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Specific gravities of minerals: an index of some recent determinations.

By L. J. SPENCER, M.A., Sc.D., F.R.S.
Keeper of Minerals in the British Museum
(Natural History).

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AS a first-aid in the identification of non-metallic minerals I have for many years¹ made use of specific gravity, which is a character that can be easily and rapidly determined by the use of heavy liquids. A small, clean fragment of the mineral to be tested is dropped into one or other of a series of tubes containing methylene iodide with various small known crystals as indicators. Adding benzene from a dropping-bottle, the density of the liquid is quickly brought to that of the mineral. This preliminary determination of the specific gravity gives a useful clue as to the nature of the mineral—what it may or may not be; and the same fragment can then be used for confirmatory optical and micro-chemical tests.

The set that I have used consists of eight small glass tubes carried in holes bored in a wooden block measuring 11 × 7 × 6 cm. The methylene iodide is thus protected from the light; and any darkening of the liquid is easily corrected by occasionally leaving a piece of copper wire in the tube. Methylene iodide is expensive, but 1 c.c. or even less is sufficient

¹ L. J. Spencer, Min. Mag., 1897, vol. 11, p. 186.

in each tube. A smaller portable set on the same lines would be useful to prospectors. A similar set of tubes for molten thallium-silver nitrate (sp. gr. 5.0) diluted with water has also been used,¹ but this was found to be much less practical. Clerici's solution,² consisting of an aqueous solution of thallium formate and malonate (sp. gr. 4.0 at 10° and about 5.0 near 100° C.), is said to be convenient for use and has a wider range than methylene iodide (sp. gr. 3.33), but this I have not had the opportunity of trying. For use as indicators in these liquids a large series of clear crystal fragments has been carefully selected, ranging from sylvine (sp. gr. 1.99) to baryte (sp. gr. 4.48). Of these the following have been found to be the most convenient for use in the eight tubes of methylene iodide.

	Sp. gr.		Sp. gr.
No. 1. Chabazite	... 2.12	No. 5. Quartz (Rock-crystal)	2.65
Heulandite	... 2.20	Beryl (Aquamarine)	2.69
Scolecite ...	... 2.30	Calcite (Iceland-spar)	2.72
No. 2. Gypsum ...	... 2.32	No. 6. Anorthite ...	2.75
Apophyllite	... 2.35	Dolomite ...	2.85
Colemanite	... 2.42	Aragonite ...	2.94
No. 3. Petalite ...	... 2.45	No. 7. Phenakite ...	2.98
Leucite ...	... 2.47	Tourmaline (pink) ...	3.02
		Fluorite ...	3.18
No. 4. Orthoclase	... 2.56	No. 8. Apatite ...	3.20
Nepheline	... 2.60	Axinite ...	3.29
Albite ...	... 2.64	Diopside ...	3.32

The position of an unknown fragment between two indicators can be approximately judged from the amount of benzene added to the mixture, or from the times taken for each fragment to rise as the benzene evaporates (this can be accelerated with a blowpipe).

In this connexion I have made constant use of the concise table of specific gravities given as an appendix in Sir Henry A. Miers's 'Mineralogy' (1902, pp. 556-561). That table was compiled mainly from Dana's 'System of Mineralogy' (sixth edition, 1892) and gives an estimated mean value to two places of decimals for each mineral species. The more elaborate table of specific gravities published by M. Websky³ in 1868 is not so clearly set out, and is less convenient for reference. In addition to estimated mean values taken from the text-books he also gave a number of actual values taken from the current literature.

¹ L. J. Spencer, Min. Mag., 1904, vol. 14, p. 48.

² Min. Abstr., vol. 2, p. 487.

³ M. Websky, Die Mineral-Species nach den für das specifische Gewicht derselben angenommenen und gefundenen Werthen. Breslau, 1868, vi + 170 pp.

In the following table only actually determined values of specific gravity are listed. These are from the mineralogical literature for the years 1910–27 and have been collected in the first place from 'Mineralogical Abstracts' (in which the literature for 1915–27 is noticed), supplemented in large part from the International Tables of Constants (covering the literature for 1910–24). A brief reference is given to these in each case, so that it is possible to trace the original source of each determination. The addition of author and date would have been a useful guide, but this would have added considerably to the length of the index. The following abbreviations have been used, and the volumes noted indexed :—

M.A. = Mineralogical Abstracts (issued with the Mineralogical Magazine), vol. 1, 1920–22; vol. 2, 1923–25; vol. 3, 1926–27 (to no. 7, p. 864).

M.M. = Mineralogical Magazine, vol. 15 (no. 72), 1910, to vol. 21 (no. 118), 1927.

T.A. = Tables annuelles de constantes et données numériques de chimie, de physique et de technologie. Paris, Cambridge, and Chicago.

Vol. 1 (année 1910), 1912, pp. 538–559.

„ 2 („ 1911), 1913, pp. 616–621.

„ 3 („ 1912), 1914, pp. 426–433.

„ 4 (années 1913–16), 1922, pp. 1026–1056.

„ 5 („ 1917–22), 1926, pp. 1286–1342.

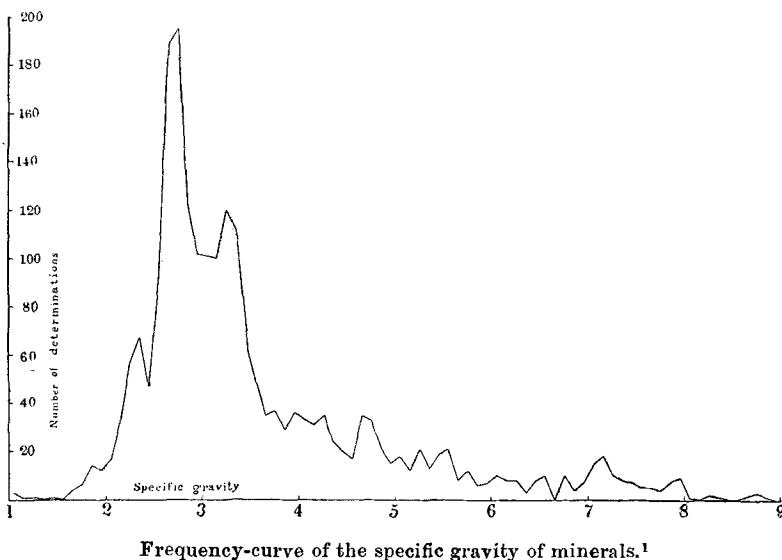
„ 6 („ 1923–24), 1928, pp. 1226–1252.

[The arrangement there being alphabetical according to mineral names, only the volumes, and not the pages, are quoted below. Reprints of the Crystallography and Mineralogy chapters from vols. 3, 4, and 5 have been issued separately.]

The number (2277) of specific gravities collected through these sources is by no means complete for the period mentioned. It represents rather the selection that was made at the time of recording for the Abstracts and for the Tables of Constants. Isolated and doubtful determinations, usually made solely for the purposes of identification, were generally omitted, and preference was given to cases where other constants had been also determined on the same sample of material. Many of these are, however, still open to criticism ; and this is especially evident from the minimum and maximum recorded values given in the second table below in the alphabetical list of mineral names. The values are copied as in the original papers, but in a few cases they have been cut down to three places of decimals. Unfortunately it is not always clear from the original papers whether the specific gravity as given is the value compared with water at the temperature of the experiment or the corrected density (weight in grams of 1 c.c. in vacuo).¹

¹ See A. Hutchinson, A graphical method for the rapid correction of specific gravity determinations. Min. Mag., 1924, vol. 20, pp. 198–200, pl. IV; L. Ahlers, Zeits. Krist., 1924, vol. 59, p. 298 [Min. Abstr., vol. 2, p. 874].

The data here given are limited to the direct determinations of specific gravity, and do not include the many values recently determined from crystal-structures as determined by X-ray methods. This method may perhaps come to be of importance in cases where only small amounts of pure material are available for examination. At present, however, some discrepancies are to be noted. For example, the following values have



Frequency-curve of the specific gravity of minerals.¹

been recently and independently given for the density of mercury telluride HgTe (coloradoite): 8.025 (W. Hartwig, 1926), 8.20 (W. F. de Jong, 1926), and 8.42 (W. Zachariasen, 1926).² Still it must be remembered that previous determinations for coloradoite by ordinary methods show far greater variations: 8.627 (F. A. Genth, 1877), 9.21 (E. S. Simpson, 1898), and 8.07 (L. J. Spencer, 1903).³

In the numerical index it will be noticed that there is a great preponderance of determinations between 2.0 and 4.0, nearly three-quarters of the values (1646 out of 2277) falling between these limits. Counting the number of determinations for each tenth of a unit, i.e. those falling between 2.0-2.099, 2.1-2.199, &c., the greatest number (195) is at 2.7-

¹ Forty-four values from the last number (no. 118) of the Magazine are not included in this diagram.

² Min. Abstr., vol. 8, p. 178.

³ Min. Mag., 1903, vol. 18, p. 276.

2.799. The accompanying frequency-curve has been obtained by plotting the number of determinations between these limits as 2.05, 2.15, 2.75, &c. The two smaller peaks at the sides of the remarkable peak at 2.75 correspond with the accidental number of determinations for zeolites and the ferromagnesian rock-forming minerals. The curve rises on the left much more steeply than on the right, and the average for all the values is shifted to the right. An approximate arithmetical mean has been arrived at by reckoning 195 values as 2.75, &c. This gives the average value 3.62. The mode at 2.75 corresponds closely with H. S. Washington's (1920)¹ value of 2.77 (or 2.75) for the average density of the earth's crust. The above average value 3.62 no doubt indicates that the number of determinations made on metallic minerals is greater than the relative abundance of such minerals in the earth's crust.

Numerical Index of determined Specific Gravities of Minerals.

1.03	Retinite . . .	M.A. 3-218	1.885	Inyoite . . .	M.A. 1-410
1.051	" . .	M.A. 3-218	1.899	Halotrichite . . .	T.A. 3
1.092	Flagstaffite . . .	M.A. 1-123	1.90-	Allophane . . .	M.A. 2-470
1.122	Schungite . . .	M.A. 2-191	1.901	Fibroferrite . . .	M.A. 2-40
1.21	Curtisite . . .	M.A. 3-239	1.91	Ulexite . . .	M.A. 1-341
1.43	Hoelite . . .	M.A. 2-10	1.924	Evansite . . .	M.A. 2-142
1.541	Ajkaite . . .	M.A. 3-362	1.929	" . . .	M.A. 3-349
1.645	Tschermigite . . .	M.A. 1-344	1.93	Trudellite . . .	M.A. 3-112
1.664	Tachyhydrite . . .	T.A. 4	1.94	Aliophane . . .	T.A. 4
1.665	" . .	T.A. 1	1.94	Racewinite . . .	M.A. 1-23
1.669	" . .	M.A. 3-298	1.950	Pisanite . . .	M.A. 1-347
1.718	Alunogen . . .	M.A. 3-354	1.953	Kernite . . .	M.A. 3-272
1.72	" . .	T.A. 3	1.98	Racewinite . . .	M.A. 1-23
1.735	" . .	T.A. 3	1.998	Al-phosphate . . .	M.A. 1-262
1.75	Quiskeite . . .	T.A. 1	1.999	Delvauxite . . .	M.A. 2-142
—	CaCO ₃ .6H ₂ O (art.)	M.A. 1-166	2.004	Cryptohalite . . .	M.A. 3-309
1.757	Hexahydrite . . .	T.A. 2	2.02	Meerschaum . . .	T.A. 4
1.777	CaCO ₃ .6H ₂ O (art.)	M.A. 2-217	—	Boothite (calc.) . . .	M.A. 1-348
1.807	Halotrichite . . .	T.A. 3	—	Zn-Cu-Melanterite . . .	M.A. 1-121
1.81	Chlorophaeite . . .	M.M. 20-437	2.045	Gmelinite . . .	T.A. 5
1.815	Delvauxite . . .	M.A. 2-142	2.05	Bolivarite . . .	M.A. 1-378
1.830	CaCO ₃ .5H ₂ O (art.)	M.A. 3-165	2.06	Opal . . .	M.A. 2-430
1.833	" . .	M.A. 3-165	—	Gmelinite . . .	M.M. 17-297
1.835	" . .	M.A. 3-164	2.07	" . . .	M.M. 17-297
1.84	Pickeringite . . .	M.A. 3-354	2.074	Monoclinic sulphur . . .	M.A. 1-64
1.845	Anthraxolite . . .	M.A. 2-191	2.08	Opal . . .	M.A. 2-430
1.85	Thaumasite . . .	T.A. 2	—	Fibroferrite . . .	T.A. 3
1.875	Inyoite . . .	M.A. 1-410	2.087	Copiapite . . .	M.A. 2-40
1.877	Thaumasite . . .	T.A. 5	2.09	Chabazite . . .	M.M. 17-297
1.879	" . .	T.A. 5	—	Gmelinite . . .	M.M. 17-297
1.88	Allophane . . .	M.A. 2-470	—	Fibroferrite . . .	T.A. 3

¹ H. S. Washington, Journ. Franklin Inst., 1920, vol. 190, p. 804 [Min. Abstr., vol. 1, p. 160].

2.090	Gmelinite . . .	T.A. 5	2.239	Natrolite . . .	M.A. 2-118
2.10	Ptilolite . . .	M.A. 2-59	—	Analcime . . .	T.A. 5
2.102	Flokite = ptilolite	M.A. 1-24	2.24	”	T.A. 4
2.105	Destinezite . . .	M.A. 2-142	—	Epinatrolite . . .	T.A. 2
2.11	Paternoite . . .	M.A. 1-150	2.244	Analcime . . .	M.A. 2-58
2.116	Stilbite . . .	M.A. 3-349	2.248	Natrolite . . .	T.A. 5
2.12	Ptilolite . . .	M.A. 2-59	2.249	Heulandite . . .	T.A. 4
2.120	Meyerhofferite . . .	T.A. 4	2.25	Flint (ignited) . . .	T.A. 5
2.125	Mordenite . . .	M.A. 2-301	—	Lucianite . . .	M.A. 1-255
2.13	Opal . . .	M.A. 2-111	—	Analcime . . .	T.A. 2
2.132	Kainite . . .	T.A. 1	2.252	Scolecite . . .	T.A. 5
2.133	Chabazite . . .	M.A. 3-349	2.254	Analcime . . .	T.A. 3
2.135	Gmelinite . . .	T.A. 5	2.256	Thomsonite . . .	T.A. 4
2.139	Kreuzbergite . . .	M.A. 1-125	2.257	Analcime . . .	T.A. 3
2.14	Trona . . .	M.A. 2-47	—	Mesolite . . .	T.A. 5
2.148	Mordenite . . .	T.A. 5	2.26	Arduinite . . .	T.A. 4
2.15	Stevensite . . .	M.A. 1-31	2.260	Analcime . . .	T.A. 3
2.150	Ferrierite . . .	M.A. 1-26	—	Mesolite . . .	T.A. 5
2.152	Hydrogibbertite . . .	T.A. 1	2.265	Analcime . . .	T.A. 2
—	Hydromagnesite . . .	M.A. 2-320	2.267	Tridymite . . .	M.A. 2-160
—	Epidesmine . . .	T.A. 4	2.27	”	T.A. 5
2.16	” . . .	T.A. 4	—	a-Tridymite (art.) . . .	T.A. 5
—	Heulandite . . .	M.M. 15-378	2.270	Tridymite (art.) . . .	T.A. 4
—	” . . .	M.M. 15-379	2.272	Laumontite . . .	T.A. 4
—	Hydromagnesite . . .	M.A. 1-107	2.279	Scolecite . . .	M.A. 1-153
2.161	Stichtite . . .	T.A. 4	2.28	Oxalite . . .	T.A. 1
2.162	Stilbite . . .	T.A. 5	—	‘Zeolite A’ (art.) . . .	T.A. 5
2.166	Halite . . .	T.A. 5	2.283	Laumontite . . .	T.A. 5
2.168	Chabazite . . .	M.A. 2-118	2.285	”	M.A. 3-349
2.17	Heulandite . . .	T.A. 4	—	Analcime . . .	M.A. 2-58
—	‘Zeolite X’ (art.) . . .	T.A. 5	2.29	Chalcoalumite . . .	M.A. 2-520
2.172	Stilbite . . .	T.A. 5	—	Nontronite . . .	T.A. 4
2.175	Chalcedony (ignited) . . .	T.A. 5	2.290	Paravauxite . . .	M.A. 2-148
2.183	Natrolite . . .	T.A. 5	2.291	Pinnoite . . .	T.A. 1
2.193	Mordenite . . .	T.A. 5	2.292	Sodalite . . .	M.A. 3-280
2.194	Zebedassite . . .	M.A. 1-25	2.295	Nontronite . . .	T.A. 4
—	Silica glass . . .	T.A. 5	—	Thomsonite . . .	T.A. 5
2.198	Scolecite . . .	M.A. 3-349	2.299	Paravauxite . . .	T.A. 5
2.2	Analcime (art.) . . .	T.A. 5	2.30	Ptilolite . . .	M.A. 1-31
2.20	Penwithite . . .	M.A. 3-214	—	Sodalite . . .	M.A. 3-118
—	Stevensite . . .	M.A. 1-31	—	”	M.A. 3-280
2.201	Leonite . . .	T.A. 1	—	Okenite . . .	M.A. 3-288
2.206	Okenite . . .	M.A. 1-21	2.302	Kornelite . . .	M.A. 3-7
2.208	Silica glass . . .	T.A. 6	2.306	Griffithite . . .	M.A. 1-206
2.21	Stilbite . . .	T.A. 4	2.309	Apophyllite . . .	M.A. 15-382
2.213	Silica glass . . .	T.A. 5	2.31	γ-Spodumene . . .	T.A. 3
2.215	Natrolite . . .	M.A. 2-118	2.313	β-Spodumene . . .	T.A. 4
2.216	Graphite . . .	T.A. 1	2.317	Bloedite . . .	T.A. 1
—	Heulandite . . .	T.A. 5	2.32	Cristobalite (art.) . . .	M.A. 3-165
—	Glaucocroite . . .	T.A. 1	—	Gypsum . . .	M.M. 16-188
2.218	Heulandite . . .	M.A. 3-349	—	‘Zeolite A’ (art.) . . .	T.A. 5
2.219	Analcime . . .	T.A. 3	—	Apophyllite . . .	T.A. 4
2.22	Opal . . .	M.A. 1-139	2.323	Okenite . . .	M.A. 2-59
—	Crestmoreite . . .	T.A. 5	—	Wavellite . . .	M.A. 1-112
—	Thomsonite . . .	T.A. 6	2.325	Okenite . . .	M.A. 2-59
2.223	Analcime . . .	T.A. 3	—	Cristobalite . . .	M.A. 2-59
2.227	” . . .	T.A. 5	2.326	” (art.) . . .	T.A. 5
2.228	Scolecite . . .	M.A. 3-349	2.33	Sodalite . . .	M.A. 3-118
2.231	Analcime . . .	T.A. 3	—	”	T.A. 5
2.235	Epinatrolite . . .	T.A. 2	—	”	T.A. 5

