 Gm. (¼–½ gr.). It is not used externally, because of its insolubility.

HYDRASTIN HYDROCHLORID forms a pale yellow, crystalline powder, of very bitter taste, readily soluble in water and alcohol. It is employed in gonorrhea, conjunctivitis, leucorrhea, etc.; externally in various dermal affections in a 1 per cent. ointment or lotion.

HYDRASTININ. $C_{11}H_{11}NO_2$.

This is obtained as the oxidation product of hydrastin by nitric acid. It forms acicular crystals, melting at 116°–117° C. (240.8°–242.6° F.), insoluble in water, readily soluble in alcohol and ether.

HYDRASTININ HYDROCHLORID is usually employed in medicine because of its ready solubility. It occurs in yellow crystals, which melt at 205° C. (401° F.). It is employed

as a uterine hemostatic, also in dysmenorrhea, metrorrhagia, etc., in doses of 0.025 Gm. (⅜ gr.). As a subcutaneous injection ½ to 1 Cc. of a 10 per cent. aqueous solution once daily.

HYDRASTOL.

A proprietary preparation of hydrastis.

HYDRAZINE. See Diamin Sulfate.

HYDROCHINON. See Hydroquinon.

HYDRO-CINNAMIC ACID. ($C_6H_5.CH_2.CH_2.COOH$). *Synonyms:* Phenyl-propionic Acid; Homotoluic Acid.

Obtained by reducing cinnamic acid with sodium amalgam. Forms white needles, almost insoluble in cold, readily soluble in hot water and in alcohol, of balsamic odor and aromatic taste. Used in phthisis in doses of 0.05–0.15 Gm. in oleaginous solution.

HYDROFLUORIC ACID AND ITS SALTS.

Effective antiseptics, and particularly valuable for the destruction of bacteria that cause decay, thus acting as preservatives. The potassium salt is more effectual than the sodium salt; the fluorids of barium, calcium, magnesium, aluminum, and iron in particular have strong antiseptic powers. Ammonium fluorid is a comparatively feeble antiseptic.

HYDROGOL.

An aqueous solution of "colloidal silver," prepared from silver nitrate with reducing agents, and stated to be a solution of metallic silver. A similar solution prepared with an organic solvent—*e. g.*, alcohol—is called organosol. Both are designed to replace actrol and itrol in many cases.

HYDRO-NAPTHOL.

An antiseptic and disinfectant, said to be obtained from beta-napthol. Usually given in keratin or salol-coated pills, containing 0.1–0.2 Gm. (1½–3 gr.). For external use, in a 1 per cent. solution. Merck states hydro-napthol to be an impure beta-napthol.

HYDROQUINON. $C_6H_4(OH)_2$ (1:4). *Synonyms:* Hydrochinon; Para-dioxybenzol; Para-diphenol.

This body is an isomer of resorcin, being prepared by the oxidation of anilin with chromic acid mixture. It forms colorless, hexagonal prisms, which melt at 169° C. (336.2° F.), difficultly soluble in cold water, readily so in hot water, in alcohol, and in ether. Hydroquinon is used as an antiferment, antiseptic, and antipyretic; as an antipyretic its dose is 1 Gm. (15 gr.); as an injection or wash, in 10 per cent. solution.

Hydroquinon is largely employed as a developer in photography.

HYDROXYLAMIN HYDROCHLORID. $NH_2OH.HCl$. *Synonym:* Oxy-ammonium Chlorid.

Hydroxylamin may be regarded as ammonia, NH_3, in which a hydrogen atom is replaced by the hydroxyl group OH. This base is obtained by interaction between sulfurous and nitrous acids at low temperature. Hydroxylamin hydrochlorid forms colorless, hygroscopic, crystalline piates, readily soluble in water, glycerin, and alcohol. It is characterized by its great reducing power, precipitating such metals as gold, silver, and mercury from their solutions; it likewise reduces Fehling's solution. This compound is employed as an antiseptic instead of chrysarobin, pyrogallol, and anthrarobin in treatment of skin diseases in a 0.5 per cent. solution.

HYGIAMA.

A condensed mixture of milk, cereals, and cacao, used as dietetic food in gastric and intestinal affections.

HYGROL.

A name which has been applied to colloidal mercury. It occurs as a dark, almost black powder, which is soluble with a fair degree of readiness in cold water, and insoluble in alcohol and ether. The commercial article leaves a small, insoluble residue. The aqueous solution is dark in color, neutral in reaction, and has no corrosive action. It is transparent by means of transmitted light, and is fluorescent in refracted light, and is then, therefore, not transparent. The metal is precipitated from the aqueous solution by addition of the acids, the bases, and by the salts of the heavy metals and the alkali earths in an insoluble condition. The alkaline and ammonium salts of such acids as form soluble mercury compounds precipitate the metal from its aqueous solution in a fine white powder, which is still soluble in water, yielding a brownish solution. The addition of a reducible metallic chlorid—chlorid of mercury, for instance—to a solution of hygrol results in a reduction, with the formation of calomel. If this reaction is carried out in a diluted solution, the result is the formation of a solution of calomel, which in its ordinary form is, of course, insoluble. Hygrol may replace the extinguished mercury in mercurial ointment.

HYOSCIN. (SCOPOLAMIN, Schmidt.) $C_{17}H_{21}NO_4$.

This amorphous alkaloid occurs, along with atropin and hyoscyamin, in the various solanaceous plants, particularly the seeds of *Hyoscyamus niger*. Hyoscin is identical with scopolamin according to Schmidt; an alkaloid obtained from the roots of *Scopolia atropoides*, commercial hyoscin being scopolamin. According to Hesse, Scopolamin, from *Scopolia atropoides*, consists of hyoscin and an active base atroscin. Among the various salts employed are the hydrobromid, hydrochlorid, hydroiodid, and hydrosulfate.

HYOSCIN HYDROBROMID ($C_{17}H_{21}NO_4.HBr + 3H_2O$) occurs in colorless, permanent, odorless, acrid crystals. It is employed as a hypnotic and sedative in various mental diseases, also as an antaphrodisiac, antisialagogue, and mydriatic. Its dose as a hypnotic in insanity is 0.002 Gm. ($\frac{1}{30}$ gr.); as sedative, 0.0004–0.0006 Gm. ($\frac{1}{150}$–$\frac{1}{100}$ gr.). Subcutaneously, as hypnotic, 0.0004–0.0006 Gm. ($\frac{1}{150}$–$\frac{1}{100}$ gr.); as sedative, 0.0002–0.0003 Gm. ($\frac{1}{300}$–$\frac{1}{200}$ gr.). As a mydriatic a 1 per cent. solution is used. Antidotes the same as for atropin.

HYOSCYAMIN. $C_{17}H_{23}NO_3$.

An alkaloid which occurs with hyoscin and atropin in the seeds and leaves of *Hyoscyamus niger*, also found in roots of *Atropa belladonna*, *Scopolia atropoides* and *japonica*, also in the leaves of *Duboisia myoporides*, etc. It forms white, silky, permanent crystals, melting at 108.5° C. (227.3° F.), almost insoluble in water, readily soluble in alcohol and ether. The action of hyoscyamin is like that of atropin, but it is chiefly employed as a hypnotic in mental disorders, as an anodyn and antispasmodic in asthma, epilepsy, colics, etc. Its usual dose is ½–1 Mg. (¹⁄₁₂₀–¹⁄₆₀ gr.); as hypnotic for the insane, 0.0075–0.015 Gm. (⅛–¼ gr.).

Among the various soluble salts employed are the *hydrobromid*, *hydrochlorid*, and *sulfate*.

HYPEREXESE.

A proprietary remedy, recommended for migraine. It is offered in three strengths, in the form of liquids having an alcoholic odor and a more or less yellowish color. According to Dr. Aufrecht, they are composed of 31–35 per cent. of alcohol, with caramel, and water.

HYPNACETIN. $CH_3CO\text{-}NH\text{-}C_6H_4\text{-}OCH_3\text{-}CO\text{-}C_6H_5$. *Synonyms:* Acetophenon-acetyl-para-amido-phenol-ether; Hypnoacetin.

Obtained by interaction between acetyl-para-amido-phenol and acetophenon with separation of one molecule of water. Forms transparent crystals, melting at 160° C., insoluble in water, soluble in alcohol and ether. Recommended as antiseptic and hypnotic. Dose, 0.2–0.25 Gm.

HYPNAL. (MONO-CHLORAL-ANTIPYRINE.) See under Antipyrine.

HYPNOACETIN. See Hypnacetin.

HYPNONE. $C_6H_5\text{-}CO\text{-}CH_3$. *Synonyms:* Acetophenone; Methyl-phenyl-ketone.

This is a mixed ketone, obtained by the dry distillation of a mixture of calcium acetate and benzoate. Hypnone is a colorless, oily fluid, of peculiar odor and pungent taste. Its sp. gr. is 1.032, and when exposed to the temperature of 14° C. (57.2° F.) it solidifies. Only slightly soluble in water, but readily miscible with alcohol, ether, and the fatty oils. It is employed as a hypnotic in doses of 0.05–0.2 Gm. (¾–3 gr.), or 1–3 minims.

HYPOPHYSIS CEREBRI SICC. PULV.

The dried preparation of the pituitary glands of cattle; one part of this powder represents 6.5 parts of the fresh organ. Used in acromegalia in doses of 0.1–0.3 Gm. several times daily.

IATROL.

An oxy-iodo-methyl-anilid, obtained by the action of iodin on an anilin derivative. A non-toxic powder. Intended as dry antiseptic in place of iodoform.

ICHTHALBIN.

A substance prepared by combining ichthyol with albumin. It is a fine, grayish-brown powder, odorless, and nearly tasteless, insoluble in acids, completely soluble in alkalies, soluble in the intestinal fluid. Employed in infectious intestinal disorders in doses of 1–2 Gm. (15–30 gr.) daily.

ICHTHYOL. $C_{22}H_{36}S_3O_6(NH_4)_2$. *Synonym:* Ammonium-ichthyol-sulfonate.

A bituminous mineral of Tyrol, which is rich in fossilized remains of aquatic animals, is subjected to dry distillation, yielding a dark, oily distillate; this is treated with an excess of sulfuric acid, by which ichthyol-sulfonic acid is formed; this product, on being purified and neutralized with ammonia, yields ammonium ichthyol-sulfonate. Ichthyol forms a thick, brownish liquid, of bituminous odor and taste, containing 10 per cent. of easily assimilable sulfur; its sp. gr. is 1.006; soluble in water, glycerin, a mixture of equal parts of alcohol and ether, and the oils. It is employed externally in various skin diseases, rheumatism, inflammatory diseases, and in gynecologic practice; internally it is given for various affections of the digestive and intestinal tract, also in treatment of scrofula, syphilis, etc. As external application, from 5–50 per cent. ointment or solution is used; in gonorrhea 1–3 per cent. solutions are employed; the internal dose is 0.2–0.6 Gm. (3–10 ♏), 3 times daily in pills or capsules. Ichthyol is also recommended by Le Tanneur for lung and throat diseases. He emphasizes the advisability of administering it in gluten or keratinated capsules, which do not dissolve until they reach the intestines. It must be given in large doses, at least 8 capsules of 0.25 Gm. (4 gr.) each a day, best taken in two portions immediately after meals. It can be continued for months, without causing disturbances.

Among the various other salts of ichthyol sulfonic acids are the ichthyol-sulfonates of sodium, magnesium, zinc, and mercury. These are black, tarry-like masses, the magnesium salt making the best pill, while the zinc salt is best for injections. Ichthyol is incompatible with strong alcoholic liquids and acids.

ODORLESS ICHTHYOL. The observation has been made that the odorous constituents of ichthyol are readily changed by oxidation to non-odorous compounds. Helmers has been successful in removing the odor by superficial oxidation with an aqueous 3 per cent. (10 volume) solution of hydrogen dioxid. When 200 Gm. of ichthyol was mixed with 150 Gm. of distilled water and 50 Gm. of hydrogen dioxid solution, no appreciable loss of odor could be noticed after 48 hours of cold treatment, but on a further addition of 50 gm. of the oxidizing agent and contact during 48 hours, a nearly inodorous product was obtained after evaporation of the liquid to the original weight of the ichthyol. The most important question in connection with this subject is the relative therapeutic value of the two preparations, and it appears not to have been settled. If the deodorizing process does not impair the value of the preparation, it is undoubtedly an improvement, both for internal and external use.

IMIDIOD.

Obtained by interaction between para-ethoxy-phenyl-succinimid and iodin with potassium iodid in presence of acetic acid. Forms glossy, rhombic crystals, which melt at 175° C.; by reflected light they are black, by transmitted light, red; when in contact with wounds iodin is given off.

Recommended as a substitute for iodoform.

INDOPHENIN. See under Phenacetin.

INFLUENZIN.

A remedy for influenza, composed of phenacetin, caffein, quinin salicylate, and sodium chlorid.

INGESTOL.

Composition: Magnesium sulfate, 15 parts; sodium sulfate, 0.8 part; potassium sulfate, 0.1 part; calcium sulfate, 0.1 part; magnesium chlorate, 0.5 part; sodium chlorate, 0.75 part; sodium carbonate, 0.05 part; magnesium bromid, 0.001 part; calcium carbonate, 0.025 part; silicic acid, 0.001 part; ferric oxid, 0.001 part; ferric citrate, 0.001 part; spirit etheris, 0.5 part; glycerin, 1.3 parts; aqua aromat., q. s. ad 100 parts. Used in diseases of stomach and intestines.

INGLUVIN.

The dry and powdered inner membrane of the chicken's craw. Used in vomiting of pregnancy. Dose, 0.5 Gm. ½ hour before meals, followed by two tablespoonfuls of 1 per cent. hydrochloric acid.

INSOLUBLE CHLORAL. See Meta-chloral.

INTESTIN.

A napthalin benzoate of bismuth. Used as intestinal antiseptic in doses of 0.5–1 Gm.

IODALBACID.

A preparation obtained by the splitting up, by means of alkali, of synthetically prepared iod-albumin. Iodalbacid contains 10 per cent. of iodin intramolecularly united. Its therapeutic action is supposed to be analogous to that of thyroidin and other preparations of the thyroid gland, but more vigorous. Dose, 1 Gm. from three to six times daily, in the treatment of syphilitic diseases. The bromalbacid contains 6 per cent. of bromin, and is given in nervous excitability in doses of 1–2 Gm. Chloralbacid contains 3 per cent. of chlorin, and is given in doses of 0.5–1 Gm. in certain stomachic disturbances.

IODAMYL-FORMOL.

A preparation consisting of formaldehyd, starch, thymol, and iodin.

IODAMYLUM.

Insoluble iodized starch. Employed as a surgical antiseptic.

IODANISOL. $C_6H_4(OCH_3)I$. *Synonyms:* Iodo-anisol; Ortho-iodo-anisol.

Yellow to red crystal mass, soluble in alcohol and ether, melting at 47° C. Proposed as an antiseptic and rubifacient.

IODETHYLFORMIN. $C_6H_{12}N_4(C_2H_5I)_2$.

Succedaneum for iodids; for internal use.

IODIC ACID AND ITS COMPOUNDS.

ALKALI IODATES, { SODIUM IODATE, $NaIO_3$. POTASSIUM IODATE, KIO_3. } Owing to the ready liberation of iodin when brought into contact with mucous surfaces, these salts are employed, in dilute solution, 2–5 per cent., in various affections of these tissues.

ATROPIN HYDRO-IODATE ($C_{17}H_{23}NO_3.HIO_3$) is employed in ophthalmic practice in ½ to 1½ per cent. solution, with good results.

CODEIN HYDRO-IODATE ($C_{18}H_{21}NO_3.HIO_3$) is employed for the same purpose and in the same doses as other salts of codein, its action being somewhat more energetic. Dose for children, 1 Cc. for each year.

HYOSCIN HYDRO-IODATE ($C_{17}H_{21}NO_4.HIO_3$) may be advantageously substituted in place of the chlorid, iodid, or bromid; it may be employed subcutaneously or internally; in either case its action is more intense, and its dose should be smaller than that of the other salts.

IODIC ACID (HIO_3) is extensively employed for the reduction of chronic glandular enlargements and goiter, ½ dram of a 2 per cent. solution being injected into the affected parts.

LITHIUM IODATE ($LiIO_3$) is employed in doses of 1½ gr. (0.1 Gm.), subcutaneously injected, in cases of renal colic, or in cases of uric acid diathesis, or in chronic gout. In the latter case it is best employed in pill form, in doses of 1½–3 gr. (0.1–0.2 Gm.).

MERCURIC IODATE ($Hg(IO_3)_2$), in form of a double salt with KI, is usefully employed during all stages of syphilis, no salivation or other side effects becoming apparent. It is best given in subcutaneous injections in doses of ⅙ gr. (0.01 Gm.).

QUININ HYDRO-IODATE ($C_{20}H_{24}N_2O_2.HIO_3$) is recommended as an excellent nervous sedative and antineuralgic. It may be given internally or hypodermically in doses of 1–1½ gr. (0.06–0.1 Gm.).

SILVER, ZINC, AND STRONTIUM IODATES ($AgIO_3$-$Zn(IO_3)_2$-$Sr(IO_3)_2$) are insoluble. Employed externally in various affections of mucous surfaces. The silver salt is also given internally as an intestinal astringent in doses of ⅙–½ gr. (0.005–0.01 Gm.), best administered in pill form.

STRYCHNIN HYDRO-IODATE ($C_{21}H_{22}N_2O_2.HIO_3$) may be used in all cases where strychnin is indicated, in doses as high as ⅛ gr. (0.005 Gm.).

IODIN TRIBROMID. IBr_3.

A mixture of powdered iodin and bromin, a dark brown fluid of penetrating odor. Recommended in angina diphtheritica of children, 1 part diluted with 300 parts of water, used as spray.

IODIN TRICHLORID. ICl_3.

Prepared by passing dry chlorin gas over dry iodin which is warmed; the iodin trichlorid which forms sublimes in the cooler portions of the apparatus. Orange to yellow, hygroscopic needles, which melt at 33° C. (91.4° F.), fuming on exposure to the air; when warmed it decomposes into iodin monochlorid and chlorin. Soluble in alcohol and water; when dissolved in a large excess of the latter, decomposition ensues. Iodin trichlorid is a powerful antiseptic and disinfectant (1 : 1000), its value depending upon the liberation of chlorin, which is rendered still more active by the presence of iodin. When combined with aqua ammonia, iodid of nitrogen is formed. With alkalies iodin is precipitated; when combined with organic substances, iodin is liberated.

IOD-IODOFORMIN. $C_6H_{12}N_4.CHI_3$. (D. R. P. Marquart.)

A light-brown insoluble powder, obtained by the action of iodin on hexa-methylene-tetramin, melting at 178° C. (352.4° F.). Recommended as an iodoform substitute.

IODIPIN and BROMIPIN.

There are addition-products of sesame oil with iodin and bromin, respectively, and contain 10 per cent. of either substance. They are yellowish preparations, having a pure oily taste, and resemble fatty oils in their properties. The iodin and bromin readily split off in the human organism. These compounds are recommended in syphilis, scrofula, etc., in place of the usual bromin and iodin preparations, in doses of a teaspoonful three times daily.

IODO-ACETANILID. See Iodo-antifebrin.

IODO-ALBUMIN.

A compound of iodin and albuminoids, obtained by the action of iodin on peptone, albuminoids, or protogen. Used in myxedema and tetanus.

IODO-ANTIFEBRIN. $C_6H_4INHC_2H_3O$. *Synonym:* Iodo-acetanilid.

Prepared by the action of iodin on acetanilid. It forms a crystalline powder, insoluble in water; melts at 181.5° C. As far as its action is concerned, it is almost inert. Nothing is known concerning its properties.

IODO-ANTIPYRINE. See under Antipyrine.

IODO-CAFFEIN. See under Caffein.

IODO-CARBOLIC ACID. See Iodo-phenol.

IODO-CASEIN.

A new antiseptic and iodoform substitute. It is a yellowish powder, with a faint iodin odor.

IODOCIN.

Antiseptic, analgesic, styptic, disinfectant, and deodorizer.

IODOCROL. $(C_{10}H_{13}OI)_2$. *Synonym:* Carvacrol Iodid.

Prepared by dissolving carvol (2 parts) and potassium iodid (38 parts) in a 10 per cent. solution of soda (40 parts). It is soluble in ethereal and fixed oils, ether, benzol, chloroform, and carbon disulfid. Recommended as an odorless substitute for iodoform.

IODOFORM OIL (Sterilized).

A sterilized solution of iodoform in almond oil (4.5–5 per cent. iodoform). An unchangeable solution of iodoform, which separates its iodoform only at a very low temperature.

IODOFORMAL. (D. R. P. Marquart.)

A yellow powder prepared by the action of ethyl-iodid on iodoformin, having a strong odor of cumarin, possessing an advantage over iodoform in its extreme lightness and absence of odor. It is insoluble in water and ether, melts at 128° C. (262.4° F.), and yields iodoform when treated with acids. It is distinguished from iodoform in that it yields iodin by the action of sulfuric acid. Iodoformal is intended to be employed in place of iodoform.

IODOFORM-CALOMEL.

A mixture of equal parts of iodoform and calomel, which is lauded as an excellent wound antiseptic.

IODOFORMIN. $(CH_2)_6N_4.CHI_3$. *Synonym:* Hexa-methylene-tetramin-iodoform. (D. R. P. Marquart.)

This compound, containing 75 per cent. of iodoform, may be prepared by rubbing together in a mortar 26 Gm. of hexa-methylene-tetramin and 74 Gm. of iodoform with a little absolute alcohol until a dry powder results. This is a harmless, inodorous compound of iodoform, intended to be used in all cases where iodoform is indicated. It melts at 178° C. (352.5° F.). Iodoformin, when applied to a moist surface, breaks up into its constituents; that is, iodoform is liberated.

IODOFORMIN-MERCURY.

A colorless to pale yellow insoluble powder, recommended as an antiseptic.

IODOFORMOGEN. (D. R. P. Knoll.)

A new odorless compound of albumin and iodoform. The iodoform is in loose combination, so that suitable solvents can gradually extract it. It is a light yellow powder, insoluble in water and sterilizable at 100° C. Further advantages over iodoform are the facts that it is a dry, impalpable powder, which does not form lumps. It is three times lighter than iodoform, and therefore more economical to use. Its faint odor, when applied even to large surfaces, is never noticeable.

IODOFORM-SALOL.

A mixture of iodoform and salol. Antiseptic for old wounds and cavities in bone.

IODOGALLICIN. $C_6H_2COOCH_3(OH)_2O.BiOH.I$. *Synonym:* Bismuth Oxy-iodo-methyl-gallol.

Antiseptic; substitute for iodoform. Prepared by the action of bismuth oxyiodid on gallicin. It is a light, amorphous, dark-gray powder, insoluble in ordinary solvents contains 23.6 per cent. of iodin and 38.4 per cent. of bismuth. Decomposed by water (slowly), acids, and alkalies.

IODOGENE.

A mixture of charcoal and potassium iodate or other oxygen compound of iodin, molded into cones or pastilles. By combustion iodin is liberated, which is intended to fumigate and disinfect sick-rooms, etc.

IODO-HEMOL. See Hemol.

IODOL. C_4I_4NH. *Synonym:* Tetra-iodo-pyrrol. (D. R. P. Kalle.)

To a solution of pyrrol (1 part) in alcohol (10 parts), a solution of iodin (12 parts) in alcohol (240 parts) is added, and allowed to stand twenty-four hours; on mixing this product with four times its volume of water, iodol separates in yellow flakes. Iodol, which contains 89 per cent. of iodin, forms a pale yellow, inodorous, tasteless powder, insoluble in water, soluble in 3 parts of alcohol, 15 parts of ether, 50 parts of chloroform, and 15 parts of oil. Iodol was introduced as a substitute for iodoform, possessing the advantage of being inodorous and non-toxic.

IODOL-CAFFEIN ($C_8H_{10}N_4O_2 + C_4I_4NH$) is a crystalline compound, made by the interaction between molecular weights of iodol and caffein in concentrated alcoholic solution. It forms an inodorous, tasteless, crystalline powder, insoluble in the usual solvents. Used as an antiseptic, like iodol, of which it contains 74.6 per cent.

IODOL-MENTHOL. A mixture of 1 part of menthol with 99 of iodol, which has the advantage of being almost free from the disagreeable odor of iodol alone.

IODO-NAPTHOL. See Napthol-aristol.

IODOPHEN. See Nosophen.

IODO-PHENIN. (IODO-PHENACETIN.) $C_{20}H_{25}I_3N_2O_4$.

An iodin substitution product of phenacetin, obtained by the action of iodin in potassium iodid on a solution of phenacetin in hydrochloric acid. Iodophenin forms a brownish powder or crystals, containing twenty-five per cent. of iodin, having an iodin-like odor, soluble in alcohol and glacial acetic acid, decomposed by water. It melts at 130–131° C., with decomposition. It is used externally as antiseptic, like iodin internally in muscular rheumatism in doses of 0.5 Gm. See also under Phenacetin.

IODO-PHENO-CHLORAL.

This is a mixture of equal parts of tincture of iodin, carbolic acid, and chloral hydrate, forming a brown-colored fluid, which is recommended as a parasiticide in certain skin diseases.

IODO-PHENOL.

A mixture of 20 parts of powdered iodin, 76 parts of fused carbolic acid, and 4 parts of glycerin is shaken in a flask until all of the iodin is dissolved. This preparation is to be kept in glass-stoppered vials in a dark place.

IODOPYRINE or IODO-ANTIPYRINE. ($C_{11}H_{11}IN_2O$).

Forms colorless needles, which melt at 160° C. (320° F.), being only slightly soluble in water. Iodopyrine has the action of an iodid in addition to that of antipyrine; used in tertiary syphilis and bronchial asthma in doses of 0.5–1.5 Gm. (8–23 gr.).

IODO-SALICYLIC ACID.

A white powder, difficultly soluble in water, readily so in alcohol, ether, fixed oils, and collodion. Used in acute articular rheumatism in daily doses, beginning with 1 Gm., increasing to 3 Gm.

IODOSINUM. (IODOSINE.)

A compound of iodin and albumin. Contains 15 per cent. of iodin. Proposed as a substitute for iodo-thyrin.

IODOSO-BENZOIC ACID. ($C_6H_4 . OI . COOH_3$).

A compound analogous to iodoform in action.

IODO-TERPIN. $C_{10}H_{16}I$.

A direct combination of iodin and terpin. It is a dark brown liquid, emitting a smell similar to that of turpentine, and freely soluble in ether, benzol, petroleum benzin, and chloroform; absolute alcohol is capable of taking up 10 per cent. Its specific gravity is placed at 1.19, and its boiling-point varies from 165°–175° C. It is said the preparation is a complete substitute for tincture of iodin and iodoform, and surpasses the former by its considerably higher percentage of iodin, which amounts to about 50 per cent. An iodoterpin dusting-powder of 1–20 per cent. may be prepared with sterilized kaolin.

IODO-THEINE.

A combination of hydriodic acid and theine (caffein) forming a crystalline or amorphous white powder, which is decomposed into its constituents by water. Used to increase the systolic action and arterial pressure of the heart. Dose, 0.13–0.5 Gm. (2–8 gr.).

IODO-THEOBROMIN. *Synonym:* Theobromin sodium iodid.

A preparation containing 40 parts of theobromin, 21.6 parts of sodium iodid, and 38.4 parts of sodium salicylate. Used in aortic insufficiency in doses of 0.25–0.5 Gm. (4–8 gr.).

IODOTHYMOFORM. *Synonym:* Iodo-thymol-formaldehyd.

A new compound that is expected to find application as an antiseptic. The following is the patented method of preparation: 100 Gm. of thymol are warmed, under stirring, with 100 Cc. of 40 per cent. formaldehyd, and after a time 100 Gm. of concentrated hydrochloric acid are added, which causes the separation of a viscid oil, that solidifies to a crystalline mass on cooling. This is powdered and thoroughly washed, to remove impurities. The result is thymol-formaldehyd, which is iodized in the following manner: 42 Gm. are dissolved in 50 Cc. of alcohol, 12 Gm. of potassium iodid, and 33 Gm. of iodin are added, and the mixture gently warmed for an hour. After cooling, an excess of ammonia is added, which precipitates the new compound. The precipitate is thoroughly washed and then dried; a yellow powder, rich in iodin, is obtained, which is nearly odorless. It dissolves readily in alcohol, ether, chloroform, benzol, and olive oil, but is insoluble in water and glycerin. Dressings impregnated with iodothymoform can be easily sterilized, as the melting-point of the compound is above 150° C.

IODOTHYRIN. Formerly known as *Thyreo-iodin* or *Thyro-iodin* or *Thyrein.* (D. R. P. Bayer.)

An amorphous brown powder, insoluble in water, soluble in alcohol, containing 9.3 per cent. of iodin and 0.5 per cent. of phosphorus, obtained from the thyroid glands of the sheep. Each gram of iodothyrin is equivalent, in activity, to 1 Gm. of the fresh gland. The commercial preparation is a milk sugar trituration, each 1 Gm. of which contains 0.3 Mg. of iodin. Used in treatment of goiter, corpulency, rachitis, menorrhagia, etc., in doses of 1–2 Gm. daily. See Organo-therapeutics, Addenda.

IODOTHYROIODINE.

A preparation similar to thyroidin (iodothyrin).

IODOVASOL.

A combination of vasol and iodin, containing 7 per cent. of iodin.

IODOZON.

A compound which is claimed to possess the action of both ozone and iodin without being caustic. Proposed as antiseptic for mouth-wash, also as inhalation for consumptives.

IQUININ.

A proprietary remedy for malaria. Dose, 2–10 gr. every two or three hours.

IRIDIN (Merck).

A resinous extract from the rhizome of *Iris versicolor*, which forms a brownish powder which stimulates the flow of gall; also used to relieve continued vomiting. Dose, 0.2 Gm. in pill form.

IRISOL.

A proprietary disinfectant, consisting of 50 per cent. of iodoform and 45 per cent. of boric acid.

IRON ALBUMINATE. *Synonym:* Ferrum Albuminatum.

This is a compound of ferric chlorid and albumin, forming a brown powder which is used in chlorosis in doses of 0.22–0.65 Gm. (3–10 gr.). See Indifferent Preparations of Iron in Addenda.

IRON-ALBUMIN PREPARATIONS. See Indifferent Preparations of Iron in Addenda.

An aqueous solution of 100 Gm. of egg albumen, warmed to 45° C., is mixed with a warm concentrated solution of about 15 Gm. of the iron compound of a nitroso-napthol-sulfonate of sodium, the mixture heated to 60° or 70° Cc., and 25 Cc. of 50 per cent. acetic acid added, which causes the formation of a flocculent precipitate. After filtration and washing the precipitate is mixed with 1.5 liter of boiling water, separated after cooling, and dried at a low heat. The egg albumen may be replaced by animal or vegetable casein or albumoses, and the nitroso-napthol-sulfonate by the iron compounds of nitroso-salicylic acid and di-nitroso-dioxy-benzene. The preparations are amorphous green powders, only slightly soluble in water, entirely insoluble in dilute hydrochloric acid, and very soluble in alkaline water.

IRON AND SODIUM DISACCHARATE. See Ferrosol.

IRON CASEINATE. See Ferrum Caseinatum.

IRON GLYCERO-PHOSPHATE. See under Glycero-phosphoric Acid.

IRON NUCLEO-ALBUMINATE. See Ferrum Caseinatum.

IRON PEPTONATE. *Synonym:* Ferrum Peptonatum.

This forms red-brown scales, which are soluble in water. This is a compound of ferric chlorid and peptone (digested albumin). See Dispensatories.

IRON SOMATOSE. See under Somatose.

IRON VITELLINATE.

A preparation of egg-yolk containing iron.

ISO-AMYLENE. See Pental.

ISO-BUTYL NITRITE.

Used in place of amyl nitrite for inhalation.

ISO-BUTYL-PHENYL-IODID.

Recommended in place of iso-butyl-cresol-iodid as antiseptic.

ISO-COCAIN. *Synonym:* Iso-ethyl-ecgonine Benzoate. (D. R. P. Boehringer.)

A synthetic alkaloid differing from cocain in containing an ethyl group (C_2H_5) instead of the methyl (CH_3) of the latter. Iso-cocain occurs in transparent crystals which melt at 44° C. It produces local anesthesia more rapidly than cocain, but is not adapted in ophthalmology because of its irritating character.

ISO-CREATININ.

Isolated from decomposing flesh; a body isomeric with and similar to ordinary creatinin. It crystallizes from alcohol as a fine yellow crystalline powder, of the composition $C_4H_7N_3O$. It forms an easily soluble picrate, while picrate of creatinin is practically insoluble. It forms double compounds with several metals, such as cadmium, $C_4H_7N_3O.CdCl_2$, which occur in well-defined crystals.

ISO-ETHYL-BENZOYL-ECGONINE. See Iso-cocain.

ISO-ETHYL-ECGONINE BENZOATE. See Iso-cocain.

ISUTAN.

A new trade name for Bismutan.

ITCHOL.

An ointment of lanolin and vaselin, of each 420 Gm., iodoform 45 Gm., glycerin 32 Gm. phenol 24 Gm., oils of eucalyptus and lavender, each, 12 Gm.

ITROL.

A citrate of silver. Forms a fine, light, inodorous, and tasteless powder, soluble 1 : 3800 of water. Used as an active antiseptic for wounds, chronic gonorrhea, also for disinfecting instruments. As disinfecting solution for instruments, hands, or wounds a solution of 1–4 : 5000 is employed. As a gargle or bath, a solution of 1–5 : 10,000 is sufficient. As ointment in treatment of wounds and skin diseases the strength is 1 : 50 or 1 : 100 of lanolin. Itrol injections for treatment of gonorrhea should be used lukewarm four or five times daily, and should be begun as soon as possible. The solutions must at first be very weak (0.01 per cent.), but after allaying the inflammation are gradually increased in strength until 1 : 3800 is reached.

ITROSYL.

A trade name for concentrated nitrous ether.

IZAL. See under Cresol.

JECORIN (Berkenheier).

Each tablespoonful of the preparation contains calcium chlorhydrophosphate 0.1 Gm., lactic acid 0.05 Gm., phosphoric acid 0.6 Gm., bromin 0.01 Gm., iodin 0.01 Gm., ferrous iodid 0.075, extr. artem. co. 1 Gm. Substitute for cod-liver oil.

JECOROL.

A preparation claimed to consist of the active constituents of cod-liver oil, and recommended as a substitute for the latter.

JEQUIRITIN. See Abrin.

JESSANODINE.

A proprietary antiseptic and analgesic.

KAIRIN. See under Chinolin.

KAIROLIN. See under Chinolin.

KAPUTINE.

This is said to be merely a colored acetanilid.

KATHAROL.

Hydrogen peroxid. Another preparation sold under this name contains 30 per cent. alcohol.

KEFIR. (MATZOON; KOUMYSS.)

These are prepared by the action of various ferments on milk. The preparations possess an undoubted value in all debilitating diseases, and in cases of obstinate vomiting are often well borne. They are very readily assimilated, and rapidly increase the body-weight after disease. Owing to their nutritive value, agreeable taste, ready assimilation, and property of assisting digestion in general, they have been suggested as a vehicle for the administration of various drugs. The assimilation of these drugs is no doubt aided by administering them in such combination.

KREOSOTAL KEFIR (Kreosot-carbonate-kefir) is found on the market, containing in—

No. 1— 1 Gm. of kreosotal to the bottle.
2— 3 " " " " " "
3— 5 " " " " " "
4—10 " " " " " "

GUAIACOL CARBONATE-KEFIR also occurs in four combinations—viz.:

No. 1—0.5 Gm. of guaiacol carbonate to the container.
2—1.0 " " " " " "
3—1.5 " " " " " "
4—2.0 " " " " " "

The above-mentioned preparations of kefir are very useful in the various pulmonary complaints, scrofulous disorders, chronic gastritis, and in hepatic and renal diseases in general. They are best administered at the rate of one bottle per diem, beginning with the lowest number.

ARSENICAL KEFIR. This compound consists of a combination of kefir with Fowler's solution, and contains in—

No. 1—3 minims of Fowler's sol. to each container.
2—4 " " " " " " "
3—5 " " " " " " "
4—6 " " " " " " "

In neurasthenic conditions, chorea, hysteria, various skin diseases, and in all conditions where the arsenical treatment is indicated, this compound is very valuable, far surpassing all other preparations of arsenic.

IODO-KEFIR consists of sodium iodid combined with kefir, as follows:

No. 1—0.5 Gm. of sodium iodid, per container.
2—1.0 " " " " " "
3—1.5 " " " " " "
4—2.0 " " " " " "

The permanence of this combination is doubtful. It is recommended in all cases where preparations of iodin are indicated.

KEPHALINE.

A proprietary headache remedy.

KIL.

The name given by the Tartars to mineral found on the banks of the Black Sea. It consists of silica, alumina, ferric oxid, calcium carbonate, and magnesium carbonate. Mixed with water it forms a white, sticky mass, and is used by the natives in place of soap. The "Semaine Medicale" proposes to sterilize the mineral by heating, and use it as an ointment-vehicle for skin diseases, for which it is said to be well adapted.

KLEMMOLIN.

A preparation of pine tops, poplar buds, etc., used in rheumatism.

KLINOL.

A proprietary antipyretic and analgesic.

KOCHIN. Synonym for Koch's Tuberculin. See Tuberculin.

KOSIN. $C_{31}H_{38}O_{10}$. *Synonyms:* Koussein; Kussin; Kosein.

A bitter principle, isolated from the flowers of *Hagenia abyssinica.* Wild. This forms inodorous, tasteless, yellow-colored, crystalline needles, which melt at 142° C. (287.6° F.), insoluble in water, readily soluble in alcohol, ether, and the alkalies. Kosin is employed as an anthelmintic and teniafuge in doses of 1–2 Gm. (15–30 gr.).

KOSOTOXIN.

This body is an active principle of Koso flowers. It is a yellowish, amorphous powder, according to Leichsewring, melting at 80°, to which the provisional formula $C_{26}H_{34}O_{10}$ has been assigned. It is soluble in alcohol, ether, and chloroform, and has a considerable physiologic action. It is a strong muscle poison, but has very little action on the central nervous system.

KOUMYSS. See Kefir.

KOUSSEIN. See Kosin.

KREATIN. See Creatin.

KREOLIN. See Creolin under Cresol.

KREOSAL.

A mixture of tannin and creosote forming a brown, hygroscopic, soluble powder. Used in solution in treating inflamed mucous surfaces of the air passages and throat.

KREOSOLID. *Synonym:* Magnesia Creosotata.

Prepared by triturating together equal parts of creosote and magnesia. Dose, 0.5 Gm. (8 gr.) 4 times daily. Non-irritating. Faint odor and taste.

KRESAMIN. *Synonym:* Ethylene-diamin Tricresol.

A mixture of ethylene diamin, 10 parts; tricresol, 10 parts; and water, 500 parts. This forms a clear, colorless, alkaline solution, which is used as a general antiseptic; also in treatment of diseases of the skin.

KRESAPOL. See under Cresol.

KRESAPROL. See Cresin.

KRESIN.

A mixture of a solution of cresylic acid (25 per cent.) and a solution of sodium-oxy-acetate. It forms a brownish fluid, miscible with water and alcohol. A 1 per cent. solution is recommended as a general disinfectant.

KRESOCHIN. See Cresochin.

KRONETHYL.

An ethereal extract of Chinese cantharides. Used in gout and neuralgia, 6–10 drops being applied on wet compresses.

KRYOFIN. $CH_3.OCH_2CO.NH.C_6H_4.OC_2H_5.H_2O$. *Synonym:* Methyl-glycollic phenetidin.

A phenetidin derivative in which methyl glycollic acid replaces acetic acid, thus closely allied to phenacetin. Formed by heating para-phenetidin and methyl-glycollic acid together. It occurs in white, odorless crystals, melting at 98°–99° C. Soluble in 52 parts of boiling water and in 600 parts of cold water. Employed as antipyretic and antineuralgic in doses of 0.5 Gm. (8 gr.) three times daily in powder or wafers. (D. R. P. Basel.)

KRYSTALLOSE.

Name given by Fahlberg, List & Co. to their new sodium-saccharin preparation, or water-soluble crystalline saccharin. It is said to be absolutely free from all contaminations and to be more than 500 times sweeter than sugar.

KUSSIN. See Kosin.

LABORDINE.

A secret remedy, forming a grayish powder, slightly soluble in water, soluble in alcohol. It is stated to contain acetanilid, caffein, saccharin, and possibly a little apiol.

LACTOCIN.

The active principle of the concrete juice of the *Lactuca virosa*. It forms white scales, soluble in 60 per cent. of water. Used as a sedative and hypnotic in doses of 1–5 gr.

LACTOL or LACTO-NAPTHOL. $C_{10}H_7O.OC.CH(OH)CH_3$.

A lactic ester of beta-napthol, similar to benzo-napthol. In the organism it is split up into lactic acid and beta-napthol, hence is used as an intestinal antiseptic. It forms a colorless and tasteless powder. Dose, about 0.25–0.5 Gm. (3.5–8 gr.).

LACTOPEPTIN.

According to the "Phar. Post," contains milk sugar, 120 parts; peptone, 24 parts; pancreatin, 18 parts; diastase, 1.5 parts; hydrochloric acid, 2 parts; lactic acid, 2 parts. Used as digestive ferment. Adult dose, 0.65–1 Gm.; for children, 0.3–0.5 Gm.

LACTOPHENIN. See under Phenacetin.

LACTO-SOMATOSE. See under Somatose.

LACTYL-PHENETIDIN. See under Phenacetin.

LACTYL-TROPEIN. $(C_8H_{14}NO.CO.CH(OH)CH_3)$.

A compound obtained by the action of lactic acid on tropein. Occurs as white, crystalline needles, readily soluble in water, alcohol, ether, etc., melting at 75° C. (167° F.). It appears to have a tonic action on the heart and respiration.

LÆVULOSE. See Diabetin.

LAIFAN.

A Chinese remedy for neuralgia. It is a crude borneol containing water, probably identical with Ngai camphor described by Flückiger, and obtained from *Blumea balsamifera*. It comes into commerce in the shape of a thick paste, showing numerous crystals, put up in earthen pots containing about 6 ounces.

LAMIN.

An alkaloid obtained from the flowers of *Lamium album*. Employed in the form of a sulfate or hydrochlorid in subcutaneous injections as a powerful hemostatic.

LANICHOL.

A specially prepared and purified fat of the wool of sheep. Does not differ essentially from adeps lanæ.

LANIOL.

A fat similar to lanolin.

LANOFORM.

The methods of applying formaldehyd in form of ointment, dusting-powder, soaps, etc., as heretofore used, have not been found entirely satisfactory, according to Weiss, who proposes a new combination, entitled Lanoform, from which the usual disadvantages, such as unpleasant odor, variation in strength, etc., are absent. The lanoform preparations contain 1 per cent. of active formaldehyd, so combined that it becomes effective at the temperature of the body, thus exerting its disinfecting power gradually. The preparations placed on the market are lanoform-cream and lanoform dusting-powder.

LANOLIN. See Adeps Lanæ. (D. R. P. Jaffé.)

LANOLIN MILK.

Lanolin, 10 parts; sapo. med., 2.5 parts; borax, 1 part; aqua rosæ, 100 parts.

LANOLIN POWDER.

Obtained by dissolving lanolin in ether, alcohol, or acetone, and adding magnesium carbonate, zinc oxid, or talcum; the mixture is allowed to stand until entirely dry, then triturated, adding starch in sufficient quantity.

LANOLIN, SULFURATED. See Thilanin.

LANTANIN.

An alkaloid occurring in the herb *Lantana braziliensis*. Forms a white, bitter, crystalline powder, which is employed as an antiperiodic and antipyretic. Like quinin, it produces a moderate effect on the circulation, determining a retardation of the chemic phenomena of nutrition and a diminution of temperature. It is superior to salts of quinin, as it is tolerated by the most delicate patients; in larger doses it is a powerful antiperiodic. Intermittent fevers, though resisting sulfate of quinin, have yielded to the administration of 2 Gm. of lantanin. The dose is from 1–2 Gm. during the day, given in pills of 10 Cg. each, two being given every two hours.

LARGIN.

A new silver-albumin compound, which in the air-dried condition contains 11.1 per cent. of silver. It forms a gray powder, which is soluble in 9 parts of water. The albumin component is a new decomposition product of a para-nucleo-proteid, whose most prominent characteristic is solubility in dilute alcohol. Largin is a powerful bactericide and astringent, like silver nitrate, but non-irritating, and is not precipitated by sodium chlorid or albumen. It is chiefly used in gonorrhea in ¼–1½ per cent. solution, according to stage.

LAURENOL.

An antiseptic and deodorizer used in France. A 3 per cent. solution rapidly modifies purulent secretions and greatly hastens cicatrization. Nothing is known of its chemic and physical properties.

LAXIQUININ.

A combination of quinin with laxatives.

LAXOL.

Castor oil flavored with oil of peppermint and sweetened with saccharin.

LECITHIN. (DISTEARIN-GLYCERO-PHOSPHORIC-CHOLIN-ESTER.)

