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CHEMICAL  
CONVERSION TABLES

BATTLE AND GASCOYNE



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# CHEMICAL CONVERSION TABLES

FOR USE IN THE ANALYSIS OF

## COMMERCIAL FERTILIZERS COTTON SEED, IRON AND FOOD PRODUCTS, ETC.

BY

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## PREFACE

The present volume is a successor to the original Chemical Conversion Tables, published in 1885, by H. B. Battle and F. B. Dancy, at that time chemists in the N. C. Agricultural Experiment Station, at Raleigh. Before then, all calculations were made for each determination in order to arrive at the equivalent percentage. Consequently, the tables furnished great relief from such laborious work. They included only what was required in the analysis of commercial fertilizers and fertilizing ingredients. The present work, however, has been enlarged by the addition of tables designed to be of service also to cotton-seed products, iron and food chemists.

The original edition was followed by numerous imitations, but they were insufficient for the demands of rapid work. The main advantage in the former edition lay in the ability to read off the exact percentages at once from the actual weights as found. This advantage is likewise retained in the present volume.

The principal additions to be found in the present volume include tables for Alumina, Chlorine, Sulphur, Phosphorus, Silicon, Manganese and Magnesia. The table of Conversion Factors has been very largely increased, and now includes all compounds likely to be required.

The present tables are based on the International Atomic Weights of 1909, as reported by the Committee consisting of: F. W. Clarke, W. Ostwald, T. E. Thorpe, and G. Urbain.

W. J. GASCOYNE,  
H. B. BATTLE.





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TABLE I

## PHOSPHORIC ACID CONVERSION TABLE

In the following table for the conversion of Magnesium Pyrophosphate ( $\text{Mg}_2\text{P}_2\text{O}_7$ ) into Phosphoric Acid ( $\text{P}_2\text{O}_5$ ) and Tricalcium Phosphate ( $\text{Ca}_3\text{P}_2\text{O}_8$ ), the figures are based on the supposition that one-half gram. of the substance originally weighed out is precipitated and weighed as  $\text{Mg}_2\text{P}_2\text{O}_7$  in the determination of the  $\text{P}_2\text{O}_5$  present. This weight ( $\frac{1}{2}$  gram.) is taken because practically it is found more convenient than any other, and because it has been adopted by the Association of Official Agricultural Chemists. The range of this table extends to 38.26%  $\text{P}_2\text{O}_5$  and 83.61%  $\text{Ca}_3\text{P}_2\text{O}_8$ .

The factor employed for the conversion of  $\text{Mg}_2\text{P}_2\text{O}_7$  to  $\text{P}_2\text{O}_5$  is .6378. The factor for the conversion of  $\text{P}_2\text{O}_5$  to  $\text{Ca}_3\text{P}_2\text{O}_8$  is 2.185. These factors have been also adopted by the "Int. Kommission für die Analyse der Kunstdünger und Futtermittel," Dr. M. Ullmann, Hamburg, Secy.

In the table the numbers are carried to the second decimal, which is always sufficient for a commercial analysis. The rule in this table (as well as all the others in this book) for throwing aside decimals is invariable, and is to raise the second decimal to the next higher figure when the succeeding decimals amount to .005 or more; when these decimals do not amount to .005 the second decimal is unchanged. E. g., 21.06532 is changed to 21.07; and 16.32245 is allowed to remain 16.32.

The table can be used for 1 gram. as well as  $\frac{1}{2}$  gram., in which case the weight of  $\text{Mg}_2\text{P}_2\text{O}_7$  is divided by two; the resulting number is found in the table, and the per cent sought for will be found opposite.

Gram .0000—.0199 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_3P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_3P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_3P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_3P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.0000	.00	.00	.0050	.64	1.40	.0100	1.28	2.77	.0150	1.91	4.17
.0001	.01	.02	.0051	.65	1.42	.0101	1.29	2.82	.0151	1.93	4.21
.0002	.03	.07	.0052	.66	1.44	.0102	1.30	2.84	.0152	1.94	4.23
.0003	.04	.09	.0053	.68	1.49	.0103	1.31	2.86	.0153	1.95	4.26
.0004	.05	.11	.0054	.69	1.51	.0104	1.33	2.90	.0154	1.96	4.28
.0005	.06	.13	.0055	.70	1.53	.0105	1.34	2.93	.0155	1.98	4.32
.0006	.08	.17	.0056	.71	1.55	.0106	1.35	2.95	.0156	1.99	4.34
.0007	.09	.20	.0057	.73	1.59	.0107	1.36	2.99	.0157	2.00	4.37
.0008	.10	.22	.0058	.74	1.62	.0108	1.38	3.01	.0158	2.02	4.41
.0009	.11	.24	.0059	.75	1.64	.0109	1.39	3.03	.0159	2.03	4.43
.0010	.13	.28	.0060	.77	1.68	.0110	1.40	3.06	.0160	2.04	4.45
.0011	.14	.31	.0061	.78	1.70	.0111	1.42	3.10	.0161	2.05	4.48
.0012	.15	.33	.0062	.79	1.73	.0112	1.43	3.12	.0162	2.07	4.52
.0013	.17	.37	.0063	.80	1.75	.0113	1.44	3.14	.0163	2.08	4.54
.0014	.18	.39	.0064	.82	1.79	.0114	1.45	3.17	.0164	2.09	4.56
.0015	.19	.42	.0065	.83	1.81	.0115	1.47	3.21	.0165	2.10	4.59
.0016	.20	.44	.0066	.84	1.83	.0116	1.48	3.23	.0166	2.12	4.63
.0017	.22	.48	.0067	.85	1.86	.0117	1.49	3.25	.0167	2.13	4.65
.0018	.23	.50	.0068	.87	1.90	.0118	1.51	3.30	.0168	2.14	4.68
.0019	.24	.52	.0069	.88	1.92	.0119	1.52	3.32	.0169	2.16	4.72
.0020	.26	.57	.0070	.89	1.94	.0120	1.53	3.34	.0170	2.17	4.74
.0021	.27	.59	.0071	.91	1.99	.0121	1.54	3.36	.0171	2.18	4.76
.0022	.28	.61	.0072	.92	2.01	.0122	1.56	3.40	.0172	2.19	4.79
.0023	.29	.63	.0073	.93	2.03	.0123	1.57	3.43	.0173	2.21	4.83
.0024	.31	.68	.0074	.94	2.05	.0124	1.58	3.45	.0174	2.22	4.85
.0025	.32	.70	.0075	.96	2.10	.0125	1.59	3.47	.0175	2.23	4.87
.0026	.33	.72	.0076	.97	2.12	.0126	1.61	3.51	.0176	2.25	4.91
.0027	.34	.74	.0077	.98	2.14	.0127	1.62	3.54	.0177	2.26	4.94
.0028	.36	.79	.0078	.99	2.16	.0128	1.63	3.56	.0178	2.27	4.96
.0029	.37	.81	.0079	1.01	2.21	.0129	1.65	3.60	.0179	2.28	4.98
.0030	.38	.83	.0080	1.02	2.23	.0130	1.66	3.62	.0180	2.30	5.03
.0031	.40	.87	.0081	1.03	2.25	.0131	1.67	3.65	.0181	2.31	5.05
.0032	.41	.90	.0082	1.05	2.29	.0132	1.68	3.67	.0182	2.32	5.07
.0033	.42	.92	.0083	1.06	2.32	.0133	1.70	3.71	.0183	2.33	5.09
.0034	.43	.94	.0084	1.07	2.34	.0134	1.71	3.73	.0184	2.35	5.13
.0035	.45	.98	.0085	1.08	2.36	.0135	1.72	3.75	.0185	2.36	5.16
.0036	.46	1.00	.0086	1.10	2.40	.0136	1.73	3.78	.0186	2.37	5.18
.0037	.47	1.03	.0087	1.11	2.42	.0137	1.75	3.82	.0187	2.39	5.22
.0038	.48	1.05	.0088	1.12	2.45	.0138	1.76	3.84	.0188	2.40	5.24
.0039	.50	1.09	.0089	1.14	2.49	.0139	1.77	3.86	.0189	2.41	5.27
.0040	.51	1.11	.0090	1.15	2.51	.0140	1.79	3.91	.0190	2.42	5.29
.0041	.52	1.14	.0091	1.16	2.53	.0141	1.80	3.93	.0191	2.44	5.33
.0042	.54	1.18	.0092	1.17	2.56	.0142	1.81	3.95	.0192	2.45	5.35
.0043	.55	1.20	.0093	1.19	2.60	.0143	1.82	3.97	.0193	2.46	5.38
.0044	.56	1.22	.0094	1.20	2.62	.0144	1.84	4.02	.0194	2.47	5.40
.0045	.57	1.25	.0095	1.21	2.64	.0145	1.85	4.04	.0195	2.49	5.44
.0046	.59	1.29	.0096	1.22	2.67	.0146	1.86	4.06	.0196	2.50	5.46
.0047	.60	1.31	.0097	1.24	2.71	.0147	1.88	4.08	.0197	2.51	5.48
.0048	.61	1.33	.0098	1.25	2.73	.0148	1.89	4.13	.0198	2.53	5.53
.0049	.63	1.38	.0099	1.26	2.75	.0149	1.90	4.15	.0199	2.54	5.55

Gram .0200—.0399 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$M_{12}P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$M_{12}P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$M_{12}P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$M_{12}P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$
.0200	2.55	5.57	.0250	3.19	6.97	.0300	3.83	8.37	.0350	4.46	9.75
.0201	2.56	5.59	.0251	3.20	6.99	.0301	3.84	8.39	.0351	4.48	9.79
.0202	2.58	5.64	.0252	3.21	7.01	.0302	3.85	8.41	.0352	4.49	9.81
.0203	2.59	5.66	.0253	3.23	7.06	.0303	3.87	8.45	.0353	4.50	9.83
.0204	2.60	5.68	.0254	3.24	7.08	.0304	3.88	8.48	.0354	4.52	9.88
.0205	2.61	5.70	.0255	3.25	7.10	.0305	3.89	8.50	.0355	4.53	9.90
.0206	2.63	5.75	.0256	3.27	7.14	.0306	3.90	8.52	.0356	4.54	9.92
.0207	2.64	5.77	.0257	3.28	7.17	.0307	3.92	8.56	.0357	4.55	9.94
.0208	2.65	5.79	.0258	3.29	7.19	.0308	3.93	8.59	.0358	4.57	9.99
.0209	2.67	5.83	.0259	3.30	7.21	.0309	3.94	8.61	.0359	4.58	10.01
.0210	2.68	5.86	.0260	3.32	7.25	.0310	3.95	8.63	.0360	4.59	10.03
.0211	2.69	5.88	.0261	3.33	7.28	.0311	3.97	8.67	.0361	4.60	10.05
.0212	2.70	5.90	.0262	3.34	7.30	.0312	3.98	8.70	.0362	4.62	10.09
.0213	2.72	5.94	.0263	3.35	7.32	.0313	3.99	8.72	.0363	4.63	10.12
.0214	2.73	5.97	.0264	3.37	7.36	.0314	4.01	8.76	.0364	4.64	10.14
.0215	2.74	5.99	.0265	3.38	7.39	.0315	4.02	8.78	.0365	4.66	10.18
.0216	2.76	6.03	.0266	3.39	7.41	.0316	4.03	8.81	.0366	4.67	10.20
.0217	2.77	6.05	.0267	3.41	7.44	.0317	4.04	8.83	.0367	4.68	10.23
.0218	2.78	6.07	.0268	3.42	7.47	.0318	4.06	8.87	.0368	4.69	10.25
.0219	2.79	6.10	.0269	3.43	7.49	.0319	4.07	8.89	.0369	4.71	10.29
.0220	2.81	6.14	.0270	3.44	7.52	.0320	4.08	8.91	.0370	4.72	10.31
.0221	2.82	6.16	.0271	3.46	7.56	.0321	4.09	8.94	.0371	4.73	10.34
.0222	2.83	6.18	.0272	3.47	7.58	.0322	4.11	8.98	.0372	4.75	10.38
.0223	2.84	6.21	.0273	3.48	7.60	.0323	4.12	9.00	.0373	4.76	10.40
.0224	2.86	6.25	.0274	3.50	7.64	.0324	4.13	9.02	.0374	4.77	10.42
.0225	2.87	6.27	.0275	3.51	7.67	.0325	4.15	9.07	.0375	4.78	10.44
.0226	2.88	6.29	.0276	3.52	7.69	.0326	4.16	9.09	.0376	4.80	10.49
.0227	2.90	6.33	.0277	3.53	7.71	.0327	4.17	9.11	.0377	4.81	10.51
.0228	2.91	6.36	.0278	3.55	7.76	.0328	4.18	9.13	.0378	4.82	10.53
.0229	2.92	6.38	.0279	3.56	7.78	.0329	4.20	9.18	.0379	4.83	10.55
.0230	2.93	6.40	.0280	3.57	7.80	.0330	4.21	9.20	.0380	4.85	10.60
.0231	2.95	6.45	.0281	3.58	7.82	.0331	4.22	9.22	.0381	4.86	10.62
.0232	2.96	6.47	.0282	3.60	7.87	.0332	4.23	9.24	.0382	4.87	10.64
.0233	2.97	6.49	.0283	3.61	7.89	.0333	4.25	9.29	.0383	4.89	10.68
.0234	2.98	6.51	.0284	3.62	7.91	.0334	4.26	9.31	.0384	4.90	10.71
.0235	3.00	6.56	.0285	3.64	7.95	.0335	4.27	9.33	.0385	4.91	10.73
.0236	3.01	6.58	.0286	3.65	7.98	.0336	4.29	9.38	.0386	4.92	10.75
.0237	3.02	6.60	.0287	3.66	8.00	.0337	4.30	9.40	.0387	4.94	10.80
.0238	3.04	6.64	.0288	3.67	8.02	.0338	4.31	9.42	.0388	4.95	10.82
.0239	3.05	6.66	.0289	3.69	8.06	.0339	4.32	9.44	.0389	4.96	10.84
.0240	3.06	6.69	.0290	3.70	8.08	.0340	4.34	9.48	.0390	4.97	10.86
.0241	3.07	6.71	.0291	3.71	8.11	.0341	4.35	9.50	.0391	4.99	10.90
.0242	3.09	6.75	.0292	3.72	8.13	.0342	4.36	9.53	.0392	5.00	10.93
.0243	3.10	6.77	.0293	3.74	8.17	.0343	4.38	9.57	.0393	5.01	10.95
.0244	3.11	6.80	.0294	3.75	8.19	.0344	4.39	9.59	.0394	5.03	10.99
.0245	3.13	6.84	.0295	3.76	8.22	.0345	4.40	9.61	.0395	5.04	11.01
.0246	3.14	6.86	.0296	3.78	8.26	.0346	4.41	9.64	.0396	5.05	11.03
.0247	3.15	6.88	.0297	3.79	8.28	.0347	4.43	9.68	.0397	5.06	11.06
.0248	3.16	6.90	.0298	3.80	8.30	.0348	4.44	9.70	.0398	5.08	11.10
.0249	3.18	6.95	.0299	3.81	8.32	.0349	4.45	9.72	.0399	5.09	11.12

Gram .0400—.0599 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.0400	5.10	11.14	.0450	5.74	12.54	.0500	6.38	13.94	.0550	7.02	15.34
.0401	5.11	11.16	.0451	5.75	12.56	.0501	6.39	13.96	.0551	7.03	15.36
.0402	5.13	11.21	.0452	5.77	12.60	.0502	6.40	13.98	.0552	7.04	15.38
.0403	5.14	11.23	.0453	5.78	12.63	.0503	6.42	14.02	.0553	7.05	15.40
.0404	5.15	11.25	.0454	5.79	12.65	.0504	6.43	14.05	.0554	7.07	15.45
.0405	5.17	11.30	.0455	5.80	12.67	.0505	6.44	14.07	.0555	7.08	15.47
.0406	5.18	11.32	.0456	5.82	12.71	.0506	6.45	14.09	.0556	7.09	15.49
.0407	5.19	11.34	.0457	5.83	12.74	.0507	6.47	14.14	.0557	7.11	15.54
.0408	5.20	11.36	.0458	5.84	12.76	.0508	6.48	14.16	.0558	7.12	15.56
.0409	5.22	11.41	.0459	5.86	12.80	.0509	6.49	14.18	.0559	7.13	15.58
.0410	5.23	11.43	.0460	5.87	12.83	.0510	6.51	14.22	.0560	7.14	15.60
.0411	5.24	11.45	.0461	5.88	12.85	.0511	6.52	14.25	.0561	7.16	15.64
.0412	5.26	11.49	.0462	5.89	12.87	.0512	6.53	14.27	.0562	7.17	15.67
.0413	5.27	11.51	.0463	5.91	12.91	.0513	6.54	14.29	.0563	7.18	15.69
.0414	5.28	11.54	.0464	5.92	12.94	.0514	6.56	14.33	.0564	7.19	15.71
.0415	5.29	11.56	.0465	5.93	12.96	.0515	6.57	14.36	.0565	7.21	15.76
.0416	5.31	11.60	.0466	5.94	12.98	.0516	6.58	14.38	.0566	7.22	15.78
.0417	5.32	11.62	.0467	5.96	13.02	.0517	6.59	14.40	.0567	7.23	15.80
.0418	5.33	11.65	.0468	5.97	13.04	.0518	6.61	14.44	.0568	7.25	15.84
.0419	5.34	11.67	.0469	5.98	13.07	.0519	6.62	14.46	.0569	7.26	15.86
.0420	5.36	11.71	.0470	6.00	13.11	.0520	6.63	14.49	.0570	7.27	15.88
.0421	5.37	11.73	.0471	6.01	13.13	.0521	6.65	14.53	.0571	7.28	15.91
.0422	5.38	11.76	.0472	6.02	13.15	.0522	6.66	14.55	.0572	7.30	15.95
.0423	5.40	11.80	.0473	6.03	13.18	.0523	6.67	14.57	.0573	7.31	15.97
.0424	5.41	11.82	.0474	6.05	13.22	.0524	6.68	14.60	.0574	7.32	15.99
.0425	5.42	11.84	.0475	6.06	13.24	.0525	6.70	14.64	.0575	7.33	16.02
.0426	5.43	11.86	.0476	6.07	13.26	.0526	6.71	14.66	.0576	7.35	16.06
.0427	5.45	11.90	.0477	6.08	13.28	.0527	6.72	14.68	.0577	7.36	16.08
.0428	5.46	11.92	.0478	6.10	13.33	.0528	6.74	14.73	.0578	7.37	16.10
.0429	5.47	11.95	.0479	6.11	13.35	.0529	6.75	14.75	.0579	7.39	16.15
.0430	5.49	11.99	.0480	6.12	13.37	.0530	6.76	14.77	.0580	7.40	16.17
.0431	5.50	12.02	.0481	6.14	13.41	.0531	6.77	14.79	.0581	7.41	16.19
.0432	5.51	12.04	.0482	6.15	13.44	.0532	6.79	14.83	.0582	7.42	16.21
.0433	5.52	12.06	.0483	6.16	13.46	.0533	6.80	14.86	.0583	7.44	16.26
.0434	5.54	12.10	.0484	6.17	13.48	.0534	6.81	14.88	.0584	7.45	16.28
.0435	5.55	12.13	.0485	6.19	13.52	.0535	6.83	14.93	.0585	7.46	16.30
.0436	5.56	12.15	.0486	6.20	13.55	.0536	6.84	14.95	.0586	7.48	16.35
.0437	5.57	12.17	.0487	6.21	13.57	.0537	6.85	14.97	.0587	7.49	16.37
.0438	5.59	12.21	.0488	6.22	13.59	.0538	6.86	14.99	.0588	7.50	16.39
.0439	5.60	12.24	.0489	6.24	13.63	.0539	6.88	15.03	.0589	7.51	16.41
.0440	5.61	12.26	.0490	6.25	13.66	.0540	6.89	15.05	.0590	7.53	16.45
.0441	5.63	12.30	.0491	6.26	13.68	.0541	6.90	15.08	.0591	7.54	16.47
.0442	5.64	12.32	.0492	6.28	13.72	.0542	6.91	15.10	.0592	7.55	16.50
.0443	5.65	12.35	.0493	6.29	13.74	.0543	6.93	15.14	.0593	7.56	16.52
.0444	5.66	12.37	.0494	6.30	13.77	.0544	6.94	15.16	.0594	7.58	16.56
.0445	5.68	12.41	.0495	6.31	13.79	.0545	6.95	15.19	.0595	7.59	16.58
.0446	5.69	12.43	.0496	6.33	13.83	.0546	6.96	15.21	.0596	7.60	16.61
.0447	5.70	12.45	.0497	6.34	13.85	.0547	6.98	15.25	.0597	7.61	16.63
.0448	5.71	12.48	.0498	6.35	13.87	.0548	6.99	15.27	.0598	7.63	16.67
.0449	5.73	12.52	.0499	6.37	13.92	.0549	7.00	15.30	.0599	7.64	16.69

Gram .0600—.0799 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$
.0600	7.65	16.72	.0650	8.29	18.11	.0700	8.93	19.49	.0750	9.57	20.91
.0601	7.67	16.76	.0651	8.30	18.14	.0701	8.94	19.53	.0751	9.58	20.93
.0602	7.68	16.78	.0652	8.32	18.18	.0702	8.95	19.56	.0752	9.59	20.95
.0603	7.69	16.80	.0653	8.33	18.20	.0703	8.97	19.60	.0753	9.61	21.00
.0604	7.70	16.82	.0654	8.34	18.22	.0704	8.98	19.62	.0754	9.62	21.02
.0605	7.72	16.87	.0655	8.36	18.27	.0705	8.99	19.64	.0755	9.63	21.04
.0606	7.73	16.89	.0656	8.37	18.29	.0706	9.01	19.69	.0756	9.64	21.06
.0607	7.74	16.91	.0657	8.38	18.31	.0707	9.02	19.71	.0757	9.66	21.11
.0608	7.76	16.95	.0658	8.39	18.33	.0708	9.03	19.73	.0758	9.67	21.13
.0609	7.77	16.98	.0659	8.41	18.37	.0709	9.04	19.75	.0759	9.68	21.15
.0610	7.78	17.00	.0660	8.42	18.40	.0710	9.06	19.80	.0760	9.69	21.17
.0611	7.79	17.02	.0661	8.43	18.42	.0711	9.07	19.82	.0761	9.71	21.22
.0612	7.81	17.07	.0662	8.44	18.44	.0712	9.08	19.84	.0762	9.72	21.24
.0613	7.82	17.09	.0663	8.46	18.49	.0713	9.10	19.88	.0763	9.73	21.26
.0614	7.83	17.11	.0664	8.47	18.51	.0714	9.11	19.91	.0764	9.75	21.30
.0615	7.84	17.13	.0665	8.48	18.53	.0715	9.12	19.93	.0765	9.76	21.33
.0616	7.86	17.17	.0666	8.50	18.57	.0716	9.13	19.95	.0766	9.77	21.35
.0617	7.87	17.20	.0667	8.51	18.59	.0717	9.15	19.99	.0767	9.78	21.37
.0618	7.88	17.22	.0668	8.52	18.62	.0718	9.16	20.01	.0768	9.80	21.41
.0619	7.90	17.26	.0669	8.53	18.64	.0719	9.17	20.04	.0769	9.81	21.43
.0620	7.91	17.28	.0670	8.55	18.68	.0720	9.18	20.06	.0770	9.82	21.46
.0621	7.92	17.31	.0671	8.56	18.70	.0721	9.20	20.10	.0771	9.83	21.48
.0622	7.93	17.33	.0672	8.57	18.73	.0722	9.21	20.12	.0772	9.85	21.52
.0623	7.95	17.37	.0673	8.58	18.75	.0723	9.22	20.15	.0773	9.86	21.54
.0624	7.96	17.39	.0674	8.60	18.79	.0724	9.24	20.19	.0774	9.87	21.57
.0625	7.97	17.41	.0675	8.61	18.81	.0725	9.25	20.21	.0775	9.89	21.61
.0626	7.99	17.46	.0676	8.62	18.83	.0726	9.26	20.23	.0776	9.90	21.63
.0627	8.00	17.48	.0677	8.64	18.88	.0727	9.27	20.25	.0777	9.91	21.65
.0628	8.01	17.50	.0678	8.65	18.90	.0728	9.29	20.30	.0778	9.93	21.70
.0629	8.02	17.52	.0679	8.66	18.92	.0729	9.30	20.32	.0779	9.94	21.72
.0630	8.04	17.57	.0680	8.67	18.94	.0730	9.31	20.34	.0780	9.95	21.74
.0631	8.05	17.59	.0681	8.69	18.99	.0731	9.32	20.36	.0781	9.96	21.76
.0632	8.06	17.61	.0682	8.70	19.01	.0732	9.34	20.41	.0782	9.98	21.81
.0633	8.07	17.63	.0683	8.71	19.03	.0733	9.35	20.43	.0783	9.99	21.83
.0634	8.09	17.68	.0684	8.73	19.08	.0734	9.36	20.45	.0784	10.00	21.85
.0635	8.10	17.70	.0685	8.74	19.10	.0735	9.38	20.50	.0785	10.01	21.87
.0636	8.11	17.72	.0686	8.75	19.12	.0736	9.39	20.52	.0786	10.03	21.92
.0637	8.13	17.77	.0687	8.76	19.14	.0737	9.40	20.54	.0787	10.04	21.94
.0638	8.14	17.79	.0688	8.78	19.19	.0738	9.41	20.56	.0788	10.05	21.96
.0639	8.15	17.81	.0689	8.79	19.21	.0739	9.43	20.61	.0789	10.06	21.98
.0640	8.16	17.83	.0690	8.80	19.23	.0740	9.44	20.63	.0790	10.08	22.02
.0641	8.18	17.88	.0691	8.81	19.25	.0741	9.45	20.65	.0791	10.09	22.05
.0642	8.19	17.90	.0692	8.83	19.30	.0742	9.46	20.67	.0792	10.10	22.07
.0643	8.20	17.92	.0693	8.84	19.32	.0743	9.48	20.72	.0793	10.12	22.11
.0644	8.21	17.94	.0694	8.85	19.34	.0744	9.49	20.74	.0794	10.13	22.13
.0645	8.23	17.98	.0695	8.87	19.38	.0745	9.50	20.76	.0795	10.14	22.16
.0646	8.24	18.00	.0696	8.88	19.40	.0746	9.52	20.80	.0796	10.15	22.18
.0647	8.25	18.03	.0697	8.89	19.42	.0747	9.53	20.82	.0797	10.17	22.22
.0648	8.27	18.07	.0698	8.90	19.45	.0748	9.54	20.84	.0798	10.18	22.24
.0649	8.28	18.09	.0699	8.92	19.49	.0749	9.55	20.87	.0799	10.19	22.27

Gram .0800—.0999 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.0800	10.20	22.29	.0850	10.84	23.69	.0900	11.48	25.08	.0950	12.12	26.48
.0801	10.22	22.33	.0851	10.86	23.73	.0901	11.49	25.11	.0951	12.13	26.50
.0802	10.23	22.35	.0852	10.87	23.75	.0902	11.51	25.15	.0952	12.14	26.53
.0803	10.24	22.37	.0853	10.88	23.77	.0903	11.52	25.17	.0953	12.16	26.57
.0804	10.26	22.42	.0854	10.89	23.79	.0904	11.53	25.19	.0954	12.17	26.59
.0805	10.27	22.44	.0855	10.91	23.84	.0905	11.54	25.21	.0955	12.18	26.61
.0806	10.28	22.46	.0856	10.92	23.86	.0906	11.56	25.26	.0956	12.19	26.64
.0807	10.29	22.48	.0857	10.93	23.88	.0907	11.57	25.28	.0957	12.21	26.68
.0808	10.31	22.53	.0858	10.94	23.90	.0908	11.58	25.30	.0958	12.22	26.70
.0809	10.32	22.55	.0859	10.96	23.95	.0909	11.60	25.35	.0959	12.23	26.72
.0810	10.33	22.57	.0860	10.97	23.97	.0910	11.61	25.37	.0960	12.25	26.76
.0811	10.35	22.61	.0861	10.98	23.99	.0911	11.62	25.39	.0961	12.26	26.79
.0812	10.36	22.64	.0862	11.00	24.04	.0912	11.63	25.42	.0962	12.27	26.81
.0813	10.37	22.66	.0863	11.01	24.06	.0913	11.65	25.46	.0963	12.28	26.83
.0814	10.38	22.68	.0864	11.02	24.08	.0914	11.66	25.48	.0964	12.30	26.87
.0815	10.40	22.72	.0865	11.03	24.10	.0915	11.67	25.50	.0965	12.31	26.90
.0816	10.41	22.75	.0866	11.05	24.14	.0916	11.68	25.52	.0966	12.32	26.92
.0817	10.42	22.77	.0867	11.06	24.17	.0917	11.70	25.56	.0967	12.34	26.96
.0818	10.43	22.79	.0868	11.07	24.19	.0918	11.71	25.59	.0968	12.35	26.98
.0819	10.45	22.83	.0869	11.08	24.21	.0919	11.72	25.61	.0969	12.36	27.01
.0820	10.46	22.86	.0870	11.10	24.25	.0920	11.74	25.66	.0970	12.37	27.03
.0821	10.47	22.88	.0871	11.11	24.28	.0921	11.75	25.68	.0971	12.39	27.07
.0822	10.49	22.92	.0872	11.12	24.30	.0922	11.76	25.70	.0972	12.40	27.09
.0823	10.50	22.94	.0873	11.14	24.34	.0923	11.77	25.72	.0973	12.41	27.12
.0824	10.51	22.96	.0874	11.15	24.36	.0924	11.79	25.76	.0974	12.42	27.14
.0825	10.52	22.99	.0875	11.16	24.38	.0925	11.80	25.78	.0975	12.44	27.18
.0826	10.54	23.03	.0876	11.17	24.41	.0926	11.81	25.80	.0976	12.45	27.20
.0827	10.55	23.05	.0877	11.19	24.45	.0927	11.82	25.83	.0977	12.46	27.23
.0828	10.56	23.07	.0878	11.20	24.47	.0928	11.84	25.87	.0978	12.48	27.27
.0829	10.57	23.10	.0879	11.21	24.49	.0929	11.85	25.89	.0979	12.49	27.29
.0830	10.59	23.14	.0880	11.23	24.54	.0930	11.86	25.91	.0980	12.50	27.31
.0831	10.60	23.16	.0881	11.24	24.56	.0931	11.88	25.96	.0981	12.51	27.33
.0832	10.61	23.18	.0882	11.25	24.58	.0932	11.89	25.98	.0982	12.53	27.38
.0833	10.63	23.23	.0883	11.26	24.60	.0933	11.90	26.00	.0983	12.54	27.40
.0834	10.64	23.25	.0884	11.28	24.65	.0934	11.91	26.02	.0984	12.55	27.42
.0835	10.65	23.27	.0885	11.29	24.67	.0935	11.93	26.07	.0985	12.56	27.44
.0836	10.66	23.29	.0886	11.30	24.69	.0936	11.94	26.09	.0986	12.58	27.49
.0837	10.68	23.33	.0887	11.31	24.71	.0937	11.95	26.11	.0987	12.59	27.51
.0838	10.69	23.36	.0888	11.33	24.75	.0938	11.97	26.15	.0988	12.60	27.53
.0839	10.70	23.38	.0889	11.34	24.78	.0939	11.98	26.17	.0989	12.62	27.57
.0840	10.72	23.42	.0890	11.35	24.80	.0940	11.99	26.20	.0990	12.63	27.59
.0841	10.73	23.44	.0891	11.37	24.84	.0941	12.00	26.22	.0991	12.64	27.62
.0842	10.74	23.47	.0892	11.38	24.86	.0942	12.02	26.26	.0992	12.65	27.64
.0843	10.75	23.49	.0893	11.39	24.89	.0943	12.03	26.29	.0993	12.67	27.68
.0844	10.77	23.53	.0894	11.41	24.93	.0944	12.04	26.31	.0994	12.68	27.71
.0845	10.78	23.55	.0895	11.42	24.95	.0945	12.05	26.33	.0995	12.69	27.73
.0846	10.79	23.58	.0896	11.43	24.97	.0946	12.07	26.37	.0996	12.70	27.75
.0847	10.80	23.60	.0897	11.44	25.00	.0947	12.08	26.39	.0997	12.72	27.79
.0848	10.82	23.64	.0898	11.45	25.02	.0948	12.09	26.42	.0998	12.73	27.82
.0849	10.83	23.66	.0899	11.47	25.06	.0949	12.11	26.46	.0999	12.74	27.84



Gram .1000—,1199 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.1000	12.76	27.88	.1050	13.39	29.26	.1100	14.03	30.66	.1150	14.67	32.05
.1001	12.77	27.90	.1051	13.41	29.30	.1101	14.04	30.68	.1151	14.68	32.08
.1002	12.78	27.92	.1052	13.42	29.32	.1102	14.06	30.72	.1152	14.69	32.10
.1003	12.79	27.95	.1053	13.43	29.34	.1103	14.07	30.74	.1153	14.71	32.14
.1004	12.81	27.99	.1054	13.44	29.36	.1104	14.08	30.76	.1154	14.72	32.16
.1005	12.82	28.01	.1055	13.46	29.40	.1105	14.09	30.79	.1155	14.73	32.19
.1006	12.83	28.03	.1056	13.47	29.43	.1106	14.11	30.83	.1156	14.75	32.23
.1007	12.85	28.08	.1057	13.48	29.45	.1107	14.12	30.85	.1157	14.76	32.25
.1008	12.86	28.10	.1058	13.50	29.50	.1108	14.14	30.90	.1158	14.77	32.27
.1009	12.87	28.12	.1059	13.51	29.52	.1109	14.15	30.92	.1159	14.78	32.29
.1010	12.88	28.14	.1060	13.52	29.54	.1110	14.16	30.94	.1160	14.80	32.34
.1011	12.90	28.18	.1061	13.53	29.56	.1111	14.17	30.96	.1161	14.81	32.36
.1012	12.91	28.21	.1062	13.55	29.60	.1112	14.18	30.98	.1162	14.82	32.38
.1013	12.92	28.23	.1063	13.56	29.63	.1113	14.20	31.02	.1163	14.84	32.43
.1014	12.93	28.25	.1064	13.57	29.65	.1114	14.21	31.05	.1164	14.85	32.45
.1015	12.95	28.29	.1065	13.59	29.69	.1115	14.22	31.07	.1165	14.86	32.47
.1016	12.96	28.32	.1066	13.60	29.71	.1116	14.24	31.11	.1166	14.87	32.49
.1017	12.97	28.34	.1067	13.61	29.74	.1117	14.25	31.13	.1167	14.89	32.53
.1018	12.99	28.38	.1068	13.62	29.76	.1118	14.26	31.16	.1168	14.90	32.56
.1019	13.00	28.40	.1069	13.64	29.80	.1119	14.27	31.18	.1169	14.91	32.58
.1020	13.01	28.43	.1070	13.65	29.82	.1120	14.29	31.22	.1170	14.92	32.60
.1021	13.02	28.45	.1071	13.66	29.85	.1121	14.30	31.24	.1171	14.94	32.64
.1022	13.04	28.49	.1072	13.67	29.87	.1122	14.31	31.27	.1172	14.95	32.67
.1023	13.05	28.51	.1073	13.69	29.91	.1123	14.32	31.29	.1173	14.96	32.69
.1024	13.06	28.54	.1074	13.70	29.93	.1124	14.34	31.33	.1174	14.98	32.73
.1025	13.07	28.56	.1075	13.71	29.96	.1125	14.35	31.35	.1175	14.99	32.75
.1026	13.09	28.60	.1076	13.73	30.00	.1126	14.36	31.38	.1176	15.00	32.78
.1027	13.10	28.62	.1077	13.74	30.02	.1127	14.38	31.42	.1177	15.01	32.80
.1028	13.11	28.65	.1078	13.75	30.04	.1128	14.39	31.44	.1178	15.03	32.84
.1029	13.13	28.69	.1079	13.76	30.07	.1129	14.40	31.46	.1179	15.04	32.86
.1030	13.14	28.71	.1080	13.78	30.11	.1130	14.41	31.49	.1180	15.05	32.88
.1031	13.15	28.73	.1081	13.79	30.13	.1131	14.43	31.53	.1181	15.06	32.91
.1032	13.16	28.75	.1082	13.80	30.15	.1132	14.44	31.55	.1182	15.08	32.95
.1033	13.18	28.79	.1083	13.81	30.17	.1133	14.45	31.57	.1183	15.09	32.97
.1034	13.19	28.82	.1084	13.83	30.21	.1134	14.47	31.62	.1184	15.10	32.99
.1035	13.20	28.84	.1085	13.84	30.24	.1135	14.48	31.64	.1185	15.12	33.04
.1036	13.22	28.88	.1086	13.85	30.26	.1136	14.49	31.66	.1186	15.13	33.06
.1037	13.23	28.90	.1087	13.87	30.31	.1137	14.50	31.68	.1187	15.14	33.08
.1038	13.24	28.93	.1088	13.88	30.33	.1138	14.52	31.73	.1188	15.15	33.10
.1039	13.25	28.95	.1089	13.89	30.35	.1139	14.53	31.75	.1189	15.17	33.15
.1040	13.27	28.99	.1090	13.90	30.37	.1140	14.54	31.77	.1190	15.18	33.17
.1041	13.28	29.01	.1091	13.92	30.41	.1141	14.55	31.79	.1191	15.19	33.19
.1042	13.29	29.04	.1092	13.93	30.44	.1142	14.57	31.83	.1192	15.21	33.23
.1043	13.30	29.06	.1093	13.94	30.46	.1143	14.58	31.86	.1193	15.22	33.25
.1044	13.32	29.10	.1094	13.96	30.50	.1144	14.59	31.88	.1194	15.23	33.28
.1045	13.33	29.12	.1095	13.97	30.52	.1145	14.61	31.92	.1195	15.24	33.30
.1046	13.34	29.15	.1096	13.98	30.55	.1146	14.62	31.94	.1196	15.26	33.34
.1047	13.36	29.19	.1097	13.99	30.57	.1147	14.63	31.97	.1197	15.27	33.36
.1048	13.37	29.21	.1098	14.01	30.61	.1148	14.64	31.99	.1198	15.28	33.39
.1049	13.38	29.24	.1099	14.02	30.63	.1149	14.66	32.03	.1199	15.29	33.41

Gram .1200—.1399 (Basis  $\frac{1}{2}$  Grm.)