2-33	Toadstone-clay	M.M. 20-155	2-414	Petalite	.	.	T.A. 4
2-332	Okenite	M.A. 2-59	2-417	Chrysocolla	.	.	T.A. 4
2-333	"	T.A. 5	2-42	Heulandite	.	.	T.A. 5
—	Cristobalite (art.)	T.A. 4	—	Laumontite	(β -leon-		
2-336	β -Spodumene	T.A. 4		hardite)	.		M.A. 2-178
2-339	Thomsonite	T.A. 5	2-425	Cancrinite	.		M.A. 3-308
2-34	Davyne	T.A. 4	—	Hydronephelite	.	M.A. 3-308	
—	Magnalite	M.A. 2-54	—	Paradoxite	.	M.A. 1-392	
—	Thomsonite	T.A. 6	2-43	Cancrinite	.	.	T.A. 4
2-35	'Zeolite Y' (art.)	T.A. 5	—	Priceite	.		M.A. 2-319
—	Gyrolite	T.A. 1	2-430	Paradoxite	.	M.A. 1-392	
2-350	Harmotome	M.A. 3-285	2-433	Priceite (pandermite)	.		
2-355	'Zeolite Z' (art.)	T.A. 5					M.A. 2-318
2-36	Cristobalite	M.A. 2-411	2-44	Halloysite	.		M.A. 1-67
—	Foshagite	M.A. 2-520	—	Bentonite	.		M.A. 3-72
—	Hambergerite	T.A. 4	2-443	Sulphatic cancrinite	M.A. 1-256		
2-365	Pseudo-eucryptite (art.)	T.A. 4	2-45	Halloysite	.		M.A. 2-112
—	Harmotome	M.A. 3-285	—	Searlesite	.		M.A. 2-319
2-369	Thomsonite	T.A. 4	—	Vauxite	.		T.A. 5
2-37	Apophyllite	T.A. 2	—	Radiophyllite	.		M.A. 2-341
—	"	T.A. 4	2-457	Chrysotile	.		M.A. 3-100
2-373	β -Spodumene	T.A. 4	—	Pascoite	.		T.A. 4
2-374	Löweite	T.A. 1	2-46	Cancrinite	.		T.A. 2
2-375	Vauxite	M.A. 2-148	—	Davyne	.		M.A. 2-307
2-377	Al-Na-Ca fluoride	T.A. 3	—	Ektropite	.		M.A. 1-19
2-378	Thomsonite	T.A. 6	—	Hydronephelite	M.A. 3-302		
2-379	Apophyllite	T.A. 2	2-463	β -Spodumene	.		T.A. 4
—	Thomsonite	M.A. 2-118	2-47	Truscottite	.		M.A. 3-271
2-38	Brucite	T.A. 4	—	Variscite	.		T.A. 4
—	Jefferisite	M.A. 3-57	—	Cancrinite	.		T.A. 4
—	Kaolin	M.A. 3-15	2-470	Bardolite	.		M.A. 2-343
2-385	β -Spodumene	T.A. 4	2-48	Leucite (art.)	.		T.A. 5
2-386	Chlorite	M.M. 21-76	2-482	Cancrinite	.		M.A. 3-118
—	Thomsonite	M.A. 3-286	2-487	Davyne	.		M.A. 3-364
—	"	T.A. 6	2-49	Kaolin	.		M.A. 2-112
2-388	Spodumene (fused)	T.A. 4	2-492	Davyne	.		M.A. 3-364
—	Gyrolite	M.A. 3-287	2-495	Ussingite	.		T.A. 4
2-389	Thomsonite	T.A. 4	2-498	Avogadrite	.		M.A. 3-238
—	"	T.A. 5	2-5	Neotocite	.		T.A. 5
2-39	Brucite	T.A. 5	—	Sulphohalite	.		T.A. 4
—	Petalite	M.M. 20-141	—	Bauxite	.		M.A. 2-275
2-390	Gyrolite	M.A. 3-287	2-50	Hisingerite	.		M.A. 3-215
2-393	Chlorite	M.M. 21-76	—	Marialite	.		M.A. 1-107
2-394	Thomsonite	T.A. 4	—	Uranospathite	M.M. 17-280		
2-396	Gyrolite	T.A. 4	—	Allanite	.		M.A. 2-185
—	Chlorite	M.M. 21-76	2-505	Avogadrite (art.)	M.A. 3-238		
2-398	β -Spodumene	T.A. 4	2-506	Marialite	.		T.A. 5
2-4	Katangite	M.A. 1-250	—	Scapolite	.		M.A. 2-220
—	Bauxite	M.A. 2-275	2-51	Centralasite	.		M.A. 3-217
2-40	Gyrolite	T.A. 1	—	Colerainite	.		M.A. 1-9
—	Hydronephelite	M.A. 3-302	—	Leucite (art.)	.		T.A. 5
2-400	Chrysocolla	T.A. 4	2-511	Metahewettite	.		T.A. 4
2-401	β -Spodumene	T.A. 4	2-518	Carnegieite (art.)	.		T.A. 3
2-405	Calcio-thomsonite	M.A. 2-361	—				M.A. 1-167
2-408	Chrysocolla	T.A. 4	2-52	Epichlorite	.		M.M. 20-68
2-41	Cancrinite	T.A. 4	—	Lucinite	.		T.A. 4
2-410	Petalite	T.A. 4	2-524	Anaxite	.		M.A. 2-806
—	β -Spodumene	T.A. 3	2-528	Nepheline (art.)	.		T.A. 5
2-411	"	T.A. 4	—	Serpentine	.		M.A. 2-212
2-412	"	T.A. 4	2-53	Radiophyllite	.		T.A. 6

2-53	Lucinite . . .	T.A. 4	2-582	Sanidine . . .	T.A. 4
2-533	Titano-elpidite .	M.A. 3-235	2-584	Anorthoclase . . .	T.A. 4
2-536	Orthoclase (calc.)	M.A. 2-374	2-585	Cordierite . . .	T.A. 4
2-54	Orthoclase . . .	T.A. 5	2-59	Anorthoclase . . .	M.A. 2-76
—	Variscite . . .	T.A. 3	—	Bertrandite . . .	M.M. 17-17
—	$\mu\text{-CaCO}_3$ (art.)	M.A. 1-166	—	Kämmererite . . .	M.A. 3-57
—	Lithomarge . . .	M.A. 2-135	—	Nepheline . . .	M.A. 3-364
—	Iddingsite . . .	M.A. 3-121	—	Kaolin . . .	T.A. 6
2-545	Beryl . . .	T.A. 5	2-590	Parsettensite . . .	M.A. 2-251
2-548	Kaolin . . .	M.A. 1-205	2-592	Microperthite . . .	T.A. 2
2-55	Chalcedony . . .	M.A. 1-414	2-593	Cordierite . . .	T.A. 1
—	" . . .	T.A. 5	2-595	Microcline . . .	T.A. 5
—	Orthoclase (art.)	. . .	—	Microcline-microperthite	M.A. 1-90
—	Serpentine . . .	M.A. 2-112	—	Microperthite . . .	T.A. 4
—	Lithomarge . . .	M.A. 2-135	—	Bertrandite . . .	T.A. 2
—	Rivaite . . .	T.A. 4	2-597	Cordierite . . .	M.M. 20-248
2-554	Hewettite . . .	T.A. 4	2-598	Beryl . . .	T.A. 5
—	Microcline . . .	M.A. 2-125	—	Ferronatrite . . .	T.A. 5
2-558	Microcline-perthite	M.A. 3-155	—	Collophane . . .	M.A. 1-413
2-56	Kaliophilite . . .	T.A. 4	2-60	Bertrandite . . .	M.A. 2-112
—	Lithidionite . . .	T.A. 4	—	Camsellite . . .	M.A. 2-565
—	Microcline . . .	T.A. 4	—	Cordierite . . .	M.A. 1-67
—	Microcline-microperthite	M.A. 2-112	—	Mizzonite . . .	T.A. 1
—	Rivaite . . .	T.A. 4	—	Nepheline . . .	T.A. 4
—	Variscite . . .	M.A. 1-109	—	Radiophyllite . . .	M.A. 2-341
2-560	Marialite . . .	T.A. 1	—	Anorthoclase . . .	T.A. 4
—	Titano-elpidite .	M.A. 3-235	—	Prochlorite . . .	T.A. 6
2-561	Orthoclase . . .	T.A. 4	2-600	Cordierite . . .	T.A. 4
2-562	Microcline . . .	T.A. 1	—	Orthoclase (moonstone)	M.A. 1-134
—	" . . .	M.A. 2-224	2-602	Anorthoclase . . .	M.M. 20-336
2-564	Orthoclase . . .	T.A. 4	2-603	Albite . . .	M.A. 2-400
—	Sanidine . . .	M.A. 2-223	—	Cordierite . . .	T.A. 4
2-565	Leifite . . .	M.A. 1-123	2-604	Bertrandite . . .	T.A. 2
2-566	Microcline . . .	M.A. 2-305	2-605	Cordierite . . .	T.A. 4
2-568	Sanidine . . .	T.A. 3	—	Albite . . .	M.A. 2-435
—	" . . .	T.A. 4	—	Anorthoclase . . .	M.M. 20-336
2-57	Adularia . . .	T.A. 4	2-606	Albite-oligoclase . . .	T.A. 6
—	Chaledony . . .	M.A. 1-414	—	Anorthoclase . . .	M.A. 1-90
—	Chrysotile . . .	T.A. 5	2-61	Kaliophilite . . .	M.A. 3-364
—	Hörnesite . . .	T.A. 5	—	Chalcedony . . .	T.A. 5
—	Microcline-microperthite	M.A. 2-112	—	Serpentine . . .	M.A. 3-207
—	Microcline . . .	M.A. 2-125	—	Flint . . .	T.A. 5
—	Variscite . . .	M.A. 1-109	2-610	Albite . . .	T.A. 4
2-570	Adularia . . .	M.A. 1-90	—	Nepheline . . .	M.A. 3-303
2-571	Cordierite . . .	T.A. 4	—	Scapolite . . .	T.A. 4
—	Natron-sanidine .	T.A. 1	2-611	Albite (calc.) . . .	M.A. 2-374
2-573	Kieserite . . .	T.A. 1	2-612	Oligoclase . . .	T.A. 5
2-575	Sanidine . . .	T.A. 5	—	Scapolite . . .	M.A. 3-348
2-576	Microcline (amazonite)	T.A. 1	2-613	Albite . . .	T.A. 4
2-578	Leifite . . .	M.A. 1-123	—	Antigorite . . .	M.A. 2-212
2-579	Microcline . . .	T.A. 4	2-614	Ralstonite . . .	T.A. 3
—	Syngenite . . .	T.A. 4	2-615	Potash-oligoclase	M.M. 20-332
2-58	Kaolin . . .	M.A. 3-15	2-616	Albite . . .	T.A. 4
—	Anorthoclase . . .	T.A. 4	—	Beryl . . .	T.A. 4
—	Serpentine . . .	M.A. 3-207	—	Marialite . . .	T.A. 5
2-581	Cordierite . . .	T.A. 4	2-617	Avogadrite . . .	M.A. 3-238
2-582	'Killinitie'	M.A. 3-216	2-618	Albite . . .	M.A. 2-435
—	Orthoclase . . .	M.A. 1-90	2-619	Afwillite . . .	M.M. 20-284

2-619	Albite	T.A. 4	2-653	Oligoclase	T.A. 5
—	Gajite	T.A. 2	2-654	Quartz	T.A. 4
—	Pennine	M.M. 16-266	2-655	Xonotlite	M.A. 2-531
—	Soda-nepheline (art.)	T.A. 3	2-657	Clinochlore	M.A. 3-57
—		M.A. 1-167	2-658	α -Catapleite	M.A. 2-385
2-62	Albite "	T.A. 4	—	Scapolite	M.A. 3-348
2-620	Potash-oligoclase	M.M. 20-332	2-659	Leuchtenbergite	M.A. 2-213
—	Albite-oligoclase	T.A. 6	—	Pyrophyllite	T.A. 4
2-622	Albite	T.A. 4	2-66	Oligoclase	T.A. 4
—	"	T.A. 5	2-660	Cordierite	T.A. 4
—	Oligoclase	T.A. 5	—	Scapolite	T.A. 1
2-623	Albite	M.A. 1-281	2-661	Beryl	M.A. 3-310
2-624	"	M.A. 2-64	—	Pennine	M.A. 2-215
—	"	T.A. 6	2-662	Scapolite	M.A. 3-348
2-625	"	M.A. 2-435	2-663	Andesine	M.A. 3-35
—	"	M.A. 3-155	2-664	Beryl	M.A. 1-111
—	Potash-oligoclase	M.M. 20-332	—	Nepheline	M.A. 3-118
—	Couzermanite	T.A. 1	2-665	Andesine	T.A. 5
2-626	Albite	T.A. 4	2-666	Rumpfite	T.A. 2
—	Beryl	T.A. 1	2-667	Eucryptite	T.A. 4
2-627	Albite	T.A. 6	—	Andesine	T.A. 5
2-628	Beryl	T.A. 4	2-668	"	M.A. 3-35
2-629	Albite-oligoclase	T.A. 6	2-669	Beryl	T.A. 4
2-63	Albite	M.A. 3-292	2-67	Alunite	M.A. 1-378
—	Alunite	M.A. 1-379	—	Andesine	M.A. 1-281
—	Anorthoclase	T.A. 5	—	Beryl	M.A. 2-287
—	K-Na-felspar	M.A. 2-75	—	Kämmererite	M.A. 3-57
—	Chalcedony	T.A. 5	—	Prochlorite	M.A. 3-56
—	Flint	T.A. 5	—	Scapolite	M.A. 1-12
2-630	Afwillite	M.M. 20-284	—	Thenardite	M.A. 2-562
2-631	Oligoclase	M.A. 2-305	2-671	Andesine	T.A. 5
—	Albite	T.A. 6	—	Beryl	T.A. 4
2-632	Scapolite	T.A. 4	—	Ekmannite	M.A. 2-476
2-633	"	M.A. 3-348	2-672	Oligoclase	T.A. 4
2-634	Albite	T.A. 6	—	Marialite	T.A. 5
2-638	Beryl	T.A. 4	2-673	Clinochlore	M.A. 3-57
—	Quartz sand	T.A. 6	—	Andesine	T.A. 5
2-639	Marialite	T.A. 5	2-674	Ab _{ss} Al ₆₆ (art.)	T.A. 1
2-64	Riversideite	T.A. 5	—	Beryl	T.A. 4
2-640	Oligoclase-albite	T.A. 2	2-675	Andesine	M.A. 3-79
2-644	Rhodochrome	M.A. 2-215	—	Beryl	T.A. 4
2-645	Beryl	M.A. 2-139	2-676	"	T.A. 4
—	Nepheline	T.A. 5	—	Scapolite	T.A. 1
2-646	Oligoclase	T.A. 5	—	"	M.A. 3-348
—	"	M.A. 3-292	—	Al-Na-fluoride	T.A. 3
2-647	Beryl	M.A. 2-139	2-678	Allanite	T.A. 4
—	Nepheline	T.A. 5	—	Vivianite	M.A. 3-50
2-648	Leuchtenbergite	M.A. 2-213	2-679	Beryl	T.A. 4
—	Emerald	M.A. 3-298	—	Clinochlore	M.A. 2-215
2-649	Quartz	T.A. 2	2-68	Albite	T.A. 4
2-65	Leuchtenbergite	M.A. 2-215	—	Allanite	T.A. 4
—	Lublinitie	T.A. 4	—	Beryl	M.A. 1-332
—	Mn-silicate	M.A. 1-389	—	Pseudonepheline	T.A. 1
—	Nepheline	M.A. 1-108	—	Scapolite	M.A. 2-178
—	Potash-nepheline (art.)	T.A. 3	2-681	Parsettensite (errite)	M.A. 2-251
—	Quartz	T.A. 5	—		M.A. 2-215
—	Patronite	T.A. 1	2-682	Pennine	M.A. 2-215
2-651	Quartz	M.A. 2-374	—	Anorthite (fused)	T.A. 4
2-652	Beryl	M.A. 2-139	2-683	"	T.A. 4
—	Nepheline	T.A. 5	2-684	Anemousite	T.A. 1