The most important phosphated constituent of the nervous system, prepared usually from the yolk of eggs. Forms a white to yellowish waxy mass, soluble in alcohol and ether; with water it swells to a gelatinous mass.

LEECH EXTRACT.

An aqueous extract prepared from the heads of leeches; used to prevent coagulation of blood, also that of immunization.

LENIGALLOL. (D. R. P. Knoll.)

The triacetate of pyrogallic acid, and said to have many advantages over eugallol, being much milder in its action. It is non-toxic and does not produce any inflammatory symptoms when applied to the skin or to the mucous membrane, and does not stain the linen. The substance occurs as a white powder, wholly insoluble in water, but soluble in alkaline solutions on warming. Though somewhat decomposed upon the normal skin, a salve containing 50 per cent. of lenigallol exerts no irritating effects. Where copious perspiration takes place, the lenigallol is partially decomposed, as it is upon mixing with zinc ointment, and a dark coloration is produced. In ointments containing 0.5–5 per cent. of lenigallol it has a very powerful curative action in both acute and subacute eczema.

LENIROBIN.

The tetra-acetate of chrysarobin; has been recommended by Kromayer as a substitute for chrysarobin on the ground that it causes less local irritation.

LENTANIN.

A white powder, soluble in alcohol, insoluble in water. Used as antipyretic in doses of 0.3–1 Gm.

LEPINE.

An antiseptic mixture of the following composition:

Mercuric chlorid,	0.001	Gm.
Carbolic acid,	0.100	"
Salicylic acid,	0.100	"
Benzoic acid,	0.050	"
Calcium chlorid,	0.050	"
Bromin,	0.010	"
Quinin hydrobromid,	0.200	"
Chloroform,	0.200	"
Distilled water,	100.00	

LETHIN.

An alcoholic solution of camphor, chloroform, ethereal oils, and acetic acid.

LEUKO ALIZARIN. See Anthrarobin.

LIANTHRAL. (EXT. OLEILI ANTHRACIS.)

A preparation stated to be an extract of coal-tar, which is mixed with 10–20 per cent. of casein ointment.

LIEN SICC. PULV.

The dried and powdered spleen of the sheep, 1 part of which represents 5 parts of the fresh organ. Used in anemia, chlorosis, myxedema, rachitis, in doses of 0.25–0.75 Gm. 3 times daily. Tablets are also prepared, containing 0.1 Gm. each.

LIENADEN. See Linadin.

LIGNOROSIN.

A new reducing agent which is obtained from the refuse of paper factories by the action of calcium sulfite on lignin and consists chiefly of calcium lignate. It is found in the market as a viscous, dark-brown semi-liquid having an odor suggesting that of caramel. It is proposed as a reducing agent for potassium bichromate, and is claimed to be a perfect substitute for lactic acid in dyeing establishments.

LIGNOSULFIT.

A liquid-side product obtained in the manufacture of cellulose by Kellner's method. It is used in treatment of pulmonary disorders by inhaling the vapors; its active ingredient is sulfurous acid, the irritating properties of which are modified by the presence of aromatics.

LIMANOL.
A preparation from Liman mud, recommended for rheumatic affections.

LINADIN (Roche). See Organo-therapeutics in Addenda.
An insoluble, dark-colored powder, prepared from the spleen of various animals, 1 part representing 2 parts of the fresh gland; it has a taste resembling that of cod-liver oil. Contains 1 per cent. of iron and 0.023 per cent. of iodin. Dose, 1–3 tablets or 10–25 Gm. Used in malarial cachexia and hypertrophic spleen.

LINONINE.
A substitute for cod-liver oil.

LINTIN.
A soft, woolly texture which is made from cotton deprived of fat. Used as absorbent material for wounds, etc.

LIPANIN.
Olive oil which contains 5–6 per cent. of free fatty acid, and is intended as a substitute for cod-liver oil, in doses of 2–6 teaspoonfuls. Lipanin does not cause stomachic disturbances.

LIPASE.
A ferment obtained from blood-serum.

LIQUEUR ANTIGOUTTEUX DE LAVILLE. (GOUT LIQUEUR.)
Consists of 800 parts sherry wine, 100 parts alcohol, 25 parts extract of colchicum, 5 parts each of quinin and cinchonin, and 4.5 parts of lime salts.

LIQUOR ADHÆSIVUS. (FILMOGEN.)
A solution of nitrated cotton in acetone containing a small quantity of a fatty oil. This solution can be medicated with various antiseptics. Used like collodion.

LIQUOR ANTHRACIS.
A solution of 100 parts of coal-tar in 200 parts of benzol, to which has been added 200 parts of 90 per cent. alcohol. The mixture is agitated at 35° C. until a uniform fluid results.

LIQUOR ANTHRACIS SIMPLICIS and COMPOSITUS.
An antiseptic preparation of coal-tar, of the consistence of a thin fluid, which, when spread in thin layers, evaporates rapidly. A solution of sulfur, resorcin, and salicylic acid in Liquor Anthracis Simplicis constitutes the "Compound Solution." Nothing is known as to the solvent and method of preparation.

LIQUOR ANTISEPTICUS (Volkmann).
An antiseptic solution supposed to contain thymol (1), alcohol (10), glycerin (200), and water (100).

LIQUOR AROMATICUS HAGERI.
Oils of lavender, clove, cinnamon, thyme, lemon, mace, of each, 1 Gm.; oil of bergamot, 3 Gm.; alcohol, 260 Gm. Used as a wash for feeble eyes, 2 or 3 Cc. in 1 liter of distilled water. Undiluted, used externally in rheumatism.

LIQUOR CARBONIS DETERGENS.
A preparation consisting of coal-tar 1 part, and tincture of quillaya 8 parts. Used as disinfectant and deodorant.

LIQUOR CARNIS COMPOSITUS. See Virol.

LIQUOR CARNIS FERRO-PEPTONATUS. See Carniferrol.

LIQUOR FERRI ESTELLINI.
According to the "Pharm. Centralhalle," this is a compound of egg-yolk with iron (4 per cent. Fe). Recommended as a tonic.

LIQUOR FERRI-IODOSINI.
A solution of iodosinum and Loofsch's essence of iron peptonate, containing 0.5 per cent. of iodin and 0.4 per cent. of iron.

LIQUOR FERRI MANGANI IODOPEPTONATI.
A solution containing 0.5 per cent. of iron, 0.1 per cent. of manganese, and 0.05 per cent. of iodid of iron. Used in chlorosis. Dose, a tablespoonful.

LIQUOR FERRI OXYDATI NATRONATI SACCHARATA. See Ferrosol.

LIQUOR FERRI VITELLINI.
A ferruginous preparation of egg-yolk. Used as a substitute for cod-liver oil.

LIQUOR IODISINI.
A solution of iodosin, containing 0.25 per cent. of iodin.

LISTERINE.
Composition given as follows: Benzoic acid, 3 parts; boric acid, 8 parts; sodium biborate, 61 parts; thymol, 2.5 parts; oil of eucalyptus, 10 drops; oil of peppermint, 6 drops; alcohol, 180 parts; aqua dest., ad 1000 parts. Used as antiseptic.

LITHIO-PIPERAZIN.
A combination of lithium and piperazin. Forms a granular, soluble powder, which is used in gouty affections. Dose, 1–3 Gm. a day.

LITHIUM DIURETIN. See Uropherin.

LITHIUM SALTS.

LITHIUM BENZOATE. $C_6H_5COO\,Li$. Molecular quantities of lithium carbonate and benzoic acid are brought together with sufficient water and heated until solution has taken place; the resulting solution of lithium benzoate is evaporated to dryness on a water-bath. This salt occurs as a fine white powder, or in scales, which are soluble in 3 parts of cold water and 10 parts of alcohol. Is employed in the treatment of rheumatism in doses of 0.5–1 Gm. (8–15 gr.).

LITHIUM BITARTRATE. $Li\,C_4H_5O_6.H_2O$. *Synonym:* Tartarlithin. A white powder of agreeable acid taste, soluble in water. Recommended as a specific for rheumatic, suppurative gingivitis. The action is diuretic and laxative. Dose, 0.3 Gm. (5 gr.).

LITHIUM CAFFEIN SULFONATE. Used for gout and rheumatism.

LITHIUM DITHIOSALICYLATE. 1. $\begin{matrix}S{-}C_6H_3(OH)COO\,Li.\\ |\\ S{-}C_6H_3(OH)COO\,Li.\end{matrix}$ Obtained by neutralizing dithio-salicylic acid 1 (q. v.) with lithium carbonate. This is a yellow powder, readily soluble in water and insoluble in alcohol. The therapeutic properties and dose of this salt have not been determined.

LITHIUM DITHIOSALICYLATE 2 is obtained by neutralizing dithiosalicylic acid 2 (*q. v.*) with lithium carbonate. This salt forms an amorphous powder which is soluble in water and alcohol. Employed in treatment of rheumatism and gout.

LITHIUM FORMATE. $HCOO\,Li + H_2O$. Obtained by neutralizing formic acid with lithium carbonate, recrystallizing the resulting salt. It forms colorless needles, which are very soluble in water. Employed in rheumatism and gout. Dose, about 0.2 Gm. (3 gr.).

LITHIUM GLYCERINO-PHOSPHATE. See under Glycerino-phosphoric Acid.

LITHIUM GUAIACATUM. Employed in treatment of rheumatism and chronic gout. Dose, 0.25 Gm. (4 gr.), twice daily.

LITHIUM HIPPURATE. Recommended for excess of uric acid in the system. Dose, 0.3–1.3 Gm. (5–20 gr.).

LITHIUM IODATE. See Iodic Acid.

LITHIUM RHODANATE. See Lithium Sulfocyanate.

LITHIUM-RUBIDIUM-PLATINUM CYANID. $Li\,Rb\,Pt(CN)_4 + Ag$. Greenish-yellow needles, soluble in water.

LITHIUM SALICYLATE, $C_6H_4(OH)COO\,Li$, is obtained by neutralizing an equivalent amount of salicylic acid (138 parts) with lithium carbonate (37 parts) in the presence of water containing a little alcohol; the resulting solution should have a slight acid reaction. This salt forms a white, readily soluble, crystalline powder, which is employed in treatment of acute and chronic rheumatism in doses of 0.5–1 Gm. (8–15 gr.).

LITHIUM SOZOIODOLATE. $C_6H_2\begin{matrix}\diagup OH\\ -I_2\\ \diagdown SO_3Li.\end{matrix}$ Sparingly soluble in water. Employed as antiseptic in form of ointment or dusting-powder when mixed with starch.

LITHIUM SULFOCYANATE. A white, crystalline, hygroscopic powder, sparingly soluble in water, easily soluble in alcohol. Uses, the same as other lithium salts, in doses of 0.2–0.3 Gm. (3–5 gr.) two or three times daily.

LITHIUM SULFOICHTHYOLATE is obtained by neutralizing ichthyol-sulfonic acid with lithium carbonate. It forms a black, tarry-like mass, which is dissolved by water, forming a turbid solution. Employed internally in treatment of rheumatism in doses of 0.5 Gm. (8 gr.).

LITHIUM THEOBROMIN SALICYLATE. A white powder, soluble in water. Employed as a diuretic. Dose, 1 Gm. (15 gr.) four times daily.

LITHOLEIN.

A saffron-yellow liquid, used as antiseptic and antiparasitic in skin diseases and simple inflammations, in form of 2–5 per cent. ointment, with vaselin as vehicle.

LOBELIN. (RESINOID.)

A yellowish-green powder, soluble in water, alcohol, and ether. Emetic, also externally as anodyne. Dose, as emetic, 0.03–0.06 Gm. (½–1 gr.).

LOBELIN SULFATE.

From the leaves of *Lobelia inflata.* Yellowish-white, rather hygroscopic powder. For bronchitis, dyspnea, and spasmodic forms of asthma. Dose, 1–6 gr. either internally or hypodermically.

LORENIT. (LOREMIT.) $C_9H_4I(SO_3H)OHN$. *Synonym:* Para-iodo-ana-oxy-quinolin-ortho-sulfonate. (D. R. P. Hoechst.)

An isomer of loretin, occurring in yellow, anhydrous needles or leaflets, soluble in water. Used like loretin.

LORETIN. See under Chinolin.

LORETIN BISMUTH. See Bismuth Loretin.

LOSOPHAN. $C_6HI_3(OH)(CH)_3$. *Synonym:* Tri-iodo-meta-cresol. (D. R. P. Bayer.)

This is prepared by the action of iodin, in the presence of an alkali, on ortho-oxy-p-toluic acid. Losophan forms colorless, inodorous crystals, insoluble in water, soluble in ether and the fixed oils, melts at 121.5° C. (250.5° F.), and contains 78.4 per cent. of iodin. It is employed in various parasitic affections of the skin in alcoholic solution (1–2 per cent.), or as an ointment (1–10 per cent.).

LUCILLINE.
A purified petroleum jelly.

LUFFA AMARA.
Employed as diuretic and tonic in digestive disturbances.

LUFFA ECHINATA.
The fruits are used for colic and in cholera.

LUPERINE.
A mixture of powdered gentian, columbo, and quassia. Remedy for dipsomania.

LUPETAZIN. $HN(CH_2.CH.CH_3)_2NH$. *Synonyms:* Di-methyl-piperazin; Di-propylene-diamin.
A white, crystalline powder, an analogous compound to piperazin, recommended as a substitute for piperazin, given in the same doses.

LYCETOL. (DI-METHYL-PIPERAZIN TARTRATE.) $(NH(CH_2.CHCH_3)_2NH) + H_2\overline{T}$.
This is obtained by distilling glycerin with ammonium bromid, and reducing the resulting product (di-methyl-pyrazin) with metallic sodium; is said to be more efficacious as a solvent for uric acid than piperazin. The dose is the same as that of piperazin. (D. R. P. Bayer.)

LYCHNOL.
A fluid extract of white soap-root.

LYCOCTONIN.
This is an alkaloid obtained from *Aconitum lycoctinum*. Marchetti reports that it is a weak heart poison. In doses of 75 Cg. per kilo of body-weight it proved fatal in cases of cold-blooded animals; in warm-blooded animals much larger doses are required. It exerts a paralytic action on the nervous system. Its color is yellowish white, and it is with difficulty soluble in water, but more readily so if dilute acetic or tartaric acids are present.

LYCOPERDON GIGANTEUM.
A fungus used in powder form as a wound-dressing; the whole fungus is employed in veterinary practice as a local hemostatic and antiseptic.

LYCOPODIUM.
Recently recommended for affections of the bladder in doses of 2 Gm. (30 gr.).

LYCOPUS VIRGINICUS. (BUGLE-WEED.)
Said to be a mild narcotic and astringent. Recommended for catarrh of the stomach.

LYPTOL.
An antiseptic ointment stated to contain mercuric chlorid, oil of eucalyptus, formaldehyd, and benzo-boracic acid incorporated with petrolatum.

LYSIDIN. $(CH_2N)(CH_2NH)C.CH_3$. *Synonym:* Methyl-glyoxalidin. (D. R. P. Hoechst.)
This base was obtained by Ladenburg by the interaction between ethylene-diamin hydrochlorid and sodium acetate, liberating the base from its salt by means of a caustic alkali. It is described as being a bright red-colored crystalline mass, very hygroscopic and characterized by a peculiar mouse-like odor, melts at 105° C., and boils at 198° C. Because of its extremely hygroscopic nature it is now placed on the market in the form of a 50 per cent. solution. This is a pale yellowish liquid of soap-like feeling when rubbed between the fingers; its sp. gr. is 1.054. It precipitates solutions of mercuric chlorid and iodid, soluble in excess of lysidin; ferric chlorid forms a brown precipitate, soluble in excess of the reagent. One Gm. of lysidin (cryst.) requires 5 Cc. of normal hydrochloric acid V. S. for neutralization, phenol-phthalein being the indicator. Lysidin is recommended as a solvent for uric acid deposits, being given in doses of 1–5 Gm. (15–75 gr.) daily, dissolved in excess of carbonated water. Where the solution (50 per cent.) is employed, an equivalent double amount is used. It is claimed that lysidin possesses five times the power of piperazin as uric acid solvent.

LYSIDIN BITARTRATE.
A soluble, white, crystalline powder, 10 Gm. of which correspond to 7.2 Gm. of the 50 per cent. solution, or 3.6 Gm. of pure lysidin.

LYSOL. See under Cresol.

LYSOLUM BOHEMICUM.
A dark-brown liquid of agreeable odor, which is miscible with water in all proportions, forming transparent yellow solutions. One to 2 per cent. solutions are used as a disinfecting wash, while a 0.2 per cent. solution is sufficiently strong for washing instruments.

LYSOSOLVEOL.
A mixture of potassium linoleate (38 per cent.), cresols (44.5 per cent.), and water (22.5 per cent.). It is soluble in water. Used as disinfectant and antiseptic.

MACALIN.
Recommended as a substitute for quinin in intermittent fever. Of more agreeable taste and cheaper than the latter.

MACLAYIN. $C_{17}H_{32}O_{11}$.
A glucosid obtained from *Illipe maclayana*. A powerful local irritant.

MADAR.
An Asclepiadacea whose root and bark are employed instead of ipecacuanha as emetic.

MAGNESIUM BENZOATE. $(C_6H_5COO_2)_2Mg$.

Magnesium carbonate is mixed with sufficient water to form a smooth paste; to this is then added an equivalent (molecular) quantity of benzoic acid, and the solution evaporated to dryness. It forms a white, crystalline powder, soluble in 20 parts of cold water. Employed in the treatment of gout, urinary calculi, etc. It has been recommended by Klebs in treatment of tuberculosis. Dose, 0.15–1 Gm. (2.5–15 gr.).

MAGNESIUM BORATE. *Synonym:* Antifungin.

Prepared by boiling a solution of borax with a solution of a magnesium salt. Antiseptic.

MAGNESIUM BOROCITRATE.

Made by mixing an aqueous solution of citric acid with magnesium carbonate and borax. A remedy for gravel in doses of 1–2 Gm. (15–30 gr.), in solution or as powder.

MAGNESIUM CREOSOTATE. *Synonyms:* Creosote-magnesia; Kreosolid.

Prepared by mixing creosote and calcined magnesia in equivalent proportions. The preparation is free from the odor and taste of creosote. It is insoluble in water, but, on addition of a few drops of hydrochloric acid and warming, it is gradually dissolved to a milky fluid.

MAGNESIUM FLUORID.

A white powder, insoluble in water. Used as antiseptic.

MAGNESIUM GLYCERINO-PHOSPHATE. $C_3H_7O_3PO{<}^{O}_{O}{>}Mg$.

A white, crystalline powder, soluble in water. Solution is colorless and is stable on warming, but is precipitated by oxalates, carbonates, phosphates, and lead salts. The salt contains 31–35.5 per cent. of phosphoric acid. Nerve tonic, used in all cases where phosphoric acid is indicated. Dose, 0.13–0.32 Gm. (2–5 gr.).

MAGNESIUM GYNOCARDATE.

Prepared by mixing magnesia with gynocardic acid. A white powder, insoluble in water. Recommended for lepra. Dose, 1–4 Gm. (15–60 gr.).

MAGNESIUM ICHTHYOLATE.

Recently calcined magnesia (100 parts) and ichthyol (775 parts) are evaporated together to dryness on a water-bath. Used as antiseptic dusting-powder, mixed with talc.

MAGNESIUM LACTATE. $(C_3H_5O_3)_2Mg + 3H_2O$.

Lactic acid, previously diluted with water, is neutralized with magnesium carbonate, evaporated, and crystallized. It forms colorless crystals, which are soluble in 30 parts of cold water. Employed as a laxative in doses of 1–3 Gm. (15–45 gr.).

MAGNESIUM LORETINATE, BASIC. $MgI.O.C_9H_4N.SO_3.5H_2O$.

Bright yellow crystals, sparingly soluble in water. Used as antiseptic dusting-powder.

MAGNESIUM LORETINATE, NEUTRAL. $Mg(I.OH.C_9H_4N.SO_3)_2 7H_2O$.

Salmon-colored prisms, readily soluble in water.

MAGNESIUM PERMANGANATE. $Mg(MnO_4)_2.6H_2O$.

Friable, blue-black crystals, readily soluble in water. The action is analogous to that of calcium permanganate.

MAGNESIUM PHENOL-SULFONATE.

This salt, which occurs as white, almost odorless needles, with a bitter, not disagreeable, taste, has been recommended as an antiseptic purgative in doses of 15–30 gr. The alkaline character of the salt is an advantage, as it diminishes the danger of intestinal irritation. The salt is soluble in 2 parts of water and 5 parts of alcohol.

MAGNESIUM SALICYLATE. $(C_6H_4(OH)COO_2)Mg + 4H_2O$.

Salicylic acid is dissolved in boiling water and neutralized with magnesium carbonate, evaporated, and crystallized. It forms colorless, hygroscopic crystals, which are readily soluble in water and alcohol. Employed in abdominal typhus in doses of 1–2 Gm. (15–30 gr.).

MAGNESIUM SOZOIODOLATE. $(C_6H_2I_2(OH)SO_3)_2Mg + 8H_2O$.

Colorless, needle-like crystals. Used as antiseptic.

MAGNESIUM SULFOPHENATE. See Magnesium Phenolsulfonate.

MAIDALAKRI.

The bark of *Tetranthera laurifolia;* much used in East India for diarrhea and dysentery.

MALAKIN. $C_6H_4(OC_2H_5).N:CH.C_6H_4(OH)$. *Synonyms:* Salicyl-para-phenetidin; Salicylidenphenetidin. (D. R. P. Basel.)

This is a condensation product of p-phenetidin and salicylic aldehyd, occurring in bright yellow needles which melt at 92° C. (197.6° F.), almost insoluble in water and alcohol, and decomposed by dilute mineral acids. Malakin is recommended as an antipyretic and antirheumatic in doses of 1 Gm. (15 gr.).

MALANDRIN.

A homeopathic remedy obtained from grease, recommended as a preventative of variola.

MALARIN. $C_6H_4{<}^{OC_2H_5}_{N=C(CH_3)(C_6H_5).H_3\overline{C}}$. *Synonym:* Acetophenone-phenetidin Citrate.

A condensation product of acetophenone and para-phenetidin. A crystalline powder, insoluble in water, acidulous taste, melting at 88° C. According to Dr. Erdmann, malarin is a

citrate of para-phenetidin to which some acetophenone has been added; he also warns against its use because of its untoward effects. Dose, 0.5–1 Gm. (8–15 gr.) as antipyretic and antineuralgic. (D. R. P. F. Valentiner.)

MALLEIN (Dry).

An analogue of tuberculin, employed as a diagnostic of glanders. It is said to be a mixture of the poisonous, active metabolic products of the bacillus of glanders, and to be obtained from extremely virulent cultures of this bacillus; it is said to be stable, and can be kept for years. Mallein occurs as a yellowish-white, bulky powder, readily soluble in water; from 4–5 Cg. ($\frac{1}{15}$–$\frac{1}{12}$ gr.) are dissolved in freshly boiled distilled water and injected, with strict antiseptic precautions, into the middle of the side of the neck.

MALLOTOXIN.

Flesh-colored needles, having an action similar to that of Kamala.

MALTOS CANNABIS.

A Swedish nutrient in form of a yellowish-white powder, possessing a taste at first saline, later sweetish, and then acrid and bitter.

MAMMÆ SICCATÆ.

An extract prepared from the udder of the cow, each part representing 8.75 of the fresh glands.

MAMMEA AMERICANA.

An American Guttifera, whose leaves are used in decoction for intermittent fever, and the bark as local emollient on wounds. Water distilled from the flowers is recommended as an aid to digestion.

MANDRAGORIN. $C_{17}H_{33}NO$.

The sulfate of an alkaloid, obtained from the *Mandragora offic.* Is used in ophthalmologic practice as a mydriatic.

MANGANESE ALBUMINATE.

Yellowish-white scales, soluble in water.

MANGANESE SACCHARATE.

Brown powder, soluble in water. The albuminate, peptonate, and saccharate have been recommended in the same way as hemogallol.

MANGANOUS OXALATE. $MnC_2O_4 + 2H_2O$.

A white powder, nearly insoluble in cold and hot water. Employed as desiccant.

MANGIFERA INDICA. See Mango.

MANGO. (MANGOTREE.)

The seeds of *Mangifera indica*, an East Indian Anarcadacea, are stated to possess anthelmintic properties.

MANOL. *Synonym:* Succus Anisi Ozonatus.

A dark brown, syrupy liquid, consisting of cane sugar, carbolic acid, oil of anise, alcohol, and water. Recommended for whooping-cough.

MANSA.

The rhizome of *Anemiopsis californica*, a South American plant, is used for malaria and dysentery.

MANUEA AMERICANA.

The resin and a decoction of the bark are employed in skin diseases.

MARGOSA OIL.

Obtained by expressing the seeds of *Melia azadirachta*, an East Indian Meliacea. It is a yellow oil, of a garlic-like odor and very bitter taste. Used internally as anthelmintic; externally for rheumatism.

MARKASOL. See Bismuth Borophenate.

MARMOREKIN. See Antistreptococcin.

MARMOREKIN.

Marmorek's streptococcus serum.

MARROL.

A new dietetic preparation, said to consist of ox marrow, malt extract, and hop extract.

MARTOL.

A semi-fluid extract obtained from the shells of the cacao bean. It consists of carbohydrates, phosphates, theobromin, tannate of iron, and other mineral salts.

MASSOI.

The bark of *Sassafras gœsianum.* Used for colic, diarrhea, and spasms.

MATZOON. See Kefir.

MAYOL.

A new preservative, introduced by Ed. May, of Budapest. According to Prof. K. Than, it is a mixture of ethyl and methyl alcohols with boric acid, glycerin, and ammonium fluorid.

Meat treated with the solution becomes coated with a crust several millimeters thick, beneath which it is said to remain fresh for weeks.

MECONARCEIN.

A derivative of narcein, which appears in lemon-yellow crystals, melting at 126° C. (358.8° F.), soluble in dilute alcohol, but very slightly in water. Recommended in bronchial affections, neuralgias, and insomnia, in doses of 0.01–0.03 Gm. (⅙–½ gr.).

MEDITRINA.

A concentrated "electrozone," used in leucorrhea and other female diseases. Germicide.

MEDULLA ASSIUM RUBRUM SICC. PULV.

The dried and powdered marc of the femur bone of cattle. Useful in anemia, chlorosis, rachitis, in doses of 0.2 Gm. several times daily.

MEDULLADEN.

An extract from the bone marc of calves, used in anemia and neurasthenia, in daily doses of 6–9 Gm.

MEDULLADEN.

An extract prepared from bone marc. Recommended in treatment of gout; also anemia.

MEDULLARY GLYCERID.

Glycerin extracts of bone marrow from calves' ribs. Tonic. Used in anemia.

MEDULLINE (Hammond's).

The sterilized extract of the spinal cord of the ox. Used in nervous diseases, locomotor ataxia, etc. See Animal Extracts, Addenda.

MELACHOL.

Sodium phosphate, 100 parts; sodium nitrate, 2 parts; citric acid, 13 parts; distilled water ad 100 Cc. Used as laxative in diseases of the liver.

MELACHOL. See Sodium Citro-phosphate.

MELANTHERA BROWNEI.

The leaves of this West African Composita are recommended in form of infusion as a substitute for quinin.

MELANTHINE.

A glucosid obtained from the seed of *Nigella sativa*, resembling in character sapotoxin (obtained from quillaya bark). It is regarded by Kobert and Schulz as one of the series of saponines, whose typical physiologic properties it possesses, being, however, considerably more toxic than others of the series.

MELIA AZADIRACHTA. See Margosa Oil.

MEL-MAROBA.

A liquid combination of manaca (the Brazilian "mercurio-vegetal"), caroba, stillingia, and potassium iodid. Used in treatment of syphilis, scrofula, chronic skin diseases, and rheumatism. Adult dose is two fluidrachms.

MELOL.

A disguised castor oil.

MENTHALCAL.

A preparation in tablet form, composed of the salts contained in the mineral springs at Ems, combined with menthol.

MENTHENE.

A liquid prepared by dehydrating menthol, of the composition $C_{10}H_{18}$, soluble in alcohol, ether, and benzin, and insoluble in water. It boils at 167° C., and has the density, at 0° C., of 0.8226.

MENTHOL CARBONATE. $(C_{10}H_{19})_2CO_3$.

A white powder, without odor and taste, sparingly soluble in alcohol.

MENTHOPHENOL. *Synonym:* Mentophenol.

Prepared by fusing together phenol, 1 part, and menthol, 3 parts. Forms a fluid which is used in concentrated condition in treating wounds (burns); diluted with water, as mouth-wash (15 drops to a glass of water). Warm water containing 3–5 per cent. of menthophenol acts as local anesthetic and antiseptic in minor operations.

MENTHOXOL.

A solution of hydrogen dioxid, containing menthol and alcohol.

MENTOPHENOL. See Menthophenol.

MERCURO-IODO-HEMOL. See under Hemol.

MERCURO-SEPTOL. See Hydrargyroseptol.

MERCURY SALTS AND COMPOUNDS.

MERCURIC BENZOATE, $(C_6H_5COO)_2Hg + H_2O$, is obtained by precipitating a solution of mercuric nitrate with a solution of sodium benzoate. This forms a white, crystalline, inodorous, tasteless powder, slightly soluble in water, but readily soluble in a solution of common salt.

Employed subcutaneously in treatment of syphilis, the solution being prepared from 3 parts of the benzoate, 1 part of sodium chlorid, and 400 parts of water, one syringeful being given daily.

MERCURIC-CHLORID-UREA. To a cold solution of 1 Gm. of mercuric chlorid in 100 Cc. of water, 0.5 Gm. of urea is added, and, when solution has taken place, filtered. Employed subcutaneously in syphilis; 1 Cc. of the solution contains 0.01 Gm. of mercuric chlorid.

MERCURIC CYANID, $Hg(CN)_2$, is made by passing hydrocyanic-acid gas through water which contains freshly precipitated yellow oxid of mercury; the solution is then filtered, evaporated (caution!!), and crystallized. This forms colorless crystals, which are very soluble in water and alcohol. Employed in syphilitic diseases subcutaneously (0.1 Gm. in 10 Cc. water), ½ to 1 syringeful daily. Great caution should be observed in administering this remedy.

MERCURIC FORMAMIDATE, $(HCONH)_2Hg$, is a solution resulting from the solvent action of formamid on freshly precipitated mercuric oxid. Each cubic centimeter corresponds to 0.01 Gm. mercuric chlorid. Employed subcutaneously in syphilis (0.01 Gm. daily).

MERCURIC IODATE. See Iodic Acid.

MERCURIC NAPTHOLATE. $(C_{10}H_7O)_2Hg$. A solution of mercuric nitrate is precipitated by means of sodium naptholate; the resulting precipitate forms, when washed and dried, an inodorous, insoluble powder, employed externally in skin diseases; internally in treatment of typhus. Dose, 0.06 Gm. (1 gr.).

MERCURIC-OXID-ASPARAGIN, $[C_2H_3(NH_2)(CONH_2)(COO]_2Hg$, is an aqueous solution, prepared by adding 0.72 Gm. of freshly precipitated mercuric oxid to a solution of 1 Gm. of asparagin in 5 Gm. of water, shaking frequently for some time, filtering, and adding water to 72 Cc. This solution (1 per cent.) is used subcutaneously in treating syphilitic diseases.

MERCURIC OXYCYANID, $Hg(OCN)_2$, is a white, crystalline, soluble powder, which is said to be six times more powerful as an antiseptic than corrosive sublimate, at the same time possessing the advantages of being neutral, less caustic, and not coagulating albumin. As an antiseptic wash, solutions of 1 : 1500 are employed. Subcutaneously, 1 Cc. of a 1.25 per cent. solution used daily.

MERCURIC PEPTONATE, a yellowish solution, which contains mercuric chlorid 1 part, peptone 3 parts, and sodium chlorid 3 parts, dissolved in 100 parts of water. This is employed for subcutaneous injections, since it does not cause pain nor produce abscesses. The dose is 1 Cc., corresponding to 0.01 Gm. (⅙ gr.) of mercuric chlorid.

MERCURIC RESORCINATE. The precipitate obtained by interaction between solutions of mercuric acetate and sodium resorcinate is dissolved in excess of mercuric acetate, evaporated, and crystallized. This forms a dark yellow, crystalline powder, insoluble in the usual solvents. For subcutaneous injections the following formula may be used:

Hydrargyri resorc.-acetici, 5.6 Gm.; Paraffin liquid, 5.5 Gm.; Lanolin anhyd., 2.0 Gm. Each 1 Cc. contains 0.387 Gm. of mercury; the fluid should be warmed to 25° C. before use, and not more than 0.2 Cc. employed weekly.

MERCURIC SALICYLATE. $C_6H_4<\overset{O}{COO}>Hg$. This may be prepared by interaction between solutions of sodium salicylate and mercuric nitrate, or by warming together equivalent quantities of salicylic acid and freshly precipitated mercuric oxid in the presence of water on a water-bath, until the yellow mercuric oxid has been entirely converted into the white salicylate. This forms a white, inodorous, tasteless, and amorphous powder, which is insoluble in water and alcohol, but is readily dissolved by a solution of sodium chlorid or any of the halogen salts. Contains 50 per cent. of mercury. It is given in doses of 0.01–0.08 Gm. (⅙–1¼ gr.).

MERCURO-IODO-HEMOL. See under Hemol.

MERCURO-PARA-PHENYL-THIONATE. See Hydrargyrol.

MERCUROUS ACETATE. $(CH_3COO)_2Hg_2$. A solution of mercurous nitrate is poured under constant stirring and away from access of light, into a cold solution of sodium acetate; the precipitate formed is allowed to stand in a cool place for twelve hours, then washed with a little water and alcohol, and dried at a low temperature. It forms white, glassy scales, which turn gray on exposure to heat or light, particularly when moistened with water; soluble in 300 parts of water and insoluble in alcohol. Employed in treatment of syphilis in form of pill, dose being 0.01–0.06 Gm. (⅙–1 gr.); externally in ointments (1 : 10–25).

MERCUROUS TANNATE is prepared by rubbing a concentrated solution of mercurous nitrate with a solution of tannin until a pasty mass separates; this is then washed with water by trituration and dried at 40° C. (104° F.). It forms brownish-green scales, which are not soluble (without decomposition) in water or alcohol. Employed in syphilis in doses of 0.06–0.13 Gm. (1–2 gr.).

MERCURY ALBUMINATE is obtained by pouring a solution of albumin (1 : 8) into a 4 per cent. mercuric chlorid solution, the former being in slight excess. The solution is allowed to stand for forty-eight hours; the clear solution is then decanted from the precipitate, which is at once mixed with sugar of milk and dried in an exsiccator, adding sufficient milk sugar so that the resulting powder contains 1–1.5 per cent. of mercury albuminate. This preparation is used as an antiseptic dusting-powder in surgery.

MERCURY AMIDOPROPIONATE, or ALANATE, is prepared by neutralizing amidopropionic acid with mercuric oxid, evaporating, and crystallizing. Forms a white, crystalline, soluble powder. Employed for subcutaneous injections in place of mercuric chlorid. Dose, 0.005–0.01 Gm. (1/12–⅙ gr.).

MERCURY CARBOLATE, or PHENATE. $(C_6H_5O)_2Hg + H_2O$. An alcoholic solution of mercuric chlorid is added to an alcoholic solution of sodium phenate, the solution is evaporated to dryness, and the product washed with water, then crystallized from alcohol. Mercury phenate forms colorless needles, almost insoluble in cold water and alcohol. Employed in syphilis in doses of 0.016–0.032 Gm. (¼–½ gr.).

MERCURY ETHYLCHLORID, $Hg(C_2H_5)Cl$, is obtained by mixing equal parts of mercuric chlorid (dissolved in alcohol) and mercury ethide; the resulting ethylchlorid forms colorless, shining scales, of unpleasant ethereal odor, slightly soluble in water and alcohol. Because of

its indifference to albumin, it is recommended for subcutaneous injection in place of mercuric chlorid. Dose, 0.005 Gm.; subcutaneously, 0.5–1 : 100.

MERCURY GALLATE, $[C_6H_2(OH)_3COO]_2Hg$. Molecular quantities of gallic acid and yellow mercuric oxid are mixed with water and evaporated to dryness. This forms a greenish-black, insoluble powder, which is used as an antisyphilitic in place of the less stable tannate. Dose, 0.03–0.05 Gm. (½–¾ gr.).

MERCURY GLUTINO-PEPTONATE, SUBLIMATE. A white, hygroscopic powder, the aqueous solution of which does not yield a precipitate upon the addition of alkalies; also, no coagulum results upon the addition of albumin. On treating gluten with hydrochloric acid, a compound results which contains 12 per cent. of hydrochloric acid and possesses the property of forming a soluble double salt with mercuric chlorid, the latter being present to the extent of 25 per cent. Used as an antisyphilitic subcutaneously in doses of 0.01 Gm. (⅛ gr.).

MERCURY IMIDO-SUCCINATE, or ASPARAGINATE. $[C_2H_4(CO)_2N]_2Hg$. Freshly precipitated mercuric oxid is warmed with an aqueous solution of succinimid, and the filtered solution is evaporated and crystallized. It forms a lustrous crystalline powder, soluble in 25 parts of water and 300 parts of alcohol. Subcutaneously used in 1.2 per cent. solution.

MERCURY-POTASSIUM-HYPOSULFITE, $3Hg(S_2O_3)_2 + 5K_2S_2O_3$, is prepared by dissolving freshly precipitated mercuric oxid in a solution of potassium hyposulfite, evaporating, and crystallizing. This salt is employed for subcutaneous injections.

MERCURY-POTASSIUM-SULFITE. Occurs in colorless crystals, easily soluble in water, of which 2.32 Gm. correspond to 1 Gm. of corrosive sublimate. The solution does not precipitate in albumin, and is therefore adapted to hypodermic use.

MERCURY PYROBORATE. (HgB_4O_7). A brown, insoluble powder, which is applied ointment form (1 : 50) to wounds.

MERCURY SILICO-FLUORID. ($Hg_2SiF_6 + 2H_2O$). *Synonym:* Hydrargyrum Silico-fluoratum. Prismatic crystals, soluble in water. Used as antiseptic for wounds, etc. Applied in solution (1 : 1000) and as ointment (1 : 2000).

MERCURY SOZOIODOL, $C_6H_2I_2.O.SO_3Hg$, is obtained as a precipitate, on mixing concentrated aqueous solutions of sodium sozoiodol and mercuric nitrate. It forms a fine, yellow powder, which is soluble in 500 parts of water, but freely taken up by a solution of sodium chlorid or any of the halogen salts. This salt is employed chiefly in the treatment of syphilis, locally and subcutaneously. The subcutaneous dose is 0.06 Gm. (1 gr.). For antiseptic applications a 1–2 per cent. ointment, dusting-powder, or wash may be employed.

MERCURY SUCCINIMID (*Mercury-imidosuccinate*). $(C_2H_4(CO)_2N)_2Hg$. Freshly precipitated mercuric oxid is heated with succinimid and water until the former is dissolved; filter, evaporate to crystallization. This compound forms white, silken-like powder, soluble in water and almost insoluble in alcohol. Recommended as a subcutaneous antisyphilitic (1.3 : 100). Dose, 0.013 Gm. (¼ gr.).

MERCURY THYMOLACETATE. $(CH_3COO)_2Hg + \begin{matrix} CH_3COO \\ C_{10}H_{13}O \end{matrix} > Hg$. Prepared by dissolving the above mercury thymolate in a concentrated hot solution of mercuric acetate; on cooling, the double salt crystallizes out. It forms a crystalline, insoluble powder, containing 57 per cent. of mercury. Both of these salts are used internally in doses of 0.005–0.01 Gm. (1/12–⅙ gr.); when used subcutaneously it should be suspended in paraffin oil as directed under mercuric resorcinate.

MERCURY THYMOLATE, $C_{10}H_{13}OHgOH$, is obtained by precipitating a solution of mercuric nitrate with sodium-thymolate. An unstable, violet-green powder.

MERCURY-THYMOL-NITRATE. Colorless crystals, insoluble in water. Used hypodermically. Prepared as follows: Hydrarg. thymol nit., 1 Gm.; Ol. petrolati, 10 Gm.; Cocain mur., 0.1 Gm. One Cc. of a solution.

MERCURY TRIBROM-PHENOL-ACETATE. A hot solution of tribrom-phenolate of sodium is precipitated by a solution of mercuric acetate; the resulting precipitate is then dissolved in a hot concentrated solution of mercuric acetate, which, on cooling, deposits yellow crystals of the above salt. This contains 29.3 per cent. of mercury, and is employed subcutaneously in treatment of syphilis. One Cc. of a solution of 6.5 Gm. in 18 Gm. of Ol. petrolati.

MESPILODAPHNE PRETIOSA.

A Brazilian plant, used for nervous exhaustion, catarrh, and leucorrhea.

MESUA FERREA.

An Indian Guttifera; the oil of the seeds is used locally for rheumatism.

META-AMIDO-PHENYL-PARA-METHOXY-CHINOLIN.

Recommended as an antiperiodic and antipyretic in doses of 0.2–0.5 Gm. (4–8 gr.).

META-CHLORAL. (INSOLUBLE CHLORAL.)

A white mass of pungent, ethereal odor; insoluble in water, alcohol, ether, and chloroform. Proposed as substitute for chloral hydrate for external use. It is stated to be a powerful antiseptic, and is suitable for suppositories as well as dusting-powders.

META-CRESOL. $C_6H_4(CH_3)OH.(1 : 3)$.

One of three isomers which are found in coal and beech-wood tar. This product possesses a very feeble odor, boils at 198° C., and dissolves in 50 parts of water. It is less toxic than carbolic acid and is said to be five times more active in antiseptic power.

META-CRESOL-ANYTOL.

A 40 per cent. solution of meta-cresol in anytol, which latter is a 33 per cent. solution of anytin, a name given to the alcohol-soluble constituents of ichthyol. Anytin has the power of rendering soluble in water substances otherwise insoluble. The meta-cresol mixture is recom-

mended as a very good remedy in the various forms of erysipelas, in which it is used by applying the solution with a brush.

META-CRESOL-CINNAMIC ESTER.

A new compound intended for the treatment of tuberculosis. The preparation is as follows: Twenty-five parts of meta-cresol and 35 parts of cinnamic acid, dissolved in toluol or other indifferent solvent, are heated under a reflux condenser with 20 or 25 parts of phosphorus oxychlorid at 110°–120° C., until the evolution of acid is ended. After cooling, the liquid is separated from a reddish, resinous mass, the solvent distilled off, and the residue crystallized from alcohol. The product melts at 65° C., dissolves in most organic solvents, but is insoluble in water.

META-DI-HYDROXY-BENZENE. See Resorcin.

META-DIOXY-NAPTHALIN. See Napthoresorcin.

METHACETIN. $C_6H_4.OCH_3.NH.CH_3CO$. *Synonyms:* Para-acet-anisidin; Para-oxymethyl-acetanilid.

This is an analogous compound to phenacetin, being the methyl-ester of paraphenetidin, or it may be regarded as acetanilid in which a hydrogen in the benzene nucleus is substituted by an oxy-methyl group ($-OCH_3$). Methacetin forms colorless, inodorous, and tasteless scaly crystals, which melt at 127° C. (260.6° F.), almost insoluble in cold water, but readily soluble in hot water, also in alcohol, glycerin, and the fatty oils. It is recommended as an antipyretic and antineuralgic in doses of 0.032–0.5 Gm. (½–8 gr.); 0.5 Gm. of methacetin corresponds to 1 Gm. of phenacetin as antipyretic, and 1 Gm. of the former corresponds to 2 Gm. of the latter as antineuralgic.

METHETHYL.

According to Aufrecht, consists chiefly of ethyl chlorid, with small amounts of methyl chlorid and chloroform. Used as local anesthetic.

METHONAL. $(CH_3)_2C(SO_2CH_3)_2$. *Synonyms:* Di-methyl-sulfone-di-methyl-methane.

Prepared similar to sulfonal, employing, however, methyl mercaptan instead of ethyl mercaptan. It is used as hypnotic in same doses as sulfonal.

METHOXY-ANTIPYRIN. See under Antipyrine.

METHOXY-CAFFEIN. $C_8H_9(OCH_3)N_4O_2$.

This derivative of caffein appears in white needles or as an amorphous powder, melting at 177° C. (350.6° F.). Recommended in migraine and neuralgias in doses of 0.26 Gm. (4 gr.) hypodermically as a local anesthetic.

METHOZINE. See Antipyrine.

METHYL-ACETANILID. See Exalgin.

METHYLAL. $CH_2(OCH_3)_2$. *Synonym:* Methylene-dimethyl-ether.

This fluid is obtained by the abstraction of 1 molecule of water from a compound of 1 molecule of formaldehyd and 2 of methyl-alcohol; the resulting product belongs to the group of organic bodies known as "acetals." It is a colorless liquid, of an ethereal odor, soluble in water, alcohol, and ether; its sp. gr. is 0.855 (15° C.), and boiling-point is 42° C. (107.6° F.). Methylal is recommended as a hypnotic in doses of 1–5 Gm. (15–75 gr.).