	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .			Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .			Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .			Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .		
	Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P <sub>2</sub> O <sub>5</sub> .	Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P <sub>2</sub> O <sub>5</sub> .	Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P <sub>2</sub> O <sub>5</sub> .	Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P <sub>2</sub> O <sub>5</sub> .	Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .
.0800	.1200	15.31	33.45	.1250	15.95	34.85	.1300	16.58	36.23	.1350	17.22	37.60
.0801	.1201	15.32	33.47	.1251	15.96	34.87	.1301	16.60	36.27	.1351	17.23	37.62
.0802	.1202	15.33	33.50	.1252	15.97	34.89	.1302	16.61	36.29	.1352	17.25	37.64
.0803	.1203	15.35	33.54	.1253	15.98	34.92	.1303	16.62	36.31	.1353	17.26	37.66
.0804	.1204	15.36	33.56	.1254	16.00	34.96	.1304	16.63	36.34	.1354	17.27	37.68
.0805	.1205	15.37	33.58	.1255	16.01	34.98	.1305	16.65	36.38	.1355	17.28	37.70
.0806	.1206	15.38	33.61	.1256	16.02	35.00	.1306	16.66	36.40	.1356	17.30	37.72
.0807	.1207	15.40	33.65	.1257	16.03	35.03	.1307	16.67	36.42	.1357	17.31	37.74
.0808	.1208	15.41	33.67	.1258	16.05	35.07	.1308	16.68	36.45	.1358	17.32	37.76
.0809	.1209	15.42	33.69	.1259	16.06	35.09	.1309	16.70	36.49	.1359	17.34	37.78
.0810	.1210	15.43	33.71	.1260	16.07	35.11	.1310	16.71	36.51	.1360	17.35	37.80
.0811	.1211	15.45	33.75	.1261	16.09	35.16	.1311	16.72	36.53	.1361	17.36	37.82
.0812	.1212	15.46	33.78	.1262	16.10	35.18	.1312	16.74	36.58	.1362	17.37	37.84
.0813	.1213	15.47	33.80	.1263	16.11	35.20	.1313	16.75	36.60	.1363	17.39	38.00
.0814	.1214	15.49	33.85	.1264	16.12	35.22	.1314	16.76	36.62	.1364	17.40	38.02
.0815	.1215	15.50	33.87	.1265	16.14	35.27	.1315	16.77	36.64	.1365	17.41	38.04
.0816	.1216	15.51	33.89	.1266	16.15	35.29	.1316	16.79	36.69	.1366	17.42	38.06
.0817	.1217	15.52	33.91	.1267	16.16	35.31	.1317	16.80	36.71	.1367	17.44	38.12
.0818	.1218	15.54	33.95	.1268	16.17	35.33	.1318	16.81	36.73	.1368	17.45	38.14
.0819	.1219	15.55	33.97	.1269	16.19	35.38	.1319	16.83	36.77	.1369	17.46	38.16
.0820	.1220	15.56	34.00	.1270	16.20	35.40	.1320	16.84	36.79	.1370	17.48	38.18
.0821	.1221	15.58	34.04	.1271	16.21	35.42	.1321	16.85	36.82	.1371	17.49	38.20
.0822	.1222	15.59	34.07	.1272	16.23	35.46	.1322	16.86	36.84	.1372	17.50	38.22
.0823	.1223	15.60	34.09	.1273	16.24	35.48	.1323	16.88	36.88	.1373	17.51	38.24
.0824	.1224	15.61	34.11	.1274	16.25	35.51	.1324	16.89	36.90	.1374	17.53	38.30
.0825	.1225	15.63	34.15	.1275	16.26	35.53	.1325	16.90	36.93	.1375	17.54	38.32
.0826	.1226	15.64	34.17	.1276	16.28	35.57	.1326	16.91	36.95	.1376	17.55	38.34
.0827	.1227	15.65	34.20	.1277	16.29	35.59	.1327	16.93	36.99	.1377	17.57	38.36
.0828	.1228	15.66	34.22	.1278	16.30	35.62	.1328	16.94	37.02	.1378	17.58	38.38
.0829	.1229	15.68	34.26	.1279	16.31	35.64	.1329	16.95	37.04	.1379	17.59	38.40
.0830	.1230	15.69	34.28	.1280	16.33	35.68	.1330	16.97	37.08	.1380	17.60	38.42
.0831	.1231	15.70	34.30	.1281	16.34	35.70	.1331	16.98	37.10	.1381	17.62	38.48
.0832	.1232	15.72	34.35	.1282	16.35	35.72	.1332	16.99	37.12	.1382	17.63	38.50
.0833	.1233	15.73	34.37	.1283	16.37	35.77	.1333	17.00	37.15	.1383	17.64	38.52
.0834	.1234	15.74	34.39	.1284	16.38	35.79	.1334	17.02	37.19	.1384	17.65	38.54
.0835	.1235	15.75	34.41	.1285	16.39	35.81	.1335	17.03	37.21	.1385	17.67	38.60
.0836	.1236	15.77	34.46	.1286	16.40	35.83	.1336	17.04	37.23	.1386	17.68	38.62
.0837	.1237	15.78	34.48	.1287	16.42	35.88	.1337	17.05	37.25	.1387	17.69	38.64
.0838	.1238	15.79	34.50	.1288	16.43	35.90	.1338	17.07	37.30	.1388	17.71	38.70
.0839	.1239	15.80	34.52	.1289	16.44	35.92	.1339	17.08	37.32	.1389	17.72	38.72
.0840	.1240	15.82	34.57	.1290	16.46	35.97	.1340	17.09	37.34	.1390	17.73	38.74
.0841	.1241	15.83	34.59	.1291	16.47	35.99	.1341	17.11	37.39	.1391	17.74	38.76
.0842	.1242	15.84	34.61	.1292	16.48	36.01	.1342	17.12	37.41	.1392	17.76	38.82
.0843	.1243	15.86	34.65	.1293	16.49	36.03	.1343	17.13	37.43	.1393	17.77	38.84
.0844	.1244	15.87	34.67	.1294	16.51	36.07	.1344	17.14	37.45	.1394	17.78	38.86
.0845	.1245	15.88	34.70	.1295	16.52	36.09	.1345	17.16	37.49	.1395	17.79	38.88
.0846	.1246	15.89	34.72	.1296	16.53	36.12	.1346	17.17	37.51	.1396	17.81	38.94
.0847	.1247	15.91	34.76	.1297	16.54	36.14	.1347	17.18	37.54	.1397	17.82	38.96
.0848	.1248	15.92	34.78	.1298	16.56	36.18	.1348	17.20	37.58	.1398	17.83	38.98
.0849	.1249	15.93	34.81	.1299	16.57	36.21	.1349	17.21	37.59	.1399	17.85	39.04

Gram .1400—.1599 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%	
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	
.1400	17.86	39.02	.1450	18.50	40.42	.1500	19.13	41.80	.1550	19.77	43.20	—
.1401	17.87	39.05	.1451	18.51	40.45	.1501	19.15	41.84	.1551	19.78	43.22	34
.1402	17.88	39.07	.1452	18.52	40.47	.1502	19.16	41.87	.1552	19.80	43.26	38
.1403	17.90	39.11	.1453	18.53	40.49	.1503	19.17	41.89	.1553	19.81	43.29	41
.1404	17.91	39.14	.1454	18.55	40.53	.1504	19.19	41.93	.1554	19.82	43.31	43
.1405	17.92	39.16	.1455	18.56	40.56	.1505	19.20	41.95	.1555	19.84	43.35	47
.1406	17.93	39.18	.1456	18.57	40.58	.1506	19.21	41.98	.1556	19.85	43.37	49
.1407	17.95	39.22	.1457	18.59	40.62	.1507	19.22	42.00	.1557	19.86	43.40	51
.1408	17.96	39.24	.1458	18.60	40.64	.1508	19.24	42.04	.1558	19.87	43.42	54
.1409	17.97	39.26	.1459	18.61	40.66	.1509	19.25	42.06	.1559	19.89	43.46	58
.1410	17.99	39.31	.1460	18.62	40.68	.1510	19.26	42.08	.1560	19.90	43.48	60
.1411	18.00	39.33	.1461	18.64	40.73	.1511	19.27	42.10	.1561	19.91	43.50	62
.1412	18.01	39.35	.1462	18.65	40.75	.1512	19.29	42.15	.1562	19.92	43.53	65
.1413	18.02	39.37	.1463	18.66	40.77	.1513	19.30	42.17	.1563	19.94	43.57	69
.1414	18.04	39.42	.1464	18.67	40.79	.1514	19.31	42.19	.1564	19.95	43.59	71
.1415	18.05	39.44	.1465	18.69	40.84	.1515	19.32	42.21	.1565	19.96	43.61	73
.1416	18.06	39.46	.1466	18.70	40.86	.1516	19.34	42.26	.1566	19.98	43.66	78
.1417	18.08	39.50	.1467	18.71	40.88	.1517	19.35	42.28	.1567	19.99	43.68	80
.1418	18.09	39.53	.1468	18.73	40.93	.1518	19.36	42.30	.1568	20.00	43.70	82
.1419	18.10	39.55	.1469	18.74	40.95	.1519	19.38	42.35	.1569	20.01	43.72	84
.1420	18.11	39.57	.1470	18.75	40.97	.1520	19.39	42.37	.1570	20.03	43.77	89
.1421	18.13	39.61	.1471	18.76	40.99	.1521	19.40	42.39	.1571	20.04	43.79	91
.1422	18.14	39.64	.1472	18.78	41.03	.1522	19.41	42.41	.1572	20.05	43.81	93
.1423	18.15	39.66	.1473	18.79	41.06	.1523	19.43	42.45	.1573	20.07	43.85	95
.1424	18.16	39.68	.1474	18.80	41.08	.1524	19.44	42.48	.1574	20.08	43.87	99
.1425	18.18	39.72	.1475	18.82	41.12	.1525	19.45	42.50	.1575	20.09	43.90	92
.1426	18.19	39.75	.1476	18.83	41.14	.1526	19.47	42.54	.1576	20.10	43.92	94
.1427	18.20	39.77	.1477	18.84	41.17	.1527	19.48	42.56	.1577	20.12	43.96	98
.1428	18.22	39.81	.1478	18.85	41.19	.1528	19.49	42.59	.1578	20.13	43.98	1
.1429	18.23	39.83	.1479	18.87	41.23	.1529	19.50	42.61	.1579	20.14	44.01	3
.1430	18.24	39.85	.1480	18.88	41.25	.1530	19.52	42.65	.1580	20.15	44.03	5
.1431	18.25	39.88	.1481	18.89	41.27	.1531	19.53	42.67	.1581	20.17	44.07	9
.1432	18.27	39.92	.1482	18.90	41.30	.1532	19.54	42.69	.1582	20.18	44.09	11
.1433	18.28	39.94	.1483	18.92	41.34	.1533	19.55	42.72	.1583	20.19	44.12	13
.1434	18.29	39.96	.1484	18.93	41.36	.1534	19.57	42.76	.1584	20.21	44.16	18
.1435	18.30	39.99	.1485	18.94	41.38	.1535	19.58	42.78	.1585	20.22	44.18	19
.1436	18.32	40.03	.1486	18.96	41.43	.1536	19.59	42.80	.1586	20.23	44.20	12
.1437	18.33	40.05	.1487	18.97	41.45	.1537	19.61	42.85	.1587	20.24	44.22	15
.1438	18.34	40.07	.1488	18.98	41.47	.1538	19.62	42.87	.1588	20.26	44.27	19
.1439	18.36	40.12	.1489	18.99	41.49	.1539	19.63	42.89	.1589	20.27	44.29	11
.1440	18.37	40.14	.1490	19.01	41.54	.1540	19.64	42.91	.1590	20.28	44.31	13
.1441	18.38	40.16	.1491	19.02	41.56	.1541	19.66	42.96	.1591	20.29	44.33	16
.1442	18.39	40.18	.1492	19.03	41.58	.1542	19.67	42.98	.1592	20.31	44.38	19
.1443	18.41	40.23	.1493	19.04	41.60	.1543	19.68	43.00	.1593	20.32	44.40	12
.1444	18.42	40.25	.1494	19.06	41.65	.1544	19.70	43.04	.1594	20.33	44.42	14
.1445	18.43	40.27	.1495	19.07	41.67	.1545	19.71	43.07	.1595	20.35	44.46	19
.1446	18.45	40.31	.1496	19.08	41.69	.1546	19.72	43.09	.1596	20.36	44.49	11
.1447	18.46	40.34	.1497	19.10	41.73	.1547	19.73	43.11	.1597	20.37	44.51	13
.1448	18.47	40.36	.1498	19.11	41.76	.1548	19.75	43.15	.1598	20.38	44.53	15
.1449	18.48	40.38	.1499	19.12	41.78	.1549	19.76	43.18	.1599	20.40	44.57	19

Gram .1600—.1799 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.1600	20.41	44.60	.1650	21.05	45.99	.1700	21.69	47.39	.1750	22.32	48.77
.1601	20.42	44.62	.1651	21.06	46.01	.1701	21.70	47.41	.1751	22.34	48.81
.1602	20.44	44.66	.1652	21.07	46.04	.1702	21.71	47.43	.1752	22.35	48.83
.1603	20.45	44.68	.1653	21.09	46.08	.1703	21.72	47.46	.1753	22.36	48.85
.1604	20.46	44.71	.1654	21.10	46.10	.1704	21.74	47.50	.1754	22.37	48.88
.1605	20.47	44.73	.1655	21.11	46.12	.1705	21.75	47.52	.1755	22.39	48.92
.1606	20.49	44.77	.1656	21.12	46.15	.1706	21.76	47.55	.1756	22.40	48.94
.1607	20.50	44.79	.1657	21.14	46.19	.1707	21.77	47.57	.1757	22.41	48.97
.1608	20.51	44.81	.1658	21.15	46.21	.1708	21.79	47.61	.1758	22.43	49.01
.1609	20.52	44.84	.1659	21.16	46.23	.1709	21.80	47.63	.1759	22.44	49.03
.1610	20.54	44.88	.1660	21.17	46.26	.1710	21.81	47.65	.1760	22.45	49.05
.1611	20.55	44.90	.1661	21.19	46.30	.1711	21.83	47.70	.1761	22.46	49.08
.1612	20.56	44.92	.1662	21.20	46.32	.1712	21.84	47.72	.1762	22.48	49.12
.1613	20.58	44.97	.1663	21.21	46.34	.1713	21.85	47.74	.1763	22.49	49.14
.1614	20.59	44.99	.1664	21.23	46.39	.1714	21.86	47.76	.1764	22.50	49.16
.1615	20.60	45.01	.1665	21.24	46.41	.1715	21.88	47.81	.1765	22.51	49.18
.1616	20.61	45.03	.1666	21.25	46.43	.1716	21.89	47.83	.1766	22.53	49.23
.1617	20.63	45.08	.1667	21.26	46.45	.1717	21.90	47.85	.1767	22.54	49.25
.1618	20.64	45.10	.1668	21.28	46.50	.1718	21.91	47.87	.1768	22.55	49.27
.1619	20.65	45.12	.1669	21.29	46.52	.1719	21.93	47.92	.1769	22.57	49.32
.1620	20.66	45.14	.1670	21.30	46.54	.1720	21.94	47.94	.1770	22.58	49.34
.1621	20.68	45.19	.1671	21.32	46.58	.1721	21.95	47.96	.1771	22.59	49.36
.1622	20.69	45.21	.1672	21.33	46.61	.1722	21.97	48.00	.1772	22.60	49.38
.1623	20.70	45.23	.1673	21.34	46.63	.1723	21.98	48.03	.1773	22.62	49.42
.1624	20.72	45.27	.1674	21.35	46.65	.1724	21.99	48.05	.1774	22.63	49.45
.1625	20.73	45.30	.1675	21.37	46.69	.1725	22.00	48.07	.1775	22.64	49.47
.1626	20.74	45.32	.1676	21.38	46.72	.1726	22.02	48.11	.1776	22.65	49.49
.1627	20.75	45.34	.1677	21.39	46.74	.1727	22.03	48.13	.1777	22.67	49.53
.1628	20.77	45.38	.1678	21.40	46.76	.1728	22.04	48.16	.1778	22.68	49.55
.1629	20.78	45.40	.1679	21.42	46.80	.1729	22.06	48.20	.1779	22.69	49.58
.1630	20.79	45.43	.1680	21.43	46.82	.1730	22.07	48.22	.1780	22.71	49.62
.1631	20.81	45.47	.1681	21.44	46.85	.1731	22.08	48.25	.1781	22.72	49.64
.1632	20.82	45.49	.1682	21.46	46.89	.1732	22.09	48.27	.1782	22.73	49.66
.1633	20.83	45.51	.1683	21.47	46.91	.1733	22.11	48.31	.1783	22.74	49.69
.1634	20.84	45.54	.1684	21.48	46.93	.1734	22.12	48.33	.1784	22.76	49.73
.1635	20.86	45.58	.1685	21.49	46.96	.1735	22.13	48.35	.1785	22.77	49.75
.1636	20.87	45.60	.1686	21.51	47.00	.1736	22.14	48.38	.1786	22.78	49.77
.1637	20.88	45.62	.1687	21.52	47.02	.1737	22.16	48.42	.1787	22.79	49.80
.1638	20.89	45.64	.1688	21.53	47.04	.1738	22.17	48.44	.1788	22.81	49.84
.1639	20.91	45.69	.1689	21.54	47.06	.1739	22.18	48.46	.1789	22.82	49.86
.1640	20.92	45.71	.1690	21.56	47.11	.1740	22.20	48.51	.1790	22.83	49.88
.1641	20.93	45.73	.1691	21.57	47.13	.1741	22.21	48.53	.1791	22.85	49.93
.1642	20.95	45.78	.1692	21.58	47.15	.1742	22.22	48.55	.1792	22.86	49.95
.1643	20.96	45.80	.1693	21.60	47.20	.1743	22.23	48.57	.1793	22.87	49.97
.1644	20.97	45.82	.1694	21.61	47.22	.1744	22.25	48.62	.1794	22.88	49.99
.1645	20.98	45.84	.1695	21.62	47.24	.1745	22.26	48.64	.1795	22.90	50.04
.1646	21.00	45.89	.1696	21.63	47.26	.1746	22.27	48.66	.1796	22.91	50.06
.1647	21.01	45.91	.1697	21.65	47.31	.1747	22.28	48.68	.1797	22.92	50.08
.1648	21.02	45.93	.1698	21.66	47.33	.1748	22.30	48.73	.1798	22.94	50.12
.1649	21.03	45.95	.1699	21.67	47.35	.1749	22.31	48.75	.1799	22.95	50.15

Gram .1800—1999 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.1800	22.96	50.17	.1850	23.60	51.57	.1900	24.24	52.96	.1950	24.87	54.34
.1801	22.97	50.19	.1851	23.61	51.59	.1901	24.25	52.99	.1951	24.89	54.38
.1802	22.99	50.23	.1852	23.62	51.61	.1902	24.26	53.01	.1952	24.90	54.41
.1803	23.00	50.25	.1853	23.64	51.65	.1903	24.27	53.03	.1953	24.91	54.43
.1804	23.01	50.27	.1854	23.65	51.68	.1904	24.29	53.07	.1954	24.93	54.47
.1805	23.02	50.30	.1855	23.66	51.70	.1905	24.30	53.09	.1955	24.94	54.49
.1806	23.04	50.34	.1856	23.68	51.74	.1906	24.31	53.12	.1956	24.95	54.51
.1807	23.05	50.36	.1857	23.69	51.76	.1907	24.33	53.16	.1957	24.96	54.54
.1808	23.06	50.39	.1858	23.70	51.78	.1908	24.34	53.18	.1958	24.98	54.58
.1809	23.08	50.43	.1859	23.71	51.81	.1909	24.35	53.20	.1959	24.99	54.60
.1810	23.09	50.45	.1860	23.73	51.85	.1910	24.36	53.23	.1960	25.00	54.62
.1811	23.10	50.47	.1861	23.74	51.87	.1911	24.38	53.27	.1961	25.01	54.65
.1812	23.11	50.50	.1862	23.75	51.89	.1912	24.39	53.29	.1962	25.03	54.69
.1813	23.13	50.54	.1863	23.76	51.92	.1913	24.40	53.31	.1963	25.04	54.71
.1814	23.14	50.56	.1864	23.78	51.96	.1914	24.41	53.34	.1964	25.05	54.73
.1815	23.15	50.58	.1865	23.79	51.98	.1915	24.43	53.38	.1965	25.07	54.78
.1816	23.16	50.60	.1866	23.80	52.00	.1916	24.44	53.40	.1966	25.08	54.80
.1817	23.18	50.65	.1867	23.82	52.05	.1917	24.45	53.43	.1967	25.09	54.82
.1818	23.19	50.67	.1868	23.83	52.07	.1918	24.47	53.47	.1968	25.10	54.84
.1819	23.20	50.69	.1869	23.84	52.09	.1919	24.48	53.49	.1969	25.12	54.89
.1820	23.22	50.74	.1870	23.85	52.11	.1920	24.49	53.51	.1970	25.13	54.91
.1821	23.23	50.76	.1871	23.87	52.16	.1921	24.50	53.53	.1971	25.14	54.93
.1822	23.24	50.78	.1872	23.88	52.18	.1922	24.52	53.58	.1972	25.15	54.95
.1823	23.25	50.80	.1873	23.89	52.20	.1923	24.53	53.60	.1973	25.17	55.00
.1824	23.27	50.84	.1874	23.90	52.22	.1924	24.54	53.62	.1974	25.18	55.02
.1825	23.28	50.86	.1875	23.92	52.27	.1925	24.56	53.66	.1975	25.19	55.04
.1826	23.29	50.89	.1876	23.93	52.29	.1926	24.57	53.69	.1976	25.21	55.08
.1827	23.31	50.93	.1877	23.94	52.31	.1927	24.58	53.71	.1977	25.22	55.11
.1828	23.32	50.95	.1878	23.96	52.35	.1928	24.59	53.73	.1978	25.23	55.13
.1829	23.33	50.97	.1879	23.97	52.37	.1929	24.61	53.77	.1979	25.24	55.15
.1830	23.34	51.00	.1880	23.98	52.39	.1930	24.62	53.79	.1980	25.26	55.19
.1831	23.36	51.04	.1881	23.99	52.42	.1931	24.63	53.81	.1981	25.27	55.21
.1832	23.37	51.06	.1882	24.01	52.46	.1932	24.64	53.84	.1982	25.28	55.23
.1833	23.38	51.08	.1883	24.02	52.48	.1933	24.66	53.88	.1983	25.30	55.28
.1834	23.39	51.11	.1884	24.03	52.50	.1934	24.67	53.90	.1984	25.31	55.30
.1835	23.41	51.15	.1885	24.05	52.55	.1935	24.68	53.93	.1985	25.32	55.32
.1836	23.42	51.17	.1886	24.06	52.57	.1936	24.70	53.97	.1986	25.33	55.35
.1837	23.43	51.19	.1887	24.07	52.59	.1937	24.71	53.99	.1987	25.35	55.39
.1838	23.45	51.24	.1888	24.08	52.61	.1938	24.72	54.01	.1988	25.36	55.41
.1839	23.46	51.26	.1889	24.10	52.66	.1939	24.73	54.04	.1989	25.37	55.43
.1840	23.47	51.28	.1890	24.11	52.68	.1940	24.75	54.08	.1990	25.38	55.46
.1841	23.48	51.30	.1891	24.12	52.70	.1941	24.76	54.10	.1991	25.40	55.50
.1842	23.50	51.35	.1892	24.13	52.72	.1942	24.77	54.12	.1992	25.41	55.52
.1843	23.51	51.37	.1893	24.15	52.77	.1943	24.78	54.14	.1993	25.42	55.54
.1844	23.52	51.39	.1894	24.16	52.79	.1944	24.80	54.19	.1994	25.44	55.59
.1845	23.53	51.41	.1895	24.17	52.81	.1945	24.81	54.21	.1995	25.45	55.61
.1846	23.55	51.46	.1896	24.19	52.86	.1946	24.82	54.23	.1996	25.46	55.63
.1847	23.56	51.48	.1897	24.20	52.88	.1947	24.84	54.28	.1997	25.47	55.65
.1848	23.57	51.50	.1898	24.21	52.90	.1948	24.85	54.30	.1998	25.49	55.70
.1849	23.59	51.54	.1899	24.22	52.92	.1949	24.86	54.32	.1999	25.50	55.72

Gram .2000—.2199 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.2000	25.51	55.74	.2050	26.15	57.14	.2100	26.79	58.54	.2150	27.43	59.93
.2001	25.52	55.76	.2051	26.16	57.16	.2101	26.80	58.56	.2151	27.44	59.96
.2002	25.54	55.80	.2052	26.18	57.20	.2102	26.81	58.58	.2152	27.45	59.98
.2003	25.55	55.83	.2053	26.19	57.23	.2103	26.83	58.62	.2153	27.46	60.00
.2004	25.56	55.85	.2054	26.20	57.25	.2104	26.84	58.65	.2154	27.48	60.04
.2005	25.58	55.89	.2055	26.21	57.27	.2105	26.85	58.67	.2155	27.49	60.07
.2006	25.59	55.91	.2056	26.23	57.31	.2106	26.86	58.69	.2156	27.50	60.09
.2007	25.60	55.94	.2057	26.24	57.33	.2107	26.88	58.73	.2157	27.51	60.11
.2008	25.61	55.96	.2058	26.25	57.36	.2108	26.89	58.75	.2158	27.53	60.15
.2009	25.63	56.00	.2059	26.26	57.38	.2109	26.90	58.78	.2159	27.54	60.17
.2010	25.64	56.02	.2060	26.28	57.42	.2110	26.92	58.82	.2160	27.55	60.20
.2011	25.65	56.05	.2061	26.29	57.44	.2111	26.93	58.84	.2161	27.57	60.24
.2012	25.67	56.09	.2062	26.30	57.47	.2112	26.94	58.86	.2162	27.58	60.26
.2013	25.68	56.11	.2063	26.32	57.51	.2113	26.95	58.89	.2163	27.59	60.28
.2014	25.69	56.13	.2064	26.33	57.53	.2114	26.97	58.93	.2164	27.60	60.31
.2015	25.70	56.15	.2065	26.34	57.55	.2115	26.98	58.95	.2165	27.62	60.35
.2016	25.72	56.20	.2066	26.35	57.57	.2116	26.99	58.97	.2166	27.63	60.37
.2017	25.73	56.22	.2067	26.37	57.62	.2117	27.00	59.00	.2167	27.64	60.39
.2018	25.74	56.24	.2068	26.38	57.64	.2118	27.02	59.04	.2168	27.66	60.44
.2019	25.75	56.26	.2069	26.39	57.66	.2119	27.03	59.06	.2169	27.67	60.46
.2020	25.77	56.31	.2070	26.40	57.68	.2120	27.04	59.08	.2170	27.68	60.48
.2021	25.78	56.33	.2071	26.42	57.73	.2121	27.06	59.13	.2171	27.69	60.50
.2022	25.79	56.35	.2072	26.43	57.75	.2122	27.07	59.15	.2172	27.71	60.55
.2023	25.81	56.39	.2073	26.44	57.77	.2123	27.08	59.17	.2173	27.72	60.57
.2024	25.82	56.42	.2074	26.46	57.82	.2124	27.09	59.19	.2174	27.73	60.59
.2025	25.83	56.44	.2075	26.47	57.84	.2125	27.11	59.24	.2175	27.74	60.61
.2026	25.84	56.46	.2076	26.48	57.86	.2126	27.12	59.26	.2176	27.76	60.66
.2027	25.86	56.50	.2077	26.49	57.88	.2127	27.13	59.28	.2177	27.77	60.68
.2028	25.87	56.53	.2078	26.51	57.92	.2128	27.14	59.30	.2178	27.78	60.70
.2029	25.88	56.55	.2079	26.52	57.95	.2129	27.16	59.34	.2179	27.80	60.74
.2030	25.89	56.57	.2080	26.53	57.97	.2130	27.17	59.37	.2180	27.81	60.76
.2031	25.91	56.61	.2081	26.55	58.01	.2131	27.18	59.39	.2181	27.82	60.79
.2032	25.92	56.64	.2082	26.56	58.03	.2132	27.20	59.43	.2182	27.83	60.81
.2033	25.93	56.66	.2083	26.57	58.06	.2133	27.21	59.45	.2183	27.85	60.85
.2034	25.95	56.70	.2084	26.58	58.08	.2134	27.22	59.48	.2184	27.86	60.87
.2035	25.96	56.72	.2085	26.60	58.12	.2135	27.23	59.50	.2185	27.87	60.90
.2036	25.97	56.74	.2086	26.61	58.14	.2136	27.25	59.54	.2186	27.88	60.92
.2037	25.98	56.77	.2087	26.62	58.16	.2137	27.26	59.56	.2187	27.90	60.96
.2038	26.00	56.81	.2088	26.63	58.19	.2138	27.27	59.58	.2188	27.91	60.98
.2039	26.01	56.83	.2089	26.65	58.23	.2139	27.29	59.63	.2189	27.92	61.01
.2040	26.02	56.85	.2090	26.66	58.25	.2140	27.30	59.65	.2190	27.94	61.05
.2041	26.03	56.88	.2091	26.67	58.27	.2141	27.31	59.67	.2191	27.95	61.07
.2042	26.05	56.92	.2092	26.69	58.32	.2142	27.32	59.69	.2192	27.96	61.09
.2043	26.06	56.94	.2093	26.70	58.34	.2143	27.34	59.74	.2193	27.97	61.11
.2044	26.07	56.96	.2094	26.71	58.36	.2144	27.35	59.76	.2194	27.99	61.16
.2045	26.09	57.01	.2095	26.72	58.38	.2145	27.36	59.78	.2195	28.00	61.18
.2046	26.10	57.03	.2096	26.74	58.43	.2146	27.37	59.80	.2196	28.01	61.20
.2047	26.11	57.05	.2097	26.75	58.45	.2147	27.39	59.85	.2197	28.02	61.22
.2048	26.12	57.07	.2098	26.76	58.47	.2148	27.40	59.87	.2198	28.04	61.27
.2049	26.14	57.12	.2099	26.77	58.49	.2149	27.41	59.89	.2199	28.05	61.29

Gram .2200—.2399 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.2200	28.06	61.31	.2250	28.70	62.71	.2300	29.34	64.11	.2350	29.98	65.51
.2201	28.08	61.35	.2251	28.71	62.73	.2301	29.35	64.13	.2351	29.99	65.53
.2202	28.09	61.38	.2252	28.73	62.78	.2302	29.36	64.15	.2352	30.00	65.55
.2203	28.10	61.40	.2253	28.74	62.80	.2303	29.38	64.20	.2353	30.01	65.57
.2204	28.11	61.42	.2254	28.75	62.82	.2304	29.39	64.22	.2354	30.03	65.62
.2205	28.13	61.46	.2255	28.76	62.84	.2305	29.40	64.24	.2355	30.04	65.64
.2206	28.14	61.49	.2256	28.78	62.88	.2306	29.42	64.28	.2356	30.05	65.66
.2207	28.15	61.51	.2257	28.79	62.91	.2307	29.43	64.30	.2357	30.07	65.70
.2208	28.17	61.55	.2258	28.80	62.93	.2308	29.44	64.33	.2358	30.08	65.72
.2209	28.18	61.57	.2259	28.82	62.97	.2309	29.45	64.35	.2359	30.09	65.75
.2210	28.19	61.60	.2260	28.83	62.99	.2310	29.47	64.39	.2360	30.10	65.77
.2211	28.20	61.62	.2261	28.84	63.02	.2311	29.48	64.41	.2361	30.12	65.81
.2212	28.22	61.66	.2262	28.85	63.04	.2312	29.49	64.44	.2362	30.13	65.83
.2213	28.23	61.68	.2263	28.87	63.08	.2313	29.50	64.46	.2363	30.14	65.86
.2214	28.24	61.70	.2264	28.88	63.10	.2314	29.52	64.50	.2364	30.16	65.90
.2215	28.25	61.73	.2265	28.89	63.12	.2315	29.53	64.52	.2365	30.17	65.92
.2216	28.27	61.77	.2266	28.91	63.17	.2316	29.54	64.54	.2366	30.18	65.94
.2217	28.28	61.79	.2267	28.92	63.19	.2317	29.56	64.59	.2367	30.19	65.97
.2218	28.29	61.81	.2268	28.93	63.21	.2318	29.57	64.61	.2368	30.21	66.01
.2219	28.31	61.86	.2269	28.94	63.23	.2319	29.58	64.63	.2369	30.22	66.03
.2220	28.32	61.88	.2270	28.96	63.28	.2320	29.59	64.65	.2370	30.23	66.05
.2221	28.33	61.90	.2271	28.97	63.30	.2321	29.61	64.70	.2371	30.24	66.07
.2222	28.34	61.92	.2272	28.98	63.32	.2322	29.62	64.72	.2372	30.26	66.12
.2223	28.36	61.97	.2273	28.99	63.34	.2323	29.63	64.74	.2373	30.27	66.14
.2224	28.37	61.99	.2274	29.01	63.39	.2324	29.64	64.76	.2374	30.28	66.16
.2225	28.38	62.01	.2275	29.02	63.41	.2325	29.66	64.81	.2375	30.30	66.21
.2226	28.39	62.03	.2276	29.03	63.43	.2326	29.67	64.83	.2376	30.31	66.23
.2227	28.41	62.08	.2277	29.05	63.47	.2327	29.68	64.85	.2377	30.32	66.25
.2228	28.42	62.10	.2278	29.06	63.50	.2328	29.70	64.89	.2378	30.33	66.27
.2229	28.43	62.12	.2279	29.07	63.52	.2329	29.71	64.92	.2379	30.35	66.31
.2230	28.45	62.16	.2280	29.08	63.54	.2330	29.72	64.94	.2380	30.36	66.34
.2231	28.46	62.19	.2281	29.10	63.58	.2331	29.73	64.96	.2381	30.37	66.36
.2232	28.47	62.21	.2282	29.11	63.61	.2332	29.75	65.00	.2382	30.38	66.38
.2233	28.48	62.23	.2283	29.12	63.63	.2333	29.76	65.03	.2383	30.40	66.42
.2234	28.50	62.27	.2284	29.13	63.65	.2334	29.77	65.05	.2384	30.41	66.45
.2235	28.51	62.29	.2285	29.15	63.69	.2335	29.79	65.09	.2385	30.42	66.47
.2236	28.52	62.32	.2286	29.16	63.71	.2336	29.80	65.11	.2386	30.44	66.51
.2237	28.54	62.36	.2287	29.17	63.74	.2337	29.81	65.13	.2387	30.45	66.53
.2238	28.55	62.38	.2288	29.19	63.78	.2338	29.82	65.16	.2388	30.46	66.56
.2239	28.56	62.40	.2289	29.20	63.80	.2339	29.84	65.20	.2389	30.47	66.58
.2240	28.57	62.43	.2290	29.21	63.82	.2340	29.85	65.22	.2390	30.49	66.62
.2241	28.59	62.47	.2291	29.22	63.85	.2341	29.86	65.24	.2391	30.50	66.64
.2242	28.60	62.49	.2292	29.24	63.89	.2342	29.87	65.27	.2392	30.51	66.66
.2243	28.61	62.51	.2293	29.25	63.91	.2343	29.89	65.31	.2393	30.53	66.71
.2244	28.62	62.53	.2294	29.26	63.93	.2344	29.90	65.33	.2394	30.54	66.73
.2245	28.64	62.58	.2295	29.28	63.98	.2345	29.91	65.35	.2395	30.55	66.75
.2246	28.65	62.60	.2296	29.29	64.00	.2346	29.93	65.40	.2396	30.56	66.77
.2247	28.66	62.62	.2297	29.30	64.02	.2347	29.94	65.42	.2397	30.58	66.82
.2248	28.68	62.67	.2298	29.31	64.04	.2348	29.95	65.44	.2398	30.59	66.84
.2249	28.69	62.69	.2299	29.33	64.09	.2349	29.96	65.46	.2399	30.60	66.86

Gram .2400—.2599 (Basis  $\frac{1}{2}$  Grm.)