2.685	Beryl	.	.	T.A. 4	2.710	$Ab_{16}An_{85}$ (art.)	.	.	T.A. 1
—	Eakleite	.	M.A. 1-206	—	Gearksutite	.	.	M.M. 19-32	
2.686	Labradorite	.	M.A. 3-292	—	Scapolite	.	.	T.A. 4	
2.688	Albite	.	.	T.A. 4	—	Beryl	.	.	T.A. 3
—	Scapolite	.	.	T.A. 5	2.711	Scapolite	.	M.A. 2-126	
2.689	Labradorite	.	.	T.A. 5	—	Beryl	.	.	T.A. 1
—	Beryl	.	.	T.A. 4	—	"	.	.	T.A. 3
—	"	.	.	T.A. 3	2.712	"	.	.	T.A. 3
2.69	Allanite	.	.	T.A. 4	—	"	.	.	T.A. 4
—	Ascharite	.	.	T.A. 1	—	$Ab_{42.5}An_{57.5}$	.	M.A. 2-433	
—	Labradorite	.	.	T.A. 4	2.713	Beryl	.	.	T.A. 3
—	Lanthanite	.	.	T.A. 1	—	"	.	.	T.A. 1
2.690	Labradorite	.	.	T.A. 4	—	Creelite	.	M.A. 1-417	
2.692	Beryl	.	.	T.A. 3	—	Calcite	.	.	T.A. 4
—	Scapolite	.	M.A. 3-348	—	Scapolite	.	.	T.A. 1	
—	"	.	M.A. 2-220	2.714	Beryl	.	.	T.A. 1	
—	Mariolite	.	.	T.A. 5	—	Haloysite	.	.	T.A. 5
—	Biotite	.	.	T.A. 4	—	Myeline	.	M.A. 1-264	
2.693	Beryl	.	.	T.A. 3	—	$Ab_{12.5}An_{87.5}$ (art.)	.	T.A. 1	
—	"	.	M.A. 2-189	—	Beryl	.	.	T.A. 3	
—	Labradorite	.	.	T.A. 5	2.715	"	.	.	T.A. 3
—	Pseudophosphate	.	M.M. 20-242	—	Gearksutite	.	M.M. 19-32		
—	Vivianite	.	M.A. 2-475	—	Scapolite	.	M.A. 2-267		
2.694	Beryl	.	.	T.A. 4	2.716	"	.	.	T.A. 5
—	Emerald	.	M.A. 3-298	—	Beryl	.	.	T.A. 3	
2.695	Labradorite	.	.	T.A. 4	—	"	.	.	T.A. 1
—	Pseudophosphate	.	.	T.A. 6	2.717	"	.	.	T.A. 3
2.697	Quartz	.	.	T.A. 4	—	Calcite	.	.	T.A. 5
—	Allanite	.	.	T.A. 4	2.718	Beryl	.	.	T.A. 3
—	Beryl	.	.	T.A. 4	—	"	.	.	T.A. 4
2.698	"	.	.	T.A. 4	—	"	.	.	T.A. 2
—	Labradorite	.	.	T.A. 4	—	"	.	.	T.A. 1
—	Scapolite	.	.	T.A. 5	—	Labradorite	.	.	T.A. 1
—	"	.	.	T.A. 4	2.719	Beryl	.	.	T.A. 1
2.699	Calcite	.	.	T.A. 5	—	"	.	.	T.A. 2
2.7	Aphthitalite	.	.	T.A. 5	—	"	.	.	T.A. 3
2.70	Calcite	.	M.A. 3-192	—	Scapolite	.	M.A. 3-266		
—	Glauconite	.	M.M. 19-330	2.72	Calcite	.			
—	Na-K-alunite	.	M.A. 3-206	—	Phosphorite	.	M.A. 2-92		
—	$Ab_{25}An_{75}$ (art.)	.	.	T.A. 1	2.720	Calcite	.	T.A. 5	
—	Scorodite	.	.	T.A. 6	—	Beryl	.	T.A. 3	
2.701	Beryl	.	.	T.A. 4	—	"	.	T.A. 4	
—	"	.	M.A. 3-310	—	Gearksutite	.	M.M. 19-32		
2.702	"	.	M.A. 2-139	—	Scapolite	.	T.A. 4		
—	Scapolite	.	.	T.A. 5	2.721	Anorthite (cyclopelite)	M.A. 2-62		
—	Sheridanite	.	.	T.A. 3	—	Beryl	.	T.A. 3	
2.703	Beryl	.	.	T.A. 1	—	"	.	T.A. 3	
—	"	.	.	T.A. 3	2.722	Scapolite	.	T.A. 5	
—	Anorthite	.	.	T.A. 1	—	$Ab_{10}An_{90}$ (art.)	.	T.A. 1	
2.705	Beryl	.	M.A. 2-139	—	Calcite	.	T.A. 4		
—	Eakleite	.	M.A. 1-206	—	Allanite	.	T.A. 4		
—	"	.	.	T.A. 5	2.724	Calcite	.	T.A. 5	
—	Labradorite	.	.	T.A. 5	—	Beryl	.	T.A. 4	
—	"	.	.	T.A. 6	2.725	"	.	T.A. 4	
2.706	Beryl	.	.	T.A. 4	—	"	.	M.A. 1-76	
—	Labradorite	.	M.M. 16-269	2.726	Alunite	.	M.A. 3-56		
2.708	$Ab_{20}An_{80}$ (art.)	.	.	T.A. 1	—	Phosphosiderite?	M.A. 1-417		
2.709	Emerald	.	M.A. 3-298	2.727	Beryl	.	T.A. 4		
—	Beryl	.	.	T.A. 3	2.729	Anorthite	.	T.A. 1	
2.71	Patronite	.	.	T.A. 1	—	Scapolite	.	T.A. 5	

2.729	Beryl	.	.	T.A. 3	2.764	Beryl	.	.	T.A. 3
2.73	"	.	.	T.A. 1	—	Scapolite	.	.	T.A. 5
—	Calcite (plumbocalcite)	.	T.A. 5	2.765	Beryl	.	.	T.A. 3	
—	Dolomite-rock	.	M.A. 1-75	2.768	Gearksutite	.	M.A. 1-205		
—	Glauconite	.	M.A. 1-419	—	Sulphate-scapolite	.	T.A. 5		
2.730	Creelite	.	M.A. 1-205	2.769	Calcite	.	.	T.A. 4	
—	Scapolite	.	T.A. 4	2.77	average for earth's crust	.	.		
2.731	Beryl	.	.	T.A. 3				M.A. 1-160	
2.732	"	.	.	T.A. 3	—	Allanite	.	.	T.A. 4
2.735	Leuchtenbergite	.	M.A. 3-57	—	Amesite	.	M.A. 1-71		
2.736	Beryl	.	.	T.A. 4	—	Diabantite	.	M.A. 1-171	
—	Pectolite	.	M.A. 3-25	2.770	Beryl	.	.	T.A. 3	
—	Scapolite	.	T.A. 1	2.771	Sulphate-scapolite	.	T.A. 5		
2.737	Phlogopite	.	M.A. 3-82	2.772	"	.	T.A. 5		
—	Beryl	.	T.A. 3	—	Beryl	.	.	T.A. 3	
2.738	"	.	.	T.A. 1	2.774	Cryolithionite	.	.	T.A. 3
—	"	.	.	T.A. 3	2.775	Beryl	.	.	T.A. 3
2.739	"	.	.	T.A. 4	2.78	Sulphate-scapolite	.	T.A. 5	
2.74	"	.	.	T.A. 4	—	Bentonite	.	M.A. 3-72	
—	Scapolite	.	M.A. 2-220	2.780	Pinite	.	M.A. 1-422		
—	Lanthanite	.	T.A. 1	2.782	Beryl	.	.	T.A. 3	
2.740	Beryl	.	.	T.A. 4	2.783	Hydrophlogopite	.	T.A. 6	
—	Ab ₅ An ₉₅ (art.)	.	T.A. 1	2.784	Beryl	.	.	T.A. 3	
2.741	Allanite	.	.	T.A. 4	2.785	Diabantite	.	T.A. 1	
—	Scapolite	.	T.A. 5	—	Phlogopite	.	T.A. 6		
—	Calcite	.	T.A. 4	2.786	Clinochlore	.	M.A. 2-215		
2.742	Beryl	.	.	T.A. 3	—	Manganophyllite	M.A. 2-424		
—	Scapolite	.	T.A. 5	2.787	Beryl	.	T.A. 1		
2.743	Beryl	.	.	T.A. 3	2.79	Biotite	.	M.A. 2-112	
—	Manganophyllite	.	M.A. 2-424	—	Diabantite	.	M.M. 20-152		
2.744	Anorthite	.	.	T.A. 5	—	Pectolite	.	M.A. 1-398	
—	Calcite	.	T.A. 5	2.791	Phlogopite (calc.)	M.A. 2-425			
2.745	Beryl	.	.	T.A. 3	2.792	Dolomite	.	T.A. 5	
2.746	Anorthite	.	T.A. 5	—	Phlogopite	.	T.A. 6		
—	Beryl	.	.	T.A. 3	2.793	Manganophyllite	M.A. 2-424		
2.748	"	.	.	T.A. 1	2.797	Muscovite	.	T.A. 6	
—	"	.	.	T.A. 3	2.798	Sericite	.	M.M. 16-264	
—	Sulphate-scapolite	.	M.A. 1-284	2.799	Lepidolite	.	T.A. 1		
2.749	Beryl	.	.	T.A. 4	2.8	Limnite	.	M.M. 18-340	
2.75	"	.	.	T.A. 2	2.80	Bazzite	.	M.A. 1-204	
—	Emerald	.	M.A. 2-5	—	Beryl	.	T.A. 1		
—	Jurupaita	.	M.A. 1-254	—	Iddingsite	.	M.A. 3-121		
—	Phlogopite	.	M.A. 2-126	2.800	Beryl	.	T.A. 3		
2.750	Scapolite	.	.	T.A. 5	2.801	Lepidolite (calc.)	M.A. 2-425		
—	Beryl	.	.	T.A. 4	2.802	Muscovite (calc.)	M.A. 2-425		
2.751	"	.	.	T.A. 4	2.803	Muscovite	.	T.A. 4	
2.752	Anorthite (calc.)	.	M.A. 2-374	—	Tabergite	.	M.A. 2-215		
—	Beryl	.	.	T.A. 3	—	Lepidolite	.	T.A. 1	
2.754	Anorthite (art.)	.	T.A. 1	—	Beryl	.	T.A. 3		
2.755	Calcite	.	T.A. 5	2.806	2.808	.	T.A. 3		
—	Sulphate-scapolite	.	M.A. 1-284	—	Beryl	.	T.A. 3		
2.757	Anorthite	.	.	T.A. 4	2.809	Muscovite	.	M.A. 3-356	
2.758	"	.	.	T.A. 4	2.81	Beryl	.	T.A. 2	
—	Beryl	.	.	T.A. 3	—	Manganocalcite	M.A. 2-360		
2.76	Szajbelitye	.	M.A. 3-316	—	Phlogopite	.	M.A. 2-126		
2.760	Anorthite	.	M.A. 1-281	2.812	Beryl	.	T.A. 3		
—	Manganophyllite	.	M.A. 2-424	2.815	Meionite	.	T.A. 1		
2.761	Pectolite	.	M.A. 3-25	2.816	Muscovite	.	T.A. 4		
2.762	Anorthite	.	T.A. 5	—	Phlogopite	.	T.A. 6		
2.763	"	.	.	T.A. 5	2.819	Allanite	.	T.A. 4	

2.819	Huronite .	M.A. 2-238	2.869	Phlogopite .	M.A. 3-82	
2.822	Beryl .	. T.A. 1	2.871	Dolomite .	. T.A. 5	
—	Calcite .	. T.A. 5	—	Soumansite .	. T.A. 1	
—	Glaucite .	M.A. 1-419	2.870	Beryl .	. T.A. 4	
2.820	Beryl .	. T.A. 3	—	Prochlorite .	M.A. 3-25	
—	Lepidolite .	. T.A. 6	2.872	Damourite .	M.A. 3-155	
2.821	Muscovite .	. T.A. 6	—	Dolomite .	. T.A. 5	
2.822	Dolomite .	M.A. 3-130	2.875	Muscovite .	. T.A. 6	
2.833	Muscovite .	M.A. 3-214	—	Prehnite .	. T.A. 5	
2.831	Beryl .	. T.A. 4	2.876	Muscovite .	. T.A. 6	
—	Phlogopite .	M.A. 3-92	2.88	Dolomite .	M.A. 1-75	
2.832	Talc .	. T.A. 6	—	Prehnite .	M.M. 16-217	
2.834	Pectolite .	M.A. 2-528	—	Salmonsite .	. T.A. 3	
—	Dolomite .	. T.A. 4	2.880	Beryl .	. T.A. 1	
2.835	Beryl .	. T.A. 4	—	Corundophyllite .	M.A. 2-215	
—	Muscovite .	. T.A. 6	2.881	Lepidolite .	. T.A. 6	
2.837	Lepidolite .	. T.A. 6	—	Beryl .	. T.A. 3	
2.838	Muscovite .	. T.A. 6	—	Dolomite .	. T.A. 5	
2.839	Phlogopite .	. T.A. 6	—	Stilpnomelane .	M.A. 2-568	
2.84	Beryl .	M.A. 3-205	2.882	Muscovite .	. T.A. 4	
—	Eudialyte .	M.A. 2-264	—	Prehnite .	. T.A. 6	
—	Sincoosite .	M.A. 2-381	2.883	Ferrisymplesite .	M.A. 2-382	
—	Strengite .	. T.A. 4	2.884	Fe-muscovite (calc.)		
—	Turquoise .	. T.A. 3	2.885			
2.842	Lepidolite .	M.A. 1-352	—			
2.843	Muscovite .	. T.A. 6	—			
2.844	Xanthoxenite .	M.A. 1-125	—		M.A. 2 425	
2.846	Muscovite .	M.A. 3-356	2.886	Beryl .	. T.A. 4	
2.847	Beryl .	. T.A. 2	2.887	Dolomite .	. T.A. 5	
—	" .	. T.A. 3	—	—	. T.A. 4	
2.848	" .	. T.A. 4	2.889	" .	. T.A. 5	
2.849	Dolomite .	. T.A. 5	2.89	Viridite .	M.A. 1-255	
2.85	" .	M.A. 1-75	—	Boracite (stassfurtite) .	T.A. 1	
—	Muscovite .	M.A. 3-214	—	Dolomite .	. T.A. 4	
—	Stilpnomelane .	M.M. 20-194	—	—	. T.A. 5	
2.850	Muscovite .	. T.A. 6	2.890	Fluoborite .	M.A. 3-110	
—	Beraunite .	. T.A. 4	—	Prehnite .	. T.A. 4	
2.855	Muscovite .	. T.A. 6	—	Wollastonite .	. T.A. 5	
2.856	" .	. T.A. 6	2.891	Collophane .	M.A. 1-413	
2.857	Pectolite .	M.A. 3-285	—	Dolomite .	M.A. 1-75	
2.86	Beryl .	. T.A. 1	2.897	Hyalophane .	M.A. 3-312	
—	Eudialyte .	M.A. 2-264	—	Prochlorite .	. T.A. 6	
—	Mingueite .	. T.A. 1	—	Beraunite .	. T.A. 4	
—	Phosphorite .	M.A. 2-92	2.9	Manganophyllite .	M.A. 2-424	
—	Strengite .	M.A. 1-417	2.90	Wollastonite .	. T.A. 5	
—	" Rare-earth zeolite "	M.A. 2-263	—	Collophane .	M.A. 1-413	
—	Scorodite .	. T.A. 6	—	Dolomite .	M.A. 1-75	
2.860	Dolomite .	. T.A. 4	2.900	—	Hyalophane .	M.A. 3-312
2.861	Aragonite .	M.A. 2-476	—	Prochlorite .	. T.A. 6	
2.863	Monetite .	M.A. 3-126	—	Beraunite .	. T.A. 4	
2.865	Dolomite .	. T.A. 4	2.904	Dolomite .	M.A. 3-59	
—	" .	. T.A. 5	—	Prehnite .	M.A. 3-285	
—	Manganophyllite .	M.A. 2-424	2.906	Dolomite .	M.A. 3-285	
—	Dolomite .	. T.A. 4	2.907	Annabergite .	M.A. 2-382	
2.867	" .	. T.A. 5	—	Dolomite .	. T.A. 4	
2.868	" .	. T.A. 5	2.91	Custerite .	. T.A. 4	
—	" .	. T.A. 4	—	Dolomite .	. T.A. 5	
2.869	" .	. T.A. 5	—	Boracite (stassfurtite) .	T.A. 1	
--	Lepidolite .	M.A. 2-401	—	Beraunite .	. T.A. 4	