METHYL CHLORID. CH_3Cl. *Synonyms:* Chlormethyl; Mono-chlor-methane.

This gaseous compound is made by heating methyl-alcohol and hydrochloric acid under pressure at 100° C.; the gas produced is washed and dried, and then compressed in copper or steel cylinders at low temperature with pressure. Methyl chlorid forms a colorless and inflammable gas of an ethereal odor, which, under a pressure of 5 atmospheres, or at a temperature of —25° C., is converted into a liquid. It appears in commerce in the compressed liquid form, which is employed as a spray to produce local anesthesia. A minute stream of the liquid is directed upon a tampon of wool and silk placed over the surface to be anesthetized; the rapid evaporation produced absorbs the heat from the parts and leaves them bloodless and insensible.

RICHARDSON'S COMPOUND LIQUID consists of a mixture of ether and chloroform saturated with methyl chlorid; has been recommended as a substitute for chloroform.

METHYL CHLOROFORM. CH_3CCl_3.

As anesthetic, less dangerous than chloroform. Recommended in cases where a very rapid narcosis is not necessary.

METHYL CYANID. (ACETONITRIL.) CH_3CN.

A colorless liquid of agreeable odor. To be distinguished from another methyl cyanid (methyl carbylamin), which has a repulsive odor.

METHYL ETHER. (METHYL OXID.) $(CH_3)_2O$.

A gas obtained by action of sulfuric acid on methyl alcohol. Anesthetic action is rapid, followed by speedy recovery without bad after-effects. It destroys sensibility before loss of consciousness. A solution in ethyl (ordinary) ether is more generally employed.

METHYLENE. (METHYLENE CHLORID, Richardson.)

A mixture of chloroform 4 parts, and methyl alcohol 1 part. Recommended as anesthetic.

METHYLENE BICHLORID. See Methylene Chlorid.

METHYLENE BLUE. $C_{16}H_{18}N_3SCl$. *Synonym:* Tetra-methyl-thionine-chlorid.

A complex derivative of diphenylamin, classed as an "anilin dye." This salt occurs in dark blue or reddish-brown crystals or crystalline powder, of a bronze-like tinge, slightly soluble in water and alcohol, producing a deep blue solution. Methylene blue is employed inter-

nally as an analgesic in neuralgic and rheumatic affections in doses of 0.13–0.5 Gm. (2–8 gr.), or subcutaneously in doses of 0.016–0.06 Gm. (¼–1 gr.). (D. R. P. Hoechst.)

METHYLENE CHLORID. CH_2Cl_2. *Synonyms:* Di-chlor-methane; Methylene Bichlorid.

Prepared by the reducing action of nascent hydrogen (from zinc and hydrochloric acid) upon chloroform, the product being washed and rectified. This forms a colorless liquid, which resembles chloroform in odor and solubility; specific gravity is 1.354 (15° C.); boiling-point, 41.6° C. (107° F.). Like pure chloroform, it is readily decomposed by the action of sunlight, hence the addition of 1 per cent. of alcohol is recommended. Methylene chlorid is recommended as an anesthetic in place of chloroform.

METHYLENE CHLORID (Richardson). See Methylene.

METHYL-GLYCOLIC-ACID-PHENETIDID. See Kryofin.

METHYL-GLYOXALIDIN. See Lysidin.

METHYL GUANIDIN. $NH.C(NH_2).NH(CH_3)$.

A colorless mass, soluble in water, insoluble in alcohol. Employed as a narcotic.

METHYL IODID. CH_3I.

Obtained by distilling a mixture of phosphorus, iodin, and methyl alcohol, washing the distillate with water, and finally fractionating. A colorless fluid which, on exposure to light, assumes a brown color, due to the separation of iodin. Used as a local anesthetic.

METHYL-LORETIN. $CH_3I.OH.C_9H_3N.SO_3H.H_2O$. *Synonym:* Para-methyl-meta-iodo-ortho-oxyquinolin-ana-sulfonic Acid.

Occurs in form of intensely yellow, vitreous needles, or in glistening scales and leaflets. Insoluble in ether and benzol, slightly soluble in alcohol and water. Used as an antiseptic like loretin.

METHYL-PARA-AMIDO-META-OXYBENZOATE. See Orthoform.

METHYL-PHENACETIN. See under Phenacetin.

METHYL-PHEN-MORPHOLINE.

A new synthetic alkaloid, claimed to possess valuable narcotic properties. A patented process of manufacture consists in heating a mixture of mono-chlor-acetone and ortho-nitro-phenol-potassium and treating the product of the reaction with tin and hydrochloric acid. The compound is a colorless, highly refracting, oily liquid, which boils at 150°–152° C. under 24 mm. pressure. Its hydrochlorid is in large crystals, soluble in water and alcohol. The acetyl derivative has also been prepared, and crystallizes in needles.

METHYL-PROTOCATECHUIC ALDEHYD. See Vanillin.

METHYL-PYRIDIN, SULFOCYANATE.

A compound obtained by the action of thiocyanic acid on chinolin. A crystalline, energetic antiseptic, free from caustic properties and all dangers that are liable to occur with the use of corrosive sublimate and carbolic acid. Usually employed in 1 per cent. solutions.

METHYLSALOL. $CH_3(OH)(CH_3)CO_2.C_6H_5$. *Synonym:* Para-cresotonic-phenyl Ester.

Colorless, needle-like crystals, insoluble in water, soluble in hot alcohol, ether, and chloroform. Employed for rheumatism.

METHYL-URETHANE. (URETHYLAN.) $C{=}O{<}^{NH_2}_{OCH_3}$.

Prepared by the action of cyanogen chlorid on methyl alcohol. Occurs in colorless plates, soluble in water and alcohol. Employed as hypnotic.

METHYL-VANILLIN-PARA-PHENETIDIN.

Used as hypnotic.

METHYL-VIOLET. See Pyoktanin, blue.

MEZQUITE.

The leaves of *Algarobia glandulosa*, a plant indigenous to Texas, are recommended as a febrifuge in form of decoction.

MICHELIA CHAMPAIA.

The bark is used as a febrifuge, and has been recommended as a substitute for guaiac.

MICROCIDIN. $C_{10}H_7ONa$.

This is a sodium beta-napthol, obtained by fusing beta-napthol with one-half of its weight of sodium hydrate. As an antiseptic wash a ⅛ per cent. aqueous solution is employed. It is recommended internally as an antipyretic, but more particularly as an antiseptic in purulent otitis media, rhinitis, ozena, and tonsillitis. In nasal and throat diseases, a 0.1 per cent. solution is usually employed.

MIGRAININ.

This is an antipyrine preparation, the composition of which is, according to various analyses, antipyrine, 85 per cent.; caffein, 9 per cent.; citric acid, 6 per cent. It is recommended as a specific in the treatment of migraine, and is also employed in relieving the headache of influenza. The dose is given as 1 Gm. (15.5 gr.). (D. R. P. Hoechst.)

MIGROL.

A proprietary remedy for migraine, consisting of caffein, sodium bicarbonate, and guaiacetin.

MIGROSINE.
A mixture of menthol and acetic ether. Used for migraine.

MILDIOL.
A disinfectant prepared from petroleum and creosote.

MILK, DIABETIC. See Diabetic Milk.

MILK, DRIED.
One of the most recent results of food industry. It is a yellowish powder, presenting the appearance of coarse rye flour. According to the manufacturers, it gives a product resembling fresh milk when mixed with water in proper proportions. Chemic analysis shows that the water is reduced from about 88 to about 3 per cent. in this powder. Its composition is as follows:

Total solid matter,	95	per cent.
Albumin,	25	"
Fat,	24–25	"
Ash,	5.7	"
Milk sugar,	40	"

It represents ten times its weight of fresh milk and may be used advantageously in coffee, cocoa, etc.

MILK-PEPTONE. See Casein-peptone.

MILK-SOMATOSE.
A preparation resembling ordinary somatose, made from meat. It is prepared from casein, with addition of 5 per cent. of tannin. See also under Somatose.

MOCHARAS.
The gum resin of *Bombax malabarica*, used as astringent for diarrhea and dysentery. The dose is 2–3 Gm. (30–45 gr.).

MOLLICHTHYOLIN.
A mixture of ichthyol and mollin.

MOLLIN.
A soft soap containing 15 per cent. excess of fats and 30 per cent. of glycerin. Miscible with water.

MOLLIN, CARBOLATED.
A mixture of mollin and carbolic acid. Antiseptic and disinfectant.

MOLLIN, CREOLINATED.
A mixture of creolin and mollin. Antiseptic and disinfectant.

MOLLOSIN.
An ointment vehicle composed of a mixture of yellow wax 1 part, and liquid petrolatum 4 parts.

MOLLUGO STRICTA.
An East Indian plant, used in form of infusion as stomachic and abortive.

MONESIA. (BURANHEM. GUARANHEM. CARYOPHYLLUM GLYPHLŒUM.)
A Brazilian Sapotacea, the bark of which is used, in form of decoction or aqueous extract, as tonic and stomachic for diarrhea and bronchitis. Also employed internally and externally as styptic. The dose is given for the extract as 0.2–1.5 Gm. (3–23 gr.) three to five times daily.

MONESIN.
An acrid principle analogous to saponin, obtained from the bark of the *Lucuma glycyphlœa*. It forms a white powder or yellowish scales, soluble in water and alcohol. Used as astringent and oxytocic in amenorrhea, diarrhea, catarrh, and scurvy, in doses of 0.0065–0.032 Gm. ($\frac{1}{10}$–$\frac{1}{2}$ gr.).

MONO-BROM-ACETANILID. See Mono-brom-phenyl-acetamid.

MONO-BROM-PHENYL-ACETAMID. (MONO-BROM-ACETANILID. BROM-ANTIFEBRIN.) $C_6H_4{<}^{Br}_{NHC_2H_3O}$.
Occurs in small, white, glistening, needle-like crystals. The preparation combines the sedative action of bromin with the antipyretic effect of acetanilid. Dose, 0.15–0.75 Gm. (2½–12 gr.).

MONO-CHLORAL-ANTIPYRINE, or HYPNAL. ($C_{11}H_{12}N_2O+CCl_3.CH(OH)_2$).
Obtained by triturating together 188 parts of antipyrine and 165.5 parts of chloral hydrate until liquefaction takes place; the oily-like liquid is then dissolved in hot water and set aside to crystallize. Hypnal forms colorless crystals, which melt at 67.5° C. (154° F.), and are readily soluble in warm water. It is employed as a hypnotic and analgesic in doses of 1–2 Gm. (15–30 gr.).

MONO-CHLOR-ETHANE. See Ethyl Chlorid.

MONO-CHLOR-META-CRESOL.
Succedaneum for para-chlorophenol.

MONO-CHLOR-METHANE. See Methyl Chlorid.

MONO-CHLOR-PHENOL. See Chlor-phenol.

MONOL.

An aqueous solution of calcium permanganate (2 : 1000), which is in use in France for purifying drinking water.

MONOLENE.

A colorless hydrocarbon oil.

MONO-PHENETIDIN. See Apolysine.

MORADEIN.

An alkaloid obtained from *Pogonopus febrifugus.* It occurs in colorless, transparent prisms, easily soluble in alcohol, ether, and chloroform; sparingly soluble in water.

MORPHIN SALTS. $C_{17}H_{17}(OH)_2.NO.AC.$

Among the newer salts of this base are the—

ANISATE. A white, crystalline powder, easily soluble in water, with difficulty in alcohol.

BENZOATE, obtained by neutralizing morphin with benzoic acid. This forms white, crystalline prisms or powder, which is employed in treatment of asthma in the same doses as the morphin sulfate.

BORATE is recommended for subcutaneous injections and eye-washes, because of the stability and neutral nature of the salt.

PHTHALATE and TARTRATE are recommended for subcutaneous injections, both being very soluble in water.

SACCHARINATED. Consists of 60.9 parts morphin and 39.1 parts saccharin.

STEARATE. ($C_{17}H_{19}NO_3.C_{17}H_{35}COOH$). Best obtained by double decomposition between sodium stearate and morphin hydrochlorid. As oleaginous application, 0.5 Gm. to 50 Gm. of fixed oil of almonds; as ointment, 0.5 Gm. to 50 Gm. of petrolatum; in suppositories, 0.02 Gm. to 2.5 Gm. of cacao butter.

MORRHUIN. $C_{19}H_{27}N_2.$

A basic principle found in cod-liver oil. It is a thick, oily liquid, which is soluble in alcohol and ether; 2 Mg. of the principle are presumed to represent a tablespoonful of cod-liver oil in activity.

MORRHUOL.

Stated to be the most active constituent of cod-liver oil. Obtained by agitating cod-liver oil with several portions of 90 per cent. alcohol, after which the alcohol is distilled off from the mixed extracts. The dose is 0.2 Gm. (3 gr.), in gelatin capsules, which represents 5 Gm. (75 gr.) of cod-liver oil, given to adults six times daily; to children, four times.

MUAVIN HYDROBROMID. (MUAWIN.)

An amorphous salt of an alkaloid obtained from "muawi" bark, which forms a yellowish powder, soluble in water. Its physiologic effect is similar to that of digitalin.

MUCOSOLVENE.

A germicide employed in diphtheria.

MUSCARIN. $(CH_3)_3N(OH)(C_2H_5O_2).$

An alkaloid obtained from the fungus *Agaricus muscarius.* It appears in hygroscopic, crystalline masses, readily soluble in water and alcohol. The nitrate and sulfate are usually employed. Used in place of eserin as an antidote to atropin; also recommended for diabetes insipidus. Dose, 0.0022–0.0044 Gm. ($\frac{1}{30}$–$\frac{1}{15}$ gr.).

MUSCULINE (Hammond's).

The sterilized extract of the muscular tissue of the ox. Used in rheumatism. See Animal Extracts. Also same in Addenda.

MUSIN.

A fluid preparation made from tamarinds.

MUSSANIN.

An alkaloid obtained from *Acacia anthelmintica.* Dose, 0.2–0.3 Gm. (3–5 gr.).

MYDRIN (Merck).

A mixture of the hydrochlorids of ephedrin and homatropin, placed on the market in 10 per cent. aqueous solutions. It is recommended as a very useful evanescent mydriatic. Apply in 10 per cent. solution.

MYDROL. *Synonym:* Iodo-methyl-phenyl-pyrazolin.

A colorless, inodorous, bitter powder, which is readily soluble in water and alcohol. Used as a mydriatic in 5–10 per cent. solution.

MYELEN.

An extract prepared from fresh ox marc. Used in treatment of rachitis, and in anemic and scrofulous conditions.

MYRICIN.

An extract in powder form, employed in diarrhea and jaundice as astringent and stimulant. Dose, 0.1–0.25 Gm. ($1\frac{1}{2}$–4 gr.), in pills.

MYRISTIN. $C_3H_5(C_{14}H_{27}O)_3O_3.$

A white powder, easily soluble in ether, with difficulty in water and alcohol.

MYROBALANEN.

The fruit of *Terminalia indica* and *Terminalia nigra* has been recommended for diarrhea and other intestinal disturbances. Dose, for adults, 1–8 Gm. (15–120 gr.) a day in pills; for children, 0.5–3 Gm. (8–50 gr.) in mixture.

MYRONIN.

The firm of Eggert & Haeckel, in Berlin, have introduced under this name a new ointment vehicle consisting of a mixture of soap, carnauba wax, and dœgling oil. The latter possesses remarkable penetrating powers, and does not readily become rancid. Myronin is prepared by heating stearic acid, in the presence of carnauba wax, with sufficient dilute potassium carbonate solution until saturation has taken place. The mixture of the resulting stearin soap and wax is then diluted with the dœgling oil until an ointment-like mass results, possessing the desired degree of consistency. This base, as prepared, contains about 12.5 per cent. of water, which may be increased or decreased as desired.

MYRRHOLIN.

A solution of equal parts of myrrh and oil (fatty), which has been used as a vehicle for creosote in laryngeal and pulmonary tuberculosis.

MYRTOL.

A mixture of dextro-pinene ($C_{10}H_{16}$), eucalyptol ($C_{10}H_{18}O$), and a camphor-like body ($C_{10}H_{16}O$), obtained by the fractional distillation of the oil of *Myrtus communis*. It forms a colorless liquid, of aromatic odor, boiling between 160° and 180° C. (320°–356° F.); recommended as a disinfectant and deodorant in putrid bronchitis and other diseases of the respiratory tract. Dose, 5 minims every two or three hours, taken in capsules.

NAFTALAN.

Consists principally (96–97.5 per cent.) of a peculiar naptha obtained from Russia, purified by fractional distillation and mixed with 2.5–4 per cent. of anhydrous soap to give it the proper consistence and to render it gelatinous. It melts at 70° C., is insoluble in water, alcohol, and glycerin, soluble in ether and chloroform, and readily miscible with all kinds of fats. Its high melting-point makes it applicable for external use even in summer heat. In the treatment of burns, inflamed wounds, ulcers, etc., it relieves pain, and also finds application in various skin diseases, and in arthritic and rheumatic disorders. Finally, it is antiseptic, antiparasitic, and deodorant.

NAPELLINE.

From *Aconitum napellus*, white powder, soluble in water, alcohol, and ether. Anodyne, analgesic. Neuralgia, rheumatism, etc. Dose, 0.008–0.03 Gm. (⅛–½ gr.).

NAPTHALIN. *Synonyms:* Naphthalene; Naphthalin, $C_{10}H_8$; Tar Camphor.

A hydrocarbon obtained from coal tar, which occurs in white scales of fatty luster and strong coal-tar odor, melts at 80° C. (176° F.), and is soluble in alcohol and ether, but insoluble in water. Used internally as a vermifuge against oxyuris vermicularis, as an expectorant, as an antiseptic in chronic diarrhea and typhoid fever, also as an antipyretic. Externally napthalin is used in various skin diseases, as eczema, psoriasis, lepra, etc. Dose is 0.13–0.5–1 Gm. (2–8–15 gr.); for tapeworms, 1 Gm., followed by castor oil. Externally, from 5 to 10 per cent., dusting-powder or ointment.

NAPTHALINUM BENZOICUM. (BENZONAPTHALIN.)

Stated to be a mixture of napthalin and benzoic acid.

NAPTHALOL. See Betol.

NAPTHASALICYN.

Recommended as a disinfecting solution for clothing, etc., and consists of a solution of salicylic acid, napthol, and borax. Ammonia water may be substituted for borax.

NAPTHASALOL. See Betol.

NAPTHIONIC ACID. $C_{10}H_6(NH_2)SO_3H$. *Synonym:* Napthglaminsulfonic Acid.

A remedy in acute iodism, poisoning by nitrites, and vesical affections. Dose, 3–4 Gm. (45–60 gr.) daily.

NAPTHOCRESOL.

A brown fluid having a tarry appearance and odor, insoluble in water, soluble in alcohol. Antiseptic, in place of creolin.

NAPTHOFORMIN.

Prepared from alpha- or beta-napthol and formaldehyd. It is used as an antiseptic in dermatology.

NAPTHOL (ALPHA). $C_{10}H_7OH$. *Synonym:* Alpha Napthol.

A constituent of coal-tar, also obtained artificially from napthalene. It forms colorless prisms of phenol-like odor and burning taste, soluble in alcohol and ether, slightly so in water; melts at 95°. Alpha-napthol is an antiseptic and antiferment, being recommended in treatment of diarrhea, dysentery, typhoid fever, etc. A solution of 0.1–0.25 : 1000 prevents the development of the spores of the tubercle bacilli. Said to be equally as strong but more toxic than beta-napthol.

NAPTHOL (BETA). $C_{10}H_7OH$. *Synonym:* Beta-napthol.

A constituent of coal-tar, also obtained artificially from napthalene. For description and tests see U. S. Pharmacopœia. Beta-napthol is used as a general antiseptic in cutaneous disorders and in affections of the respiratory tract; also as an intestinal antiseptic in typhoid and typhus

fevers and in chronic diarrheas. The dose varies from 0.12–1 Gm. (2–15 gr.). Externally, 2–10 per cent. solutions or ointments are employed.

NAPTHOL (BETA) BISMUTH. See Orphol.

NAPTHOL-ANTIPYRINE (Beta). See Napthopyrine.

NAPTHOL-ARISTOL. $C_{16}H_6I_2O_2$. *Synonyms:* Di-iodo-beta-napthol; Napthol Di-iodid.

Prepared like aristol; a solution of sodium napthol (beta-napthol 11 parts, and sodium carbonate 4 parts) is precipitated by an aqueous solution of iodin in potassium iodid (2.4 parts each). It is a greenish-yellow powder, insoluble in water, slightly soluble in alcohol, and very soluble in chloroform. The compound is recommended as an antiseptic in place of iodoform.

NAPTHOL BENZOATE (Beta). See Benzonapthol.

NAPTHOL CAMPHOR (Beta). *Synonym:* Napthol, camphorated.

A syrupy fluid, made by fusing together napthol 1 part, and camphor 2 parts. This is used as an antiseptic application to boils and in tuberculosis.

NAPTHOL CARBONATE (Beta). $CO(OC_{10}H_7)_2$.

A di-napthyl ester of carbonic acid. It is prepared by the action of phosgene on beta-napthol sodium, yielding shining, colorless scales, which are insoluble in water and melt at 176° C. (348.8° F.). Recommended as a substitute for beta-napthol, as an intestinal antiseptic, owing to its less irritating qualities.

NAPTHOL CARBOXYLIC ACID. $C_{10}H_6(OH)CO_2H$. *Synonym:* Alpha-oxynapthoic Acid.

This is obtained by the action of carbonic acid gas upon sodium-alpha-napthol under pressure. It forms a white, crystalline powder or acicular crystals: melts at 186° C. (366.8° F.); insoluble in water, soluble in alcohol, ether, fatty oils, and glycerin. Forms soluble salts with the alkalies or alkali carbonates. Recommended as an antiseptic disinfectant and antiparasitic, in form of an ointment (5–10 per cent.) or antiseptic gauze (1 per cent.).

NAPTHOL DI-IODID. See Napthol-aristol.

NAPTHOL DI-SULFONATE OF ALUMINUM. See Alumnol.

NAPTHOL-MONO-SULFONATE OF CALCIUM. See Asaprol.

NAPTHOLSALOL. See Betol.

NAPTHOPYRINE. (BETA-NAPTHOL-ANTIPYRINE.)

A molecular compound of beta-napthol and antipyrine, obtained by trituration.

NAPTHORESORCIN.

Obtained by heating di-oxy-napthalin-sulfonic acid with dilute inorganic acids. Transparent crystals which melt at 124° C. Use unknown.

NAPTHOSALOL. See Betol.

NAPTHOXOL.

A solution of hydrogen dioxid, containing napthol and alcohol.

NARCEIN HYDROCHLORID. $C_{23}H_{29}NO_9.HCl + 3H_2O$.

Narcein is found in opium to the extent of 0.1–0.4 per cent. The hydrochlorid forms colorless, crystalline needles, which are soluble in water and alcohol. It is employed as a hypnotic in doses of 0.01–0.2 Gm. ($\frac{1}{6}$–3 gr.).

NARCEIN MECONATE.

Lemon-yellow crystals, soluble in water. Recommended as sedative. Subcutaneous dose, 0.006–0.025 Gm. ($\frac{1}{10}$–$\frac{2}{5}$ gr.).

NARCOTIN. $C_{22}H_{23}NO_7$.

This alkaloid, which is found in opium, occurs in colorless crystals, which melt at 176° C (348.8° F.); insoluble in water and alkalies, but readily soluble in alcohol and ether. It is used as a hypnotic in doses of 0.25–1 Gm. (3.8–15 gr.).

NARINGIN. $C_{33}H_{36}O_{11}.4H_2O$.

A glucosid obtained from *Citrus decumana.* It occurs in white crystals of intensely bitter taste, easily soluble in alcohol and warm water, with a yellowish color.

NAROGAMIA ALATA. *Synonyms:* Goa Ipecacuanha; Trifolio; Nelanringu.

A meliaceous plant found in East India. The root is in use as expectorant and emetic.

NASROL. See Sodium Sulfocaffeate.

NELANRINGU. See Narogamia.

NERIUM OLEANDER.

An alcoholic extract of the root of this plant is recommended instead of digitalis and strophanthus for heart diseases. Dose, 0.05 Gm. ($\frac{3}{4}$ gr.).

NERVINE.

An extract of the normal gray substance of sheeps' brains.

NERVINE.

A proprietary remedy for gout, rheumatism, migraine, neuralgia, sciatica, etc.

NERVOSINE.

A mixture of reduced iron (0.025 per cent.) with valerian, angelica, orange peel, and licorice extract, made into pills weighing 0.25 Gm. (4 gr.) each. Used for hysteria and neurasthenia.

NEURALGIN. (CARBUCICCHIO.)

A mixture of acetanilid, caffein, and sodium salicylate. Recommended for acute and chronic articular rheumatism; antineuralgic. Dose, 0.5–3 Gm. (8–45 gr.).

NEURIN. $N(CH_3)_3(C_2H_3)OH$. *Synonym:* Tri-methyl-vinyl-ammonium-hydroxid.

This base, containing the unsaturated radicle "vinyl," C_2H_3, is found, along with neurodin ($C_5H_{14}N_2$), among the products of the decomposition of flesh. Obtained synthetically by reaction between ethylene bromid and alcoholic trimethylamin at 60° C. (140° F.) under pressure. It forms a very poisonous, strongly alkaline fluid, which is very soluble in water, but is decomposed on boiling. A 3 per cent. solution is employed as a local application for diphtheritic membranes.

NEURODIN. $C_6H_4(OCOCH_3)NH.COOC_2H_5$. *Synonym:* Acetyl-p-oxy-phenyl-urethane.

A substance introduced by Merck as an antipyretic and antineuralgic. By the action of chloro-carbonic ether ($CO(Cl)(OC_2H_5)$), and amido-phenol ($C_6H_4(OH)NH_2$), para-oxyphenyl-urethane, is formed, which, on being acetylated, is converted into neurodin. This forms colorless, inodorous crystals, melting at 87° C. (188.6° F.), soluble in 1400 parts of cold water.

Dose as antineuralgic is 1–1.5 Gm. (15–23 gr.); as antipyretic, 0.5 Gm. (7½ gr.). (D. R. P. E. Merck.)

NEUROSIN.

A French preparation (in syrup or granule form) which contains as active constituent, glycerino-calcium phosphate.

NICKEL BROMID. $NiBr_2$.

Used as hypnotic and sedative, also recommended in epilepsy. Dose, 0.13–0.52 Gm. (2–8 gr.) in form of syrup.

NICKEL CARBONIC OXID.

A clear, colorless, very poisonous liquid. Used subcutaneously to lower the temperature.

NICKELSALIPYRINE. (ANTIPYRINE NICKEL SALICYLATE.)

Appears as a pale green powder or nearly white needles.

NICOTIN BITARTRATE.

White crystals, soluble in water. Used for tetanus and as antidote in strychnin poisoning.

NICOTIN TARTRATE. $C_{10}H_{14}N_2(C_4H_6O_6) + 2H_2O$.

White needles, soluble in water. Solution more stable than that of the free alkaloid.

NIRVANIN. (D. R. P. Hoechst.)

Its composition is that of a hydrochlorid of diethyl-glycocoll-amido-oxybenzoic-methyl ester. It crystallizes from absolute alcohol in white prisms melting at 185°, gives a violet color with ferric chlorid, and is very soluble in water. A 5 per cent. solution causes, when injected into the eye, complete anesthesia after temporary irritation of the conjunctiva. Upon less sensitive mucous membranes the solution is not at all irritating, but does not produce such deep-seated anesthesia. Applied subcutaneously, the anesthetic effect is complete and prolonged. The new preparation has also the advantage over orthoform of being less toxic. Experiments on animals proved it to be only one-tenth as toxic as cocain. The highest subcutaneous dose that could be given without injury was 0.5 Gm. (8 gr.). It has also been used successfully in dental practice in 2–5 per cent. solutions. A 1 per cent. solution is an effective antiseptic, preventing bacterial growth, fermentation, and putrefaction.

NITRO-SALOL. See under Salol.

NJALLIN.

An alkaloid obtained from Njalla beans.

NORMAL-ANTI-HYDRORRHINE.

A remedy composed of boric and salicylic acids, dissolved with chlorin in alcohol and water.

NORTROPINON. $C_7H_{11}NO$.

A tropigenin ketone obtained by oxidizing demethylated tropin with chromic acid. Melts at 70° C. Use unknown.

NOSOPHEN. *Synonyms:* Iodophen; Tetra-iodo-phenol-phthalein, $(C_6H_2I_2.OH)_2.C<{}^{C_6H_4CO}_{O\text{———}|}$.

Obtained by the action of iodin on a solution of phenol-phthalein. It forms a pale yellow colored, inodorous, and tasteless powder, insoluble in water and alcohol; melts at 255° C. With alkali esnosophen forms soluble salts, the sodium compound being blue. It contains 60 per cent. of iodin, which is not liberated by the action of alkalies or boiling dilute acids. It is of feeble acid character, readily forming salts with bases, the sodium salt (antinosin) being readily

soluble. Employed as antiseptic dusting-powder, being destructive to bacterial life. Used in catarrh of the intestines and stomach in doses of 0.3–0.5 Gm. (5–8 gr.). (D. R. P. Rhenania.)

NUCLEIN.

A phosphorated proteid extracted from the spleen and other organs. It forms a pale yellow colored powder, soluble in alkaline solutions, but insoluble in alcohol or water. In doses of 2–3 Gm., well diluted, nuclein is said to enhance phagocytosis by increasing the number of white corpuscles. Also recommended hypodermically in treatment of pleurisy and pneumonia.

NUCLEOHISTON.

An albuminoid obtained from lymph and thymus gland of calves. It is said to effect immunization against disease. A white powder, soluble in water, mineral acids, and alkalies.

NUTRIMENTOSE. See under Carnose.

NUTRIN.

A dietetic food which, according to its manufacturers, represents "the pure nutritious substance of meat."

NUTROL.

According to an official analysis, this preparation consists largely of maltose (40 per cent.), dextrose (17.3 per cent.), dextrin (16.6 per cent.), and water (24.7 per cent.), with small quantities of pepsin and hydrochloric acid. The conclusion is reached that nutrol has some digestive power, but that it is not justifiable to call it a food, considering the small doses directed to be taken.

NUTROSE. (D. R. P. Hoechst.)

Neutral casein sodium which forms an inodorous, soluble powder containing 13.8 per cent. of nitrogen. Used as a food in intestinal and digestive disturbances, also in anemia and scrofula.

OCULIN.

An organo-therapeutic preparation, stated to be a glycerin extract from the ciliary body of the eyes of oxen. A similar preparation in the market is extractum corporis ciliaris.

OCULUSTRO.

An oleate of potassium soap containing 30 per cent. of glycerin and a little turpentine.

ODOL.

A mouth-wash, composed of salol, 2.5 parts; oil of peppermint, 0.5 parts; saccharin, 0.004 parts; and alcohol, 97 parts. Small quantities of the oils of clove and caraway are probably present.

ODONTODOL.

Said to be a mixture of cocain hydrochlorid (1), oil of cherry-laurel (1), tincture arnica (10), and solution of ammonium acetate (20). Used as a dental anodyne.

ŒNANTHOTOXIN. $C_{17}H_{22}O_5$.

A resinous substance obtained from *Œnanthe crocata;* it is said to be very poisonous, and to produce violent spasms, like picrotoxin.

ŒSYPUS.

In place of the expensive lanolin, a cheap, impure wool-fat bearing the above name has been recommended, which is a by-product in cleansing sheep-wool, and is obtained in form of a tenacious, unctuous mass of dark brown color and disagreeable odor. The odor can be masked by addition of vanillin, but it is advised not to use this fat in acute eczema. The following formulas are given: (1) Zinc oxid, starch, of each, 20 parts; olive oil, œsypus, of each, 30 parts; vanillin, 0.2 parts. (2) Zinc oxid, starch, of each, 20 parts; olive oil, œsypus, of each, 28.5 parts; tincture of benzoin, 3 parts.

OIL OF GARLIC. See Allyl Sulfid.

OLEO-CREOSOTE. See under Guaiacol.

OLEUM RICINI NAPTHOLATUM.

Castor oil containing 0.2 per cent. each of alpha-napthol, chloroform, and oil of peppermint.

OMAL. $(C_6H_2Cl_3)OH)$ [2.4.6.]. *Synonym:* Tri-chlor-phenol.

A crystalline mass obtained by the action of chlorin on phenol, which melts at 68° C. Used by inhalation to relieve inflammation of the upper air passages.

OOPHORIN.

A preparation made from the fresh ovaries of cows and swine. Used like ovarin. Each 0.5 Gm. represents about 3 Gm. of the fresh ovaries. Dose, 3 tablets (each containing 0.5 Gm.) three times daily. See Organo-therapeutics, Addenda.

OPIANIC-ACID-PARA-PHENETIDIN.

Used as a hypnotic.

OPOTHERAPEUTIC PREPARATIONS (E. Merck).

These form a class of organo-therapeutic preparations which represent the active secretions of the various organs, deprived of inert albuminoid matter. Since these secretions consist largely of leucomains which are of a basic character, advantage is taken of the readiness with which they form double salts with sodium chlorid, for their extraction from the respective organs. One

part of the extract represents 10 parts of the fresh organ. The following constitute the class under this head:

Name and Origin of the Preparation.	Indications.	Doses for Adults, in Grams.
Opocerebrinum, from the gray brain matter.	Chorea; hysteria; neurasthenia; insomnia; chronic alcoholism; anemia; chlorosis with pronounced cerebral symptoms; epilepsy; brachycardia.	0.2–0.4 (gr. 3–6) per dose, 0.4–0.8 (gr. 6–12) per day.
Opohepatoidinum, from the liver.	Hemoptysis; icterus; epistaxis; cirrhosis.	0.5 (gr. 8) per dose, 1.5–4.0 (gr. 23–15) per day.
Opohypophysinum, from the pituitary body.	Acromegaly.	0.05 (gr. ¾) per dose.
Opolieninum, from the spleen.	Hypertrophy of the spleen; malarial cachexia; leucocythemia; pseudoleucocythemia.	2.0–6.0 (½–1½) per dose, 4.0–12.0 (1–3) per day.
Opomamminum, from the mammary gland.	Menorrhagia; metrorrhagia; uterine fibroma.	1.5 (gr. 23) per dose, 5.0–8.0 (1¼–2) per day.
Opomedullinum, from the red bone-marrow.	Pernicious anemia; pseudoleucocythemia; chlorosis; neurasthenia.	0.2–1.0 (gr. 3–15) per dose, up to 6.0 (1½) per day.
Opoorchidinum, from the testicles.	Spinal and other nervous diseases.	0.5–0.8 (gr. 8–12) per dose, 1.5–3.0 (gr. 23–45) per day.
Opoossiinum, from the yellow bone-marrow.	Rachitis; osteomalacia.	0.2–1.0 (gr. 3–15) per dose, up to 6.0 (1½) per day.
Opoovariinum, from the ovaries.	Climacteric disturbances; nervous disorders following ovariotomy; hysteria; chlorosis.	0.2–0.8 (gr. 3–12) per dose, 0.6–3.0 (gr. 10–45) per day.
Opopancreatinum, from the pancreas.	Diabetes mellitus.	0.2–0.8 (gr. 3–12) per dose, 2.0–8.0 (½–2) per day.
Opoprostatinum, from the prostate gland.	Hypertrophy of the prostate gland.	0.2 (gr. 3) per dose, 0.8 (gr. 12) per day.
Oporeniinum, from the kidneys.	Uremia; chronic nephritis; albuminuria.	0.5–0.8 (gr. 8–12) per dose, 1.5–3.0 (gr. 23–45) per day.
Oposuprarenaiinum, from the suprarenal capsule.	Diabetes insipidus; Addison's disease; neurasthenia.	0.2–0.4 (gr. 3–6) per dose, 0.4–0.8 (gr. 6–12) per day.
Opothymiinum, from the thymus gland.	Deficient development of the newborn; infantile paralysis; Graves' disease; leucocythemia; chlorosis; anemia.	0.2–0.5 (gr. 3–8) per dose, 0.6–3.0 (gr. 10–45) per day.
Opothyroidinum, from the thyroid gland.	Myxedema; cretinism; cachexia strumipriva; obesity; skin diseases (psoriasis, eczema, etc.); absence of milk; hemophilia; torticollis; etc.	0.05–0.1 (gr. ¾–1½) per dose, 0.15–0.6 (gr. 2½–10) per day.

ORCHIDIN.

Prof. Poehl's testicular fluid. Recommended as a nervine.

OREXIN. $C_6H_4.CH_2N.CH.NC_6H_5$. *Synonym:* Phenyl-dihydro-chin-azoline. (D. R. P. Kalle.)

This, a complex chinolin derivative, is obtained by the action of sodium formanilid on o-nitrobenzyl chlorid; the resulting o-nitrobenzyl formanilid is reduced to the corresponding amido derivative by means of nascent hydrogen; the hydrochlorid of this base on heating gives up one molecule of water, yielding the hydrochlorid of orexin, from which the base orexin may be obtained by treatment with an alkali. It occurs as a white, amorphous, tasteless powder, which is almost insoluble in water. Employed as a stomachic, stimulating the appetite; also as an antiemetic, given in doses of 0.13–0.4 Gm. (2–6 gr.), either in wafers or capsules, followed by drafts of beef-tea or cocoa to prevent any local irritation.

HYDROCHLORID. $C_6H_4.CH_2N.CH.NC_6H_5.HCl + 2H_2O$. Forms colorless, odorless crystals, of bitter, pungent taste, melting at 80° C. (176° F.), soluble in 15 parts of cold water. The properties and dose are same as those of orexin; however, it produces an irritating effect upon mucous surfaces.

TANNATE. A yellowish-white, odorless powder, having a taste resembling that of chalk. It is insoluble in water, readily soluble in dilute hydrochloric acid. Given in tablets in doses of 0.25–0.5 Gm. (4–8 gr.), two hours before meals, twice daily, as a stomachic.

ORGANOSOL. See under Hydrogol.

ORMOSIN HYDROCHLORID.

An alkaloid obtained from the seeds of the *Ormosia dasycarpa*, which occurs in small, white crystals, insoluble in water and dilute alkalies, soluble in alcohol and chloroform. Employed as narcotic.

OROXYLIN.

Golden-yellow crystals, insoluble in water, soluble in alcohol and ether. Recommended as antirheumatic.

ORPHOL. $[(C_{10}H_7O)_3Bi]_2 + Bi_2O_3$ or $(C_{10}H_7O)_3Bi + 3H_2O$. *Synonym:* Basic Beta-napthol Bismuth.

A compound which, according to the first formula, contains 50 per cent. of bismuth oxid, constitutes a light brown powder of agreeable aromatic taste; according to the second formula it should contain 71.6 per cent. of bismuth oxid and 23 per cent. of beta-napthol. It splits up in the intestines into napthol and bismuth. Used as intestinal astringent and antiseptic in treatment of cholera infantum, gastro-intestinal catarrh, typhoid fever, the diarrheas of consumptives, etc., in doses of 0.5 Gm., the total daily dose for children being 1 Gm. (15 gr.), for adults 3 Gm. (45 gr.), given with honey or milk.

ORTHIN. $C_6H_3.OH.COOH.NH.NH_2$. *Synonym:* Ortho-hydrazin-para-oxybenzoate.

Orthin is a derivative of phenyl-hydrazin ($C_6H_5–NH–NH_2$) in which one hydrogen atom of the benzene nucleus is replaced by a hydroxyl group and another by the carboxyl group. The *hydrochlorid*, in which form it usually appears, forms colorless soluble crystals, and is recommended as an antipyretic. Experiments have shown it to be too dangerous for general use.

ORTHO-AMIDO-SALICYLIC ACID. $C_6H_3(NH_2)(OH)COOH$.

Obtained through reduction of ortho-nitrosalicylic acid. It forms a gray-white, amorphous, inodorous powder, of a faint sweet taste. Insoluble in water, alcohol, and ether. It is employed in treatment of chronic rheumatism, in doses of 0.25–0.5 Gm. (3–7 gr.).

ORTHOFORM. $C_6H_3(OH)(NH_2)COOCH_3$. *Synonym:* Methyl-para-amido-meta-oxybenzoate.

Occurs as a white, voluminous, odorless, and tasteless powder. It is permanent and non-hygroscopic, and slightly soluble in water. Used as an antiseptic and local anesthetic to relieve the pain of wounds, ulcers, burns, excoriations, etc. Being absolutely non-toxic, it may be applied to large surfaces in any quantity; as ointment it is used to the extent of 10–20 per cent. made up with lanolin. Dose, 0.5–1 Gm. (8–15 gr.) in affections of the gastric mucous membranes. Orthoform hydrochlorid forms a soluble crystalline salt, and, although it anesthetizes as well as orthoform, it is not generally applicable for subcutaneous injection. (D. R. P. Hoechst.)

ORTHOFORM EMULSION.

Dr. Kassel recommends injections of an emulsion, consisting of 25 parts of orthoform and 100 parts of olive oil, for tuberculosis of the larynx. Local anesthesia is produced, which may last from one to three and one-half days. Solid food may be taken without difficulty almost immediately after the injection.

ORTHOFORM, NEW.

Under the name of the new orthoform (orthoform, new), the Hoechst Color Works has put on the market *meta*-amido-para-oxybenzoic-methyl ester, while the original orthoform is *para*-amido-meta-oxybenzoic-methyl ester. The new preparation is whiter and cheaper than the original article. It is used in the same way as the original orthoform.

ORTHO-HYDRAZIN-PARA-OXY-BENZOATE. See Orthin.

ORTHO-OXY-BENZOIC ACID. *Synonym:* Salicylic Acid.

ORTHO-PHENOL-SULFONIC ACID. See Aseptol.

ORTHO-PHENOL-SULFURIC ACID. See Aseptol.

ORTHO-SULFAMIN-BENZOIC ANHYDRID. See Saccharin.

ORTHO-SULFO-CARBOLIC ACID. See Aseptol.

ORTHO-TOLYL-ACETAMID. See Aceto-ortho-toluid.

ORTHO-TOLYL-DI-METHYL-PYRAZOLON. See Tolypyrin.

OSAN.

A new preparation for the teeth, placed on the market in liquid form and as tooth powder. It is claimed to combine the good points of all the best-known tooth preparations.

OSMIC ACID. OsO_4.

Obtained by heating osmium in fine powder in a current of oxygen or moist chlorin; or by evaporating a solution of osmium in nitromuriatic acid to dryness. Occurs in colorless or yellowish-green, lustrous needles, of a penetrating chlorin-like odor, melting at 40° C. (104° F.); stains the skin and linen black. Externally in a 1 per cent. solution (fresh) osmic acid acts as a caustic for cancerous and scrofulous sores; subcutaneously (1 per cent. solution) it has been

employed in neuralgia, epilepsy, sarcoma, cancer, etc. Dose, internally, 0.001 Gm. ($\frac{1}{60}$ gr.) in pill form, freshly prepared.

OSSAGEN.

The calcium salt of the fatty acids of red bone-marc. A white powder which represents an intermediary product in the formation of bone. Used twice daily in doses of 2–4 Gm. in rachitis.

OSSALIN. *Synonym:* Adeps Ossium.

An ointment-base obtained from ox-marrow. It is a neutral, mild fat, of a grayish-white color and an odor resembling that of tallow. It absorbs water to the extent of 200 per cent.

OSSIN. *Synonym:* Extractum Ossium Liquidum.

A remedy for diabetes, stated to contain water (8.82 per cent.), inorganic salts (9.4 per cent.), ethereal extract (0.06 per cent.), nitrogen (12.1 per cent.), and substances soluble in 80 per cent. alcohol (61.25 per cent.).

OUABAIN.

A glucosidal principle obtained from the wood of *Acocanthera ouabaio*, also the seed of *Strophanthus glabrus*. Inodorous white crystals, slightly soluble in cold, freely in hot, water and dilute alcohol, melting at 200° C. (392° F.). Employed in doses of 0.000065 Gm. ($\frac{1}{1000}$ gr.), repeated at frequent intervals, for the relief of whooping-cough.

OVADIN.

A powder containing traces of iodin, prepared from the ovaries of cows and swine.

OVALBUMIC ACID.

A product obtained through the action of iodin and amorphous phosphorus upon powdered egg albumen suspended in water. The acid is free from iodin, and forms a sodium salt that crystallizes in fine needles. The acid separated from this compound melts at 260° C. with decomposition. It is insoluble in water, but soluble in mineral acids. From its solution in hydrochloric acid it is precipitated by picric and phosphomolybdic acids, also by gold and platinum salts.

OVARADEN.

A preparation of ovaries containing their active constituents in an unchanged form, and representing twice its weight of the fresh ovaries. It is an odorless, tasteless powder. Dose, 1–2 Gm. (15–30 gr.) daily. See Addenda.

OVARIA SICCATA PULV.

A powder prepared from the entire ovaries of cows, using milk sugar as diluent. Five ovaries yield 7.5 Gm. of above preparation; or 15 tablets are equivalent to one ovary. Used in amenorrhea, chlorosis, etc. Dose, 0.5–1 Gm. daily. See Addenda.