C	.2400—.2499			.2500—.2599			.2600—.2699			.2700—.2799		
	Grm.	% P <sub>2</sub> O <sub>5</sub> .	% Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .	Grm.	% P <sub>2</sub> O <sub>5</sub> .	% Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .	Grm.	% P <sub>2</sub> O <sub>5</sub> .	% Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .	Grm.	% P <sub>2</sub> O <sub>5</sub> .	% Ca <sub>3</sub> P <sub>2</sub> O <sub>8</sub> .
	.2400	30.61	66.88	.2450	31.25	68.28	.2500	31.89	69.68	.2550	32.53	71.08
	.2401	30.63	66.93	.2451	31.26	68.30	.2501	31.90	69.70	.2551	32.54	71.10
	.2402	30.64	66.95	.2452	31.28	68.35	.2502	31.92	69.75	.2552	32.55	71.12
	.2403	30.65	66.97	.2453	31.29	68.37	.2503	31.93	69.77	.2553	32.57	71.17
	.2404	30.67	67.01	.2454	31.30	68.39	.2504	31.94	69.79	.2554	32.58	71.19
	.2405	30.68	67.04	.2455	31.32	68.43	.2505	31.95	69.81	.2555	32.59	71.21
	.2406	30.69	67.06	.2456	31.33	68.46	.2506	31.97	69.85	.2556	32.60	71.23
	.2407	30.70	67.08	.2457	31.34	68.48	.2507	31.98	69.88	.2557	32.62	71.27
	.2408	30.72	67.12	.2458	31.35	68.50	.2508	31.99	69.90	.2558	32.63	71.30
	.2409	30.73	67.15	.2459	31.37	68.54	.2509	32.00	69.92	.2559	32.64	71.32
	.2410	30.74	67.17	.2460	31.38	68.57	.2510	32.02	69.96	.2560	32.66	71.36
	.2411	30.75	67.19	.2461	31.39	68.59	.2511	32.03	69.99	.2561	32.67	71.38
	.2412	30.77	67.23	.2462	31.41	68.63	.2512	32.04	70.01	.2562	32.68	71.41
	.2413	30.78	67.25	.2463	31.42	68.65	.2513	32.06	70.05	.2563	32.69	71.43
	.2414	30.79	67.28	.2464	31.43	68.67	.2514	32.07	70.07	.2564	32.71	71.47
	.2415	30.81	67.32	.2465	31.44	68.70	.2515	32.08	70.09	.2565	32.72	71.49
	.2416	30.82	67.34	.2466	31.46	68.74	.2516	32.09	70.12	.2566	32.73	71.52
	.2417	30.83	67.36	.2467	31.47	68.76	.2517	32.11	70.16	.2567	32.74	71.54
	.2418	30.84	67.39	.2468	31.48	68.78	.2518	32.12	70.18	.2568	32.76	71.58
	.2419	30.86	67.43	.2469	31.49	68.81	.2519	32.13	70.20	.2569	32.77	71.60
	.2420	30.87	67.45	.2470	31.51	68.85	.2520	32.15	70.25	.2570	32.78	71.62
	.2421	30.88	67.47	.2471	31.52	68.87	.2521	32.16	70.27	.2571	32.80	71.67
	.2422	30.90	67.52	.2472	31.53	68.89	.2522	32.17	70.29	.2572	32.81	71.69
	.2423	30.91	67.54	.2473	31.55	68.94	.2523	32.18	70.31	.2573	32.82	71.71
	.2424	30.92	67.56	.2474	31.56	68.96	.2524	32.20	70.36	.2574	32.83	71.73
	.2425	30.93	67.58	.2475	31.57	68.98	.2525	32.21	70.38	.2575	32.85	71.78
	.2426	30.95	67.63	.2476	31.58	69.00	.2526	32.22	70.40	.2576	32.86	71.80
	.2427	30.96	67.65	.2477	31.60	69.05	.2527	32.23	70.42	.2577	32.87	71.82
	.2428	30.97	67.67	.2478	31.61	69.07	.2528	32.25	70.47	.2578	32.88	71.84
	.2429	30.98	67.69	.2479	31.62	69.09	.2529	32.26	70.49	.2579	32.90	71.89
	.2430	31.00	67.74	.2480	31.63	69.11	.2530	32.27	70.51	.2580	32.91	71.91
	.2431	31.01	67.76	.2481	31.65	69.16	.2531	32.29	70.55	.2581	32.92	71.93
	.2432	31.02	67.78	.2482	31.66	69.18	.2532	32.30	70.58	.2582	32.94	71.97
	.2433	31.04	67.82	.2483	31.67	69.20	.2533	32.31	70.60	.2583	32.95	72.00
	.2434	31.05	67.84	.2484	31.69	69.24	.2534	32.32	70.62	.2584	32.96	72.02
	.2435	31.06	67.87	.2485	31.70	69.26	.2535	32.34	70.66	.2585	32.97	72.04
	.2436	31.07	67.89	.2486	31.71	69.29	.2536	32.35	70.68	.2586	32.99	72.08
	.2437	31.09	67.93	.2487	31.72	69.31	.2537	32.36	70.71	.2587	33.00	72.11
	.2438	31.10	67.95	.2488	31.74	69.35	.2538	32.37	70.73	.2588	33.01	72.13
	.2439	31.11	67.98	.2489	31.75	69.37	.2539	32.39	70.77	.2589	33.03	72.17
	.2440	31.12	68.00	.2490	31.76	69.40	.2540	32.40	70.79	.2590	33.04	72.19
	.2441	31.14	68.04	.2491	31.78	69.44	.2541	32.41	70.82	.2591	33.05	72.21
	.2442	31.15	68.06	.2492	31.79	69.46	.2542	32.43	70.86	.2592	33.06	72.24
	.2443	31.16	68.08	.2493	31.80	69.48	.2543	32.44	70.88	.2593	33.08	72.28
	.2444	31.18	68.13	.2494	31.81	69.50	.2544	32.45	70.90	.2594	33.09	72.30
	.2445	31.19	68.15	.2495	31.83	69.55	.2545	32.46	70.93	.2595	33.10	72.32
	.2446	31.20	68.17	.2496	31.84	69.57	.2546	32.48	70.97	.2596	33.11	72.35
	.2447	31.21	68.19	.2497	31.85	69.59	.2547	32.49	70.99	.2597	33.13	72.39
	.2448	31.23	68.24	.2498	31.86	69.61	.2548	32.50	71.01	.2598	33.14	72.41
	.2449	31.24	68.26	.2499	31.88	69.66	.2549	32.52	71.06	.2599	33.15	72.43



Gram .2600—.2799. (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .	$Mg_2P_2O_7$ .	$P_2O_5$ .	$Ca_3P_2O_8$ .
.2600	33.17	72.48	.2650	33.80	73.85	.2700	34.44	75.25	.2750	35.08	76.65
.2601	33.18	72.50	.2651	33.82	73.90	.2701	34.45	75.27	.2751	35.09	76.67
.2602	33.19	72.52	.2652	33.83	73.92	.2702	34.47	75.32	.2752	35.10	76.69
.2603	33.20	72.54	.2653	33.84	73.94	.2703	34.48	75.34	.2753	35.12	76.74
.2604	33.22	72.59	.2654	33.85	73.96	.2704	34.49	75.36	.2754	35.13	76.76
.2605	33.23	72.61	.2655	33.87	74.01	.2705	34.50	75.38	.2755	35.14	76.78
.2606	33.24	72.63	.2656	33.88	74.03	.2706	34.52	75.43	.2756	35.16	76.82
.2607	33.25	72.65	.2657	33.89	74.05	.2707	34.53	75.45	.2757	35.17	76.85
.2608	33.27	72.69	.2658	33.91	74.09	.2708	34.54	75.47	.2758	35.18	76.87
.2609	33.28	72.72	.2659	33.92	74.12	.2709	34.56	75.51	.2759	35.19	76.89
.2610	33.29	72.74	.2660	33.93	74.14	.2710	34.57	75.54	.2760	35.21	76.93
.2611	33.31	72.78	.2661	33.94	74.16	.2711	34.58	75.56	.2761	35.22	76.96
.2612	33.32	72.80	.2662	33.96	74.20	.2712	34.59	75.58	.2762	35.23	76.98
.2613	33.33	72.83	.2663	33.97	74.22	.2713	34.61	75.62	.2763	35.24	77.00
.2614	33.34	72.85	.2664	33.98	74.25	.2714	34.62	75.64	.2764	35.26	77.04
.2615	33.36	72.89	.2665	33.99	74.27	.2715	34.63	75.67	.2765	35.27	77.06
.2616	33.37	72.91	.2666	34.01	74.31	.2716	34.65	75.71	.2766	35.28	77.09
.2617	33.38	72.94	.2667	34.02	74.33	.2717	34.66	75.73	.2767	35.30	77.13
.2618	33.40	72.98	.2668	34.03	74.36	.2718	34.67	75.75	.2768	35.31	77.15
.2619	33.41	73.00	.2669	34.04	74.38	.2719	34.68	75.78	.2769	35.32	77.17
.2620	33.42	73.02	.2670	34.06	74.42	.2720	34.70	75.82	.2770	35.33	77.20
.2621	33.43	73.04	.2671	34.07	74.44	.2721	34.71	75.84	.2771	35.35	77.24
.2622	33.45	73.09	.2672	34.08	74.46	.2722	34.72	75.86	.2772	35.36	77.26
.2623	33.46	73.11	.2673	34.10	74.51	.2723	34.73	75.89	.2773	35.37	77.28
.2624	33.47	73.13	.2674	34.11	74.53	.2724	34.75	75.93	.2774	35.39	77.33
.2625	33.48	73.15	.2675	34.12	74.55	.2725	34.76	75.95	.2775	35.40	77.35
.2626	33.50	73.20	.2676	34.14	74.60	.2726	34.77	75.97	.2776	35.41	77.37
.2627	33.51	73.22	.2677	34.15	74.62	.2727	34.79	76.02	.2777	35.42	77.39
.2628	33.52	73.24	.2678	34.16	74.64	.2728	34.80	76.04	.2778	35.44	77.44
.2629	33.54	73.28	.2679	34.17	74.66	.2729	34.81	76.06	.2779	35.45	77.46
.2630	33.55	73.31	.2680	34.19	74.71	.2730	34.82	76.08	.2780	35.46	77.48
.2631	33.56	73.33	.2681	34.20	74.73	.2731	34.84	76.13	.2781	35.47	77.50
.2632	33.57	73.35	.2682	34.21	74.75	.2732	34.85	76.15	.2782	35.49	77.55
.2633	33.59	73.39	.2683	34.22	74.77	.2733	34.86	76.17	.2783	35.50	77.57
.2634	33.60	73.42	.2684	34.24	74.81	.2734	34.87	76.19	.2784	35.51	77.59
.2635	33.61	73.44	.2685	34.25	74.84	.2735	34.89	76.23	.2785	35.53	77.63
.2636	33.62	73.46	.2686	34.26	74.86	.2736	34.90	76.26	.2786	35.54	77.65
.2637	33.64	73.50	.2687	34.28	74.90	.2737	34.91	76.28	.2787	35.55	77.68
.2638	33.65	73.53	.2688	34.29	74.92	.2738	34.93	76.32	.2788	35.56	77.70
.2639	33.66	73.55	.2689	34.30	74.95	.2739	34.94	76.34	.2789	35.58	77.74
.2640	33.68	73.59	.2690	34.31	74.97	.2740	34.95	76.37	.2790	35.59	77.76
.2641	33.69	73.61	.2691	34.33	75.01	.2741	34.96	76.39	.2791	35.60	77.79
.2642	33.70	73.63	.2692	34.34	75.03	.2742	34.98	76.43	.2792	35.61	77.81
.2643	33.71	73.66	.2693	34.35	75.05	.2743	34.99	76.45	.2793	35.63	77.85
.2644	33.73	73.70	.2694	34.36	75.08	.2744	35.00	76.48	.2794	35.64	77.87
.2645	33.74	73.72	.2695	34.38	75.12	.2745	35.02	76.52	.2795	35.65	77.90
.2646	33.75	73.74	.2696	34.39	75.14	.2746	35.03	76.54	.2796	35.67	77.94
.2647	33.77	73.79	.2697	34.40	75.16	.2747	35.04	76.56	.2797	35.68	77.96
.2648	33.78	73.81	.2698	34.42	75.21	.2748	35.05	76.58	.2798	35.69	77.98
.2649	33.79	73.83	.2699	34.43	75.23	.2749	35.07	76.63	.2799	35.70	78.00

Gram .2800—.2999 (Basis  $\frac{1}{2}$  Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$	$Mg_2P_2O_7$	$P_2O_5$	$Ca_3P_2O_8$
.2800	35.72	78.05	.2850	36.35	79.42	.2900	36.99	80.82	.2950	37.63	82.22
.2801	35.73	78.07	.2851	36.37	79.47	.2901	37.01	80.87	.2951	37.64	82.24
.2802	35.74	78.09	.2852	36.38	79.49	.2902	37.02	80.89	.2952	37.66	82.29
.2803	35.76	78.14	.2853	36.39	79.51	.2903	37.03	80.91	.2953	37.67	82.31
.2804	35.77	78.16	.2854	36.41	79.56	.2904	37.04	80.93	.2954	37.68	82.33
.2805	35.78	78.18	.2855	36.42	79.58	.2905	37.06	80.98	.2955	37.69	82.35
.2806	35.79	78.20	.2856	36.43	79.60	.2906	37.07	81.00	.2956	37.71	82.40
.2807	35.81	78.24	.2857	36.44	79.62	.2907	37.08	81.02	.2957	37.72	82.42
.2808	35.82	78.27	.2858	36.46	79.67	.2908	37.09	81.04	.2958	37.73	82.44
.2809	35.83	78.29	.2859	36.47	79.69	.2909	37.11	81.09	.2959	37.75	82.48
.2810	35.84	78.31	.2860	36.48	79.71	.2910	37.12	81.10	.2960	37.76	82.51
.2811	35.86	78.35	.2861	36.49	79.73	.2911	37.13	81.13	.2961	37.77	82.53
.2812	35.87	78.38	.2862	36.51	79.77	.2912	37.15	81.17	.2962	37.78	82.55
.2813	35.88	78.40	.2863	36.52	79.80	.2913	37.16	81.19	.2963	37.80	82.59
.2814	35.90	78.44	.2864	36.53	79.82	.2914	37.17	81.22	.2964	37.81	82.61
.2815	35.91	78.46	.2865	36.55	79.86	.2915	37.18	81.24	.2965	37.82	82.64
.2816	35.92	78.49	.2866	36.56	79.88	.2916	37.20	81.28	.2966	37.83	82.66
.2817	35.93	78.51	.2867	36.57	79.91	.2917	37.21	81.30	.2967	37.85	82.70
.2818	35.95	78.55	.2868	36.58	79.93	.2918	37.22	81.33	.2968	37.86	82.72
.2819	35.96	78.57	.2869	36.60	79.97	.2919	37.23	81.35	.2969	37.87	82.75
.2820	35.97	78.59	.2870	36.61	79.99	.2920	37.25	81.39	.2970	37.89	82.79
.2821	35.98	78.62	.2871	36.62	80.01	.2921	37.26	81.41	.2971	37.90	82.81
.2822	36.00	78.66	.2872	36.64	80.06	.2922	37.27	81.43	.2972	37.91	82.83
.2823	36.01	78.68	.2873	36.65	80.08	.2923	37.29	81.46	.2973	37.92	82.86
.2824	36.02	78.70	.2874	36.66	80.10	.2924	37.30	81.50	.2974	37.94	82.90
.2825	36.04	78.75	.2875	36.67	80.12	.2925	37.31	81.52	.2975	37.95	82.92
.2826	36.05	78.77	.2876	36.69	80.17	.2926	37.32	81.54	.2976	37.96	82.94
.2827	36.06	78.79	.2877	36.70	80.19	.2927	37.34	81.59	.2977	37.97	82.96
.2828	36.07	78.81	.2878	36.71	80.21	.2928	37.35	81.61	.2978	37.99	83.01
.2829	36.09	78.86	.2879	36.72	80.23	.2929	37.36	81.63	.2979	38.00	83.03
.2830	36.10	78.88	.2880	36.74	80.28	.2930	37.38	81.68	.2980	38.01	83.05
.2831	36.11	78.90	.2881	36.75	80.30	.2931	37.39	81.70	.2981	38.03	83.10
.2832	36.12	78.92	.2882	36.76	80.32	.2932	37.40	81.72	.2982	38.04	83.12
.2833	36.14	78.96	.2883	36.78	80.36	.2933	37.41	81.74	.2983	38.05	83.14
.2834	36.15	78.99	.2884	36.79	80.39	.2934	37.43	81.78	.2984	38.06	83.16
.2835	36.16	79.01	.2885	36.80	80.41	.2935	37.44	81.81	.2985	38.08	83.20
.2836	36.18	79.05	.2886	36.81	80.43	.2936	37.45	81.83	.2986	38.09	83.23
.2837	36.19	79.08	.2887	36.83	80.47	.2937	37.46	81.85	.2987	38.10	83.25
.2838	36.20	79.10	.2888	36.84	80.50	.2938	37.48	81.89	.2988	38.11	83.27
.2839	36.21	79.12	.2889	36.85	80.52	.2939	37.49	81.92	.2989	38.13	83.31
.2840	36.23	79.16	.2890	36.86	80.54	.2940	37.50	81.94	.2990	38.14	83.34
.2841	36.24	79.18	.2891	36.88	80.58	.2941	37.52	81.98	.2991	38.15	83.36
.2842	36.25	79.21	.2892	36.89	80.60	.2942	37.53	82.00	.2992	38.17	83.40
.2843	36.27	79.25	.2893	36.90	80.63	.2943	37.54	82.02	.2993	38.18	83.42
.2844	36.28	79.27	.2894	36.92	80.67	.2944	37.55	82.05	.2994	38.19	83.45
.2845	36.29	79.29	.2895	36.93	80.69	.2945	37.57	82.09	.2995	38.20	83.47
.2846	36.30	79.32	.2896	36.94	80.71	.2946	37.58	82.11	.2996	38.22	83.51
.2847	36.32	79.36	.2897	36.95	80.74	.2947	37.59	82.13	.2997	38.23	83.53
.2848	36.33	79.38	.2898	36.97	80.78	.2948	37.60	82.16	.2998	38.24	83.55
.2849	36.34	79.40	.2899	36.98	80.80	.2949	37.62	82.20	.2999	38.26	83.61

## TABLE II

### POTASH CONVERSION TABLE

The Potash Table is intended to be used in the analysis of fertilizers and potash salts. It gives the per cent of  $K_2O$  from the weight of  $K_2PtCl_6$ , from .01 per cent up to 20.00 per cent  $K_2O$ . It is based on the supposition that 1 gram of substance is taken for analysis, or an aliquot corresponding to 1 gram from a solution of any number of grams.

When the weight of  $K_2PtCl_6$  has been obtained, look in the table, take the weight there given nearest to the weight obtained, and the per cent of  $K_2O$  will be found opposite. In other substances having higher per cents of  $K_2O$ , 0.5 gram is to be taken for the analysis. In such cases, it will be sufficient for all practical purposes to double the per cent read in the table. In cases of fertilizers and substances with low per cents of  $K_2O$ , and when only 0.5 gram has been taken, it will, of course, be more accurate to double the weight of  $K_2PtCl_6$  found and then read from the table.

It will be observed that by moving the decimal point two places to the left in the column of per cents, the weight of  $K_2O$  from a known weight of  $K_2PtCl_6$  may be read.

The Potash Table for the conversion of  $K_2PtCl_6$  to  $K_2O$  is constructed with the factor 0.1938.

## Gram .0005—.1548 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$
.0005	.01	.0263	.51	.0521	1.01	.0779	1.51	.1037	2.01	.1296	2.51
.0010	.02	.0268	.52	.0526	1.02	.0784	1.52	.1042	2.02	.1300	2.52
.0015	.03	.0273	.53	.0531	1.03	.0789	1.53	.1047	2.03	.1305	2.53
.0021	.04	.0279	.54	.0537	1.04	.0795	1.54	.1053	2.04	.1311	2.54
.0026	.05	.0283	.55	.0541	1.05	.0800	1.55	.1058	2.05	.1316	2.55
.0031	.06	.0289	.56	.0547	1.06	.0805	1.56	.1063	2.06	.1321	2.56
.0036	.07	.0294	.57	.0552	1.07	.0810	1.57	.1068	2.07	.1326	2.57
.0041	.08	.0299	.58	.0557	1.08	.0815	1.58	.1073	2.08	.1331	2.58
.0046	.09	.0304	.59	.0562	1.09	.0820	1.59	.1078	2.09	.1336	2.59
.0052	.10	.0310	.60	.0568	1.10	.0826	1.60	.1084	2.10	.1342	2.60
.0057	.11	.0315	.61	.0573	1.11	.0831	1.61	.1089	2.11	.1347	2.61
.0062	.12	.0320	.62	.0578	1.12	.0836	1.62	.1094	2.12	.1352	2.62
.0067	.13	.0325	.63	.0583	1.13	.0841	1.63	.1099	2.13	.1357	2.63
.0072	.14	.0330	.64	.0588	1.14	.0846	1.64	.1104	2.14	.1362	2.64
.0077	.15	.0335	.65	.0593	1.15	.0851	1.65	.1109	2.15	.1367	2.65
.0083	.16	.0341	.66	.0599	1.16	.0857	1.66	.1115	2.16	.1373	2.66
.0088	.17	.0346	.67	.0604	1.17	.0862	1.67	.1120	2.17	.1378	2.67
.0093	.18	.0351	.68	.0609	1.18	.0867	1.68	.1125	2.18	.1383	2.68
.0098	.19	.0356	.69	.0614	1.19	.0872	1.69	.1130	2.19	.1388	2.69
.0103	.20	.0361	.70	.0619	1.20	.0877	1.70	.1135	2.20	.1393	2.70
.0108	.21	.0366	.71	.0624	1.21	.0882	1.71	.1140	2.21	.1398	2.71
.0114	.22	.0372	.72	.0630	1.22	.0888	1.72	.1146	2.22	.1404	2.72
.0119	.23	.0377	.73	.0635	1.23	.0893	1.73	.1151	2.23	.1409	2.73
.0124	.24	.0382	.74	.0640	1.24	.0898	1.74	.1156	2.24	.1414	2.74
.0129	.25	.0387	.75	.0645	1.25	.0903	1.75	.1161	2.25	.1419	2.75
.0134	.26	.0392	.76	.0650	1.26	.0908	1.76	.1166	2.26	.1424	2.76
.0139	.27	.0397	.77	.0655	1.27	.0913	1.77	.1171	2.27	.1429	2.77
.0144	.28	.0402	.78	.0660	1.28	.0918	1.78	.1176	2.28	.1434	2.78
.0150	.29	.0408	.79	.0666	1.29	.0924	1.79	.1182	2.29	.1440	2.79
.0155	.30	.0413	.80	.0671	1.30	.0929	1.80	.1187	2.30	.1445	2.80
.0160	.31	.0418	.81	.0676	1.31	.0934	1.81	.1192	2.31	.1450	2.81
.0165	.32	.0423	.82	.0681	1.32	.0939	1.82	.1197	2.32	.1455	2.82
.0170	.33	.0428	.83	.0686	1.33	.0944	1.83	.1202	2.33	.1460	2.83
.0175	.34	.0433	.84	.0691	1.34	.0949	1.84	.1207	2.34	.1465	2.84
.0181	.35	.0439	.85	.0697	1.35	.0955	1.85	.1213	2.35	.1471	2.85
.0186	.36	.0444	.86	.0702	1.36	.0960	1.86	.1218	2.36	.1476	2.86
.0191	.37	.0449	.87	.0707	1.37	.0965	1.87	.1223	2.37	.1481	2.87
.0196	.38	.0454	.88	.0712	1.38	.0970	1.88	.1228	2.38	.1486	2.88
.0201	.39	.0459	.89	.0717	1.39	.0975	1.89	.1233	2.39	.1491	2.89
.0206	.40	.0464	.90	.0722	1.40	.0980	1.90	.1238	2.40	.1496	2.90
.0212	.41	.0469	.91	.0728	1.41	.0986	1.91	.1244	2.41	.1502	2.91
.0217	.42	.0475	.92	.0733	1.42	.0991	1.92	.1249	2.42	.1507	2.92
.0222	.43	.0480	.93	.0738	1.43	.0996	1.93	.1254	2.43	.1512	2.93
.0227	.44	.0485	.94	.0743	1.44	.1001	1.94	.1259	2.44	.1517	2.94
.0232	.45	.0490	.95	.0748	1.45	.1006	1.95	.1264	2.45	.1522	2.95
.0237	.46	.0495	.96	.0753	1.46	.1011	1.96	.1269	2.46	.1527	2.96
.0243	.47	.0501	.97	.0759	1.47	.1017	1.97	.1275	2.47	.1533	2.97
.0248	.48	.0506	.98	.0764	1.48	.1022	1.98	.1280	2.48	.1538	2.98
.0253	.49	.0511	.99	.0769	1.49	.1027	1.99	.1285	2.49	.1543	2.99
.0258	.50	.0516	1.00	.0774	1.50	.1032	2.00	.1290	2.50	.1548	3.00

Gram .1553—.3096. (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.
.1553	3.01	.1811	3.51	.2069	4.01	.2327	4.51	.2585	5.01	.2843	5.51
.1558	3.02	.1816	3.52	.2074	4.02	.2332	4.52	.2590	5.02	.2848	5.52
.1563	3.03	.1821	3.53	.2079	4.03	.2337	4.53	.2595	5.03	.2853	5.53
.1569	3.04	.1827	3.54	.2085	4.04	.2343	4.54	.2601	5.04	.2859	5.54
.1574	3.05	.1832	3.55	.2090	4.05	.2348	4.55	.2606	5.05	.2864	5.55
.1579	3.06	.1837	3.56	.2095	4.06	.2353	4.56	.2611	5.06	.2869	5.56
.1584	3.07	.1842	3.57	.2100	4.07	.2358	4.57	.2616	5.07	.2874	5.57
.1589	3.08	.1847	3.58	.2105	4.08	.2363	4.58	.2621	5.08	.2879	5.58
.1594	3.09	.1852	3.59	.2110	4.09	.2368	4.59	.2626	5.09	.2884	5.59
.1600	3.10	.1858	3.60	.2116	4.10	.2374	4.60	.2632	5.10	.2890	5.60
.1605	3.11	.1863	3.61	.2121	4.11	.2379	4.61	.2637	5.11	.2895	5.61
.1610	3.12	.1868	3.62	.2126	4.12	.2384	4.62	.2642	5.12	.2900	5.62
.1615	3.13	.1873	3.63	.2131	4.13	.2389	4.63	.2647	5.13	.2905	5.63
.1620	3.14	.1878	3.64	.2136	4.14	.2394	4.64	.2652	5.14	.2910	5.64
.1625	3.15	.1883	3.65	.2141	4.15	.2399	4.65	.2657	5.15	.2915	5.65
.1631	3.16	.1889	3.66	.2147	4.16	.2405	4.66	.2663	5.16	.2921	5.66
.1636	3.17	.1894	3.67	.2152	4.17	.2410	4.67	.2668	5.17	.2927	5.67
.1641	3.18	.1899	3.68	.2157	4.18	.2415	4.68	.2673	5.18	.2931	5.68
.1646	3.19	.1904	3.69	.2162	4.19	.2420	4.69	.2678	5.19	.2936	5.69
.1651	3.20	.1909	3.70	.2167	4.20	.2425	4.70	.2683	5.20	.2941	5.70
.1656	3.21	.1914	3.71	.2172	4.21	.2430	4.71	.2688	5.21	.2946	5.71
.1662	3.22	.1920	3.72	.2178	4.22	.2436	4.72	.2694	5.22	.2952	5.72
.1667	3.23	.1925	3.73	.2183	4.23	.2441	4.73	.2699	5.23	.2957	5.73
.1672	3.24	.1930	3.74	.2188	4.24	.2446	4.74	.2704	5.24	.2962	5.74
.1677	3.25	.1935	3.75	.2193	4.25	.2451	4.75	.2709	5.25	.2967	5.75
.1682	3.26	.1940	3.76	.2198	4.26	.2456	4.76	.2714	5.26	.2972	5.76
.1687	3.27	.1945	3.77	.2203	4.27	.2461	4.77	.2719	5.27	.2977	5.77
.1692	3.28	.1950	3.78	.2208	4.28	.2466	4.78	.2724	5.28	.2982	5.78
.1698	3.29	.1956	3.79	.2214	4.29	.2472	4.79	.2730	5.29	.2988	5.79
.1703	3.30	.1961	3.80	.2219	4.30	.2477	4.80	.2735	5.30	.2993	5.80
.1708	3.31	.1966	3.81	.2224	4.31	.2482	4.81	.2740	5.31	.2998	5.81
.1713	3.32	.1971	3.82	.2229	4.32	.2487	4.82	.2745	5.32	.3003	5.82
.1718	3.33	.1976	3.83	.2234	4.33	.2492	4.83	.2750	5.33	.3008	5.83
.1723	3.34	.1981	3.84	.2239	4.34	.2497	4.84	.2755	5.34	.3013	5.84
.1729	3.35	.1987	3.85	.2245	4.35	.2503	4.85	.2761	5.35	.3019	5.85
.1734	3.36	.1992	3.86	.2250	4.36	.2508	4.86	.2766	5.36	.3024	5.86
.1739	3.37	.1997	3.87	.2255	4.37	.2513	4.87	.2771	5.37	.3029	5.87
.1744	3.38	.2002	3.88	.2260	4.38	.2518	4.88	.2776	5.38	.3034	5.88
.1749	3.39	.2007	3.89	.2265	4.39	.2523	4.89	.2781	5.39	.3039	5.89
.1754	3.40	.2012	3.90	.2270	4.40	.2528	4.90	.2786	5.40	.3044	5.90
.1760	3.41	.2018	3.91	.2276	4.41	.2534	4.91	.2792	5.41	.3050	5.91
.1765	3.42	.2023	3.92	.2281	4.42	.2539	4.92	.2798	5.42	.3055	5.92
.1770	3.43	.2028	3.93	.2286	4.43	.2544	4.93	.2802	5.43	.3060	5.93
.1775	3.44	.2033	3.94	.2291	4.44	.2549	4.94	.2807	5.44	.3065	5.94
.1780	3.45	.2038	3.95	.2296	4.45	.2554	4.95	.2812	5.45	.3070	5.95
.1785	3.46	.2043	3.96	.2301	4.46	.2559	4.96	.2817	5.46	.3075	5.96
.1791	3.47	.2049	3.97	.2307	4.47	.2565	4.97	.2823	5.47	.3081	5.97
.1796	3.48	.2054	3.98	.2312	4.48	.2570	4.98	.2828	5.48	.3086	5.98
.1801	3.49	.2059	3.99	.2317	4.49	.2575	4.99	.2833	5.49	.3091	5.99
.1806	3.50	.2064	4.00	.2322	4.50	.2580	5.00	.2838	5.50	.3096	6.00

## Gram .3101—.4644 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .
.3101	6.01	.3359	6.51	.3617	7.01	.3875	7.51	.4133	8.01	.4391	8.51
.3106	6.02	.3364	6.52	.3622	7.02	.3880	7.52	.4138	8.02	.4396	8.52
.3111	6.03	.3369	6.53	.3627	7.03	.3885	7.53	.4143	8.03	.4401	8.53
.3116	6.04	.3375	6.54	.3633	7.04	.3891	7.54	.4149	8.04	.4407	8.54
.3122	6.05	.3380	6.55	.3638	7.05	.3896	7.55	.4154	8.05	.4412	8.55
.3127	6.06	.3385	6.56	.3643	7.06	.3901	7.56	.4159	8.06	.4417	8.56
.3132	6.07	.3390	6.57	.3648	7.07	.3906	7.57	.4164	8.07	.4422	8.57
.3137	6.08	.3395	6.58	.3653	7.08	.3911	7.58	.4169	8.08	.4427	8.58
.3142	6.09	.3400	6.59	.3658	7.09	.3916	7.59	.4174	8.09	.4432	8.59
.3148	6.10	.3406	6.60	.3664	7.10	.3922	7.60	.4180	8.10	.4438	8.60
.3153	6.11	.3411	6.61	.3669	7.11	.3927	7.61	.4185	8.11	.4443	8.61
.3158	6.12	.3416	6.62	.3674	7.12	.3932	7.62	.4190	8.12	.4448	8.62
.3163	6.13	.3421	6.63	.3679	7.13	.3937	7.63	.4195	8.13	.4453	8.63
.3168	6.14	.3426	6.64	.3684	7.14	.3942	7.64	.4200	8.14	.4458	8.64
.3173	6.15	.3431	6.65	.3689	7.15	.3947	7.65	.4205	8.15	.4463	8.65
.3179	6.16	.3437	6.66	.3695	7.16	.3953	7.66	.4211	8.16	.4469	8.66
.3184	6.17	.3442	6.67	.3700	7.17	.3958	7.67	.4216	8.17	.4474	8.67
.3189	6.18	.3447	6.68	.3705	7.18	.3963	7.68	.4221	8.18	.4479	8.68
.3194	6.19	.3452	6.69	.3710	7.19	.3968	7.69	.4226	8.19	.4484	8.69
.3199	6.20	.3457	6.70	.3715	7.20	.3973	7.70	.4231	8.20	.4489	8.70
.3204	6.21	.3462	6.71	.3720	7.21	.3978	7.71	.4236	8.21	.4494	8.71
.3210	6.22	.3468	6.72	.3726	7.22	.3984	7.72	.4242	8.22	.4499	8.72
.3215	6.23	.3473	6.73	.3731	7.23	.3989	7.73	.4247	8.23	.4505	8.73
.3220	6.24	.3478	6.74	.3736	7.24	.3994	7.74	.4252	8.24	.4510	8.74
.3225	6.25	.3483	6.75	.3741	7.25	.3999	7.75	.4257	8.25	.4515	8.75
.3230	6.26	.3488	6.76	.3746	7.26	.4004	7.76	.4262	8.26	.4520	8.76
.3235	6.27	.3493	6.77	.3751	7.27	.4009	7.77	.4267	8.27	.4525	8.77
.3240	6.28	.3498	6.78	.3756	7.28	.4014	7.78	.4272	8.28	.4530	8.78
.3246	6.29	.3504	6.79	.3762	7.29	.4020	7.79	.4278	8.29	.4536	8.79
.3251	6.30	.3509	6.80	.3767	7.30	.4025	7.80	.4283	8.30	.4541	8.80
.3256	6.31	.3514	6.81	.3772	7.31	.4030	7.81	.4288	8.31	.4546	8.81
.3261	6.32	.3519	6.82	.3777	7.32	.4035	7.82	.4293	8.32	.4551	8.82
.3266	6.33	.3524	6.83	.3782	7.33	.4040	7.83	.4298	8.33	.4556	8.83
.3271	6.34	.3529	6.84	.3787	7.34	.4045	7.84	.4303	8.34	.4561	8.84
.3277	6.35	.3535	6.85	.3795	7.35	.4051	7.85	.4309	8.35	.4567	8.85
.3282	6.36	.3540	6.86	.3798	7.36	.4056	7.86	.4314	8.36	.4572	8.86
.3287	6.37	.3545	6.87	.3803	7.37	.4061	7.87	.4319	8.37	.4577	8.87
.3292	6.38	.3550	6.88	.3808	7.38	.4066	7.88	.4324	8.38	.4582	8.88
.3297	6.39	.3555	6.89	.3813	7.39	.4071	7.89	.4329	8.39	.4587	8.89
.3302	6.40	.3560	6.90	.3818	7.40	.4076	7.90	.4334	8.40	.4592	8.90
.3308	6.41	.3566	6.91	.3824	7.41	.4082	7.91	.4340	8.41	.4598	8.91
.3313	6.42	.3571	6.92	.3829	7.42	.4087	7.92	.4345	8.42	.4603	8.92
.3318	6.43	.3576	6.93	.3834	7.43	.4092	7.93	.4350	8.43	.4608	8.93
.3323	6.44	.3581	6.94	.3839	7.44	.4097	7.94	.4355	8.44	.4613	8.94
.3328	6.45	.3586	6.95	.3844	7.45	.4102	7.95	.4360	8.45	.4618	8.95
.3333	6.46	.3591	6.96	.3849	7.46	.4107	7.96	.4365	8.46	.4623	8.96
.3339	6.47	.3597	6.97	.3855	7.47	.4113	7.97	.4371	8.47	.4629	8.97
.3344	6.48	.3602	6.98	.3860	7.48	.4118	7.98	.4376	8.48	.4634	8.98
.3349	6.49	.3607	6.99	.3865	7.49	.4123	7.99	.4381	8.49	.4639	8.99
.3354	6.50	.3612	7.00	.3870	7.50	.4128	8.00	.4386	8.50	.4644	9.00

Gram .4649—.6192 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.	K <sub>2</sub> PtCl <sub>6</sub> .	K <sub>2</sub> O.
.4649	9.01	.4907	9.51	.5165	10.01	.5423	10.51	.5681	11.01	.5939	11.51
.4654	9.02	.4912	9.52	.5170	10.02	.5428	10.52	.5686	11.02	.5944	11.52
.4659	9.03	.4917	9.53	.5175	10.03	.5433	10.53	.5691	11.03	.5949	11.53
.4665	9.04	.4923	9.54	.5181	10.04	.5439	10.54	.5697	11.04	.5955	11.54
.4670	9.05	.4928	9.55	.5186	10.05	.5444	10.55	.5702	11.05	.5960	11.55
.4675	9.06	.4933	9.56	.5191	10.06	.5449	10.56	.5707	11.06	.5965	11.56
.4680	9.07	.4938	9.57	.5196	10.07	.5454	10.57	.5712	11.07	.5970	11.57
.4685	9.08	.4943	9.58	.5201	10.08	.5459	10.58	.5717	11.08	.5975	11.58
.4690	9.09	.4948	9.59	.5206	10.09	.5464	10.59	.5722	11.09	.5980	11.59
.4696	9.10	.4954	9.60	.5212	10.10	.5470	10.60	.5728	11.10	.5985	11.60
.4701	9.11	.4959	9.61	.5217	10.11	.5475	10.61	.5733	11.11	.5991	11.61
.4706	9.12	.4964	9.62	.5222	10.12	.5480	10.62	.5738	11.12	.5996	11.62
.4711	9.13	.4969	9.63	.5227	10.13	.5485	10.63	.5743	11.13	.6001	11.63
.4716	9.14	.4974	9.64	.5232	10.14	.5490	10.64	.5748	11.14	.6006	11.64
.4721	9.15	.4979	9.65	.5237	10.15	.5495	10.65	.5753	11.15	.6011	11.65
.4727	9.16	.4985	9.66	.5243	10.16	.5501	10.66	.5759	11.16	.6017	11.66
.4732	9.17	.4990	9.67	.5248	10.17	.5506	10.67	.5764	11.17	.6022	11.67
.4737	9.18	.4995	9.68	.5253	10.18	.5511	10.68	.5769	11.18	.6027	11.68
.4742	9.19	.5000	9.69	.5258	10.19	.5516	10.69	.5774	11.19	.6032	11.69
.4747	9.20	.5005	9.70	.5263	10.20	.5521	10.70	.5779	11.20	.6037	11.70
.4752	9.21	.5010	9.71	.5268	10.21	.5526	10.71	.5784	11.21	.6042	11.71
.4758	9.22	.5016	9.72	.5274	10.22	.5532	10.72	.5790	11.22	.6048	11.72
.4763	9.23	.5021	9.73	.5279	10.23	.5537	10.73	.5795	11.23	.6053	11.73
.4768	9.24	.5026	9.74	.5284	10.24	.5542	10.74	.5800	11.24	.6058	11.74
.4773	9.25	.5031	9.75	.5289	10.25	.5547	10.75	.5805	11.25	.6063	11.75
.4778	9.26	.5036	9.76	.5294	10.26	.5552	10.76	.5810	11.26	.6068	11.76
.4783	9.27	.5041	9.77	.5299	10.27	.5557	10.77	.5815	11.27	.6073	11.77
.4788	9.28	.5046	9.78	.5304	10.28	.5562	10.78	.5820	11.28	.6078	11.78
.4794	9.29	.5052	9.79	.5310	10.29	.5568	10.79	.5826	11.29	.6084	11.79
.4799	9.30	.5057	9.80	.5315	10.30	.5573	10.80	.5831	11.30	.6089	11.80
.4804	9.31	.5062	9.81	.5320	10.31	.5578	10.81	.5836	11.31	.6094	11.81
.4809	9.32	.5067	9.82	.5325	10.32	.5583	10.82	.5841	11.32	.6099	11.82
.4814	9.33	.5072	9.83	.5330	10.33	.5588	10.83	.5846	11.33	.6104	11.83
.4819	9.34	.5077	9.84	.5335	10.34	.5593	10.84	.5851	11.34	.6109	11.84
.4825	9.35	.5083	9.85	.5341	10.35	.5599	10.85	.5857	11.35	.6115	11.85
.4830	9.36	.5088	9.86	.5346	10.36	.5604	10.86	.5862	11.36	.6120	11.86
.4835	9.37	.5093	9.87	.5351	10.37	.5609	10.87	.5867	11.37	.6125	11.87
.4840	9.38	.5098	9.88	.5356	10.38	.5614	10.88	.5872	11.38	.6130	11.88
.4845	9.39	.5103	9.89	.5361	10.39	.5619	10.89	.5877	11.39	.6135	11.89
.4850	9.40	.5108	9.90	.5366	10.40	.5624	10.90	.5882	11.40	.6140	11.90
.4856	9.41	.5114	9.91	.5372	10.41	.5630	10.91	.5888	11.41	.6146	11.91
.4861	9.42	.5119	9.92	.5377	10.42	.5635	10.92	.5893	11.42	.6151	11.92
.4866	9.43	.5124	9.93	.5382	10.43	.5640	10.93	.5898	11.43	.6156	11.93
.4871	9.44	.5129	9.94	.5387	10.44	.5645	10.94	.5903	11.44	.6161	11.94
.4876	9.45	.5134	9.95	.5392	10.45	.5650	10.95	.5908	11.45	.6166	11.95
.4881	9.46	.5139	9.96	.5397	10.46	.5655	10.96	.5913	11.46	.6171	11.96
.4887	9.47	.5145	9.97	.5403	10.47	.5661	10.97	.5919	11.47	.6177	11.97
.4892	9.48	.5150	9.98	.5408	10.48	.5666	10.98	.5924	11.48	.6182	11.98
.4897	9.49	.5155	9.99	.5413	10.49	.5671	10.99	.5929	11.49	.6187	11.99
.4902	9.50	.5160	10.00	.5418	10.50	.5676	11.00	.5934	11.50	.6192	12.00