2.910	Beryl	T.A. 3	2.975	Ripidolite	T.A. 4
2.912	Wollastonite (art.)	T.A. 4	2.976	Pachnolite	T.A. 3
—	Dolomite	T.A. 5	2.978	Tourmaline	T.A. 1
2.913	Actinolite	T.A. 4	2.98	Justite	M.A. 2-22
2.914	Prehnite	M.A. 1-48	—	Phenakite	M.M. 16-55
—	Dolomite	T.A. 4	—	"	M.M. 16-59
2.916	Prehnite	M.A. 3-49	—	Fluorite	M.A. 1-107
—	Roscherite	T.A. 4	2.980	Åkermanite	T.A. 5
—	Zinnwaldite	M.A. 2-401	2.981	Anhydrite	M.A. 2-356
2.918	Prehnite	T.A. 4	—	Biotite	T.A. 6
2.92	Humboldtilite	T.A. 5	2.982	Thomsenolite	T.A. 3
2.920	Beraunite	T.A. 4	2.985	Asbolane	M.A. 3-264
2.922	Aragonite	M.M. 20-417	2.987	Zinnwaldite	T.A. 6
2.925	Humboldtilite	T.A. 5	2.989	Amblygonite	M.A. 2-400
2.927	Kochite	T.A. 6	—	Cuspidine	T.A. 1
2.928	Prehnite	T.A. 1	2.99	Ankerite	T.A. 4
2.929	Kochite	M.A. 2-51	—	Beraunite	M.M. 21-275
—	Melilite	M.A. 2-165	—	Ferrimolybdite	M.A. 3-131
2.93	Danburite	M.A. 2-469	—	Nephrite	T.A. 4
2.932	Kochite	T.A. 6	2.991	Ankerite	T.A. 5
2.936	Prochlorite	M.A. 2-214	2.992	Wollastonite	T.A. 6
2.938	Nephrite	M.A. 2-67	2.993	Biotite	M.A. 2-162
2.94	Kempite	M.A. 2-338	—	Datolite	M.A. 2-353
—	Stewartite	T.A. 3	—	Dolomite	T.A. 6
2.943	Prehnite	M.A. 2-215	—	Gehlenite-åkermanite (art.)	T.A. 5
2.944	Åkermanite (art.)	M.A. 1-168	2.995	Chiolite	T.A. 3
—	Phenakite	T.A. 5	—	Datolite	M.A. 2-529
2.95	Anthophyllite	T.A. 3	2.997	Spodumene	T.A. 4
—	Magnesite	M.A. 1-15	3.0	Ferrazite	M.A. 1-18
—	Humboldtilite	T.A. 5	3.000	Dahlite	M.A. 1-174
—	Biotite	M.A. 1-71	3.001	Datolite	M.M. 15-413
2.953	Manganophyllite	M.A. 2-424	3.005	Chiolite	T.A. 3
2.954	Magnesite	M.A. 1-333	—	Tourmaline	T.A. 1
—	Manganophyllite	M.A. 2-424	3.008	Montebrasite	M.A. 1-76
2.957	Melilite	T.A. 4	3.01	Ankerite	M.M. 16-220
2.958	Lazulite	T.A. 4	—	Magnesite	M.A. 1-15
—	. . . .	M.A. 1-877	—	Ankerite	M.M. 16-222
2.959	Aphrosiderite	M.A. 1-206	—	Natramblygonite	T.A. 3
2.96	Cébollite	T.A. 4	3.012	Dahlite	T.A. 4
—	Dolomite	T.A. 4	3.015	Tourmaline	T.A. 1
—	Nocerite	M.A. 1-107	3.017	Allanite	T.A. 4
—	Fe-Reddingite	M.A. 3-274	—	Aragonite	M.A. 1-140
2.963	Allanite	T.A. 4	3.018	Gehlenite-åkermanite (art.)	T.A. 5
—	Biotite	M.A. 2-162	—	Zinnwaldite	T.A. 6
2.964	Allanite	T.A. 4	3.02	Actinolite	T.A. 6
2.965	Cuspidine	T.A. 1	—	Gehlenite	T.A. 5
2.969	Gehlenite-åkermanite (art.)	T.A. 5	—	Imerinite	T.A. 1
2.97	Amphibole-asbestos	M.A. 2-429	—	Magnesite	M.A. 1-15
—	Eucolite	T.A. 4	—	"	M.A. 3-238
—	Cuspidine	T.A. 4	—	Manganolangbeinite (art.)	M.A. 2-388
—	Phenakite	M.A. 1-296	3.020	Ankerite	T.A. 4
—	Zinnwaldite (calc.)	M.A. 2-425	—	Tourmaline (rubellite)	T.A. 1
—	Fluorite	M.A. 1-106	3.021	Biotite	T.A. 6
2.970	Zinnwaldite	T.A. 6	3.025	Ankerite	T.A. 5
2.973	Lithionite	T.A. 1	3.028	Tourmaline	T.A. 4
2.974	Danburite	M.A. 2-67	3.029	Biotite	T.A. 4
—	Grodnolite	M.A. 2-843	—	Amblygonite	T.A. 5
2.975	Humboldtilite	T.A. 5	—		

3-029	Magnesite.	.	T.A. 5	3-085	Biotite	.	M.A. 3	82	
—	Inesite	.	M.A. 2	252	3-086	Tourmaline	.	T.A. 4	
3-03	Tourmaline	.	T.A. 2	3-089	Pargasite (ignited)	.	T.A. 5		
—	Inesite (agnolite)	M.A. 2	352	—	Tourmaline	.	T.A. 3		
—	Hopeite	.	M.A. 1	6	3-09	Arakawaite	.	M.A. 1	251
—	Manganolangbeinite (art.)		M.A. 2	383	—	Eucrase	.	T.A. 4	
3-037	Diopside	.	T.A. 6	—	Magnesite	.	T.A. 5		
3-038	Gehlenite (art.)	M.A. 1	167	3-090	Grothine	.	M.A. 1	107	
—	Velardeñite (art.)	.	T.A. 4	—	Dahllite	.	T.A. 4		
3-039	Amblygonite	.	T.A. 5	3-093	Clintonite	.	T.A. 5		
—	Gehlenite	.	T.A. 5	3-094	Tourmaline	.	M.A. 2	359	
—	Velardeñite	.	T.A. 4	—	Dahllite	.	M.A. 1	174	
3-04	Monticellite (art.)	M.A. 1	317	3-097	Amblygonite	.	T.A. 5		
—	Tourmaline	.	T.A. 3	3-10	Bassettite	.	M.M. 17	224	
—	Xanthitane	.	M.A. 2	113	—	Magnesite	.	T.A. 5	
3-041	Phenakite	.	T.A. 4	—	Merrillite	.	M.A. 2	560	
3-042	Amblygonite	.	T.A. 5	—	Voelckerite	.	M.M. 17	157	
3-047	Tourmaline	.	T.A. 1	—	Fe-Reddingite	.	M.A. 2	274	
3-048	Actinolite	.	M.A. 2	212	—	Fibrolite (art.)	.	T.A. 4	
—	Tourmaline (rubellite)	T.A. 1		3-100	Tourmaline	.	M.A. 2	359	
3-049	Amblygonite	.	T.A. 5	3-101	Amblygonite	.	M.A. 1	76	
3-05	Allanite	.	T.A. 4	3-102	Tourmaline	.	T.A. 1		
—	Ankerite	.	T.A. 3	3-105	Ankerite	.	T.A. 4		
—	Euclase	.	M.M. 20	3-106	Bementite	.	M.A. 1	176	
—	Magnesite	.	T.A. 5	3-107	Tourmaline	.	T.A. 1		
—	Orientite	.	M.A. 1	3-11	Biotite	.	T.A. 6		
—	Tourmaline	.	T.A. 3	—	Ankerite	.	T.A. 5		
3-052	Magnesite	.	M.A. 2	239	—	Magnesite	.	M.A. 2	430
3-053	Tourmaline	.	T.A. 3	—	Natrojarosite	.	M.A. 1	355	
3-054	,	.	T.A. 4	—	Tourmaline	.	T.A. 3		
3-055	,	.	T.A. 4	3-111	Andalusite	.	T.A. 1		
—	Amblygonite	.	T.A. 5	3-118	Uralite	.	T.A. 4		
3-056	Magnesite	.	M.A. 1	3-119	Tourmaline	.	T.A. 4		
3-059	Tourmaline	.	T.A. 4	3-12	Lawsonite	.	T.A. 4		
3-06	Ankerite	.	M.A. 3	3-126	Magnesite	.	T.A. 5		
—	Nephrite	.	T.A. 4	—	Tourmaline	.	T.A. 3		
—	Voelckerite	.	M.M. 17	3-120	“	.	T.A. 4		
—	Natramblygonite	.	T.A. 3	3-121	Ankerite	.	T.A. 5		
3-061	Tourmaline	.	T.A. 1	3-123	Spencerite	.	M.A. 1	-5	
3-064	,	.	T.A. 4	3-125	Biotite	.	T.A. 6		
3-065	Amblygonite	.	M.A. 1	3-126	Lacroixite	.	T.A. 4		
3-066	Biotite	.	M.A. 2	3-127	Tourmaline	.	T.A. 1		
—	Tourmaline	.	T.A. 4	3-128	Heterogenite	.	M.A. 1	243	
3-069	Pargasite	.	T.A. 5	3-129	Plazolite	.	M.A. 1	151	
3-07	Thuringite	.	M.A. 2	3-13	Fluosiderite	.	M.A. 1	107	
—	Tourmaline	.	M.M. 18	3-13	Hornblende	.	T.A. 6		
—	Biotite	.	M.A. 1	3-138	Norbergite	.	M.A. 3	110	
3-071	Magnesite	.	T.A. 4	3-142	Anthophyllite	.	M.A. 2	212	
3-072	Tourmaline	.	T.A. 1	3-144	Svanbergite	.	T.A. 5		
3-078	Monticellite	.	T.A. 5	3-145	Chlor-apatite (art.)	.	T.A. 4		
3-079	Actinolite	.	M.A. 2	3-147	Palait	.	T.A. 3		
—	Biotite	.	T.A. 6	3-148	Spencerite	.	M.M. 18	78	
3-08	Grothine	.	M.A. 1	3-149	Tourmaline	.	T.A. 4		
3-080	Ankerite	.	M.A. 3	3-145	Spencerite	.	M.M. 18	78	
3-081	Allanite	.	T.A. 4	3-147	Spodumene	.	T.A. 3		
—	Phosphophyllite	M.A. 1	125	3-148	Protolithionite	.	T.A. 6		
—	Xanthophyllite	.	T.A. 4	3-149	Erythrite-annabergite	.	M.A. 2	882	
3-082	Volgerite	.	M.A. 1	3-15	Tourmaline	.	T.A. 4		
—	Phosphophyllite	.	T.A. 5						

3-15 Aragonite (tarnowitzite)	M.A. 2-116	3-2 Fibrolite T.A. 4
— Fibrolite (art.) . . . T.A. 4		— Pumpellyite . . . M.A. 3-8
— Norbergite . . . M.A. 3-110		3-20 Bavalite . . . M.A. 2-184
— Chlorapatite (art.) . . T.A. 4		— Chlorapatite . . . M.A. 2-560
3-150 Merwinite . . . M.A. 1-254		— Crocidolite . . . T.A. 4
3-151 Apatite . . . T.A. 1		— Monticellite (art.) M.M. 19-194
— Lepidomelane . . . T.A. 6		— Palaite . . . T.A. 3
— Tourmaline . . . T.A. 4		3-201 Fluorite . . . T.A. 2
3-153 Torenkrakite . . . T.A. 5		— Diopside . . . T.A. 6
3-154 Andalusite . . . M.A. 1-396		— Apatite . . . T.A. 4
— Spodumene . . . T.A. 4		3-202 Viridine . . . T.A. 5
3-156 Phosphoferrite . . . M.A. 1-125		3-203 Mangan-neptunite M.A. 3-108
3-157 Allanite . . . T.A. 4		3-204 Spodumene . . . T.A. 4
3-16 Biotite . . . T.A. 1		3-206 Fluorapatite . . M.A. 1-351
— Harstigite . . . T.A. 5		3-207 Hornblende . . . T.A. 1
— Lepidomelane . . . M.A. 3-303		— Sulphateapatite M.A. 1-256
— Tourmaline . . . T.A. 3		3-208 Bronzite . . . M.A. 2-212
— Spodumene . . . T.A. 4		3-209 Fibrolite . . . M.A. 2-287
3-162 Andalusite . . . M.A. 1-396		3-21 Parahopeite . . . M.A. 1-7
3-167 Spodumene . . . M.A. 3-216		— Torenkrakite . . . M.A. 1-376
3-168 α -Spodumene . . . T.A. 3		3-211 Allanite . . . T.A. 4
3-169 Tourmaline . . . T.A. 1		3-212 Clinzoisite . . M.A. 3-218
3-17 Jarosite . . . M.A. 2-113		— Hornblende . . . T.A. 1
— Johnstrupite . . . M.A. 2-263		3-213 Hibbenite . . . M.A. 1-5
— Sellaite . . . T.A. 5		— Hornblende . . . M.A. 2-66
3-170 Allanite . . . T.A. 4		3-214 Apatite . . . T.A. 3
3-172 Fibrolite (bucholzite)	M.A. 1-213	3-216 Forsterite (art.) . . T.A. 4
3-175 Chondrodite . . . T.A. 5		3-218 Apatite . . . T.A. 3
3-177 Tourmaline . . . T.A. 1		3-219 Torbernite . . M.M. 19-45
3-178 Hornblende . . . M.M. 20-239		3-22 Axinite . . . M.A. 2-354
— Lepidomelane . . . T.A. 6		— Parahopeite . . . T.A. 5
3-18 Pababudanite . . . T.A. 2		— " . . . M.A. 1-7
— Fluorapatite . . . T.A. 3		— Forsterite . . . M.A. 3-280
— Spodumene (art.) . . M.A. 3-191		— Tourmaline . . . T.A. 3
— Spodumene . . . T.A. 4		3-220 Viridine . . . M.A. 1-396
3-180 Fluorite . . . M.A. 1-108		3-221 Axinite . . . M.A. 2-287
— Fibrolite (bucholzite)	M.A. 1-213	3-223 Hornblende . . . T.A. 1
3-181 Pargasite . . . T.A. 5		3-223 " . . . T.A. 4
3-184 Apatite . . . M.A. 3-303		3-224 " . . . T.A. 4
3-185 Andalusite . . . T.A. 4		3-225 " . . . M.A. 2-224
3-186 Spodumene . . . T.A. 4		3-226 " . . . T.A. 4
3-187 Tourmaline . . . T.A. 1		— Grossular . . . T.A. 4
— Epidote . . . M.A. 1-48		3-229 Hornblende . . . T.A. 1
3-189 " . . . M.A. 1-48		3-23 Allanite . . . T.A. 4
3-19 Allanite . . . T.A. 4		— Cummingtonite . . M.A. 3-153
— Ankerite . . . T.A. 4		— Epidote (fouquite) M.A. 2-410
— Ludlamite (lehnerite)	M.A. 3-10	— Fibrolite . . . M.M. 19-110
— Weibyeite . . . M.A. 1-204		— Forsterite . . . M.A. 1-93
3-190 Calc-olivine . . . T.A. 4		3-231 Fluotaramite . . M.A. 3-109
3-191 Fluorite . . . M.A. 2-353		— Hornblende . . . T.A. 1
3-194 Akrochordite . . . M.A. 2-51		3-234 Wilkeite . . . T.A. 4
— Fluorapatite . . . T.A. 4		3-235 Hornblende . . . T.A. 1
3-195 Fluorite . . . M.A. 1-108		— Scorodite . . . T.A. 4
3-196 Sulphateapatite . . M.A. 1-256		3-236 Diopside . . . T.A. 5
3-198 Autunite . . . M.A. 3-296		— Fluor-diopside . . T.A. 5
— Hornblende . . . T.A. 1		— Parahopeite . . . M.A. 1-7
		— Pyroxene . . . M.A. 2-68
		— Hornblende . . . T.A. 4
		3-238 Viridine . . . T.A. 5