OVARIINUM SICCUM.

The ovaries of cows, freed from fat, dried, and powdered. Employed in molimina climacterica, in doses of 1–4.5 Gm. (15–75 gr.) daily in form of pills or tablets. See Addenda.

OVARINE (Hammond's).

The sterilized extract of the ovaries of the pig, used in diseases of women, sterility, etc. See Animal Extracts. See Addenda.

OVIPROTOGEN.

A dietetic, stated to be a methylene compound of albumin. It is given in milk to infants. Also used hypodermically.

OXIN.

A saccharated extract of beef.

OXOL.

A generic name for mixtures of hydrogen dioxid with menthol, camphor, or napthol, called respectively menth-oxol, camph-oxol, and napth-oxol, which see.

OXYCAMPHOR. $C_8H_{14}<\begin{matrix}CHOH.\\|\\CO.\end{matrix}$

A white, crystalline powder, melting at 203°–205° C. Sparingly soluble in cold water, more so in hot water. Easily soluble in all organic solvents except ligroin. The aqueous solution has a faint peppery-bitter taste and odor. It reduces the excitability of the respiratory centers, like morphin, but is free from the side effects caused by the latter. Employed in dyspnea in doses of 1 Gm. (15 gr.) several times daily.

OXYCANTHINE.

A white powder, insoluble in water, alcohol, and ether, soluble in chloroform. Stated to have a paralyzing and irritant action on the brain and spine.

OXY-CHIN-ASEPTOL. See Diaphtherin.

OXY-DIMETHYL-CHINIZIN. See Antipyrine.

OXYGENATED WATER.

Water saturated with 12–15 volumes of oxygen. Used in uterine hemorrhage.

OXYNAPTHOIC ACID. $C_{10}H_6(OH).COOH$. *Synonym:* Alpha-napthol-carboxylic Acid. Obtained by the action of carbonic acid on alpha-napthol-sodium under pressure at 140° C.; the resulting sodium salt is a yellowish powder or colorless needles of melting-point

186° C. (366.8° F.). Very slightly soluble in cold water, but very soluble in alcohol. The acid is quite soluble in an aqueous solution of borax. Its properties are those of an antiseptic and antizymotic. Applied as an ointment (10 per cent.) in treatment of scabies.

OXY-PHENACETIN SALICYLATE.

Crystallizes in shining leaflets, melting between 132° and 134° C. Made by the interaction of chloro- or bromo-phenacetin and sodium salicylate. It is said not to produce the side effects usually noticed with its components. Used as antipyretic and antirheumatic.

OXY-PROPYLENE-DI-ISO-AMYLAMIN.

A colorless fluid, soluble in alcohol, ether, and oils, insoluble in water. Used as heart tonic and stimulant.

OXYSEPSIN.

An oxidized toxin, prepared by cultivation from a culture of the tubercle bacillus obtained from a case where high fever persisted. It is used in cases where, with tuberculosis, there is an infection due to some of the various kinds of cocci. It is employed simultaneously with oxy-tuberculin (*vide*), and may be injected in large quantities (up to 60 Cc.) without deleterious results.

OXY-SPARTEIN. $C_{15}H_{24}N_2O$.

This is an oxidation product of spartein (*q. v.*), and occurs in colorless, hygroscopic crystals, melting at 83° C. (181.4° F.), and soluble in the usual solvents. It is employed subcutaneously as a heart stimulant; it, however, lowers the pulse at the same time. Dose is 0.04 Gm. (⅔ gr.), gradually increasing to 0.1 Gm. (1½ gr.). The *hydrochlorid* melts between 48° and 50° C. (118.4°–122° F.). This alkaloid is incompatible (therapeutically) with opiates.

OXY-SPARTEIN HYDROCHLORID. $C_{15}H_{24}N_2O.2HCl$.

Used in narcosis to avoid heart complications. Given in doses of 0.03–0.04 Gm., subcutaneously, one hour before the operation.

OXY-TUBERCULIN.

A tuberculin prepared by cultivation from a highly virulent bacillus, and changed by oxidation. Its advantages are claimed to be that it may be given in large doses (20 Cc. daily) without causing disturbances.

OZALIN.

A disinfectant, said to consist of a mixture of calcium, magnesium, and iron sulfates, with caustic soda and magnesia.

OZONE-ETHER.

A mixture of ether with alcohol and hydrogen peroxid. Used internally in diabetes and whooping-cough; locally as antiseptic in scarlet fever. Dose, 2–4 Gm., three times daily.

PALPEBRINE.

A mixture of boric acid, zinc sulfate, corrosive sublimate, and glycerin. An antiseptic for external diseases of the eye, especially conjunctivitis.

PANCREADEN.

A preparation recommended for diabetes mellitus; made from the pancreas. Dose, 10–15 Gm. (4–6 drachms) daily.

PANGADUINE.

Name proposed for the collective basic principles of cod-liver oil. A crystalline solid soluble in alcohol and in a mixture of water and glycerin.

PAPAIN. *Synonyms:* Papayotin; Plant Pepsin; Papoid.

The concentrated active principle of the juice of the unripe fruit of *Carica papaya*. The juice is concentrated in vacuo, and the ferment is precipitated by the addition of alcohol. Papain forms an amorphous, white, hygroscopic powder, soluble in water and glycerin only. Employed as a digestive ferment; like animal ferments (pepsin), it digests albuminous substances, possessing the advantage of being active in either acid, alkaline, or neutral solutions. Dose, 0.12–0.5 Gm. (2–8 gr.) after meals. Applied as a 5 per cent. solution (in equal parts of glycerin and water) it is used to dissolve the false membranes of croup and diphtheria.

PAPAYOTIN. See Papain.

PAPIN.

Stated to be "catechu-oxychinol-dextrin-glycerate." (?) Probably a glycerol containing catechu, quinin, and dextrin.

PARA-ACET-AMIDO-PHENETOL. See Phenacetin.

PARA-ACET-ANISIDIN. See Methacetin.

PARA-ACETO-PHENOL-ETHYL-CARBONATE.

A crystalline, colorless, and tasteless powder, soluble in alcohol and insoluble in water. It is recommended as antithermic, analgesic, and hypnotic, in doses of 0.5 Gm. (8 gr.).

PARA-ACET-PHENETIDIN. See Phenacetin.

PARA-ALLYL-PHENYL-METHYL ETHER. See Anethol.

PARA-AMIDO-META-OXY-BENZOIC ACID METHYL ESTER. See Orthoform.

PARA-BROM-ACETANILID. See Antisepsin.

PARA-CHLORALOSE. $C_8H_{11}Cl_3O_6$.

Colorless, iridescent plates, insoluble in cold water, sparingly soluble in hot water, easily soluble in hot alcohol and ether.

PARA-CHLORO-PHENOL. $C_6H_4(Cl)OH[1.4]$.

A crystalline substitution product of phenol. Fusing-point is 40° C. and boiling-point 217° C.; it is soluble in alcohol, ether, and fatty oils, almost insoluble in water. Karpow recommends this as a powerful antiseptic and disinfectant, only exceeded in intensity by silver nitrate and mercuric chlorid. It has been successfully employed in treatment of erysipelas in a 2–3 per cent. vaselin ointment.

PARA-CHLORO-PHENOL PASTE.

A remedy employed in lupus. Said to be composed of equal parts of lanolin, vaselin, starch, and para-chlor-phenol.

PARA-CHLORO-SALOL.

Recommended as superior to salol as a disinfectant, without possessing any of its secondary toxic properties.

PARACOTOIN. $C_9H_{12}O_6$.

A principle which occurs, along with several others, in the para coto bark. It forms a pale yellow, tasteless, crystalline powder, melting at 152° C. (305.6° F.), almost insoluble in water, but readily soluble in alcohol. Employed in intestinal catarrh and as an anti-diarrheic, the dose being 0.1–0.2 Gm. (1.5–3 gr.) for children.

PARA-CRESOL. See under Cresol.

PARA-CRESOTINIC ACID. See Cresotinic Acid.

PARA-CRESOTINIC PHENYL ESTER. See Methyl Salol.

PARA-DI-ETHOXY-ETHENYL-DIPHENYL-AMIDIN. See Holococain.

PARA-DIPHENOL. See Hydroquinon.

PARA-ETHOXY-PHENYL-URETHANE. See Thermodin.

PARAFORM. $(H.COH)_3$. *Synonyms:* Paraform-aldehyd; Triformol; Trioxymethylene.

A white, crystalline solid; a polymeric formaldehyd. Recommended as intestinal antiseptic in diarrhea, cholera nostras, phthisis, etc. Dose, 0.5–1 Gm. (8–15 gr.). Used externally as surgical antiseptic.

PARAHEMAGLOBIN.

A preparation made from blood and containing 5 per cent. of iron.

PARA-IODO-ANA-OXY-QUINOLIN-ORTHO-SULFONATE. See Lorenit.

PARAL.

A new toilet cream, prepared by fusing together lanolin and paraffin. Admixture with paraffin renders lanolin capable of taking up much more water than it would otherwise, the amount of water in this preparation being 50 per cent. It is said to keep a long time without becoming rancid.

PARA-MONO-CHLORO-PHENOL. See under Chlorphenol.

PARA-NITRO-PHENOL.

Colorless and odorless needles, recommended as antiseptic.

PARA-OXY-ETHYL-ACETANILID. See Phenacetin.

PARA-OXY-METHYL-ACETANILID. See Methacetin.

PARA-PHENETOL-CARBAMID. See Sucrol.

PARA-PHENYL-THIONATE OF MERCURY. See Hydrargyrol.

PARAPLASTE.

A plaster mass containing rubber, adeps lanæ, resin, and dammar resin, which has been spread upon gauze. This mass can be medicated to the extent of from 40–65 per cent.

PARATALOID. See Tuberculin.

PARA-TOLYL-DIMETHYL-PYRAZOLON. See Tolypyrin.

PARODYN. See Antipyrine.

PARTHENIN.

With inodorous crystals, of bitter taste, insoluble in cold water, easily soluble in hot water, alcohol, ether, and chloroform. Recommended as substitute for quinin, also for malaria and neuralgia. Dose, for malaria, 1 Gm. (15 gr.); for neuralgia, 0.05 Gm. (¾ gr.).

PASTA CERATA (Schleich). *Synonym:* Ceral.

A vehicle for external application of medicaments and consisting of wax, potash, and water.

PASTE, PEPTON. See Pepton-paste.

PASTE, SERUM. See Serum Paste.

PASTE, SULFURIC ACID. See Sulfuric Acid Paste.

PAUCINE.

Yellow plates, soluble in water and alcohol, insoluble in ether and chloroform.

PEDICULIN.

A preparation intended for the extermination of insects, consisting, according to "Ph. Ztg.," of 65 per cent. of limestone and 35 per cent. of crude napthalin.

PELAGIN.

A proprietary remedy for sea-sickness, said to be a solution of antipyrine, caffein, and cocain.

PELLETIERIN. (PUNICIN.) $C_8H_{15}NO$.

One of several alkaloids obtained from the root-bark of *Punica granatum*. It is a colorless liquid, soluble in 20 parts of water, readily in all proportions in alcohol and ether. With acids it unites to form crystalline salts, among which the *tannate* is most frequently employed.

HYDROBROMID. A brownish fluid, soluble in water and alcohol. Used for muscular paralysis of the eye. Dose, 0.25–0.4 Gm. (4–6 gr.).

HYDROCHLORID. A brownish salt, soluble in water. Employed as teniafuge in doses of 0.3–0.5 Gm. (4½–8 gr.).

NITRATE. A brown, deliquescent mass.

TANNATE. A yellowish, tasteless, amorphous powder, insoluble in water, soluble in 80 parts of alcohol, and readily in diluted acids. Prompt and innocuous teniacide in doses of 1.5 Gm. (23 gr.) followed by a purgative.

PELLOTIN. ($C_{13}H_{19}NO_3$).

An alkaloid prepared from the *Anhalonium williamsii*. Used as hypnotic in doses of 0.06 Gm., subcutaneously in doses of 0.02–0.04 Gm. The hydrochlorid is generally preferred to the base.

PELOSIN. See Bebeerin.

PENTAL. $(CH_3)_2C{:}CH.CH_3$. *Synonyms:* Tri-methyl-ethylene; Iso-amylene.

This hydrocarbon is prepared by distilling fusel-oil with zinc chlorid, and then treating the distillate (amylene) with concentrated sulfuric acid. Pental is a colorless liquid of sp. gr. 0.6783 (0° C.), boiling at 38° C. (100.4° F.), insoluble in water, miscible with alcohol (9 per cent.), ether, and chloroform in all proportions. Employed as anesthetic in dental surgery—10–12 Cc. being sufficient.

PENTYLENE. See Hydramyl.

PEPSIN, PLANT. See Papain.

PEPTO-MEDULLIN, PEPTO-THYROIDIN, and PEPTO-OVARIN.

These remedies are prepared by G. Maurange from bone-marrow, thyroid glands, and ovaries respectively, and contain the active constituents of the organs in peptonized form. They keep indefinitely, either dry or in form of syrupy fluids, prepared with equal parts of alcohol and glycerin. A large number of observations have shown that these preparations are fully as efficient as the fresh organs and that they are free from the undesirable side effects frequently noticed with similar preparations. A peptothyroidin wine is directed to be made as follows: One hundred Gm. of finely divided thyroid gland are digested, during 6 to 8 hours, at a temperature not exceeding 40° C. (104° F.), with 500 Cc. of water, in which 2 Gm. of pepsin and 15 Gm. of tartaric acid are dissolved. When peptonization is judged to be complete, a few drops of nitric acid are added to a small filtered sample, and should cause no precipitate. The mixture is then filtered, carefully neutralized with sodium bicarbonate, again filtered, and evaporated to a syrupy consistency at a temperature not exceeding 45° C. (113° F.), in a vacuum. To the product 7.5 liters of wine, containing at least 10 per cent. of alcohol, are added, and the solution filtered after standing a few days.

PEPTONATE OF MERCURY. See Mercury Peptonate.

PEPTON-PASTE.

Recommended as a substitute for collodion in securing gauzes or bandages to the skin, free from any irritating or contractile properties. The dried, varnish-like cuticle may be removed by washing with water.

PEREIRIN.

An alkaloid obtained from the bark of *Geissospermum lævæ*, by exhausting with boiling alcohol, evaporating to an extract, and treating the residue with soda and ether. Forms a white, amorphous powder, slightly soluble in water, readily soluble in alcohol and ether. With acids it yields crystallizable soluble salts; among those usually employed are the *hydrochlorid* and *valerianate*. Pereirin is recommended as a tonic and antifebrile, 0.5–2 Gm. (8–30 gr.) being administered about four hours before the expected attack.

PEREZON. See Pipitzahoinic Acid.

PERIPLOCIN. $C_{30}H_{46}O_{12}$.

A crystalline glucosid prepared from *Periploca græca*. It melts at 205° C., is soluble in alcohol, and insoluble in ether. In physiologic action it resembles digitalin and strophanthin.

PERONIN. $C_6H_5CH_2.O.(OH).C_{17}H_{17}NO.HCl$. (D. R. P. Merck.)

The hydrochlorid of the benzyl ether of morphin. It forms a white powder, readily soluble

in water, insoluble in alcohol. Therapeutically, the action of peronin is between that of morphin and codein (methyl ether of morphin). Used in coughs and in rheumatic and neuralgic pains, being almost free from the by-effects of morphin. Dose, ⅛–1 gr. Compare Dionin.

PEROXOLES.

Combinations of a 3 per cent. solution of hydrogen peroxid with the well-known antiseptics menthol, camphor, and napthol, known as menthoxol, camphoroxol, and napthoxol. These are used in 10 per cent. solutions as antiseptics and deodorants.

PERTUSSIN.

Stated to be a saccharated extract of thyme, used in whooping-cough.

PERU-COGNAC.

Stated to be a solution of the active constituents of balsam of Peru in cognac, the stomach-disturbing, but otherwise inert, resins being excluded. It represents 25 Gm. of balsam per liter, and is given, a tablespoonful in a glass of milk every two hours, in tuberculosis of the lungs and of the intestines.

PETROSULFOL.

The name given by a German firm to a product closely resembling ichthyol, but with a less disagreeable odor. The therapeutic claims made for it are identical with those made for ichthyol.

PHASELIN.

A proprietary surgical antiseptic and absorptive, stimulant, and digestive.

PHEDURETIN.

A phenol derivative; composition not given; tasteless white crystals, insoluble in water. Dose of 0.5–1 Gm. a powerful diuretic.

PHENACETIN.

$C_6H_4<\begin{matrix}OC_2H_5\\NH-CH_3CO\end{matrix}$. *Synonyms:* Para-acet-phenetidin; Para-acet-amido-phenetol; Para-oxyethyl-acetanilid; Phenetidin; Phenedin; Phenin. (D. R. P. Bayer.)

This compound, which chemically is closely connected with acetanilid and methacetin, is prepared as follows:

Sodium para-nitrophenol (which is prepared by the action of nitric acid on phenol and subsequent treatment of the product [para] with sodium hydrate) is ethylated by heating with ethyl bromid under pressure; this product (para-nitrophenetol) is reduced by nascent hydrogen to para-amidophenetol $\left(C_6H_4<\begin{matrix}OC_2H_5\\NH_2\end{matrix}\right)$, which, by prolonged boiling with glacial acetic acid, yields phenacetin. $C_6H_4(OC_2H_5).NH_2 + CH_3COOH = H_2O + C_6H_4(OC_2H_5)NH.CH_3CO$. This forms colorless, tasteless, inodorous, scaly crystals, melting at 135° C. (275° F.), soluble in 1500 parts of cold, and 80 parts of boiling, water, and in about 16 parts of alcohol. Employed as an antipyretic and antineuralgic in doses of 0.5–1 Gm. (8–15 gr.). Decomposed by strong alkalies or acids. Additions of acetanilid cause a lowering of the melting-point of phenacetin. If 1 Gm. of the sample of phenacetin is boiled some minutes with 100 Cc. of water, and the solution, after cooling and filtering, treated with bromin water, with even 1 per cent. of acetanilid, a turbidity is formed and crystals of brom-acetanilid separate. See "Jour. Soc. Chem. Ind.," 1895, pp. 77–852.

As test of identity for phenacetin, boil 0.2 Gm. for one minute with 2 Cc. of 25 per cent. muriatic acid, dilute with 10 Cc. of water, and add a few drops of a 3 per cent. solution of chromic acid; a ruby-red color is produced. Para-phenetidin derivatives, differing from phenacetin in that the acetyl rest is replaced by various other acid rests, are *phenocoll, lactophenin, saliphen, triphenin, apolysin, citrophen, kyrofin, phesin, amygdophenin-vanillin-phenetidin*, etc. These will be found under their respective headings.

ETHYL-PHENACETIN, $C_6H_4(OC_2H_5)N(C_2H_5)CH_3CO$, a homologue of the above methyl-compound, is prepared in like manner by the action of ethyl iodid on phenacetin-sodium. This forms a yellow colored oil, boiling at 330°–335° C. (626°–635° F.), almost insoluble in water, readily so in alcohol and ether. Possesses hypnotic properties, but to a less degree than the above methyl derivative.

FORMYL-PHENETIDIN, or PARA-OXYETHYL-FORMANILID, $C_6H_4(OC_2H_5)NH.COH$, is prepared by heating a mixture of hydrochlorid of para-phenetidin, anhydrous sodium formate, and formic acid, the reaction-product being crystallized from water. Colorless, inodorous, tasteless crystals, melting at 60° C. (140° F.), slightly soluble in cold water, readily in hot water, alcohol, and ether. Recommended as an antiseptic.

IODO-PHENIN, or IODO-PHENACETIN, $C_{20}H_{25}I_3N_2O_4$, is a derivative of phenacetin, obtained by the combination of two molecules of the latter with three molecules of iodin. Phenacetin is dissolved in glacial acetic acid, then diluted with water and hydrochloric acid; to this is added an aqueous solution of iodin in potassium iodid until no further precipitation occurs. If the operation is carried on in a hot solution, iodophenin is obtained in brown needle-like crystals, which have an odor resembling that of iodin, melting at 130°–131° C. (266°–267.8° F.), soluble in alcohol, and when mixed or heated with water iodin is liberated. This compound contains iodin (25 per cent.) in a very loose state of combination; hence it is not adapted to internal use because of its irritating properties.

LACTOPHENIN, or LACTYL-PHENETIDIN ($C_6H_4(OC_2H_5).NH.CO-CH(OH)CH_3$), is produced by the action of lactic acid on phenetidin in presence of dehydrating agents. It forms a crystalline powder of bitter taste, more soluble than phenacetin (1:500), melts at 117.5° C., and is employed as an antipyretic and sedative in doses of 0.5–1 Gm. (8–15 gr.). (D. R. P. Boehringer.)

METHYL-PHENACETIN, $C_6H_4(OC_2H_5)N(CH_3)CH_3CO$, is prepared by the action of methyl iodid on phenacetin-sodium, the latter resulting from the action of metallic sodium on a solution of phenacetin in boiling xylol. This salt forms colorless crystals, melting at 40° C. (104° F.), only slightly soluble in water, but readily so in alcohol. Employed as a hypnotic.

SEDATIN, or VALERYL-PHENETIDIN ($C_6H_4(OC_2H_5)NH.C_4H_9CO$), is obtained by the action of valeric acid on p-amido-phenetol. Recommended as an antipyretic and antineuralgic. The selection of the term "sedatin" is unfortunate, since this was formerly applied as a synonym for antipyrine.

PHENACYLIDIN. $C_6H_4(OC_2H_5)NH.CH_2CO.C_6H_5$.

A new antipyretic, recommended by Schmidt, particularly for animals. It is produced by the condensation of bromo-aceto-phenone and para-phenetidin, forming a powder insoluble in water.

PHENALGENE.

A proprietary combination containing acetanilid, sodium bicarbonate, etc. Recommended as analgesic.

PHENAMIN.

A name improperly applied to phenocoll.

PHENANTIPYRINE.

An antipyretic used for typhoid, pneumonia, and rheumatism.

PHENATOL.

Said to be a mixture of acetanilid, caffein, sodium bicarbonate, carbonate, sulfate, and chlorid. Recommended as an antipyretic and anodyne.

PHENATROCIN.

A proprietary antiseptic and analgesic.

PHENAZONE. See Antipyrine.

PHENEDIN. See Phenacetin.

PHENESOL. See Phenosal.

PHENETIDIN. See under Phenacetin.

PHENETIDYL-CROTONIC-ETHYL-ESTER.

This compound is formed by mixing molecular quantities of para-phenetidin ($C_6H_4OC_2H_5NH_2$) and aceto-acetic ester ($CH_3.CO.CH_2.CO_2C_2H_5$); the mixture becomes turbid and quite warm, with the separation of water. By recrystallization from alcohol, the substance forms glossy white, needle-like crystals, which melt at 53° C. (127.4° F.), insoluble in water, readily soluble in alcohol and ether. Nothing is known concerning the medicinal properties of this substance, as it is still in the experimental stage.

PHENETOL-CARBAMID. See Dulcin.

PHENIN. See Phenacetin.

PHENO-BROMATE.

A proprietary analgesic and antiseptic.

PHENOCOLL HYDROCHLORID. $C_6H_4<\overset{OC_2H_5}{NH.COCH_2NH_2}.HCl$. *Synonyms:* Amido-aceto-para-phenetidin-hydrochlorid; Glycocoll-para-phenetidin Hydrochlorid. (D. R. P. Schering.)

The base phenocoll is prepared by interaction between amido-acetic-acid ester and phenetidin [$C_6H_4(OC_2H_5)(NH_2)$] or by the action of chloracetylchlorid on phenetidin, and subsequent treatment of the resulting mono-chlor-acet-para-phenetidin with ammonia. This base unites with acids, forming salts. Phenocoll hydrochlorid forms colorless needles, or a crystalline powder, soluble in 16 parts of water, but the base phenocoll is precipitated upon the addition of alkalies. Because of its greater solubility and freedom from the unpleasant after-effects which sometimes accompany phenacetin, it has become quite popular. Employed as an antipyretic, antirheumatic, and antineuralgic, in doses of 0.3–1 Gm. (5–15 gr.). Has been recommended as a specific in malarial complaints, also as an antiseptic in treatment of wounds, sores, etc., either in form of powder, 5 per cent. solutions, 10–20 per cent. gauze, or ointment (10–20 per cent.). Decomposed by alkali hydrates or carbonates; also by piperazin.

PHENOCOLL CARBONATE, $[C_6H_4(OC_2H_5)NH.CO-CH_2NH_2]_2CO_3$, is a colorless, almost tasteless, crystalline powder, which is quite insoluble in water. When heated to 65° C., carbonic acid is given off. Employed like the above, but particularly adapted as an antiseptic powder.

PHENOCOLL ACETATE forms bulky, crystalline needles, which are soluble in 3 parts of water. This salt is adapted to subcutaneous injections.

SALOCOLL, or PHENOCOLL SALICYLATE, is a crystalline salt which is less soluble than the hydrochlorid, combining the medicinal effects of phenocoll with those of salicylic acid. Employed as an antipyretic and antirheumatic in doses of 1–2 Gm. (15–30 gr.).

PHENOL. (CARBOLIC ACID.)

PHENOL CAMPHOR. *Synonym:* Camphor, Phenylated.

Crystallized carbolic acid is liquefied by heat, and in this is dissolved an equal quantity of camphor; another formula directs three times the quantity of camphor; still another directs 4 parts of camphor, 12 parts of carbolic acid, and 1 part of water. This phenylated camphor is an oily, colorless liquid, which is insoluble in water, very soluble in alcohol, ether, chloroform, fatty and volatile oils. It is employed as an antiseptic, germicide, and local anesthetic (particularly in toothache).

PHENOL DI-IODID. *Synonym:* Di-iodo-phenol Iodid.

Prepared by mixing solutions of sodium phenol and iodo-potassium iodid. The precipitate formed is washed and dried. A violet-red, odorless powder, insoluble in water, soluble in alcohol and ether. Recommended as substitute for aristol.

PHENOL, MONO-BROMO. $C_6H_4Br.OH$. *Synonym:* Ortho-mono-bromo-phenol.

An oily, violet-colored liquid, of strong odor, soluble in ether, in 100 parts of water, boils at 195° C. Used as an antiseptic in 1–2 per cent. solutions or applications.

PHENOL, MONO-CHLORO. $C_6H_4Cl.OH$. (2 : 1.) *Synonym:* Ortho-mono-chloro-phenol.

Obtained by the action of chlorin on amido-phenol. It forms a colorless fluid, soluble in alcohol. Used as an antiseptic, usually with petrolatum, in skin diseases.

PHENOL, MONO-CHLORO. $C_6H_4Cl.OH$. (4 : 1.) *Synonym:* Para-mono-chloro-phenol.

This forms crystals, soluble in alkalies, ether, slightly in water, melting at 37° C., boiling at 217° C. Properties antiseptic. Used externally in syphilitic diseases of the eyes and tuberculous diseases of the throat in 5–20 per cent. solution in glycerin. In lupus it is applied heated to 40° C., using afterward a 25 per cent. ointment; after twelve hours this paste is removed and salicylated ointment substituted.

PHENOL and SODIUM RICINATE.

A yellowish fluid containing 20 per cent. synthetic carbolic acid and 80 per cent. sodium sulfo-ricinate. An antiseptic and rubifacient, used in 20 per cent. aqueous solution for painting false diphtheritic membranes, in skin diseases, etc.

PHENOL SULFO-RICINATE.

Prepared by dissolving chemically pure phenol in sulfo-ricinic acid. A yellowish liquid of ethereal odor, soluble in water and alcohol. Employed for tuberculous affections of the throat and nose, in 20–30 per cent. solutions.

PHENOLID.

Stated to be a mixture of acetanilid and sodium salicylate or sodium bicarbonate. Dose, 0.3–0.6 Gm. (5–10 gr.).

PHENOLIN. (KRESAPOL.) See under Cresol.

PHENOL-TRI-CHLORID. See Chloro-phenol (Tri).

PHENOPYRINE.

Prepared from equal parts of phenol and antipyrine. It is an oily, colorless fluid, free from odor, insoluble in cold water.

PHENOSAL.

The name given to aceto-salicylate of phenetidin. The compound forms colorless needles or plates, which have an acid taste and are only sparingly soluble in water. When administered, it is decomposed in the digestive tract, yielding 57 per cent. of phenetidin and 34 per cent. of salicylic acid. It is antipyretic in its action. See also Pyrosal.

PHENOSALYL.

Stated to be obtained by fusing together 8 Gm. of phenol, 1 Gm. of salicylic acid, and 2 Gm. of lactic acid, adding at last 0.1 Gm. of menthol.

PHENOSUCCIN. $C_6H_4(OC_2H_5)N(COCH_2)_2$. *Synonym:* Pyrantin.

A para-ethoxy-phenyl-succinimid, obtained by the action of succinic acid on para-amido-phenol. Occurs in colorless needles, which melt at 155° C. (311° F.), insoluble in cold water. Recommended as antipyretic and antineuralgic; daily dose being 1–3 Gm. (15–45 gr.). The sodium salt (sodium pheno-succinate) is to be preferred.

PHEN-OXY-CAFFEIN. $C_9H_9(OC_6H_5)N_4O_2$.

A white, crystalline powder, soluble in alcohol, melting at 142° C. Used as an anesthetic, antineuralgic, and narcotic, in doses of 0.26 Gm. (4 gr.).

PHENYL-ACETIC ACID. $C_6H_5.CH_2.COOH$. *Synonym:* Alpha-toluic Acid.

Obtained by boiling benzyl cyanid with potassium hydrate solution. Forms white, glassy scales, of burning aromatic taste, soluble in hot water and alcohol, melting at 76.5° C. (170° F.). Used in lung tuberculosis in doses of 0.05–0.15 Gm. in cod-liver oil; in typhus, in daily doses of 2–6 Gm.

PHENYL-ACRYLIC ACID. See Cinnamic Acid.

PHENYL-BORIC ACID. See Borophenylic Acid.

PHENYLCHINALDIN. $C_9H_6(C_6H_5N)$.

Prepared by the action of hydrochloric acid on a mixture of anilin, acetophenon, and aldehyd. The hydrochlorid forms colorless, easily soluble crystals. Recommended for malaria, in doses of 0.1–0.2 Gm. (1½–3 gr.).

PHENYL-DI-HYDRO-CHINAZOLINE. See Orexin.

PHENYL-DI-METHYL-PYRAZOLON. See Antipyrine.

PHENYL-ETHYLENE. See Styrol.

PHENYL-HYDRAZIN-ACETYL-ETHYL. See Acetyl-ethyl-phenylhydrazin.

PHENYL-HYDRAZIN-LÆVULINIC ACID. See Antithermin.

PHENYL-METHANE. (DIPHENYL-METHANE.) $CH_2(C_6H_5)_2$.

Phenyl methane is an incorrect trade name for di-phenyl methane. Forms crystals having the odor of orange, soluble in alcohol, ether, and chloroform, melts between 26° and 27° C. Recommended as antipyretic and analgesic. Dose, 0.5 Gm. (8 gr.) in wine.

PHENYLON. See Antipyrine.

PHENYL-PROPIONIC ACID (Beta). $C_6H_5.CH_2.CH_2.COOH$. *Synonym:* Hydro-cinnamic Acid.

Obtained by the reduction of cinnamic acid by means of sodium amalgam. It occurs in colorless crystals, slightly soluble in cold, but very soluble in hot water and alcohol. Melting-point is 47.5° C. (117.5° F.).

Hydrocinnamic acid is employed in the treatment of phthisis, the dose being 10 drops of the alcoholic solution (1 + 5).

PHENYL SALICYLATE. See Salol.

PHENYL-SALICYLIC ACID. $C_6H_3(OH)(C_6H_5)COOH$. *Synonym:* Ortho-oxydi-phenyl-carboxylic Acid.

This occurs as a white powder, only slightly soluble in water, more soluble in alcohol and glycerin. Phenyl-salicylic acid is employed as an antiseptic dusting-powder.

PHENYL-URETHANE. $C_6H_3(O.C_2H_5)(SO_3Na).NH.CO.CH_3$. See Euphorin.

PHESIN (Hoffmann, LaRoche & Co.). $C_6H_3.O.C_2H_5SO_3Na.NH.CO.CH_3$.

A sulfo-derivative of phenacetin. Used as an antipyretic. A pale reddish-brown, light, amorphous, odorless powder, having a mildly caustic and saline taste. Easily soluble in water. Dose same as phenacetin.

PHILOPAIDIA.

A proprietary diphtheria remedy.

PHLORIDZIN. $C_{21}H_{24}O_{10}.2H_2O$.

White, iridescent, or silky needles, of bitter-sweet taste, sparingly soluble in water, easily soluble in alcohol. Employed in intermittent fever. Dose, 1–10 Gm. (15–150 gr.) a day.

PHŒNIXIN. CCl_4.

Another name for Carbon-tetrachlorid, a non-inflammable liquid solvent.

PHOSOTE and TAPHOSOTE.

Combinations of creosote and phosphoric acid. Phosote is claimed to be the best form of administering creosote, being completely absorbed by the intestines. It is a syrupy, colorless liquid, almost entirely free from the odor and taste of creosote, of the specific gravity 1.20 to 1.25, and containing about 80 per cent. of creosote and 20 per cent. of phosphoric anhydrid. Its dose is a dessertspoonful daily. Taphosote is a similar liquid, of grayish color, being a compound of tannin, creosote, and phosphoric acid. It has been found very useful in treating diarrhea of tuberculosis.

PHOSPHAGON.

A proprietary elixir, containing the glycero-phosphates of the alkalies.

PHOSPHATOL.

Prepared by the action of phosphorus trichlorid on creosote in an alcoholic solution of soda. It has a composition analogous to guaiacol phosphate. A thick, reddish-yellow liquid, containing 90 per cent. of creosote, which boils at 140° C.; possesses a burning taste, and is but slightly soluble in water, however readily so in alcohol and the oils. Best administered in pill form or dissolved in wine.

PHOSPHERGOT.

Generic name given to a mixture of sodium phosphate and ergot, recommended in general debility. It appears in the following three modifications: The variety intended to be taken as a mixture (in sweetened water) contains 1.5 Gm. (23 gr.) of sodium phosphate and 1 Gm. (15 gr.) of powdered ergot; this quantity constituting a daily dose. In the case of phosphergot powder, each dose represents 0.25 Gm. (3¾ gr.) each of dried sodium phosphate and powdered ergot; and this dose is intended to be taken in the morning on an empty stomach. For pills, the following proportions are used: Dried sodium phosphate and extract of ergot, of each 2 Gm. (31 gr.); make into 20 pills. Two to four pills to be taken daily.

PHOSPHERRIN.

A mixture of ferric chlorid, phosphoric acid, and glycerin.

PHOSPHO-CEREAL.

A dietetic suitable for ingesting phosphates in vegetable form.

PHOTOXYLIN.

This is a nitrocellulose prepared by the action of nitric acid on wood-wool. When dissolved in a mixture of ether and alcohol (equal parts) a preparation very similar to collodion is obtained. A 3–5 per cent. solution of photoxylin forms a thick liquid, which leaves on evaporation a much stronger film than collodion.

PHTHISIN.

This is a preparation obtained from the substance of the bronchial gland, and is recommended in all lung affections. It is made into tablets, each of which contains 0.25 Gm. of the remedy and 0.5 Gm. of vanilla chocolate to make it palatable.

PHYLLYRIN. $C_{27}H_{34}O_{11}$.

Silvery scales, easily soluble in alcohol, sparingly soluble in water, ether, and chloroform. Recommended for intermittent fever.

PICROADONIDIN.

An amorphous powder, of bitter taste, soluble in water and alcohol. Diuretic and tonic.

PICROL. $C_6HI_2(OH)_2SO_3K$. *Synonym:* Di-iodo-resorcin-monosulfonate of Potassium.

Obtained by the action of a solution of hydriodic and iodic acids on resorcin-mono-sulfonate of potassium. It forms a colorless, inodorous, very bitter, crystalline powder, which is soluble in water, glycerin, ether, and collodion. Contains 52 per cent. of iodin, and is offered as a substitute for iodoform, its antiseptic powers being equivalent to those of corrosive sublimate.

PICROPODOPHYLLIN.

A crystalline principle obtained from the rhizome of *Podophyllum peltatum*. It is claimed to be the active principle of podophyllotoxin.

PICROPYRINE.

Prepared from picric acid and antipyrine. Yellow, readily inflammable needles. Uses not known.

PILAGENE.

A remedy for sea-sickness.

PILIN.

A 60 per cent. alcohol, stained red and perfumed, which contains benzoic acid. Used as cosmetic.

PILULÆ ROBORANTES.

Prepared from beef blood and beef juice. They contain in three pills the salts of 2 Gm. of blood and 1 Gm. of meat. They have been used with success in acute and chronic anemia and chlorosis.

PIMPINELLIN.

A bitter principle obtained from the root of *Pimpinella saxifraga* as a crystallizable, nitrogen-free substance, melting at 97° C. It has been prepared in colorless needles, melting at 106°. It dissolves in sulfuric acid with a green color, and is easily soluble in a dilute potash solution with aid of heat.

PINAPIN.

A fermented pineapple juice. Recommended in treatment of catarrh of the stomach; also in nasal catarrh; in the latter case, pinapin is applied as a spray.

PINCOLINE.

A proprietary, non-poisonous disinfectant and antiseptic.

PINOL.

The volatile oil prepared from the needles of *Pinus pumilio*.

PIPERAZIDIN. See Piperazin.

PIPERAZIN. $NH\text{-}(CH_2)_4\text{-}NH$. *Synonyms:* Diethylene-diamin; Æthylen-imin; Piperazidin; Dispermin (Spermin). (D. P. R. Schering.)

By the interaction between ethylene bromid and anilin in the presence of a solution of potassium hydrate, di-phenyl-piperazin is formed; this is converted into piperazin by subsequent treatment with nitric or sulphuric acid and distillation of the resulting product with alkalies. Piperazin forms white, deliquescent scales, which melt at 104°–107° C. (219.2–224.6° F.); boils at 145° C. (293° F.), and is very soluble in water. Because of its property of uniting with uric acid and forming a soluble compound, it is employed as a remedy in treatment of uremia, rheumatism, and gout. Dose, 1 Gm. (15 gr.), dissolved in about 1 pint of carbonated water. Sometimes given together with phenocoll, when about 1 Gm. of each is dissolved in a pint of carbonated water, and the two solutions mixed.

PIPERIDIN GUAIACOLATE. $(C_5H_{11}N.\ C_7H_8O_2)$.

Obtained by the action of piperidin on guaiacol dissolved in benzol. Crystals soluble in water, decomposed by acids or alkalies. Used in phthisis in doses of 0.4–1.5 Gm. three times daily.

PIPERIDIN URATE.

Used as uric acid solvent.

PIPERIN. $C_{17}H_{19}NO_3$.

An alkaloid which occurs in the fruits of *Piper nigrum*, *Schinus mollis*, etc. Obtained synthetically by heating solutions of piperidin and piperic acid in benzol. Forms colorless, almost tasteless, monoclinic prisms, which melt at 128°–129° C. (262.4°–264.2° F.), slightly soluble in water and soluble in 30 parts of cold alcohol. Piperin which is contaminated with resin possesses a more or less pungent taste. Employed as antiperiodic and antipyretic in doses of 0.06–0.64 Gm. (1–10 gr.).

PIPERONAL, or HELIOTROPIN. $C_6H_3(COOH)(O)CH_2$. *Synonym:* Methylene Ether of Protocatechuic Aldehyd.

Piperin is converted into potassium piperate by boiling with its equal weight of potassium hydrate and 5 parts of alcohol in a flask with inverted condenser; on cooling, the crystalline mass that separates is washed with alcohol and crystallized from boiling water. One part of potassium piperate is dissolved in 50 parts of hot water, adding slowly, in portions, an aqueous solution of 2 parts of potassium permanganate, shaking constantly; a soft mass separates, which is

strained off and washed with water until free from heliotrope odor. The mixed liquids are distilled, collecting the first distillate separately, because of the presence of the greater portion of the piperonal, which crystallizes out on exposure to cold, while from the latter and weaker distillate it is removed by agitating with ether. Piperonal forms small white crystals, soluble in alcohol and ether, insoluble in cold water. Employed as an antiseptic and antipyretic in doses of 0.5–1 Gm. (8–15 gr.). Because of its heliotrope odor it is employed largely in perfumery.

PIPEROVATIN. ($C_{16}H_{21}NO_3$).

A crystalline substance obtained from *Piperovatum*. It is insoluble in water, dilute acids, and alkalies, soluble in alcohol. Piperovatin acts as a temporary depressant of both motor and sensory nerves, and also as a heart poison. It produces a powerful stimulant effect on the spinal cord, causing a tonic spasm resembling that of strychnin. It therefore seems likely to be of service in therapeutics.

PIPITZAHOINIC ACID. *Synonyms:* Perezon; Aurum Vegetabile.

Golden-yellow, glossy scales, which are readily soluble in alcohol and ether. Used as mild drastic in doses of 0.2–0.3 Gm.

PIXOL. See under Cresol.

PLASMA NASAL.

Tablets stated to consist of the soluble sodium and potassium salts of the blood, each one containing 0.006 Gm. of menthol. When dissolved in water, the solution is used for washing the nasal cavity and throat.

PLASMINS.

Plasmatic cell fluids prepared by Buchner and Hahn from the bacilli of cholera, typhus, tuberculosis, etc. Experiments on animals as to the immunizing and remedial power of these fluids have given encouraging results.

PODOPHYLLOTOXIN.

An amorphous principle obtained from podophyllin (resin) by extraction with chloroform and precipitation with ether. Forms a white, amorphous powder, soluble in hot water, dilute alcohol, chloroform, and ether. Podophyllotoxin is the active constituent of the mandrake root and its resin (podophyllin), the latter containing 20–30 per cent. of podophyllotoxin. This principle is a very active cathartic, and should be employed with caution. Dose, 0.001–0.1 Gm. (1/60–1½ gr.).

POLIGANIN.

A yellow, transparent mass, soluble in water, alcohol, and chloroform, insoluble in ether. Used as antiasthmatic and teniafuge. Dose, 0.01–0.02 Gm. (1/6–1/3 gr.).

POLYFORMIN.

Two preparations of this name have been made, a soluble and an insoluble form. The insoluble is prepared by dissolving resorcin in aqueous formaldehyd and, without cooling, adding an excess of ammonia. The product contains a high percentage of formaldehyd and is a powerful bactericide. It is an odorless, yellowish-brown, amorphous powder, insoluble in all known solvents. Soluble polyformin has the composition of di-resorcin-hexamethylene tetramin, and occurs in colorless crystals, which are decomposed by heating in solution. It is soluble in water and alcohol, and is used externally for skin diseases, internally as diuretic and antiferment.

POLYFORMIN, INSOLUBLE. This compound, which is employed as a substitute for iodoform, results when polyatomic phenols, or such as possess a condensed benzol-nucleus, are dissolved in formaldehyd, adding subsequently an excess of ammonia without previously cooling the solution. The combinations so formed are insoluble, and are rich in formaldehyd. They possess strong antiseptic properties. If resorcin be employed, the resulting compound is odorless, of a yellow-brown color, and amorphous. To this, in particular, the name *polyformin* is applied.

POLYFORMIN, SOLUBLE, or DI-RESORCIN-HEXA-METHYLENE TETRAMIN. $(C_6H_4(OH)_2)_2(CH_2)_6N_4$. A combination of two molecules of resorcin with one molecule of hexamethylene tetramin. It occurs in the form of handsome white crystals, very soluble in water and alcohol, but insoluble in ether, benzol, or oils. The reaction must proceed in cold solutions, otherwise formaldehyd splits off and an insoluble product is obtained. Its therapeutic applications are externally in cases of skin diseases, and internally as an antiferment and diuretic.

POLYSOLFIN.

A preparation for the laundry, whose effect is stated to depend on the presence of a high percentage of sulfids and polysulfids, and is recommended for all kinds of clothes; it has been found to consist entirely of crude soda.

POLYSOLVE. See Polysolvol.

POLYSOLVOL. *Synonyms:* Solvin; Sodium or Ammonium Sulfo-ricinate.

A compound prepared by Stroink, which has the property of dissolving phenol, menthol, salicylic acid, and other substances in large quantity. It is prepared by the treatment of castor oil with strong sulfuric acid, and subsequently with a solution of sodium chlorid. The free sulfo-ricinic acid so obtained is carefully neutralized with sodium hydrate. The product is a thick, clear, light yellow liquid, which must be kept in well-closed bottles. It is insoluble in water, but forms a permanent white emulsion with it. By warming on a water-bath polysolvol dissolves 30 per cent. of dry phenol, 25 per cent. of menthol, or 10 per cent. of salicylic acid.

PORCOSAN.

A proprietary remedy used as a preventative of erysipelas.

POTASSIUM SALTS.

Only the most important of the newer preparations are enumerated.

AURO-BROMID. $AuBr_3.KBr + 2H_2O$. Forms purple-colored crystals (by transmitted light), soluble in water and alcohol, with red-brown color. Recommended as antiseptic. Subcutaneous dose, 0.008–0.012 Gm.