## Gram .6197—.7740 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .
.6197	12.01	.6455	12.51	.6713	13.01	.6971	13.51	.7229	14.01	.7487	14.51
.6202	12.02	.6460	12.52	.6718	13.02	.6976	13.52	.7234	14.02	.7492	14.52
.6207	12.03	.6465	12.53	.6723	13.03	.6981	13.53	.7239	14.03	.7497	14.53
.6213	12.04	.6471	12.54	.6729	13.04	.6987	13.54	.7245	14.04	.7503	14.54
.6218	12.05	.6476	12.55	.6734	13.05	.6992	13.55	.7250	14.05	.7508	14.55
.6223	12.06	.6481	12.56	.6739	13.06	.6997	13.56	.7255	14.06	.7513	14.56
.6228	12.07	.6486	12.57	.6744	13.07	.7002	13.57	.7260	14.07	.7518	14.57
.6233	12.08	.6491	12.58	.6749	13.08	.7007	13.58	.7265	14.08	.7523	14.58
.6238	12.09	.6496	12.59	.6754	13.09	.7012	13.59	.7270	14.09	.7528	14.59
.6243	12.10	.6501	12.60	.6760	13.10	.7018	13.60	.7276	14.10	.7534	14.60
.6249	12.11	.6507	12.61	.6765	13.11	.7023	13.61	.7281	14.11	.7539	14.61
.6254	12.12	.6512	12.62	.6770	13.12	.7028	13.62	.7286	14.12	.7544	14.62
.6259	12.13	.6517	12.63	.6775	13.13	.7033	13.63	.7291	14.13	.7549	14.63
.6264	12.14	.6522	12.64	.6780	13.14	.7038	13.64	.7296	14.14	.7554	14.64
.6269	12.15	.6527	12.65	.6785	13.15	.7043	13.65	.7301	14.15	.7559	14.65
.6275	12.16	.6533	12.66	.6791	13.16	.7048	13.66	.7307	14.16	.7565	14.66
.6280	12.17	.6538	12.67	.6796	13.17	.7054	13.67	.7312	14.17	.7570	14.67
.6285	12.18	.6543	12.68	.6801	13.18	.7059	13.68	.7317	14.18	.7575	14.68
.6290	12.19	.6548	12.69	.6806	13.19	.7064	13.69	.7322	14.19	.7580	14.69
.6295	12.20	.6553	12.70	.6811	13.20	.7069	13.70	.7327	14.20	.7585	14.70
.6300	12.21	.6558	12.71	.6816	13.21	.7074	13.71	.7332	14.21	.7590	14.71
.6306	12.22	.6564	12.72	.6822	13.22	.7080	13.72	.7338	14.22	.7596	14.72
.6311	12.23	.6569	12.73	.6827	13.23	.7085	13.73	.7343	14.23	.7601	14.73
.6316	12.24	.6574	12.74	.6832	13.24	.7090	13.74	.7348	14.24	.7606	14.74
.6321	12.25	.6579	12.75	.6837	13.25	.7095	13.75	.7353	14.25	.7611	14.75
.6326	12.26	.6584	12.76	.6842	13.26	.7100	13.76	.7358	14.26	.7616	14.76
.6331	12.27	.6589	12.77	.6847	13.27	.7105	13.77	.7363	14.27	.7621	14.77
.6336	12.28	.6594	12.78	.6852	13.28	.7110	13.78	.7368	14.28	.7626	14.78
.6342	12.29	.6600	12.79	.6858	13.29	.7116	13.79	.7374	14.29	.7632	14.79
.6347	12.30	.6605	12.80	.6863	13.30	.7121	13.80	.7379	14.30	.7637	14.80
.6352	12.31	.6610	12.81	.6868	13.31	.7126	13.81	.7384	14.31	.7642	14.81
.6357	12.32	.6615	12.82	.6873	13.32	.7131	13.82	.7389	14.32	.7647	14.82
.6362	12.33	.6620	12.83	.6879	13.33	.7136	13.83	.7394	14.33	.7652	14.83
.6367	12.34	.6625	12.84	.6883	13.34	.7141	13.84	.7399	14.34	.7657	14.84
.6373	12.35	.6631	12.85	.6889	13.35	.7147	13.85	.7405	14.35	.7663	14.85
.6378	12.36	.6636	12.86	.6894	13.36	.7152	13.86	.7410	14.36	.7668	14.86
.6383	12.37	.6641	12.87	.6899	13.37	.7157	13.87	.7415	14.37	.7673	14.87
.6388	12.38	.6646	12.88	.6904	13.38	.7162	13.88	.7420	14.38	.7678	14.88
.6393	12.39	.6651	12.89	.6909	13.39	.7167	13.89	.7425	14.39	.7683	14.89
.6398	12.40	.6656	12.90	.6914	13.40	.7172	13.90	.7430	14.40	.7688	14.90
.6403	12.41	.6662	12.91	.6920	13.41	.7178	13.91	.7436	14.41	.7694	14.91
.6408	12.42	.6667	12.92	.6925	13.42	.7183	13.92	.7441	14.42	.7699	14.92
.6414	12.43	.6672	12.93	.6930	13.43	.7188	13.93	.7446	14.43	.7704	14.93
.6419	12.44	.6677	12.94	.6935	13.44	.7193	13.94	.7451	14.44	.7709	14.94
.6424	12.45	.6682	12.95	.6940	13.45	.7198	13.95	.7456	14.45	.7714	14.95
.6429	12.46	.6687	12.96	.6945	13.46	.7203	13.96	.7461	14.46	.7719	14.96
.6435	12.47	.6693	12.97	.6951	13.47	.7209	13.97	.7467	14.47	.7725	14.97
.6440	12.48	.6688	12.98	.6956	13.48	.7214	13.98	.7472	14.48	.7730	14.98
.6445	12.49	.6703	12.99	.6961	13.49	.7219	13.99	.7477	14.49	.7735	14.99
.6450	12.50	.6708	13.00	.6966	13.50	.7224	14.00	.7482	14.50	.7740	15.00



Gram .7744—.9286 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$	$K_2PtCl_6$	$K_2O$
.7744	15.01	.8001	15.51	.8259	16.01	.8517	16.51	.8775	17.01	.9033	17.51
.7749	15.02	.8006	15.52	.8264	16.02	.8522	16.52	.8780	17.02	.9038	17.52
.7754	15.03	.8012	15.53	.8270	16.03	.8527	16.53	.8785	17.03	.9043	17.53
.7759	15.04	.8017	15.54	.8275	16.04	.8533	16.54	.8791	17.04	.9049	17.54
.7764	15.05	.8022	15.55	.8280	16.05	.8538	16.55	.8796	17.05	.9054	17.55
.7769	15.06	.8027	15.56	.8285	16.06	.8543	16.56	.8801	17.06	.9059	17.56
.7774	15.07	.8032	15.57	.8290	16.07	.8548	16.57	.8806	17.07	.9064	17.57
.7779	15.08	.8037	15.58	.8295	16.08	.8553	16.58	.8811	17.08	.9069	17.58
.7785	15.09	.8043	15.59	.8301	16.09	.8558	16.59	.8816	17.09	.9074	17.59
.7790	15.10	.8048	15.60	.8306	16.10	.8564	16.60	.8822	17.10	.9079	17.60
.7795	15.11	.8053	15.61	.8311	16.11	.8569	16.61	.8827	17.11	.9084	17.61
.7800	15.12	.8058	15.62	.8316	16.12	.8574	16.62	.8832	17.12	.9090	17.62
.7805	15.13	.8063	15.63	.8321	16.13	.8579	16.63	.8837	17.13	.9095	17.63
.7810	15.14	.8068	15.64	.8326	16.14	.8584	16.64	.8842	17.14	.9100	17.64
.7816	15.15	.8074	15.65	.8331	16.15	.8589	16.65	.8847	17.15	.9105	17.65
.7821	15.16	.8079	15.66	.8337	16.16	.8595	16.66	.8853	17.16	.9110	17.66
.7826	15.17	.8084	15.67	.8342	16.17	.8600	16.67	.8858	17.17	.9116	17.67
.7831	15.18	.8089	15.68	.8347	16.18	.8605	16.68	.8863	17.18	.9121	17.68
.7836	15.19	.8094	15.69	.8352	16.19	.8610	16.69	.8868	17.19	.9126	17.69
.7841	15.20	.8099	15.70	.8357	16.20	.8615	16.70	.8873	17.20	.9131	17.70
.7847	15.21	.8104	15.71	.8362	16.21	.8620	16.71	.8878	17.21	.9136	17.71
.7852	15.22	.8110	15.72	.8368	16.22	.8626	16.72	.8883	17.22	.9141	17.72
.7857	15.23	.8115	15.73	.8373	16.23	.8631	16.73	.8889	17.23	.9147	17.73
.7862	15.24	.8120	15.74	.8378	16.24	.8636	16.74	.8894	17.24	.9152	17.74
.7867	15.25	.8125	15.75	.8383	16.25	.8641	16.75	.8899	17.25	.9157	17.75
.7872	15.26	.8130	15.76	.8388	16.26	.8646	16.76	.8904	17.26	.9162	17.76
.7877	15.27	.8135	15.77	.8393	16.27	.8651	16.77	.8909	17.27	.9167	17.77
.7883	15.28	.8141	15.78	.8399	16.28	.8656	16.78	.8914	17.28	.9172	17.78
.7888	15.29	.8146	15.79	.8404	16.29	.8662	16.79	.8920	17.29	.9178	17.79
.7893	15.30	.8151	15.80	.8409	16.30	.8667	16.80	.8925	17.30	.9183	17.80
.7898	15.31	.8156	15.81	.8414	16.31	.8672	16.81	.8930	17.31	.9188	17.81
.7903	15.32	.8161	15.82	.8419	16.32	.8677	16.82	.8935	17.32	.9193	17.82
.7908	15.33	.8166	15.83	.8424	16.33	.8682	16.83	.8940	17.33	.9198	17.83
.7914	15.34	.8172	15.84	.8429	16.34	.8687	16.84	.8945	17.34	.9203	17.84
.7919	15.35	.8177	15.85	.8435	16.35	.8693	16.85	.8951	17.35	.9208	17.85
.7924	15.36	.8182	15.86	.8440	16.36	.8698	16.86	.8956	17.36	.9214	17.86
.7929	15.37	.8187	15.87	.8445	16.37	.8703	16.87	.8961	17.37	.9219	17.87
.7934	15.38	.8192	15.88	.8450	16.38	.8708	16.88	.8966	17.38	.9224	17.88
.7939	15.39	.8197	15.89	.8455	16.39	.8713	16.89	.8971	17.39	.9229	17.89
.7945	15.40	.8202	15.90	.8460	16.40	.8718	16.90	.8976	17.40	.9234	17.90
.7950	15.41	.8208	15.91	.8466	16.41	.8724	16.91	.8981	17.41	.9239	17.91
.7955	15.42	.8213	15.92	.8471	16.42	.8729	16.92	.8987	17.42	.9245	17.92
.7960	15.43	.8218	15.93	.8476	16.43	.8734	16.93	.8992	17.43	.9250	17.93
.7965	15.44	.8223	15.94	.8481	16.44	.8739	16.94	.8997	17.44	.9255	17.94
.7970	15.45	.8228	15.95	.8486	16.45	.8744	16.95	.9002	17.45	.9260	17.95
.7976	15.46	.8233	15.96	.8491	16.46	.8749	16.96	.9007	17.46	.9265	17.96
.7981	15.47	.8239	15.97	.8497	16.47	.8754	16.97	.9012	17.47	.9270	17.97
.7986	15.48	.8244	15.98	.8502	16.48	.8760	16.98	.9018	17.48	.9275	17.98
.7991	15.49	.8249	15.99	.8507	16.49	.8765	16.99	.9023	17.49	.9281	17.99
.7996	15.50	.8254	16.00	.8512	16.50	.8770	17.00	.9028	17.50	.9286	18.00

## Gram .9291 — 1.0318 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .	$K_2PtCl_6$ .	$K_2O$ .
.9291	18.01	.9549	18.51	.9807	19.01	1.0065	19.51				
.9296	18.02	.9554	18.52	.9812	19.02	1.0070	19.52				
.9301	18.03	.9559	18.53	.9817	19.03	1.0075	19.53				
.9306	18.04	.9564	18.54	.9822	19.04	1.0080	19.54				
.9312	18.05	.9570	18.55	.9828	19.05	1.0085	19.55				
.9317	18.06	.9575	18.56	.9833	19.06	1.0091	19.56				
.9322	18.07	.9580	18.57	.9838	19.07	1.0096	19.57				
.9327	18.08	.9585	18.58	.9843	19.08	1.0101	19.58				
.9332	18.09	.9590	18.59	.9848	19.09	1.0106	19.59				
.9337	18.10	.9595	18.60	.9853	19.10	1.0111	19.60				
.9343	18.11	.9601	18.61	.9858	19.11	1.0116	19.61				
.9348	18.12	.9606	18.62	.9864	19.12	1.0122	19.62				
.9353	18.13	.9611	18.63	.9869	19.13	1.0127	19.63				
.9358	18.14	.9616	18.64	.9874	19.14	1.0132	19.64				
.9363	18.15	.9621	18.65	.9879	19.15	1.0137	19.65				
.9368	18.16	.9626	18.66	.9884	19.16	1.0142	19.66				
.9374	18.17	.9631	18.67	.9889	19.17	1.0147	19.67				
.9379	18.18	.9637	18.68	.9895	19.18	1.0153	19.68				
.9384	18.19	.9642	18.69	.9900	19.19	1.0158	19.69				
.9389	18.20	.9647	18.70	.9905	19.20	1.0163	19.70				
.9394	18.21	.9652	18.71	.9910	19.21	1.0168	19.71				
.9399	18.22	.9657	18.72	.9915	19.22	1.0173	19.72				
.9404	18.23	.9662	18.73	.9920	19.23	1.0178	19.73				
.9410	18.24	.9668	18.74	.9926	19.24	1.0183	19.74				
.9415	18.25	.9673	18.75	.9931	19.25	1.0189	19.75				
.9420	18.26	.9678	18.76	.9936	19.26	1.0194	19.76				
.9425	18.27	.9683	18.77	.9941	19.27	1.0199	19.77				
.9430	18.28	.9688	18.78	.9946	19.28	1.0204	19.78				
.9435	18.29	.9693	18.79	.9951	19.29	1.0209	19.79				
.9441	18.30	.9699	18.80	.9956	19.30	1.0214	19.80				
.9446	18.31	.9704	18.81	.9962	19.31	1.0220	19.81				
.9451	18.32	.9709	18.82	.9967	19.32	1.0225	19.82				
.9456	18.33	.9714	18.83	.9972	19.33	1.0230	19.83				
.9461	18.34	.9719	18.84	.9977	19.34	1.0235	19.84				
.9466	18.35	.9724	18.85	.9982	19.35	1.0240	19.85				
.9472	18.36	.9729	18.86	.9987	19.36	1.0245	19.86				
.9477	18.37	.9735	18.87	.9993	19.37	1.0251	19.87				
.9482	18.38	.9740	18.88	.9998	19.38	1.0256	19.88				
.9487	18.39	.9745	18.89	1.0003	19.39	1.0261	19.89				
.9492	18.40	.9750	18.90	1.0008	19.40	1.0266	19.90				
.9497	18.41	.9755	18.91	1.0013	19.41	1.0271	19.91				
.9503	18.42	.9760	18.92	1.0018	19.42	1.0276	19.92				
.9508	18.43	.9766	18.93	1.0024	19.43	1.0281	19.93				
.9513	18.44	.9771	18.94	1.0029	19.44	1.0287	19.94				
.9518	18.45	.9776	18.95	1.0034	19.45	1.0292	19.95				
.9523	18.46	.9781	18.96	1.0039	19.46	1.0297	19.96				
.9528	18.47	.9786	18.97	1.0044	19.47	1.0302	19.97				
.9533	18.48	.9791	18.98	1.0049	19.48	1.0307	19.98				
.9539	18.49	.9797	18.99	1.0055	19.49	1.0312	19.99				
.9543	18.50	.9802	19.00	1.0060	19.50	1.0318	20.00				

### TABLE III

#### AMMONIA AND PROTEIN CONVERSION TABLE

The Ammonia and Protein Table is constructed for use more particularly in fertilizer, cotton-seed product and food analyses, but can be used as well in all cases where the per cent or weight of ammonia ( $\text{NH}_3$ ) is desired from a known per cent or weight of nitrogen (N). It is rather to be used, however, to derive per cent from per cent, since the decimals are not carried far enough for the accurate reading of weights. It extends from 0.00 per cent to 20.99 per cent of N. or from 0.00 per cent to 25.52 per cent of  $\text{NH}_3$  and from 0.00 per cent to 100 per cent Protein, being comprehensive enough to embrace all commercial substances containing nitrogenous materials likely to come up for analysis.

The factor used in constructing this table is 1.2158, based on the atomic weight of N, 14.01.

If the determination of ammonia is made by the so-called copper oxide method, then by Table IV the weight of N is read from the volume of N (corrected for temperature and pressure), and from the weight of N the per cent of N is calculated in a moment's time. Having then the per cent of N, the per cent of  $\text{NH}_3$  is read from the accompanying Ammonia Table (Table III).

The Protein is determined by multiplying the percentage of N by 6.25.

## Nitrogen .00—1.99

%	%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.
.00	.00	.00	.50	.61	3.13	1.00	1.22	6.25	1.50	1.82	9.38	
.01	.01	.06	.51	.62	3.19	1.01	1.23	6.31	1.51	1.84	9.44	
.02	.02	.13	.52	.63	3.25	1.02	1.24	6.38	1.52	1.85	9.50	
.03	.03	.19	.53	.64	3.31	1.03	1.25	6.44	1.53	1.86	9.56	
.04	.05	.25	.54	.66	3.38	1.04	1.26	6.50	1.54	1.87	9.63	
.05	.06	.31	.55	.67	3.44	1.05	1.28	6.56	1.55	1.88	9.69	
.06	.07	.38	.56	.68	3.50	1.06	1.29	6.63	1.56	1.89	9.75	
.07	.08	.44	.57	.69	3.56	1.07	1.30	6.69	1.57	1.91	9.81	
.08	.10	.50	.58	.70	3.63	1.08	1.31	6.75	1.58	1.92	9.88	
.09	.11	.56	.59	.72	3.69	1.09	1.33	6.81	1.59	1.93	9.94	
.10	.12	.63	.60	.73	3.75	1.10	1.34	6.88	1.60	1.94	10.00	
.11	.13	.69	.61	.74	3.81	1.11	1.35	6.94	1.61	1.96	10.06	
.12	.15	.75	.62	.75	3.88	1.12	1.36	7.00	1.62	1.97	10.13	
.13	.16	.81	.63	.77	3.94	1.13	1.37	7.06	1.63	1.98	10.19	
.14	.17	.88	.64	.78	4.00	1.14	1.39	7.13	1.64	1.99	10.25	
.15	.18	.94	.65	.79	4.06	1.15	1.40	7.19	1.65	2.01	10.31	
.16	.19	1.00	.66	.80	4.13	1.16	1.41	7.25	1.66	2.02	10.38	
.17	.21	1.06	.67	.81	4.19	1.17	1.42	7.31	1.67	2.03	10.44	
.18	.22	1.13	.68	.83	4.25	1.18	1.43	7.38	1.68	2.04	10.50	
.19	.23	1.19	.69	.84	4.31	1.19	1.45	7.44	1.69	2.05	10.56	
.20	.24	1.25	.70	.85	4.38	1.20	1.46	7.50	1.70	2.07	10.63	
.21	.25	1.31	.71	.86	4.44	1.21	1.47	7.56	1.71	2.08	10.69	
.22	.27	1.38	.72	.88	4.50	1.22	1.48	7.63	1.72	2.09	10.75	
.23	.28	1.44	.73	.89	4.56	1.23	1.50	7.69	1.73	2.10	10.81	
.24	.29	1.50	.74	.90	4.63	1.24	1.51	7.75	1.74	2.11	10.88	
.25	.30	1.56	.75	.91	4.69	1.25	1.52	7.81	1.75	2.13	10.94	
.26	.32	1.63	.76	.92	4.75	1.26	1.53	7.88	1.76	2.14	11.00	
.27	.33	1.69	.77	.94	4.81	1.27	1.54	7.94	1.77	2.15	11.06	
.28	.34	1.75	.78	.95	4.88	1.28	1.56	8.00	1.78	2.16	11.13	
.29	.35	1.81	.79	.96	4.94	1.29	1.57	8.06	1.79	2.18	11.19	
.30	.36	1.88	.80	.97	5.00	1.30	1.58	8.13	1.80	2.19	11.25	
.31	.38	1.94	.81	.98	5.06	1.31	1.59	8.19	1.81	2.20	11.31	
.32	.39	2.00	.82	1.00	5.13	1.32	1.61	8.25	1.82	2.21	11.38	
.33	.40	2.06	.83	1.01	5.19	1.33	1.62	8.31	1.83	2.22	11.44	
.34	.41	2.13	.84	1.02	5.25	1.34	1.63	8.38	1.84	2.24	11.50	
.35	.43	2.19	.85	1.03	5.31	1.35	1.64	8.44	1.85	2.25	11.56	
.36	.44	2.25	.86	1.05	5.38	1.36	1.65	8.50	1.86	2.26	11.63	
.37	.45	2.31	.87	1.06	5.44	1.37	1.67	8.56	1.87	2.27	11.69	
.38	.46	2.38	.88	1.07	5.50	1.38	1.68	8.63	1.88	2.29	11.75	
.39	.47	2.44	.89	1.08	5.56	1.39	1.69	8.69	1.89	2.30	11.81	
.40	.49	2.50	.90	1.09	5.63	1.40	1.70	8.75	1.90	2.31	11.88	
.41	.50	2.56	.91	1.11	5.69	1.41	1.71	8.81	1.91	2.32	11.94	
.42	.51	2.63	.92	1.12	5.75	1.42	1.73	8.88	1.92	2.33	12.00	
.43	.52	2.69	.93	1.13	5.81	1.43	1.74	8.94	1.93	2.35	12.06	
.44	.53	2.75	.94	1.14	5.88	1.44	1.75	9.00	1.94	2.36	12.13	
.45	.55	2.81	.95	1.16	5.94	1.45	1.76	9.06	1.95	2.37	12.19	
.46	.56	2.88	.96	1.17	6.00	1.46	1.78	9.13	1.96	2.38	12.25	
.47	.57	2.94	.97	1.18	6.06	1.47	1.79	9.19	1.97	2.40	12.31	
.48	.58	3.00	.98	1.19	6.13	1.48	1.80	9.25	1.98	2.41	12.38	
.49	.60	3.06	.99	1.20	6.19	1.49	1.81	9.31	1.99	2.42	12.44	

## Nitrogen 2.00—3.99

%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.
2.00	2.43	12.50	2.50	3.04	15.63	3.00	3.65	18.75	3.50	4.26	21.88
2.01	2.44	12.56	2.51	3.05	15.69	3.01	3.66	18.81	3.51	4.27	21.94
2.02	2.46	12.63	2.52	3.06	15.75	3.02	3.67	18.88	3.52	4.28	22.00
2.03	2.47	12.69	2.53	3.08	15.81	3.03	3.68	18.94	3.53	4.29	22.06
2.04	2.48	12.75	2.54	3.09	15.88	3.04	3.70	19.00	3.54	4.30	22.13
2.05	2.49	12.81	2.55	3.10	15.94	3.05	3.71	19.06	3.55	4.32	22.19
2.06	2.50	12.88	2.56	3.11	16.00	3.06	3.72	19.13	3.56	4.33	22.25
2.07	2.52	12.94	2.57	3.12	16.06	3.07	3.73	19.19	3.57	4.34	22.31
2.08	2.53	13.00	2.58	3.14	16.13	3.08	3.74	19.25	3.58	4.35	22.38
2.09	2.54	13.06	2.59	3.15	16.19	3.09	3.76	19.31	3.59	4.36	22.44
2.10	2.55	13.13	2.60	3.16	16.25	3.10	3.77	19.38	3.60	4.38	22.50
2.11	2.57	13.19	2.61	3.17	16.31	3.11	3.78	19.44	3.61	4.39	22.56
2.12	2.58	13.25	2.62	3.19	16.38	3.12	3.79	19.50	3.62	4.40	22.63
2.13	2.59	13.31	2.63	3.20	16.44	3.13	3.81	19.56	3.63	4.41	22.69
2.14	2.60	13.38	2.64	3.21	16.50	3.14	3.82	19.63	3.64	4.43	22.75
2.15	2.61	13.44	2.65	3.22	16.56	3.15	3.83	19.69	3.65	4.44	22.81
2.16	2.63	13.50	2.66	3.23	16.63	3.16	3.84	19.75	3.66	4.45	22.88
2.17	2.64	13.56	2.67	3.25	16.69	3.17	3.85	19.81	3.67	4.46	22.94
2.18	2.65	13.63	2.68	3.26	16.75	3.18	3.87	19.88	3.68	4.47	23.00
2.19	2.66	13.69	2.69	3.27	16.81	3.19	3.88	19.94	3.69	4.49	23.06
2.20	2.67	13.75	2.70	3.28	16.88	3.20	3.89	20.00	3.70	4.50	23.13
2.21	2.69	13.81	2.71	3.29	16.94	3.21	3.90	20.06	3.71	4.51	23.19
2.22	2.70	13.88	2.72	3.31	17.00	3.22	3.91	20.13	3.72	4.52	23.25
2.23	2.71	13.94	2.73	3.32	17.06	3.23	3.93	20.19	3.73	4.53	23.31
2.24	2.72	14.00	2.74	3.33	17.13	3.24	3.94	20.25	3.74	4.55	23.38
2.25	2.74	14.06	2.75	3.34	17.19	3.25	3.95	20.31	3.75	4.56	23.44
2.26	2.75	14.13	2.76	3.36	17.25	3.26	3.96	20.38	3.76	4.57	23.50
2.27	2.76	14.19	2.77	3.37	17.31	3.27	3.98	20.44	3.77	4.58	23.56
2.28	2.77	14.25	2.78	3.38	17.38	3.28	3.99	20.50	3.78	4.60	23.63
2.29	2.78	14.31	2.79	3.39	17.44	3.29	4.00	20.56	3.79	4.61	23.69
2.30	2.80	14.38	2.80	3.40	17.50	3.30	4.01	20.63	3.80	4.62	23.75
2.31	2.81	14.44	2.81	3.42	17.56	3.31	4.02	20.69	3.81	4.63	23.81
2.32	2.82	14.50	2.82	3.43	17.63	3.32	4.04	20.75	3.82	4.64	23.88
2.33	2.83	14.56	2.83	3.44	17.69	3.33	4.05	20.81	3.83	4.66	23.94
2.34	2.84	14.63	2.84	3.45	17.75	3.34	4.06	20.88	3.84	4.67	24.00
2.35	2.86	14.69	2.85	3.46	17.81	3.35	4.07	20.94	3.85	4.68	24.06
2.36	2.87	14.75	2.86	3.48	17.88	3.36	4.09	21.00	3.86	4.69	24.13
2.37	2.88	14.81	2.87	3.49	17.94	3.37	4.10	21.06	3.87	4.71	24.19
2.38	2.89	14.88	2.88	3.50	18.00	3.38	4.11	21.13	3.88	4.72	24.25
2.39	2.91	14.94	2.89	3.51	18.06	3.39	4.12	21.19	3.89	4.73	24.31
2.40	2.92	15.00	2.90	3.53	18.13	3.40	4.13	21.25	3.90	4.74	24.38
2.41	2.93	15.06	2.91	3.54	18.19	3.41	4.14	21.31	3.91	4.75	24.44
2.42	2.94	15.13	2.92	3.55	18.25	3.42	4.16	21.38	3.92	4.77	24.50
2.43	2.95	15.19	2.93	3.56	18.31	3.43	4.17	21.44	3.93	4.78	24.56
2.44	2.97	15.25	2.94	3.57	18.38	3.44	4.18	21.50	3.94	4.79	24.63
2.45	2.98	15.31	2.95	3.59	18.44	3.45	4.19	21.56	3.95	4.80	24.69
2.46	2.99	15.38	2.96	3.60	18.50	3.46	4.21	21.63	3.96	4.81	24.75
2.47	3.00	15.44	2.97	3.61	18.56	3.47	4.22	21.69	3.97	4.83	24.81
2.48	3.02	15.50	2.98	3.62	18.63	3.48	4.23	21.75	3.98	4.84	24.88
2.49	3.03	15.56	2.99	3.64	18.69	3.49	4.24	21.81	3.99	4.85	24.94

## Nitrogen 4.00—5.99

%	%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.
4.00	4.86	25.00	4.50	5.47	28.13	5.00	6.08	31.25	5.50	6.69	34.38	
4.01	4.88	25.06	4.51	5.48	28.19	5.01	6.09	31.31	5.51	6.70	34.44	
4.02	4.89	25.13	4.52	5.50	28.25	5.02	6.10	31.38	5.52	6.71	34.50	
4.03	4.90	25.19	4.53	5.51	28.31	5.03	6.12	31.44	5.53	6.72	34.56	
4.04	4.91	25.25	4.54	5.52	28.38	5.04	6.13	31.50	5.54	6.74	34.63	
4.05	4.92	25.31	4.55	5.53	28.44	5.05	6.14	31.56	5.55	6.75	34.69	
4.06	4.94	25.38	4.56	5.54	28.50	5.06	6.15	31.63	5.56	6.76	34.75	
4.07	4.95	25.44	4.57	5.56	28.56	5.07	6.16	31.69	5.57	6.77	34.81	
4.08	4.96	25.50	4.58	5.57	28.63	5.08	6.18	31.75	5.58	6.78	34.88	
4.09	4.97	25.56	4.59	5.58	28.69	5.09	6.19	31.81	5.59	6.80	34.94	
4.10	4.98	25.63	4.60	5.59	28.75	5.10	6.20	31.88	5.60	6.81	35.00	
4.11	5.00	25.69	4.61	5.60	28.81	5.11	6.21	31.94	5.61	6.82	35.06	
4.12	5.01	25.75	4.62	5.62	28.88	5.12	6.22	32.00	5.62	6.83	35.13	
4.13	5.02	25.81	4.63	5.63	28.94	5.13	6.24	32.06	5.63	6.84	35.19	
4.14	5.03	25.88	4.64	5.64	29.00	5.14	6.25	32.13	5.64	6.86	35.25	
4.15	5.05	25.94	4.65	5.65	29.06	5.15	6.26	32.19	5.65	6.87	35.31	
4.16	5.06	26.00	4.66	5.67	29.13	5.16	6.27	32.25	5.66	6.88	35.38	
4.17	5.07	26.06	4.67	5.68	29.19	5.17	6.29	32.31	5.67	6.89	35.44	
4.18	5.08	26.13	4.68	5.69	29.25	5.18	6.30	32.38	5.68	6.91	35.50	
4.19	5.09	26.19	4.69	5.70	29.31	5.19	6.31	32.44	5.69	6.92	35.56	
4.20	5.11	26.25	4.70	5.71	29.38	5.20	6.32	32.50	5.70	6.93	35.63	
4.21	5.12	26.31	4.71	5.73	29.44	5.21	6.33	32.56	5.71	6.94	35.69	
4.22	5.13	26.38	4.72	5.74	29.50	5.22	6.35	32.63	5.72	6.95	35.75	
4.23	5.14	26.44	4.73	5.75	29.56	5.23	6.36	32.69	5.73	6.97	35.81	
4.24	5.15	26.50	4.74	5.76	29.63	5.24	6.37	32.75	5.74	6.98	35.88	
4.25	5.17	26.56	4.75	5.78	29.69	5.25	6.38	32.81	5.75	6.99	35.94	
4.26	5.18	26.63	4.76	5.79	29.75	5.26	6.40	32.88	5.76	7.00	36.00	
4.27	5.19	26.69	4.77	5.80	29.81	5.27	6.41	32.94	5.77	7.02	36.06	
4.28	5.20	26.75	4.78	5.81	29.88	5.28	6.42	33.00	5.78	7.03	36.13	
4.29	5.22	26.81	4.79	5.82	29.94	5.29	6.43	33.06	5.79	7.04	36.19	
4.30	5.23	26.88	4.80	5.84	30.00	5.30	6.44	33.13	5.80	7.05	36.25	
4.31	5.24	26.94	4.81	5.85	30.06	5.31	6.46	33.19	5.81	7.06	36.31	
4.32	5.25	27.00	4.82	5.86	30.13	5.32	6.47	33.25	5.82	7.08	36.38	
4.33	5.26	27.06	4.83	5.87	30.19	5.33	6.48	33.31	5.83	7.09	36.44	
4.34	5.28	27.13	4.84	5.88	30.25	5.34	6.49	33.38	5.84	7.10	36.50	
4.35	5.29	27.19	4.85	5.90	30.31	5.35	6.50	33.44	5.85	7.11	36.56	
4.36	5.30	27.25	4.86	5.91	30.38	5.36	6.52	33.50	5.86	7.12	36.63	
4.37	5.31	27.31	4.87	5.92	30.44	5.37	6.53	33.56	5.87	7.14	36.69	
4.38	5.33	27.38	4.88	5.93	30.50	5.38	6.54	33.63	5.88	7.15	36.75	
4.39	5.34	27.44	4.89	5.95	30.56	5.39	6.55	33.69	5.89	7.16	36.81	
4.40	5.35	27.50	4.90	5.96	30.63	5.40	6.57	33.75	5.90	7.17	36.88	
4.41	5.36	27.56	4.91	5.97	30.69	5.41	6.58	33.81	5.91	7.19	36.94	
4.42	5.37	27.63	4.92	5.98	30.75	5.42	6.59	33.88	5.92	7.20	37.00	
4.43	5.39	27.69	4.93	5.99	30.81	5.43	6.60	33.94	5.93	7.21	37.06	
4.44	5.40	27.75	4.94	6.01	30.88	5.44	6.61	34.00	5.94	7.22	37.13	
4.45	5.41	27.81	4.95	6.02	30.94	5.45	6.63	34.06	5.95	7.23	37.19	
4.46	5.42	27.88	4.96	6.03	31.00	5.46	6.64	34.13	5.96	7.25	37.25	
4.47	5.43	27.94	4.97	6.04	31.06	5.47	6.65	34.19	5.97	7.26	37.31	
4.48	5.45	28.00	4.98	6.05	31.13	5.48	6.66	34.25	5.98	7.27	37.38	
4.49	5.46	28.06	4.99	6.07	31.19	5.49	6.67	34.31	5.99	7.28	37.44	