3.24	Ferro-anthophyllite	M.A. 1-253	3.30	β -Corundum (art.)	. T.A. 4
—	Melilite (justite)	M.A. 2-22	—	Diopside	. T.A. 4
3.240	Allanite	. . . T.A. 4	—	”	. T.A. 6
—	Gedrite	. . . T.A. 4	—	Dumortierite	M.A. 3-315
3.242	Augite	. M.A. 1-161	—	Rancieite	M.A. 2-144
3.243	”	. M.A. 1-233	3.301	Allanite	. T.A. 4
3.25	Axinite	. . . T.A. 4	—	Olivine	M.A. 2-212
—	Chlorite	. M.A. 1-187	—	Spodumene	. T.A. 4
—	Fibrolite	. M.M. 19-109	3.303	Enstatite	M.A. 2-212
—	Rancieite	. M.A. 2-144	3.305	Protolithionite (calc.)	
3.250	Allanite	. . . T.A. 4			M.A. 2-425
—	Tourmaline	. . . T.A. 4	3.307	Dioprase	. T.A. 4
3.252	Fibrolite	. M.M. 19-109	—	Johannite	M.A. 1-248
—	Sursassite	. M.A. 3-272	—	Olivine	. T.A. 4
3.254	Enstatite	. M.A. 2-305	3.308	Fassaite	M.A. 2-69
3.255	Fibrolite	. M.M. 19-109	3.309	Diopside	. T.A. 5
3.257	Mangan-apatite	. M.A. 2-401	—	Dumortierite	M.A. 2-39
3.26	Acmite-augite	. M.A. 1-107	—	Pyroxene	M.A. 2-68
—	Diopside	. . . T.A. 4	3.31	Guarinite	. T.A. 5
—	”	. M.A. 1-250	—	Omphacite	M.A. 1-163
3.262	Spodumene	. . . T.A. 4	3.311	Grünerite-cummingtonite	T.A. 6
3.265	Diopside	. . . T.A. 5			
3.266	Fibrolite	. M.A. 3-280	3.312	Rhodochrosite	M.A. 2-143
—	Hornblende	. . . T.A. 4	3.313	Diopside	M.A. 2-38
3.267	Diopside	. M.A. 1-9	—	Dioprase	. T.A. 4
—	Fluotaramite	. M.A. 3-109	3.314	Axinite	M.A. 2-239
3.268	Forsterite	. M.A. 2-212	—	Bronzite	M.A. 2-160
3.27	Augite	. M.A. 1-93	3.315	”	. T.A. 4
—	Hornblende	. . . T.A. 6	3.318	Fluotaramite	M.A. 3-109
—	Planchete	. M.A. 1-416	—	Dioprase	. T.A. 4
3.270	Apatite	. . . T.A. 5	—	Bronzite	. T.A. 4
—	Diopside-jadeite	. M.A. 1-382	—	Augite	M.A. 2-65
3.272	Diopside	. M.A. 2-38	3.319	Yttrifluorite	. T.A. 4
3.274	Aurichalcite	. . . T.A. 4	3.32	Fe-Zn-Ca-olivine (art.)	T.A. 5
—	Axinite	. M.A. 3-306	—	Idocrase	. T.A. 5
3.275	Diopside	. M.A. 2-38	—	Lovchornite	M.A. 3-236
3.276	Hornblende	. M.A. 2-429	3.323	Pyroxene	. T.A. 4
3.278	Diopside	. M.A. 3-118	3.33	Allanite	. T.A. 4
3.279	Allanite	. M.A. 2-237	—	Buttgenbachite	M.A. 3-6
3.28	Zeunerite	. M.A. 2-353	—	Gillespite	M.A. 1-375
3.281	Diopside	. . . T.A. 5	—	Olivine	M.A. 2-436
3.282	”	. . . T.A. 5	—	Riebeckite	. T.A. 4
—	Kyanite	. . . T.A. 4	3.330	Diopside-jadeite	. T.A. 6
3.286	Tinzenite	. . . T.A. 6	—	Augite	M.A. 2-65
3.287	Augite	. . . T.A. 1	3.331	Clinozoisite	. T.A. 4
—	Diopside	. . . T.A. 5	3.332	Pyroxene	. T.A. 4
3.289	Helvine	. M.A. 3-150	3.335	Soda-jadeite	M.A. 1-383
3.29	Andalusite	. M.A. 3-51	—	Grossular	M.A. 2-396
—	Epidote	. . . T.A. 3	3.336	Idocrase	. T.A. 5
3.290	Titanaugite	. . . T.A. 4	—	Soda-jadeite	. T.A. 5
3.291	Augite	. M.M. 17-107	3.337	Chrome-diopside	. T.A. 4
—	Diopside	. . . T.A. 5	—	Idocrase	M.A. 3-118
3.294	Lepidomelane	. M.A. 3-303	3.338	Augite	M.M. 19-179
3.295	Spodumene	. . . T.A. 4	—	Bronzite	. T.A. 6
3.296	Axinite	. M.A. 1-8	3.34	Augite	. T.A. 6
—	Dioprase	. M.A. 1-350	—	Grünerite-cummingtonite	T.A. 6
3.298	Augite	. . . T.A. 1	—	Gerhardtite	. T.A. 6
—	Barkevikit	. . . T.A. 4	3.340	Lepidomelane (calc.)	
3.3	Aegirine	. . . T.A. 4			M.A. 2-425
—	Ferrazite	. M.A. 1-18			

3-341	Calc-olivine	.	T.A. 4	3-396	Hastingsite	.	M.A. 3-400
3-343	Olivino	.	M.A. 3-58	3-398	Babingtonite	.	T.A. 4
—	Clinozoisite	.	M.A. 3-353	3-4	Riebeckite	.	M.A. 1-277
3-344	Rhodizite	.	T.A. 2	3-40	Gerhardtite	.	M.A. 3-53
3-345	Prismatine	.	T.A. 1	—	Rinkolite	.	M.A. 3-236
3-346	Allanite	.	T.A. 4	—	Augite	.	T.A. 6
3-348	Clinozoisite	.	M.A. 3-353	3-401	Idocrase	.	T.A. 6
—	Ampangabeite	.	T.A. 4	3-402	Augite	.	T.A. 1
3-349	Topaz	.	T.A. 4	3-404	Olivine	.	M.A. 3-58
3-35	Hornblende	.	T.A. 5	—	Trimerite	.	M.A. 1-48
—	Zoisite	.	M.A. 2-215	3-405	Yttrifluorite	.	T.A. 4
3-351	Babingtonite	.	T.A. 4	3-41	Allanite	.	T.A. 4
—	Olivine	.	T.A. 5	—	Idocrase	.	M.A. 2-240
—	Clinozoisite	.	M.A. 3-353	—	Olivine	.	T.A. 5
3-352	"	.	M.A. 3-49	3-411	Sphene	.	T.A. 5
3-353	"	.	M.A. 3-353	3-414	Augite	.	T.A. 1
3-354	Hardystonite	.	M.A. 2-22	3-415	Hypersthene	.	M.A. 2-305
3-356	Clinozoisite	.	M.A. 3-49	—	Idocrase	.	T.A. 4
3-358	Augite	.	M.A. 1-394	3-416	Rhodonite	.	T.A. 6
3-359	Babingtonite	.	M.A. 2-472	—	Tinzenite	.	M.A. 2-252
3-36	Dumortierite	.	T.A. 4	3-417	Idocrase	.	T.A. 6
—	Hypersthene	.	T.A. 1	3-418	Uvarovite	.	T.A. 4
—	Idocrase	.	T.A. 5	—	Ampangabeite	.	T.A. 4
3-360	Clinozoisite	.	M.A. 3-353	3-42	Aegirine-augite (vanadiferous)	.	T.A. 4
3-363	Allanite	.	T.A. 4	—	Allanite	.	T.A. 4
3-365	Chloromelanite	.	T.A. 6	—	Diopside	.	M.M. 16-277
—	Clinozoisite	.	M.A. 1-346	—	"	.	T.A. 5
3-366	"	.	M.A. 3-353	—	Olivine	.	M.A. 1-108
3-368	Schallerite	.	M.A. 2-420	3-420	Epidote	.	T.A. 4
3-369	Clinozoisite	.	M.A. 1-78	3-421	Idocrase	.	T.A. 6
3-37	Plancheite	.	M.A. 3-265	3-426	Hastingsite	.	M.A. 2-400
3-371	Diopside	.	T.A. 6	3-427	Allanite	.	T.A. 4
—	Osannite	.	M.A. 2-401	3-48	Ramsayite	.	M.A. 2-251
3-373	Augite	.	M.A. 1-162	3-431	Olivine	.	T.A. 5
—	"	.	M.A. 2-305	3-435	Sphene	.	T.A. 4
3-375	Clinozoisite	.	T.A. 4	—	Augite	.	T.A. 1
—	Diopside	.	T.A. 6	—	Epidote	.	M.A. 1-109
—	Mesitite	.	T.A. 5	3-439	Taramite	.	M.A. 3-109
—	Clinozoisite	.	M.A. 1-109	—	Allanite	.	T.A. 4
3-376	"	.	T.A. 4	3-44	"	.	T.A. 4
3-379	"	.	M.A. 1-78	—	Augite	.	M.M. 17-99
3-38	Allanite	.	M.A. 3-208	—	Riebeckite	.	M.A. 2-239
3-380	Clinozoisite	.	M.A. 1-78	3-447	Epidote	.	T.A. 4
3-381	Augite	.	M.A. 2-433	3-45	Chloritoid	.	M.A. 3-204
—	Idocrase	.	T.A. 6	—	Sicklerite	.	T.A. 3
3-383	Clinozoisite	.	M.A. 1-78	3-451	Idocrase	.	T.A. 1
3-385	"	.	M.A. 1-78	3-456	Sphene	.	T.A. 5
—	Diaspore (tanatarite)	.	M.A. 3-237	3-46	Gerhardtite	.	T.A. 6
—	Clinozoisite	.	M.A. 1-109	3-460	Sphene	.	T.A. 4
3-39	Allanite	.	T.A. 4	3-462	"	.	T.A. 4
—	Grossular	.	T.A. 5	3-463	Glinkite	.	M.A. 2-212
—	Lithiophilite	.	M.A. 3-131	3-47	Idocrase	.	M.A. 2-180
—	Ti-augite	.	M.A. 1-394	—	Ramsayite (art.)	.	M.A. 3-168
—	Vogtite (art.)	.	M.M. 18-369	3-471	Olivine	.	M.A. 3-58
—	Augite	.	T.A. 6	3-476	Taramite	.	M.A. 3-109
3-391	Riebeckite	.	T.A. 2	3-477	Melanovanadite	.	M.A. 1-250
3-395	Grünerite	.	T.A. 5	3-48	Wöhlerite	.	M.A. 2-268
3-396	Allanite	.	T.A. 4	3-485	Epidote	.	M.A. 1-346
—	Grünerite	.	M.A. 1-253	3-487	Aegirine	.	M.A. 3-303

3-49	Chrysoberyl	M.A. 2-265	3-60	Sobralite	M.A. 1-253
3-490	Allanite	T.A. 4	3-608	Ellsworthite	M.A. 2-248
3-499	Aegirine	T.A. 2	3-61	Ytterocerite	M.A. 2-263
—	Sphene	M.A. 2-429	3-611	Grossular	T.A. 4
—	"	T.A. 6	3-620	Chrysoberyl (alexandrite)	
3-5	Dufrenite	T.A. 5			T.A. 2
3-50	Andradite	M.A. 3-207	3-63	Chalybite	T.A. 4
—	Hedenbergite	T.A. 3	3-633	"	T.A. 5
3-506	Grossular	T.A. 4	—	Hessonite	T.A. 4
3-507	Allanite	T.A. 4	3-637	Chrysoberyl	T.A. 4
—	Epidote	T.A. 4	3-64	Aurichalcite	M.A. 2-111
3-509	Sphene	T.A. 4	—	Jarosite	M.A. 2-113
3-510	Pyrope (calc.)	T.A. 4	—	Pyrope	T.A. 1
3-513	Diamond	M.A. 1-216	—	Sarcopside	M.A. 1-175
3-514	"	T.A. 1	3-645	Allanite	T.A. 4
3-516	Dannemorite	T.A. 6	3-65	Grossular	T.A. 5
3-518	Fermorite	M.M. 18-85	—	Hinsdalite	T.A. 2
—	Hornblende (barkevikite)	T.A. 5	3-658	Allanite	M.A. 2-236
3-52	Sphene	M.A. 1-379	3-660	Andradite	T.A. 4
—	Grossular	M.A. 2-396	3-666	Metabrukite (art.)	T.A. 4
3-525	"	T.A. 4	3-668	Rhodochrosite	M.A. 3-124
3-530	" (calc.)	T.A. 4	3-67	Alstonite	T.A. 1
3-531	Triphylite	M.A. 2-471	—	Meta-torbernite (art.)	M.M. 18-45
3-532	Sphene	T.A. 6	—	Tuyamunite	M.A. 2-404
3-536	Yttrifluorite	T.A. 2	3-68	Meta-torbernite	M.M. 19-44
3-537	Sphene	T.A. 4	—	Torbernite	M.A. 2-183
3-54	Ceruleofibrite = connellite	M.A. 2-10	3-681	Pyrope	M.A. 2-212
—	Olivine	T.A. 6	3-682	Spinel	T.A. 5
—	Sklodowskite	M.A. 2-341	3-683	Alkali-spinel	M.A. 2-185
—	"	M.A. 2-384	3-687	Chrysoberyl	T.A. 4
3-544	Diopside	T.A. 5	3-69	Andradite	M.M. 17-52
3-547	Topaz	M.A. 1-338	3-691	Rhodochrosite	M.A. 3-59
3-555	Aegirine (vanadiferous)	T.A. 4	3-693	Poecilitite	M.A. 1-423
—	Thortveitite	M.A. 1-172	3-695	Svabite	M.A. 3-364
—	Olivine (hyalosideritic)	T.A. 5	3-698	Rhodochrosite	M.A. 3-124
3-552	Rhodochrosite	M.A. 2-143	3-702	Chrysoberyl	T.A. 4
3-557	Yttrifluorite	T.A. 2	3-707	Alstonite	T.A. 1
3-558	Aegirine	T.A. 4	—	Chalybite	T.A. 5
3-56	Grossular	M.A. 2-119	3-71	Barytocalcite	T.A. 1
—	Olivine (hyalosideritic)	M.A. 1-109	—	Rhodochrosite	M.A. 2-46
3-561	Grünerite (calc.)	M.A. 3-153	3-715	Pyrope	T.A. 4
3-566	Thortveitite	T.A. 5	3-72	Picrotephroite	T.A. 5
3-568	Topaz	T.A. 5	—	Pyrope	T.A. 1
3-57	Thortveitite	M.A. 1-340	3-721	Poecilitite	M.A. 1-423
3-570	Rhodochrosite	M.A. 3-124	3-73	Chrysoberyl	T.A. 4
3-571	Thortveitite	T.A. 2	3-732	Aenigmatite	M.A. 2-264
3-578	Chapmanite	M.A. 2-336	3-74	Sklodowskite	M.A. 2-384
3-58	Grossular	M.A. 2-357	3-743	Rhodochrosite	T.A. 5
—	Pseudomalachite	M.A. 2-266	3-75	Betafite	T.A. 3
3-584	Triplite	M.A. 1-213	—	Chalybite	M.A. 3-358
3-59	Kyanite	M.A. 2-265	—	Dussertite	M.A. 2-419
—	"	M.A. 3-51	—	Pyrope	T.A. 1
—	Topaz	M.A. 3-27	—	Rhodolite	T.A. 4
3-593	Kyanite	M.A. 2-224	3-750	Andradite (calc.)	T.A. 4
3-596	Hessonite	M.A. 3-119	3-753	Staurolite	T.A. 4
3-60	Allanite	M.A. 3-9	3-757	Heterobrochantite	M.A. 3-270
—	Grossular	M.A. 1-9	3-758	Aenigmatite	M.A. 2-264
			3-759	Ellsworthite	M.A. 2-248
			3-759	Staurolite	T.A. 4

3.76	Tilasite . .	M.A. 2-412	3.95	Ilvaite . .	. T.A. 3
3.769	Atacamite . .	T.A. 2	—	Torbernite . .	M.A. 2-183
3.77	Almandine . .	M.A. 2-119	—	Tyuyamunite . .	M.A. 2-404
—	Tilasite . .	M.M. 16-95	3.951	Chalybite . .	. T.A. 5
3.771	Allanite . .	T.A. 4	3.96	” (calc.) . .	. T.A. 5
3.776	Staurolite . .	M.A. 2-224	3.960	Almandine . .	. T.A. 4
3.778	” . .	T.A. 4	3.965	” . .	. T.A. 6
3.78	Uranotile . .	M.A. 1-244	3.968	Brookite . .	. T.A. 4
3.780	Atacamite . .	T.A. 2	—	Celestine . .	. T.A. 4
3.781	Andradite . .	T.A. 4	3.97	Almandine . .	. T.A. 6
3.782	Almandine-pyrope . .	T.A. 6	—	Sapphire . .	M.A. 2-5
3.79	Tilasite . .	M.A. 2-412	—	Paredrite . .	M.A. 1-256
—	Triplite . .	T.A. 4	—	Ampangabeite . .	. T.A. 3
3.793	Chalybite . .	T.A. 5	3.977	Corundum (art.) . .	. T.A. 1
3.80	Almandine-pyrope . .	T.A. 4	3.98	Blende . .	. T.A. 3
—	Pyroxmangite . .	T.A. 4	—	Olivine (hortonolite)	
3.801	Demantoid . .	T.A. 4			M.M. 16-378
3.81	Hügbomite . .	M.A. 1-252	3.984	Almandine . .	. T.A. 6
—	Uvarovite . .	T.A. 1	3.988	Corundum (art.) . .	. T.A. 1
3.813	Chalybite . .	T.A. 5	3.99	Almandine . .	. T.A. 6
3.82	Almandine-pyrope . .	T.A. 4	3.991	Margarosanite . .	M.A. 1-18
—	Calcio-ancyllite . .	M.A. 2-263	4.0	Gadolinite . .	. T.A. 5
—	” . .	M.A. 2-407	4.00	Allanite . .	M.A. 3-274
3.824	Allanite . .	M.A. 3-268	—	Almandine . .	. T.A. 6
3.83	Almandine-pyrope . .	T.A. 6	—	Corundum (art.) . .	M.A. 3-191
—	Ferro-anthophyllite		4.000	Ilvaite . .	M.A. 3-307
		M.A. 1-253	4.01	Corundum (art.) . .	. T.A. 1
3.837	Rhodolite . .	T.A. 4	—	Hercynite . .	M.A. 3-353
3.84	Chalybite . .	M.A. 2-46	—	Kalkowskyn . .	M.A. 2-419
—	Torbernite . .	M.A. 2-183	4.02	Almandine . .	. T.A. 6
—	Celestine . .	M.A. 2-137	—	Gadolinite . .	. T.A. 5
3.841	Spinel . .	T.A. 5	4.025	Almandine . .	. T.A. 4
3.85	Andradite . .	M.A. 2-439	4.027	Barylite . .	M.A. 2-411
3.86	Garnet . .	M.A. 1-163	4.03	Corundum (art.) . .	M.A. 3-191
—	Zinco-rhodochrosite . .	T.A. 3	4.030	Blende . .	. T.A. 3
3.87	Allanite . .	T.A. 4	4.032	Pisekite . .	M.A. 2-336
—	Limonite . .	M.M. 18-343	4.033	Blende . .	M.A. 1-163
3.875	Triplite . .	T.A. 1	4.04	Chalmersite . .	M.A. 1-173
3.88	Almandine . .	M.A. 2-119	4.040	Almandine . .	. T.A. 4
—	Brochantite . .	M.A. 2-320	4.044	Tephroite . .	. T.A. 4
—	Chalybite . .	M.A. 1-15	4.048	Zircon . .	M.A. 3-55
—	Celestine . .	M.A. 2-137	4.058	Spessartine . .	. T.A. 4
3.882	Almandine-pyrope . .	T.A. 6	4.059	” . .	. T.A. 1
3.90	Allanite (Mg-orthite)		4.063	” . .	. T.A. 4
		M.A. 3-274	4.07	Blomstrandite . .	. T.A. 1
3.908	Garnet (melanite) . .	M.A. 2-212	4.076	Grossular . .	. T.A. 6
3.91	Fayalite (art.) . .	M.A. 3-167	4.079	Blende . .	. T.A. 3
—	Hodgkinsonite . .	T.A. 4	4.08	Paredrite . .	M.A. 1-256
3.917	Almandine . .	T.A. 6	4.087	Wurtzite (art.) . .	. T.A. 3
3.92	Celestine . .	T.A. 5	4.09	Blende . .	M.A. 2-110
3.924	Ampangabeite . .	T.A. 4	—	Lepidocrocite . .	. T.A. 5
—	Spinel . .	T.A. 4	—	Rosasite . .	M.A. 2-240
3.927	Chalybite . .	M.A. 3-59	—	Spessartine . .	M.A. 1-258
3.93	Ferropicotite . .	T.A. 5	4.090	Blende . .	. T.A. 3
3.935	Blende . .	T.A. 3	4.093	Almandine . .	. T.A. 4
3.94	Almandine . .	T.A. 6	4.1	Bolivianite . .	M.A. 3-112
—	Celestine . .	M.A. 2-137	—	Zircon (oyamalite) . .	M.A. 3-10
—	Chalybite . .	M.A. 3-46	4.10	Cornetite . .	M.M. 19-229
3.95	Almandine-pyrope . .	T.A. 4	4.102	Zircon (cyrtolite) . .	M.A. 2-236
—	Anatase . .	M.A. 2-358	4.104	Cuprozincite . .	M.A. 1-203