AURO-CYANID. $KAuCn_2$. Forms colorless, very soluble crystals, which are employed subcutaneously.

CANTHARIDATE. $C_{10}H_{14}K_2O_6 + 2H_2O$. Obtained by neutralizing cantharidin with potassium hydrate and evaporating to dryness. It forms a white, very soluble, crystalline mass, recommended by Liebreich in form of subcutaneous injections in treatment of tuberculosis (*v.* Cantharidin).

COBALTO-NITRITE. $K_6CO_7(NO_2)_{12} + 2H_2O$. Minute yellow crystals, which are slightly soluble in water, insoluble in alcohol. Employed in dyspepsia, cardiac albuminuria, etc. Dose is 0.032 Gm. (½ gr.).

DI-THIO-CARBONATE, K_2COS_2, is prepared by interaction between boiling solutions of carbon disulfid and potassium hydrate. It forms a reddish, deliquescent salt, soluble in alcohol and water. Employed in skin diseases as 5 per cent. ointment or solution.

GLYCERINO-PHOSPHATE. A white, deliquescent, vitreous mass, very soluble in water, forming a colorless, alkaline solution, which is not affected by warming, but is precipitated by lead salts and platinum chlorid. The salt contains 26–27 per cent. of phosphoric acid. Dose and uses same as the calcium salt.

IODATE. See Iodic Acid.

OSMATE forms a red, soluble, crystalline powder. It is used in combination with bromids in treatment of epilepsy, subcutaneously for neuralgia and goiter. Dose, 0.001 Gm. (1/62 gr.).

SOZOIODOL. $C_6H_2I_2(OH)SO_3K + 2H_2O$. Forms colorless prisms, which are soluble in 84 parts of water and 200 parts of alcohol. Employed in skin diseases, either as a dusting-powder (3 per cent.) diluted with talcum, or in ointments (3 per cent.).

SULFO-PHENATE (Sulfo-carbolate). $C_6H_5KSO_4 + H_2O$. Occurs as white, shining crystals, readily soluble in water. It possesses antiseptic properties, analogous therapeutically to sodium sulfophenate.

TELLURATE. K_2TeO_4. A white, crystalline salt, soluble in water. Employed in phthisis for arresting night-sweats.

POWDER, SERUM.

See Serum Powder.

PRASOID.

A solution of globularin and globularetin, of which 100 drops contain 0.135 Gm. of the former and 0.153 Gm. of the latter. It is used in acute attacks of gout and rheumatism in doses of 15–20 drops three times daily.

PRESERVALIN.

A preparation recommended for preserving meat and other foods. Consists of sodium chlorid 9.08, potassium nitrate 24.6, borax 34.6, and boric acid 32.2 per cent.

PROPION. (DI-ETHYL-KETONE.) $C_2H_5.CO.C_2H_5$.

A mobile, easily soluble liquid, given in doses of 0.5–3 Gm. (8–45 gr.) with peppermint water as hypnotic; as sedative in doses of 0.5 Gm.

PROPYLAMIN. $CH_3-CH_2-CH_2-NH_2$.

This base should not be confused with trimethylamin, $(CH_3)_3N$. Propylamin occurs in colorless crystals of strong ammoniacal odor, melting at 50° C. Recommended in doses of 2–4 Gm. a day in treatment of chorea. Best administered with a syrup of peppermint as corrigent.

PROSTADEN.

An extract of the prostate gland, administered in treatment of diseases of this gland. Dose, 2 Gm. (30 gr.) daily. See Organo-therapeutics, Addenda.

PROSTATÆ SICC.

See Glandulæ Prostatæ.

PROTALBIN-SILVER.

A silver-albumin preparation well suited to the treatment of gonorrhea because of its feeble irritant action on the mucous membranes. It is used in solutions containing 0.25–1.5 per cent. Protalbin-silver is a grayish-white powder, which dissolves in water to the extent of 10.5 per cent. at 18° C. It is not precipitated from its solution by chlorids or albumins. Glycerin, blood-serum, alkali and acid albumins, and peptone solutions are also solvents.

PROTARGOL.

A silver albumose containing 8 per cent. of metallic silver. It is a yellow powder, readily soluble in water. The solution is not affected by heat, albumin, hydrochloric acid, a weak solution of sodium chlorid, or a solution of caustic soda. Recommended for treatment of wounds and gonorrhea in ¼–2 per cent. solutions. Claimed to be absolutely non-irritating. The solution should be kept in amber vials. Experiments made concerning the applicability of protargol in eye diseases have shown that the preparation is almost entirely free from all caustic or corrosive effects. With its use all fear of using too strong solutions is unnecessary. A 5 per cent. solution, dropped into the eye, is scarcely felt; at most a slight burning sensation is noticed, which, however, is readily borne by the most sensitive children. The pain incident to its use is so insignificant that combination with anesthetics is unnecessary. For painting on with a brush, 20–25 per cent. solutions are used. Neisser lays particular stress on its non-irritant properties, which make it preferable to other silver salts for prolonged use. It also appears to penetrate deeper into the cellular tissue.

PROTECTIN.

Tissue paper coated on one side with an adhesive rubber mixture; employed in surgery.

PROTECTIO.

A remedy for diphtheria and colds.

PROTOGEN.

Protogens are albuminoid compounds which, when heated in aqueous solution, do not coagulate. Obtained by action of formaldehyd on serum or egg albumen. Used as dietetic food for children, also given subcutaneously and in form of enema. Dose, 60 Gm. twice daily as enema.

PROTOPIN.

An alkaloid obtained from *Eschholzia californica*, employed as hypnotic and analgesic. Dose, 2.5–10 Gm. (40–150 gr.).

PSEUDO-CODEIN. $C_{18}H_{21}NO_3$.

It is analogous in action to codein, but weaker.

PSEUDO-DIPHTHERIN.

A proprietary remedy for diphtheria.

PSEUDO-EPHIDRIN.

Needle-like crystals of agreeable odor, sparingly soluble in water, easily soluble in alcohol. Employed as mydriatic and has the advantage over other mydriatics of causing no inflammation or other deleterious effects. With use of a 10–12 per cent. solution mydriasis takes place in 30 to 35 minutes.

PSEUDO-HYOSCYAMIN. $C_{17}H_{23}NO_3$.

A new alkaloid recently discovered in *Duboisia myoporoides*. It occurs in yellow needles which melt at 133°–134° C. (271.4°–273° F.), sparingly soluble in water. Pseudo-hyoscyamin is employed in treatment of mania and hysteria, in subcutaneous doses of 0.0005–0.006 Gm. ($\frac{1}{120}$–$\frac{1}{10}$ gr.).

PSILOTHINUM.

A depilatory in the form of cerate, consisting of elemi balsam (40 per cent.), benzoin (10 per cent.), rosin (8 per cent.), yellow wax (10 per cent.), and diachylon plaster (30 per cent.). It is applied with a hot, flat piece of metal and allowed to cool; then removed with the hair adhering.

PULMONIN.

An extract prepared from calves' lungs, which appears in the market in tablet form. Used in lung diseases.

PULVIS CUTICULOR.

The term applied to a powder which is highly recommended as a topical application in seborrhea. It consists of a mixture of 2 parts of zinc oxid, 3 of magnesium carbonate, 3 of fullers' earth, 2 of Armenian bole, and 10 of rice starch.

PULVIS LISTERI. See Rhinolin.

PUNICIN. See Pelletierin.

PURAL.

A new disinfecting agent, which consists of powdered wood charcoal, saturated with a mixture of menthol, carbolic and benzoic acids, and compressed into cylindric form. For use a cylinder is ignited with a candle flame and laid on a suitable surface to undergo slow combustion. The odors of sickrooms are entirely removed by the use of 2 or 3 cylinders daily, and only very sensitive persons are slightly annoyed by the vapors. It is claimed that this preparation is equal to vaporized phenol in the treatment of whooping-cough.

PURO.

A new meat juice, which differs from the other meat juices of the market in that it is made by expression of the meat and is not a solution of Liebig's beef extract. It contains 21 per cent. of unchanged albumin, other meat juices containing only 0.53, 0.63, and 2.83 per cent. Puro is stated to be a thrice concentrated, sterile, natural product, much superior in keeping qualities to the ordinary juices and extracts. The composition, according to Fresenius, is, in 100 parts: water, 36.6; organic matter, 53.6; starch, 9.3; albumin, 21.3.

PYOKTANIN (Blue). $C_{24}H_{28}N_3Cl$ and $C_{25}H_{30}N_3Cl$. *Synonyms:* Pyoktaninum Cæruleum; Methyl-violet.

The methyl-violet of commerce (a dye stuff) is a mixture of the hydrochlorids of penta- and hexa-methyl-para-rosanilin, which forms a very soluble, blue, crystalline powder. Employed as an antiseptic in surgery in the same dilutions as given under yellow pyoktanin (*q. v.*). It has been employed with success in the treatment of diphtheria, in which the membranes have been painted with a warm, saturated solution. Incompatible with corrosive sublimate; also with alkalies.

PYOKTANIN (Yellow). $C_{17}H_{24}N_3OCl$. *Synonyms:* Pyoktaninum Aureum; Auramin; Imido-tetramethyl-di-p-amido-diphenyl-methane. (D. R. P. Bad. Anilinfabrik.)

Yellow pyoktanin, or auramin, is a yellow dye obtained by the interaction between tetramethyl-diamido-benzophenone, ammonium chlorid, and zinc chlorid at 150° C. It forms a bright yellow powder which is almost insoluble in cold, but very soluble in hot water, also soluble in alcohol. Auramin is employed as an antiseptic for ophthalmic purposes and in surgery in aqueous solutions (1–4 : 10,000), as an antiseptic dusting-powder (1–2 per cent.), and as ointment (2–10 per cent.). Its aqueous solutions are decomposed when heated above 70° C.

ETHYL-PYOKTANIN. According to Stilling, ethyl-pyoktanin is more active than the ordinary pyoktanin, hence is recommended in surgery and ophthalmology.

PYOKTANIN-MERCURY.

Used in gonorrhea in 1 per cent. solution; for burns it is mixed with an equal quantity of starch and dusted over the wounded parts.

PYRALOXIN. See Pyrogallol, Oxidized.

PYRAMIDON. *Synonym:* Di-methyl-amido-phenyl-dimethyl-pyrazolon. (D. R. P. Hoechst.)

A derivative of antipyrine in which an H-atom of the pyrazolon group is replaced by a dimethyl-amido group. Forms a yellowish-white, tasteless, crystalline powder, soluble in water (1 : 10). This solution gives a violet fugitive color with Fe_2Cl_6. Nitrous acid gives an evanescent violet. In the urine pyramidon is best detected by the ferric chlorid test. The action of pyramidon upon the nervous system is analogous to that of antipyrin, but is active in much smaller doses. It is much milder, more gradual, and lasting in its influence than antipyrine. Dose, 0.5–2 Gm. For consumptives and in hectic fever the dose of 0.5 Gm. should not be exceeded.

PYRANTIN. $C_6H_4(OC_2H_5)N(COCH_2)_2$. *Synonym:* Phenosuccin.

A new synthetic antipyretic, having, according to Piutti, the composition of para-ethoxy-phenylin-succinimid. Clinical experiments have shown that small doses have no effect on the heart and the respiration, and that larger doses diminish the arterial pressure. The antipyretic action is manifested partly by increased elimination of heat, partly by a diminution of the production of heat. Pyrantin is obtained in the pure state in brilliant prisms, which are sparingly soluble in water and ether, very soluble in alcohol and acetic acid, melting at 155° C. (311° F.). The sodium salt is readily soluble in water, forming a solution of sweetish taste. Daily dose, 1–3 Gm. (15–45 gr.).

PYRAZIN. See Antipyrine.

PYRAZOL. *Synonym:* Phenyl-methyl-pyrazol-carbonic Acid.

A crystalline compound of composition similar to antipyrine, but used as a diuretic in doses of 1–2 Gm. (15–30 gr.).

PYRAZOLINUM COMPOSITUM.

The name proposed for a preparation similar to migrain in composition. It is best prepared by fusing cautiously a mixture of 90 parts of antipyrine, 9 parts of caffein, and 1 part of citric acid, and reducing the mixture, after cooling, to powder.

PYRAZOLON-PARA-METHOXY- PHENYL-DIMETHYL, or PARA-METHOXY-ANTIPYRINE.

Obtained by methylating the product of the reaction between p-methoxy-phenyl-hydrazin and aceto-acetic ester. It forms crystals which melt at 82° C. (179.6° F.), and are readily soluble in water and alcohol. The *ethoxy*-compound melts at 91° C. (195.8° F.).

Both of these compounds possess antipyretic and antineuralgic properties, being weaker, however, than antipyrine.

PYRETIN.

Found by Walter to consist of a mixture of acetanilid, 58.7 parts; caffein, 6.74 parts; sodium bicarbonate, 19.5 parts; and calcium carbonate, 13.5 parts. Another analyst finds potassium bromid present. Recommended as an antipyretic.

PYRIDIN. C_5H_5N.

A liquid base which is formed by the dry distillation of nitrogenated organic substances, being found in Dippel's animal oil and coal-tar oil. Pure pyradin is a colorless liquid, of peculiar empyreumatic odor, pungent taste, boiling at 117° C. (242.6° F.); miscible with water; with acids forms salts, being the basis of several natural alkaloids. Pyridin is employed in asthma, from 3–5 Cc. being poured on a plate and placed in the room with the patient. Internally, in doses of 3 drops, it acts as a cardiac stimulant.

PYRISOL. See Pyrosal.

PYROCTIN.

A proprietary febrifuge and anodyne.

PYRODIN. See Hydracetin.

PYROFORM.

A trade name given to bismuth oxyiodid pyrogallol, which is stated to be useful in skin diseases and to be less toxic than pyrogallol.

PYROGALLOL DI-ACETATE.

A white powder, sparingly soluble in cold water, readily on addition of alkali. It is slightly toxic.

PYROGALLOL, OXIDIZED.

Pyrogallol is exposed to the action of air containing ammonia. A stable, brownish-black powder, which possesses the same medicinal properties as pyrogallol without its unpleasant side effects. Used externally in skin diseases; pyrogallol oxid, 5 Gm., adeps lanæ and vaselin, of each 25 Gm. Internally the daily dose is 0.05–0.1 Gm. Recommended by Unna as superior to ordinary pyrogallol in skin diseases, being less irritating and only slightly toxic. Employed in seborrheic eczema and pityriasis of the hairy scalp, in ointment, as follows: Lanolin, 10 parts; lime-water, 10 parts; chamomile water, 10 parts; ointment of zinc oxid, 10 parts; precipitated sulfur, 2 parts; pyraloxin, 0.4 parts.

PYROGALLOPYRINE.

Obtained by reaction between pyrogallol and antipyrine.

PYROLIGNIN.

An antipyretic.

PYROSAL and PHENOSAL.

New antipyretic compounds prepared by J. D. Riedel in Berlin. The first is a salicylacetate of antipyrine, the second the corresponding salt of phenetidin. They occur in colorless leaflets or needles, which are sparingly soluble in water and have a sour but not bitter taste. Pyrosal contains 50 per cent. of antipyrine and 37 per cent. of salicylic acid; phenosal, 57 per cent. of phenetidin and 34 per cent. of salicylic acid. Both remedies are given in doses of 0.5 Gm. (7–8 gr.), repeated two to six times daily. Pyrosal has been found valuable in polyarthritis, pleuritis, influenza, and migraine, while phenosal has been used successfully for acute articular rheumatism. No secondary effects have been noticed with either preparation.

PYROZONE.

A name given to represent absolute anhydrous H_2O_2, the active part of that which was formerly called peroxid of hydrogen; hence the 3 per cent. portion of aqua hydrogenii dioxidi, U. S. P.

The Greek word "pyr" and the word "ozone" were combined to describe the action resulting from the contact of well diffused animal organic matter, like silk or camels' hair, with the thick syrupy fluid of pure H_2O_2. After such articles are moistened with this active principle and then slightly warmed on a steam bath, they ignite and burn furiously, as substances do in oxygen, presumably producing both fire and ozone; therefore, true H_2O_2 was called pyrozone.

PYROZONE 3 PER CENT. SOLUTION is an aqueous solution of H_2O_2 of correct pharmacopœial strength. The manufacturers claim that it is more stable than ordinary products of the U. S. P. process, that it is free from barium and other earthy salts, and contains only $\frac{1}{10}$ of 1 per cent. of acidity.

PYROZONE 5 PER CENT. SOLUTION, ETHEREAL, is a surgical antiseptic and cleansing bleacher for tooth cavities prior to filling. For external use only.

PYROZONE 25 PER CENT. SOLUTION, ETHEREAL, is employed in surgery, dermatology, and dentistry as an antiseptic and caustic in a new sense of that term; it destroys pathologic cells and apparently does not destroy physiologic cells, and has been found by dentists to be a prompt bleacher for teeth discolored with organic matter. For external use only.

QUARANHEM. See Monesia.

QUEBRACHIN. $C_{21}H_{26}N_2O_3$.

One of six alkaloids found in the bark of *Aspidosperma quebracho*. Occurs in pale yellow needles, insoluble in water and but slightly soluble in alcohol and ether. With acids it forms crystalline, soluble salts, the *hydrochlorid* being most frequently employed. Used internally and subcutaneously in dyspnea. Dose, 0.05–0.1 Gm. ($\frac{3}{4}$–1$\frac{1}{2}$ gr.).

QUILLAYAIC ACID.

This substance has the property of precipitating albumin in urine, and is therefore recommended by Dr. Pachorukow for the quantitative determination of this.

QUINACETIN SULFATE. $(C_{37}H_{31}NO_3)_2H_2SO_4.H_2O$.

Antipyretic and anodyne.

QUINAPTHOL. See Chinapthol.

QUINIDIN GLYCERRHIZATE.

To an ammoniacal aqueous extract of licorice root, containing ammonium carbonate, a solution of quinidin sulfate (made acid with HCl) is added; the precipitate of quinidin glycyrrhizate is allowed to settle, washed by decantation, then collected and dried. Forms a yellowish colored powder, insoluble in water.

QUINIDIN TANNATE.

A yellowish-white powder, given in diarrhea, dyspepsia, albuminuria, nephritis, in doses of 0.1–0.8 Gm. twice daily.

QUINIMEL.

A preparation for disguising the taste of quinin.

QUININ SALTS. (Only those salts of less frequent occurrence are given.)

ARSENITE. $C_{20}H_{24}N_2O_2.H_3AsO_3 + 2H_2O$. Obtained by dissolving 34 parts of freshly precipitated quinin in a hot aqueous solution of 10 parts of arsenous acid, evaporating at 20° C. (68° F.), and crystallizing. This is a white, crystalline powder, containing 69 per cent. of quinin (theoretically), slightly soluble in cold and very soluble in hot water. Employed as antiperiodic in doses of 0.005–0.03 Gm. ($\frac{1}{12}$–$\frac{1}{2}$ gr.).

BORATE (Amorphous). Yellow insoluble powder. Used as antiseptic and antipyretic in doses of 0.5–1 Gm.

CHLORO-CARBONIC ESTER. $(CO.Cl.C_{20}H_{23}N_2O_2)$. Obtained by action of phosgene on quinin in solution. Forms colorless crystals, melting at 188° C., almost free from bitter taste. Recommended as substitute for quinin sulfate. (D. R. P. Zimmer.)

CHLOROPHOSPHATE. $C_{20}H_{24}N_2O_2.HCl.2PO_4H_3 + 3H_2O$. Occurs in colorless crystals, soluble in 2 parts of water, and containing about 50 per cent. of the alkaloid. It has been used with good success in obstinate attacks of malaria and nervous headaches.

DI-HYDROCHLORID. $C_{20}H_{24}N_2O_2.2HCl$. Prepared by dissolving 5 Gm. of quinin hydrochlorid in 5 Gm. of hydrochloric acid (1.045) and adding water to 10 Cc. Forms white needles, very soluble in water and alcohol. Recommended for hypodermic injection in treatment of whooping-cough. Dose, 2.5–3 Gm.

DI-HYDROCHLORID CARBAMATE. $(C_{20}H_{24}N_2O_2).HCl + CO(NH_2)_2HCl$. *Synonyms:*

Chininum Amido-bichloratum; Chininum Bimuriaticum Carbamidatum. This double salt is obtained by dissolving molecular quantities of quinin hydrochlorid and urea chlorid ($CO(NH_2)_2$.HCl) in boiling water and crystallizing. Forms colorless, soluble crystals, containing 70 per cent. of quinin. Especially adapted for subcutaneous use. Dose, 0.1–0.5 Gm. in 50 per cent. solution.

DI-HYDROIODATE. ($C_{20}H_{24}N_2O_2(HIO_3)_2$). A white, readily soluble powder. See under Iodic Acid.

ETHYL CARBONIC ESTER. See Euchinin.

FERRI-CHLORID. This forms dark-brown scales or reddish-brown, hygroscopic powder, soluble in water and alcohol. Recommended as hemostatic for external and internal use; externally, dusted over the bleeding surface; used in a 2 per cent. solution in uterine hemorrhage.

GLYCERO-PHOSPHATE. $C_3H_7O_3.PO_3(C_{20}H_{24}N_2O_2)_3$. Colorless needles, soluble in hot water and alcohol, possessing the medicinal properties of both quinin and glycero-phosphoric acid. Employed in neuralgia, malaria, reconvalescence, in doses of 0.1 Gm.

GUAIACOL-BISULFONATE. See Guaiaquin.

HYDRIODATE. See Iodic Acid.

HYDRO-CHLORO-PHOSPHATE. See Q. Phospho-hydrochlorid.

HYDRO-CHLOR-SULFATE. $(C_{20}H_{24}N_2O_2)_2HCl.H_2SO_4 + 3H_2O$. Quinin hydrochlorid and bisulfate are dissolved, in molecular proportions, in warm water, evaporated and crystallized. Colorless crystals, soluble in 1 part of water; recommended for subcutaneous injection.

HYDROQUINONE-HYDROCHLORID. Forms fine soluble needles. Excellent febrifuge; causes rapid reduction of temperature.

ICHTHYOL-SULFONATE. See Quinin Sulfo-ichthyolate.

IODO-HYDROIODATE. ($C_{20}H_{24}N_2O_2.I.HI$). A brown powder, insoluble in water, soluble in alcohol. Used in secondary and tertiary syphilis as follows: Alkaloid, 10 Gm.; kaolin, 2 Gm.; acacia, q. s. Make into 80 pills; take 16 to 20 pills every morning.

LACTATE. Prepared by dissolving freshly precipitated quinin in lactic acid and evaporating to dryness. Forms a white, granular powder, readily soluble. Can be given subcutaneously in solution 1:4.

PHOSPHO-HYDROCHLORID. $C_{20}H_{24}N_2O_2.HCl.2H_3PO_4.3H_2O$. Prepared by dissolving 35 Gm. of quinin hydrochlorid in warmed solution of 70 parts of phosphoric acid (1.154) and 9 parts of dilute hydrochloric acid (10 per cent.) and setting aside for crystallization. Used in nervous headache and malaria.

SALICYLATE. $C_{20}H_{24}N_2O_2.C_7H_6O_3 + H_2O$. An alcoholic solution of freshly precipitated quinin is saturated with an alcoholic solution of salicylic acid and crystallized, or 10 parts of quinin sulfate and 3⅛ parts of sodium salicylate are added to 120 parts of water and heated to boiling; on cooling, the quinin salicylate crystallizes out. Forms fine white needles, soluble in 225 parts of water. Employed as antipyretic in typhus; also used in rheumatism and gout in doses of 0.1–0.5 Gm. (1½–8 gr.).

SILICO-FLUORID. Forms small crystals, soluble in water, insoluble in alcohol. Used as antipyretic and antiseptic.

SULFO-ICHTHYOLATE. A combination having the combined properties of the components. Given in pill form.

TANNATE. Obtained by precipitating an aqueous solution of a quinin salt with tannic acid. Forms a yellowish-white amorphous powder, of a slightly bitter and astringent taste, containing 30–32 per cent. of quinin, and only very slightly soluble in water. Employed in diarrhea, whooping-cough, etc., in doses of 0.2–0.5 Gm. (3–8 gr.).

URETHANE. Professor Gaglio recommends a mixture of 2 parts of quinin hydrochlorid and 1 part of urethane for use in subcutaneous injection in place of other salts of quinin. The presence of urethane renders the solution very soluble in water. The solution is neutral in reaction and non-irritating. He recommends a mixture of 3 parts of the quinin salts, 1¼ parts of urethane, and 3 parts of distilled water.

QUINOCHLORAL.

A thick, oily liquid, of neutral reaction and very bitter taste, and soluble in aqueous and alcoholic liquids in all proportions. It is exempt from the irritating action of quinin and chloral, does not affect the action of the heart, and is used principally as a substitute for antiseptic metallic salts and phenols. Comparative experiments with corrosive sublimate and quinochloral have shown that bacteria subjected to the influence of the latter are destroyed in shorter time than those exposed to the action of corrosive sublimate. Quinochloral is given in doses of 0.05–1 Gm. (¾–15 gr.) as an internal antiseptic. In large doses it is useful as a hypnotic, particularly in delirium tremens; miscible with water and alcoholic liquids.

QUINOFORM. See Chinoform.

QUINOLIN AND DERIVATIVES. See under Chinolin.

QUINOPYRINE. *Synonym:* Chinopyrine.

A concentrated, aqueous solution of quinin hydrochlorid (50 per cent.) and antipyrine (33⅓ per cent.). Employed subcutaneously in epidemic malaria, in doses of 1 Cc. several times daily. Also used in other cases where quinin can not be administered per os on account of idiosyncrasy or other causes.

QUINORAL. See Quinochloral.

QUINOSOL.

A quinolin compound said to possess bactericidal and antiseptic properties of considerable power. It is reported to act as an antiseptic in solutions as dilute as 1 : 40,000. See also under Chinosol.

QUIONIN. ("TASTELESS QUININ.")

A mixture of chinchona alkaloids (principally cinchonidin), offered as a substitute for quinin. It occurs in granular masses coated with resin.

RENADEN.

A remedy prepared from kidneys; used in chronic nephritis. Dose, 6–8 Gm. (1½–2 drachms).

RENES.

An extract prepared from fresh and dried kidneys of the sheep or pig. Used in kidney disturbances. See Organo-therapeutics.

RENES SICCATI PULV.

The dried fresh kidneys of the sheep or swine, 6 parts of the fresh gland representing 1 part of the above powder. Used in nephritis in doses of 0.5–1 Gm. three to four times daily. See Addenda.

RESACETIN.

A salt of oxy-phenyl-acetic acid, of unknown properties.

RESALGIN. *Synonym:* Resorcylalgin.

This is obtained by the action of potassium resorcylate on antipyrine, the former being obtained by heating resorcin 1 part, and potassium bicarbonate 5 parts, together with 10 parts of water. Resalgin forms crystalline needles, which melt at 110.5° C. (231° F.), soluble in 150 parts of cold and 20 parts of boiling water, and readily soluble in alcohol, ether, and chloroform. Nothing definite is known concerning its medicinal properties and dose.

RESINOL. (UNGUENTUM RESINOL.)

A proprietary ointment, used as an antipruritic, antiseptic, local antipyretic, sedative, and skin nutrient.

RESOL.

New disinfectant obtained by saponifying 1000 parts of tar with 200 parts of caustic potash, and adding 200 parts of any indifferent substance—methylic alcohol, for instance. See under Cresol.

RESOPYRINE. $C_{11}H_{12}N_2O + C_6H_4(OH_2)$.

Obtained by reaction between antipyrine and resorcin in solution in molecular proportions. It crystallizes in fine rhombic crystals, which are insoluble in water, but soluble in 5 parts of alcohol. Nothing definite is known concerning its therapeutic properties.

RESORBIN.

This is proposed as an ointment vehicle, being prepared by emulsifying almond oil and water with yellow wax, gelatin, and soap; it is said to possess marked penetrating power, but is open to the objection that ointments prepared with it do not keep.

RESORCIN. $C_6H_4(OH_2)$. *Synonyms:* Resorcinol; Meta-dihydroxy-benzene.

This is obtained on fusing many resins (umbelliferous), or m-phenol-sulfonic acid, or m-benzene-disulfonic acid, with potash; the fused mass is acidified with hydrochloric acid and the resorcin extracted with ether. For description see U. S. P. Internally it is employed in gastritis, gastric ulcers, affections of the larynx generally. Dose, 0.2–0.5 Gm. (3–8 gr.). Externally, in diphtheria, as a resorcin glycerol (10 per cent.) for topical application; as an ointment (5–25 per cent.) in various skin diseases.

RESORCIN-CAMPHOR.

A compound of resorcin and camphor obtained by triturating both constituents together. Used in pruritus and pediculosis.

RESORCINOL.

The term "resorcinol" has been applied by chemists to resorcin, in compliance with the rules of modern chemic nomenclature. Unfortunately, the same title has been given to an amorphous, brown powder which is prepared by fusing together equal parts of resorcin and iodoform. It is recommended as an application to gangrenous sores, ulcers, chancres, etc.; diluted with starch it is used as a dusting-powder (5 per cent.); also as an ointment of 5–15 per cent. strength. It is soluble in ether and partly soluble in alcohol and water. The caustic action of the resorcin and the unpleasant odor and toxic effects of the iodoform are lost in this preparation. Resorcinol is recommended as an antiseptic.

RESORCINO-PHTHALEIN. See Fluorescein.

RESORCINOPYRINE. See Resopyrine.

RESORCIN-SALOL. See Salol.

RESORCYLALGIN. See Resalgin.

RETAMIN. $C_{15}H_{22}N_2O$.

An alkaloid obtained from the twigs and bark of *Retama sphærocarpa*. Soluble with difficulty in water and ether; more so in alcohol, petroleum, and chloroform. It is probably an oxy-spartein.

RETINOL. *Synonym:* Codol.

Obtained as a product of the destructive distillation of resin (colophony). Retinol forms a yellowish, fluorescent, oily liquid of sp. gr. 0.900, boiling between 240° and 280° C. (464°–536° F.). Employed as a solvent for various organic bodies, as iodol, aristol, camphor, cocain, codein, phenol, phosphorus, creosote, etc.

RHAMNIN.

The trade name given to fluid extract of *Rhamnus frangula*, which is recommended very highly as a laxative for children.

RHEIN. See Chrysophanic Acid.

RHEUMAGON.

"Normal osmotic, regulating nutrition and waste." A proprietary antilithic, analgesic, and sorbefacient. Dose, ½ drachm three times daily.

RHINALGIN.

A nasal suppository containing cacao-butter, 1 Gm.; alumnol, 0.01 Gm.; menthol, 0.025 Gm.; and oil of valerian, 0.025 Gm. Recommended in coryza.

RHINOLIN. (PULVIS LISTERI.)

Used as an antiseptic, analgesic, and tonic.

RHODALLIN. See Thiosinamin.

RICINE.

A white, amorphous powder, easily soluble in a 10 per cent. solution of common salt.

RIXOLIN.

A liquid resembling oil of turpentine. Consists of petroleum and oil of camphor.

ROBOLINE.

A proprietary general tonic, nerve stimulant, and digestive.

ROSBONIT.

An anticorrosive.

ROSEIN. See Fuchsin.

ROTTERIN.

Consists of: Zinc chlorid, 1.25; zinc sulfocarbolate, 1.25; salicylic acid, 0.3; boric acid, 1.0; citric acid, 0.05; thymol, 0.1; sodium chlorid, 0.12; distilled water, 1 liter. Used as an antiseptic for wounds.

ROVUSINE.

A liquid for removing grease spots from cloth, composed of benzin, 894 parts; water, 65 parts; alcohol, 35 parts; saponin, 4 parts; and essence of mirbane, 2 parts.

RUBIDIUM-AMMONIUM BROMID. ($RbBr.3NH_4Br$).

This double salt forms a yellowish-white powder of a saline taste, soluble in water, used as a sedative and hypnotic in epilepsy in daily doses of 4–6 Gm. (60–90 gr.).

RUBIDIUM IODID. RbI.

Forms colorless cubic crystals, which are readily soluble in water. Employed in the same instances where the potassium or sodium iodid is indicated, possessing the advantage of not causing gastric and other disturbances which usually result from the administration of these salts in large quantities. Dose, 0.13 Gm. (2 gr.).

RUBIDIUM TARTRATE ($RbC_4H_5O_6$) **and BROMID.** RbBr.

Form transparent soluble crystals, and, like the corresponding cesium salts, these are serviceable in cardiac palpitation of nervous origin. The dose of either is 0.18–0.30 Gm. (3–5 gr.).

RUBIN. See Fuchsin.

RUBINAT.

The name of a Spanish natural bitter water recently placed on the market. According to analysis, it contains principally sodium sulfate, with small quantities of potassium, calcium, and magnesium sulfates, sodium chlorid, and silicates of iron and aluminum.

RUBITIN.

A proprietary preparation for massage and application by friction. Said to consist of menthol, ether, camphor, soap, laurel oil, and oil of rosemary.

RUBROL.

A solution of boric acid, thymol, and a coal-tar derivative (?) in water, recommended as a gonorrheal injection.

RUMICIN. See Chrysophanic Acid.

SACCHARIN. $C_6H_4<\begin{matrix}CO\\SO_2\end{matrix}>NH$. *Synonyms:* Benzoyl-sulfonic-imid; Orthosulfaminebenzoic-anhydrid; Glusid; Glucusimid; Saccharinol; Saccharinose; Sycose; Zuckerin.

Saccharin is an intensely sweet principle prepared from toluene ($C_6H_5CH_3$) by first converting this into the mixture of mono-sulfonic acids, which, by the action of phosphorus pentachlorid, are converted into the corresponding toluene-sulfonic chlorids. By the action of ammonia the ortho compound is converted into sulfamin benzoic acid, which by oxidation yields the above imide (saccharin). The pure ortho compound forms a white, crystalline powder, which possesses 500 times the sweetening power of cane sugar; it is soluble in about 400 parts of water (15° C.), more so in alcohol and glycerin (1:30), readily soluble in water in presence of alkalies ($NaHCO_3$). Mixed with water and neutralized with sodium bicarbonate, it forms the soluble sodium salt, "soluble glucosid," or "soluble saccharin." The chief use of saccharin is as a sweetening agent in the food of diabetic patients. A syrup of saccharin may be prepared by dissolving saccharin

10 Gm., sodium bicarbonate 12 Gm., in 1000 Cc. of water. Syrup of saccharin may be employed in many mixtures where cane-sugar syrup is inadmissible. (D. R. P. Fahlberg. D. R. P. v. Heyden.)

SACCHARINOL. See Saccharin.

SACCHARINOSE. See Saccharin.

SACCHARIN-SODIUM.

Has been found to be an excellent intestinal antiseptic. It is a soluble powder containing 90 per cent. of pure saccharin. In doses of 1 Gm. (15 gr.), given once or twice daily, it diminishes considerably the number of germs usually found in the intestines, particularly those of the coli bacillus. The remedy has no injurious influence on the kidneys. Because of its intensely sweet taste it must be given in capsules.

SACCHAROL. See Saccharin.

SAFROL.

The chief constituent of oil of sassafras. Used as an anodyne in subacute rheumatism. Dose, 3–4 Gm. (45–60 gr.).

SAGRADIN.

A 20 per cent. solution of ext. of cascara (free from bitter principle) to which 2 per cent. of spirits of peppermint have been added.

SALACETOL. $C_6H_4(OH)CO.OCH_3.CO.CH_3$. *Synonyms:* Salicyl-acetol; Salantol.

A compound differing from salol in the replacement of the phenyl group (C_6H_5) by the acetone radical (CH_3–CO–CH_3); introduced as a substitute for salol in order to avoid the elimination of phenol in the organism. It is prepared by interaction between monochlor-acetone and sodium salicylate. Forms fine needle-like crystals or scales, melting at 71° C. (159.8° F.), insoluble in cold water, slightly soluble in cold alcohol, freely soluble in hot alcohol, ether, and chloroform. By action of alkalies it yields up its salicylic acid (about 71 per cent.). Salacetol is employed in all instances where salol is indicated, in doses of 2–3 Gm. (30–45 gr.).

SALACTOL.

A preparation consisting of the sodium salts of salicylic and lactic acids has been introduced under this name, and when dissolved in a 1 per cent. solution of hydrogen peroxid it is recommended as an efficient remedy for diphtheria. The solution is applied to the throat with a brush every four hours, and in the intervals the solution is used as a gargle. It is also stated to act as a prophylactic.

SALANTOL. See Salacetol.

SALAZOLON. Same as Salipyrin. See under Antipyrine.

SALBOROL.

A combination of salol and boric acid. Used as antiseptic and antirheumatic.

SALBROMALID.

A mixture of acetanilid, ammonium bromid, and salicylic acid.

SALFENE.

A proprietary combination which appears either in the form of a powder or tablets. Recommended in adult doses of 5–10 grains as an analgesic and internal antiseptic. Used in treatment of influenza and all conditions induced by exaltation of the functions of the cerebro-spinal nerve-centers, as spasms, convulsive coughs, cerebral hyperemia, malaria, etc. Dose, for children, ½–2 grains.

SALHYPNONE. $C_6H_4O(COC_6H_5)COOCH_3$.

A benzoyl-methyl-salicylic ester. It occurs in long, colorless needles, insoluble in water, sparingly soluble in alcohol and ether. It melts at 113°–114°. A mild antiseptic.

SALICAMAR. $CH_2OH.CHOH.CH_2O.C_6H_4CO.CH_2.CHOH.CH_2OH$. *Synonym:* Glycerin Ether of Glycerol Salicylic Acid.

A fluid of about the density of glycerin, which is recommended as a stomachic and antirheumatic.

SALICOL.

A solution of methyl alcohol, salicylic acid, and oil of wintergreen in water. Used as antiseptic, cosmetic.

SALICYL-ACETOL. See Salacetol.

SALICYLAMID. $C_6H_4(OH)CONH_2$.

This compound differs from salicylic acid in the replacement of the hydroxyl of the carboxyl group by the amido radicle (NH_2). Obtained by the action of concentrated ammonia on salicylic-methyl-ester (oil of wintergreen), yielding colorless, inodorous, and tasteless crystals, melting at 138° C. (280.4° F.), soluble in 250 parts of water, readily so in alcohol and ether. Salicylamid possesses the same therapeutic properties as salicylic acid, having the advantage of being tasteless, more soluble, and acting more readily in smaller doses. Dose, 0.13–0.3 Gm. (2–5 gr.).

SALICYL-ANILID. See Salifebrin.

SALICYL-CREOSOTE PASTE.

A mixture of salicylic acid, creosote, wax, and cerate, prescribed by Unna in skin diseases.

SALICYLIC-ALCOHOL. See Saligenin.

SALICYLIC ALDEHYD. ($C_6H_4.OH.CHO(1:2)$). *Synonyms:* Salicylous Acid; Ortho-oxy-benzaldehyd; Oil of Spirea.

Obtained by heating phenol, sodium hydrate, and chloroform together, and subsequent fractionation. Colorless fluid of pleasant odor, with difficulty slightly soluble in water, readily so in alcohol and ether. Used as internal antiseptic and diuretic. Dose, 0.1–0.5 Gm. several times daily.

SALICYLIC-AMID. See Salicylamid.

SALICYLIC NAPTHYLIC ESTER. See Betol.

SALICYLIC-PHENYL-ESTER. See Salol.

SALICYLIC-THYMOL-ESTER. See Salithymol.

SALICYLIDEN-PARA-PHENETIDIN. See Malakin.

SALICYLIDEN PHENETIDIN. See Malakin.

SALICYLO-ACETIC ACID. ($C_9H_8O_5$).

Forms glassy scales, difficultly soluble in cold water and ether, readily soluble in hot water and alcohol. Used as antiseptic.

SALICYLOUS ACID. See Salicylic Aldehyd.

SALICYL-PARA-PHENETIDIN. See Saliphen.

SALICYL-RESORCIN-KETONE. *Synonym:* Tri-oxy-benzophenon.

Combines the properties of salicylic acid and resorcin. Used in typhus abdominalis and in dermatologic practice. Dose, in typhus, 3–4 Gm. (45–60 gr.).

SALICYL-SULFURIC ACID. See Sulfo-salicylic Acid.

SALIFEBRIN, or SALICYLANILID.

A preparation of salicylic acid and acetanilid, in which both constituents are probably fused together and powdered. Forms a white powder, soluble in alcohol, insoluble in water. Recommended as an antineuralgic and antipyretic. No authoritative dose has been given.

SALIFORMIN. $(CH_2)_6N_4.C_6H_4(OH)COOH$. *Synonyms:* Formin Salicylate; Hexa-methylene-tetramin-salicylate; Urotropin Salicylate.

White, crystalline powder, of sour taste, soluble in water and alcohol. Possesses antiseptic properties and also exerts a solvent action on uric acid deposits. Dose, 1–2 Gm.

SALIGALLOL.

This name has been applied to the di-salicylate of pyrogallic acid, and, according to Kromayer, it is even more valuable than lenigallol. It is a resinous, solid body, soluble in 2 parts of acetone or in 15 parts of chloroform. It is recommended in the form of a solution to be applied in various kinds of skin diseases. A preparation has been placed on the market consisting of a solution of saligallol in acetone.

SALIGENIN. (SALICYLIC ALCOHOL.) $C_6H_4(OH)CH_2OH$.

An oxy-benzoyl-alcohol, obtained by the action of acids or ferments (emulsin, saliva, etc.) on salicin, a glucosid. This same reaction takes place in the human organism when salicin is taken internally, yielding, however, only 43 per cent. of saligenin. A dose of 12 Gm. (3 drachms) of salicin corresponds to about 4.2 Gm. (60½ gr.) of saligenin. It will be seen that saligenin, which constitutes the activity, is an excellent substitute for salicin in the treatment of malaria, rheumatism, typhus, etc. Saligenin crystallizes in colorless scales or needles, melting at 86° C. (186.8° F.), of a slightly bitter taste, soluble in alcohol and water. It is now prepared synthetically through the condensation of phenol with formaldehyd. Dose, 0.5–1 Gm. every hour or so.

SALINAPTHOL. See Betol.

SALIPHEN. See Saliphenin.

SALIPHENIN. $C_6H_4(OC_2H_5)NH.C_6H_4(OH)CO$. *Synonyms:* Salicyl-p-phenetidin.

Obtained by the action of salicylic acid on phenetidin in the presence of phosphorous trichlorid. Forms colorless crystals, melting at 139.5° C. (283° F.), insoluble in water, but soluble in alcohol. Its slight antifebrile action has not brought it into any favor.

SALIPYRAZOLON. Same as Salipyrin. See under Antipyrine.

SALIPYRINE, OR ANTIPYRINE SALICYLATE. ($C_{11}H_{12}N_2O.C_7H_6O_3$). *Synonyms:* Salazolon; Saliprazolon.

Obtained by interaction between antipyrine and salicylic acid; 57.7 parts of the former and 42.3 parts of the latter being heated together on a water-bath; the resulting oily-like fluid, which solidifies on cooling, is crystallized from alcohol. It occurs as a crystalline, inodorous powder, melting at 92° C. (197.6° F.), soluble in 200 parts of cold and 25 parts of boiling water, very soluble in alcohol and ether. Salipyrine exerts the combined effects of antipyrine and salicylic acid, being employed in the treatment of acute and chronic rheumatism, rheumatic sciatica, and influenza, in doses of 1–2 Gm. (15–30 gr.).

SALITANNOL. $C_{14}H_{10}O_7$.

A condensation product of salicylic and gallic acid, formed by the action of phosphorus oxychlorid. It occurs as a white, amorphous powder, insoluble in water, ether, chloroform, and benzol, slightly soluble in alcohol, soluble in solutions of caustic alkalies. It melts at 210° C., undergoing decomposition. Recommended as a surgical antiseptic because of its indifferent chemic behavior.

SALITHYMOL. $C_6H_3(CH_3)(C_3H_7)O.COC_6H_4(OH)$.

A thymol ester of salicylic acid, prepared by the action of phosphorus trichlorid on molecular quantities of sodium salicylate and thymol sodium. Salithymol forms a white, crystalline powder, of sweet taste, insoluble in water, very soluble in alcohol and ether. It is recommended as an antiseptic in same doses as salol.

SALOCOLL. See under Phenocoll.

SALOL. $C_6H_4<^{OH}_{COOC_6H_5}$. *Synonym:* Phenyl Salicylate.

This phenyl ester of salicylic acid is obtained by the action of sodium salicylate on sodium phenylate in the presence of phosphorus oxychlorid or phosgene. The reaction product is thoroughly washed with water and crystallized from alcohol. For description see U. S. P. Salol, when taken, passes unabsorbed through the stomach into the intestines, where, under the influence of alkaline secretions, it is split up into salicylic acid and phenol; to this dissociation its value as an intestinal disinfectant in case of dysentery, cholera, etc., is due. In view of this peculiarity, salol is employed for coating pills* which are intended to act only in the intestines. As an antirheumatic its dose is 1–2 Gm. (15–30 gr.); in diarrhea and intestinal troubles of children 0.13–0.19 Gm. (2–3 gr.); as an antiseptic and deodorant externally in the form of dusting-powder (1:3), being diluted with starch or talcum, ointment or collodion (4 to ether 4 and collodion 30). (D. R. P. v. Heyden and Knoll.)