## Nitrogen 6.00—7.99

%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub>	Protein.	N.	NH <sub>3</sub>	Protein.	N.	NH <sub>3</sub>	Protein.	N.	NH <sub>3</sub>	Protein.
6.00	7.29	37.50	6.50	7.90	40.63	7.00	8.51	43.75	7.50	9.12	46.88
6.01	7.31	37.56	6.51	7.91	40.69	7.01	8.52	43.81	7.51	9.13	46.94
6.02	7.32	37.63	6.52	7.93	40.75	7.02	8.53	43.88	7.52	9.14	47.00
6.03	7.33	37.69	6.53	7.94	40.81	7.03	8.55	43.94	7.53	9.15	47.06
6.04	7.34	37.75	6.54	7.95	40.88	7.04	8.56	44.00	7.54	9.17	47.13
6.05	7.36	37.81	6.55	7.96	40.94	7.05	8.57	44.06	7.55	9.18	47.19
6.06	7.37	37.88	6.56	7.98	41.00	7.06	8.58	44.13	7.56	9.19	47.25
6.07	7.38	37.94	6.57	7.99	41.06	7.07	8.60	44.19	7.57	9.20	47.31
6.08	7.39	38.00	6.58	8.00	41.13	7.08	8.61	44.25	7.58	9.22	47.38
6.09	7.40	38.06	6.59	8.01	41.19	7.09	8.62	44.31	7.59	9.23	47.44
6.10	7.42	38.13	6.60	8.02	41.25	7.10	8.63	44.38	7.60	9.24	47.50
6.11	7.43	38.19	6.61	8.04	41.31	7.11	8.64	44.44	7.61	9.25	47.56
6.12	7.44	38.25	6.62	8.05	41.38	7.12	8.66	44.50	7.62	9.26	47.63
6.13	7.45	38.31	6.63	8.06	41.44	7.13	8.67	44.56	7.63	9.28	47.69
6.14	7.47	38.38	6.64	8.07	41.50	7.14	8.68	44.63	7.64	9.29	47.75
6.15	7.48	38.44	6.65	8.09	41.56	7.15	8.69	44.69	7.65	9.30	47.81
6.16	7.49	38.50	6.66	8.10	41.63	7.16	8.71	44.75	7.66	9.31	47.88
6.17	7.50	38.56	6.67	8.11	41.69	7.17	8.72	44.81	7.67	9.33	47.94
6.18	7.51	38.63	6.68	8.12	41.75	7.18	8.73	44.88	7.68	9.34	48.00
6.19	7.53	38.69	6.69	8.13	41.81	7.19	8.74	44.94	7.69	9.35	48.06
6.20	7.54	38.75	6.70	8.15	41.88	7.20	8.75	45.00	7.70	9.36	48.13
6.21	7.55	38.81	6.71	8.16	41.94	7.21	8.77	45.06	7.71	9.37	48.19
6.22	7.56	38.88	6.72	8.17	42.00	7.22	8.78	45.13	7.72	9.39	48.25
6.23	7.57	38.94	6.73	8.18	42.06	7.23	8.79	45.19	7.73	9.40	48.31
6.24	7.59	39.00	6.74	8.19	42.13	7.24	8.80	45.25	7.74	9.41	48.38
6.25	7.60	39.06	6.75	8.21	42.19	7.25	8.81	45.31	7.75	9.42	48.44
6.26	7.61	39.13	6.76	8.22	42.25	7.26	8.83	45.38	7.76	9.43	48.50
6.27	7.62	39.19	6.77	8.23	42.31	7.27	8.84	45.44	7.77	9.45	48.56
6.28	7.64	39.25	6.78	8.24	42.38	7.28	8.85	45.50	7.78	9.46	48.63
6.29	7.65	39.31	6.79	8.26	42.44	7.29	8.86	45.56	7.79	9.47	48.69
6.30	7.66	39.38	6.80	8.27	42.50	7.30	8.88	45.63	7.80	9.48	48.75
6.31	7.67	39.44	6.81	8.28	42.56	7.31	8.89	45.69	7.81	9.50	48.81
6.32	7.68	39.50	6.82	8.29	42.63	7.32	8.90	45.75	7.82	9.51	48.88
6.33	7.70	39.56	6.83	8.30	42.69	7.33	8.91	45.81	7.83	9.52	48.94
6.34	7.71	39.63	6.84	8.32	42.75	7.34	8.92	45.88	7.84	9.53	49.00
6.35	7.72	39.69	6.85	8.33	42.81	7.35	8.94	45.94	7.85	9.54	49.06
6.36	7.73	39.75	6.86	8.34	42.88	7.36	8.95	46.00	7.86	9.56	49.13
6.37	7.74	39.81	6.87	8.35	42.94	7.37	8.96	46.06	7.87	9.57	49.19
6.38	7.76	39.88	6.88	8.36	43.00	7.38	8.97	46.13	7.88	9.58	49.25
6.39	7.77	39.94	6.89	8.38	43.06	7.39	8.98	46.19	7.89	9.59	49.31
6.40	7.78	40.00	6.90	8.39	43.13	7.40	9.00	46.25	7.90	9.60	49.38
6.41	7.79	40.06	6.91	8.40	43.19	7.41	9.01	46.31	7.91	9.62	49.44
6.42	7.81	40.13	6.92	8.41	43.25	7.42	9.02	46.38	7.92	9.63	49.50
6.43	7.82	40.19	6.93	8.43	43.31	7.43	9.03	46.44	7.93	9.64	49.56
6.44	7.83	40.25	6.94	8.44	43.38	7.44	9.05	46.50	7.94	9.65	49.63
6.45	7.84	40.31	6.95	8.45	43.44	7.45	9.06	46.56	7.95	9.67	49.69
6.46	7.85	40.38	6.96	8.46	43.50	7.46	9.07	46.63	7.96	9.68	49.75
6.47	7.87	40.44	6.97	8.47	43.56	7.47	9.08	46.69	7.97	9.69	49.81
6.48	7.88	40.50	6.98	8.49	43.63	7.48	9.09	46.75	7.98	9.70	49.88
6.49	7.89	40.56	6.99	8.50	43.69	7.49	9.11	46.81	7.99	9.71	49.94

## Nitrogen 8.00—9.99

%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.
8.00	9.73	50.00	8.50	10.34	53.13	9.00	10.94	56.25	9.50	11.55	59.38
8.01	9.74	50.06	8.51	10.35	53.19	9.01	10.95	56.31	9.51	11.56	59.44
8.02	9.75	50.13	8.52	10.36	53.25	9.02	10.97	56.38	9.52	11.57	59.50
8.03	9.76	50.19	8.53	10.37	53.31	9.03	10.98	56.44	9.53	11.59	59.56
8.04	9.78	50.25	8.54	10.38	53.38	9.04	10.99	56.50	9.54	11.60	59.63
8.05	9.79	50.31	8.55	10.40	53.44	9.05	11.00	56.56	9.55	11.61	59.69
8.06	9.80	50.38	8.56	10.41	53.50	9.06	11.02	56.63	9.56	11.62	59.75
8.07	9.81	50.44	8.57	10.42	53.56	9.07	11.03	56.69	9.57	11.64	59.81
8.08	9.82	50.50	8.58	10.43	53.63	9.08	11.04	56.75	9.58	11.65	59.88
8.09	9.84	50.56	8.59	10.44	53.69	9.09	11.05	56.81	9.59	11.66	59.94
8.10	9.85	50.63	8.60	10.46	53.75	9.10	11.06	56.88	9.60	11.67	60.00
8.11	9.86	50.69	8.61	10.47	53.81	9.11	11.08	56.94	9.61	11.68	60.06
8.12	9.87	50.75	8.62	10.48	53.88	9.12	11.09	57.00	9.62	11.70	60.13
8.13	9.88	50.81	8.63	10.49	53.94	9.13	11.10	57.06	9.63	11.71	60.19
8.14	9.90	50.88	8.64	10.50	54.00	9.14	11.11	57.13	9.64	11.72	60.25
8.15	9.91	50.94	8.65	10.52	54.06	9.15	11.12	57.19	9.65	11.73	60.31
8.16	9.92	51.00	8.66	10.53	54.13	9.16	11.14	57.25	9.66	11.74	60.38
8.17	9.93	51.06	8.67	10.54	54.19	9.17	11.15	57.31	9.67	11.76	60.44
8.18	9.95	51.13	8.68	10.55	54.25	9.18	11.16	57.38	9.68	11.77	60.50
8.19	9.96	51.19	8.69	10.57	54.31	9.19	11.17	57.44	9.69	11.78	60.56
8.20	9.97	51.25	8.70	10.58	54.38	9.20	11.19	57.50	9.70	11.79	60.63
8.21	9.98	51.31	8.71	10.59	54.44	9.21	11.20	57.56	9.71	11.81	60.69
8.22	9.99	51.38	8.72	10.60	54.50	9.22	11.21	57.63	9.72	11.82	60.75
8.23	10.01	51.44	8.73	10.61	54.56	9.23	11.22	57.69	9.73	11.83	60.81
8.24	10.02	51.50	8.74	10.63	54.63	9.24	11.23	57.75	9.74	11.84	60.88
8.25	10.03	51.56	8.75	10.64	54.69	9.25	11.25	57.81	9.75	11.85	60.94
8.26	10.04	51.63	8.76	10.65	54.75	9.26	11.26	57.88	9.76	11.87	61.00
8.27	10.05	51.69	8.77	10.66	54.81	9.27	11.27	57.94	9.77	11.88	61.06
8.28	10.07	51.75	8.78	10.67	54.88	9.28	11.28	58.00	9.78	11.89	61.13
8.29	10.08	51.81	8.79	10.69	54.94	9.29	11.29	58.06	9.79	11.90	61.19
8.30	10.09	51.88	8.80	10.70	55.00	9.30	11.31	58.13	9.80	11.91	61.25
8.31	10.10	51.94	8.81	10.71	55.06	9.31	11.32	58.19	9.81	11.93	61.31
8.32	10.12	52.00	8.82	10.72	55.13	9.32	11.33	58.25	9.82	11.94	61.38
8.33	10.13	52.06	8.83	10.74	55.19	9.33	11.34	58.31	9.83	11.95	61.44
8.34	10.14	52.13	8.84	10.75	55.25	9.34	11.36	58.38	9.84	11.96	61.50
8.35	10.15	52.19	8.85	10.76	55.31	9.35	11.37	58.44	9.85	11.98	61.56
8.36	10.16	52.25	8.86	10.77	55.38	9.36	11.38	58.50	9.86	11.99	61.63
8.37	10.18	52.31	8.87	10.78	55.44	9.37	11.39	58.56	9.87	12.00	61.69
8.38	10.19	52.38	8.88	10.80	55.50	9.38	11.40	58.63	9.88	12.01	61.75
8.39	10.20	52.44	8.89	10.81	55.56	9.39	11.42	58.69	9.89	12.02	61.81
8.40	10.21	52.50	8.90	10.82	55.63	9.40	11.43	58.75	9.90	12.04	61.88
8.41	10.22	52.56	8.91	10.83	55.69	9.41	11.44	58.81	9.91	12.05	61.94
8.42	10.24	52.63	8.92	10.84	55.75	9.42	11.45	58.88	9.92	12.06	62.00
8.43	10.25	52.69	8.93	10.86	55.81	9.43	11.46	58.94	9.93	12.07	62.06
8.44	10.26	52.75	8.94	10.87	55.88	9.44	11.48	59.00	9.94	12.09	62.13
8.45	10.27	52.81	8.95	10.88	55.94	9.45	11.49	59.06	9.95	12.10	62.19
8.46	10.29	52.88	8.96	10.89	56.00	9.46	11.50	59.13	9.96	12.11	62.25
8.47	10.30	52.94	8.97	10.91	56.06	9.47	11.51	59.19	9.97	12.12	62.31
8.48	10.31	53.00	8.98	10.92	56.13	9.48	11.53	59.25	9.98	12.13	62.38
8.49	10.32	53.06	8.99	10.93	56.19	9.49	11.54	59.31	9.99	12.15	62.44



## Nitrogen 10.00—11.99

%	%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.
10.00	12.16	62.50	10.50	12.77	65.63	11.00	13.37	68.75	11.50	13.98	71.88	
10.01	12.17	62.56	10.51	12.78	65.69	11.01	13.39	68.81	11.51	13.99	71.94	
10.02	12.18	62.63	10.52	12.79	65.75	11.02	13.40	68.88	11.52	14.01	72.00	
10.03	12.19	62.69	10.53	12.80	65.81	11.03	13.41	68.94	11.53	14.02	72.06	
10.04	12.21	62.75	10.54	12.81	65.88	11.04	13.42	69.00	11.54	14.03	72.13	
10.05	12.22	62.81	10.55	12.83	65.94	11.05	13.43	69.06	11.55	14.04	72.19	
10.06	12.23	62.88	10.56	12.84	66.00	11.06	13.45	69.13	11.56	14.05	72.25	
10.07	12.24	62.94	10.57	12.85	66.06	11.07	13.46	69.19	11.57	14.07	72.31	
10.08	12.26	63.00	10.58	12.86	66.13	11.08	13.47	69.25	11.58	14.08	72.38	
10.09	12.27	63.06	10.59	12.88	66.19	11.09	13.48	69.31	11.59	14.09	72.44	
10.10	12.28	63.13	10.60	12.89	66.25	11.10	13.50	69.38	11.60	14.10	72.50	
10.11	12.29	63.19	10.61	12.90	66.31	11.11	13.51	69.44	11.61	14.12	72.56	
10.12	12.30	63.25	10.62	12.91	66.38	11.12	13.52	69.50	11.62	14.13	72.63	
10.13	12.32	63.31	10.63	12.92	66.44	11.13	13.53	69.56	11.63	14.14	72.69	
10.14	12.33	63.38	10.64	12.94	66.50	11.14	13.54	69.63	11.64	14.15	72.75	
10.15	12.34	63.44	10.65	12.95	66.56	11.15	13.56	69.69	11.65	14.16	72.81	
10.16	12.35	63.50	10.66	12.96	66.63	11.16	13.57	69.75	11.66	14.18	72.88	
10.17	12.36	63.56	10.67	12.97	66.69	11.17	13.58	69.81	11.67	14.19	72.94	
10.18	12.38	63.63	10.68	12.98	66.75	11.18	13.59	69.88	11.68	14.20	73.00	
10.19	12.39	63.69	10.69	13.00	66.81	11.19	13.60	69.94	11.69	14.21	73.06	
10.20	12.40	63.75	10.70	13.01	66.88	11.20	13.62	70.00	11.70	14.22	73.13	
10.21	12.41	63.81	10.71	13.02	66.94	11.21	13.63	70.06	11.71	14.24	73.19	
10.22	12.43	63.88	10.72	13.03	67.00	11.22	13.64	70.13	11.72	14.25	73.25	
10.23	12.44	63.94	10.73	13.05	67.06	11.23	13.65	70.19	11.73	14.26	73.31	
10.24	12.45	64.00	10.74	13.06	67.13	11.24	13.67	70.25	11.74	14.27	73.38	
10.25	12.46	64.06	10.75	13.07	67.19	11.25	13.68	70.31	11.75	14.29	73.44	
10.26	12.47	64.13	10.76	13.08	67.25	11.26	13.69	70.38	11.76	14.30	73.50	
10.27	12.49	64.19	10.77	13.09	67.31	11.27	13.70	70.44	11.77	14.31	73.56	
10.28	12.50	64.25	10.78	13.11	67.38	11.28	13.71	70.50	11.78	14.32	73.63	
10.29	12.51	64.31	10.79	13.12	67.44	11.29	13.73	70.56	11.79	14.33	73.69	
10.30	12.52	64.38	10.80	13.13	67.50	11.30	13.74	70.63	11.80	14.35	73.75	
10.31	12.53	64.44	10.81	13.14	67.56	11.31	13.75	70.69	11.81	14.36	73.81	
10.32	12.55	64.50	10.82	13.15	67.63	11.32	13.76	70.75	11.82	14.37	73.88	
10.33	12.56	64.56	10.83	13.17	67.69	11.33	13.78	70.81	11.83	14.38	73.94	
10.34	12.57	64.63	10.84	13.18	67.75	11.34	13.79	70.88	11.84	14.40	74.00	
10.35	12.58	64.69	10.85	13.19	67.81	11.35	13.80	70.94	11.85	14.41	74.06	
10.36	12.60	64.75	10.86	13.20	67.88	11.36	13.81	71.00	11.86	14.42	74.13	
10.37	12.61	64.81	10.87	13.22	67.94	11.37	13.82	71.06	11.87	14.43	74.19	
10.38	12.62	64.88	10.88	13.23	68.00	11.38	13.84	71.13	11.88	14.44	74.25	
10.39	12.63	64.94	10.89	13.24	68.06	11.39	13.85	71.19	11.89	14.46	74.31	
10.40	12.65	65.00	10.90	13.25	68.13	11.40	13.86	71.25	11.90	14.47	74.38	
10.41	12.66	65.06	10.91	13.26	68.19	11.41	13.87	71.31	11.91	14.48	74.44	
10.42	12.67	65.13	10.92	13.28	68.25	11.42	13.88	71.38	11.92	14.49	74.50	
10.43	12.68	65.19	10.93	13.29	68.31	11.43	13.90	71.44	11.93	14.50	74.56	
10.44	12.69	65.25	10.94	13.30	68.38	11.44	13.91	71.50	11.94	14.52	74.63	
10.45	12.71	65.31	10.95	13.31	68.44	11.45	13.92	71.56	11.95	14.53	74.69	
10.46	12.72	65.38	10.96	13.33	68.50	11.46	13.93	71.63	11.96	14.54	74.75	
10.47	12.73	65.44	10.97	13.34	68.56	11.47	13.95	71.69	11.97	14.55	74.81	
10.48	12.74	65.50	10.98	13.35	68.63	11.48	13.96	71.75	11.98	14.57	74.88	
10.49	12.75	65.56	10.99	13.36	68.69	11.49	13.97	71.81	11.99	14.58	74.94	

## Nitrogen 12.00—13.99

%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.
12.00	14.59	75.00	12.50	15.20	78.13	13.00	15.81	81.25	13.50	16.41	84.38
12.01	14.60	75.06	12.51	15.21	78.19	13.01	15.82	81.31	13.51	16.43	84.44
12.02	14.61	75.13	12.52	15.22	78.25	13.02	15.83	81.38	13.52	16.44	84.50
12.03	14.63	75.19	12.53	15.23	78.31	13.03	15.84	81.44	13.53	16.45	84.56
12.04	14.64	75.25	12.54	15.25	78.38	13.04	15.85	81.50	13.54	16.46	84.63
12.05	14.65	75.31	12.55	15.26	78.44	13.05	15.87	81.56	13.55	16.47	84.69
12.06	14.66	75.38	12.56	15.27	78.50	13.06	15.88	81.63	13.56	16.49	84.75
12.07	14.67	75.44	12.57	15.28	78.56	13.07	15.89	81.69	13.57	16.50	84.81
12.08	14.69	75.50	12.58	15.29	78.63	13.08	15.90	81.75	13.58	16.51	84.88
12.09	14.70	75.56	12.59	15.31	78.69	13.09	15.91	81.81	13.59	16.52	84.94
12.10	14.71	75.63	12.60	15.32	78.75	13.10	15.93	81.88	13.60	16.53	85.00
12.11	14.72	75.69	12.61	15.33	78.81	13.11	15.94	81.94	13.61	16.55	85.06
12.12	14.74	75.75	12.62	15.34	78.88	13.12	15.95	82.00	13.62	16.56	85.13
12.13	14.75	75.81	12.63	15.36	78.94	13.13	15.96	82.06	13.63	16.57	85.19
12.14	14.76	75.88	12.64	15.37	79.00	13.14	15.98	82.13	13.64	16.58	85.25
12.15	14.77	75.94	12.65	15.38	79.06	13.15	15.99	82.19	13.65	16.60	85.31
12.16	14.78	76.00	12.66	15.39	79.13	13.16	16.00	82.25	13.66	16.61	85.38
12.17	14.80	76.06	12.67	15.40	79.19	13.17	16.01	82.31	13.67	16.62	85.44
12.18	14.81	76.13	12.68	15.42	79.25	13.18	16.02	82.38	13.68	16.63	85.50
12.19	14.82	76.19	12.69	15.43	79.31	13.19	16.04	82.44	13.69	16.64	85.56
12.20	14.83	76.25	12.70	15.44	79.38	13.20	16.05	82.50	13.70	16.66	85.63
12.21	14.84	76.31	12.71	15.45	79.44	13.21	16.06	82.56	13.71	16.67	85.69
12.22	14.86	76.38	12.72	15.46	79.50	13.22	16.07	82.63	13.72	16.68	85.75
12.23	14.87	76.44	12.73	15.48	79.56	13.23	16.09	82.69	13.73	16.69	85.81
12.24	14.88	76.50	12.74	15.49	79.63	13.24	16.10	82.75	13.74	16.71	85.88
12.25	14.89	76.56	12.75	15.50	79.69	13.25	16.11	82.81	13.75	16.72	85.94
12.26	14.91	76.63	12.76	15.51	79.75	13.26	16.12	82.88	13.76	16.73	86.00
12.27	14.92	76.69	12.77	15.53	79.81	13.27	16.13	82.94	13.77	16.74	86.06
12.28	14.93	76.75	12.78	15.54	79.88	13.28	16.15	83.00	13.78	16.75	86.13
12.29	14.94	76.81	12.79	15.55	79.94	13.29	16.16	83.06	13.79	16.77	86.19
12.30	14.96	76.88	12.80	15.56	80.00	13.30	16.17	83.13	13.80	16.78	86.25
12.31	14.97	76.94	12.81	15.57	80.06	13.31	16.18	83.19	13.81	16.79	86.31
12.32	14.98	77.00	12.82	15.59	80.13	13.32	16.19	83.25	13.82	16.80	86.38
12.33	14.99	77.06	12.83	15.60	80.19	13.33	16.21	83.31	13.83	16.81	86.44
12.34	15.00	77.13	12.84	15.61	80.25	13.34	16.22	83.38	13.84	16.83	86.50
12.35	15.02	77.19	12.85	15.62	80.31	13.35	16.23	83.44	13.85	16.84	86.56
12.36	15.03	77.25	12.86	15.64	80.38	13.36	16.24	83.50	13.86	16.85	86.63
12.37	15.04	77.31	12.87	15.65	80.44	13.37	16.26	83.56	13.87	16.86	86.69
12.38	15.05	77.38	12.88	15.66	80.50	13.38	16.27	83.63	13.88	16.88	86.75
12.39	15.06	77.44	12.89	15.67	80.56	13.39	16.28	83.69	13.89	16.89	86.81
12.40	15.08	77.50	12.90	15.69	80.63	13.40	16.29	83.75	13.90	16.90	86.88
12.41	15.09	77.56	12.91	15.70	80.69	13.41	16.30	83.81	13.91	16.91	86.94
12.42	15.10	77.63	12.92	15.71	80.75	13.42	16.32	83.88	13.92	16.92	87.00
12.43	15.11	77.69	12.93	15.72	80.81	13.43	16.33	83.94	13.93	16.94	87.06
12.44	15.12	77.75	12.94	15.73	80.88	13.44	16.34	84.00	13.94	16.95	87.13
12.45	15.14	77.81	12.95	15.74	80.94	13.45	16.35	84.06	13.95	16.96	87.19
12.46	15.15	77.88	12.96	15.76	81.00	13.46	16.36	84.13	13.96	16.97	87.25
12.47	15.16	77.94	12.97	15.77	81.06	13.47	16.38	84.19	13.97	16.98	87.31
12.48	15.17	78.00	12.98	15.78	81.13	13.48	16.39	84.25	13.98	17.00	87.38
12.49	15.19	78.06	12.99	15.79	81.19	13.49	16.40	84.31	13.99	17.01	87.44

## Nitrogen 14.00—15.99

%	%	%	%	%	%	%	%	%	%	%	%	%		
N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.	N.	NH <sub>3</sub> .	Protein.
14.00	17.02	87.50	14.50	17.63	90.63	15.00	18.24	93.75	15.50	18.84	96.88			
14.01	17.03	87.56	14.51	17.64	90.69	15.01	18.25	93.81	15.51	18.86	96.94			
14.02	17.05	87.63	14.52	17.65	90.75	15.02	18.26	93.88	15.52	18.87	97.00			
14.03	17.06	87.69	14.53	17.67	90.81	15.03	18.27	93.94	15.53	18.88	97.06			
14.04	17.07	87.75	14.54	17.68	90.88	15.04	18.29	94.00	15.54	18.89	97.13			
14.05	17.08	87.81	14.55	17.69	90.94	15.05	18.30	94.06	15.55	18.90	97.19			
14.06	17.09	87.88	14.56	17.70	91.00	15.06	18.31	94.13	15.56	18.92	97.25			
14.07	17.11	87.94	14.57	17.71	91.06	15.07	18.32	94.19	15.57	18.93	97.31			
14.08	17.12	88.00	14.58	17.73	91.13	15.08	18.33	94.25	15.58	18.94	97.38			
14.09	17.13	88.06	14.59	17.74	91.19	15.09	18.35	94.31	15.59	18.95	97.44			
14.10	17.14	88.13	14.60	17.75	91.25	15.10	18.36	94.38	15.60	18.97	97.50			
14.11	17.15	88.19	14.61	17.76	91.31	15.11	18.37	94.44	15.61	18.98	97.56			
14.12	17.17	88.25	14.62	17.77	91.38	15.12	18.38	94.50	15.62	18.99	97.63			
14.13	17.18	88.31	14.63	17.79	91.44	15.13	18.40	94.56	15.63	19.00	97.69			
14.14	17.19	88.38	14.64	17.80	91.50	15.14	18.41	94.63	15.64	19.02	97.75			
14.15	17.20	88.44	14.65	17.81	91.56	15.15	18.42	94.69	15.65	19.03	97.81			
14.16	17.22	88.50	14.66	17.82	91.63	15.16	18.43	94.75	15.66	19.04	97.88			
14.17	17.23	88.56	14.67	17.84	91.69	15.17	18.44	94.81	15.67	19.05	97.94			
14.18	17.24	88.63	14.68	17.85	91.75	15.18	18.46	94.88	15.68	19.06	98.00			
14.19	17.25	88.69	14.69	17.86	91.81	15.19	18.47	94.94	15.69	19.08	98.06			
14.20	17.26	88.75	14.70	17.87	91.88	15.20	18.48	95.00	15.70	19.09	98.13			
14.21	17.28	88.81	14.71	17.88	91.94	15.21	18.49	95.06	15.71	19.10	98.19			
14.22	17.29	88.88	14.72	17.90	92.00	15.22	18.50	95.13	15.72	19.11	98.25			
14.23	17.30	88.94	14.73	17.91	92.06	15.23	18.52	95.19	15.73	19.12	98.31			
14.24	17.31	89.00	14.74	17.92	92.13	15.24	18.53	95.25	15.74	19.14	98.38			
14.25	17.33	89.06	14.75	17.93	92.19	15.25	18.54	95.31	15.75	19.15	98.44			
14.26	17.34	89.13	14.76	17.95	92.25	15.26	18.55	95.38	15.76	19.16	98.50			
14.27	17.35	89.19	14.77	17.96	92.31	15.27	18.57	95.44	15.77	19.17	98.56			
14.28	17.36	89.25	14.78	17.97	92.38	15.28	18.58	95.50	15.78	19.19	98.63			
14.29	17.37	89.31	14.79	17.98	92.44	15.29	18.59	95.56	15.79	19.20	98.69			
14.30	17.39	89.38	14.80	17.99	92.50	15.30	18.60	95.63	15.80	19.21	98.75			
14.31	17.40	89.44	14.81	18.01	92.56	15.31	18.61	95.69	15.81	19.22	98.81			
14.32	17.41	89.50	14.82	18.02	92.63	15.32	18.63	95.75	15.82	19.23	98.88			
14.33	17.42	89.56	14.83	18.03	92.69	15.33	18.64	95.81	15.83	19.25	98.94			
14.34	17.43	89.63	14.84	18.04	92.75	15.34	18.65	95.88	15.84	19.26	99.00			
14.35	17.45	89.69	14.85	18.05	92.81	15.35	18.66	95.94	15.85	19.27	99.06			
14.36	17.46	89.75	14.86	18.07	92.88	15.36	18.67	96.00	15.86	19.28	99.13			
14.37	17.47	89.81	14.87	18.08	92.94	15.37	18.69	96.06	15.87	19.29	99.19			
14.38	17.48	89.88	14.88	18.09	93.00	15.38	18.70	96.13	15.88	19.31	99.25			
14.39	17.50	89.94	14.89	18.10	93.06	15.39	18.71	96.19	15.89	19.32	99.31			
14.40	17.51	90.00	14.90	18.12	93.13	15.40	18.72	96.25	15.90	19.33	99.38			
14.41	17.52	90.06	14.91	18.13	93.19	15.41	18.74	96.31	15.91	19.34	99.44			
14.42	17.53	90.13	14.92	18.14	93.25	15.42	18.75	96.38	15.92	19.36	99.50			
14.43	17.54	90.19	14.93	18.15	93.31	15.43	18.76	96.44	15.93	19.37	99.56			
14.44	17.56	90.25	14.94	18.16	93.38	15.44	18.77	96.50	15.94	19.38	99.63			
14.45	17.57	90.31	14.95	18.18	93.44	15.45	18.78	96.56	15.95	19.39	99.69			
14.46	17.58	90.38	14.96	18.19	93.50	15.46	18.80	96.63	15.96	19.40	99.75			
14.47	17.59	90.44	14.97	18.20	93.56	15.47	18.81	96.69	15.97	19.42	99.81			
14.48	17.60	90.50	14.98	18.21	93.63	15.48	18.82	96.75	15.98	19.43	99.88			
14.49	17.62	90.56	14.99	18.22	93.69	15.49	18.83	96.81	15.99	19.44	99.94			

## Nitrogen 16.00—18.99

%	%	%	%	%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .
16.00	19.45	16.50	20.06	17.00	20.67	17.50	21.28	18.00	21.88	18.50	22.49
16.01	19.46	16.51	20.07	17.01	20.68	17.51	21.29	18.01	21.90	18.51	22.50
16.02	19.48	16.52	20.09	17.02	20.69	17.52	21.30	18.02	21.91	18.52	22.52
16.03	19.49	16.53	20.10	17.03	20.71	17.53	21.31	18.03	21.92	18.53	22.53
16.04	19.50	16.54	20.11	17.04	20.72	17.54	21.33	18.04	21.93	18.54	22.54
16.05	19.51	16.55	20.12	17.05	20.73	17.55	21.34	18.05	21.95	18.55	22.55
16.06	19.53	16.56	20.13	17.06	20.74	17.56	21.35	18.06	21.96	18.56	22.56
16.07	19.54	16.57	20.15	17.07	20.75	17.57	21.36	18.07	21.97	18.57	22.58
16.08	19.55	16.58	20.16	17.08	20.77	17.58	21.37	18.08	21.98	18.58	22.59
16.09	19.56	16.59	20.17	17.09	20.78	17.59	21.39	18.09	21.99	18.59	22.60
16.10	19.57	16.60	20.18	17.10	20.79	17.60	21.40	18.10	22.01	18.60	22.61
16.11	19.59	16.61	20.19	17.11	20.80	17.61	21.41	18.11	22.02	18.61	22.63
16.12	19.60	16.62	20.21	17.12	20.81	17.62	21.42	18.12	22.03	18.62	22.64
16.13	19.61	16.63	20.22	17.13	20.83	17.63	21.43	18.13	22.04	18.63	22.65
16.14	19.62	16.64	20.23	17.14	20.84	17.64	21.45	18.14	22.05	18.64	22.66
16.15	19.64	16.65	20.24	17.15	20.85	17.65	21.46	18.15	22.07	18.65	22.67
16.16	19.65	16.66	20.26	17.16	20.86	17.66	21.47	18.16	22.08	18.66	22.69
16.17	19.66	16.67	20.27	17.17	20.87	17.67	21.48	18.17	22.09	18.67	22.70
16.18	19.67	16.68	20.28	17.18	20.89	17.68	21.50	18.18	22.10	18.68	22.71
16.19	19.68	16.69	20.29	17.19	20.90	17.69	21.51	18.19	22.12	18.69	22.72
16.20	19.70	16.70	20.30	17.20	20.91	17.70	21.52	18.20	22.13	18.70	22.74
16.21	19.71	16.71	20.32	17.21	20.92	17.71	21.53	18.21	22.14	18.71	22.75
16.22	19.72	16.72	20.33	17.22	20.94	17.72	21.54	18.22	22.15	18.72	22.76
16.23	19.73	16.73	20.34	17.23	20.95	17.73	21.56	18.23	22.16	18.73	22.77
16.24	19.74	16.74	20.35	17.24	20.96	17.74	21.57	18.24	22.18	18.74	22.78
16.25	19.76	16.75	20.36	17.25	20.97	17.75	21.58	18.25	22.19	18.75	22.80
16.26	19.77	16.76	20.38	17.26	20.98	17.76	21.59	18.26	22.20	18.76	22.81
16.27	19.78	16.77	20.39	17.27	21.00	17.77	21.60	18.27	22.21	18.77	22.82
16.28	19.79	16.78	20.40	17.28	21.01	17.78	21.62	18.28	22.22	18.78	22.83
16.29	19.81	16.79	20.41	17.29	21.02	17.79	21.63	18.29	22.24	18.79	22.84
16.30	19.82	16.80	20.43	17.30	21.03	17.80	21.64	18.30	22.25	18.80	22.86
16.31	19.83	16.81	20.44	17.31	21.05	17.81	21.65	18.31	22.26	18.81	22.87
16.32	19.84	16.82	20.45	17.32	21.06	17.82	21.67	18.32	22.27	18.82	22.88
16.33	19.85	16.83	20.46	17.33	21.07	17.83	21.68	18.33	22.29	18.83	22.89
16.34	19.87	16.84	20.47	17.34	21.08	17.84	21.69	18.34	22.30	18.84	22.91
16.35	19.88	16.85	20.49	17.35	21.09	17.85	21.70	18.35	22.31	18.85	22.92
16.36	19.89	16.86	20.50	17.36	21.10	17.86	21.71	18.36	22.32	18.86	22.93
16.37	19.90	16.87	20.51	17.37	21.12	17.87	21.73	18.37	22.33	18.87	22.94
16.38	19.91	16.88	20.52	17.38	21.13	17.88	21.74	18.38	22.35	18.88	22.95
16.39	19.93	16.89	20.53	17.39	21.14	17.89	21.75	18.39	22.36	18.89	22.97
16.40	19.94	16.90	20.54	17.40	21.15	17.90	21.76	18.40	22.37	18.90	22.98
16.41	19.95	16.91	20.56	17.41	21.17	17.91	21.77	18.41	22.38	18.91	22.99
16.42	19.96	16.92	20.57	17.42	21.18	17.92	21.79	18.42	22.40	18.92	23.00
16.43	19.98	16.93	20.58	17.43	21.19	17.93	21.80	18.43	22.41	18.93	23.02
16.44	19.99	16.94	20.60	17.44	21.20	17.94	21.81	18.44	22.42	18.94	23.03
16.45	20.00	16.95	20.61	17.45	21.22	17.95	21.82	18.45	22.43	18.95	23.04
16.46	20.01	16.96	20.62	17.46	21.23	17.96	21.84	18.46	22.44	18.96	23.05
16.47	20.02	16.97	20.63	17.47	21.24	17.97	21.85	18.47	22.46	18.97	23.06
16.48	20.04	16.98	20.64	17.48	21.25	17.98	21.86	18.48	22.47	18.98	23.08
16.49	20.05	16.99	20.66	17.49	21.26	17.99	21.87	18.49	22.48	18.99	23.09

## Nitrogen 19.00—20.99

%	%	%	%	%	%	%	%
N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .	N.	NH <sub>3</sub> .
19.00	23.10	19.50	23.71	20.00	24.32	20.50	24.92
19.01	23.11	19.51	23.72	20.01	24.33	20.51	24.94
19.02	23.12	19.52	23.73	20.02	24.34	20.52	24.95
19.03	23.14	19.53	23.74	20.03	24.35	20.53	24.96
19.04	23.15	19.54	23.76	20.04	24.36	20.54	24.97
19.05	23.16	19.55	23.77	20.05	24.38	20.55	24.98
19.06	23.17	19.56	23.78	20.06	24.39	20.56	25.00
19.07	23.19	19.57	23.79	20.07	24.40	20.57	25.01
19.08	23.20	19.58	23.81	20.08	24.41	20.58	25.02
19.09	23.21	19.59	23.82	20.09	24.43	20.59	25.03
19.10	23.22	19.60	23.83	20.10	24.44	20.60	25.05
19.11	23.23	19.61	23.84	20.11	24.45	20.61	25.06
19.12	23.25	19.62	23.85	20.12	24.46	20.62	25.07
19.13	23.26	19.63	23.87	20.13	24.47	20.63	25.08
19.14	23.27	19.64	23.88	20.14	24.49	20.64	25.09
19.15	23.28	19.65	23.89	20.15	24.50	20.65	25.11
19.16	23.29	19.66	23.90	20.16	24.51	20.66	25.12
19.17	23.31	19.67	23.91	20.17	24.52	20.67	25.13
19.18	23.32	19.68	23.93	20.18	24.54	20.68	25.14
19.19	23.33	19.69	23.94	20.19	24.55	20.69	25.15
19.20	23.34	19.70	23.95	20.20	24.56	20.70	25.17
19.21	23.36	19.71	23.96	20.21	24.57	20.71	25.18
19.22	23.37	19.72	23.98	20.22	24.58	20.72	25.19
19.23	23.38	19.73	23.99	20.23	24.60	20.73	25.20
19.24	23.39	19.74	24.00	20.24	24.61	20.74	25.22
19.25	23.40	19.75	24.01	20.25	24.62	20.75	25.23
19.26	23.42	19.76	24.02	20.26	24.63	20.76	25.24
19.27	23.43	19.77	24.04	20.27	24.64	20.77	25.25
19.28	23.44	19.78	24.05	20.28	24.66	20.78	25.26
19.29	23.45	19.79	24.06	20.29	24.67	20.79	25.28
19.30	23.46	19.80	24.07	20.30	24.68	20.80	25.29
19.31	23.48	19.81	24.08	20.31	24.69	20.81	25.30
19.32	23.49	19.82	24.10	20.32	24.71	20.82	25.31
19.33	23.50	19.83	24.11	20.33	24.72	20.83	25.33
19.34	23.51	19.84	24.12	20.34	24.73	20.84	25.34
19.35	23.53	19.85	24.13	20.35	24.74	20.85	25.35
19.36	23.54	19.86	24.15	20.36	24.75	20.86	25.36
19.37	23.55	19.87	24.16	20.37	24.77	20.87	25.37
19.38	23.56	19.88	24.17	20.38	24.78	20.88	25.39
19.39	23.57	19.89	24.18	20.39	24.79	20.89	25.40
19.40	23.59	19.90	24.19	20.40	24.80	20.90	25.41
19.41	23.60	19.91	24.21	20.41	24.81	20.91	25.42
19.42	23.61	19.92	24.22	20.42	24.83	20.92	25.43
19.43	23.62	19.93	24.23	20.43	24.84	20.93	25.45
19.44	23.64	19.94	24.24	20.44	24.85	20.94	25.46
19.45	23.65	19.95	24.26	20.45	24.86	20.95	25.47
19.46	23.66	19.96	24.27	20.46	24.88	20.96	25.48
19.47	23.67	19.97	24.28	20.47	24.89	20.97	25.50
19.48	23.68	19.98	24.29	20.48	24.90	20.98	25.51
19.49	23.70	19.99	24.30	20.49	24.91	20.99	25.52



TABLE IV  
NITROGEN CONVERSION TABLE

(Volume of N to Weight of N).

The following table\* gives the weight of one cubic centimeter of nitrogen in milligrams for all variations of temperature and barometric height, the latter being given in both millimeters and inches. Multiply the volume of N found by the weight of 1 cc. at the observed temperature and pressure and the weight of the N in milligrams is obtained.

Fractions of a thermometric degree or of a millimeter may be disregarded since the error thus arising is less than that incident to imperfect reading of the volume of N. Generally the errors caused by incorrect reading of barometric height and of temperature will equalize each other.

The calculations are made from the following formula:

$$G = V \frac{(b - w) 1.25658}{760 (1 + 0.00366t)}$$

where  $G$  = required wt. of N in milligrams.  $V$  = observed volume of N.  $b$  = height of barometer.  $w$  = tension of aqueous vapor observed at temperature  $t^{\circ}$ .

\* Adapted from Kohlmann and Frerichs—"Richtentafeln zur Quantitativen Chemischen Analyse." 1882.