4·115	Mangan-almandine	M.A. 1-253	4·29	Ampangabeite	.	T.A. 3
4·118	Spessartine	. T.A. 4	4·298	Gadolinite.	.	M.A. 2-46
4·12	Ceylonite	M.M. 19-106	4·3	"	.	T.A. 5
—	Chalcopyrite	M.A. 2-110	—	Schafarzikite	.	M.A. 3-99
4·120	Ampangabeite	. T.A. 4	—	Zircon	.	M.A. 3-9
4·123	Rutile	. T.A. 4	—	Zirkelite	.	M.M. 16-310
—	Gadolinite.	. T.A. 4	4·30	Psilomelane	.	M.A. 1-379
4·13	Almandine	M.A. 3-23	—	Gadolinite.	.	T.A. 5
4·135	"	. T.A. 4	4·31	Hulsite	.	T.A. 1
4·137	Paraurichalcite	M.A. 1-203	4·32	Gadolinite.	.	T.A. 5
4·15	Allanite	M.A. 2-185	—	Mangan-fayalite	M.A. 1-253	
4·158	Spessartine	. T.A. 4	—	Zirkelite	.	16-313
4·163	Almandine	. T.A. 4	4·320	Parisite	.	T.A. 2
4·169	Spessartine	. T.A. 4	4·33	Almandine	.	T.A. 6
4·17	Betafite	. T.A. 3	—	Higginsite.	M.A. 1-122	
—	Blomstrandite	. T.A. 2	—	Hydrohaematite	M.A. 2-111	
—	"	. T.A. 1	4·35		M.M. 18-343	
—	Almandine-spessartine	T.A. 4	—	Spessartine	.	M.A. 3-208
4·173	Sarkinite	. M.A. 3-360	—	Tyuyamunite	.	M.A. 2-404
4·178	"	. M.A. 3-360	4·36	Gadolinite.	.	T.A. 4
4·18	Goethite	M.M. 18-347	4·37	Gahnite	.	T.A. 5
—	Paraurichalcite	. T.A. 5	—	Smithsonite	M.A. 2-111	
4·180	Spessartine (calc.)	. T.A. 4	4·39	Margarosanite	M.A. 1-19	
4·19	Barthite	. T.A. 4	—	Smithsonite	M.A. 2-111	
—	Smithsonite	M.A. 2-111	4·398	Zircon (bagatalite)	M.A. 3-10	
4·193	Goethite	. T.A. 4	4·4	"	M.A. 3-9	
4·2	Samarskite	. T.A. 2	—	Smithsonite (herrerite)	M.A. 2-111	
4·20	Dixenite	. M.A. 1-149	4·40		M.M. 16-313	
—	Allanite	. M.A. 1-251	—	Zirkelite	.	M.A. 2-567
—	Psilomelane	. M.A. 1-379	4·410	Smithsonite	.	M.A. 1-123
4·201	Paraurichalcite	M.A. 1-203	4·415	Chromohereynite	M.A. 2-236	
4·208	Gadolinite	M.A. 3-152	4·417	Hatchettolite	.	M.A. 1-24
4·21	Vonsenite	. T.A. 5	4·42	Villamaninite	M.M. 19-17	
4·22	Powellite	M.A. 2-113	4·43	"		
4·223	Gadolinite	. T.A. 4	4·433	Ilmenite	.	T.A. 2
4·227	Staszcicite	M.A. 2-52	4·44	Mendelyeevite	M.A. 2-147	
4·23	Almandine	M.A. 2-265	—	Gadolinite.	.	T.A. 5
—	Armangite	M.A. 1-124	4·45	Thalenite	M.A. 2-25	
—	Rutile (calc.)	M.A. 2-189	4·454	Germanite	.	M.A. 2-12
4·230	Spessartine	. T.A. 4	4·46	Zirkelite	M.A. 16-313	
4·234	Grossular	. T.A. 5	4·47	Gahnite	.	T.A. 4
4·239	Rutile	. T.A. 4	4·478	Goethite	.	T.A. 4
4·24	Fayalite	. T.A. 2	4·481	Ampangabeite	M.A. 3-114	
4·25	Mangan-fayalite	. T.A. 4	4·49	Enargite	M.A. 3-101	
4·250	Almandine (calc.)	. T.A. 4	4·50	Katoptrite	M.A. 1-19	
4·254	Grossular	. T.A. 5	4·5	Brannerite	M.A. 1-22	
4·255	Spessartine	. T.A. 4	—	Palmierite	M.A. 1-216	
4·26	Dysanalyte	. T.A. 4	4·50	Hatchettolite	M.A. 2-236	
4·272	Rutile	M.A. 2-568	4·509	Mendelyeevite	M.A. 2-147	
4·273	Spessartine	. T.A. 4	4·51	Villamaninite	M.A. 1-24	
4·276	Zircon	M.A. 3-356	4·52	"	M.M. 19-17	
4·277	Spessartine	. T.A. 4	4·523	Ilmenite	M.A. 2-188	
4·28	Fayalite	. T.A. 4	4·55	Xenotime?	M.A. 2-254	
—	Goethite	M.A. 1-143	—	Pyrrhotine	T.A. 1	
—	Gadolinite	. T.A. 5	—	Tennantite	T.A. 3	
4·285	Swedenborgite	M.A. 2-339	4·56	Zircon	T.A. 4	
4·29	Sr-Baryte	M.A. 1-356	—	Germanite	T.A. 6	
—	Manganite	M.A. 1-124	4·576			
—	Smithsonite	M.A. 2-111	4·583			
—	Witherite	M.A. 2-111	4·59			

4.594	Euxenite . . .	T.A. 4	4.736	Tetrahedrite . . .	T.A. 1
4.597	Tetrahedrite . . .	T.A. 1	4.738	Boleite (cumengeite) . . .	T.A. 1
4.6	Gadolinite. . .	T.A. 5	4.74	Tetrahedrite . . .	T.A. 5
—	Hetaerolite . . .	T.A. 4	4.740	Zirkelite . . .	M.M. 16-313
—	Zirkelite . . .	M.M. 16-310	4.741	Tennantite . . .	T.A. 1
4.60	Pseudobrookite . . .	M.A. 3-251	4.746	Pyrolusite . . .	M.A. 1-413
4.602	Gahnite . . .	T.A. 4	4.748	Zircon . . .	M.A. 3-55
4.609	Marcasite . . .	T.A. 2	—	Ilmenite . . .	M.A. 2-224
4.61	Tennantite . . .	M.M. 15-387	4.75	Boleite (cumengeite) . . .	T.A. 5
—	" . . .	M.A. 1-150	—	Mendelyeovite . . .	T.A. 6
4.619	Zircon . . .	M.A. 3-356	4.751	Ilmenite . . .	M.A. 2-224
4.62	Baryte (plumbiferous)	M.M. 19-74	4.754	Euxenite . . .	T.A. 4
—	Bravoite . . .	M.A. 3-154	4.76	Mendelyeovite . . .	M.A. 2-147
—	Molybdenite . . .	T.A. 4	4.766	" . . .	T.A. 6
4.627	Sodelite . . .	M.A. 1-377	4.769	Tetrahedrite . . .	T.A. 1
4.63	Zircon . . .	M.M. 21-176	4.77	Cumengeite . . .	M.A. 1-76
4.637	" . . .	M.A. 3-356	—	FeTiO ₃ (calc.) . . .	M.A. 2-189
4.638	Pentlandite . . .	T.A. 4	4.778	Loparite . . .	M.A. 3-236
4.64	Tetrahedrite . . .	M.A. 2-432	4.779	Hausmannite . . .	M.A. 1-47
4.644	Zircon . . .	M.A. 2-137	4.78	Tetrahedrite . . .	T.A. 1
—	Ampangabeite . . .	T.A. 4	—	Tetrahedrite . . .	M.A. 2-110
4.65	Covellite (art.) . . .	M.A. 2-20	4.780	" . . .	T.A. 1
4.650	Euxenite . . .	T.A. 4	4.794	Dewindtite . . .	M.A. 1-377
4.651	Stibnite . . .	M.A. 2-562	4.8	Lubeckite . . .	M.A. 2-52
—	Tetrahedrite . . .	T.A. 1	—	Boleite . . .	M.A. 1-76
4.652	Covellite . . .	T.A. 4	4.802	Euxenite . . .	M.A. 2-407
—	Zircon . . .	M.A. 2-137	4.81	Linnaeite . . .	M.A. 2-342
—	" . . .	M.A. 3-356	4.82	Greenockite (art.) . . .	T.A. 3
4.654	Stibnite . . .	M.A. 3-208	4.820	Hausmannite . . .	M.A. 1-47
4.67	Troilite . . .	M.A. 2-43	4.836	Hetaerolite . . .	T.A. 1
4.671	Zircon . . .	M.A. 3-356	4.85	Linnaeite . . .	M.A. 2-183
4.676	Covellite . . .	T.A. 4	—	Ilmenite . . .	T.A. 1
4.679	Zircon . . .	M.A. 3-356	4.86	Euxenite . . .	T.A. 1
4.68	Covellite . . .	M.A. 2-20	4.862	Tetrahedrite . . .	T.A. 1
—	Tetrahedrite . . .	T.A. 1	4.87	Marcasite . . .	T.A. 2
4.680	Zircon . . .	M.A. 3-356	4.879	Blomstrandine . . .	M.A. 2-408
4.682	" . . .	M.A. 2-288	4.88	Boleite (cumengeite) . . .	T.A. 5
—	" . . .	M.A. 3-356	—	Pyrolusite . . .	T.A. 5
4.683	Covellite . . .	T.A. 4	4.885	Marcasite . . .	T.A. 3
4.686	Zircon (heated) . . .	T.A. 4	4.887	Tetrahedrite . . .	M.A. 1-337
4.69	Ilmenite . . .	T.A. 4	4.888	Strüverite . . .	T.A. 3
—	Zircon . . .	M.A. 2-288	4.89	Mackensite . . .	M.A. 1-255
—	" . . .	M.A. 3-296	4.895	Euxenite . . .	T.A. 2
4.692	Tennantite (julianite) . . .	T.A. 1	4.897	Tetrahedrite . . .	M.A. 1-337
—	Zircon . . .	M.A. 3-356	4.91	Strüverite . . .	T.A. 3
4.7	Hydrohaematite . . .	T.A. 5	4.94	Törnebohmite . . .	M.A. 1-251
4.700	Tennantite (miedziankite)	M.A. 3-233	4.948	Bastnäsite . . .	T.A. 3
—	" . . .	M.A. 3-356	4.95	CaNb ₂ O ₆ (calc.) . . .	M.M. 18-119
4.702	Zircon . . .	M.A. 3-356	4.964	Weslisenite . . .	T.A. 6
4.707	" . . .	M.A. 3-356	4.965	Cobalt-pyrite . . .	M.A. 2-339
4.710	Euxenite . . .	T.A. 4	4.967	Becquerelite . . .	T.A. 6
—	Ilmenite . . .	T.A. 4	—	Magnetite . . .	T.A. 4
4.711	Euxenite . . .	T.A. 4	—	Weslisenite . . .	M.A. 2-253
4.716	Cobalt-nickel-pyrite . . .	T.A. 4	4.970	Pyrite . . .	T.A. 2
4.72	Zirkelite . . .	M.M. 16-310	4.971	Weslisenite . . .	T.A. 6
4.720	Zircon . . .	M.A. 3-356	4.972	Crednerite . . .	M.M. 20-87
4.722	" . . .	M.A. 3-356	4.977	Boleite . . .	M.A. 1-76
—	Euxenite . . .	T.A. 4	4.98	Fergusonite . . .	M.A. 2-233
4.73	Loparite . . .	M.A. 3-275	4.99	Euxenite . . .	M.A. 1-73

5.0	Samarskite	.	T.A. 2	5.36	Eichbergite	.	T.A. 2
—	Zirkelite	.	M.M. 16-313	—	Miargyrite (art.)	.	T.A. 3
5.00	Blomstrandine	.	T.A. 1	5.364	Manganosite	.	T.A. 1
5.027	Pyrite	.	T.A. 3	5.37	Columbite	.	T.A. 5
5.03	Crednerite	.	M.M. 20-88	5.377	Pyrobelonite	.	M.A. 1-124
—	Stasite	.	M.A. 1-377	5.4	Pufahlite	.	M.A. 2-520
5.036	Strüverite	.	T.A. 4	5.40	Samarskite	.	M.A. 2-408
5.037	Bornite	.	M.A. 1-341	5.41	Columbite	.	T.A. 5
5.041	Toddite	.	M.A. 3-271	—	Schneeburgite	.	T.A. 4
5.044	Romeite	.	T.A. 4	5.42	Columbite	.	T.A. 5
5.061	Bornite	.	T.A. 4	5.421	“	.	T.A. 5
5.064	”	.	T.A. 4	5.43	Samarskite	.	M.A. 2-406
5.074	Romeite	.	T.A. 4	—	Brannerite	.	M.A. 1-22
5.079	Bornite	.	T.A. 4	5.431	Columbite	.	T.A. 6
—	Tetrahedrite	.	T.A. 1	5.44	“	.	T.A. 5
5.08	Gummite	.	M.A. 1-415	—	Parabayldonite	.	T.A. 5
5.086	Bornite	.	T.A. 4	—	Seligmannite	.	M.M. 15-386
5.09	Franklinite	.	T.A. 1	5.447	Aramayoite	.	M.A. 3-269
5.1	Zirkelite	.	M.M. 16-313	5.453	Rathite?	.	M.M. 18-362
5.103	Bornite	.	M.A. 1-341	5.47	Plagionite (art.)	.	T.A. 3
5.11	Monazite	.	T.A. 3	5.48	Columbite	.	T.A. 5
5.147	Columbite	.	T.A. 6	—	Seligmannite	.	M.M. 15-386
5.155	Boleite	.	M.A. 1-76	5.49	Berthonite	.	M.A. 2-149
5.162	Monazite	.	M.A. 1-333	5.496	Columbite	.	T.A. 5
5.165	Trevorite	.	M.A. 2-249	5.5	Bornite	.	M.A. 1-250
5.169	Pyrite	.	T.A. 2	—	Cuproplumbite	.	T.A. 5
5.17	Monazite	.	T.A. 4	5.50	Bayldonite	.	T.A. 5
—	”	.	M.A. 2-36	—	Samarskite	.	T.A. 5
5.173	Haematite	.	T.A. 4	—	“	.	M.A. 2-406
5.18	Ilmenorutile	.	M.A. 2-405	5.502	Cuproplumbite	.	T.A. 5
—	MnNb ₂ O ₆ (calc.)	M.M. 18-119	5.504	Parabayldonite	.	T.A. 5	
5.2	Monazite	.	M.A. 1-173	5.51	Chalcosine	.	T.A. 4
—	Zirkelite	.	M.M. 16-313	—	Proustite (art.)	.	T.A. 3
5.20	Mossite (calc.)	M.M. 18-119	5.512	Parabayldonite	.	T.A. 5	
—	Columbite	.	M.A. 2-473	5.517	Magnetoplumbite	.	M.A. 3-5
5.201	”	.	M.A. 2-192	5.52	Columbite	.	T.A. 3
5.21	Bayldonite	.	T.A. 5	—	“	.	T.A. 5
—	Keeleyite	.	M.A. 2-11	—	“	.	M.A. 1-173
5.22	Zirkelite	.	M.M. 16-310	5.54	Plagionite	.	T.A. 3
5.23	Linarite	.	T.A. 2	5.563	Columbite	.	T.A. 6
5.24	Monazite	.	T.A. 4	5.576	Ganomalite	.	T.A. 5
—	Samiresite	.	T.A. 3	5.58	Fergusonite	.	T.A. 2
5.25	Ambatoarinitie	M.A. 1-148	5.59	Columbite	.	M.A. 2-36	
—	Monazite	.	T.A. 4	5.590	Chalcosine	.	T.A. 4
—	Strüverite	.	T.A. 2	5.594	“	.	T.A. 4
5.261	Haematite	.	T.A. 4	5.60	Proustite	.	T.A. 4
5.262	”	.	T.A. 2	5.602	Aramayoite	.	M.M. 21-161
5.273	Columbite	.	T.A. 4	5.613	Columbite	.	T.A. 6
—	Monazite	.	T.A. 4	5.62	Jamesonite	.	T.A. 3
5.28	Columbite	.	T.A. 5	5.63	Microlite	.	M.A. 1-73
—	”	.	M.A. 1-173	5.636	Arsenic	.	M.M. 20-301
5.29	Cesarolite	.	M.A. 1-201	5.685	Schoepite	.	M.A. 2-384
5.3	Columbite	.	T.A. 5	5.694	Chalcosine	.	T.A. 4
5.30	Fergusonite	M.A. 8-10	5.70	—	Arseno-bismite	.	M.A. 1-255
—	”	M.A. 3-268	—	Samarskite	.	M.A. 2-406	
—	Strüverite	M.M. 16-225	—	Columbite	.	M.A. 3-284	
—	Vrbaite	.	T.A. 3	5.703	Chalcosine	.	T.A. 4
5.31	Monazite	.	T.A. 4	5.73	Fluocerite	.	M.A. 1-258
—	Samarskite	M.A. 2-406	5.774	Chalcosine	.	T.A. 4	
5.35	Bismutoplagionite	M.A. 1-75	5.78	Arsenic	.	M.A. 3-145	