Under the general title of Salols a number of esters of salicylic acid have been introduced in which the phenyl (C_6H_5) group has been replaced by other antiseptic groupings, as cresyl ($C_6H_4CH_3$), xylenyl ($C_6H_3(CH_3)_2$), guaiacol $C_6H_4(OH)CH_3$, resorcin ($C_6H_4(OH)_2$), pyrogallol ($C_6H_3(CH)_3$). These bodies split up into salicylic acid and their respective phenols (as cresol, guaiacol, resorcin, etc.).

ACETYL-TRI-BROM-SALOL. "*CORDYL.*" Crystallizes in fine, white needles, melting at 108.5° C. Insoluble in water, soluble in alcohol. Resembles tri-brom-salol in physiologic action.

DI-IODO-SALOL, $C_6H_2I_2(OH)CO_2C_6H_5$, the phenyl ester of di-iodo-salicylic acid, is obtained by the condensation of di-iodo-salicylic acid with phenol. Forms an inodorous, tasteless, crystalline powder, melting at 135° C. (275° F.); employed as an antiseptic in treatment of skin diseases. (D. R. P. Herzfeld.)

METHYL-TRI-BROM-SALOL. "*CORDEINE.*" Occurs in the form of white needles, insoluble in water, very soluble in alcohol and chloroform. Melting-point, 126°–127° C.

NITRO-SALOL, $C_6H_4(OH)CO_2.C_6H_4NO_2$, salicylic-p-nitro-phenyl-ester, is obtained by condensation of salicylic acid with p-nitrophenol. Forms a yellowish, inodorous, and tasteless crystalline powder, melting at 148° C. (298.4° F.), insoluble in water, and soluble in alcohol and ether. In the intestines it is split up into its constituents. Employed in the manufacture of salophen.

TRIBROMSALOL. ($C_6H_4(OH)COO.C_6H_2Br_3$). *Synonym:* Cardol. Long, slender, white needles; melting-point, 195° C. Insoluble in water, sparingly soluble in chloroform, acetone, and glacial acetic acid. Dose, 0.5–2 Gm. (8–30 gr.) three or four times daily. A valuable intestinal antiseptic, soluble in alkaline secretions; that is, it is decomposed into tribromphenol and salicylic acid in passing through the body. Hypnotic in 1.5–2 Gm. (23–30 gr.) doses. Also hemostatic, antispasmodic, and analgesic.

SALOL CAMPHOR is made by mixing 3 parts of salol with 2 parts of camphor, both in fine powder, fusing and filtering the product. It forms a colorless, oily liquid, insoluble in water, soluble in ether, chloroform, and the oils; by the action of light and air it undergoes decomposition. Employed locally as an antiseptic.

SALOPHEN. $C_6H_4(OH)CO_2.C_6H_4NH.COCH_3$. *Synonyms:* Acetyl-para-amido-phenyl-salicylate; Aceto-para-amido-salol.

This body was introduced as a substitute for salol in order to avoid effects resulting from the liberation of phenol in the organism, salophen being split up in the intestines into salicylic acid and acetyl-p-amidophenol. Obtained by the reduction and acetification of salicylic-p-nitrophenol (nitro salol), $C_6H_4(OH)CO_2.C_6H_4NO_2$, yielding colorless crystals melting at 187°–188° C. (368.6°–370.4° F.), insoluble in water, soluble in alcohol and ether, the alcoholic solution being colored violet by ferric chlorid. Employed as an antineuralgic and antirheumatic in doses of 1–2 Gm. (15–30 gr.). Lately recommended as a specific in influenza with nervous complications, in doses of 0.5 Gm. (8 gr.) every two hours. For children, doses of 0.25 Gm. (4 gr.) every three hours. (D. R. P. Bayer.)

SALOSANTAL.

A mixture of salol and oil of sandal-wood. It is recommended by Dr. Weber in pathologic conditions of the urinary organs, taken preferably in gelatin capsules.

SALUBRIN.

A composition manufactured in Sweden, and containing, according to Hager, 2 per cent. of anhydrous acetic acid, 25 per cent. of acetic ether, 50 per cent. of alcohol, and the remainder of distilled water. It is antiseptic, astringent, and hemostatic, and is used, diluted with water, as a gargle, and on compresses.

SALUBROL.

A bromated derivative of antipyrine (tetra-bromo-methylene-di-antipyrine), obtained by the action of bromin on methyl antipyrine. An inodorous powder which possesses strong antiseptic properties. Used, like iodoform, as an antiseptic dusting-powder. It has no injurious action on the tissues or organs. It is also a good hemostatic, and does not attack the mucous membranes. Berger recommends it strongly for treating affections of the buccal cavity and for the extraction of teeth.

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*Coblentz' "Handbook of Pharmacy."

SALUMIN (Insoluble). $(C_6H_4(OH)COO)_6Al_2 + 3H_2O$. *Synonym:* Aluminum Salicylate.

Obtained as an insoluble precipitate by interaction between solutions of a salt of aluminum and sodium salicylate. Forms a reddish-white, insoluble powder, employed as a dusting-powder in catarrhal affections of the nose and pharynx.

SALUMIN (Soluble). $(C_6H_4(ONH_4)COO)_6Al_2 + 2H_2O$. *Synonym:* Aluminum-ammonium Salicylate.

This ammoniated aluminum salicylate forms a neutral, readily soluble salt. More stable in solution than in dry condition. Used as astringent wash in dry, inflamed conditions of the throat and nasal passages.

SALUS.

A remedy for rheumatism and neuralgia.

SAMBUCIN.

An alcoholic fluid extract of the bark of *Sambucus nigra*. Used as a diuretic.

SANAL.

A surgical antiseptic.

SANATOGEN.

A new albumin preparation, made from milk casein. Its composition is stated to be sodium-casein glycerino phosphate. It is readily soluble in water, and has the advantage over other preparations of this class of having a more agreeable odor and taste. The dose is a teaspoonful, with meals, taken in warm soup, cocoa, etc. It must first be stirred up with cold water.

SANATOL. See under Creolin—Cresol.

SANGUINAL.

Prepared by defibrinating fresh blood and evaporating to an extract, in which condition it is made up into pills, each of which is said to represent 5 Cc. of fresh blood. The composition of the extract is said to be 46 parts of peptonized muscle albumin, 44 parts of blood salts, and 10 parts of oxyhemoglobin.

SANGUINO TABLETS.

This preparation is claimed to contain all iron salts, albumins, fats, and carbohydrates formed in the animal organism, in five times the quantity they are contained in the blood. The tablets are recommended for anemia, affections of the nerves and the heart, loss of appetite, scrofula, and rachitis. They are agreeable to the taste and are well borne by weak stomachs. The preparation is also offered in liquid form, as "Haemanutrid Janke," containing 70 per cent. of purified hemoglobin, 20 per cent. of glycerin, and 10 per cent. of cognac. The tablets are palatable and no after-effects are noticed. The dose for an adult is 2–4 tablets three times daily, one-quarter hour before meals. Children below twelve years of age are given 1 tablet twice a day.

SANO.

A new preparation purporting to consist of barley flour dextrinated by means of heat, and also claimed to contain a very high percentage of proteids. It is recommended as a dietetic remedy for the treatment of indigestion and anemia. Analysis does not bear out the statements made regarding its composition, but indicates the following constituents: Water, 13.7 per cent.; proteids, 12.5 per cent.; fat, 1.6 per cent.; mineral matter, 1.85 per cent.; soluble carbohydrates, 4.1 per cent.; cellulose, 1.4 per cent.; and starch, 64.9 per cent. The preparation, therefore, does not meet the requirements for the kind of remedy that it is claimed to be. The name "Sano" is easily confounded with "Sanose," another dietetic preparation.

SANOFORM. $C_6H_2\begin{cases}COOCH_3.\\OH\\I_2\end{cases}$

A di-iodo-salicylic-methyl-ester, prepared by the action of iodin on oil of wintergreen. Forms white, inodorous, tasteless needles, soluble in about 10 parts of hot alcohol, also in ether and petrolatum; melts at 110° C. Used as dessicant for wounds and substitute for iodoform. It is stated to be non-toxic, and to cause neither local nor general irritation. Has been used with success for ulcers, blennorrhea, etc. Used in powder form and as a 10 per cent. ointment.

SANOSE.

An albumin preparation, stated to consist of 80 per cent. of casein and 20 per cent. of albumose. It is a white, odorless, and tasteless powder, which readily forms emulsions with water. Used as a dietetic and tonic, preferably in form of emulsion.

SANTONINOXIM. $C_{15}H_{18}O_2.NOH$.

Santonin, 5 parts; hydroxylamin hydrochlorid, 4 parts; calcium carbonate, 4 parts; and alcohol, 50 parts, are boiled from six to seven hours in a flask with reflex condenser,* filtering and pouring into five times its volume of water, whereby santoninoxim separates. Forms white crystals, insoluble in cold water, soluble in alcohol, ether, fats, and fatty oils; melts at 216°–217° C. (420.8°–422.6° F.). Because of its comparatively non-toxic nature it is preferred to santonin as an anthelmintic; dose for children from two to three years, 0.06 Gm. (1 gr.); from four to six years, 0.09 Gm. (1½ gr.); from six to nine years, 0.13 Gm. (2 gr.), in two doses in one hour intervals, followed by a purgative.

SAPOCARPOL. See under Cresol.

SAPODERMIN.

A neutral, non-irritant, antiseptic soap, containing albuminate of mercury.

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* Coblentz' "Handbook of Pharmacy," p. 94.

SAPONAL.
A cleansing preparation, composed of 20 per cent. soap, 60 per cent. sodium carbonate crystals, sodium chlorid, etc., 2.2 per cent., and water 11 per cent.

SAPOLENTUM HYDRARGYRI.
A soft, super-fatted potash soap, which is absorbed easily and quickly by the skin. Before application the skin must be moistened with water and the hand dipped into water before rubbing.

SAPOTOXIN.
A white, amorphous powder, easily soluble in water with frothing; also soluble in alcohol and alkalies. Very poisonous.

SAPROL. See under Cresol.

SASSAFRAS GŒSIANUM. See Massoi.

SAVONAL.
A soap-base, intended as a vehicle in skin diseases.

SCILLIPICRIN.
A yellowish-white powder of bitter taste, soluble in water. Used as diuretic in doses of 0.5–3 Gm. (8–45 gr.) daily.

SCILLITOXIN.
A colorless or yellowish mass, or a cinnamon-brown powder, having a bitter taste, insoluble in water and soluble in alcohol. Employed as diuretic. The single dose is given as 0.001 Gm. ($\frac{1}{60}$ gr.), or 0.01–0.04 Gm. ($\frac{1}{6}$–$\frac{2}{3}$ gr.) daily.

SCLEROTIC ACID (Dragendorff's).
A faintly acid, yellowish, hygroscopic powder obtained from ergot; it is inodorous, tasteless, and readily soluble in water. Recommended for injection as a substitute for ergotin in epilepsy; inferior to ergot in gynecology. Dose, $\frac{1}{3}$ gr.

SCOPARIN. $C_{21}H_{22}O_{10}$.
Light yellow crystals, sparingly soluble in cold water and alcohol, easily soluble in hot water and hot alcohol. Employed as diuretic. Dose, by the mouth, 0.5–1 Gm. (8–15 gr.); subcutaneously, 0.03–0.06 Gm. ($\frac{1}{2}$–1 gr.).

SCOPOLAMIN HYDROBROMID. $C_{17}H_{21}NO_4HBr$. *Synonym:* Hyoscin Hydrobromin.
An alkaloid found in the roots of the *Scopolia atropoides*, claimed to be identical to commercial hyoscin. Occurs in hygroscopic crystals. Used as a mydriatic and sedative. Externally in ophthalmology, $\frac{1}{10}$–1 per cent. solution; subcutaneously for insane, $\frac{1}{120}$–$\frac{1}{4}$ gr. See also Hyoscin.

SCULCOPINE.
A preparation of hydrastis and skullcap, used as a local astringent.

SECALIN. See under Trimethylamin.

SECALOSE.
A carbohydrate obtained from green rye. It is soluble in water, from which it is precipitated by alcohol. Desiccated over sulfuric acid it forms a white powder which is very hygrometric. By inversion it is converted into levulose.

SEDATIN. See under Antipyrine.

SEDATIN-VALERYL-AMIDO-PHENETOL. See under Phenacetin.

SENECINE.
An elixir prepared from *Senecio jacobæa*, recommended as an emmenagogue. Not to be confused with the alkaloid of *Senecio vulgaris*.

SEPTENTRIONALIN.
An alkaloid prepared from the *Aconitum septentrionale*, recommended as an antidote in strychnia poisoning, also in treatment of tetanus and hydrophobia.

SEQUARDIN.
A sterilized testicle-fluid (Brown-Séquard).

SÉRIBÈLE, or SÉRIBÉLI.
A teniafuge, consisting of seeds and root-bark of *Connerus africanus*. Dose, 60 Gm. (2 ounces), in decoction, as tapeworm remedy.

SEROSINE. *Synonym:* Brom-anilin.
A proprietary antipyretic, aseptic, and nervine.

SERUM ANTIDIPHTHERITICUM. See Diphtheria-antitoxin.

SERUM ANTIDIPHTHERITICUM EXSICCATUM.
A serum in the form of golden-yellow needles, soluble in twice its weight of cold water. Occurs in the market in tubes containing 1 Gm., corresponding to 10 Cc. of the normal fluid serum.

SERUM ANTITOXINS (Concentrated).

These are prepared, according to O. Bujwid ("Wien. Med. Presse"), by freezing. The water separates out in form of ice crystals, and a brownish liquid remains. If the mixture is then thawed cautiously, two layers will be formed, the upper one colorless and nearly inactive, the lower one intensely yellow and of high antitoxic power. After two or three successive concentrations by freezing, a toxin is said to result that represents 1000 antitoxin units in 1–2 Cc., and retains its full strength for more than a year.

SÉRUM ANTIVENIMEUX (Dr. Calmette).

A remedy for snake-bite. Prepared from the blood of asses and horses which have been immunized against snake-poisons. The power of immunization is 1 in 10,000—*i. e.*, 0.1 Cc. is sufficient to immunize a rabbit weighing 1 kg. against a dose of 0.001 Gm. ($\frac{1}{70}$ gr.) of the dried venom of a cobra. The dose for adults is 20 Cc.; for children, 10 Cc.; in very dangerous cases the dose is doubled.

SERUM PASTE.

The freshly prepared serum from ox-blood is thoroughly mixed with 25 per cent. of zinc oxid and sterilized at 70° C. in a thermostat. When painted over denuded or diseased surfaces it dries quickly, leaving a film which is readily removed by washing with water.

SERUM POWDER.

A mixture of freshly prepared serum and zinc oxid (25 per cent.) is spread on glass plates and dried, then finely powdered and sterilized at 100° C. Recommended as an antiseptic dusting-powder, to be employed alone or mixed with iodoform.

SERUM SUBLIMATUM.

Prepared, according to Lister, by adding 1 part of corrosive sublimate to from 50 to 100 parts of serum, as nearly as possible free from blood. Used subcutaneously as antiseptic, and for impregnating bandages.

SILVER FLUORID. AgFl.

This forms a brown, glassy, hygroscopic mass, very soluble in water. Used as an antiseptic in anthrax infection.

SILVER IODATES. See Iodic Acid.

SILVER LACTATE. See Actol.

SILVER SULFO-CARBOLATE. *Synonym:* Silver sulfo-phenate.

An antiseptic, used like itrol and argonin, in eye diseases and wounds. It occurs in white, prismatic needles, containing 28 per cent. of silver. Prepared from silver carbonate and sulfo-carbolic acid. The preparation must be protected from light and air, otherwise it is liable to split up into metallic silver and phenol. It is said to possess good antiseptic properties, and to be preferable to silver nitrate, owing to its non-corrosive action.

SIMULO.

A 20 per cent. tincture of the seeds of *Capparis coreacea*, recommended, mixed with wine, for hysteria and epilepsy.

SINAPOL.

A mixture recommended as an external application for headache, neuralgia, rheumatism, etc.:

Spirit of rosemary (1 : 15),	780 Gm.
Castor oil,	120 Gm.
Menthol,	30 Gm.
Essence of mustard,	30 Gm.
Aconitin,	0.4 Gm.

SINKOLIN. See Cholin.

SIROLIN.

A name given to a preparation of beech-tar containing a very large proportion of guaiacol, which is recommended for the treatment of patients suffering from diseases of the respiratory organs. The dose for an adult is given as 1 teaspoonful three times a day.

SOCOTRINE.

A veterinary remedy for colic.

SODIUM SALTS.

Only the most important of the new salts are enumerated.

ACET-SULFANILID (*SULFANILID*). A white, crystalline, hygroscopic mass, easily soluble in water, less so in alcohol, insoluble in ether. Substitute for antipyrine; preferable because of greater solubility and consequent more rapid effect.

ACID SALICYL-SULFONATE. See Sodium Acid Sulfosalicylate.

ACID SULFO-SALICYLATE. $C_6H_3(OH)CO_2HSO_3Na$. *Synonym:* Sodium Acid Salicyl-sulfonate. Prepared by the action of sulfuric acid on salicylic acid and neutralization of the product with sodium carbonate. Colorless crystals, soluble in water. Recommended as a substitute for sodium salicylate in rheumatism.

ANISATE. $C_6H_4(OCH_3)COONa$. Anisic acid is obtained by oxidizing anethol (main constituent of anise oil) with a mixture of sulfuric acid and potassium bichromate; the sodium salt is made by neutralizing an aqueous solution of this acid with sodium carbonate, evaporating, and crystallizing. Sodium anisate forms a soluble crystalline powder, which is recommended as a substitute for sodium salicylate, being an antirheumatic and antipyretic. Dose, 0.3–1 Gm. (5–15 gr.).

ARSENO-TARTRATE. A stable, soluble arsenic salt, recommended as a substitute for potassium arsenite and arsenous acid. One Gm. equals 0.3225 Gm. arsenous acid.

AURO-CHLORID. $AuCl_3.NaCl + 2H_2O$. A double salt of gold and sodium chlorid, forming a golden-yellow, hygroscopic powder, readily soluble in water and partly in alcohol. Employed in syphilitic affections, the dose being 0.016–0.06 Gm. (¼–1 gr.).

BISMUTH CITRO-PYROBORATE. Occurs in form of glistening leaflets, soluble in water, insoluble in alcohol. Employed in dyspepsia and gastralgia.

BORATE, NEUTRAL (Bourgeois). Prepared by neutralizing a solution of boric acid with borax. A powerful and non-irritant antiseptic for surgical and ophthalmologic purposes.

BORO-BENZOATE. Consists of borax, 3 parts, and sodium benzoate, 4 parts, which are dissolved together in water and evaporated to dryness.

CACODYLATE. See Sodium Kakodylate.

CAFFEIN SULFATE. Synonyms: Sodium Caffein Sulfonate; Symphoral-sodium. Recommended as a diuretic in dropsy and obesity. Dose, 1–4 Gm. daily.

CANTHARIDINATE. Cantharidin, 0.2 Gm., and sodium hydrate, 0.3 Gm., are dissolved in 20 Cc. of distilled water with aid of heat. The solution is made up to 1000 Cc. Used by Liebreich subcutaneously for tuberculosis of the throat. Dose, 0.5 Gm. (8 minims) of the above solution, corresponding to 0.0002 Gm. (1/333 gr.).

CHLORO-BORATE is obtained by reaction between boron terchlorid and sodium hydrate. It forms a soluble, white, crystalline powder, possessing powerful antiseptic properties.

CINNAMATE. ($C_6H_5CH{=}CHCOONa$). A white, crystalline powder, soluble in water. Recommended in 5 per cent. sterilized solutions, hypodermically and internally, in treatment of tuberculosis.

CITRO-BENZOATE. A white powder, easily soluble in water, very sparingly soluble in alcohol. Used for bronchitis and asthma.

CITRO-PHOSPHATE. Synonym: Melachol. Sodium phosphate 100 parts, sodium nitrate 2 parts, and citric acid 13 parts, are rubbed up together until a homogeneous fluid results, which is then mixed with 100 parts distilled water. The solution is used for liver complaints.

CRESYLATE. An alkaline salt, which is used as antiseptic for the same purposes as cresylic acid.

DI-IODO-SALICYLATE. $[C_6H_2(OH)I_2 + COONa]_2 + 5H_2O$. Diiodosalicylic acid is obtained by the action of iodin and iodic acid on salicylic acid in alcoholic solution; the sodium salt of this acid is obtained by neutralization with sodium carbonate. This salt forms white, crystalline scales, which are soluble in 50 parts of water. Employed as an analgesic, antipyretic, and antiseptic in doses of 0.5–1 Gm. (8–15 gr.).

DIOXID. Na_2O_2. *Synonym:* Sodium Peroxid. A white powder soluble in water. Used by dentists for bleaching teeth from which the nerve-pulp has been removed; also for disinfection of the root-canals.

DI-THIO-SALICYLATE, I. and II. See Di-thio-salicylic Acid.

ETHOXY-PHENYL-SUCCINAMID. See Sodium Phenosuccinate.

ETHYLATE, $CH_3.CH_2ONa$, is formed by the action of metallic sodium upon absolute alcohol. It forms a white powder, of caustic taste, soluble in alcohol and water. Employed in treatment of psoriasis, lupus, etc., painting the parts with a 10 per cent. aqueous solution.

ETHYLSULFATE. $NaC_2H_5SO_4$. Prepared by neutralizing with sodium carbonate a mixture of absolute alcohol and concentrated sulfuric acid, decanting and concentrating the clear solution, and finally recrystallizing from alcohol. It forms plates, which are soluble in water and hot alcohol. Employed as cathartic.

FLUORID. Synonym: Fluorol. Prepared by neutralizing hydrofluoric acid with sodium carbonate or hydrate. A white, crystalline powder, without odor, and having a saline taste; soluble in water. It is employed in epilepsy, intermittent fever, and tuberculosis of children. Externally it is an excellent antiseptic in eye affections, where it is preferred to formal, silver nitrate, and corrosive sublimate. The dose in epilepsy and intermittents is 0.005–0.01 Gm. (1/12–1/6 gr.), given in a solution of sodium bicarbonate. For gargles in infectious diseases and for irrigation of the bladder in cystitis catarrhalis 0.5–1 per cent. solutions are employed. In tuberculosis of children the dose is 0.1–5 Mg. (1/600–1/12 gr.).

GLYCERO-PHOSPHATE. $C_3H_7O_3\,PO\,(ONa)_2 + H_2O$. Occurs as a clear 50 per cent. solution of light yellow color, miscible with water in all proportions. Employed in convalescence, nervous asthma, and in cases where the system needs phosphorus; also in lumbago and morbus Basedowii. Dose, 0.2–0.25 Gm. (3–4 gr.) a day, subcutaneously. In cases where it is substituted for jaborandi, when the latter is objectionable, injections of 0.3–0.5 Gm. (5–8 gr.) a day are administered on each side of the lumbar region.

GLYCOCHOLATE. ($C_{26}H_{42}NO_6\,Na$). Used to promote the secretion of gall.

GUAIACOL-CARBONATE. Synonym: Sodium Methoxysalicylate. Prepared by neutralizing guaiacol-carbonic acid with sodium carbonate free from iron in dilute alcoholic solution. A white powder soluble in water. Similar to sodium salicylate in physiologic action, but milder and free from side effects.

GYNOCARDATE. A yellowish-white powder, easily soluble in water, sparingly soluble in alcohol. Used with success for lepra. Dose, 2–4 Gm. (15–30 gr.).

HIPPURATE. Used for excess of uric acid in the system. Said to be more vigorous in its action than salicylic acid and its compounds, and without evil after-effects.

ICHTHYOL-SULFONATE. See under Ichthyol.

IODATE. See Iodic Acid.

KAKODYLATE. $As(CH_3)_2ONa$. A white, amorphous powder, soluble in water. Recommended in psoriasis in doses of 0.25 Gm. (4 gr.) daily per os, and 0.1 Gm. (1½ gr.) daily subcutaneously. Best given in solution: Sod. kakod., 1 Gm.; aquæ, 15 Gm.; dose, 15 drops three times daily.

KUSSINATE. $NaC_{31}H_{37}O_{10}$. A yellowish-white, amorphous, hygroscopic mass, of intensely bitter taste, sparingly soluble in cold water, easily soluble in hot water and alcohol. Used for tape-worms.

METHOXY-SALICYLATE. See Sodium Guaiacol-carbonate.

NAPTHOLATE. See Microcidin.

NULCEINATE. A white powder, soluble in water. Used as a diagnostic for tuberculosis, also in pneumonia and puerperal infections. Dose, 2–3 Gm. (30–45 gr.).

OSSALINATE. The sodium compound of the acid of ox-marrow, recommended as a substitute for cod-liver oil.

OXYNAPTHOLATE (ALPHA). $C_{10}H_5(OH).COONa$. A white, odorless powder, easily soluble in water, tasteless, but produces a mild burning sensation on the tongue after some time. Its action is antithermic and antiseptic.

PARA-CRESOTATE. $C_6H_3(OH)(CH_3)CO_2Na$. Prepared by heating creosol sodium with carbonic acid. Colorless and odorless crystalline powder, of bitter taste, insoluble in cold, soluble in warm water. Similar to salicylic acid in action. Recommended for acute articular rheumatism. Dose, 3–6 Gm. (45–90 gr.) daily.

PEROXID. See Sodium Dioxid.

PHENOL-SULFO-RICINATE is a solution of 4 parts of sodium ricinate in 1 part of carbolic acid. A caustic fluid recommended in treatment of diphtheria.

PHENO-SUCCINATE. The sodium salt of phenosuccin or pyrantin. It forms a white powder, readily soluble in water. It is to be preferred to phenosuccin itself from a therapeutic point of view, and may be administered in doses of 0.5–3 Gm. (7½–46 gr.) as an antipyretic and antineuralgic.

SILICO-FLUORID. $(NaF)_2SiF_4$. A white, crystalline powder, which is only very slightly soluble in water. Employed in aqueous solution (2 : 1000) as an antiseptic wash.

SOZOIODOLATE. $C_6H_2I_2(OH).SO_3Na. + 2H_2O$. *Synonym:* Sozoiodol-sodium. A fine, white, odorless crystalline powder, soluble in 13–14 parts of water and glycerin. The glycerin solution is not affected by light; the aqueous solution becomes dark. Antiseptic in 2–3 per cent. solution.

SULFANILATE. $(C_6H_4NH_2.SO_3ONa.2H_2O)$. White plates, soluble in water. Recommended for acute coryza and swelling of the nasal passages.

SULFOCAFFEATE. Since the introduction of the sulfo group decreases the medicinal potency in phenol groups, the same was tried here with success. It is bitter, crystalline, slightly soluble in cold water; non-toxic, does not irritate the stomach. Solutions containing more than 5 per cent. are not stable. Besides above, sodium, lithium, and strontium salts are prepared. A powerful diuretic. Dose, 1 Gm. in capsule. See Lymphorol.

SULFOICHTHYOLATE. $C_{22}H_{33}S_2O_6Na_2$. Prepared by neutralizing ichthyol sulfonic acid with caustic soda. A brown-black, tarry mass of bituminous odor, soluble in water, alcohol, and ether. The aqueous solution is dark brown, with greenish fluorescence; the others are deep brown. Uses the same as ichthyol.

SULFO-RICINATE. (*Solvin, Polysolve.*) By the action of concentrated sulfuric acid on the triglycerids of the fatty acids, or the fatty acids themselves, sulforicinic acid is formed; this, on neutralization with sodium hydrate, gives the above-named salt. This is a brownish, syrupy liquid, which is soluble in alcohol and water. Employed as a solvent for iodin, iodoform, etc.

SULFO-SALICYLATE. $C_6H_3(OH)<^{COOH}_{SO_3Na}$. Salicyl sulfonic acid is obtained by the action of sulfuric acid on salicylic acid; this product is then only partly neutralized with sodium carbonate, resulting in the saturation of the sulfonic-acid group only. This salt forms a white, crystalline powder, of a slightly acid and astringent taste, soluble in 25 parts of water and insoluble in alcohol and ether. Proposed as a substitute for sodium salicylate.

SULFO-THIOPHENE. Use same as the Thiophenate.

SULFO-TUMENOLATE. See Tumenol.

SULFUROSO-BENZOATE. A clear, colorless liquid, recommended as a harmless antiseptic. Used as a wash for wounds, it is said to cause more rapid healing than is the case with carbolic acid.

TAUROCHOLATE. $(C_{26}H_{44}NaNO_7S)$. Fine white crystals, soluble in water. Used to promote the secretion of gall.

TELLURATE. Used in night-sweats of consumption in doses of 0.01–0.02 Gm. twice daily. Gives off a garlic odor.

TETRABORATE. Prepared by mixing powdered borax (1.9 part) and powdered boric acid (0.6 part) with water (0.1 part) in a porcelain dish and heating on a water-bath, stirring constantly; the mass soon fuses, and on cooling is broken into pieces. Used as antiseptic instead of boric acid; usually applied locally in 16 per cent. solutions.

THIOPHENATE. $C_4H_3S.SO_3Na$. A white powder, sparingly soluble in water. Used for prurigo in form of ointment (½–1 per cent.).

THIOPHENE-SULFONATE. $C_4H_3S—SO_3Na$. Obtained by neutralizing thiophene-sulfonic acid with sodium carbonate. It is a white, crystalline powder, of unpleasant odor, soluble in water, and contains 33 per cent. of sulfur. Employed in prurigo as a 5–10 per cent. ointment.

TUMENOL-SULFONATE. See Tumenol.

SODOR.

A factory in Zürich has placed on the market steel capsules of liquid carbonic acid under the trade name "Sodor." The object of the capsules is the extemporaneous preparation of carbonated beverages, which any one may make at home in a bottle constructed for the purpose; at the moment it is closed gastight, the capsule within is opened and the carbonic acid mixed with the contents of the bottle. All kinds of liquids can thus be impregnated with carbonic acid with-

out trouble. To prepare effervescing fruit lemonades, a little fruit juice and water are mixed in a "Sodor" bottle and the contents of a capsule added.

SOLANIN. $C_{45}H_{87}NO_{15}$.

A principle which occurs in the berries, flowering tops, and fruits of various solanaceous plants. Obtained from the aqueous acidulated extract of potato-sprouts by making alkaline with ammonia and shaking with ether. Solanin occurs in colorless acicular crystals, melting at 235° C. (455° F.); bitter taste, insoluble in water, and but slightly in alcohol.

Recommended in doses of 0.01–0.06 Gm. (⅙–1 gr.) as an analgesic in neuralgia, also in bronchitis and asthma.

SOLPHINOL.

A mixture of borax, boric acid, and alkali sulfites. Used as an antiseptic.

SOLUTIO LITHANTRACIS ACETONICA.

A solution of coal-tar 10 parts, in benzole 20 parts, and acetone 77 parts. Used in treatment of skin diseases.

SOLUTOL. See under Cresol.

SOLVEOL. See under Cresol.

SOLVIN. See Sodium Sulfo-ricinate.

SOMATOSE. (D. R. P. Bayer.)

A preparation in which the albuminoids and nutritive constituents of flesh are converted into soluble albumoses, 5 parts of somatose representing 30 parts of beef in nutritive value. Forms a pale yellowish powder which is readily soluble in water, forming an almost odorless and tasteless solution.

Employed as a food for patients afflicted with weak digestion, being given 15–30 Gm. (or ½–1 ounce) in milk, cocoa, or soup.

IRON SOMATOSE, or FERRO SOMATOSE. A preparation of somatose containing about 2 per cent. of iron in organic composition. Forms a light brown, inodorous, and tasteless powder, readily soluble in warm fluids; does not attack the teeth nor constipate. Dose, 5–10 Gm. daily.

MILK SOMATOSE. A tasteless, inodorous, strength-giving food product in powder form, prepared from milk. It contains the albumoses of milk in soluble form with 5 per cent. of tannic acid organically combined. Used in chronic diseases of digestive organs such as are connected with inflammation of stomach, typhoid and typhus affections. Daily doses for children, 1–2 teaspoonfuls; adults, 2–3 tablespoonfuls.

SOMNAL. $C_7H_{13}Cl_3O_3N$.

A compound of chloral, alcohol, and urethane, forming a clear, colorless liquid of burning taste. Recommended as a hypnotic in doses of 15–30 ♏, or 1–2 Gm. (15–30 gr.).

SOZAL. $(C_6H_4(OH)SO_3)_3Al$. *Synonym:* Aluminum-para-phenol-sulfonate.

Obtained by dissolving aluminum hydroxid in para-phenol-sulfonic acid. Forms a crystalline powder, soluble in water, glycerin, and alcohol; possesses an astringent taste and a phenol-like odor. Its aqueous solution is colored violet by ferric chlorid, and precipitates albumin; soluble in excess of alcohol.

Employed in solution (1 per cent.) as a wash for tubercular ulcers and purulent affections.

SOZALBUMOSE. See Antiphthisin.

SOZOBOROL.

A mixture of aristol, sozoiodolates, and borates, used in coryza.

SOZOIODOL. See Sozoiodolic Acid.

SOZOIODOLIC ACID. $C_6H_2I_2(OH)SO_3H$. *Synonyms:* Sozoiodol; Di-iodo-para-phenol-sulfonic Acid. (D. R. P. Trommsdorff.)

This is obtained by the interaction between a solution of potassium-para-phenol-sulfonate in dilute hydrochloric acid and a solution of potassium iodid and iodate ($5KI + KIO_3$) in molecular proportions. The acid potassium salt which crystallizes out is treated with the necessary amount of sulfuric acid, whereby sozoiodol is liberated. Sozoiodol crystallizes from water in acicular prisms with 3 molecules of water; readily soluble in water, alcohol, and glycerin. Solutions of this compound give a violet-blue coloration with ferric salts. Sozoiodol is employed as an antiseptic, being usually used in 2 or 3 per cent. solutions. It is also employed as a dusting-powder, containing 5–10–20 per cent., with powdered French chalk or starch as dilutent.

LEAD SOZOIODOL. Fine needles, sparingly soluble in water. Becomes yellowish on exposure to air. Uses same as other salts of sozoiodol.

MERCURY SOZOIODOL, $C_6H_2I_2(OH)SO_3)_2Hg$, forms a lemon-yellow powder, obtained by interaction between concentrated aqueous solutions of sozoiodol sodium and mercuric nitrate. This compound is soluble in 500 parts of water, readily soluble in a solution of sodium chlorid. It is employed chiefly in the treatment of syphilis, locally and subcutaneously. The 2.5 per cent. solution, or 1 per cent. ointment or dusting-powder, is the usual strength dispensed.

POTASSIUM AND SODIUM SOZOIODOL, $C_6H_2I_2(OH)SO_3K$ (or Na) $+ 2H_2O$, are obtained by saturating the sozoiodolic acid with either potassium or sodium carbonate and crystallizing. Of these, the potassium salt is soluble in 50, and the sodium salt in 14, parts of water. The aqueous solutions of these compounds gradually darken on exposure to light. These compounds are employed in like manner to sozoiodolic acid.

SOZOIODOL-SODIUM. See Sodium Sozoiodolate.

ZINC SOZOIODOL, $(C_6H_2I_2(OH)SO_3)_2Zn + 6H_2O$, forms colorless crystals, soluble in 20 parts of water; employed in medicine, like the above.

SOZOLIC ACID. See Aseptol.

SPARTEIN. $C_{15}H_{26}N_2$.

An alkaloid which occurs with scoparin in the tops of *Spartium scoparium*. It forms a volatile, oily liquid, which boils at 288° C. (550.4° F.); unites with acids, forming stable crystalline salts.

SULFATE. $((C_{15}H_{26}N_2)_2H_2SO_4 + 4H_2O)$. Colorless, odorless, slightly hygroscopic crystals, soluble in water and alcohol. Employed as a heart-tonic, like digitalis, in doses of 0.01–0.02 Gm. (⅙–⅓ gr.).

SPASMOTIN. See Sphacelotoxin.

SPASMOTOXIN. See Spasmotin.

SPERMIN. $(CH_2)_2NH$.

A base, belonging to the class of leucomains, obtained from the seminal fluid of animals. Also found in various glands and organs of the human body. A readily soluble, crystalline substance, which is usually obtained in the form of the hydrochlorid. Spermin exerts a powerful tonic and stimulating action upon the nervous system. A 2 per cent. solution is employed subcutaneously in quantities of ½–6 Cc. (8–97 minims) once daily in treatment of nervous diseases complicated with anemia, also neurasthenia, tabes dorsalis, diabetes, syphilis, typhus, scorbutus, etc.

SPERMIN AURO-CHLORID. $C_2H_5N.HCl.AuCl_3$. Golden-yellow, brilliant plates, easily soluble in water, alcohol, and ether.

SPERMIN PHOSPHATE. $(C_2H_5N)_4H_4Ca(PO_4)_2$. White prisms, sparingly soluble in water, easily soluble in alkalies and dilute acids, insoluble in alcohol.

SPERMIN POEHL. A 2 per cent. solution of the hydrochlorid of spermin, being sterilized, is adapted for subcutaneous injection. For external use the "Essentia Spermini Poehl" is best adapted, being a 4 per cent. aromatic hydro-alcoholic solution of the spermin-sodium-chlorid. This is given in doses of 10–30 drops in an alkaline mineral water every morning.

SPHACELOTOXIN. *Synonyms:* Spasmotin; Spasmotoxin.

According to Jacoby, the specifically active constituent of ergot is a nitrogen-free resin, which he calls sphacelotoxin. It is stated to be active in very small quantities, and to have the property of combining with bases, and, under circumstances, also neutral or feebly acid bodies. Sphacelotoxin forms a yellow, amorphous powder which is readily dissolved by volatile solvents. Dose, 0.032–0.08 Gm. (½–1½ gr.).

SPHYGMOGENIN. (D. R. P. v. Heyden.)

Prepared by extracting the suprarenal capsule with water or alcohol, evaporating, and separating superfluous matter by treatment with water, alcohol, or acetone. It is said to be more efficient in increasing the blood-pressure than the dried suprarenal capsule. Used as antidote in nicotin poisoning.

SPINOL.

A liquid saccharine extract of young, fresh spinach leaves, containing about 2.6 per cent. of iron. Proposed as a substitute for the leaves in the spinach cure for children. It has an agreeable taste, and is given in anemia, chlorosis; also as tonic for convalescents in doses of 1–8 gr. several times daily.

SPINOL SICCUM. Spinol in form of a light green powder.

SPLENIN.

An organo-therapeutic preparation made from the spleen.

STENOCARPIN.

A mixture of cocain hydrochlorid, atropin sulfate, and salicylic acid.

STERESOL.

A brown, thick liquid, obtained by dissolving shellac 270 parts, gum benzoin 10 parts, balsam tolu 10 parts, phenol 100 parts, oil of cinnamon 6 parts, and saccharin 6 parts, in alcohol sufficient to make 1000 parts. Recommended as an antiseptic varnish for tubercular sores and various skin diseases.

STERIFORM (Chlorid).

According to Rosenberg, it is composed of formaldehyd, 5 parts; ammonium chlorid, 10 parts; pepsin, 20 parts; and milk-sugar, 65 parts.

STERIFORM (Iodid).

Composed of formaldehyd, 5 parts; ammonium iodid, 10 parts; pepsin, 20 parts; and milk sugar, 65 parts.

STERISOL.

According to Aufrecht, sterisol contains sugar of milk, 2.98 parts; sodium chlorid, 0.672 parts; potassium phosphate, 0.322 parts; formaldehyd, 0.520 parts; water, 95.506 parts. Used as antiseptic in infectious diseases.

STHAVARA.

An antiseptic for hypodermic treatment of hernia.

STOMATOL.

Composition is: Terpineol, 4 parts; soap, 2 parts; alcohol, 45 parts; aromatics, 2 parts; glycerin, 5 parts; water, 42 parts. Used as antiseptic.

STRONTIUM SALTS.

These salts have been recommended as preferable to the corresponding salts of sodium or potassium for the same diseases, on the ground of being better tolerated by the system. The bromid, carbonate, iodid, and lactate are most frequently used. Also—

CAFFEIN SULFONATE. *Synonym:* Symphoral Strontium. Used with success for inflammation of the kidneys.

GLYCERINO-PHOSPHATE. A white powder, soluble in water. It contains 26–27 per cent. of phosphoric acid. It is precipitated from solution on warming, also by various salts. See Glycerino-phosphoric Acid.

LORETINATE (Basic). $Sr.I.O.C_9H_4N.SO_2$. Fine, bright needles, slightly soluble in water, decomposed at 300° C.

LORETINATE (Normal). $Sr(I.OH.C_9H_4N.SO_2)_2.H_2O$. Orange-red, prismatic crystals, sparingly soluble in water.

SALICYLATE. $(Sr(C_7H_6O_3)_2)$. White crystals, sparingly soluble in water and alcohol. Recommended as the best remedy for chronic gout and rheumatism when complicated by digestive disturbances. Also recommended as a very good intestinal antiseptic instead of salol. Dose, 0.6–1 Gm. (10–15 gr.) two or three times daily.

STROPHANTHIN. $C_{30}H_{34}O_{10}$ or $C_{31}H_{46}O_{12}$(?).

The active principle (a glucosid) of the seeds of the species of *Strophanthus.* Forms a white, crystalline powder, melting at 185° C. (365° F.), soluble in 40 parts of water (18° C.), readily in alcohol. Strophanthin is employed as a substitute for digitalis, being free from all disturbing effects upon the respiratory centers and producing less gastric disturbance. Dose, 0.0002–0.0003 Gm. ($\frac{1}{300}$–$\frac{1}{200}$ gr.). Very powerful; should be used with great caution. Antidotes, aconite and veratrum viride. Commercial strophanthin is quite variable in strength, hence uncertain in effect.

STRYCHNIN.

Of late employed for chronic alcoholism. Dose, hypodermically, 0.003–0.006 Gm. ($\frac{1}{20}$–$\frac{1}{10}$ gr.).

ARSENITE. White, microcrystalline powder, of bitter taste, sparingly soluble in water. Employed as diuretic and tonic in consumption subcutaneously. Dose, 4–15 drops of a 0.5 per cent. solution in liquid paraffin oil or albolene.

HYDRID. Obtained by the action of metallic sodium on strychnin in a boiling alcoholic solution. Its physiologic action is in every respect the opposite of that of strychnin, and it may, therefore, be used as a physiologic antidote in strychnin poisoning. It resembles morphin in having a similar paralyzing action.

HYDROIODATE. $C_{21}H_{22}N_2O_2.HIO_3$. Colorless needles, soluble in water. Used as tonic; also in anesthesia and paralysis. Dose, subcutaneously, 0.001–0.006 Gm. ($\frac{1}{60}$–$\frac{1}{10}$ gr.).

SACCHARINATED. Consists of 64.6 per cent. of strychnin and 35.4 per cent. of saccharin.

STYPTICIN. See Cotarnin Hydrochlorid.

STYRACOL. (GUAIACOL CINNAMATE.) $C_6H_5.CH = CH.CO_2C_6H_4.OCH_3$.

This is the cinnamic ester of guaiacol. It is prepared by warming a mixture of guaiacol and cinnamyl chlorid in molecular proportions. This compound forms colorless needles, which melt at 130° C. (266° F.); insoluble in water, readily soluble in alcohol. Styracol is employed in catarrhal affections of the digestive organs, also in the treatment of phthisis. Dose, 1 Gm. (15 gr.).

STYROL. $C_6H_5.CH.CH_2$. *Synonyms:* Cinamol; Phenylethylene.

A transparent fluid of aromatic odor, insoluble in water, soluble in alcohol and ether.

STYRON. $C_6H_5.CH = CH.CH_2.OH$. *Synonym:* Phenyl Allyl Alcohol.

A thick, brown, oily fluid (B. P. 250° C.), which emulsifies with water. Used as antiseptic and deodorizer.

SUCCUS ANISI OZONATUS. See Manol.

SUCROL. See Dulcin.

SUGARINE.

A compound having 500 times greater sweetening power than sugar. Its composition is methyl-benzol-sulfinid, and it is prepared in the following manner: Toluol-cyan-sulfamid is boiled with water and sufficient caustic potash to effect saponification. The solution is cooled, and sulfuric acid added to precipitate the new compound. It is purified by recrystallization from dimethyl-benzol.

SULFANILIC ACID. $(C_6H_4NH_2.SO_3H.)$ *Synonym:* Para-amido-benzene-sulfonic Acid.

Recommended by Valentine in acute catarrhs in doses of 2–4 Gm. daily; best after following formula: Ac. sulfanilic, 10 Gm.; sodium bicarb., 8.5 Gm.; aqua, 200 Gm. From 40–80 Cc. to be taken in two doses.

SULFHYDRAL.

A proprietary antiseptic and antiparasitic, used in infectious and contagious diseases.

SULFINDUM ABSOLUTUM.

Absolutely pure saccharin, free from isomers. See Saccharin.

SULFONAL. See Sulphonal.

SULFO-TUMENOLIC ACID. See Tumenol.

SULFURARIA.