Degrees Cent.	726 mm. 28.58 in.	727 mm. 28.62 in.	728 mm. 28.66 in.	729 mm. 28.70 in.	730 mm. 28.74 in.	731 mm. 28.78 in.	732 mm. 28.82 in.	733 mm. 28.86 in.	734 mm. 28.90 in.
0°	1.1927	1.1944	1.1960	1.1977	1.1993	1.2010	1.2026	1.2043	1.2059
1°	1.1879	1.1895	1.1912	1.1928	1.1945	1.1961	1.1978	1.1994	1.2011
2°	1.1829	1.1846	1.1862	1.1879	1.1895	1.1911	1.1928	1.1944	1.1961
3°	1.1781	1.1797	1.1814	1.1830	1.1846	1.1863	1.1879	1.1895	1.1912
4°	1.1731	1.1748	1.1764	1.1780	1.1797	1.1813	1.1829	1.1845	1.1862
5°	1.1682	1.1698	1.1714	1.1731	1.1747	1.1763	1.1779	1.1796	1.1812
6°	1.1632	1.1649	1.1665	1.1681	1.1697	1.1713	1.1729	1.1746	1.1762
7°	1.1583	1.1599	1.1615	1.1631	1.1647	1.1664	1.1680	1.1696	1.1712
8°	1.1533	1.1549	1.1566	1.1582	1.1598	1.1614	1.1630	1.1646	1.1662
9°	1.1484	1.1500	1.1516	1.1532	1.1548	1.1564	1.1580	1.1596	1.1612
10°	1.1433	1.1449	1.1465	1.1481	1.1497	1.1513	1.1529	1.1545	1.1561
11°	1.1384	1.1400	1.1416	1.1432	1.1448	1.1463	1.1479	1.1495	1.1511
12°	1.1332	1.1348	1.1364	1.1380	1.1396	1.1412	1.1427	1.1443	1.1459
13°	1.1282	1.1298	1.1314	1.1329	1.1345	1.1361	1.1377	1.1392	1.1408
14°	1.1231	1.1247	1.1263	1.1279	1.1294	1.1310	1.1326	1.1342	1.1357
15°	1.1180	1.1196	1.1211	1.1227	1.1243	1.1258	1.1274	1.1290	1.1305
16°	1.1128	1.1144	1.1160	1.1175	1.1191	1.1207	1.1222	1.1238	1.1253
17°	1.1077	1.1092	1.1108	1.1124	1.1139	1.1155	1.1170	1.1186	1.1201
18°	1.1023	1.1039	1.1054	1.1070	1.1085	1.1101	1.1116	1.1132	1.1147
19°	1.0971	1.0986	1.1002	1.1017	1.1033	1.1048	1.1064	1.1079	1.1095
20°	1.0917	1.0933	1.0948	1.0964	1.0979	1.0994	1.1010	1.1025	1.1041
21°	1.0863	1.0878	1.0894	1.0900	1.0924	1.0940	1.0955	1.0970	1.0986
22°	1.0808	1.0824	1.0839	1.0854	1.0869	1.0885	1.0900	1.0915	1.0931
23°	1.0753	1.0768	1.0783	1.0799	1.0814	1.0829	1.0844	1.0860	1.0875
24°	1.0697	1.0712	1.0728	1.0743	1.0758	1.0773	1.0788	1.0804	1.0819
25°	1.0640	1.0655	1.0670	1.0685	1.0700	1.0715	1.0731	1.0746	1.0761
26°	1.0583	1.0598	1.0613	1.0628	1.0644	1.0659	1.0674	1.0689	1.0704
27°	1.0526	1.0541	1.0556	1.0571	1.0586	1.0601	1.0616	1.0631	1.0646
28°	1.0467	1.0482	1.0497	1.0512	1.0527	1.0542	1.0557	1.0572	1.0587
29°	1.0406	1.0421	1.0436	1.0451	1.0466	1.0481	1.0496	1.0511	1.0526
30°	1.0347	1.0362	1.0377	1.0392	1.0407	1.0421	1.0436	1.0451	1.0466
31°	1.0285	1.0300	1.0315	1.0329	1.0344	1.0359	1.0374	1.0389	1.0404
32°	1.0222	1.0237	1.0251	1.0266	1.0281	1.0296	1.0311	1.0325	1.0340
33°	1.0159	1.0174	1.0188	1.0203	1.0218	1.0233	1.0247	1.0262	1.0277
34°	1.0093	1.0107	1.0122	1.0137	1.0152	1.0166	1.0181	1.0196	1.0210
35°	1.0028	1.0042	1.0057	1.0072	1.0086	1.0101	1.0116	1.0130	1.0145



Degrees Cent.	735 mm. 28.94 in.	736 mm. 28.98 in.	737 mm. 29.02 in.	738 mm. 29.06 in.	739 mm. 29.09 in.	740 mm. 29.13 in.	741 mm. 29.17 in.	742 mm. 29.21 in.	743 mm. 29.25 in.
0°	1.2076	1.2092	1.2109	1.2125	1.2142	1.2158	1.2175	1.2192	1.2208
1°	1.2027	1.2043	1.2060	1.2076	1.2093	1.2109	1.2126	1.2142	1.2159
2°	1.1977	1.1993	1.2010	1.2026	1.2043	1.2059	1.2075	1.2092	1.2108
3°	1.1928	1.1944	1.1961	1.1977	1.1993	1.2010	1.2025	1.2041	1.2058
4°	1.1878	1.1894	1.1911	1.1927	1.1943	1.1959	1.1976	1.1992	1.2008
5°	1.1828	1.1844	1.1860	1.1877	1.1893	1.1909	1.1925	1.1942	1.1958
6°	1.1778	1.1794	1.1810	1.1827	1.1843	1.1859	1.1875	1.1891	1.1907
7°	1.1728	1.1744	1.1760	1.1776	1.1792	1.1809	1.1825	1.1841	1.1857
8°	1.1678	1.1694	1.1710	1.1726	1.1742	1.1758	1.1774	1.1790	1.1807
9°	1.1628	1.1644	1.1660	1.1676	1.1692	1.1708	1.1724	1.1740	1.1756
10°	1.1577	1.1593	1.1609	1.1625	1.1641	1.1657	1.1673	1.1689	1.1705
11°	1.1527	1.1543	1.1559	1.1575	1.1591	1.1606	1.1622	1.1638	1.1654
12°	1.1475	1.1491	1.1507	1.1523	1.1538	1.1554	1.1570	1.1586	1.1602
13°	1.1424	1.1440	1.1456	1.1471	1.1487	1.1503	1.1519	1.1534	1.1550
14°	1.1373	1.1389	1.1404	1.1420	1.1436	1.1452	1.1467	1.1483	1.1499
15°	1.1321	1.1337	1.1352	1.1368	1.1384	1.1399	1.1415	1.1431	1.1446
16°	1.1269	1.1285	1.1300	1.1316	1.1331	1.1347	1.1363	1.1378	1.1394
17°	1.1217	1.1233	1.1248	1.1264	1.1279	1.1295	1.1310	1.1326	1.1342
18°	1.1163	1.1179	1.1194	1.1210	1.1225	1.1241	1.1256	1.1272	1.1287
19°	1.1110	1.1125	1.1141	1.1156	1.1172	1.1187	1.1203	1.1218	1.1234
20°	1.1056	1.1071	1.1087	1.1102	1.1118	1.1133	1.1148	1.1164	1.1179
21°	1.1001	1.1016	1.1032	1.1047	1.1062	1.1078	1.1093	1.1108	1.1124
22°	1.0946	1.0961	1.0977	1.0992	1.1007	1.1023	1.1038	1.1053	1.1068
23°	1.0890	1.0905	1.0921	1.0936	1.0951	1.0966	1.0982	1.0997	1.1012
24°	1.0834	1.0849	1.0864	1.0880	1.0895	1.0910	1.0925	1.0940	1.0956
25°	1.0776	1.0791	1.0806	1.0821	1.0837	1.0852	1.0867	1.0882	1.0897
26°	1.0719	1.0734	1.0749	1.0764	1.0779	1.0794	1.0810	1.0825	1.0840
27°	1.0661	1.0676	1.0691	1.0706	1.0721	1.0736	1.0751	1.0766	1.0781
28°	1.0602	1.0617	1.0632	1.0647	1.0662	1.0677	1.0692	1.0707	1.0722
29°	1.0541	1.0556	1.0571	1.0586	1.0601	1.0616	1.0631	1.0646	1.0661
30°	1.0481	1.0496	1.0511	1.0526	1.0541	1.0555	1.0570	1.0585	1.0600
31°	1.0419	1.0433	1.0448	1.0463	1.0478	1.0493	1.0508	1.0522	1.0537
32°	1.0355	1.0370	1.0385	1.0399	1.0414	1.0429	1.0444	1.0459	1.0473
33°	1.0292	1.0306	1.0321	1.0336	1.0351	1.0365	1.0380	1.0395	1.0410
34°	1.0225	1.0240	1.0254	1.0269	1.0284	1.0299	1.0313	1.0328	1.0343
35°	1.0160	1.0174	1.0189	1.0204	1.0218	1.0233	1.0248	1.0262	1.0277

Degrees Cent.	744 mm. 29.29 in.	745 mm. 29.33 in.	746 mm. 29.37 in.	747 mm. 29.41 in.	748 mm. 29.45 in.	749 mm. 29.49 in.	750 mm. 29.53 in.	751 mm. 29.57 in.	752 mm. 29.61 in.
0°	1.2225	1.2241	1.2258	1.2274	1.2291	1.2307	1.2324	1.2340	1.2357
1°	1.2175	1.2192	1.2208	1.2225	1.2241	1.2258	1.2274	1.2291	1.2307
2°	1.2125	1.2141	1.2158	1.2174	1.2190	1.2207	1.2223	1.2240	1.2256
3°	1.2074	1.2090	1.2107	1.2123	1.2140	1.2156	1.2172	1.2189	1.2205
4°	1.2025	1.2041	1.2057	1.2074	1.2090	1.2106	1.2122	1.2139	1.2155
5°	1.1974	1.1990	1.2007	1.2023	1.2039	1.2055	1.2072	1.2088	1.2104
6°	1.1924	1.1940	1.1956	1.1972	1.1988	1.2005	1.2021	1.2037	1.2053
7°	1.1873	1.1889	1.1905	1.1921	1.1938	1.1954	1.1970	1.1986	1.2002
8°	1.1823	1.1839	1.1855	1.1871	1.1887	1.1903	1.1919	1.1935	1.1951
9°	1.1772	1.1788	1.1804	1.1820	1.1836	1.1852	1.1868	1.1884	1.1900
10°	1.1721	1.1737	1.1753	1.1769	1.1784	1.1800	1.1816	1.1832	1.1848
11°	1.1670	1.1686	1.1702	1.1718	1.1734	1.1750	1.1765	1.1781	1.1797
12°	1.1618	1.1633	1.1649	1.1665	1.1681	1.1697	1.1713	1.1728	1.1744
13°	1.1566	1.1582	1.1598	1.1613	1.1629	1.1645	1.1661	1.1677	1.1692
14°	1.1515	1.1530	1.1546	1.1562	1.1577	1.1593	1.1609	1.1625	1.1640
15°	1.1462	1.1478	1.1493	1.1509	1.1525	1.1540	1.1556	1.1572	1.1587
16°	1.1410	1.1425	1.1441	1.1456	1.1472	1.1488	1.1503	1.1519	1.1535
17°	1.1357	1.1373	1.1388	1.1404	1.1419	1.1435	1.1450	1.1466	1.1482
18°	1.1303	1.1318	1.1334	1.1349	1.1365	1.1380	1.1396	1.1411	1.1427
19°	1.1249	1.1265	1.1280	1.1296	1.1311	1.1326	1.1342	1.1357	1.1373
20°	1.1195	1.1210	1.1225	1.1241	1.1256	1.1272	1.1287	1.1303	1.1318
21°	1.1139	1.1155	1.1170	1.1185	1.1201	1.1216	1.1231	1.1247	1.1262
22°	1.1084	1.1099	1.1114	1.1130	1.1145	1.1160	1.1176	1.1191	1.1206
23°	1.1027	1.1043	1.1058	1.1073	1.1088	1.1103	1.1119	1.1134	1.1149
24°	1.0971	1.0986	1.1001	1.1016	1.1032	1.1047	1.1062	1.1077	1.1092
25°	1.0912	1.0927	1.0943	1.0958	1.0973	1.0988	1.1003	1.1018	1.1034
26°	1.0855	1.0870	1.0885	1.0900	1.0915	1.0930	1.0945	1.0961	1.0976
27°	1.0796	1.0811	1.0827	1.0842	1.0857	1.0872	1.0887	1.0902	1.0917
28°	1.0737	1.0752	1.0767	1.0782	1.0797	1.0812	1.0827	1.0842	1.0857
29°	1.0676	1.0690	1.0705	1.0720	1.0735	1.0750	1.0765	1.0780	1.0795
30°	1.0615	1.0630	1.0645	1.0660	1.0675	1.0690	1.0704	1.0719	1.0734
31°	1.0552	1.0567	1.0582	1.0597	1.0612	1.0626	1.0641	1.0656	1.0671
32°	1.0488	1.0503	1.0518	1.0533	1.0547	1.0562	1.0577	1.0592	1.0607
33°	1.0424	1.0439	1.0454	1.0469	1.0483	1.0498	1.0513	1.0528	1.0542
34°	1.0357	1.0372	1.0387	1.0401	1.0416	1.0431	1.0446	1.0460	1.0475
35°	1.0291	1.0306	1.0321	1.0335	1.0350	1.0365	1.0379	1.0394	1.0409

Degrees Cent.	753 mm. 29.65 in.	754 mm. 29.69 in.	755 mm. 29.72 in.	756 mm. 29.76 in.	757 mm. 29.80 in.	758 mm. 29.84 in.	759 mm. 29.88 in.	760 mm. 29.92 in.	761 mm. 29.96 in.
0°	1.2373	1.2390	1.2406	1.2423	1.2440	1.2456	1.2473	1.2489	1.2506
1°	1.2324	1.2340	1.2356	1.2373	1.2389	1.2406	1.2422	1.2439	1.2455
2°	1.2272	1.2289	1.2305	1.2322	1.2338	1.2355	1.2371	1.2387	1.2404
3°	1.2221	1.2238	1.2254	1.2270	1.2287	1.2303	1.2320	1.2336	1.2352
4°	1.2171	1.2188	1.2204	1.2220	1.2237	1.2253	1.2269	1.2285	1.2302
5°	1.2120	1.2137	1.2153	1.2169	1.2185	1.2202	1.2218	1.2234	1.2250
6°	1.2069	1.2085	1.2102	1.2118	1.2134	1.2150	1.2166	1.2182	1.2199
7°	1.2018	1.2034	1.2051	1.2067	1.2083	1.2099	1.2115	1.2131	1.2147
8°	1.1967	1.1983	1.1999	1.2015	1.2031	1.2047	1.2064	1.2080	1.2096
9°	1.1916	1.1932	1.1948	1.1964	1.1980	1.1996	1.2012	1.2028	1.2044
10°	1.1864	1.1880	1.1896	1.1912	1.1928	1.1944	1.1960	1.1976	1.1992
11°	1.1813	1.1829	1.1845	1.1861	1.1877	1.1893	1.1909	1.1924	1.1940
12°	1.1760	1.1776	1.1792	1.1808	1.1823	1.1839	1.1855	1.1871	1.1887
13°	1.1708	1.1724	1.1740	1.1755	1.1771	1.1787	1.1803	1.1819	1.1834
14°	1.1656	1.1672	1.1687	1.1703	1.1719	1.1735	1.1750	1.1766	1.1782
15°	1.1603	1.1619	1.1634	1.1650	1.1666	1.1681	1.1697	1.1713	1.1729
16°	1.1550	1.1566	1.1581	1.1597	1.1613	1.1628	1.1644	1.1660	1.1675
17°	1.1497	1.1513	1.1528	1.1544	1.1559	1.1575	1.1591	1.1606	1.1622
18°	1.1442	1.1458	1.1473	1.1489	1.1504	1.1520	1.1535	1.1551	1.1566
19°	1.1388	1.1404	1.1419	1.1435	1.1450	1.1466	1.1481	1.1496	1.1512
20°	1.1333	1.1349	1.1364	1.1380	1.1395	1.1410	1.1426	1.1441	1.1457
21°	1.1277	1.1293	1.1308	1.1323	1.1339	1.1354	1.1369	1.1385	1.1400
22°	1.1221	1.1237	1.1252	1.1267	1.1283	1.1298	1.1313	1.1329	1.1344
23°	1.1164	1.1180	1.1195	1.1210	1.1225	1.1241	1.1256	1.1271	1.1286
24°	1.1108	1.1123	1.1138	1.1153	1.1168	1.1184	1.1199	1.1214	1.1229
25°	1.1049	1.1064	1.1079	1.1094	1.1109	1.1124	1.1140	1.1155	1.1170
26°	1.0991	1.1006	1.1021	1.1036	1.1051	1.1066	1.1081	1.1096	1.1111
27°	1.0932	1.0947	1.0962	1.0977	1.0992	1.1007	1.1022	1.1037	1.1052
28°	1.0872	1.0887	1.0902	1.0917	1.0932	1.0947	1.0962	1.0977	1.0992
29°	1.0810	1.0825	1.0840	1.0855	1.0870	1.0885	1.0900	1.0915	1.0930
30°	1.0749	1.0764	1.0779	1.0794	1.0809	1.0824	1.0839	1.0853	1.0868
31°	1.0686	1.0701	1.0716	1.0730	1.0745	1.0760	1.0775	1.0790	1.0805
32°	1.0621	1.0636	1.0651	1.0666	1.0681	1.0695	1.0710	1.0725	1.0740
33°	1.0557	1.0572	1.0587	1.0601	1.0616	1.0631	1.0646	1.0660	1.0675
34°	1.0490	1.0505	1.0519	1.0534	1.0549	1.0563	1.0578	1.0593	1.0607
35°	1.0423	1.0438	1.0453	1.0467	1.0482	1.0497	1.0511	1.0526	1.0541

Degrees Cent.	762	763	764	765	766	767	768	769	770
	mm. 30.00 in.	mm. 30.04 in.	mm. 30.08 in.	mm. 30.12 in.	mm. 30.16 in.	mm. 30.20 in.	mm. 30.24 in.	mm. 30.28 in.	mm. 30.32 in.
0°	1.2522	1.2539	1.2555	1.2572	1.2588	1.2605	1.2621	1.2638	1.2654
1°	1.2472	1.2488	1.2505	1.2521	1.2538	1.2554	1.2571	1.2587	1.2604
2°	1.2420	1.2437	1.2453	1.2469	1.2486	1.2502	1.2519	1.2535	1.2551
3°	1.2369	1.2385	1.2401	1.2418	1.2434	1.2450	1.2467	1.2483	1.2499
4°	1.2318	1.2334	1.2351	1.2367	1.2383	1.2399	1.2416	1.2432	1.2448
5°	1.2267	1.2283	1.2299	1.2315	1.2332	1.2348	1.2364	1.2380	1.2397
6°	1.2215	1.2231	1.2247	1.2263	1.2279	1.2296	1.2312	1.2328	1.2344
7°	1.2163	1.2179	1.2196	1.2212	1.2228	1.2244	1.2260	1.2276	1.2292
8°	1.2112	1.2128	1.2144	1.2160	1.2176	1.2192	1.2208	1.2224	1.2240
9°	1.2060	1.2076	1.2092	1.2108	1.2124	1.2140	1.2156	1.2172	1.2188
10°	1.2008	1.2024	1.2040	1.2056	1.2072	1.2088	1.2103	1.2119	1.2135
11°	1.1956	1.1972	1.1988	1.2004	1.2020	1.2036	1.2052	1.2067	1.2083
12°	1.1903	1.1918	1.1934	1.1950	1.1966	1.1982	1.1998	1.2013	1.2029
13°	1.1850	1.1866	1.1882	1.1897	1.1913	1.1929	1.1945	1.1961	1.1976
14°	1.1798	1.1813	1.1829	1.1845	1.1860	1.1876	1.1892	1.1908	1.1923
15°	1.1744	1.1760	1.1776	1.1791	1.1807	1.1823	1.1838	1.1854	1.1870
16°	1.1691	1.1706	1.1722	1.1738	1.1753	1.1769	1.1784	1.1800	1.1816
17°	1.1637	1.1653	1.1668	1.1684	1.1700	1.1715	1.1731	1.1746	1.1762
18°	1.1582	1.1597	1.1613	1.1628	1.1644	1.1659	1.1675	1.1690	1.1706
19°	1.1527	1.1543	1.1558	1.1574	1.1589	1.1605	1.1620	1.1636	1.1651
20°	1.1472	1.1487	1.1503	1.1518	1.1534	1.1549	1.1564	1.1580	1.1595
21°	1.1416	1.1431	1.1446	1.1462	1.1477	1.1492	1.1508	1.1523	1.1538
22°	1.1359	1.1374	1.1390	1.1405	1.1420	1.1436	1.1451	1.1466	1.1482
23°	1.1302	1.1317	1.1332	1.1347	1.1363	1.1378	1.1393	1.1408	1.1424
24°	1.1244	1.1260	1.1275	1.1290	1.1305	1.1320	1.1336	1.1351	1.1366
25°	1.1185	1.1200	1.1215	1.1230	1.1246	1.1261	1.1276	1.1291	1.1306
26°	1.1127	1.1142	1.1157	1.1172	1.1187	1.1202	1.1217	1.1232	1.1247
27°	1.1067	1.1082	1.1097	1.1112	1.1127	1.1142	1.1157	1.1172	1.1188
28°	1.1007	1.1022	1.1037	1.1052	1.1067	1.1082	1.1097	1.1112	1.1127
29°	1.0945	1.0960	1.0974	1.0989	1.1004	1.1019	1.1034	1.1049	1.1064
30°	1.0883	1.0898	1.0913	1.0928	1.0943	1.0958	1.0973	1.0988	1.1002
31°	1.0819	1.0834	1.0849	1.0864	1.0879	1.0893	1.0909	1.0923	1.0938
32°	1.0755	1.0769	1.0784	1.0799	1.0814	1.0829	1.0843	1.0858	1.0873
33°	1.0690	1.0705	1.0719	1.0734	1.0749	1.0764	1.0778	1.0793	1.0808
34°	1.0622	1.0637	1.0652	1.0666	1.0681	1.0696	1.0710	1.0725	1.0740
35°	1.0555	1.0570	1.0585	1.0599	1.0614	1.0629	1.0643	1.0658	1.0673

Degrees Cent.	771 mm. 30.36 in.	772 mm. 30.40 in.	773 mm. 30.44 in.	774 mm. 30.48 in.	775 mm. 30.52 in.	776 mm. 30.56 in.	777 mm. 30.66 in.	778 mm. 30.70 in.	779 mm. 30.74 in.
0°	1.2670	1.2687	1.2703	1.2720	1.2737	1.2753	1.2769	1.2786	1.2802
1°	1.2621	1.2637	1.2654	1.2670	1.2687	1.2703	1.2720	1.2736	1.2743
2°	1.2567	1.2583	1.2599	1.2616	1.2632	1.2648	1.2665	1.2681	1.2697
3°	1.2516	1.2532	1.2548	1.2565	1.2581	1.2597	1.2614	1.2630	1.2646
4°	1.2464	1.2480	1.2497	1.2513	1.2529	1.2545	1.2562	1.2578	1.2594
5°	1.2414	1.2430	1.2446	1.2462	1.2479	1.2495	1.2511	1.2527	1.2544
6°	1.2361	1.2377	1.2393	1.2419	1.2435	1.2452	1.2468	1.2484	1.2500
7°	1.2308	1.2324	1.2341	1.2357	1.2373	1.2389	1.2405	1.2421	1.2437
8°	1.2256	1.2272	1.2288	1.2304	1.2320	1.2336	1.2352	1.2378	1.2394
9°	1.2204	1.2220	1.2236	1.2252	1.2278	1.2294	1.2310	1.2326	1.2342
10°	1.2141	1.2157	1.2173	1.2189	1.2205	1.2221	1.2236	1.2252	1.2268
11°	1.2099	1.2115	1.2131	1.2147	1.2163	1.2179	1.2195	1.2210	1.2226
12°	1.2045	1.2060	1.2076	1.2092	1.2108	1.2124	1.2140	1.2155	1.2171
13°	1.1992	1.2008	1.2024	1.2039	1.2055	1.2071	1.2087	1.2103	1.2118
14°	1.1939	1.1954	1.1970	1.1986	1.2001	1.2017	1.2033	1.2049	1.2064
15°	1.1885	1.1901	1.1917	1.1932	1.1948	1.1964	1.1979	1.1995	1.2011
16°	1.1832	1.1847	1.1863	1.1879	1.1894	1.1910	1.1925	1.1941	1.1956
17°	1.1777	1.1793	1.1808	1.1824	1.1840	1.1855	1.1871	1.1886	1.1902
18°	1.1722	1.1737	1.1753	1.1768	1.1784	1.1799	1.1815	1.1830	1.1846
19°	1.1666	1.1682	1.1697	1.1713	1.1728	1.1744	1.1759	1.1775	1.1790
20°	1.1610	1.1625	1.1641	1.1656	1.1672	1.1687	1.1702	1.1718	1.1733
21°	1.1554	1.1569	1.1584	1.1600	1.1615	1.1630	1.1646	1.1661	1.1676
22°	1.1498	1.1513	1.1529	1.1545	1.1560	1.1576	1.1591	1.1607	1.1622
23°	1.1440	1.1455	1.1471	1.1486	1.1501	1.1517	1.1532	1.1548	1.1563
24°	1.1381	1.1397	1.1412	1.1427	1.1442	1.1457	1.1472	1.1487	1.1501
25°	1.1321	1.1336	1.1351	1.1366	1.1381	1.1396	1.1411	1.1426	1.1440
26°	1.1262	1.1277	1.1292	1.1307	1.1322	1.1337	1.1352	1.1367	1.1381
27°	1.1203	1.1218	1.1233	1.1248	1.1263	1.1278	1.1293	1.1208	1.1222
28°	1.1142	1.1157	1.1172	1.1187	1.1202	1.1217	1.1232	1.1247	1.1261
29°	1.1079	1.1094	1.1109	1.1124	1.1139	1.1155	1.1169	1.1184	1.1199
30°	1.1017	1.1032	1.1047	1.1067	1.1077	1.1092	1.1107	1.1122	1.1136
31°	1.0953	1.0968	1.0983	1.0997	1.1012	1.1026	1.1041	1.1055	1.1070
32°	1.0887	1.0902	1.0917	1.0931	1.0946	1.0961	1.0975	1.0990	1.1004
33°	1.0822	1.0837	1.0852	1.0866	1.0881	1.0896	1.0910	1.0925	1.0940
34°	1.0755	1.0769	1.0784	1.0799	1.0813	1.0828	1.0843	1.0858	1.0872
35°	1.0687	1.0702	1.0717	1.0731	1.0746	1.0761	1.0776	1.0791	1.0805



TABLE V

CHLORINE CONVERSION TABLE

This table is calculated with the factor of 0.2474, on the basis of 1 gm. of substance being used in analysis. The figures are up to 0.999 gram AgCl, equivalent to 24.72 per cent Cl.

## Gram .000—.299 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.
.000	.00	.050	1.24	.100	2.47	.150	3.71	.200	4.95	.250	6.19
.001	.02	.051	1.26	.101	2.50	.151	3.74	.201	4.97	.251	6.21
.002	.05	.052	1.29	.102	2.52	.152	3.76	.202	5.00	.252	6.23
.003	.07	.053	1.31	.103	2.55	.153	3.79	.203	5.02	.253	6.26
.004	.10	.054	1.34	.104	2.57	.154	3.81	.204	5.05	.254	6.28
.005	.12	.055	1.36	.105	2.60	.155	3.83	.205	5.07	.255	6.31
.006	.15	.056	1.39	.106	2.62	.156	3.86	.206	5.10	.256	6.33
.007	.17	.057	1.41	.107	2.65	.157	3.88	.207	5.12	.257	6.36
.008	.20	.058	1.43	.108	2.67	.158	3.91	.208	5.15	.258	6.38
.009	.22	.059	1.46	.109	2.70	.159	3.93	.209	5.17	.259	6.41
.010	.25	.060	1.48	.110	2.72	.160	3.96	.210	5.20	.260	6.43
.011	.27	.061	1.51	.111	2.75	.161	3.98	.211	5.22	.261	6.46
.012	.30	.062	1.53	.112	2.77	.162	4.01	.212	5.24	.262	6.48
.013	.32	.063	1.56	.113	2.80	.163	4.03	.213	5.27	.263	6.51
.014	.35	.064	1.58	.114	2.82	.164	4.06	.214	5.29	.264	6.53
.015	.37	.065	1.61	.115	2.85	.165	4.08	.215	5.32	.265	6.56
.016	.40	.066	1.63	.116	2.87	.166	4.11	.216	5.34	.266	6.58
.017	.42	.067	1.66	.117	2.89	.167	4.13	.217	5.37	.267	6.61
.018	.45	.068	1.68	.118	2.92	.168	4.16	.218	5.39	.268	6.63
.019	.47	.069	1.71	.119	2.94	.169	4.18	.219	5.42	.269	6.66
.020	.49	.070	1.73	.120	2.97	.170	4.21	.220	5.44	.270	6.68
.021	.52	.071	1.76	.121	2.99	.171	4.23	.221	5.47	.271	6.70
.022	.54	.072	1.78	.122	3.02	.172	4.26	.222	5.49	.272	6.73
.023	.57	.073	1.81	.123	3.04	.173	4.28	.223	5.52	.273	6.75
.024	.59	.074	1.83	.124	3.07	.174	4.30	.224	5.54	.274	6.78
.025	.62	.075	1.86	.125	3.09	.175	4.33	.225	5.57	.275	6.80
.026	.64	.076	1.88	.126	3.12	.176	4.35	.226	5.59	.276	6.83
.027	.67	.077	1.90	.127	3.14	.177	4.38	.227	5.62	.277	6.85
.028	.69	.078	1.93	.128	3.17	.178	4.40	.228	5.64	.278	6.88
.029	.72	.079	1.95	.129	3.19	.179	4.43	.229	5.67	.279	6.90
.030	.74	.080	1.98	.130	3.22	.180	4.45	.230	5.69	.280	6.93
.031	.77	.081	2.00	.131	3.24	.181	4.48	.231	5.71	.281	6.95
.032	.79	.082	2.03	.132	3.27	.182	4.50	.232	5.74	.282	6.98
.033	.82	.083	2.05	.133	3.29	.183	4.53	.233	5.76	.283	7.00
.034	.84	.084	2.08	.134	3.32	.184	4.55	.234	5.79	.284	7.03
.035	.87	.085	2.10	.135	3.34	.185	4.58	.235	5.81	.285	7.05
.036	.89	.086	2.13	.136	3.36	.186	4.60	.236	5.84	.286	7.08
.037	.92	.087	2.15	.137	3.39	.187	4.63	.237	5.86	.287	7.10
.038	.94	.088	2.18	.138	3.41	.188	4.65	.238	5.89	.288	7.13
.039	.96	.089	2.20	.139	3.44	.189	4.68	.239	5.91	.289	7.15
.040	.99	.090	2.23	.140	3.46	.190	4.70	.240	5.94	.290	7.17
.041	1.01	.091	2.25	.141	3.49	.191	4.73	.241	5.96	.291	7.20
.042	1.04	.092	2.28	.142	3.51	.192	4.75	.242	5.99	.292	7.22
.043	1.06	.093	2.30	.143	3.54	.193	4.77	.243	6.01	.293	7.25
.044	1.09	.094	2.33	.144	3.56	.194	4.80	.244	6.04	.294	7.27
.045	1.11	.095	2.35	.145	3.59	.195	4.82	.245	6.06	.295	7.30
.046	1.14	.096	2.38	.146	3.61	.196	4.85	.246	6.09	.296	7.32
.047	1.16	.097	2.40	.147	3.64	.197	4.87	.247	6.11	.297	7.35
.048	1.19	.098	2.42	.148	3.66	.198	4.90	.248	6.14	.298	7.37
.049	1.21	.099	2.45	.149	3.69	.199	4.92	.249	6.16	.299	7.40



## Gram 300.—599 (Basis 1 Grm.)

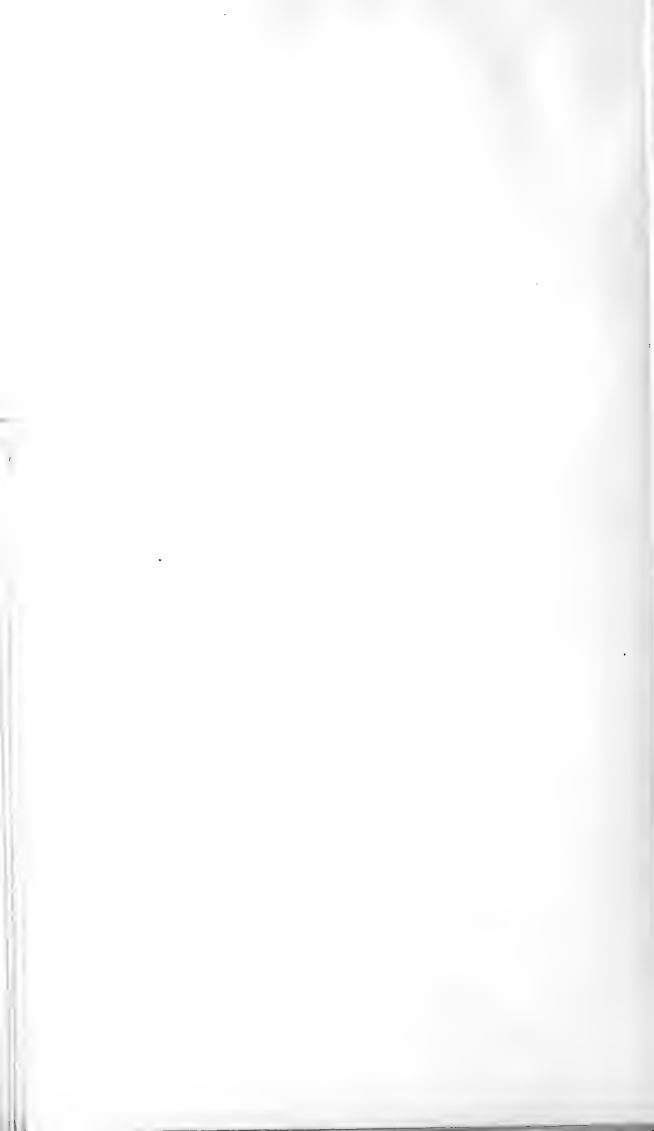
Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.
.300	7.42	.350	8.66	.400	9.90	.450	11.13	.500	12.37	.550	13.61
.301	7.45	.351	8.68	.401	9.92	.451	11.16	.501	12.39	.551	13.63
.302	7.47	.352	8.71	.402	9.95	.452	11.18	.502	12.42	.552	13.66
.303	7.50	.353	8.73	.403	9.97	.453	11.21	.503	12.44	.553	13.68
.304	7.52	.354	8.76	.404	9.99	.454	11.23	.504	12.47	.554	13.71
.305	7.55	.355	8.78	.405	10.01	.455	11.26	.505	12.49	.555	13.73
.306	7.57	.356	8.81	.406	10.04	.456	11.28	.506	12.52	.556	13.76
.307	7.60	.357	8.83	.407	10.07	.457	11.31	.507	12.54	.557	13.78
.308	7.62	.358	8.86	.408	10.09	.458	11.33	.508	12.57	.558	13.80
.309	7.64	.359	8.88	.409	10.11	.459	11.36	.509	12.59	.559	13.83
.310	7.67	.360	8.91	.410	10.14	.460	11.38	.510	12.62	.560	13.85
.311	7.69	.361	8.93	.411	10.17	.461	11.41	.511	12.64	.561	13.88
.312	7.72	.362	8.96	.412	10.19	.462	11.43	.512	12.67	.562	13.90
.313	7.74	.363	8.98	.413	10.22	.463	11.45	.513	12.69	.563	13.93
.314	7.77	.364	9.01	.414	10.24	.464	11.48	.514	12.72	.564	13.95
.315	7.79	.365	9.03	.415	10.27	.465	11.50	.515	12.74	.565	13.98
.316	7.82	.366	9.05	.416	10.29	.466	11.53	.516	12.77	.566	14.00
.317	7.84	.367	9.08	.417	10.32	.467	11.55	.517	12.79	.567	14.03
.318	7.87	.368	9.10	.418	10.34	.468	11.58	.518	12.82	.568	14.05
.319	7.89	.369	9.13	.419	10.37	.469	11.60	.519	12.84	.569	14.08
.320	7.92	.370	9.15	.420	10.39	.470	11.63	.520	12.86	.570	14.10
.321	7.94	.371	9.18	.421	10.42	.471	11.65	.521	12.89	.571	14.13
.322	7.97	.372	9.20	.422	10.44	.472	11.68	.522	12.91	.572	14.15
.323	7.99	.373	9.23	.423	10.47	.473	11.70	.523	12.94	.573	14.18
.324	8.02	.374	9.25	.424	10.49	.474	11.73	.524	12.96	.574	14.20
.325	8.04	.375	9.28	.425	10.51	.475	11.75	.525	12.99	.575	14.23
.326	8.07	.376	9.30	.426	10.54	.476	11.78	.526	13.01	.576	14.25
.327	8.09	.377	9.33	.427	10.56	.477	11.80	.527	13.04	.577	14.27
.328	8.11	.378	9.35	.428	10.59	.478	11.83	.528	13.06	.578	14.30
.329	8.14	.379	9.38	.429	10.61	.479	11.85	.529	13.09	.579	14.32
.330	8.16	.380	9.40	.430	10.64	.480	11.88	.530	13.11	.580	14.35
.331	8.19	.381	9.43	.431	10.66	.481	11.90	.531	13.14	.581	14.37
.332	8.21	.382	9.45	.432	10.69	.482	11.92	.532	13.16	.582	14.40
.333	8.24	.383	9.48	.433	10.71	.483	11.95	.533	13.19	.583	14.42
.334	8.26	.384	9.50	.434	10.74	.484	11.97	.534	13.21	.584	14.45
.335	8.29	.385	9.52	.435	10.76	.485	12.00	.535	13.24	.585	14.47
.336	8.31	.386	9.55	.436	10.79	.486	12.02	.536	13.26	.586	14.50
.337	8.34	.387	9.57	.437	10.81	.487	12.05	.537	13.29	.587	14.52
.338	8.36	.388	9.60	.438	10.84	.488	12.07	.538	13.31	.588	14.55
.339	8.39	.389	9.62	.439	10.86	.489	12.10	.539	13.33	.589	14.57
.340	8.41	.390	9.65	.440	10.89	.490	12.12	.540	13.36	.590	14.60
.341	8.44	.391	9.67	.441	10.91	.491	12.15	.541	13.38	.591	14.62
.342	8.46	.392	9.70	.442	10.94	.492	12.17	.542	13.41	.592	14.65
.343	8.49	.393	9.72	.443	10.96	.493	12.20	.543	13.43	.593	14.67
.344	8.51	.394	9.75	.444	10.98	.494	12.22	.544	13.46	.594	14.70
.345	8.54	.395	9.77	.445	11.01	.495	12.25	.545	13.48	.595	14.72
.346	8.56	.396	9.80	.446	11.03	.496	12.27	.546	13.51	.596	14.75
.347	8.58	.397	9.82	.447	11.06	.497	12.30	.547	13.53	.597	14.77
.348	8.61	.398	9.85	.448	11.08	.498	12.32	.538	13.56	.598	14.79
.349	8.63	.399	9.87	.449	11.11	.499	12.35	.549	13.58	.599	14.82