5.78	Fergusonite	M.A. 2-405	6.519	Skutterudite	M.A. 3-305
5.781	Chalcosine	T.A. 4	6.527	Naumannite	M.A. 1-144
5.783	"	T.A. 4	6.53	Barysilite	M.A. 1-48
5.785	(art.)	M.A. 2-19	6.535	Kobellite	T.A. 4
5.790	Pyrargyrite (art.)	T.A. 3	6.54	Cannizzarite	M.A. 3-10
5.80	Allemontite	M.A. 1 356	—	Cerussite	M.A. 2-111
5.81	Bournonite	T.A. 4	6.55	Bismuthinite	M.A. 2-562
5.829	"	M.A. 1-423	—	Cosalite	M.A. 1-298
5.84	Semseyite	M.M. 18-858	6.70	Ullmannite	T.A. 1
5.87	Eschwegeite	M.A. 3-113	6.706	Barysilite	M.A. 1-48
5.88	Mispickel	M.A. 1-423	6.725	Columbite	T.A. 5
5.9	Scheelite	M.A. 3-140	6.73	Bismuthinite	M.A. 1-77
5.90	Mottramite	M.A. 1-150	6.734	Rammelsbergite	M.A. 3-305
5.92	Allemontite	T.A. 5	6.76	Cosalite	M.A. 1-293
5.93	Mottramite	M.A. 1-150	6.763	Chloroxiphite	M.M. 20-76
5.943	Schultenite	M.M. 21-155	6.781	Cassiterite	M.M. 16-119
5.96	Gersdorffite	T.A. 5	6.786	Hydrocerussite	M.M. 20-85
5.962	Kasolite	M.A. 1-249	6.79	Skutterudite	M.A. 1-356
6.00	Descloizite	M.A. 1-144	6.80	Cosalite	M.A. 1-293
6.02	Hydrocerussite	M.A. 2-111	—	Hydrocerussite	M.M. 20-84
6.026	Ultrabasite	M.A. 1-149	6.842	Quenselite	M.A. 3-110
6.04	Samarskite	M.A. 2-406	6.845	Columbite	T.A. 5
6.046	Fourmarierite	M.A. 2-343	6.913	Cassiterite	M.A. 1-144
6.05	Allemontite	T.A. 5	6.93	Penroseite	M.A. 3-112
—	Semseyite	M.A. 3-8	—	Wolframite	M.A. 2-113
6.07	Cosalite	M.A. 1-259	6.94	Cosalite	M.A. 1-259
—	Wolframite	M.A. 2-113	6.954	Tantalite	T.A. 5
6.08	Phosgenite	M.A. 2-475	6.96	Gladite	M.A. 2-340
6.1	Mispickel	M.A. 1-336	6.98	Mimetite	M.A. 1-150
6.12	Phosgenite	M.A. 3 29	7.0	Rammelsbergite	M.A. 1 410
6.127	Stromeyerite	M.A. 2-470	7.01	Lindströmite	M.A. 2-840
6.14	Cocinerite	M.A. 1 18	7.019	Tantalite	T.A. 5
—	Mispickel	M.A. 1-337	7.02	Rammelsbergite	T.A. 5
6.15	Gersdorffite	M.A. 1 330	7.04	Galenobismutite	M.A. 2-339
6.19	Duftite	M.A. 1-150	7.05	Pyromorphite	T.A. 4
—	Cuprodescloizite	M.A. 1-150	7.062	Tantalite	M.A. 1-73
6.2	Ishikawaite	M.A. 2 9	7.07	Matildite	T.A. 5
6.23	Alaskaite	M.A. 3-272	—	Pyromorphite	T.A. 4
—	Parsonsite	M.A. 2-50	—	Wolframite	M.A. 2-113
—	Columbite	M.A. 3-284	7.08	Finnemanite	M.A. 2-147
6.24	Phosgenite	M.A. 2-111	—	Pyromorphite	T.A. 4
6.26	Stromeyerite	M.A. 2-110	7.09	Lillianite	M.A. 1-259
6.260	"	M.A. 2-519	—	Pyromorphite	T.A. 4
6.274	Boulangerite (mullanite)	M.A. 1-151	—	Wolframite (hübnnerite)	T.A. 4
6.303	Epiboulangerite	M.A. 1-150	7.10	Pyromorphite	T.A. 4
6.34	Allemontite	M.A. 1-356	—	Wolframite	M.A. 3-305
6.350	Anglesite	T.A. 4	7.11	Pyromorphite	T.A. 4
6.4	Ishikawaite	M.A. 2-9	7.12	"	T.A. 4
6.407	Boulangerite (mullanite)	M.A. 1-151	—	Wittite	M.A. 2-340
6.412	Diaboleite	M.M. 20-79	7.124	Galenobismutite	M.A. 2-339
6.43	Meneghinite	T.A. 1	7.126	Pyromorphite	M.A. 3-310
6.444	Columbite	T.A. 5	7.13	Pitchblende	M.A. 2-182
6.451	Jordanite (reniforite)	M.A. 3-114	7.14	Cosalite	M.A. 3-8
6.46	Cerussite	M.A. 2-111	7.15	Lillianite	T.A. 1
—	Vanadinite	M.A. 1-295	—	Mimetite	M.A. 2-841
6.5	Tantalite	T.A. 5	7.162	Se-chivatite	T.A. 4
6.50	Manganotantalite	M.A. 1-80	7.163	Wolframite	M.A. 3-7
			7.180	Wartshite	T.A. 5
			7.186	Tantalite	M.A. 3-810
				Mimetite	

7.190	Tapiolite . . .	T.A. 5	7.81	Maucherite . . .	T.A. 4
7.192	Curite . . .	M.A. 1-249	7.83	" . . .	T.A. 4
7.2	Wolframite . . .	M.A. 3-140	7.839	Tapiolite . . .	M.M. 18-117
7.22	Löllingite . . .	T.A. 5	7.84	" . . .	M.M. 18-116
7.23	Metacinnabarite (leviglianite)	M.A. 3-206	7.875	" . . .	M.M. 18-117
—	Wolframite . . .	M.A. 3-155	7.878	Tantalite . . .	T.A. 5
7.235	Argentite . . .	T.A. 6	7.88	Ixiolite (calc.) .	M.M. 18-119
7.240	Mendipite . . .	M.M. 20-74	7.90	Tapiolite (calc.) .	M.M. 18-119
7.265	Finnemanite . . .	M.A. 2-147	7.901	Maucherite . . .	T.A. 4
7.272	Wolframite . . .	T.A. 4	7.907	Tapiolite . . .	M.M. 18-117
7.275	Löllingite . . .	T.A. 5	7.91	" . . .	M.M. 18-116
7.29	Goongarrite . . .	M.A. 2-336	7.952	Chubutite . . .	M.A. 1-121
7.30	Galena . . .	M.A. 2-110	7.975	Tantalite . . .	M.A. 2-192
—	Tantalite . . .	T.A. 5	—	Kleinite . . .	T.A. 1
7.301	" . . .	M.A. 1-73	7.98	Platynite . . .	T.A. 1
7.33	Löllingite . . .	T.A. 5	7.987	Kleinite . . .	T.A. 1
7.36	Tapiolite . . .	M.M. 18-115	8.00	Hessite . . .	M.A. 3-264
7.39	Galena . . .	M.A. 2-110	8.20	Tantalite . . .	M.A. 2-473
—	Lorettoite . . .	M.A. 1-120	8.28	Trigonite . . .	M.A. 1-149
—	Schwartzembergite . . .	T.A. 2	8.33	Silver (cupriferous) .	M.A. 2-110
7.4	Tapiolite . . .	T.A. 5	8.61	Massicot . . .	T.A. 4
7.40	Argentite . . .	T.A. 4	8.62	Copper . . .	M.A. 2-110
7.44	Tapiolite . . .	M.M. 18-114	8.723	Terlinguaite . . .	T.A. 1
7.45	" . . .	M.M. 18-115	8.728	" . . .	T.A. 1
7.46	" . . .	M.M. 18-114	8.735	Petzite . . .	M.A. 3-264
7.48	Tantalite . . .	T.A. 5	8.80	Copper . . .	M.A. 2-110
7.49	Wolframite . . .	M.A. 3-155	9.082	Uraninite . . .	M.A. 2-409
7.50	Galena . . .	M.A. 2-110	9.182	" . . .	M.A. 3-106
7.510	Empressite . . .	T.A. 4	9.33	Thorianite . . .	T.A. 4
7.52	Tapiolite . . .	M.M. 18-114	9.660	Uraninite . . .	M.A. 3-106
7.53	Petzite . . .	M.A. 3-305	9.787	" . . .	M.A. 3-106
7.55	Galena . . .	M.A. 2-110	9.83	Silver . . .	M.A. 2-110
7.6	Oruetite . . .	M.A. 1-201	10.58	Sperrylite . . .	M.M. 21-95
7.65	Lorettoite . . .	M.A. 1-120	10.73	" . . .	M.A. 2-138
—	CaTa ₂ O ₆ (calc.)	M.M. 18-119	11.2	Tantalum . . .	T.A. 1
7.688	Joseite . . .	M.A. 1-420	11.273	Lead . . .	M.A. 1-103
7.69	Tapiolite . . .	M.M. 18-111	13.33	Pd-amalgam . . .	M.A. 3-4
7.73	Maucherite . . .	T.A. 4	14.68	Gold (electrum) .	M.A. 2-110
7.746	Awaruite . . .	T.A. 2	15.82	Pd-amalgam . . .	M.A. 3-4
7.793	Joseite . . .	M.A. 1-420	15.96	Gold (electrum) .	M.A. 2-110
7.794	Tantalite . . .	T.A. 5	16.4	Platinum . . .	M.A. 2-441
7.80	Maucherite . . .	T.A. 4	18.35	" . . .	M.A. 2-442
			19.0	" . . .	M.A. 2-441

Alphabetical List of Minerals giving the minimum and maximum recorded values of specific gravity.

Acmite-augite, 3.26-3.42	Ardunite, 2.26	Bornite, 5.087-5.5
Actinolite, 2.918-3.079	Argentite, 7.235-7.40	Boulangerite, 6.274-6.407
Aegirine, 3.3-3.558	Armangite, 4.23	Bournonite, 5.81-5.829
Aenigmatite, 3.732-3.758	Arsenic, 5.636-5.78	Brannerite, 4.5-5.43
Afwillite, 2.619-2.630	Arseno-bismite, 5.70	Bravoite, 4.62
Ajkaite, 1.541	Asbestos, amphibole-, 2.97	Brochantite, 3.88
Åkermanite, 2.944-2.980	Asbolane, 2.985	Bronzite, 3.208-3.338
Akrochordite, 3.194	Ascharite, 2.69	Brookite, 3.968
Alaskaite, 6.23	Atacamite, 3.769-3.780	Brucite, 2.38-2.39
Albite, 2.603-2.688	Augite, 3.242-3.44	Buttgenbachite, 3.33
Allanite, 2.50-4.20	— titan-, 3.29-3.39	Calcio-thomsonite, 2.405
Allemontite, 5.80-6.34	Aurichalcite, 3.274-3.64	Calcite, 2.699-2.82
Allophane, 1.88-1.94	Autunite, 3.198	Camsellite, 2.60
Almandine, 3.77-4.33	Avogadrite, 2.498-2.617	Cancrinite, 2.41-2.47
Almandine-pyrope, 3.80-3.95	Awaruite, 7.746	Cannizzarite, 6.54
Alstonite, 3.67-3.707	Axinite, 3.22-3.314	Carnegeite, 2.513
Alunite, 2.63-2.726	Bababudanite, 3.18	Cassiterite, 6.718-6.913
Alunogen, 1.718-1.735	Babingtonite, 3.351-3.398	Catapleiite, α , 2.658
Ambatoarinite, 5.25	Bardolite, 2.470	Cebollite, 2.96
Amblygonite, 2.989-3.101	Barkevikitie, 3.298-3.518	Celestine, 3.84-3.968
Amesite, 2.77	Barthite, 4.19	Centralitasite, 2.51
Ampangabeite, 3.348-4.644	Barylite, 4.027	Cerussite, 6.46-6.54
Analcime, 2.2-2.285	Barysilite, 6.53-6.706	Cesarolite, 5.29
Anatase, 3.95	Baryte (Sr-), 4.29	Ceylonite, 4.12
Anauxite, 2.524	Barytocalcite, 3.71	Chabazite, 2.09-2.168
Ancylite, calcio-, 3.82	Bassettite, 3.10	Chalcedony, 2.55-2.63
Andalusite, 3.118-3.29	Bastnasite, 4.948	Chalcoalumite, 2.29
Andesine, 2.663-2.675	Bauxite, 2.4-2.5	Chalcopyrite, 4.12
Andradite, 3.50-3.85	Bavalite, 3.20	Chalcosine, 5.51-5.785
Anemousite, 2.684	Bayldonite, 5.21-5.50	Chalmersite, 4.04
Anglesite, 6.350	Bazzite, 2.80	Chalybite, 3.63-3.96
Anhydrite, 2.981	Beequerelite, 4.967	Chapmanite, 3.578
Ankerite, 2.99-3.19	Bementite, 3.106	Chiolite, 2.995-3.005
Annabergite, 2.907	Bentonite, 2.44-2.78	Chiviatite, 7.15
Anorthite, 2.703-2.763	Beraunitite, 2.850-2.99	Chlorite, 2.386-2.396
Anorthoclase, 2.584-2.63	Berthonite, 5.49	Chloritoid, 3.45
Anthophyllite, 2.95-3.138	Bertrandite, 2.59-2.604	Chloromelanite, 3.365
— ferro-, 3.24-3.83	Beryl, 2.545-2.910	Chlorophaeite, 1.81
Anthraxolite, 1.845	Betafite, 3.75-4.17	Chloroxiphite, 6.763
Antigorite, 2.613	Biotite, 2.692-3.16	Chondrodite, 3.175
Apatite, 3.151-3.270	Bismuthinite, 6.55-6.73	Chromohercynite, 4.415
— chlor-, 3.14-3.20	Bismutoplagonite, 5.35	Chrysoberyl, 3.49-3.73
— fluor-, 3.18-3.206	Blende, 3.935-4.09	Chrysocolla, 2.400-2.417
— mangan-, 3.257	Bloodite, 2.32	Chrysotile, 2.457-2.57
— sulphate-, 3.196-3.207	Blomstrandine, 4.88-5.00	Chubutite, 7.952
Aphrosiderite, 2.959	Blomstrandite, 4.7-4.17	Clinochlore, 2.657-2.787
Aphthelite, 2.7	Boleite, 4.74-5.155	Clinozoisite, 3.212-3.366
Apophyllite, 2.823-2.379	Bolivarite, 2.05	Clintonite, 3.093
Aragonite, 2.861-3.15	Bolivianite, 4.1	Cobalt-nickel-pyrite, 4.716
Arakawaite, 3.09	Boothite, 2.02	Cobalt-pyrite, 4.965
Aramayite, 5.447-5.602	Boracite, 2.89-2.91	Cocinerite, 6.14