A sediment of the San Filippo Springs. A yellow powder, containing 32.96 per cent. of sulfur, calcium sulfid 36.55 per cent., organic substances 13.44 per cent., silica and strontium sulfate 1.07 per cent. Used in skin diseases.

SULFURIC ACID PASTE.

A caustic application composed of a mixture of equal parts of sulfuric acid and powdered saffron, the latter being employed because of the finely subdivided condition of the carbon yielded.

SULPHALDEHYD. (SULFALDEHYD.)

Prepared by treating acetaldehyd with hydrogen sulfid. An oily fluid of repulsive odor, which has been recommended as hypnotic.

SULPHAMINOL. (SULFAMINOL.) $C_6H_4<\overset{S-S}{NH}>C_6H_3OH$. *Synonym:* Thio-oxy-diphenylamin.

Obtained by boiling meta-oxy-diphenylamin with sulfur and caustic soda solution, and precipitating with a solution of ammonium chlorid. Sulphaminol forms an inodorous, pale yellow powder, melting at 155° C. (311° F.), insoluble in water, soluble in alkali solutions, alcohol, and glacial acetic acid. Employed as a substitute for iodoform; used as a deodorizing antiseptic for both internal and external use. It readily breaks up, yielding phenol and sulfur. Internally employed in cystitis, dose being 0.25 Gm. (about 4 gr.).

SULPHONAL. (SULFONAL.) $(CH_3)_2C(SO_2C_2H_5)_2$. *Synonym:* Di-ethyl-sulfon-dimethyl Methane.

Through a mixture of anhydrous ethyl-mercaptan (C_2H_5SH) and acetone (CH_3CO-CH_3), dry hydrochloric acid gas is passed, resulting in the condensation product mercaptal (di-thio-ethyl-di-methyl-methane), which on oxidation yields sulphonal. Forms colorless, permanent crystals, melting at 125°–126° C. (257°–258.8° F.); soluble in 500 parts of cold and 15 parts of boiling water, in 65 parts of cold and 2 parts of boiling alcohol.

Employed as a valuable hypnotic in doses of 1–2 Gm. (15–30 gr.).

SULPHO-PARALDEHYD. (SULFO-PARALDEHYD.) $(C_4H_4S_2)_3$. *Synonym:* Tri-thi-aldehyd.

Occurs in crystals, soluble in alcohol, insoluble in water. Recommended as hypnotic.

SULPHO-SALICYLIC ACID. (SULFO-SALICYLIC ACID.) $C_6H_3(SO_3H)(OH)COOH$. *Synonym:* Salicyl-sulfuric Acid.

This is prepared by the action of fuming sulfuric acid on salicylic acid; it forms white crystals, which are soluble in water and alcohol. Employed as a substitute for sodium salicylate in treatment of articular rheumatism. This compound is a valuable reagent for proteids, albumins, and peptones. An albumose or peptone is precipitated, but redissolves on boiling the solution, while albumin or globulin does not.

SULPHURINE.

A preparation of some of the higher sulfids of sodium and potassium with sulfur.

SULPHUR-VASOGEN.

This is a vasogen preparation recently introduced, which is claimed to have the advantage over other sulfur preparations of penetrating deeper into the skin. It is offered in semi-solid and in fluid form, and is said to have given very good results in seborrheic processes.

SUPRADIN.

A powder prepared from the suprarenal capsules, containing 0.015 per cent. of iodin.

SUPRADIN (Roche).

An extract prepared from suprarenal capsules.

SUPRARENADEN.

A preparation made from the suprarenal capsules, used in Addison's disease, menopause, neurasthenia, and diabetes insipidus. Dose, 1–1½ Gm. (15–23 gr.) daily.

SUPRARENALES SICC. PULV. See Glandulæ Suprarenales.

SYCOSE. Synonym for Saccharin.

SYMPHOROL. See Sodium Sulfocaffeate.

SYMPHOROL-LITHIUM. See Lithium Caffein Sulfonate.

SYMPHOROL-SODIUM. See Sodium Caffein Sulfate.

SYMPHOROL STRONTIUM. See Strontium Caffein Sulfonate.

SYNDETICON.

A varnish prepared by dissolving 100 parts of fish glue in 125 parts of acetic acid (glacial), mixing with a solution of 20 parts of gelatin in 125 parts of water. This solution is then mixed with 20 parts of shellac varnish (concentrated alcoholic solution of shellac).

SYRINGIN.

White needles, sparingly soluble in cold water, easily soluble in hot water and hot alcohol, insoluble in ether. Employed as febrifuge in malaria.

TAGULAWAYA.

A yellow, turbid oil, of peculiar odor, obtained from the bark of *Parameria vulneraria* by boiling with cocoanut oil. Used externally for wounds.

TAKA-DIASTASE.

A diastasic ferment obtained by the action of the spores of the fungus *Eurotium oryzal* (Taka-moyashi), on wheat bran. A yellowish-white, very hygroscopic powder, recommended in digestive disorders, particularly those resulting from deficient secretion of saliva and hyperacidity of the stomach. Dose, 0.1–0.3 Gm. (1½–5 gr.) with meals.

TAMAQUARE.

A remedy for clearing up corneal opacities.

TANGHININ. $C_{10}H_{16}$.

A principle obtained from the *Janghinia venenifera*, which is used as a substitute for strophanthin. Colorless crystals, sparingly soluble in water, readily soluble in alcohol and ether. Stated to resemble strophanthin in physiologic action.

TANNAL (Insoluble). $Al_2(OH)_4(C_{14}H_9O_9)_2 + 10H_2O$. *Synonym:* Aluminum Basic Tannate.

Formed by precipitating a solution of an aluminum salt with a solution of tannic acid in presence of an alkali. Tannal is a brownish-yellow, insoluble powder, employed as an astringent in catarrh of the respiratory organs.

TANNAL (Soluble). $Al_2(C_4H_6O_6)_2(C_{14}H_9O_9)_2 + 6H_2O$. *Synonym:* Aluminum Tannic-tartrate.

Obtained by treating insoluble tannal with tartaric acid, yielding a brownish-yellow, soluble powder, which is employed for the same purpose as the above.

TANNALBIN. (D. R. P. Knoll.)

A red-brown powder which is recommended as an excellent intestinal astringent in chronic and subacute intestinal catarrh. Dose for adults, 3–10 Gm.; for children, 0.5–1 Gm. Tannalbin, which is a compound of tannin and albumin, may be prepared as follows: To 10 parts of a 10 per cent. solution of albumin 6.5 parts of a 10 per cent. solution of tannin are added; the precipitate formed is collected on a strainer, washed, pressed, and dried at 30° C. The resulting mass is then triturated and forced through a fine sieve, and finally spread out in thin layers and dried for six hours at 120° C. This compound is only decomposed by the alkaline secretions of the intestines.

TANNALBIN (Veterinary).

A tannalbin specially prepared for veterinary use. Used as an intestinal astringent in treating diarrhea of animals. For horses, a dose of 20–24 Gm. (5–6 drachms) is recommended.

TANNIGEN. $C_{14}H_8(COCH_3)_2O_9$. *Synonym:* Diacetyl Tannin. (D. R. P. Bayer.)

An acetic ester of tannic acid, prepared by the action of acetic anhydrid on tannin dissolved in glacial acetic acid. Forms a yellowish-gray, odorless and tasteless, hygroscopic powder, insoluble in water, only slightly soluble in ether, very soluble in alcohol. Its solutions are colored blue-black by ferric chlorid and decomposed by alkalies. Tannigen is recommended in treatment of chronic diarrhea, acting as an intestinal astringent, since, owing to its insolubility, it passes through the stomach into the intestines, where in presence of the alkaline secretions it is broken up into its constituents.

TANNOFORM. $CH_2(C_{14}H_9O_9)_2$. *Synonym:* Methylen-ditannin. (D. R. P. Merck.)

A condensation product of gallo-tannic acid and formaldehyd, obtained by adding formaldehyd to an aqueous solution of tannin, then precipitating with hydrochloric acid. Tannoform forms a pale rose-colored, bulky powder, insoluble in water, soluble in alkaline solutions. Used in dermatology, for burns, decubitus, hyperidrosis; also in ozena, pruritus, hemorrhoids; internally in chronic intestinal catarrh. Internal dose, 0.25–0.5 Gm.; externally, 10 per cent. ointment, or dusting-powder with 2–4 parts of starch. Tannoforms are prepared, using in place of gallo-tannic acid other tannins; thus we have *querci-*, *quebracho-*, *rhatania*-tannoform, etc.

TANNON. $(CH_2)_6N_4.(C_{14}H_{10}O_9)_3$. *Synonym:* Tannopin.

A condensation product of tannin, 87 per cent., and hexamethylene-tetramin (urotropin), 13 per cent. It is a light-brown, tasteless, slightly hygroscopic powder, nearly insoluble in water, weak acids, alcohol, and ether, soluble in weak alkaline fluids. Recommended in acute and chronic enteritis and typhoid fever. Dose, 1 Gm. (15 gr.) three or four times daily for adults; 0.2–0.5 Gm. (3–8 gr.) for children.

TANNOPIN.

Another name for tannon, a condensation product of tannin and urotropin, which is used for intestinal catarrh.

TANNOSAL. See Creosal.

TAPHOSOTE. See Phosote.

TARTARLITHINE.

This is an effervescent salt, the lithium analogue of cream of tartar, containing none of the additional alkaline salts common to the granular effervescent preparations. It is recommended as a uric acid solvent, in place of the other salts of lithium, for gout, rheumatism, and all the manifestations of uricacidemia, and is presented in tablet form.

Dose: One or two of the 5-grain tablets, dissolved in a goblet of water, may be taken on a reasonably empty stomach four times a day.

TARTARLITHINE AND SULFUR is prepared with equal parts of tartarlithine and precipitated sulfur, compressed into 5-grain tablets. Indicated in the treatment of chronic sore throat, chronic bronchitis accompanied with copious secretion; in digestive difficulties due to

disordered action of the liver, which ultimately lead to lithemia and structural lesions, in addition to many benefits as a pulmonary or intestinal disinfectant. This combination of sulfur, probably after absorption, favors the bile-producing function of the liver, since taurocholic acid normally contains a large proportion of sulfur. It is prescribed in diseases of the nails, the scalp, and generally in superficial skin diseases.

Dose, same as tartarlithine.

TEGMIN.

A new surgical dressing, recommended particularly as a protective covering during vaccination. It is an emulsion of yellow wax, 1 part, acacia, 2 parts, and water, 3 parts.

TENIDE.

A remedy for diabetes.

TEREBENE. $C_{10}H_{16}$. *Synonym:* Tereben.

This is produced by the action of concentrated sulfuric acid upon oil of turpentine and repeated distillation for purification. It consists of a mixture of camphene, cymene, borneol, and terpilene. A pale yellowish fluid of thyme-like odor and turpentine taste, difficultly soluble in water, readily so in alcohol, ether, glacial acetic acid, and acids. Specific gravity, 0.860. Terebene is an agreeable antiseptic, disinfectant, and deodorizer, a 5 per cent. aqueous solution forming a very serviceable surgical dressing, while its vapor is inhaled in treatment of bronchial affections and pulmonary tuberculosis. Internally, in doses of 5 to 6 drops in emulsion or tablet form, it acts as an expectorant.

TEREBENE-GLYCERIN.

Prepared by mixing 7 parts of glycerin, 4 parts of terebene, and 1 part of water, and shaking the mixture thoroughly, with frequent exposure to air, until the separating glycerin remains turbid upon standing. This product is employed for purulent wounds, and applied by covering the wounds with cotton or gauze saturated with it.

TERMINALIA. See Myrobalanen.

TERPENE IODID. See Iodo-terpin.

TERPIN HYDRATE. $C_{10}H_{16}(OH)_2 + H_2O$.

A mixture of rectified turpentine oil, 4 parts, alcohol, 3 parts, and nitric acid, 1 part, is set aside in a shallow porcelain dish for several days; crystals of terpin hydrate separate, and these are recrystallized from 95 per cent. alcohol. For description, see "U. S. P.," p. 404. Employed as expectorant in bronchitis and chronic nephritis, in doses of 0.2–0.4 Gm. (3–6 gr.).

TERPINOL. $C_{20}H_{34}O$.

By the distillation of terpin hydrate with dilute sulfuric acid terpinol is obtained; this consists of a mixture of terpineol ($C_{10}H_{17}OH$), an alcohol, and three terpenes ($C_{10}H_{16}$), terpinene, terpineolene, and dipentene. Terpinol is an oily liquid, of hyacinthine odor, boiling at 168° C., sp. gr. 0.852, insoluble in water and soluble in alcohol and ether. Employed as a bronchial stimulant in doses of 0.5–1 Gm. (8–15 gr.). Terpinol is sometimes used to mask the odor of iodoform.

TERRALIN.

An ointment vehicle which is claimed to be neutral, and does not give stains like the fats. It consists of a mixture of plaster-of-Paris, kaolin, infusorial earth, lanolin, glycerin, and indifferent antiseptics.

TERROL.

A mixture of hydrocarbons of the paraffin series, obtained from the residues of the distillation of petroleum. Forms a petrolatum-like mass, which is offered as a substitute for cod-liver oil.

TERROLINE.

A name for a special brand of petroleum jelly.

TERTIARY AMYL ALCOHOL. See Amylenum Hydratum.

TESTADEN.

Prepared from the testes of the bull. Its strength is five times that of the fresh organs. Employed in affections of the spinal cord and nerves. Dose, 6–8 Gm. (90–120 gr.) daily.

TESTES SICCATI PULV.

A dry powder obtained from the testicles of the steer by evaporating and removing the fatty matter. One part of the above represents six parts of the fresh gland. Used in hysteria, hystero-epilepsy, neurasthenia, diseases of brain and spine, in doses of 1–2 Gm. daily. See Organo-therapeutics in Addenda.

TESTIDIN.

An alcoholic extract prepared from the testes of the bull.

TESTINE (Hammond's).

A sterilized extract made from the testes of the ram; used for nervous debility, impairment, etc. See Animal Extracts, also Organo-therapeutics in Addenda.

TETANUS ANTITOXIN.

An antitoxin prepared by Professors Behring and Knorr. Its method of preparation is analogous to that of diphtheria antitoxin, and it is similar to this in nature and action. It is put up in two forms—viz., as a dry powder, which is used for the treatment of developed cases of tetanus in man or animals, and as a liquid, which is employed as a prophylactic. Its degree of

efficiency is measured by antitoxic units. The dry antitoxin is designated as a hundredfold normal antitoxin—*i. e.*, 1 Gm. is sufficient to neutralize 100 Gm. of the normal poison of tetanus. It is put up in 5 Gm. vials, this quantity being theoretically sufficient to effect a cure. This quantity is dissolved in 30 Cc. of sterilized water, at 40° C., and injected hypodermically at a single dose. The liquid form is of fivefold normal strength, and is employed hypodermically in cases of wounds where there is reason to fear development of tetanus, in quantity proportionate to the condition of the patient and the length of time elapsed since the injury.

TETRA-ALLYL-AMMONIUM-ALUM. $N(C_3H_5)_4.Al_2(SO_4)_3.12H_2O$.

Prepared by evaporating to the crystallizing point equivalent quantities of tetraallylammonium sulfate and aluminum sulfate. The salt crystallizes in octahedra. Employed as uric acid solvent.

TETRA-ETHYL-AMMONIUM HYDROXID. $N(C_2H_5)_4OH$.

This forms a hygroscopic, crystalline salt, of bitter taste, and very soluble in water. Recommended as a uric acid solvent, being administered in doses of 10–15 minims of a 10 per cent. solution.

TETRA-HYDRO-BETA-NAPTHALAMIN. See Thermin.

TETRAHYDRO - METHOXY - OXY - METHYL - DIQUINOLYLIN SULFATE.

Wedge-shaped crystals of persistently bitter taste. Recommended as a substitute for quinin.

TETRA-HYDRO-PARA-CHINANISOL. See Thallin.

TETRA-IODO-ETHYLENE. C_2I_4.

An inodorous succedaneum for iodoform. It is prepared by adding calcium carbid to a solution of iodin in potassium iodid, kept at 0° C. Forms non-volatile crystals melting at 187° C.

TETRA-IODO-PHENOL-PHTHALEIN. See Nosophen.

TETRA-IODO-PYRROL. See Iodol.

TETRANTHERA LAURIFOLIA. See Maidalakri.

TETRA-THIO-DICHLOR-SALICYLIC ACID. $(S_2 = C_6H(Cl)(OH)COOH)_2$.

This is obtained by heating salicylic acid (27.6 parts) with sulfur chlorid (55 parts). It forms a reddish-yellow powder, which is soluble in aqueous solutions of the alkalies. It is employed chiefly as an antiseptic dusting-powder.

TETRONAL. $(C_2H_5)_2.C.(SO_2C_2H_5)_2$. *Synonym*: Di-ethyl-sulfon-di-ethyl-methane. (D. R. P. Bayer.)

An analogue of sulfonal and trional, differing in the possession of four ethyl groups, while the former contains two and the latter three. The method of preparation is the same as that of sulfonal, only that di-ethyl-ketone (C_2H_5–CO–C_2H_5) is employed in place of acetone. This compound forms colorless, crystalline scales, melting at 89° C. (192.2° F.); soluble in 450 parts of cold water, readily in alcohol and ether. Tetronal is employed as a hypnotic in doses of 1–2 Gm. (15–30 gr.).

TEUCRIN.

The purified extract of *Teucrium scordium* sterilized in small glass tubes. It forms a dark-brown fluid of pungent taste. Employed in treatment of tuberculous abscesses, fungous adenitis, lupus, etc., producing local active hyperemia and organic reaction that arrests development of these diseases. Dose, hypodermically, 50 minims; locally, 10 gr. as ointment with lanolin, once daily.

TFOL.

A mineral bearing this name is used by the Arabs instead of soap for washing their garments. This body has a wax-like appearance, is fatty to the touch, and varies in color according to the nature of metallic oxid which it contains, appearing red, gray, or pure white. It is found throughout entire Algeria, and, according to researches by Lahache, consists of alkali and alkaline earth silicates, calcium carbonate, fine gelatinous silica, alumina, alkali sulfates, and chlorids. Since only a small proportion of the mineral is soluble in water, it is surmised that the cleansing effect is due principally to absorption. Lahache proposes the mineral as a vehicle for an antiseptic emulsion, and directs 20 parts of tfol to be mixed with 100 parts of heavy tar oil, the mineral being previously finely powdered and moistened with water. A stable, homogeneous paste is obtained, from which the oil does not separate even on admixture with water.

THALLIN. $C_9H_{10}N(OCH_3)$. *Synonym:* Tetra-hydro-para-chinanisol.

This liquid base, a chinolin derivative, is obtained by heating a mixture of para-amido-anisol, para-nitro-anisol, glycerin, and sulfuric acid at 150° C.; from the reaction product, after being rendered alkaline, para-chinanisol is distilled off; this, on treatment with reducing agents, takes up four hydrogen atoms, forming the base thallin. This forms an oily liquid, of strongly basic properties, uniting with acids, forming salts.

ACETATE has been employed by Combemale for phthisic night-sweats, in form of pills containing 0.1 Gm. (1½ gr.) each. The daily dose is one pill, rarely two. The remedy is not given longer than four days in succession, as the effects last eight or ten days. Toxic symptoms were not noticed, but in three cases complete loss of hair resulted.

PERIODID. Synonym: Thallin Per-iodo-sulfate. A black, crystalline substance, soluble in alcohol. Recommended for cancer in pill form. Dose, 0.05 Gm. (¾ gr.).

PERIODOSULFATE. See Thallin Periodid.

SALICYLATE. Employed for similar purposes as other thallin salts.

SULFATE forms a white, crystalline powder, soluble in 7 parts of cold water, 100 parts of alcohol, and insoluble in ether; it melts at 100° C. (212° F.). Oxidizing agents, as the halogens, argentic and mercuric nitrate, ferric chlorid, etc., produce a bright green color. Internally thallin sulfate is an antipyretic in doses of 0.129–0.5 Gm. (2–8 gr.); externally, as an antiseptic injection, 1 to 2 per cent. solution.

TARTRATE is a yellowish, crystalline powder, soluble in 10 parts of cold water, almost insoluble in alcohol and ether. Employed for same purposes as the sulfate.

THANATOL. See Guæthal.

THEATRIN-JASPER.

A new ointment vehicle, consisting of wax, oil, and water, prepared by a new process not described. It is a soft, homogeneous, yellowish-white ointment, which keeps perfectly, takes up water to a fluid consistence, and penetrates deep into the skin. It is particularly suitable for cosmetics, grease paints, etc. For medicinal purposes Jasper recommends such combinations as the following: Zinc oxid, 2 parts; theatrin, 18 parts. M. f. ung. Or, iodin, 0.1 part; potassium iodid, 1 part; water sufficient for solution; theatrin, 20 parts. M. f. ung.

THEOBROMIN. $C_7H_8N_4O_2$.

An alkaloid occurring in the seeds of *Theobroma cacao* (1.5 per cent.), obtained from the pressed cacao mass by mixing with slaked lime and exhausting with 8 per cent. boiling alcohol. It is a white, crystalline powder, slightly soluble in water, alcohol, and ether. Theobromin is a homologue of caffein, differing in containing one CH_2 group less; it unites readily with alkalies, forming soluble salts (see Diuretin). Because of its insolubility, theobromin is unsuitable for use, but is employed in form of a double salt. In physiologic action it resembles caffein, being, however, free from any irritating action on the nerve centers.

SALICYLATE. $C_7H_8N_4O_2.CO_2.C_6H_4OH$. Occurs in small white needles, having an acid reaction and an agreeable bitter taste, slightly soluble in water. It is recommended as a substitute for diuretin in the same doses. The advantages claimed over the latter are that it is perfectly stable, not altered by air, moisture, or carbonic acid. (D. R. P. Merck.)

SODIUM IODID. *Synonym:* Iodo-theobromin. A white powder, soluble in water, decomposed by hot water. Used to increase arterial pressure; also as diuretic. Dose, 0.5 Gm. (8 gr.).

THEOBROMIN-LITHIUM-SALICYLATE. See Uropherin.

THEOLIN.

A substitute for benzin.

THERMIN. $C_{10}H_{11}.NH_2HCl$. *Synonym:* Tetra-hydro-beta-napthylamin-hydrochlorid.

Obtained by the action of metallic sodium on a solution of beta-napthylamin in amyl alcohol. Thermin is a colorless liquid which, with hydrochloric acid, forms colorless, soluble crystals, which melt at 237° C. (458.6° F.). Recommended by Filehne as a mydriatic; further, nothing definite is known concerning this substance.

THERMODIN. $C_6H_4(OC_2H_5)N(COCH_3)COOC_2H_5$. *Synonym:* Acetyl-para-ethoxy-phenyl-urethane. (D. R. P. Merck.)

This derivative of urethane was introduced to replace neurodin, which is too powerful and rapid in its effects. Thermodin is a white, crystalline powder, melts at 86°–88° C. (186.8°–190.4° F.), and is almost insoluble in cold water. Recommended as a mild antipyretic, free from any unpleasant effects; given in doses of 0.32–1 Gm. (5–15 gr.).

THERMOTAXINE.

A proprietary analgesic and antipyretic.

THIALDIN. $NH(CHCH_3.S)_2CHCH_3$.

Prepared by action of sulfuretted hydrogen on aldehyd ammonia, forming volatile crystals, sparingly soluble in water, easily soluble in alcohol, ether, and acids. Used as heart stimulant.

THILANIN.

This is a sulfurated lanolin, obtained by heating lanolin with sulfur at 230° C., and subsequently washing. It forms a brown, unctuous mass, which contains about 3 per cent. of sulfur. Thilanin is employed as an application in various skin diseases.

THIOCAMPH.

Prepared by treatment of camphor with sulfurous acid. A yellowish-green liquid, used as disinfectant.

THIOCOL.

The potassium salt of guaiacol-sulfonic acid. It contains about 60 per cent. of guaiacol, and is in the form of a fine, white powder, which has a taste at first bitter, then sweetish. As advantages over other remedies may be mentioned: Entire freedom from odor, great solubility in water, ready absorption and freedom from irritant action on the mucous membranes. It is claimed that these properties make it applicable for the most sensitive patients. Daily doses of from 10–15 Gm. (150–225 gr.) may be continued for a considerable time without disadvantage, which is of the greatest importance in the creosote treatment. It causes no nausea or diarrhea.

THIO-DINAPTHYL OXID.

An orange-colored powder, insoluble in water and cold alcohol, easily soluble in hot alcohol, ether, acetone, and chloroform. Employed in dermatology.

THIOFORM. See Dithiosalicylic Acids.

THIOL. A basic di-thio-salicylate of bismuth. (D. R. P. Riedel.)

A synthetic product of hydrocarbons obtained in a similar manner to ichthyol. The tarry oils obtained by the destructive distillation of peat are heated with sulfur at high temperature; the unsaturated hydrocarbons which unite with the sulfur are removed, and by the action of sulfuric acid at a low temperature converted into a sulfonated compound called thiol, which is then purified by washing and dialysis, and evaporated (in vacuo) to an extractive consistence (thiolum liquidum) or to dryness (thiolum siccum). Thiol forms either a brownish-black, thick liquid (containing about 25 per cent. of dry residue) or a brownish-black powder, which is soluble in water and alcohol. It is precipitated from its aqueous solutions by mineral acids, metallic salts, or alkali earths. Thiol is employed in the treatment of various skin diseases, its discoverers recommending it as a substitute for ichthyol. As an ointment the strength usually employed is 10–50 per cent. The dry thiol, which is about 2½ times the strength of the liquid, when mixed with starch is used as a dusting-powder. Internal dose is 0.13–0.6 Gm. (2–10 gr.).

GLYCERINATED. A remedy for chilblain, consisting of equal parts of liquid thiol and glycerin.

THIOLIN. See Thiolinic Acid.

THIOLINIC ACID. *Synonym:* Thiolin.

This is prepared by boiling together linseed oil (6 parts) and sulfur (1 part); the sulfurated linseed oil which is thereby formed is warmed with sulfuric acid until solution takes place; the oily product is poured into water and washed to remove the sulfuric and sulfurous acids. Thiolinic acid forms a dark-green mass, of extract-like consistency, and a peculiar mustard-like odor; insoluble in water, but soluble in alcohol, it contains about 15 per cent. of sulfur. The sodium salt, which constitutes a soluble powder, is preferred to the above. The medicinal properties of thiolin are similar to those of thiol and ichthyol.

THIO-OXY-DIPHENYLAMIN. See Sulphaminol.

THIOPHEN DI-IODID. $C_4H_2I_2S$.

Obtained by the action of iodin and iodic acid on thiophen. Forms crystalline plates, insoluble in water, very soluble in chloroform, ether, and warm alcohol, melting at 40.5° C. (104.9° F.), containing 75.5 per cent. of iodin and 9.5 per cent. of sulfur. Thiophen di-iodid is employed externally as a powder and gauze in all instances where iodoform might be applied.

THIORESORCIN. $C_6H_4(OS)_2$.

A sulfur derivative of resorcin, obtained by fusing 1 molecule of resorcin with 2 molecules of sulfur. A yellowish-gray powder, insoluble in water; recommended as an iodoform substitute, as dusting-powder or in 5 per cent. ointment, but its use is followed by unpleasant symptoms.

THIOSALICYLIC ACID. $C_6H_4(SH)COOH$.

This is prepared from amido-benzoic acid, $(C_6H_4(NH_2)COOH$, by the action of nitrous acid and sulfuretted hydrogen. It is employed, like salicylic and sulfo-salicylic acids, as an antiseptic.

THIOSAPOL. (D. R. P. Riedel.)

A sulfuretted soda soap, prepared by heating unsaturated fats or fat acids, such as oleic acid, with sulfur to a temperature of 120°–160° C. Sulfur enters into combination, the product containing about 10 per cent. Soap containing sulfur in this state of combination is very serviceable in treatment of skin diseases.

THIOSAVONALS. (D. R. P. Riedel.)

Potash sulfur soaps which contain sulfur in a chemically combined state. For their production sulfurized oils are used. Grube gives the following directions for the preparation of thiosavonals. Soft sulfur soap: The thick liquid thio-oil is made fluid with alcohol and gradually mixed, while being constantly stirred, with an equivalent volume of potash lye, which is likewise thinned with alcohol. The addition of large quantities of potash lye at one time produces separation of sulfur, but this danger becomes less toward the end of saponification. Excess of alkali is neutralized with volatile fatty acid. Eighty-five parts of soap are mixed with 15 parts of glycerin. The mixture contains 5 per cent. of thiosebate of potassium. The liquid sulfur soap differs from this only in containing more water.

THIOSINAMIN. $CS(NH_2)NH.C_3H_5$. *Synonyms:* Allyl-sulfo-urea; Rhodallin; Allyl-sulfo-carbamid.

On heating a mixture of mustard oil (3 parts), alcohol (3 parts), and ammonia (6 parts), at a temperature of 50° C., the pungent odor of the oil disappears, and, on cooling, crystals of thiosinamin are deposited. This forms colorless crystals of a slight alliaceous odor, melting at 74° C. (165.2° F.), very soluble in alcohol, water, and ether. Employed in treatment of lupus, in subcutaneous injections of 15–20 per cent. alcoholic solution.

THIURET. $C_3H_7N_3S_2$.

A sulfurated compound obtained by the oxidation of phenyl-dithio-biuret ($C_8H_9N_3S_2$). Forms a light, inodorous, crystalline powder, insoluble in water, quite soluble in alcohol and ether; in contact with alkalies (warmed) it gives up its sulfur. Thiuret, because of its kalyseptic and germicidal properties, is recommended as a substitute for iodoform. Various salts of thiuret have been prepared, such as the *phenolsulfonate*, *hydrochlorid*, *hydrobromid*, *salicylate*, etc. These are more soluble in water than the base, and insoluble in ether and the oils. Their aqueous solutions give a violet coloration with ferric chlorid and a white precipitate of the base (thiuret) on addition of aqua ammonia.

THIURET PARA-SULFO-PHENATE. (SULFO-CARBOLATE.) $C_3H_7N_3S_2C_6H_4OH.SO_3H$.

A yellow, inodorous, bitter powder, soluble in 330 parts of water, insoluble in volatile solvents, melts at 215° C. Used as a substitute for iodoform in skin diseases.

THYCALOL.
A proprietary antiseptic used in dentistry.

THYMACETIN. $\frac{CH_3}{C_3H_7} > C_6H_2 < \frac{OC_2H_3}{NH(CH_3CO)}$.

By the action of nitric acid, thymol is converted into nitro-thymol, from which a sodium salt is prepared; this, on heating with ethyl chlorid under pressure, yields nitro-thymol-ethyl-ether, which on reduction and acetification yields thymacetin. This forms a white, crystalline powder, melting at 136° C. (276.8° F.), slightly soluble in water and freely in alcohol. Employed in treatment of neuralgia in doses of 0.19–0.64 Gm. (3–10 gr.); it is said to produce unpleasant effects.

THYMENTHOL.
A proprietary antiseptic.

THYMII SICC. PULV. See Glandula Thymi Sicc. Pulv.

THYMOFORM.
Prepared by a reaction between thymol and formaldehyd. It is a yellowish, tasteless powder, having a feeble odor of thymol. It is readily soluble in ether, alcohol, chloroform, and olive oil, insoluble in water, petroleum, ether, and glycerin. On boiling with sulfuric acid formaldehyd is split off. Thymoform is to be used for the same purposes as iodoform and dermatol.

THYMOL-CAMPHOR.
A compound thymol and camphor obtained by triturating the two constituents together. Used in treatment of pruritus and pediculosis.

DI-IODID. Synonym: Iodothymol. A powder resembling aristol, partially soluble in ether. Used as antiseptic in treatment of wounds as a substitute for aristol.

THYMOTOL. A synonym for Thymol.

THYMOZONE.
A proprietary antiseptic.

THYRADEN. (Extractum Thyreodæ, Haaf.) *Synonym:* Thyreoidin.

This preparation is an extract of the thyroid gland, prepared according to an improved method by Dr. Haaf. It is said to possess all the active principles of the gland. Its non-toxic property and lack of odor are claimed as chief advantages over other similar preparations. It is so diluted with sugar of milk that 1 part of the extract is equivalent to 2 parts of the fresh glands.

Employed internally and subcutaneously in diseases caused by absence or defective action of the thyroid gland. Fifty parts of thyraden represent 100 parts of the fresh gland. It appears (1) as dry milk-sugar trituration, 1 Gm. of which represents 2 Gm. of fresh gland, containing 0.7 Mg. of iodin; (2) in pill or tablet form, each of which represents 0.3 Gm. of the fresh gland. Dose, for adults, 1–1.5 Gm. (15–25 gr.) daily, increased in exceptional cases to 5 Gm. (75 gr.); for children, one-fourth to one-half the preceding. Indications of too large doses are: A feeling of great weakness in the extremities, a subjective sensation of blood rushing to the head, then palpitation of the heart and insomnia, with digestive disorders. Thyraiden is also used in obesity and in various skin diseases.

THYREIN. See Iodothyrin.

THYREO-ANTITOXIN.
A nitrogenated crystalline substance, free from iodin, obtained from the thyroid glands of sheep. Used in treatment of goiter.

THYREOIDIN. See Thyraden.

THYREOIDIN (Notkine), PURIFIED.
An active albuminoid body, which represents all the activity of the thyroid gland. Occurs in transparent scales, soluble in water. Dose, 0.1 Gm. once or twice daily. Subcutaneously, 1 Cc. of an aqueous solution (0.05–10). One drop of chloroform should be added to the solution for preservation.

THYREOIODIN. See Iodothyrin.

THYREOPROTEID.
An albuminoid prepared from the thyroid gland by first extracting with ether to remove fat and para-lactic acid, then with water, and after removing inert material the albuminoid is precipitated by addition of sodium chlorid, purified by dialysis. Thyreoproteid is a toxic albuminoid, and is used in Basedow's disease.

THYROIDINE (Hammond).
The sterilized extract of the thyroid glands of the sheep. Used for obesity, goiter, etc. See Animal Extracts. Also Organo-therapeutics in Addenda.

THYROPROTEIN.
Notkine has recently isolated from the thyroid body an albuminoid which in properties and composition differs from all other albuminoids hitherto described. Under certain conditions this new body splits up, yielding a carbohydrate which is transformed with difficulty into a reducing substance. With a fairly strong solution of ferric chlorid the albuminoid assumes a gelatinous consistence; tannin precipitates it in the form of thick flakes, or as a transparent gelatinous substance, according to the strength of the solution. It dissolves in weak acids, and is precipitated by alcohol, the precipitation rapidly becoming insoluble in water. The author

has named this substance "thyroprotein." From experiments on animals it appears to be very toxic, and is slowly eliminated. It acts at first as an excitant, afterward as a paralyzant, probably on the central nervous system. The author regards this albuminoid as identical with the poison which accumulates in the organism after extirpation of the thyroid body; it is therefore not a secretion of the gland, but a toxalbumin, which it is the function of the thyroid gland to neutralize by means of the peculiar ferment it elaborates, and so prevent the accumulation of the poison in the animal organism.

TINCTURA HÆMOSTATICA.

Denzel gives the following formula: Powdered ergot, 10 Gm.; alcohol, 20 Gm.; and sulfuric acid, 2 Gm.; mixed, and 500 Cc. of hot water added. The mixture is evaporated to 200 Gm., and then 2 Gm. of calcium carbonate added. The insoluble matter is removed by pressure, the liquid filtered, evaporated to 70 Gm., and, finally, 30 Gm. of alcohol and 3 drops of a concentrated tincture of ginger added.

TOLYL-ANTIPYRINE. See Tolypyrine.

TOLYPYRINE. $C_6H_4CH_3N<^{CO.CH}_{N.CH_3.C.CH_3}$ *Synonyms:* Tolylantipyrine; Para-tolyl-dimethyl-pyrazolon. (D. R. P. Hoechst.)

Antipyrine is the phenyl (C_6H_5) derivative of di-methyl-pyrazolon, while tolypyrine is the tolyl ($C_6H_4.CH_3$) derivative of the same, or the latter may be considered as antipyrine in which one hydrogen atom of the phenyl radicle is replaced by a methyl group. This compound forms colorless crystals, melting at 136°–137° C. (276.8°–278.6° F.), soluble in 10 parts of water, readily in alcohol, and insoluble in ether. Tolypyrine gives the same color reactions with ferric chlorid and nitrous acid as antipyrine, and, like the latter, is employed as an antipyretic, antirheumatic, and antineuralgic in the same doses, 0.5–2 Gm. (8–30 gr.). According to P. Guttmann, 4 Gm. of tolypyrine are equivalent in antipyretic action to 5–6 Gm. of antipyrine.

TOLYPYRINE SALICYLATE. See Tolysal.

TOLYSAL. $C_6H_4CH_3N<^{COCH}_{N.CH_3.C.CH_3.C_7H_6O_3}$ *Synonym:* Tolypyrine Salicylate.

Obtained by fusing together equimolecular quantities of tolypyrine and salicylic acid and crystallizing from alcohol. Forms colorless crystals, melting at 101°–102° C. (213.8°–215.6° F.), almost insoluble in water and readily soluble in alcohol.

Employed in chronic and acute rheumatism and rheumatic neuralgia in doses of 1–2 Gm. (15–30 gr.).

TONINERVIN.

By this name Dr. Canzler designates a new water-soluble salt of quinin discovered by him, which he proposes as a roborant, stomachic, and antipyretic. Its exact composition is not given, but it is stated to contain 4.5 per cent. of iron. This is claimed to counteract the unpleasant secondary effect incident to a prolonged use of quinin. The salt is also antiseptic and bactericide. Application as antipyretic requires doses of 0.1–0.3 Gm. (1½–5 gr.), at intervals of three to four hours; for tonic or stomachic purposes doses of 0.05 Gm. (4–5 gr.) twice daily are sufficient.

TONQUINOL. $C_6H(CH_3)(C_4H_9)(NO_2)_2$ *Synonyms:* "Artificial Musk"; Tri-nitro-iso-buntyl-toluol.

This forms yellowish crystals which melt at 97° C., and possess a strong odor of musk. (D. R. P. Bauer.)

TOPASOL. "G." I., or Antiperonosporin, Zinci Cupri Sulfas.
"G." II., or Anticornutin, Zinci Cupri-ferro-sulfas.
"G." III., or Antimucorin, Ferro-zinci-sulfas.
"G." IV., or Anticornutin, Ferro-zinci-calcii-sulfas.
"G." V., or Anticoroin, Ferro-zinci-magnesii-sulfas.

These are *presumably* molecular mixtures of the given salts.

TRAUMATICIN.

A collodion-like preparation used as a vehicle for external medication.

TRAUMATOL. C_7H_7IO.

An iodocresol, of purple-red color, obtained by action of iodin on cresol. Yellow fine powder, soluble in alcohol and oils. It is expected to find use as a substitute for iodoform, being odorless, non-toxic, antiseptic, and non-irritating.

TREFUSIA.

A dark red-brown, soluble, granular powder, obtained by drying defibrinated blood. Employed as a natural iron albuminate in chlorosis.

TRI-BENZOYL-GALLIC ACID.

Prepared by the reaction of benzoyl chlorid and gallic acid. Used as an intestinal astringent. Colorless, odorless, and tasteless crystals, insoluble in water, readily soluble in alcohol. Split up in the intestines with liberation of gallic acid.

TRI-BROM-ALDEHYD HYDRATE. See Bromal Hydrate.

TRI-BROM-ANILIN HYDROBROMID. See Bromamid.

TRI-BROM-PHENOL. See Bromol.

TRI-BROM-SALOL or CORDOL. See under Salol.

TRI-CHLOR-ACETIC ACID. CCl_3COOH.

This is obtained by the action of chlorin on glacial acetic acid, or by the oxidation of an-

hydrous chloral by means of fuming nitric acid. Trichloracetic acid occurs in colorless, rhombic crystals, very hygroscopic, of a slightly penetrating odor; melting at 55° C. (131° F.). Very soluble in water and alcohol. It is employed as a caustic in 10–50 per cent. solution, also as a test reagent for albumin in urine.*

TRI-CHLOR-CARBOLIC ACID. See Chlor-phenol (Tri).

TRI-CHLOR-PHENIC ACID. See Chlor-phenol (Tri).

TRI-CHLOR-PHENOL. See Omal.

TRICRESOL. See under Cresol.

TRICRESOLAMIN.

A mixture of 10 parts each of ethylene diamin and tricresol with 500 parts of water. This forms a colorless fluid soluble in 2 parts of water. Used as wound antiseptic in $\frac{1}{10}$ to 1 per cent. solution. Of no value in gonorrhea, eczema, or psoriasis.

TRICRESOL PHOSPHATE. See Creosote Phosphate.

TRIFOLIO. See Narogamia.

TRIFORMAL. See Formalin.

TRIFORMOL. See Para-formaldehyd.

TRI-IODO-META-CRESOL. See Losophan.

TRIKRESOL. See Tricresol under Cresol.

TRIMETHYLAMIN. $N(CH_3)_3$. *Synonym:* Secaline.

Prepared from herring-brine by distillation with milk of lime. A clear, colorless liquid, having a herring-like odor, soluble in water and alcohol. Employed in muscular rheumatism, chorea, and paralysis agitans. Dose, 2–6 drops several times daily.

HYDROCHLORID. Deliquescent crystals of fish-like odor. Employed in gout and rheumatism. Dose, 0.1–0.3 Gm. (1½–5 gr.) in pills, three to five times daily.

TRI-METHYL-ETHYLENE. See Pental.

TRINITRIN. A synonym for Nitroglycerin.

TRINITRINUM COMPOSITUM.

Consists of nitroglycerin, 1 part; amyl nitrite, 25 parts; capsicin, 50 parts; and menthol, 50 parts.

TRIONAL. $C_2H_5.CH_3.C(SO_2C_2H_5)_2$. *Synonym:* Di-ethyl-sulfon-methyl-ethyl-methane.

This is an analogue of sulfonal, and differs in the substitution of a methyl by an ethyl group (see Tetronal). The method of preparation is the same as that of sulfonal, except that methyl-ethyl-ketone (CH_3–CO–C_2H_5) is employed in place of acetone. Trional forms colorless, shining, tabular crystals, melting at 76° C. (168.8° F.), soluble in 320 parts of cold and freely in hot water, very soluble in alcohol and ether. This compound is a more powerful hypnotic than sulfonal, and is less liable to produce ill effects. It is preferred to tetronal as a reliable and safe hypnotic. Dose, 1–2 Gm. (15–30 gr.). (D. R. P. Bayer.)

TRI-OXY-BENZO-PHENONE. See Salicylresorcinketone.

TRI-OXY-METHYLENE. See Paraformaldehyd.

TRIPHENAMIN.

A mixture of phenocoll, 2.6 parts, phenocoll salicylate, 1 part, and phenocoll acetate, 0.4 part. Recommended for rheumatic complaints.

TRIPHENETOL-GUANIDIN HYDROCHLORID.

A local anesthetic used in eye treatment as a 0.1 per cent. solution. Its application produces complete anesthesia in one to two minutes. No irritant or toxic effects, nor action on the iris, have been observed.

TRIPHENIN. ($C_6H_4.C_2H_5O.NH.(CH_3.CH_2.CO)$). *Synonym:* Propionyl-phenetidin.

A homologue of phenacetin, prepared by boiling a mixture of para-phenetidid and propionic acid. It forms a white, odorless, shining, crystalline powder, of feebly bitter taste, and melting at 120° C. It dissolves in about 2000 parts of water, and is therefore considerably less soluble than the other similar remedies (lactophenin, phenacetin, and acetanilid). The single dose of triphenin is 0.5–1 Gm. (8–15 gr.), best given in wafers. The daily dose should not exceed 3 Gm. (45 gr.). According to Gaude, it is a reliable antipyretic, a sure and rapid anti-neuralgic, and an excellent nervine. It also frequently acts as a hypnotic.

TRIPHENYL ALBUMIN.

A preparation made by heating dry egg albumen with phenol. It is odorless, tasteless, insoluble in water, alcohol, and potassa solution, but soluble in phenol. Serves as a nutrient for bacteriologic work.

TRI-THIALDEHYD. See Sulfoparaldehyd.

TRI-THIODO-FORMALDEHYD.

The name given by Auger to a substance obtained by him by the interaction of formic acid, lead formiate, and hydrogen sulfid. It occurs in crystals which melt at 216° C. He has

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* Coblentz' "Hand-book of Pharmacy."

also observed that noticeable quantities of formaldehyd are produced by the dry distillation of lead formiate.

TRITOL.

E. Dieterich recommends diastasic extract of malt as an emulsifying agent for oils, and calls emulsions made in this manner "tritols." One part of extract is required for 4 parts of oil. Pancreatic juice and pancreatin also form perfect emulsions with cod-liver oil.

TROPA-COCAIN HYDROCHLORID. $C_8H_{14}NO.(C_6H_5CO)HCl$. *Synonym:* Benzoyl-pseudo-tropein Hydrochlorid.

This alkaloid occurs with cocain and other bases in the small Java coca leaves; prepared synthetically by Liebermann. Forms white needles, melting at 271° C. (519.8° F.), and is readily soluble in water. Tropa-cocain in 2 or 3 per cent. solutions produces more rapid anesthesia, is less toxic, and more reliable than cocain (Ferdinando and Chadbourne).