## Gram .600—.899 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.
.600	14.84	.650	16.08	.700	17.32	.750	18.56	.800	19.79	.850	21.03
.601	14.87	.651	16.11	.701	17.34	.751	18.58	.801	19.82	.851	21.05
.602	14.89	.652	16.13	.702	17.37	.752	18.60	.802	19.84	.852	21.08
.603	14.92	.653	16.16	.703	17.39	.753	18.63	.803	19.87	.853	21.10
.604	14.94	.654	16.18	.704	17.42	.754	18.65	.804	19.89	.854	21.13
.605	14.97	.655	16.20	.705	17.44	.755	18.68	.805	19.92	.855	21.15
.606	14.99	.656	16.23	.706	17.47	.756	18.70	.806	19.94	.856	21.18
.607	15.02	.657	16.25	.707	17.49	.757	18.73	.807	19.97	.857	21.20
.608	15.04	.658	16.28	.708	17.52	.758	18.75	.808	19.99	.858	21.23
.609	15.07	.659	16.30	.709	17.54	.759	18.78	.809	20.01	.859	21.25
.610	15.09	.660	16.33	.710	17.57	.760	18.80	.810	20.04	.860	21.28
.611	15.12	.661	16.35	.711	17.59	.761	18.83	.811	20.06	.861	21.30
.612	15.14	.662	16.38	.712	17.61	.762	18.85	.812	20.09	.862	21.33
.613	15.17	.663	16.40	.713	17.64	.763	18.88	.813	20.11	.863	21.35
.614	15.19	.664	16.43	.714	17.66	.764	18.90	.814	20.14	.864	21.38
.615	15.22	.665	16.45	.715	17.69	.765	18.93	.815	20.16	.865	21.40
.616	15.24	.666	16.48	.716	17.71	.766	18.95	.816	20.19	.866	21.42
.617	15.26	.667	16.50	.717	17.74	.767	18.98	.817	20.21	.867	21.45
.618	15.29	.668	16.53	.718	17.76	.768	19.00	.818	20.24	.868	21.47
.619	15.31	.669	16.55	.719	17.79	.769	19.03	.819	20.26	.869	21.50
.620	15.34	.670	16.58	.720	17.81	.770	19.05	.820	20.29	.870	21.52
.621	15.36	.671	16.60	.721	17.84	.771	19.07	.821	20.31	.871	21.55
.622	15.39	.672	16.63	.722	17.86	.772	19.10	.822	20.34	.872	21.57
.623	15.41	.673	16.65	.723	17.89	.773	19.12	.823	20.36	.873	21.60
.624	15.44	.674	16.67	.724	17.91	.774	19.15	.824	20.39	.874	21.62
.625	15.46	.675	16.70	.725	17.94	.775	19.17	.825	20.41	.875	21.65
.626	15.49	.676	16.72	.726	17.96	.776	19.20	.826	20.44	.876	21.67
.627	15.51	.677	16.75	.727	17.99	.777	19.22	.827	20.46	.877	21.70
.628	15.54	.678	16.77	.728	18.01	.778	19.25	.828	20.48	.878	21.72
.629	15.56	.679	16.80	.729	18.04	.779	19.27	.829	20.51	.879	21.75
.630	15.59	.680	16.82	.730	18.06	.780	19.30	.830	20.53	.880	21.77
.631	15.61	.681	16.85	.731	18.08	.781	19.32	.831	20.56	.881	21.80
.632	15.64	.682	16.87	.732	18.11	.782	19.35	.832	20.58	.882	21.82
.633	15.66	.683	16.90	.733	18.13	.783	19.37	.833	20.61	.883	21.85
.634	15.69	.684	16.92	.734	18.16	.784	19.40	.834	20.63	.884	21.87
.635	15.71	.685	16.95	.735	18.18	.785	19.42	.835	20.66	.885	21.89
.636	15.73	.686	16.97	.736	18.21	.786	19.45	.836	20.68	.886	21.92
.637	15.76	.687	17.00	.737	18.23	.787	19.47	.837	20.70	.887	21.94
.638	15.78	.688	17.02	.738	18.26	.788	19.50	.838	20.73	.888	21.97
.639	15.81	.689	17.05	.739	18.28	.789	19.52	.839	20.76	.889	21.99
.640	15.83	.690	17.07	.740	18.31	.790	19.54	.840	20.78	.890	22.02
.641	15.86	.691	17.10	.741	18.33	.791	19.57	.841	20.81	.891	22.04
.642	15.88	.692	17.12	.742	18.36	.792	19.59	.842	20.83	.892	22.07
.643	15.91	.693	17.14	.743	18.38	.793	19.62	.843	20.86	.893	22.09
.644	15.93	.694	17.17	.744	18.41	.794	19.64	.844	20.88	.894	22.12
.645	15.96	.695	17.19	.745	18.43	.795	19.67	.845	20.91	.895	22.14
.646	15.98	.696	17.22	.746	18.46	.796	19.69	.846	20.93	.896	22.17
.647	16.01	.697	17.24	.747	18.48	.797	19.72	.847	20.95	.897	22.19
.648	16.03	.698	17.27	.748	18.51	.798	19.74	.848	20.98	.898	22.22
.649	16.06	.699	17.29	.749	18.53	.799	19.77	.849	21.00	.899	22.24

## Gram .900—.999 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.	AgCl.	Cl.
.900	22.27	.920	22.76	.940	23.26	.960	23.75	.980	24.25		
.901	22.29	.921	22.79	.941	23.28	.961	23.78	.981	24.27		
.902	22.32	.922	22.81	.942	23.31	.962	23.80	.982	24.29		
.903	22.34	.923	22.84	.943	23.33	.963	23.82	.983	24.32		
.904	22.36	.924	22.86	.944	23.35	.964	23.85	.984	24.34		
.905	22.39	.925	22.88	.945	23.38	.965	23.87	.985	24.37		
.906	22.41	.926	22.91	.946	23.40	.966	23.90	.986	24.39		
.907	22.44	.927	22.93	.947	23.43	.967	23.92	.987	24.42		
.908	22.46	.928	22.96	.948	23.45	.968	23.95	.988	24.44		
.909	22.49	.929	22.98	.949	23.48	.969	23.97	.989	24.47		
.910	22.51	.930	23.01	.950	23.50	.970	24.00	.990	24.49		
.911	22.54	.931	23.03	.951	23.53	.971	24.02	.991	24.52		
.912	22.56	.932	23.06	.952	23.55	.972	24.05	.992	24.54		
.913	22.59	.933	23.08	.953	23.58	.973	24.07	.993	24.57		
.914	22.61	.934	23.11	.954	23.60	.974	24.10	.994	24.59		
.915	22.64	.935	23.13	.955	23.63	.975	24.12	.995	24.62		
.916	22.66	.936	23.16	.956	23.65	.976	24.15	.996	24.64		
.917	22.69	.937	23.18	.957	23.68	.977	24.17	.997	24.67		
.918	22.71	.938	23.21	.958	23.70	.978	24.20	.998	24.69		
.919	22.74	.939	23.23	.959	23.73	.979	24.22	.999	24.72		



## TABLE VI

### SULPHUR CONVERSION TABLE

The factors used herein are 0.13738 from  $\text{BaSO}_4$  to S, and 0.3430 to  $\text{SO}_3$ . The limit is up to 0.999 gm.  $\text{BaSO}_4$  equivalent to 13.72 per cent S and 34.27 per cent  $\text{SO}_3$ . The basis is 1 gram of substance used in analysis.

## Gram .000—.199 (Basis 1 Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .
.000	.00	.00	.050	.69	1.72	.100	1.37	3.43	.150	2.06	5.15
.001	.01	.03	.051	.70	1.75	.101	1.39	3.46	.151	2.07	5.18
.002	.03	.07	.052	.71	1.78	.102	1.40	3.50	.152	2.09	5.21
.003	.04	.10	.053	.73	1.82	.103	1.42	3.53	.153	2.10	5.25
.004	.05	.14	.054	.74	1.85	.104	1.43	3.57	.154	2.12	5.28
.005	.07	.17	.055	.76	1.89	.105	1.44	3.60	.155	2.13	5.32
.006	.08	.21	.056	.77	1.92	.106	1.46	3.64	.156	2.14	5.35
.007	.10	.24	.057	.78	1.96	.107	1.47	3.67	.157	2.16	5.39
.008	.11	.27	.058	.80	1.99	.108	1.48	3.70	.158	2.17	5.42
.009	.12	.31	.059	.81	2.02	.109	1.50	3.74	.159	2.18	5.45
.010	.14	.34	.060	.82	2.04	.110	1.51	3.77	.160	2.20	5.49
.011	.15	.38	.061	.84	2.09	.111	1.52	3.81	.161	2.21	5.52
.012	.16	.41	.062	.85	2.13	.112	1.54	3.84	.162	2.23	5.56
.013	.18	.45	.063	.87	2.16	.113	1.55	3.88	.163	2.24	5.59
.014	.19	.48	.064	.88	2.20	.114	1.57	3.91	.164	2.25	5.63
.015	.21	.51	.065	.89	2.23	.115	1.58	3.94	.165	2.27	5.66
.016	.22	.55	.066	.91	2.26	.116	1.59	3.98	.166	2.28	5.69
.017	.23	.58	.067	.92	2.30	.117	1.61	4.01	.167	2.29	5.73
.018	.25	.62	.068	.93	2.33	.118	1.62	4.05	.168	2.31	5.76
.019	.26	.65	.069	.95	2.37	.119	1.63	4.08	.169	2.32	5.80
.020	.27	.69	.070	.96	2.40	.120	1.65	4.12	.170	2.34	5.83
.021	.29	.72	.071	.98	2.44	.121	1.66	4.15	.171	2.35	5.87
.022	.30	.75	.072	.99	2.47	.122	1.68	4.18	.172	2.36	5.90
.023	.32	.79	.073	1.00	2.50	.123	1.69	4.22	.173	2.38	5.93
.024	.33	.82	.074	1.02	2.54	.124	1.70	4.25	.174	2.39	5.97
.025	.34	.86	.075	1.03	2.57	.125	1.72	4.29	.175	2.40	6.00
.026	.36	.89	.076	1.04	2.61	.126	1.73	4.32	.176	2.42	6.04
.027	.37	.93	.077	1.06	2.64	.127	1.74	4.36	.177	2.43	6.07
.028	.38	.96	.078	1.07	2.68	.128	1.76	4.39	.178	2.45	6.11
.029	.40	.99	.079	1.09	2.71	.129	1.77	4.42	.179	2.46	6.14
.030	.41	1.03	.080	1.10	2.74	.130	1.79	4.46	.180	2.47	6.17
.031	.43	1.06	.081	1.11	2.78	.131	1.80	4.49	.181	2.49	6.21
.032	.44	1.10	.082	1.13	2.81	.132	1.81	4.53	.182	2.50	6.24
.033	.46	1.13	.083	1.14	2.85	.133	1.83	4.56	.183	2.51	6.28
.034	.47	1.17	.084	1.15	2.88	.134	1.84	4.60	.184	2.53	6.31
.035	.48	1.20	.085	1.17	2.92	.135	1.85	4.63	.185	2.54	6.35
.036	.49	1.23	.086	1.18	2.95	.136	1.87	4.66	.186	2.56	6.38
.037	.51	1.27	.087	1.20	2.98	.137	1.88	4.70	.187	2.57	6.41
.038	.52	1.30	.088	1.21	3.02	.138	1.90	4.73	.188	2.58	6.45
.039	.54	1.34	.089	1.22	3.05	.139	1.91	4.77	.189	2.60	6.48
.040	.55	1.37	.090	1.24	3.09	.140	1.92	4.80	.190	2.61	6.52
.041	.56	1.41	.091	1.25	3.12	.141	1.94	4.84	.191	2.62	6.55
.042	.58	1.44	.092	1.26	3.16	.142	1.95	4.87	.192	2.64	6.59
.043	.59	1.47	.093	1.28	3.19	.143	1.96	4.90	.193	2.65	6.62
.044	.60	1.51	.094	1.29	3.22	.144	1.98	4.94	.194	2.67	6.65
.045	.62	1.54	.095	1.31	3.26	.145	1.99	4.97	.195	2.68	6.69
.046	.63	1.58	.096	1.32	3.29	.146	2.01	5.01	.196	2.69	6.72
.047	.65	1.61	.097	1.33	3.33	.147	2.02	5.04	.197	2.71	6.76
.048	.66	1.65	.098	1.35	3.36	.148	2.03	5.08	.198	2.72	6.79
.049	.67	1.68	.099	1.36	3.40	.149	2.05	5.11	.199	2.73	6.83

## Gram .200—.399 (Basis 1 Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
BaSO <sub>4</sub> .	S	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S	SO <sub>3</sub> .
.200	2.75	6.86	.250	3.43	8.58	.300	4.12	10.29	.350	4.81	12.01
.201	2.76	6.89	.251	3.45	8.61	.301	4.14	10.32	.351	4.82	12.04
.202	2.78	6.93	.252	3.46	8.64	.302	4.15	10.36	.352	4.84	12.07
.203	2.79	6.96	.253	3.48	8.68	.303	4.16	10.39	.353	4.85	12.11
.204	2.80	7.00	.254	3.49	8.71	.304	4.18	10.43	.354	4.86	12.14
.205	2.82	7.03	.255	3.50	8.75	.305	4.19	10.46	.355	4.88	12.18
.206	2.83	7.07	.256	3.52	8.78	.306	4.20	10.50	.356	4.89	12.21
.207	2.84	7.10	.257	3.53	8.82	.307	4.22	10.53	.357	4.90	12.25
.208	2.86	7.13	.258	3.54	8.85	.308	4.23	10.56	.358	4.92	12.28
.209	2.87	7.17	.259	3.56	8.88	.309	4.25	10.60	.359	4.93	12.31
.210	2.88	7.20	.260	3.57	8.92	.310	4.26	10.63	.360	4.95	12.35
.211	2.90	7.24	.261	3.59	8.95	.311	4.27	10.67	.361	4.96	12.38
.212	2.91	7.27	.262	3.60	8.99	.312	4.29	10.70	.362	4.97	12.42
.213	2.93	7.31	.263	3.61	9.02	.313	4.30	10.74	.363	4.99	12.45
.214	2.94	7.34	.264	3.62	9.06	.314	4.31	10.77	.364	5.00	12.49
.215	2.95	7.37	.265	3.63	9.09	.315	4.33	10.80	.365	5.01	12.52
.216	2.97	7.41	.266	3.65	9.12	.316	4.34	10.84	.366	5.03	12.55
.217	2.98	7.44	.267	3.67	9.16	.317	4.35	10.87	.367	5.04	12.59
.218	2.99	7.48	.268	3.68	9.19	.318	4.37	10.91	.368	5.06	12.62
.219	3.01	7.51	.269	3.70	9.23	.319	4.38	10.94	.369	5.07	12.66
.220	3.02	7.55	.270	3.71	9.26	.320	4.40	10.98	.370	5.08	12.69
.221	3.04	7.58	.271	3.72	9.30	.321	4.41	11.01	.371	5.10	12.73
.222	3.05	7.61	.272	3.74	9.33	.322	4.42	11.04	.372	5.11	12.76
.223	3.06	7.65	.273	3.75	9.36	.323	4.44	11.08	.373	5.12	12.79
.224	3.08	7.68	.274	3.76	9.40	.324	4.45	11.11	.374	5.14	12.83
.225	3.09	7.72	.275	3.78	9.43	.325	4.46	11.15	.375	5.15	12.86
.226	3.10	7.75	.276	3.79	9.46	.326	4.48	11.18	.376	5.17	12.90
.227	3.12	7.79	.277	3.81	9.50	.327	4.49	11.22	.377	5.18	12.93
.228	3.13	7.82	.278	3.82	9.54	.328	4.51	11.25	.378	5.19	12.97
.229	3.15	7.85	.279	3.83	9.57	.329	4.52	11.28	.379	5.21	13.00
.230	3.16	7.89	.280	3.85	9.60	.330	4.53	11.32	.380	5.22	13.03
.231	3.17	7.92	.281	3.86	9.64	.331	4.55	11.35	.381	5.23	13.07
.232	3.19	7.96	.282	3.87	9.67	.332	4.56	11.39	.382	5.25	13.10
.233	3.20	7.99	.283	3.89	9.71	.333	4.57	11.42	.383	5.26	13.14
.234	3.21	8.03	.284	3.90	9.74	.334	4.59	11.46	.384	5.28	13.17
.235	3.23	8.06	.285	3.92	9.78	.335	4.60	11.49	.385	5.29	13.21
.236	3.24	8.09	.286	3.93	9.81	.336	4.62	11.52	.386	5.30	13.24
.237	3.26	8.13	.287	3.94	9.84	.337	4.63	11.56	.387	5.32	13.27
.238	3.27	8.16	.288	3.96	9.88	.338	4.64	11.59	.388	5.33	13.31
.239	3.28	8.20	.289	3.97	9.91	.339	4.66	11.63	.389	5.34	13.34
.240	3.30	8.23	.290	3.98	9.95	.340	4.67	11.66	.390	5.36	13.38
.241	3.31	8.27	.291	4.00	9.98	.341	4.68	11.70	.391	5.37	13.41
.242	3.32	8.30	.292	4.01	10.02	.342	4.70	11.73	.392	5.39	13.45
.243	3.34	8.33	.293	4.03	10.05	.343	4.71	11.76	.393	5.40	13.48
.244	3.35	8.37	.294	4.04	10.08	.344	4.73	11.80	.394	5.41	13.51
.245	3.37	8.40	.295	4.05	10.12	.345	4.74	11.83	.395	5.43	13.55
.246	3.38	8.44	.296	4.07	10.15	.346	4.75	11.87	.396	5.44	13.58
.247	3.39	8.47	.297	4.08	10.19	.347	4.77	11.90	.397	5.45	13.62
.248	3.41	8.51	.298	4.09	10.22	.348	4.78	11.94	.398	5.47	13.65
.249	3.42	8.54	.299	4.11	10.26	.349	4.79	11.97	.399	5.48	13.69

## Gram .400—.599. (Basis 1 Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
BaSO <sub>4</sub>	S	SO <sub>3</sub>	BaSO <sub>4</sub>	S	SO <sub>3</sub>	BaSO <sub>4</sub>	S	SO <sub>3</sub>	BaSO <sub>4</sub>	S	SO <sub>3</sub>
.400	5.50	13.72	.450	6.18	15.44	.500	6.87	17.15	.550	7.56	18.87
.401	5.51	13.75	.451	6.20	15.47	.501	6.88	17.18	.551	7.57	18.90
.402	5.52	13.79	.452	6.21	15.50	.502	6.90	17.22	.552	7.58	18.93
.403	5.54	13.82	.453	6.22	15.54	.503	6.91	17.25	.553	7.60	18.97
.404	5.55	13.86	.454	6.24	15.57	.504	6.92	17.29	.554	7.61	19.00
.405	5.56	13.89	.455	6.25	15.61	.505	6.94	17.32	.555	7.62	19.04
.406	5.58	13.93	.456	6.26	15.64	.506	6.95	17.36	.556	7.64	19.07
.407	5.59	13.96	.457	6.28	15.68	.507	6.97	17.39	.557	7.65	19.11
.408	5.61	13.99	.458	6.29	15.71	.508	6.98	17.42	.558	7.67	19.14
.409	5.62	14.03	.459	6.31	15.74	.509	6.99	17.46	.559	7.68	19.17
.410	5.63	14.06	.460	6.32	15.78	.510	7.01	17.49	.560	7.69	19.21
.411	5.65	14.10	.461	6.33	15.81	.511	7.02	17.53	.561	7.71	19.24
.412	5.66	14.13	.462	6.35	15.85	.512	7.03	17.56	.562	7.72	19.28
.413	5.67	14.17	.463	6.36	15.88	.513	7.05	17.60	.563	7.73	19.31
.414	5.69	14.20	.464	6.37	15.92	.514	7.06	17.63	.564	7.75	19.35
.415	5.70	14.23	.465	6.39	15.95	.515	7.08	17.66	.565	7.76	19.38
.416	5.72	14.27	.466	6.40	15.98	.516	7.09	17.70	.566	7.78	19.41
.417	5.73	14.30	.467	6.42	16.02	.517	7.10	17.73	.567	7.79	19.45
.418	5.74	14.34	.468	6.43	16.05	.518	7.12	17.77	.568	7.80	19.48
.419	5.76	14.37	.469	6.44	16.09	.519	7.13	17.80	.569	7.82	19.52
.420	5.77	14.41	.470	6.46	16.12	.520	7.14	17.84	.570	7.83	19.55
.421	5.78	14.44	.471	6.47	16.16	.521	7.16	17.87	.571	7.84	19.59
.422	5.80	14.47	.472	6.48	16.19	.522	7.17	17.90	.572	7.86	19.62
.423	5.81	14.51	.473	6.50	16.22	.523	7.18	17.94	.573	7.87	19.65
.424	5.82	14.54	.474	6.51	16.26	.524	7.20	17.97	.574	7.89	19.69
.425	5.84	14.58	.475	6.53	16.29	.525	7.21	18.01	.575	7.90	19.72
.426	5.85	14.61	.476	6.54	16.33	.526	7.23	18.04	.576	7.91	19.76
.427	5.87	14.65	.477	6.55	16.36	.527	7.24	18.08	.577	7.93	19.79
.428	5.88	14.68	.478	6.57	16.40	.528	7.25	18.11	.578	7.94	19.83
.429	5.89	14.71	.479	6.58	16.43	.529	7.27	18.14	.579	7.95	19.86
.430	5.91	14.75	.480	6.59	16.46	.530	7.28	18.18	.580	7.97	19.89
.431	5.92	14.78	.481	6.61	16.50	.531	7.29	18.21	.581	7.98	19.93
.432	5.93	14.82	.482	6.62	16.53	.532	7.31	18.25	.582	8.00	19.96
.433	5.95	14.85	.483	6.64	16.57	.533	7.32	18.28	.583	8.01	20.00
.434	5.96	14.89	.484	6.65	16.60	.534	7.34	18.32	.584	8.02	20.03
.435	5.98	14.92	.485	6.66	16.64	.535	7.35	18.35	.585	8.04	20.07
.436	5.99	14.95	.486	6.68	16.67	.536	7.36	18.38	.586	8.05	20.10
.437	6.00	14.99	.487	6.69	16.70	.537	7.38	18.42	.587	8.06	20.13
.438	6.02	15.02	.488	6.70	16.74	.538	7.39	18.45	.588	8.08	20.17
.439	6.03	15.06	.489	6.72	16.77	.539	7.40	18.49	.589	8.09	20.20
.440	6.04	15.09	.490	6.73	16.81	.540	7.42	18.52	.590	8.11	20.24
.441	6.06	15.13	.491	6.75	16.84	.541	7.43	18.56	.591	8.12	20.27
.442	6.07	15.16	.492	6.76	16.88	.542	7.45	18.59	.592	8.13	20.31
.443	6.09	15.19	.493	6.77	16.91	.543	7.46	18.62	.593	8.15	20.34
.444	6.10	15.23	.494	6.79	16.94	.544	7.47	18.66	.594	8.16	20.37
.445	6.11	15.26	.495	6.80	16.98	.545	7.49	18.69	.595	8.17	20.41
.446	6.13	15.30	.496	6.81	17.01	.546	7.50	18.73	.596	8.19	20.44
.447	6.14	15.33	.497	6.83	17.05	.547	7.51	18.76	.597	8.20	20.47
.448	6.15	15.37	.498	6.84	17.08	.548	7.53	18.80	.598	8.22	20.51
.449	6.17	15.40	.499	6.86	17.12	.549	7.54	18.83	.599	8.23	20.55



## Gram .600— .799 (Basis 1 Grm.)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .	BaSO <sub>4</sub> .	S.	SO <sub>3</sub> .
.600	8.24	20.58	.650	8.93	22.30	.700	9.62	24.01	.750	10.30	25.73
.601	8.26	20.61	.651	8.94	22.33	.701	9.63	24.04	.751	10.32	25.76
.602	8.27	20.65	.652	8.96	22.36	.702	9.64	24.08	.752	10.33	25.79
.603	8.28	20.68	.653	8.97	22.40	.703	9.66	24.11	.753	10.34	25.83
.604	8.30	20.72	.654	8.98	22.43	.704	9.67	24.15	.754	10.36	25.86
.605	8.31	20.75	.655	9.00	22.47	.705	9.69	24.18	.755	10.37	25.90
.606	8.33	20.79	.656	9.01	22.50	.706	9.70	24.22	.756	10.39	25.93
.607	8.34	20.82	.657	9.03	22.54	.707	9.71	24.25	.757	10.40	25.97
.608	8.35	20.85	.658	9.04	22.57	.708	9.73	24.28	.758	10.41	26.00
.609	8.37	20.89	.659	9.05	22.60	.709	9.74	24.32	.759	10.43	26.03
.610	8.38	20.92	.660	9.07	22.64	.710	9.75	24.35	.760	10.44	26.07
.611	8.39	20.96	.661	9.08	22.67	.711	9.77	24.39	.761	10.45	26.10
.612	8.41	20.99	.662	9.09	22.71	.712	9.78	24.42	.762	10.47	26.14
.613	8.42	21.03	.663	9.11	22.74	.713	9.80	24.46	.763	10.48	26.17
.614	8.44	21.06	.664	9.12	22.78	.714	9.81	24.49	.764	10.50	26.21
.615	8.45	21.09	.665	9.14	22.81	.715	9.82	24.52	.765	10.51	26.24
.616	8.46	21.13	.666	9.15	22.84	.716	9.84	24.56	.766	10.52	26.27
.617	8.48	21.16	.667	9.16	22.88	.717	9.85	24.59	.767	10.54	26.31
.618	8.49	21.20	.668	9.18	22.91	.718	9.86	24.63	.768	10.55	26.34
.619	8.50	21.23	.669	9.19	22.95	.719	9.88	24.66	.769	10.56	26.38
.620	8.52	21.26	.670	9.20	22.98	.720	9.89	24.70	.770	10.58	26.41
.621	8.53	21.30	.671	9.22	23.02	.721	9.91	24.73	.771	10.59	26.45
.622	8.55	21.33	.672	9.23	23.05	.722	9.92	24.76	.772	10.61	26.48
.623	8.56	21.37	.673	9.25	23.08	.723	9.93	24.80	.773	10.62	26.51
.624	8.57	21.40	.674	9.26	23.12	.724	9.95	24.83	.774	10.63	26.55
.625	8.59	21.44	.675	9.27	23.15	.725	9.96	24.87	.775	10.65	26.58
.626	8.60	21.47	.676	9.29	23.19	.726	9.97	24.90	.776	10.66	26.62
.627	8.61	21.51	.677	9.30	23.22	.727	9.99	24.94	.777	10.67	26.65
.628	8.63	21.54	.678	9.31	23.26	.728	10.00	24.97	.778	10.69	26.69
.629	8.64	21.57	.679	9.33	23.29	.729	10.02	25.00	.779	10.70	26.72
.630	8.65	21.61	.680	9.34	23.32	.730	10.03	25.04	.780	10.72	26.75
.631	8.67	21.64	.681	9.36	23.36	.731	10.04	25.07	.781	10.73	26.79
.632	8.68	21.68	.682	9.37	23.39	.732	10.06	25.11	.782	10.74	26.82
.633	8.70	21.71	.683	9.38	23.43	.733	10.07	25.14	.783	10.76	26.86
.634	8.71	21.75	.684	9.40	23.46	.734	10.08	25.18	.784	10.77	26.89
.635	8.72	21.78	.685	9.41	23.50	.735	10.10	25.21	.785	10.78	26.93
.636	8.74	21.81	.686	9.42	23.53	.736	10.11	25.24	.786	10.80	26.96
.637	8.75	21.85	.687	9.44	23.56	.737	10.12	25.28	.787	10.81	26.99
.638	8.76	21.88	.688	9.45	23.60	.738	10.14	25.31	.788	10.83	27.03
.639	8.78	21.92	.689	9.47	23.63	.739	10.15	25.35	.789	10.84	27.06
.640	8.79	21.95	.690	9.48	23.67	.740	10.17	25.38	.790	10.85	27.10
.641	8.81	21.99	.691	9.49	23.70	.741	10.18	25.42	.791	10.87	27.13
.642	8.82	22.02	.692	9.51	23.74	.742	10.19	25.45	.792	10.88	27.17
.643	8.83	22.05	.693	9.52	23.77	.743	10.21	25.48	.793	10.89	27.20
.644	8.85	22.09	.694	9.53	23.80	.744	10.22	25.52	.794	10.91	27.23
.645	8.86	22.12	.695	9.55	23.84	.745	10.23	25.55	.795	10.92	27.27
.646	8.87	22.16	.696	9.56	23.87	.746	10.25	25.59	.796	10.94	27.30
.647	8.89	22.19	.697	9.58	23.91	.747	10.26	25.62	.797	10.95	27.34
.648	8.90	22.23	.698	9.59	23.94	.748	10.28	25.66	.798	10.96	27.37
.649	8.92	22.26	.699	9.60	23.98	.749	10.29	25.69	.799	10.98	27.41

## Gram .800—.999 (Basis 1 Grm)

Grm.	%	%	Grm.	%	%	Grm.	%	%	Grm.	%	%
BaSO <sub>4</sub>	S	SO <sub>3</sub>	BaSO <sub>4</sub>	S	SO <sub>3</sub>	BaSO <sub>4</sub>	S	SO <sub>3</sub>	BaSO <sub>4</sub>	S	SO <sub>3</sub>
.800	10.99	27.44	.850	11.68	29.16	.900	12.36	30.87	.950	13.05	32.59
.801	11.00	27.47	.851	11.69	29.19	.901	12.38	30.90	.951	13.06	32.62
.802	11.02	27.51	.852	11.70	29.22	.902	12.39	30.94	.952	13.08	32.65
.803	11.03	27.54	.853	11.72	29.26	.903	12.41	30.97	.953	13.09	32.69
.804	11.05	27.58	.854	11.73	29.29	.904	12.42	31.01	.954	13.11	32.72
.805	11.06	27.61	.855	11.75	29.33	.905	12.43	31.04	.955	13.12	32.76
.806	11.07	27.65	.856	11.76	29.36	.906	12.45	31.08	.956	13.13	32.79
.807	11.09	27.68	.857	11.77	29.40	.907	12.46	31.11	.957	13.15	32.83
.808	11.10	27.71	.858	11.79	29.43	.908	12.47	31.14	.958	13.16	32.86
.809	11.11	27.75	.859	11.80	29.46	.909	12.49	31.18	.959	13.17	32.89
.810	11.13	27.78	.860	11.81	29.50	.910	12.50	31.21	.960	13.19	32.93
.811	11.14	27.82	.861	11.83	29.53	.911	12.52	31.25	.961	13.20	32.96
.812	11.16	27.85	.862	11.84	29.57	.912	12.53	31.28	.962	13.22	33.00
.813	11.17	27.89	.863	11.86	29.60	.913	12.54	31.32	.963	13.23	33.03
.814	11.18	27.92	.864	11.87	29.64	.914	12.56	31.35	.964	13.24	33.07
.815	11.20	27.95	.865	11.88	29.67	.915	12.57	31.38	.965	13.26	33.10
.816	11.21	27.99	.866	11.90	29.70	.916	12.58	31.42	.966	13.27	33.13
.817	11.22	28.02	.867	11.91	29.74	.917	12.60	31.45	.967	13.28	33.17
.818	11.24	28.06	.868	11.92	29.77	.918	12.61	31.49	.968	13.30	33.20
.819	11.25	28.09	.869	11.94	29.81	.919	12.63	31.52	.969	13.31	33.24
.820	11.27	28.13	.870	11.95	29.84	.920	12.64	31.56	.970	13.33	33.27
.821	11.28	28.16	.871	11.97	29.88	.921	12.65	31.59	.971	13.34	33.31
.822	11.29	28.19	.872	11.98	29.91	.922	12.67	31.62	.972	13.35	33.34
.823	11.31	28.23	.873	11.99	29.94	.923	12.68	31.66	.973	13.37	33.37
.824	11.32	28.26	.874	12.01	29.98	.924	12.69	31.69	.974	13.38	33.41
.825	11.33	28.30	.875	12.02	30.01	.925	12.71	31.73	.975	13.39	33.44
.826	11.35	28.33	.876	12.03	30.05	.926	12.72	31.76	.976	13.41	33.48
.827	11.36	28.37	.877	12.05	30.08	.927	12.74	31.80	.977	13.42	33.51
.828	11.38	28.40	.878	12.06	30.12	.928	12.75	31.83	.978	13.44	33.55
.829	11.39	28.43	.879	12.08	30.15	.929	12.76	31.86	.979	13.45	33.58
.830	11.40	28.47	.880	12.09	30.18	.930	12.78	31.90	.980	13.46	33.61
.831	11.42	28.50	.881	12.10	30.22	.931	12.79	31.93	.981	13.48	33.65
.832	11.43	28.54	.882	12.12	30.25	.932	12.80	31.97	.982	13.49	33.68
.833	11.44	28.57	.883	12.13	30.29	.933	12.82	32.00	.983	13.50	33.72
.834	11.46	28.61	.884	12.14	30.32	.934	12.83	32.04	.984	13.52	33.75
.835	11.47	28.64	.885	12.16	30.36	.935	12.85	32.07	.985	13.53	33.79
.836	11.48	28.67	.886	12.17	30.39	.936	12.86	32.10	.986	13.55	33.82
.837	11.50	28.71	.887	12.19	30.42	.937	12.87	32.14	.987	13.56	33.85
.838	11.51	28.74	.888	12.20	30.46	.938	12.89	32.17	.988	13.57	33.89
.839	11.53	28.78	.889	12.21	30.49	.939	12.90	32.21	.989	13.59	33.92
.840	11.54	28.81	.890	12.23	30.53	.940	12.91	32.24	.990	13.60	33.96
.841	11.55	28.85	.891	12.24	30.56	.941	12.93	32.28	.991	13.61	33.99
.842	11.57	28.88	.892	12.25	30.60	.942	12.94	32.31	.992	13.63	34.03
.843	11.58	28.91	.893	12.27	30.63	.943	12.95	32.34	.993	13.64	34.06
.844	11.59	28.95	.894	12.28	30.66	.944	12.97	32.38	.994	13.66	34.09
.845	11.61	28.98	.895	12.30	30.70	.945	12.98	32.41	.995	13.67	34.13
.846	11.62	29.02	.896	12.31	30.73	.946	13.00	32.45	.996	13.68	34.16
.847	11.64	29.05	.897	12.32	30.77	.947	13.01	32.48	.997	13.70	34.20
.848	11.65	29.09	.898	12.34	30.80	.948	13.02	32.52	.998	13.71	34.23
.849	11.66	29.12	.899	12.35	30.84	.949	13.04	32.55	.999	13.72	34.27

## TABLE VII

### ALUMINA CONVERSION TABLE

This table is based on 1 gram of substance being used in analysis. The factor employed is 0.4185 from  $\text{AlPO}_4$  to  $\text{Al}_2\text{O}_3$ . The range of the table is to .2995 gm.  $\text{AlPO}_4$  equivalent to 12.53 per cent  $\text{Al}_2\text{O}_3$ .