Colerainite, 2·51	Eckmannite, 2·671	Germanite, 4·46-4·59
Collophane, 2·6-2·9	Ektropite, 2·46	Gersdorffite, 5·96-6·15
Columbite, 5·147-6·845	Ellsworthite, 3·608-3·758	Gillespite, 3·33
Connellite, 3·54	Elpidite, titan-,	Gladite, 6·96
Copiapite, 2·087	2·533-2·560	Glaucochroite, 2·216
Copper, 8·62-8·80	Emerald, 2·648-2·709	Glauconite, 2·70-2·82
Cordierite, 2·571-2·660	Empressite, 7·510	Glinkite, 3·463
Cornetite, 4·10	Enargite, 4·49-4·55	Gmelinite, 2·045-2·135
Corundophyllite, 2·881	Enstatite, 3·254-3·303	Goethite, 4·18-4·481
Corundum, 3·97-4·03	Epiboulangerite, 6·303	Gold (electrum),
— β -, 3·80	Epichlorite, 2·52	14·68-15·96
Cosalite, 6·07-7·13	Epidesmine, 2·152-2·16	Goongarrite, 7·29
Couzermanite, 2·625	Epidote, 3·187-3·507	Graphite, 2·216
Covellite, 4·65-4·683	Epinatrolite, 2·235-2·24	Greenockite, 4·820
Crednerite, 4·972-5·03	Erythrite, 3·149	Griffithite, 2·309
Creelite, 2·718-2·730	Eschwegeite, 5·87	Grodnolite, 2·974
Crestmoreite, 2·22	Euclase, 3·05-3·09	Grossular, 3·226-4·254
Cristobalite, 2·32-2·36	Eucelite, 2·97	Grothine, 3·079-3·090
Crocidolite, 3·20	Eucryptite, 2·667	Grünerite, 3·311-3·561
Cryolithonite, 2·774	— pseudo-, 2·365	Guarinite, 3·31
Cryptohalite, 2·004	Eudialyte, 2·84-2·86	Gummite, 5·08
Cumengeite, 4·74-4·88	Euxenite, 4·594-4·99	Gypsum, 2·32
Cummingtonite, 3·23	Evansite, 1·924-1·929	Gyrolite, 2·35-2·40
Cuprodесcloizite, 6·19	Fassaite, 3·308	Haematite, 5·173-5·262
Cuproplumbite, 5·5-5·502	Fayalite, 3·91-4·28	Halite, 2·166
Cuprozincite, 4·104	— mangan-, 4·32	Halloysite, 2·44-2·714
Curite, 7·192	Fergusonite, 4·98 5·78	Halotrichite, 1·807-1·899
Curtisite, 1·21	Fermorite, 3·518	Hambergite, 2·36
Cuspидine, 2·965-2·989	Ferrazite, 3·0-3·3	Harmotomite, 2·350-2·365
Custerite, 2·91	Ferrierite, 2·150	Hastingsite, 3·16-3·426
Dahllite, 3·00-3·094	Ferrimolybdate, 2·99	Hatchettolite, 4·417-4·509
Damourite, 2·872	Ferrisymplesite, 2·885	Hausmannite, 4·778-4·836
Danburite, 2·93-2·974	Feronatrite, 2·6	Hedenbergite, 3·50
Dannemomite, 3·516	Ferropicotite, 3·93	Helvine, 3·289
Datolite, 2·993-3·001	Fibroferrite, 1·901-2·09	Hercynite, 4·01
Davyne, 2·34-2·492	Fibrolite, 3·10-3·266	Hessite, 8·00
Delvauxite, 1·815-1·999	Finnemanite, 7·08-7·265	Hessonite, 3·596-3·633
Demantoid, 3·801	Flagstaffite, 1·092	Hetaerolite, 4·6-4·85
Descloizite, 6·00	Flint, 2·61-2·63	Heterobrochantite, 3·757
Destinezite, 2·105	Fluoborate, 2·89	Heterogenite, 3·128
Dewindtitite, 4·8	Fluocerite, 5·73	Heulandite, 2·16-2·249
Diabantite, 2·77-2·79	Fluorite, 2·97-3·201	Hewettite, 2·554
Diaboleite, 6·412	Fluosiderite, 3·13	Hexahydrite, 1·757
Diamond, 3·513-3·514	Forsterite, 3·216-3·268	Hibbenite, 3·213
Diaspore, 3·385	Foshagite, 2·36	Higginsite, 4·33
Diopside, 3·037-3·544	Fourmarierite, 6·046	Hinsdalite, 3·65
— jadeite, 3·270-3·330	Franklinite, 5·09	Hisingerite, 2·50
— chrome-, 3·337	Gadolinite, 4·0-4·6	Hodgkinsonite, 3·91
— fluor-, 3·236	Gahnite, 4·478-4·602	Hoelite, 1·43
Dioprase, 3·296-3·318	Gajite, 2·619	Högbonite, 3·81
Dixenite, 4·20	Galena, 7·30-7·55	Hopeite, 3·03
Dolomite, 2·829-2·993	'Galénobismutite,	Hornblende, 3·13-3·518
Dufrenite, 3·5	7·04-7·12	Hörnesite, 2·57
Duftite, 6·19	Ganomalite, 5·576	Hortonolite, 3·98
Dumortierite, 3·30-3·36	Gearksutite, 2·710-2·768	Hulsite, 4·31
Dussertite, 3·75	Gedrite, 3·240	Humboldtilite, 2·92-2·975
Dysanalyte, 4·26	Gehlenite, 2·969-3·039	Huronite, 2·819
Eakleite, 2·685-2·705	Gerhardtite, 3·84-3·46	Hyalophane, 2·90
Eichbergite, 5·36		Hydrocerussite, 6·02-6·80

Hydrogibbertite, 2.152	Lepidomelane, 3.151-3.294	Mimeticite, 6.98-7.186
Hydrohaematite, 4.33-4.7		Minguetite, 2.86
Hydromagnesite, 2.152-2.16	Leuchtenbergite, 2.648-2.735	Mispickel, 5.88-6.14
Hydronephelite, 2.40-2.46	Leucite, 2.48-2.51	Mizzonite, 2.60
Hydrophlogopite, 2.783	Lillianite, 7.09-7.14	Molybdenite, 4.62
Hypersthene, 3.36-3.415	Limnite, 2.8	Monazite, 5.11-5.31
Iddingsite, 2.54-2.80	Limonite, 3.87	Monetite, 2.863
Idocrase, 3.32-3.47	Linarite, 5.23	Montebrasite, 3.008
Ilmenite, 4.44-4.86	Lindströmite, 7.01	Monticellite, 3.04-3.20
Ilmenorutile, 5.18	Linnaeite, 4.82-4.85	Mordenite, 2.125-2.193
Ilvaite, 3.95-4.00	Lithidionite, 2.56	Mossite, 5.20
Imerinitite, 3.02	Lithionite, 2.972	Mottramite, 5.90-5.93
Inesite, 3.029-3.03	Lithiophilite, 3.39	Muscovite, 2.797-2.891
Inyoite, 1.875	Lithomarge, 2.54-2.55	Myeline, 2.714
Ishikawaite, 6.2-6.4	Löllingite, 7.22-7.23	Natramblygonite, 3.01-3.06
Ixiolite, 7.88	Loparite, 4.73-4.77	Natrojarosite, 3.11
Jadeite, 3.335	Lorettoite, 7.39-7.65	Natrolite, 2.183-2.248
Jamesonite, 5.62	Lovchorrite, 3.32	Naumannite, 6.527
Jarosite, 3.17-3.64	Löweite, 2.374	Neotocite, 2.5
Jefferisite, 2.38	Lubeckite, 4.8	Nepheline, 2.528-2.664
Johannite, 3.307	Lublinite, 2.65	Nephrite, 2.938-3.06
Johnstrupite, 3.17	Lucinite, 2.52-2.53	Neptunite, mangan-, 3.203
Jordanite, 6.451	Ludlamite, 3.19	Nocerite, 2.96
Joseite, 7.688-7.793	Mackensite, 4.89	Nontromite, 2.29-2.295
Jurupaite, 2.75	Magnalite, 2.34	Norbergite, 3.13-3.15
Justite, 2.98-3.24	Magnesite, 2.95-3.12	Okenite, 2.206-2.332
Kainite, 2.132	Magnetite, 4.967	Oligoclase, 2.612-2.672
Kaliophilitite, 2.56-2.61	Magnetoplumbite, 5.517	— potash-, 2.615-2.625
Kalkowskyn, 4.01	Manganite, 4.29	Olivine, 3.301-3.56
Kämmererite, 2.59-2.67	Manganolangbeinite, 3.02-3.03	— calc-, 3.190-3.341
Kaolin, 2.32-2.59	Manganophyllite, 2.743-2.954	— (hortonolite), 3.98
Kasolite, 5.962	Manganosite, 5.364	Omphacite, 3.31
Katangite, 2.4	Marcasite, 4.609-4.887	Opal, 2.06-2.22
Katoptrite, 4.5	Margarosanite, 3.991-4.39	Orientite, 3.05
Keeleyite, 5.21	Marialite, 2.50-2.692	Orthoclase, 2.536-2.600
Kempite, 2.94	Massicot, 8.61	Oruetite, 7.6
Kernite, 1.953	Matildite, 7.07	Oxalite, 2.28
Kieserite, 2.573	Maucherite, 7.73-7.901	Pachnolite, 2.976
Kleinite, 7.975-7.987	Meerschaum, 2.02	Pageite, 4.78
Kobellite, 6.535	Meionite, 2.815	Palaite, 3.14-3.20
Kochite, 2.927-2.932	Melanite, 3.908	Palladium amalgam, 13.83-15.82
Kornelite, 2.306	Melanovanadite, 3.477	Palmierite, 4.50
Kreuzbergite, 2.139	Melilite, 2.929-3.24	Parabayldonite, 5.44-5.512
Kyanite, 3.282-3.593	Mendelyeite, 4.44-4.766	Paradoxite, 2.425-2.430
Labradorite, 2.686-2.718	Mendipite, 7.240	Parahopeite, 3.21-3.236
Lacroixite, 3.126	Meneghinitie, 6.43	Paraurichalcite, 4.137-4.201
Lanthanite, 2.69-2.74	Merrillite, 3.10	Paravauxite, 2.291-2.30
Laumontite, 2.272-2.42	Merwinite, 3.150	Paredrite, 3.97-4.08
Lawsonite, 3.12	Mesite, 3.375	Pargasite, 3.069-3.181
Lazulite, 2.958	Mesolite, 2.257-2.260	Parisite, 4.320
Lead, 11.273	Metabrushite, 3.666	Parasettensite, 2.590-2.681
Leifite, 2.565-2.578	Metacinnabarite, 7.23	Parsonsite, 6.23
Leonite, 2.201	Metahewettite, 2.511	
Lepidocrocite, 4.09	Meyerhofferite, 2.120	
Lepidolite, 2.799-2.881	Miargyrite, 5.36	
	Microcline, 2.554-2.692	

Pascoite, 2·457	Radiophyllite, 2·45-2·60
Paternoite, 2·11	Ralstonite, 2·614
Pectolite, 2·736-2·857	Rammelsbergite, 6·734-7·02
Pennine, 2·619-2·682	Ramsayite, 3·43-3·47
Penroseite, 6·98	Rancieite, 3·25-3·30
Pentlandite, 4·638	Rathite, 5·453
Penwithite, 2·20	Reddingite, Fe-, 2·96-3·10
Petalite, 2·414	Retinite, 1·03-1·051
Petzite, 7·53-8·735	Rhodizite, 3·344
Phenakite, 2·944-3·041	Rhodochrome, 2·644
Phlogopite, 2·737-2·869	Rhodochrosite, 3·312-3·743
Phosgenite, 6·08-6·24	— zinco, 3·86
Phosphoferrite, 3·156	Rhodolite, 3·75-3·837
Phosphophyllite, 3·081-3·082	Rhodonite, 3·416
Phosphorite, 2·72-2·86	Riebeckite, 3·391-3·44
Phosphosiderite, 2·726	Rinkolite, 3·40
Pickerlingite, 1·84	Ripidolite, 2·975
Picrotephroite, 3·72	Rivaite, 2·55-2·56
Pinite, 2·780	Riversideite, 2·64
Pinnosite, 2·292	Romeite, 5·044-5·074
Pisanite, 1·950	Rosasite, 4·09
Pisekite, 4·082	Roscherite, 2·916
Plagionite, 5·47-5·54	Rumpfite, 2·666
Plancheite, 3·37	Rutile, 4·123-4·272
Platinum, 16·4-19·0	Salmonsite, 2·88
Platynite, 7·98	Samarskite, 4·2-6·04
Plazolite, 3·129	Samiresite, 5·24
Poechite, 3·693-3·721	Sarcopsis, 3·64
Powellite, 4·22	Sarkinitie, 4·173-4·178
Prehnite, 2·875-2·943	Scapolite, 2·506-2·78
Priceite, 2·43-2·483	Schafarzikite, 4·3
Prismatite, 3·845	Schallerite, 3·368
Prochlorite, 2·60-2·936	Scheelite, 5·9
Protolithionite, 3·148-3·305	Schneebergite, 5·41
Proustite, 5·51-5·60	Schoepite, 5·685
Pseudobrookite, 4·60	Schluttenite, 5·943
Pseudomalachite, 3·58	Schungite, 1·122
Pseudonepheline, 2·68	Schwartzembergite, 7·39
Pseudophosphate, 2·693-2·695	Scolecite, 2·198-2·279
Psilomelane, 4·20-4·30	Scorodite, 2·70-3·235
Ptilolite, 2·10-2·30	Searlesite, 2·45
Pufahlite, 5·4	Seligmannite, 5·44-5·48
Pumpellyite, 3·2	Sellaite, 3·17
Pyrargyrite, 5·790	Semseyite, 5·84-6·05
Fyrite, 4·970-5·169	Sericite, 2·798
Pyrobelonite, 5·377	Serpentine, 2·528-2·61
Pyrolusite, 4·748-4·885	Sheridanite, 2·702
Pyromorphite, 7·05-7·124	Sicklerite, 3·45
Pyrope, 3·510-3·75	Silica glass, 2·194-2·213
Pyrophyllite, 2·659	Silver, 8·38-9·83
Pyroxmangite, 3·80	Sincosite, 2·84
Pyrrhotite, 4·56	Sklodowskite, 3·54-3·74
Quartz, 2·649-2·697	Skutterudite, 6·519-6·79
Quenselite, 6·842	Smithsonite, 4·19-4·410
Quisqueite, 1·75	Sobralite, 3·60
Racewinite, 1·94-1·98	Sodalite, 2·295-2·33
	Sodomite, 4·627
	Soumansite, 2·87
	Spencerite, 3·123-3·142
	Sperrylite, 10·58-10·73
	Spessartine, 4·058-4·35
	Sphene, 3·411-3·499
	Spinel, 3·682-3·924
	Spodumene, α , 2·997-3·301
	— β , 2·317-2·463
	— γ , 2·313
	Stasite, 5·03
	Staszicite, 4·227
	Staurolite, 3·753-3·778
	Stevensite, 2·15-2·20
	Stewartite, 2·94
	Stichtite, 2·161
	Stibnite, 4·651-4·654
	Stilbite, 2·116-2·21
	Stilpnomelane, 2·85-2·882
	Strengite, 2·84-2·86
	Stromeyerite, 6·127-6·260
	Strüverite, 4·91-5·086
	Sulphohalite, 2·5
	Sulphur (monoclinic), 2·074
	Sursassite, 3·252
	Svabite, 3·695
	Svanbergite, 3·14
	Swedenborgite, 4·285
	Syngenite, 2·579
	Szajbelyite, 2·76
	Tabergite, 2·803
	Tachyhydrite, 1·664-1·669
	Talc, 2·832
	Tantalite, 6·5-8·20
	Tantalum, 11·2
	Tapiolite, 7·190-7·91
	Taramite, 3·439-3·476
	— fluo, 3·231-3·318
	Tennantite, 4·576-4·746
	Tephroite, 4·044
	Terlinguaite, 8·723-8·728
	Tetrahedrite, 4·597-5·079
	Thalenite, 4·454
	Thaumasite, 1·85-1·879
	Thenardite, 2·67
	Thomsenolite, 2·982
	Thomsonite, 2·22-2·389
	Thorianite, 9·38
	Thortveitite, 3·55-3·571
	Thuringite, 3·07
	Tilasite, 3·76-3·77
	Tinzenite, 3·286-3·416
	Toddite, 5·041
	Topaz, 3·349-3·59
	Torbernite, 3·219-3·95
	— meta, 3·67-3·68
	Torenrikite, 3·153-3·21
	Törnebohmite, 4·94

Tourmaline, 2.978-3.250	Vanadinite, 6.46	Wohlerite, 3.48
Trevorite, 4.67-5.165	Variscite, 2.47	Wolframite, 6.93-7.49
Tridymite, 2.267-2.270	Vauxite, 2.375-2.57	Wollastonite, 2.897-2.992
Trigonite, 8.28	Velardeñite, 3.038-3.089	Wurtzite, 4.087
Trimerite, 3.404	Villamaninitite, 4.433-4.523	
Triphylite, 3.531	Viridine, 3.202-3.238	Xanthitane, 3.04
Triplite, 3.584-3.875	Viridite, 2.89	Xanthophyllite, 3.081
Trona, 2.14	Vivianite, 2.678-2.693	Xanthoxenite, 2.844
Trudellite, 1.93	Voelckerite, 3.06-3.10	Xenotime, 4.55
Truscottite, 2.47	Vogtite, 3.39	Xonotlite, 2.655
Tscher migite, 1.645	Volgerite, 3.082	
Turquoise, 2.84	Vonsenite, 4.21	Yttrocerite, 3.61
Tuyuyamunite, 3.67-4.35	Vrbaitite, 5.30	Yttrofluorite, 3.319-3.557
Ulexite, 1.91	Warthaite, 7.163	
Ullmannite, 6.70	Wavellite, 2.325	Zebedassite, 2.194
Ultrabasite, 6.026	Weibyeite, 3.19	Zeunerite, 3.28
Uralite, 3.118	Weslienite, 4.964-4.971	Zinnwaldite, 2.916-3.018
Uraninite, 7.126-9.787	Wilkeite, 3.234	Zircon, 4.048-4.748
Uranosposphate, 2.50	Witherite, 4.29	Zirkelite, 4.3-5.22
Ussingite, 2.495	Wittite, 7.12	Zoisite, 3.35
Uvarovite, 3.418-3.81		

Addendum.—During the printing of the above numerical table some duplicate determinations for beryl have been deleted, and there is still an undue preponderance in the number of determinations for this mineral between 2.7 and 2.799. Also, since the curve (fig., p. 340) was drawn, forty-four values have been added from the last number (no. 118) of the Magazine. The result is that the peak of the curve is now at 2.65 for 196 determinations.