TROPHONINE.

A nutritive.

TUBERCULAR SERUM (Behring's).

Behring reported at the Congress at Madrid that the tubercle antitoxin obtained by him first from mammalia is very injurious to the human system, which precludes its employment. Further investigations of the subject showed that the fault did not lie with the antitoxin as such, but with the serum *per se*, as also serum of healthy animals and diphtheria serum produced the same disturbances with tuberculous patients. On the other hand, he succeeded in obtaining a suitable serum by the immunization of certain birds. This new antitoxin does not differ in its essential character from Koch's tuberculin, but principally in strength.

TUBERCULIN (Koch). *Synonyms:* Kochin; Parataloid.

Prof. R. Koch has produced three new tuberculins: Tuberculin A, Tuberculin O, and Tuberculin R. The latter alone is of therapeutic value, and is decidedly active in immunizing against tubercle bacilli. Patients suffering from pulmonary tuberculosis were decidedly benefited in the early stages, and so was every case of lupus. Prepared by extraction of pure cultures of tubercle bacilli with 40–50 per cent. glycerin, and repeated precipitation with alcohol. The pure preparation is a snow-white mass, which becomes light gray upon drying at 100°. It is easily soluble in water, but the aqueous solution is unstable; its solution in 50 per cent. glycerin remains unchanged. The preparation is administered subcutaneously in the muscles of the back between the shoulder-blades, after cleaning the parts with an antiseptic solution. After injection the spot is covered with iodoform collodion and bandaged with iodoform gauze. Dose, ¼–1 Mg. ($\frac{1}{110}$–$\frac{1}{60}$ gr.), subcutaneously.

TUBERCULINIC ACID.

According to Bombelon, this is the active constituent of the crude tuberculin, and is prepared from Koch's lymph by precipitating with ether and alcohol, dissolving the precipitate in water, and adding phenol.

TUBERCULINOSE (Hunter).

Dialyzed, purified tuberculin.

TUBERCULOCIDIN.

A tuberculin prepared according to the directions of Prof. Klebs.

TULIPIN.

An alkaloid obtained from the garden tulip. It is poisonous, and possesses sialagogue properties. Stated to act upon the spine in a manner similar to colchicin, scillitin, and veratrin.

TUMENOL. *Synonyms:* Sulfo-tumenolic Acid; Tumenol Sulfonic Acid.

This compound, which is closely allied to ichthyol, is obtained by treating (sulfonating) the unsaturated hydrocarbons of mineral oils with sulfuric acid; the resulting product is dissolved in water and separated in pure form by the addition of sodium chlorid. The tumenol-sulfonic acid thus obtained is known as "Commercial Tumenol," being a dark-brown, almost black, acid fluid; this, on being neutralized with soda and extracted with ether, yields the "tumenol-sulfone" (tumenol oil), which is a thick, dark yellow, syrupy fluid, with a bitter taste and insoluble in water. This latter, prepared in powder form, is known as "tumenol-sulfonic acid," being of dark color, inodorous, slightly bitter, and readily soluble in water. Tumenol is employed in treatment of all forms of pruritus, and also eczema, either as a 5–10 per cent. solution (ether-alcohol, water, or glycerin), ointment, paste, or dusting-powder. The tumenol oil is frequently painted directly upon the diseased surfaces. (D. R. P. Gewerkschaft-Messel.)

SODIUM TUMENOL SULFONATE is a combination of sulfotumenolic acid and sodium. A dark-colored, dry powder, soluble in water, and applied in all instances above cited.

TURPENTINE-ETHER. See Ether, Terebinthinated.

TUSSOL. $C_{11}H_{12}N_2O.C_6H_5CH(OH)COOH$. *Synonym:* Antipyrine Mandelate, or Phenyl-glycolate.

This new salt of antipyrine which melts at 52–53° C., is recommended as being superior to antipyrine itself in the treatment of whooping-cough. Given in doses of 0.05–0.1 Gm. ($\frac{1}{12}$–1½ gr.) for children under 1 year of age; 0.1 Gm. (1½ gr.) for 1 to 2 years; 0.25–0.4 Gm. (⅜–6 gr.) for 2 to 4 years; and 0.5 Gm. (8 gr.) for 5 years and above.

TYLOPHORIN.

An emetic.

TYROSIN.

The name given to cholesterin, as it is prepared for immunizing against snake poison. C. Phisalix some time ago made the discovery that cholesterin obtained from gall has the power of

immunizing animals to which it is administered hypodermically against the venom of snakes, and has continued his experiments with cholesterin of vegetable sources with equally good results. That obtained from the carrot differs from animal cholesterin in melting at 136° C., the other melting at 146°. Such a mixture containing 1 per cent. is easily injected; 2 or 3 Cc. are sufficient for a guinea-pig, and are borne without trouble. After twenty-four to forty-eight hours these animals can bear quantities of venom which would kill in five to six hours those not immunized. For guinea-pigs a dose of 5 mg. tyrosin is usually sufficient, but to be more certain it is advisable to inject 10–20 Mg. Immunization then lasts twenty-five days, though in some cases only sixteen days. If tyrosin is injected simultaneously with the poison, but in a different part of the body, death will be retarded, but not prevented. When a mixture of tyrosin and poison is injected, the action of the latter is as violent as it would be without the antidote. It was found that the fresh juice from the rhizome of the dahlia acts similarly to tyrosin, 1 or 2 Cc. protecting a guinea-pig against a mortal dose of the poison.

UABAIN. See Ouabin.

UCAMBIN.

Needles or plates, easily soluble in water, sparingly in alcohol, insoluble in ether and chloroform. Stated to be similar in action to strophanthin, but more powerful.

ULEXIN. See Cytisin.

ULYPTOL. *Synonym:* Eulyptol.

This is a name given to a mixture of phenol, 1 part, salicylic acid, 6 parts, and eucalyptus oil, 1 part.

UNGUENTUM CASEINI.

Prepared by emulsifying casein with alkali and addition of zinc oxid and carbolic acid Serves as an ointment-base for chrysarobin, dermatol, etc.

DURUM. An ointment-base consisting of hard and soft paraffin and lanolin.

MOLLE. An ointment-base consisting of liquid paraffin, lanolin, and solid paraffin.

PSORIATICUM. An ointment composed of chrysarobin, ichthyol, and zymoidin ointment.

RESINOL. See Resinol.

SALVO PETROLIA. An ointment-base resembling vaselin.

VEGETABILE. An ointment-base prepared by emulsifying a mixture of oil, wax, water, and borax.

URALINE. See Uralium.

URALIUM. $CCl_3CH.OH.NHCO_2C_2H_5$. *Synonyms:* Chloral Urethane; Uraline.

To a solution of urethane (*q. v.*) in melted chloral hydrate, concentrated hydrochloric acid is added; after twenty-four hours it congeals to a solid mass, which is then washed with sulfuric acid, followed by water, leaving an oil which, on standing, crystallizes. Uralium constitutes a white powder, melting at 103° C. (217.4° F.), insoluble in cold water, very soluble in alcohol and ether; when boiled with water it decomposes into chloral and urethane. Recommended as a hypnotic in doses of 2–3 Gm. (30–45 gr.).

URANIUM ACETATE. $C_2H_3O_2.UO_2.2H_2O$.

A yellow salt, soluble in water. Recommended in coryza, to be used either in solution as a nasal douche or dry as a snuff, combined with coffee. Use with great caution.

AMMONIUM FLUORID. $UO_2.F_4NH_4.H_2O$. *Synonym:* Uranyl Ammonium Fluorid. A greenish-yellow, crystalline powder. Used for the detection of Roentgen-rays.

NITRATE. $(HNO_3)_2UO_2.6H_2O$. Light yellow crystals, soluble in water, alcohol, and ether. Recommended for diabetes. Dose, 0.01–0.02 Gm. (⅙–⅓ gr.) twice daily in aqueous solution with saccharin.

URANYL AMMONIUM FLUORID. See Uranium Ammonium Fluorid.

UREA. $CO(NH_2)_2$. *Synonym:* Carbamid.

White needles or quadratic prisms, of neutral reaction, soluble in water and in 20 parts of absolute alcohol; melts at 132° C. Recommended as a diuretic, particularly in dropsy and in cirrhosis of the liver. Also used as uric acid solvent. Dose, to begin, 10 Gm. (155 gr.) daily in water.

URETHALAN. See Methyl-urethane.

URETHANE. $CO{<}^{NH_2}_{OC_2H_5}$. *Synonyms:* Ethyl-urethane; Ethyl Carbamate.

This compound, an ethyl ether of carbamic acid $\left(CO{<}^{NH_2}_{OH}\right)$, is obtained by heating a salt of urea with ethyl alcohol under pressure at a temperature of 120°–130° C. Forms colorless, odorless prisms or scales, melting at 50°–51° C. (122°–123.8° F.), soluble in 1 part of water, 0.6 part of alcohol, 1 part of ether, and 1.5 parts of chloroform. Urethane is an excellent hypnotic, being free from by or after effects. Dose, 1–5 Gm. (15–80 gr.).

URICEDIN (Stroschein).

Obtained by adding 20 parts of sulfuric and 4 parts of hydrochloric acids to a sufficient quantity of freshly expressed lemon juice, representing 50 parts of citric acid, and keeping the mixture cold; then neutralizing the product with sodium bicarbonate, evaporating, and granulating. The resulting preparation contains sodium sulfate 27.5 per cent., sodium chlorid 1.6 per cent., sodium citrate, 67 per cent., in addition to small quantities of the citrates and phosphates of potassium and calcium. Used in gout.

URISOLVIN.

A combination of pure urea with acid lithium citrate. Used in treatment of uric acid

diathesis and cirrhosis of the liver. Dose, 2 tablets (each 0.1 Gm.) every three hours, dissolved in carbonated water.

UROPHERIN. $C_7H_7N_4O_2Li+C_6H_4(OH)COOLi$. *Synonyms:* Lithium Diuretin; Theobromin-lithium-salicylate.

This double salt is analogous to diuretin, differing only in the substitution of lithium for sodium. It is prepared by rubbing together theobromin with lithium hydroxid and an equivalent quantity of lithium salicylate, with sufficient water, and then dried. It is a white powder, soluble in 5 parts of water. Employed as a diuretic in doses of 1 Gm. (15 gr.).

UROPHERIN-BENZOATE. A mixture of theobromin and benzoate of lithium. A white, soluble powder. Used as a diuretic in doses of 1 Gm.

UROPHERIN SALICYLATE. A combination of salicylate of lithium with lithium-theobromin. Recommended by Dr. A. Schmid as an excellent diuretic in the treatment of children. The dose is a teaspoonful four times daily, of a mixture containing 1 part of the compound in 16 parts of the liquid. The corresponding benzoate may be used in case of idiosyncrasy against salicylates.

UROTROPIN. $(CH_2)_6N_4$. *Synonyms:* Hexa-methylene-tetramin; Formin.

A compound produced by the action of formaldehyd on ammonia. Urotropin increases the excretion of the urine and of uric acid, the solution of the urates beginning within twenty-four hours of the ingestion of the medicament. It may be given in doses of 6 Gm. (90 gr.) daily to adults, the single dose being from 1–1.5 Gm. (15–23 gr.).

URSAL.

A compound of urea and salicylic acid. Recommended as a substitute for sodium salicylate. Said to be particularly useful when the combined effects of the components are desired. It is given in the same doses as sodium salicylate.

USANE.

A local anesthetic, used in dentistry.

VALERIDIN. $C_6H_4(OC_2H_5)NH.C_5H_9O$. *Synonyms:* Sedatin; Iso-valeryl-p-phenetidin.

A new synthetic compound, claimed to have all the advantages of the valerian preparations, without their disagreeable odor and taste. It crystallizes in white needles, which melt at 129°, are insoluble in water, and easily soluble in ether, alcohol, and chloroform. It is a specific for all nervous affections, and has no bad effects on the stomach and the heart. The dose is 0.5–1 Gm. (8–15 gr.), several times daily.

VALERYL-PHENETIDIN. See under Phenetidin.

VALIDOL.

A valeric acid menthol ester, recommended as an analeptic and antihysteric. It is a colorless liquid, of the consistency of glycerin, of a mild, agreeable odor, and a refreshingly cool, faintly bitter taste. It is a good solvent of menthol. Dose, 10–15 drops daily, on sugar.

VALSOL.

A mixture of oxygenized hydrocarbons which, with water, forms an emulsionized mass; this readily dissolves iodin, iodoform, ichthyol, thiol, etc. Used as an ointment vehicle.

VANADIN.

Consists of a solution of a vanadium salt (it is not stated which salt) with sodium chlorid. It is recommended, in a dose of 6–30 drops daily, as a remedy for pulmonary tuberculosis, on the ground of its power as a disinfectant.

VANILLIN. $C_6H_3OH.OCH_3.CHO$. *Synonym:* Methyl-protocatechuic Aldehyd.

This odorous principle, which is found in vanilla pods, also occurs in small quantities in gum benzoin, asparagus, raw beet sugar, and the wood of many plants. Synthetically prepared from coniferin, a glucosid, and also from eugenol. Vanillin occurs in acicular crystals, melting at 80°–81° C. (176°–177.8° F.), soluble in alcohol, glycerin, ether, and chloroform, only slightly soluble in water. It possesses the odor and taste of vanillin. Employed chiefly as an odoriferous and flavoring agent; also as stimulant in atonic dyspepsia.

VANILLIN-PARA-PHENETIDIN. $C_6H_3\begin{cases}OH\\OCH_3\\CH.N.C_6H_4OC_2H_5\end{cases}$.

A condensation-product formed by heating vanillin with para-phenetidin at 140° C. It is crystalline, and melts at 97° C. Soluble in water. It is used as hypnotic, antineuralgic, and styptic. Dose, 1.5–2 Gm. (D. R. P. Goldschmidt.)

VASELON.

Stated to be a solution of stearin and margarin in neutral mineral oil. Ointment vehicle.

VASOGEN.

A new ointment-vehicle which has been introduced in Germany. It is said to be an oxygenated vaselin (vaselin with free oxygen), but another statement is that it contains about 25 per cent. of olein, saponified with anhydrous ammonia and mixed with vaselin, and brought to a suitable consistency with vaselin oil.

VASOL.

A mixture of liquid petrolatum with ammonium oleate.

VASOL, IODIZED.

Vasol containing 7 per cent. of iodin.

VELLOLIN.

A purified adeps lanæ.

VELLOSIN. $C_{28}H_{28}N_2O_4$.

Yellow crystals, nearly insoluble in water, easily soluble in hot alcohol, ether, and chloroform. In physiologic effect it resembles brucin.

VERATROL. $C_6H_4<^{OCH_3}_{OCH_3}$. *Synonym:* Dimethyl Pyrocatechin.

A clear, mobile liquid, soluble in alcohol, ether, and fatty oils. Its toxicity is about one-third that of guaiacol, but it is much more caustic. Employed as antiseptic in form of inhalations, external application (1 per cent. solution), or hypodermically. In intercostal neuralgia and epididymitis acuta it is stated to have been used with success.

VERNONIN. $C_{10}H_{24}O_7$.

A glucosid from the root of *Vernonia nigritiana*, which forms a white, hygroscopic powder, soluble in water, insoluble in ether and chloroform. Said to resemble digitalin and strophanthin in physiologic effect, possessing $\frac{1}{4}$ their power.

VETERINARY TANNALBIN. See Tannalbin, Veterinary.

VICOSIN.

A mixture of caramel and extract of saponaria, used for producing a permanent foam on beer.

VIERIN.

An amorphous, white, bitter principle, of aromatic odor, obtained from the bark of *Remisia velloxii*. It melts at 120° C. (248° F.), and is readily soluble in alcohol and chloroform. Employed as a quinin substitute in doses of 0.1–0.2 Gm. (1½–3 gr.).

VIROL.

A meat extract (liq. carnis comp.). Intended as a substitute for cod-liver oil.

VISKOLEIN.

A proprietary antiseptic and febrifuge.

VITALIN (Gatschkowski).

A secret remedy, stated to be boroglycerin.

VITOGEN.

A surgical dressing, to be used instead of iodoform. Antiseptic, deodorizer, germicide, and non-toxic, inodorous disinfectant.

VULNERAL.

Contains: Comp. tinct. of benzoin, tinct. of myrrh, of each, 75 parts; ung. paraf., ung. vasel. co., of each 300 parts; cerat. cetac., lanolin, of each, 100 parts; boric acid, zinc oxid, of each, 40 parts; carbolic acid, 12.5 parts; liq. alum. acet., camphor, of each, 7.5 parts; lard, 360 parts.

VUTRIN.

A concentrated meat extract in powder form, one part of which represents the nutritive value of four parts of beef.

WIGGER'S ETHER. See Ethyliden Chlorid.

XEROFORM. See under Bismuth Compounds.

XEROFORM. $(C_6H_2Br_3O)_2BiOH + Bi_2O_3$. *Synonyms:* Tri-brom-phenol Bismuth; Tri-bromo-carbolate of Bismuth.

A yellow, neutral, insoluble powder, non-irritating, inodorous, and tasteless, containing about 50 per cent. of Bi_2O_3. Used as an intestinal antiseptic in cholerine, cholera, inflammatory condition of the intestinal mucous membrane; also useful for fresh and infected wounds, old abscesses, buboes, eczema, pruritus, etc.; in gynecology and diseases of eye and ear. Dose, 0.5–1 Gm. (8–15 gr.). (D. R. P. v. Heyden.)

XYLENE. See Xylol.

XYLENOL SALOL. See Salol.

XYLENOL-SALOLS. $C_6H_4(OH)COOC_6H_3(CH_3)_2$.

By the action of dehydrating agents upon a mixture of equal molecules of salicylic acid and xylenol (o-, m-, or p-), ortho, meta, or para-xylenol salicylates are formed. These are insoluble in water and soluble in alcohol; employed like salol as intestinal disinfectants.

XYLOCHLORAL.

Prepared by heating xylose with chlorin in presence of hydrochloric acid. Crystallizes in form of laminæ, which are readily soluble in water and melt at 132°. Used as hypnotic in same doses as chloralose.

XYLOL. $C_6H_4(CH_3)_2$. *Synonym:* Dimethylbenzol; Xylene.

Obtained from coal-tar by fractional distillation. A clear, colorless liquid of aromatic odor and burning taste, soluble in alcohol and ether, insoluble in water. Used internally as antiseptic for syphilis. Dose, 15–30 drops in gelatin capsules.

YOHIMBINE. $(C_{21}H_{28}N_2O_3)_2H_2O$.

An alkaloid obtained from the yohimbehe tree.

ZAPON LAC.

A new quick-drying lac or varnish which consists of gun-cotton dissolved in a mixture of amyl acetate and amylic alcohol. It is coming into use in pharmacy as a varnish for ointment boxes, etc., especially the new and elegant celluloid boxes.

ZEMATONE.

An anti-asthmatic powder made up of potassium nitrate 22 parts, hyoscyamus and stramonium, each, 8 parts, solanum niger, 4 parts, belladonna leaves, 6 parts, grindelia robusta, 15 parts, white agaric, 5 parts, papaver (fruct.), 5 parts.

ZINC COMPOUNDS.

BORATE. $ZnB_4O_7 + 7H_2O$. (*Tetraborate.*) Prepared by interaction between hot solutions of 5 parts of zinc sulfate in 50 parts of water and 4 parts of borax in 100 parts of water. An amorphous, white powder, which is employed as an antiseptic dusting-powder for wounds.

CALCIUM CYANID. $ZnCa(CN)_4$. White crystals, soluble in water.

CHRYSOPHANATE. Forms a brownish-red powder, which is readily soluble in water which has been rendered slightly alkaline. Recommended as an antiseptic dusting-powder.

CYANID. White powder, insoluble in water. Used for chorea, dysmenorrhea, gastralgia, palpitation, and pain in cardiac region, in doses of 0.005 Gm. ($\frac{1}{12}$ gr.), several times daily, in pill form.

GYNOCARDATE. A yellow, granular powder, insoluble in water and dilute acids, readily soluble in alcohol and ether. Recommended in treatment of psoriasis, prurigo, and other skin diseases.

HEMOL. See under Hemol.

ICHTHYOL-SULFONATE. $(C_{28}H_{36}S_2O_6H)Zn_2$. Prepared by neutralizing free ichthyolsulfonic acid with zinc oxid. Uses the same as other ichthyol preparations.

IODATE. See Iodic Acid.

MERCURIC-CYANID. $Zn_4Hg(CN)_{10}$. A white, insoluble powder recommended as a non-irritating antiseptic.

PERMANGANATE. Occurs in crystals closely resembling those of the potassium salt; hygroscopic and soluble in water. This salt is employed in all instances where zinc sulfate is indicated, its solution being of the strength 0.05 Gm. to 200 Cc. of water ($\frac{1}{10}$ gr. to 6.8 fld. oz.). Care should be taken not to triturate this salt with organic substances or dispense it in solutions containing alcohol or organic extracts.*

SALICYLATE. $(C_7H_5O_3)_2Zn + H_2O$. Sodium salicylate 34 parts and zinc sulfate 29 parts are boiled for a short time with 125 parts of water; on cooling, a solid crystalline mass separates, which, after washing with a little cold water, is recrystallized. Forms colorless crystals, which are soluble in 25.2 parts of cold and readily in boiling water, soluble in 36 parts of ether and 3.5 parts of alcohol. Recommended as antiseptic dusting-powder and wash in various skin diseases.

SOZOIDOL. $(C_6H_2I_2(OH)SO_3)_2Zn + 6H_2O$. See under Sozoiodol.

SOZOIODOLATE. $(C_6H_2I_2(OH)SO_3)_2Zn + 6H_2O$. Forms colorless needles, which are used in 2 per cent. solution in treatment of gonorrhea. In nasal catarrh a 10–15 per cent. dusting-powder is employed.

STEARATE. $Zn(C_{18}H_{35}O_2)_2$. A white, insoluble powder, of feeble antiseptic and a strong astringent action. Used in gonorrhea and in rhinologic practice. In gonorrhea it is combined with menthol (5 parts to 20 parts zinc stearate) and introduced into the urethra by means of a glass tube after emptying the bladder and cleansing the urethra with water. As a snuff for the nose, a mixture of zinc stearate 15 parts and europhen 5 parts is used.

SUBGALLATE is an odorless, non-toxic, non-irritant, greenish-gray, neutral powder, insoluble in the ordinary solvents, containing 44 per cent. of zinc oxid and 56 per cent. of gallic acid. Used internally and externally. Internally it is recommended in doses of ½–4 gr. (0.03–0.25 Gm.) in fermentive disorders of the intestines and in night-sweats. Externally it has been used in eczema, fresh and septic wounds, otorrhea, gonorrhea, and hemorrhoids. It is applied pure or diluted with indifferent powders or ointments. As an injection, it is suspended in water and mucilage, 1 : 16.

SULFHYDRATE. $Zn(SH)_2$. A white precipitate, which should be kept under water, since it readily decomposes on becoming dry. Recommended by Barduzzi externally and internally in the treatment of chronic eczema, psoriasis, and vegeto-parasitic dermatoses. Internally the dose is 0.03–0.13 Gm. (½–2 gr.), externally in ointment form (10 per cent.), combined with lanolin and lard (2 : 3).

SULFITE. $ZnSO_3.2H_2O$. Prepared by mixing aqueous solutions of zinc sulfate and sodium sulfite. White, crystalline powder, very sparingly soluble in water. Used to impregnate bandages.

SULFOCARBOLATE. $C_6H_4(OH)SO_3)_2Zn + 8H_2O$. By the action of concentrated sulfuric acid on phenol at 90° C. para-phenol-sulfonic acid is formed; this is neutralized with barium carbonate, and the resulting barium sulfocarbolate, on being brought into reaction with an equivalent amount of zinc sulfate in solution, yields zinc sulfocarbolate and the insoluble barium sulfate. The filtrate is evaporated and crystallized. This salt forms colorless, rhombic prisms or scales, soluble in water and alcohol. Employed as an antiseptic wash in all instances where zinc sulfate or carbolic acid is indicated.

ZOMAKYNE.

A proprietary antipyretic and analgesic.

ZUCKERIN. A synonym for Saccharin.

ZYMOIDIN (Rosenberg).

Said to be composed of the oxids of zinc, bismuth, and aluminum with iodin, boric acid, carbolic acid, gallic acid, salicylic acid, quinin, etc. Recommended as an antiseptic in the form of dusting-powder, ointment, solution, or bougie.

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* See Coblentz' "Hand-book of Pharmacy," pp. 392–396.

ADDENDA.

ORGANO-THERAPEUTIC AGENTS.

ANIMAL REMEDIAL PREPARATIONS.

One of the first to call attention to this class of remedial agents was Brown-Séquard, who advanced the hypothesis that "all the glands of the body, whether they have excretory canals or not, give to the blood useful principles, the absence of which is felt when these glands are extirpated or destroyed by disease." In conjunction with D'Arsonval this hypothesis was extended to include various organs from all parts of the body, and that in a diseased condition of an organ an extract prepared from the same organ of a healthy animal serves as a remedial agent.

Thus, for example, the testicle secretes spermatozoa and a fluid, the latter, being absorbed into the system, acting as a nervous stimulant and tonic. This same fluid was employed subcutaneously by Brown-Séquard when symptoms indicated that such a tonic was necessary, as is the case in neurasthenia, tabes dorsalis, syphilis, etc. Again, a certain form of diabetes is due to a disorder of the pancreas; it has been found that extirpation of this organ produces the same diabetic symptoms in certain animals; according to this, the internal secretion of the pancreas is an important function of this organ. This same theory has been extended to such glands and organs as the suprarenal capsules, thyroid gland, ovaries, kidneys, brain, pancreas, spinal cord, spleen, thymus gland, testicles, etc.*

Concerning the chemic nature of the organic principles occurring in these secretions comparatively little is known, owing to the minute quantities present and the great difficulties of isolation; again, it is a matter of speculation as to whether an isolated principle represents the activity until opportunities are offered to give it a thorough physiologic test. To illustrate some theories applied to the action of these extracts, Dr. J. Althaus, in his study of *cerebrine alpha*, an active brain extract of his preparation, suggests that its action upon the nervous system may be due, first, to the injection of a highly specialized pabulum of nervous matter; second, to the decomposition of the lecithin and protagon which it contains through the alkaline blood into cholin, glycero-phosphoric acid, and stearic acid. Cholin, by reason of its oxidizing action on the blood, acts as an antitoxin. The value of glycero-phosphoric acid as a nervine is well known, so that these two decomposition products might be said to represent the activity of brain extract.

These animal medicinal products are usually presented to us in either of two forms—the powder or the liquid extract. Owing to the readiness with which these organs undergo putrefactive changes, the greatest care must be observed to obtain a safe preparation. The organs or glands are removed with sterilized instruments; then carefully cleaned, to remove all extraneous matter, fat, connective tissue, etc.; and, after slicing, they are ready for extraction. The organs should always be removed by the operator himself from the freshly slaughtered animal, and all instruments, vessels, as well as the hands, should be rendered as aseptic as possible by thorough cleansing with soap and antiseptic solutions.

The powdered extract is usually prepared by expressing the juice from the glands, mixing with a definite quantity of sugar of milk, then spreading in thin layers upon glass, and drying at low temperature. These dried extracts are made

* An interesting paper upon this subject from which the author has abstracted is that of C. E. Stuart on "Animal Extracts" ("Phar. Jour.," 25, 177).

to represent a definite quantity of the fresh organ, and are usually two or three times the strength of the liquid extract. In other instances the cleansed glands or organs are ground up and dried entire at low temperature, observing precautions of sterilization. These products should be kept in a very dry and cool place, in order to avoid any putrefactive changes.

The liquid extracts are prepared by digesting the properly cleansed, sliced, and bruised organs in a mixture of glycerin and sterilized water, or glycerin, alcohol, and boric acid, or glycerin and 0.5 per cent. carbolized water; the resulting solution should be strictly aseptic, particularly if employed subcutaneously. Another class of liquid extracts (opotherapeutic) represent the active secretions of the various organs deprived of their inert albuminoids. Owing to the basic character of these secretions (belonging to the class of leucomains) advantage is taken of the readiness with which many of these form very soluble and diffusible double salts with sodium chlorid, the resulting ("opo-") extracts representing from 10 to 20 parts of the fresh organ.

Thyroid Extracts.

Employed in treatment of psoriasis, eczema, lupus, sporadic cretinism, exophthalmic goiter, myxedema, obesity, uterine fibroma, etc.

The glands from freshly slaughtered sheep are preferred.

Aiodin (Roche).—Tablets containing active matter of thyroid gland; contains 0.4 per cent. of iodin.

Iodothyrin (*Thyro-iodin* or *Thyrein*).—A compound isolated by Prof. Baumann from the thyroid glands of sheep, forming a brown powder which contains 9.3 per cent. of iodin and 0.5 per cent. of phosphorus. The commercial preparation is a milk-sugar trituration of this, each 1 Gm. of which contains 0.3 Mg. of iodin. Dose, 1–2 Gm. daily.

Opo-thyreoidin.—A liquid extract. See Opotherapeutics, page 98.

Thyraden (*Thyreoidin; Extract Thyreoda*, Haaf).—A stable, uniform preparation, without any unpleasant side action. One Gm. of this sugar of milk trituration is equivalent to 2 Gm. of the fresh gland containing 0.7 Mg. of iodin. Dose, 1–5 Gm. a day.

Thyreoantitoxin.—A nitrogenated crystalline principle free from iodin. Supposed to be a guanidin derivative.

Thyreoidin.—Forms dry scales; consists of two albuminoids, one a globulin and the other an important enzyme. Dose, 0.01 Gm. once or twice daily. When employed in aqueous solution these extracts require the addition of a few drops of chloroform to prevent any decomposition.

Thyreodinum Siccatum.—The purified and dried gland, 1 part representing 6 parts of fresh gland. Natkin claims to have isolated two active albuminoids from the normal gland—thyroproteid and thyreoidin.

Thyroidin (Hammond).—A sterilized liquid extract of thyroid gland of sheep. Dose, 5 drops.

Thyroproteid.—Forms dry scales; stated to be a uniform compound and very toxic. Acts first as an excitant then as paralyzant on the central nervous system.

Thymus Extracts.

Prepared from the thymus gland of young sheep or pigs. Employed in like disturbances as the thyroid gland, the chief distinction being that preparations of the thymus glands do not produce any disturbances of the heart or loss in weight. Also used in struma and Basedow's disease.

Nucleohiston.—An albuminoid body prepared from the lymph of the thymus glands of calves.

Opothymiin.—A liquid extract. See Opotherapeutics, page 98.

Thymus Siccatus Pulv.—Each 0.05 Gm. of the preparation represents 0.3 Gm. of the fresh gland. Dose, 2.5–5 Gm. daily.

Brain Extracts.

The products of the gray brain matter of calves are employed in treatment of neurasthenia, agoraphobia, chorea, psychosis, etc.

Cerebrine (Hammond).—A sterilized liquid extract. See Animal Extracts.

Cerebrinin or *Cerebrine Alpha.*—A sterilized liquid extract; prepared by Dr. J. Althaus.*

Cerebrinum (Paul).—A liquid extract.

Cerebrum Exsiccatum.—The dried and powdered organ, 1 part of which represents 5 parts of the fresh organ.

Liquor Cerebri Sterilisatus.

Pituitary Body Extracts.

Prepared from the pituitary body of the sheep. This is a small mass at the base of the brain, and weighs about ½ Gm. From the idea that acromegalia arose from a functional disturbance of the pituitary body, Marinesco applied extracts of this organ in such cases with considerable success. He employed tablets containing 0.1 Gm. of the dried body.

Hypophysis Cerebri Sicc. Pulv.—One part of this powdered gland represents 6.5 parts of the fresh product.

Opo-hypophysin.—A liquid extract. See Opotherapeutics, page 98.

Kidney Extracts.

Employed chiefly in nephritis.

Opo-renin.—A liquid extract. See Opotherapeutics, page 98.

Renaden.—An extract prepared from the kidneys. Daily dose, 6–8 Gm.

Renes (Roche).—Dried extract made into tablets.

Renes Siccati.—The dried and powdered kidney of the sheep or calf, 1 part of which represents 6 parts of the fresh organ. Dose, 0.5–1 Gm. three times daily.

Succus Renalis (E. and B.).—A liquid extract of kidneys prepared like the succus e testibus.

Suprarenal Capsules.

When administered internally, extracts of these organs cause a contraction of the arteries with a corresponding increase of blood pressure; a tonic influence is also exerted upon the heart. Employed in Addison's disease, diabetes insipidus, neurasthenia—in fact, all disturbances arising from a loss of vasomotoric tone.

Ext. Suprarenal Hemostatic (Merck).—A dry extract prepared from the dried capsules, the aqueous solution of which causes a strong contraction of the blood-vessels of mucous surfaces; hence employed (usually in conjunction with cocain) as hemostatic in capillary hemorrhages.

Glandulæ Suprarenalis Sicc. Pulv.—The dried and powdered suprarenal capsules of recently slaughtered sheep or cattle, 1 part of which represents 5 parts of the fresh organs. Dose, 0.2–0.5 Gm.

Opo-suprarenaliin.—A liquid extract. See Opotherapeutics, page 98.

Sphygmogenin.—An active preparation of the capsules made by Dr. Fraenkel. Recommended as antidote in nicotin poisoning.

Succus Glandulæ Suprarenalis (E. and B.).—A liquid extract prepared like the succus e testibus.

Supradin (Roche).—A dry extract containing 0.015 per cent. iodin.

Suprarenaden.—A dry extract of the capsules. Dose, 1–1.5 Gm.

Bone-marrow Extracts.

Latest investigations have established the fact that the red blood-corpuscles are chiefly developed in the red marrow of bones; hence the value of these preparations in anemia and chlorosis. Dr. Mason prepares a glycerin extract by macerating the red cancellous tissue obtained from the head of the femur of calves.

Medulladen.—An extract of ox marrow. Dose, 5–15 Gm. per day.

Medulla Ossium Rubra Sicc. Pulv.—The powdered red marrow.

Myelen.—A red syrupy extract of bone marrow.

Opo-medullin.—A fluid preparation of the red marrow. See Opotherapeutics, page 98.

Opo-ossiin.—A fluid preparation of the bone marrow. See Opotherapeutics, page 98.

Ossagen.—A calcium salt of the fatty acids of red bone marrow.

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* "Lancet," December 2, 1893.

Spleen Extracts.

The various preparations of the spleen are employed in the treatment of leucocythemia, Hodgkin's disease, anemia, myxedema, rachitis, enlarged spleen, etc.

Eurythol.—A syrupy extract. Dose, 1–2 teaspoonfuls daily.

Lien Sicc. Pulv.—The dried and powdered spleen of calves or sheep, 1 part of which represents 5 parts of the fresh organ.

Linadin (Roche).—A dry extract made into tablets, containing in addition about 1 per cent. of iron and from 0.015–0.02 per cent. of iodin.

Nuclein (Horbaczewski).—A yellowish powder prepared from the spleen. Dose, 2–3 Gm. Possesses antibactericidal and antitoxic properties. Is frequently given in conjunction with tuberculin.

Nucleohiston.—An albuminoid extract constituting a white powder obtained from the lymphatic glands and spleen. This possesses antibactericidal and antitoxic properties.

Opo-lienin.—A liquid extract. See Opotherapeutics, page 98.

Of the heart extracts we have the *Cardin* (Hammond), a sterilized extract of the heart of the ox. Employed as heart tonic.

Prostate Gland Extracts.

Preparations of the prostate gland of the bull are employed in hypertrophic conditions of the prostate gland.

Opo-prostiin.—A liquid extract. See Opotherapeutics, page 98.

Prostaden.—An extract given in daily doses of 2 Gm.

Prostata Siccata Pulv.—The dried and powdered gland, 1 part of which represents 6 parts of the fresh.

Prostata (Roche).—A dry extract in tablet form.

Testicle Extracts: Orchitic Fluid.

Prepared from the testicular fluid of the ram, and employed in treatment of mental diseases, hysteria, neurasthenia, etc.

Didymin.—A dry extract of the testes of the bull prepared in tablet form.

Opo-orchidin.—A liquid extract from the testes. See Opotherapeutics, page 98.

Spermin (Poehl).—A solution of the hydrochlorid of the base spermin, $C_5H_{14}N$, which occurs in the testicular fluid and the fluids of other glands. Spermin is a powerful tonic stimulant for the entire nervous system, and is employed in all diseases caused by auto-intoxication, as neurasthenia, tabes dorsalis, phthisis, scurvy, marasmus, etc. The preparations employed are spermin (Poehl), a 2 per cent. sterilized extract, and also an alcoholic solution of spermin sodium chlorid. Injection dose, 1–6 Cc.

Spermin (*Testicular Fluid*).—This, a sterilized testicular fluid, so warmly advocated by Brown-Séquard, appears to be best adapted in such mental diseases as ataxia and delirious epilepsy. Dr. Poehl found the principle spermin in various other organs of the body, he not regarding it as a specific for any particular form of malady, but as a promotive of the oxidations of the body.

Succus e Testibus Paratus (Egasse and Bouyé).—A liquid extract prepared from the testes of the bull. The preparation No. 0 is forced through d'Arsonval's filter by means of carbonic acid pressure, while No. 1 is sterilized in d'Arsonval's autoclave under a pressure of carbonic acid.

Testaden.—An extract of the testes of the bull. One Gm. representing 2 Gm. of the testicular fluid. Daily dose, 6–8 Gm.

Testes Siccati Pulv.—Dried and powdered testes of the bull. One part represents 6 parts of the glands.

Testidin.—A brown liquid extract of the testes.

Testin (Stroschein).—Tablets containing 0.2 per cent. of extract.

Testine (Hammond).—A sterilized extract of the testes of the ram.

Testis (Roche).—A dry extract prepared in tablet form.

Ovarian Extract.

Extracts of the fresh ovaries of the cow or swine are employed in amenorrhea caused by atrophy of genitals, also difficulties after total or partial extirpation of uterus or ovaries, also in chlorosis.

Oophorin.—An extract, 1 part of which represents 10 parts of the fresh ovaries.

Opo-ovulin.—A liquid extract. See Opotherapeutics, page 98.

Ovadin.—A dry extract, in tablet form, containing 0.00127–0.0048 per cent. of iodin.

Ovaraden or *Ovariin.*—One part of this dry extract represents 2 parts of the fresh ovaries. Dose, 3–6.

Ovariinum Siccum.—The dried and powdered ovaries of the cow, 1 part of which represents 5 parts of the fresh organs.

MISCELLANEOUS.

Mammæ (Roche).—A dry extract prepared from the fresh udder of the cow.

Mammæ Sicc. Pulv.—One part of the dry powder represents 8.75 parts of the cow's fresh udder.

Musculine (Hammond).—An extract of the muscular tissue of the ox.

Pulmonin.—An extract prepared from calves' lungs.

INDIFFERENT COMPOUNDS OF IRON.

Compounds of iron with the inorganic acids and halogens are characterized by the readiness with which they attack the teeth, mucous surfaces, and their astringent action; this latter being a serious objection where prolonged treatment is necessary. These features have been overcome in the class known as the "indifferent compounds of iron," which are combinations of iron with albumin, peptone, and the like, being especially adapted where prolonged administration of iron is indicated, as in persistent anemia and chlorosis.

Bunge first demonstrated the presence of iron combined with albumin in foodstuffs, preparing a nucleo-albumin iron compound from the yolk of eggs, calling it *Hematogen.* This combination of iron (hematogen) is distinguished from ordinary iron salts, as well as albuminates, in that its ammoniacal solution, upon the addition of a little ammonium sulfid, does not react at once, but only after the lapse of some time, when a dark coloration takes place through the formation of iron sulfid. Bunge reasoned that if iron occurred as a nucleo-albuminate in the egg, it subsequently appeared as such in the blood of fowls; also, that this same compound would be found in the human organism, having been introduced through food. A natural source for hematogen being impracticable, artificial methods have been devised based on the following: As is well known, when animal or vegetable albumins are heated with alkalies they do not coagulate, owing to the formation of alkali-albuminates; upon the addition of acids to such solutions, an albuminoid substance of acid character precipitates. Such acid albumins combine with bases forming albuminates; thus, on adding a neutral ferric salt to a neutral solution of potassium albuminate, a precipitate of iron albuminate forms which is soluble in alkalies forming double salts; these give an immediate black color with ammonium sulfid. On heating such an alkaline solution of iron-albuminate, a change in color takes place, and the product reacts much slower with ammonium sulfid. On adding a diluted acid to this albuminate a brown flocculent precipitate forms, which dissolves readily in diluted alkalies. This solution is known as a "ferrated albuminic acid," and is distinguished from the above iron-albuminate in that the blackening with ammonium sulfid takes place only after a time, a decomposition of the compound through the action of this reagent being first necessary. Again, this ferrated albuminic acid also differs from salts of iron in that, by electrolysis of its ammoniacal solution, hydrogen gas is evolved at the negative electrode instead of a deposition of iron taking place. Such compounds contain from 4 to 8 per cent. of iron.

Mafori endeavored to prepare organic iron compounds from such internal organs as the liver; in this he was successful in producing a compound closely corresponding to the ferrated albuminic acid, containing 2–4 per cent. of iron; however, he was not able to obtain uniform products with each operation. This difficulty was overcome by Schmiedeberg, who obtained a compound of constant composition by mixing finely chopped swine livers with an excess of water, heating gradually up to boiling temperature, filtering, then adding to the filtrate tartaric acid, whereby a

precipitate of "ferrated albuminic acid" was obtained. This forms a light brown powder, containing 6–8 per cent. of iron, soluble in alkaline liquids. This product is known commercially as—

Arsen-hemol contains 1 per cent. of As_2O_3.

Bromated Hemol contains 2.7 per cent. of bromin.

Copper Hemol contains 2 per cent. of copper.

Ferratin.—This method of production on a commercial scale consists in the preparation of acid albumin, as above cited, but differing in the length of time of heating of the alkali-albumin solution; this being continued until the fluid has lost its slimy consistency, whereby another form of acid is produced, the ferric compound of which, after drying, yields a more soluble product. Ferratin contains 7 per cent. of iron and is given in doses of 0.5 Gm.

Ferropyrin.—A compound of antipyrine and iron, containing 54 per cent. of the former and 12 per cent. of the latter.

Ferrosol.—A saccharated ferrous oxid, containing sodium chlorid.

Ferrum Albuminatum.—This albumin compound contains about 5 per cent. of Fe_2O_3.

Ferrum Albuminatum (peptonized).—Contains about 0.25 per cent. of iron.

Ferrum Caseinatum.—Contains 52 per cent. of Fe_2O_3.

Ferrum Dextrinatum.—Contains 10 per cent. of Fe_2O_3.

Ferrum Inulatum.—Contains 10 per cent. of Fe_2O_3.

Ferrum Natrium Albuminatum.

Hemalbumin.—A preparation containing salts and albuminoid constituents of blood in the form of acid non-coagulating albuminoids.

Hemalbumin (Dr. Dahmen).—An indifferent iron preparation, containing hematin, and hemoglobulin 49.17 per cent., serum albumin, and paraglobulin 4.6 per cent., along with the inorganic constituents of the blood, 46.23 per cent.

Hematicum.—A red-brown, clear, hydro-alcoholic fluid, containing indifferent compounds of iron.

Hematin-albumin.—A ferrated albumin, consisting of dried blood.

Hematogen (Bunge).—A nucleo-albuminoid preparation of iron (about 0.3 per cent.).

Hematogen (Hommel).—Defibrinated blood, from which the serum has been removed, condensed to small bulk, with a minute percentage of creosote. About 0.5 per cent. of iron is present.

Hematogen (Marfori).—A soluble ferrated albuminic acid, containing 0.7 per cent. of iron (Fe). This preparation usually forms a yellow powder, although it can be obtained in fluid form.

Hematol (Niemann).—A sterilized hemoglobin containing glycerin and brandy.

Hemochromogen.—Stated to be the product of the action of acids or alkalies on hemoglobin by absence of oxygen.

Hemoferrum.—An iron albuminoid prepared by drying blood from which the serum has been removed.

Hemogallol.—This, with hemol, constitute two excellent indifferent preparations of iron, discovered by Kobert, being obtained by the action of reducing agents upon the hemoglobin of ox-blood. These are distinguished from the other albuminoid preparations by greater digestibility, since they have already undergone the reduction necessary before entering the system. Pyrogallol is the reducing agent employed in the preparation of hemogallol.

Hemoglobin (*Hematropin*).—Red coloring-matter of the blood.

Hemol.—Allied to hemogallol, obtained by reduction of hemoglobin through zinc dust, contains 0.2 per cent. of iron. A number of combinations of hemol with other metals are in use, possessing the tonic properties of the former in conjunction with the medicinal properties of the latter.

Hydrargyro-iodo hemol contains 12.35 of Hg and 28 per cent. of iodin.

Iodo-hemol contains 16.6 per cent. of iodin.

Methemoglobin.—Obtained by oxidation of hemoglobin.

Zinc Hemol contains 1 per cent. of zinc.

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