## Gram .0000—.1495 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
AlPO <sub>4</sub> .	Al <sub>2</sub> O <sub>3</sub> .	AlPO <sub>4</sub> .	Al <sub>2</sub> O <sub>3</sub> .	AlPO <sub>4</sub> .	Al <sub>2</sub> O <sub>3</sub> .	AlPO <sub>4</sub> .	Al <sub>2</sub> O <sub>3</sub> .	AlPO <sub>4</sub> .	Al <sub>2</sub> O <sub>3</sub> .	AlPO <sub>4</sub> .	Al <sub>2</sub> O <sub>3</sub> .
.0000	.00	.0250	1.05	.0500	2.09	.0750	3.14	.1000	4.19	.1250	5.23
.0005	.02	.0255	1.07	.0505	2.11	.0755	3.16	.1005	4.21	.1255	5.25
.0010	.04	.0260	1.09	.0510	2.13	.0760	3.18	.1010	4.23	.1260	5.27
.0015	.06	.0265	1.11	.0515	2.16	.0765	3.20	.1015	4.25	.1265	5.29
.0020	.08	.0270	1.13	.0520	2.18	.0770	3.22	.1020	4.27	.1270	5.31
.0025	.10	.0275	1.15	.0525	2.20	.0775	3.24	.1025	4.29	.1275	5.34
.0030	.13	.0280	1.17	.0530	2.22	.0780	3.26	.1030	4.31	.1280	5.36
.0035	.15	.0285	1.19	.0535	2.24	.0785	3.28	.1035	4.33	.1285	5.38
.0040	.17	.0290	1.21	.0540	2.26	.0790	3.31	.1040	4.35	.1290	5.40
.0045	.19	.0295	1.23	.0545	2.28	.0795	3.33	.1045	4.37	.1295	5.42
.0050	.21	.0300	1.26	.0550	2.30	.0800	3.35	.1050	4.39	.1300	5.44
.0055	.23	.0305	1.28	.0555	2.32	.0805	3.37	.1055	4.42	.1305	5.46
.0060	.25	.0310	1.30	.0560	2.34	.0810	3.39	.1060	4.44	.1310	5.48
.0065	.27	.0315	1.32	.0565	2.36	.0815	3.41	.1065	4.46	.1315	5.50
.0070	.29	.0320	1.34	.0570	2.39	.0820	3.43	.1070	4.48	.1320	5.52
.0075	.31	.0325	1.36	.0575	2.41	.0825	3.45	.1075	4.50	.1325	5.55
.0080	.33	.0330	1.38	.0580	2.43	.0830	3.47	.1080	4.52	.1330	5.57
.0085	.36	.0335	1.40	.0585	2.45	.0835	3.49	.1085	4.54	.1335	5.59
.0090	.38	.0340	1.42	.0590	2.47	.0840	3.52	.1090	4.56	.1340	5.61
.0095	.40	.0345	1.44	.0595	2.49	.0845	3.54	.1095	4.58	.1345	5.63
.0100	.42	.0350	1.46	.0600	2.51	.0850	3.56	.1100	4.60	.1350	5.65
.0105	.44	.0355	1.49	.0605	2.53	.0855	3.58	.1105	4.62	.1355	5.67
.0110	.46	.0360	1.51	.0610	2.55	.0860	3.60	.1110	4.65	.1360	5.69
.0115	.48	.0365	1.53	.0615	2.57	.0865	3.62	.1115	4.67	.1365	5.71
.0120	.50	.0370	1.55	.0620	2.59	.0870	3.64	.1120	4.69	.1370	5.73
.0125	.52	.0375	1.57	.0625	2.62	.0875	3.66	.1125	4.71	.1375	5.76
.0130	.54	.0380	1.59	.0630	2.64	.0880	3.68	.1130	4.73	.1380	5.78
.0135	.56	.0385	1.61	.0635	2.66	.0885	3.70	.1135	4.75	.1385	5.80
.0140	.59	.0390	1.63	.0640	2.68	.0890	3.72	.1140	4.77	.1390	5.82
.0145	.61	.0395	1.65	.0645	2.70	.0895	3.75	.1145	4.79	.1395	5.84
.0150	.63	.0400	1.67	.0650	2.72	.0900	3.77	.1150	4.81	.1400	5.86
.0155	.65	.0405	1.69	.0655	2.74	.0905	3.79	.1155	4.83	.1405	5.88
.0160	.67	.0410	1.72	.0660	2.76	.0910	3.81	.1160	4.85	.1410	5.90
.0165	.69	.0415	1.74	.0665	2.78	.0915	3.83	.1165	4.87	.1415	5.92
.0170	.71	.0420	1.76	.0670	2.80	.0920	3.85	.1170	4.90	.1420	5.94
.0175	.73	.0425	1.78	.0675	2.82	.0925	3.87	.1175	4.92	.1425	5.96
.0180	.75	.0430	1.80	.0680	2.85	.0930	3.89	.1180	4.94	.1430	5.98
.0185	.77	.0435	1.82	.0685	2.87	.0935	3.91	.1185	4.96	.1435	6.01
.0190	.80	.0440	1.84	.0690	2.89	.0940	3.93	.1190	4.98	.1440	6.03
.0195	.82	.0445	1.86	.0695	2.91	.0945	3.95	.1195	5.00	.1445	6.05
.0200	.84	.0450	1.88	.0700	2.93	.0950	3.98	.1200	5.02	.1450	6.07
.0205	.86	.0455	1.90	.0705	2.95	.0955	4.00	.1205	5.04	.1455	6.09
.0210	.88	.0460	1.93	.0710	2.97	.0960	4.02	.1210	5.06	.1460	6.11
.0215	.90	.0465	1.95	.0715	2.99	.0965	4.04	.1215	5.08	.1465	6.13
.0220	.92	.0470	1.97	.0720	3.01	.0970	4.06	.1220	5.11	.1470	6.15
.0225	.94	.0475	1.99	.0725	3.03	.0975	4.08	.1225	5.13	.1475	6.17
.0230	.96	.0480	2.01	.0730	3.06	.0980	4.10	.1230	5.15	.1480	6.19
.0235	.98	.0485	2.03	.0735	3.08	.0985	4.12	.1235	5.17	.1485	6.21
.0240	1.00	.0490	2.05	.0740	3.10	.0990	4.14	.1240	5.19	.1490	6.24
.0245	1.03	.0495	2.07	.0745	3.12	.0995	4.16	.1245	5.21	.1495	6.26

## Gram .1500—.2995 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
AlPO <sub>4</sub>	Al <sub>2</sub> O <sub>3</sub>	AlPO <sub>4</sub>	Al <sub>2</sub> O <sub>3</sub>	AlPO <sub>4</sub>	Al <sub>2</sub> O <sub>3</sub>	AlPO <sub>4</sub>	Al <sub>2</sub> O <sub>3</sub>	AlPO <sub>4</sub>	Al <sub>2</sub> O <sub>3</sub>	AlPO <sub>4</sub>	Al <sub>2</sub> O <sub>3</sub>
.1500	6.28	.1750	7.32	.2000	8.37	.2250	9.42	.2500	10.46	.2750	11.51
.1505	6.30	.1755	7.35	.2005	8.39	.2255	9.44	.2505	10.48	.2755	11.53
.1510	6.32	.1760	7.37	.2010	8.41	.2260	9.46	.2510	10.50	.2760	11.55
.1515	6.34	.1765	7.39	.2015	8.43	.2265	9.48	.2515	10.53	.2765	11.57
.1520	6.36	.1770	7.41	.2020	8.45	.2270	9.50	.2520	10.55	.2770	11.59
.1525	6.38	.1775	7.43	.2025	8.47	.2275	9.52	.2525	10.57	.2775	11.61
.1530	6.40	.1780	7.45	.2030	8.50	.2280	9.54	.2530	10.59	.2780	11.63
.1535	6.42	.1785	7.47	.2035	8.52	.2285	9.56	.2535	10.61	.2785	11.66
.1540	6.44	.1790	7.49	.2040	8.54	.2290	9.58	.2540	10.63	.2790	11.68
.1545	6.47	.1795	7.51	.2045	8.56	.2295	9.60	.2545	10.65	.2795	11.70
.1550	6.49	.1800	7.53	.2050	8.58	.2300	9.63	.2550	10.67	.2800	11.72
.1555	6.51	.1805	7.55	.2055	8.60	.2305	9.65	.2555	10.69	.2805	11.74
.1560	6.53	.1810	7.57	.2060	8.62	.2310	9.67	.2560	10.71	.2810	11.76
.1565	6.55	.1815	7.60	.2065	8.64	.2315	9.69	.2565	10.73	.2815	11.78
.1570	6.57	.1820	7.62	.2070	8.66	.2320	9.71	.2570	10.76	.2820	11.80
.1575	6.59	.1825	7.64	.2075	8.68	.2325	9.73	.2575	10.78	.2825	11.82
.1580	6.61	.1830	7.66	.2080	8.70	.2330	9.75	.2580	10.80	.2830	11.84
.1585	6.63	.1835	7.68	.2085	8.73	.2335	9.77	.2585	10.82	.2835	11.86
.1590	6.65	.1840	7.70	.2090	8.75	.2340	9.79	.2590	10.84	.2840	11.89
.1595	6.68	.1845	7.72	.2095	8.77	.2345	9.81	.2595	10.86	.2845	11.91
.1600	6.70	.1850	7.74	.2100	8.79	.2350	9.83	.2600	10.88	.2850	11.93
.1605	6.72	.1855	7.76	.2105	8.81	.2355	9.85	.2605	10.90	.2855	11.95
.1610	6.74	.1860	7.78	.2110	8.83	.2360	9.88	.2610	10.92	.2860	11.97
.1615	6.76	.1865	7.80	.2115	8.85	.2365	9.90	.2615	10.94	.2865	11.99
.1620	6.78	.1870	7.83	.2120	8.87	.2370	9.92	.2620	10.96	.2870	12.01
.1625	6.80	.1875	7.85	.2125	8.89	.2375	9.94	.2625	10.99	.2875	12.03
.1630	6.82	.1880	7.87	.2130	8.91	.2380	9.96	.2630	11.01	.2880	12.05
.1635	6.84	.1885	7.89	.2135	8.93	.2385	9.98	.2635	11.03	.2885	12.07
.1640	6.86	.1890	7.91	.2140	8.96	.2390	10.00	.2640	11.05	.2890	12.09
.1645	6.88	.1895	7.93	.2145	8.98	.2395	10.02	.2645	11.07	.2895	12.12
.1650	6.91	.1900	7.95	.2150	9.00	.2400	10.04	.2650	11.09	.2900	12.14
.1655	6.93	.1905	7.97	.2155	9.02	.2405	10.07	.2655	11.11	.2905	12.16
.1660	6.95	.1910	7.99	.2160	9.04	.2410	10.09	.2660	11.13	.2910	12.18
.1665	6.97	.1915	8.01	.2165	9.06	.2415	10.11	.2665	11.15	.2915	12.20
.1670	6.99	.1920	8.04	.2170	9.08	.2420	10.13	.2670	11.17	.2920	12.22
.1675	7.01	.1925	8.06	.2175	9.10	.2425	10.15	.2675	11.19	.2925	12.24
.1680	7.03	.1930	8.08	.2180	9.12	.2430	10.17	.2680	11.22	.2930	12.26
.1685	7.05	.1935	8.10	.2185	9.14	.2435	10.19	.2685	11.24	.2935	12.28
.1690	7.07	.1940	8.12	.2190	9.17	.2440	10.21	.2690	11.26	.2940	12.30
.1695	7.09	.1945	8.14	.2195	9.19	.2445	10.23	.2695	11.28	.2945	12.32
.1700	7.11	.1950	8.16	.2200	9.21	.2450	10.25	.2700	11.30	.2950	12.35
.1705	7.14	.1955	8.18	.2205	9.23	.2455	10.27	.2705	11.32	.2955	12.37
.1710	7.16	.1960	8.20	.2210	9.25	.2460	10.30	.2710	11.34	.2960	12.39
.1715	7.18	.1965	8.22	.2215	9.27	.2465	10.32	.2715	11.36	.2965	12.41
.1720	7.20	.1970	8.24	.2220	9.29	.2470	10.34	.2720	11.38	.2970	12.43
.1725	7.22	.1975	8.27	.2225	9.31	.2475	10.36	.2725	11.41	.2975	12.45
.1730	7.24	.1980	8.29	.2230	9.33	.2480	10.38	.2730	11.43	.2980	12.47
.1735	7.26	.1985	8.31	.2235	9.35	.2485	10.40	.2735	11.45	.2985	12.49
.1740	7.28	.1990	8.33	.2240	9.37	.2490	10.42	.2740	11.47	.2990	12.51
.1745	7.30	.1995	8.35	.2245	9.40	.2495	10.44	.2745	11.49	.2995	12.53



### TABLE VIII

#### PHOSPHORUS AND MAGNESIA TABLE

This table is more particularly for iron work where small percentages of P are found. It is calculated on the basis of 10 grams of substance and extends up to 0.554 P with factor of 0.2785. The table also includes figures for MgO from  $\text{Mg}_2\text{P}_2\text{O}_7$ , with factor of 0.36218, and is likewise based on 10 grams of substance. By moving the decimal one place to the left, both the per cent of P and MgO can be read off on the basis of 1 gram of substance being used.

## Gram .000 —.149 (Basis 10 Grms.)

Grm.	%	%	%	Grm.	%	%	%	Grm.	%	%	%
Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P.	P <sub>2</sub> O <sub>5</sub> .	MgO.	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P.	P <sub>2</sub> O <sub>5</sub> .	MgO.	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub> .	P.	P <sub>2</sub> O <sub>5</sub> .	MgO.
.000	.000	.000	.000	.050	.139	.319	.181	.100	.279	.638	.362
.001	.003	.006	.004	.051	.142	.325	.185	.101	.281	.644	.366
.002	.006	.013	.007	.052	.145	.332	.188	.102	.284	.651	.369
.003	.008	.019	.011	.053	.148	.338	.192	.103	.287	.657	.373
.004	.011	.026	.014	.054	.150	.344	.196	.104	.290	.663	.377
.005	.014	.032	.018	.055	.153	.351	.199	.105	.292	.670	.380
.006	.017	.038	.022	.056	.156	.357	.203	.106	.295	.676	.384
.007	.019	.045	.025	.057	.159	.364	.206	.107	.298	.682	.388
.008	.022	.051	.029	.058	.162	.370	.210	.108	.301	.689	.391
.009	.025	.057	.033	.059	.164	.376	.214	.109	.304	.695	.395
.010	.028	.064	.036	.060	.167	.383	.217	.110	.306	.702	.398
.011	.031	.070	.040	.061	.170	.389	.221	.111	.309	.708	.402
.012	.033	.077	.043	.062	.173	.395	.225	.112	.312	.714	.406
.013	.036	.083	.047	.063	.175	.402	.228	.113	.315	.721	.409
.014	.039	.089	.051	.064	.178	.408	.232	.114	.317	.727	.413
.015	.042	.096	.054	.065	.181	.415	.235	.115	.320	.733	.417
.016	.045	.102	.058	.066	.184	.421	.239	.116	.323	.740	.420
.017	.047	.108	.062	.067	.187	.427	.243	.117	.326	.746	.424
.018	.050	.115	.065	.068	.189	.434	.246	.118	.329	.753	.427
.019	.053	.121	.069	.069	.192	.440	.250	.119	.331	.759	.431
.020	.056	.128	.072	.070	.195	.446	.254	.120	.334	.765	.435
.021	.058	.134	.076	.071	.198	.453	.257	.121	.337	.772	.438
.022	.061	.140	.080	.072	.201	.459	.261	.122	.340	.778	.442
.023	.064	.147	.083	.073	.203	.466	.264	.123	.343	.784	.445
.024	.067	.153	.087	.074	.206	.472	.268	.124	.345	.791	.449
.025	.070	.159	.091	.075	.209	.478	.272	.125	.348	.797	.453
.026	.072	.166	.094	.076	.212	.485	.275	.126	.351	.804	.456
.027	.075	.172	.098	.077	.214	.491	.279	.127	.354	.810	.460
.028	.078	.179	.101	.078	.217	.497	.283	.128	.356	.816	.464
.029	.081	.185	.105	.079	.220	.504	.286	.129	.359	.823	.467
.030	.084	.191	.109	.080	.223	.510	.290	.130	.362	.829	.471
.031	.086	.198	.112	.081	.226	.517	.293	.131	.365	.836	.474
.032	.089	.204	.116	.082	.228	.523	.297	.132	.368	.842	.478
.033	.092	.210	.120	.083	.231	.529	.301	.133	.370	.848	.482
.034	.095	.217	.123	.084	.234	.536	.304	.134	.373	.855	.485
.035	.097	.223	.127	.085	.237	.542	.308	.135	.376	.861	.489
.036	.100	.230	.130	.086	.240	.549	.311	.136	.379	.867	.493
.037	.103	.236	.134	.087	.242	.555	.315	.137	.382	.874	.496
.038	.106	.242	.138	.088	.245	.561	.319	.138	.384	.880	.500
.039	.109	.249	.141	.089	.248	.568	.322	.139	.387	.887	.503
.040	.111	.255	.145	.090	.251	.574	.326	.140	.390	.893	.507
.041	.114	.261	.148	.091	.253	.580	.330	.141	.393	.899	.511
.042	.117	.268	.152	.092	.256	.587	.333	.142	.395	.906	.514
.043	.120	.274	.156	.093	.259	.593	.337	.143	.398	.912	.518
.044	.123	.281	.159	.094	.262	.600	.340	.144	.401	.918	.522
.045	.125	.287	.163	.095	.265	.606	.344	.145	.404	.925	.525
.046	.128	.293	.167	.096	.267	.612	.348	.146	.407	.931	.529
.047	.131	.300	.170	.097	.270	.619	.351	.147	.409	.938	.532
.048	.134	.306	.174	.098	.273	.625	.355	.148	.412	.944	.536
.049	.136	.313	.177	.099	.276	.631	.359	.149	.415	.950	.540







## TABLE IX

### SILICON CONVERSION TABLE

This table is used for iron work. The factor is 0.4693 from  $\text{SiO}_2$  to Si, and the table extends to 6.99 per cent Si, which is about the extreme limit in iron analysis. The basis is 1 gram of substance used.

## Gram .000—.149 (Basis 1 Grm.)

Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%	Grm.	%
SiO <sub>2</sub>	Si	SiO <sub>2</sub>	Si	SiO <sub>2</sub>	Si	SiO <sub>2</sub>	Si	SiO <sub>2</sub>	Si	SiO <sub>2</sub>	Si
.000	.00	.050	2.35	.100	4.69						
.001	.05	.051	2.39	.101	4.74						
.002	.09	.052	2.44	.102	4.79						
.003	.14	.053	2.49	.103	4.83						
.004	.19	.054	2.53	.104	4.88						
.005	.23	.055	2.58	.105	4.93						
.006	.28	.056	2.63	.106	4.97						
.007	.33	.057	2.68	.107	5.02						
.008	.38	.058	2.72	.108	5.07						
.009	.42	.059	2.77	.109	5.12						
.010	.47	.060	2.82	.110	5.16						
.011	.52	.061	2.86	.111	5.21						
.012	.56	.062	2.91	.112	5.26						
.013	.61	.063	2.96	.113	5.30						
.014	.66	.064	3.00	.114	5.35						
.015	.70	.065	3.05	.115	5.40						
.016	.75	.066	3.10	.116	5.44						
.017	.80	.067	3.14	.117	5.49						
.018	.84	.068	3.19	.118	5.54						
.019	.89	.069	3.24	.119	5.58						
.020	.94	.070	3.29	.120	5.63						
.021	.99	.071	3.33	.121	5.68						
.022	1.03	.072	3.38	.122	5.73						
.023	1.08	.073	3.43	.123	5.77						
.024	1.13	.074	3.47	.124	5.82						
.025	1.17	.075	3.52	.125	5.87						
.026	1.22	.076	3.57	.126	5.91						
.027	1.27	.077	3.61	.127	5.96						
.028	1.31	.078	3.66	.128	6.01						
.029	1.36	.079	3.71	.129	6.05						
.030	1.41	.080	3.75	.130	6.10						
.031	1.45	.081	3.80	.131	6.15						
.032	1.50	.082	3.85	.132	6.19						
.033	1.55	.083	3.90	.133	6.24						
.034	1.60	.084	3.94	.134	6.29						
.035	1.64	.085	3.99	.135	6.34						
.036	1.69	.086	4.04	.136	6.38						
.037	1.74	.087	4.08	.137	6.43						
.038	1.78	.088	4.13	.138	6.48						
.039	1.83	.089	4.18	.139	6.52						
.040	1.88	.090	4.22	.140	6.57						
.041	1.92	.091	4.27	.141	6.62						
.042	1.97	.092	4.32	.142	6.66						
.043	2.02	.093	4.36	.143	6.71						
.044	2.06	.094	4.41	.144	6.76						
.045	2.11	.095	4.46	.145	6.80						
.046	2.16	.096	4.51	.146	6.85						
.047	2.21	.097	4.55	.147	6.90						
.048	2.25	.098	4.60	.148	6.95						
.049	2.30	.099	4.65	.149	6.99						

TABLE X

MANGANESE CONVERSION TABLE

This table is based upon the use of Volhard's method\* when  $\frac{1}{2}$  gram of substance is finally used in analysis. The factor value of Mn is 0.29505 in Permanganate Potash, and double this when  $\frac{1}{2}$  gram is used, as in the table.

The table is also constructed on the basis of different strengths of standard permanganate solutions, varying from 0.0030 to 0.0069 gm. Fe per cc. of  $\text{KMnO}_4$ . The c.c. value in Mn, therefore, can be easily read opposite the corresponding solution strength. For example: if the standard  $\text{KMnO}_4$  solution is equivalent to 0.0050 Fe per cc., the Mn equivalent is 0.295 per cc. If 3.30 cc. of the permanganate is required, then the per cent of Mn is  $3.30 \times 0.295$ , or 0.97 per cent Mn

MANGANESE TABLE

(Basis  $\frac{1}{2}$  Grm.)

$\text{KMnO}_4$ Sol. Fe per cc.	Mn Value % per cc.	$\text{KMnO}_4$ Sol. Fe per cc.	Mn Value % per cc.
.0030	.177	.0050	.295
.0031	.183	.0051	.301
.0032	.189	.0052	.307
.0033	.195	.0053	.303
.0034	.201	.0054	.309
.0035	.207	.0055	.315
.0036	.212	.0056	.320
.0037	.218	.0057	.326
.0038	.224	.0058	.332
.0039	.230	.0059	.338
.0040	.236	.0060	.354
.0041	.242	.0061	.360
.0042	.248	.0062	.366
.0043	.254	.0063	.372
.0044	.260	.0064	.378
.0045	.266	.0065	.384
.0046	.271	.0066	.389
.0047	.277	.0067	.396
.0048	.283	.0068	.401
.0049	.289	.0069	.407

\* See Blair's Chemical Analysis of Iron, 5th Edn., p. 116.



**TABLE XI.**  
**International Atomic Weights, 1909**

Symbol	Atomic Weight	Symbol	Atomic Weight
Aluminum.....Al	27.1	Molybdenum.....Mo	96.0
Antimony.....Sb	120.2	Neodymium.....Nd	144.3
Argon.....A	39.9	Neon.....Ne	20.0
Arsenic.....As	75.0	Nickel.....Ni	58.68
Barium.....Ba	137.37	Nitrogen.....N	14.01
Bismuth.....Bi	208.0	Osmium.....Os	190.9
Boron.....B	11.0	Oxygen.....O	16.0
Bromine.....Br	79.92	Palladium.....Pd	106.7
Cadmium.....Cd	112.40	Phosphorus.....P	31.0
Caesium.....Cs	132.81	Platinum.....Pt	195.0
Calcium.....Ca	40.09	Potassium.....K	39.10
Carbon.....C	12.00	Praseodymium.....Pr	140.6
Cerium.....Ce	140.25	Radium.....Ra	226.4
Chlorine.....Cl	35.46	Rhodium.....Rh	102.9
Chromium.....Cr	52.1	Rubidium.....Rb	85.45
Cobalt.....Co	58.97	Ruthenium.....Ru	101.7
Columbium.....Cb	93.5	Samarium.....Sa	150.4
Copper.....Cu	63.57	Scandium.....Sc	44.1
Dysprosium.....Dy	162.5	Selenium.....Se	79.2
Erbium.....Er	167.4	Silicon.....Si	28.3
Europium.....Eu	152.0	Silver.....Ag	107.88
Fluorine.....F	19.0	Sodium.....Na	23.00
Gadolinium.....Gd	157.3	Strontium.....Sr	87.62
Gallium.....Ga	69.9	Sulphur.....S	32.07
Germanium.....Ge	72.5	Tantalum.....Ta	181.0
Glucinum.....Gl	9.1	Tellurium.....Te	127.5
Gold.....Au	197.2	Terbium.....Tb	159.2
Helium.....He	4.0	Thallium.....Tl	204.0
Hydrogen.....H	1.008	Thorium.....Th	232.42
Indium.....In	114.8	Thulium.....Tm	168.5
Iodine.....I	126.92	Tin.....Sn	119.0
Iridium.....Ir	193.1	Titanium.....Ti	48.1
Iron.....Fe	55.85	Tungsten.....W	184.0
Krypton.....Kr	81.8	Uranium.....U	238.5
Lanthanum.....La	139.0	Vanadium.....V	51.2
Lead.....Pb	207.10	Xenon.....Xe	128.0
Lithium.....Li	7.0	Ytterbium	
Lutecium.....Lu	174.0	(Neoytterbium)....Yb	172.0
Magnesium.....Mg	24.32	Yttrium.....Y	89.0
Manganese.....Mn	54.93	Zinc.....Zn	65.7
Mercury.....Hg	200.0	Zirconium.....Zr	90.6

\*Reported by International Committee: F. W. Clarke, W. Ostwald, T. E. Thorpe, and G. Urbain. Journ. Am. Chem. Soc. **31**, 5, (1909)





TABLE XII.  
Conversion Factors (Atomic weights, 1909)

Sought or Found		Multiply by		Sought or Found		Multiply by	
A	B	A to B	B to A	A	B	A to B	B to A
Al <sub>2</sub> O <sub>3</sub>	AlPO <sub>4</sub>	2.3894	.4185	AgCl	Cl	.2474	4.0423
P <sub>2</sub> O <sub>5</sub>	AlPO <sub>4</sub>	1.7197	.5815		HCl	.2545	3.9306
N	NH <sub>3</sub>	1.2158	.8225	KCl	Cl	.4755	2.1027
	NH <sub>4</sub> Cl	3.8188	.2619	MgCl <sub>2</sub>	Cl	.7446	1.3429
	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	4.7164	.2120	MnO <sub>2</sub>	Cl	.8158	1.2257
NH <sub>3</sub>	(NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub>	2.8204	.3546	NaCl	Cl	.6066	1.6486
	(NH <sub>4</sub> )NO <sub>3</sub>	4.6995	.2128	PbCrO <sub>4</sub>	Cr	.1612	6.2035
	(NH <sub>4</sub> )OH	2.0576	.4860	CoSO <sub>4</sub>	Co	.3804	2.6291
	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	3.8791	.2578	Cu	CuO	1.2517	.7989
NH <sub>4</sub> Cl	NH <sub>3</sub>	.3184	3.1409	Cu <sub>2</sub> S	Cu	.7986	1.2522
(NH <sub>4</sub> ) <sub>2</sub> PtCl <sub>6</sub>	NH <sub>3</sub>	.0768	13.0282	CaF <sub>2</sub>	F	.4866	2.0550
SO <sub>3</sub>	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	1.6505	.6059	CaSO <sub>4</sub>	HF	.2946	3.4026
Sb	Sb <sub>2</sub> O <sub>3</sub>	1.1997	.8336	Au	AuCl <sub>3</sub>	1.5394	.6496
Sb <sub>2</sub> O <sub>3</sub>	Sb <sub>2</sub> S <sub>5</sub>	1.3896	.7197	H <sub>2</sub> O	H	.1119	8.9364
As <sub>2</sub> O <sub>3</sub>	As	.7576	1.3200	AgI	HI	.5448	1.8354
As <sub>2</sub> S <sub>3</sub>	As <sub>2</sub> O <sub>3</sub>	.8042	1.2435	Fe	FeO	1.2865	.7773
BaCO <sub>3</sub>	BaCl <sub>2</sub>	1.0553	.9476		Fe <sub>2</sub> O <sub>3</sub>	1.4297	.6994
	BaO	.7771	1.2869	FeO	FeCO <sub>3</sub>	1.6124	.6202
BaSO <sub>4</sub>	BaCl <sub>2</sub>	.8923	1.1208		Fe <sub>2</sub> O <sub>3</sub>	1.1113	.8998
CO <sub>2</sub>	BaCO <sub>3</sub>	4.4857	.2229	Fe <sub>2</sub> O <sub>3</sub>	Fe	.6994	1.4297
Bi <sub>2</sub> S <sub>3</sub>	Bi	.8122	1.2313		FeO	.8998	1.1113
B <sub>2</sub> O <sub>3</sub>	H <sub>3</sub> BO <sub>3</sub>	1.7721	.5643		Fe <sub>3</sub> O <sub>4</sub>	.9666	1.0345
AgBr	Br	.4256	2.3498		FeSO <sub>4</sub>	1.9026	.5256
CdS	Cd	.7780	1.2853		FePO <sub>4</sub>	1.8892	.5293
CaCO <sub>3</sub>	Ca	.4004	2.4966	FeS	Fe	.6352	1.5742
	CaO	.5604	1.7845	PbO	PbCO <sub>3</sub>	1.1972	.8353
	CaSO <sub>4</sub>	1.3603	.7350	PbSO <sub>4</sub>	Pb <sub>3</sub> O <sub>4</sub>	.7535	1.3272
CaO	CaCO <sub>3</sub>	1.7845	.5604	PbS	Pb	.8659	1.1549
	CaSO <sub>4</sub>	2.4275	.4119		PbO	.9328	1.0720
	CaSO <sub>4</sub> ·2H <sub>2</sub> O	3.0699	.3257	CO <sub>2</sub>	Li <sub>2</sub> CO <sub>3</sub>	1.6818	.5946
Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	CaO	.5423	1.8439	Li <sub>2</sub> CO <sub>3</sub>	Li	.1892	5.2857
CaSO <sub>4</sub>	CaCO <sub>3</sub>	.7350	1.3603	CO <sub>2</sub>	MgCO <sub>3</sub>	1.9164	.5218
	CaF <sub>2</sub>	.5735	1.7436	Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub>	MgO	.3622	2.7609
	CaO	.4119	2.4275	MgSO <sub>4</sub>	MgO	.3349	2.9859
CO <sub>2</sub>	CaCO <sub>3</sub>	2.2748	.4396	SO <sub>3</sub>	MgSO <sub>4</sub>	1.5036	.6651
Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub>	Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	1.3936	.7176	CO <sub>2</sub>	MnCO <sub>3</sub>	2.6123	.3828
(NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub>				Mn	MnCO <sub>3</sub>	2.0923	.4779
12MgO	Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	.0826	12.0999		MnO	1.2913	.7744
P <sub>2</sub> O <sub>5</sub>	Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	2.1850	.4577	Mn <sub>3</sub> O <sub>4</sub>	MnO	.9301	1.0751
SO <sub>3</sub>	CaSO <sub>4</sub>	1.7005	.5881		Mn <sub>2</sub> O <sub>3</sub>	1.0356	.9662
BaCO <sub>3</sub>	CO <sub>2</sub>	.2229	4.4857	MnS	Mn	.6314	1.5838
CO <sub>2</sub>	CaCO <sub>3</sub>	2.2748	.4396		MnO	.8153	1.2266
	MgCO <sub>3</sub>	1.9164	.5218	SO <sub>3</sub>	MnSO <sub>4</sub>	1.8858	.5303
	MnCO <sub>3</sub>	2.6123	.3828	HgCl	HgCl <sub>2</sub>	1.1506	.8691
	Na <sub>2</sub> CO <sub>3</sub>	2.4091	.4151		HgS	.9856	1.0146

Sought or Found		Multiply by		Sought or Found		Multiply by	
A	B	A to B	B to A	A	B	A to B	B to A
HgS	HgO	.9308	1.0744	K <sub>2</sub> PtCl <sub>6</sub>	K	.1609	6.2143
MoO <sub>3</sub>	Mo	.6667	1.5000		KCl	.3069	3.2589
NiSO <sub>4</sub>	Ni	.3792	2.6372		KNO <sub>3</sub>	.4161	2.4031
NaNO <sub>3</sub>	N	.1648	6.0678		K <sub>2</sub> O	.1938	5.1588
NH <sub>3</sub>	HNO <sub>3</sub>	3.7016	.2701		K <sub>2</sub> SO <sub>4</sub>	.3586	2.7885
	N	.8225	1.2158	K <sub>2</sub> SO <sub>4</sub>	KCl	.8557	1.1687
NH <sub>4</sub> Cl	N	.2619	3.8188		KNO <sub>3</sub>	1.1604	.8618
(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>	N	.2120	4.7164		K <sub>2</sub> O	.5405	1.8500
AlPO <sub>4</sub>	P <sub>2</sub> O <sub>5</sub>	.5815	1.7197	SiO <sub>2</sub>	Si	.4693	2.1307
Ca <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	.4577	2.1850		SiF <sub>4</sub>	1.7297	.5781
FePO <sub>4</sub>	P <sub>2</sub> O <sub>5</sub>	.4707	2.1246	Ag	AgNO <sub>3</sub>	1.5748	.6350
Mg <sub>2</sub> P <sub>2</sub> O <sub>7</sub>	P	.2785	3.5910	AgCl	Ag	.7526	1.3287
	P <sub>2</sub> O <sub>5</sub>	.6378	1.5679	Cl	AgCl	4.0423	.2474
(NH <sub>4</sub> ) <sub>3</sub> PO <sub>4</sub>				AgI	NaI	.6385	1.5662
(MoO <sub>3</sub> ) <sub>12</sub>	P <sub>2</sub> O <sub>5</sub>	.0378	26.4384	Br	NaBr	1.2878	.7765
P <sub>2</sub> O <sub>5</sub>	P	.4366	2.2903	Cl	NaCl	1.6486	.6066
U <sub>2</sub> P <sub>2</sub> O <sub>11</sub>	P <sub>2</sub> O <sub>5</sub>	.1986	5.0352	CO <sub>2</sub>	Na <sub>2</sub> CO <sub>3</sub>	2.4091	.4151
K <sub>2</sub> PtCl <sub>6</sub>	Pt	.4013	2.4897	NaBr	Na	.2235	4.4748
	PtCl <sub>4</sub>	.6931	1.4427	NaCl	N	.3934	2.5417
Pt	PtCl <sub>4</sub>	1.7274	.5789		Na <sub>2</sub> O	.5303	1.8855
AgI	KI	.7071	1.4143	Na <sub>2</sub> CO <sub>3</sub>	Na <sub>2</sub> O	.5849	1.7097
Br	KBr	1.4892	.6715	NaNO <sub>3</sub>	Na <sub>2</sub> O	.3647	2.7423
Cl	KCl	2.1027	.4755	N	NaN <sub>3</sub>	6.0678	.1648
K	K <sub>2</sub> O	1.2046	.8301	NH <sub>3</sub>	NaN <sub>3</sub>	4.9906	.2004
KCl	K	.5244	1.9069	P <sub>2</sub> O <sub>5</sub>	Na <sub>2</sub> HPO <sub>4</sub>	2.0001	.5000
	KNO <sub>3</sub>	1.3561	.7374	SO <sub>3</sub>	Na <sub>2</sub> SO <sub>4</sub>	1.7743	.5636
	K <sub>2</sub> O	.6317	1.5830	CO <sub>2</sub>	SrCO <sub>3</sub>	3.3550	.2981
	K <sub>2</sub> SO <sub>4</sub>	1.1687	.8557	BaSO <sub>4</sub>	S	.1374	7.2791
KOH	K <sub>2</sub> CO <sub>3</sub>	1.2316	.8112		SO <sub>3</sub>	.3430	2.9154
	K <sub>2</sub> O	.8395	1.1912		H <sub>2</sub> SO <sub>4</sub>	.4202	2.3800
K <sub>2</sub> O	K	.8301	1.2046	SO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	1.2250	.8163
	K <sub>2</sub> CO <sub>3</sub>	1.4671	.6816	Sn	SnO <sub>2</sub>	1.2689	.7881
	KNO <sub>3</sub>	2.1467	.4658	Zn	ZnO	1.2435	.8042
	K <sub>2</sub> SO <sub>4</sub>	1.8500	.5405	ZnO	ZnCO <sub>3</sub>	1.5386	.6500

TABLE XIII.

Metric System of Weights and Measures

1 Meter = 39.37079 inches.      1 Gram = 15.43235 grains.

Legal standard in U. S. Law } 1 Meter = 39.37 inches.  
of July 28, 1866

*Avoirdupois Weight*

		Grams
Dr.	[16]*	1.7718
Oz.	[16]	28.3495
Lb.	[14]	453.5924
St.	[ 2]	6350.2936
Qr.	[ 4]	12750.5872
Cwt.	[20]	50802.3488
Net ton		1016046.9260
Gross Ton		1137972.6131

*Troy Weight*

		Grams
Grainz	[24]	.0648
Dwt.	[20]	1.5552
Oz.	[12]	31.1035
Lb.		373.2419

*Measures of Distance*

		Meters
In.	[12]	0.02539954
Ft.	[ 3]	0.30479449
Yd.	[220]	0.91438347
Furlong	[ 8]	201.1644
Mile		1609.3149

*Apothecaries Weight*

		Grams
Grain	[20]	0.0648
Scruple	[ 3]	1.2960
Dr.	[ 8]	3.8879
Oz.	[12]	31.1035
Lb.		373.2419

*Measures of Capacity*

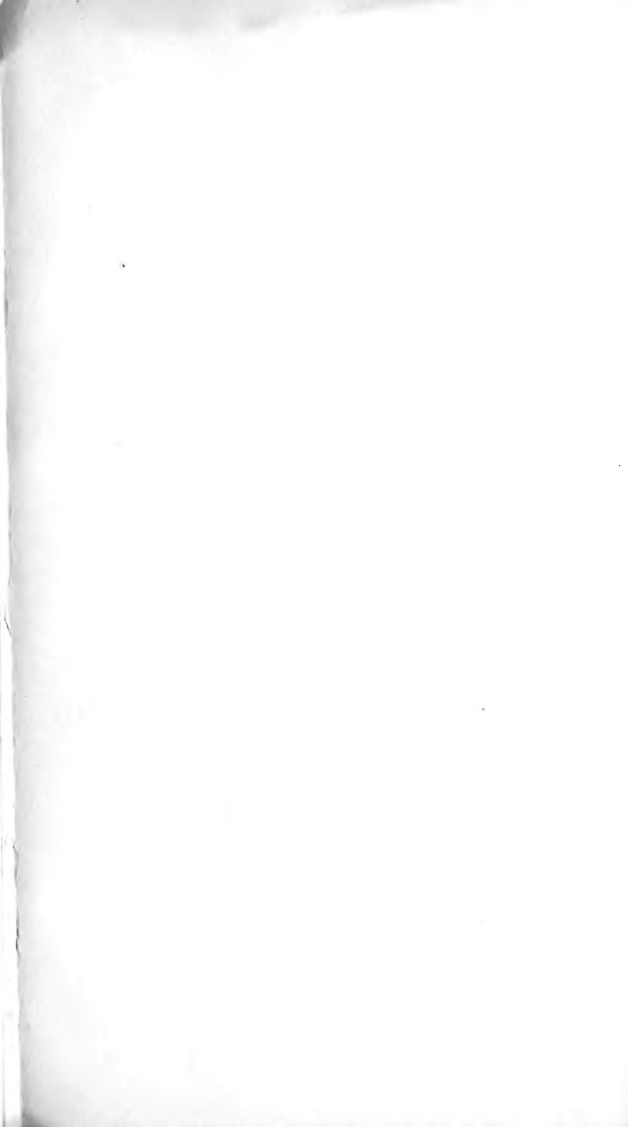
	Grains of water at 62° F.	Cc.
Minim [60]	0.95	0.061
Fl. dr. [ 8]	56.95	3.690
Fl. oz. [16]	455.61	29.570
Pt. [ 2]	7289.75	473.150
Qt. [ 4]	14579.50	946.360
Gal.	58318.00	3785.430

*Miscellaneous*

	Lbs. av.	Grams.
1 cu. in. water at 62° F. . . . .	.0361	16.3872
1 cu ft. water at 62° F. . . . .	62.3550	28347.08
1 cu. yd water at 62° F . . . . .	1683.58	
1 U. S. gal. water at 62° F. . . . .	8.3448	3785.43
1 Imperial gal- lon, 277.274 cu. in. -	4543.0 cc.	
1 U. S. Gallon, 231.00 cu. in. -	3785.4 cc.	
1 U. S. Bushel 2150.42 cu. in. -	35.239 liters	
1 oz. av. = 437.50 grains =	28.3495 grams	
1 oz. troy, 1 oz. apoth. =	480 grains = 31.1035 grams.	
1 Kilogram =	2.20462 lb. av.	
1 Liter =	1.05668 qts.	

\*The figures in brackets denote the number requisite to compose the denomination immediately below





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