A SPECIFIC GRAVITY INDEX FOR MINERALS

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This work was undertaken in order to provide a practical, and as far as possible, a complete list of specific gravities of minerals. An accurate specific gravity determination can usually be made quickly and this information when combined with other physical properties commonly leads to rapid mineral identification. Early complete but now outdated specific gravity lists are those of Miers given in his mineralogy textbook (1902), and Spencer (*Min. Mag.*, **21**, pp. 337–365, 1927). A more recent list by Hurlbut (Dana's *Manual of Mineralogy*, 1952) is incomplete and others are limited to rock forming minerals, Tröger (*Tabellen zur optischen Bestimmung der gesteinsbildenden Minerale*, 1952) and Morey (*Encyclopedia of Chemical Technology*, Vol. 12, 1954).

In his mineral identification tables, Smith (*Identification and qualitative chemical analysis of minerals*, second edition, New York, 1953) groups minerals on the basis of specific gravity but in each of the twelve groups the minerals are listed in order of decreasing hardness.

The present work should not be regarded as an index of all known minerals as the specific gravities of many minerals are unknown or known only approximately and are omitted from the current list.

The list, in order of increasing specific gravity, includes all minerals without regard to other physical properties or to chemical composition. The designation I or II after the name indicates that the mineral falls in the classes of minerals described in Dana *System of Mineralogy* Edition 7, volume I (Native elements, sulphides, oxides, etc.) or II (Halides, carbonates, etc.) (1944 and 1951). Those not so designated are therefore silicates which will appear in Volume III (in preparation). Hydrocarbons have been omitted.

As a check on published values, numerous specific gravity determinations were made on minerals from the collections of the University of British Columbia, using the Berman Gravity Balance. The determinations of most specific gravities were made on natural material but a few, made on synthetic material, are indicated by the letter S after the value. In a few cases the calculated value is given, indicated by the letter C after the value.

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In the case of some isomorphous series and complicated groups such as apatite, amphiboles, pyroxenes, and clay minerals, only well-known members are listed. Specific gravities for varietal names or unnamed minerals are generally omitted.

Dana's *System of Mineralogy*, Vols. 1 and 2, furnished most of the data for minerals other than silicates. *Elements of Optical Mineralogy*, Part II, by Winchell, proved useful for silicate data. Mineral names obtained from the above were checked in the *Chemical Index of Minerals* by Hey, 1950, to eliminate any possible synonyms. The *American Mineralogist* and the *Mineralogical Magazine* provided data on new minerals, new data on existing minerals, and discredited minerals, thus bringing the index up to September, 1957.

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Ice I	0.9167	Mascagnite II	1.768
Nitromagnesite II	1.46	Ettringite II	1.77
Kladnoite II	1.47	Alunogen II	1.77
Natron II	1.478	Apjohnite II	1.78
Sassolite I	1.48	Lesserite II	1.785
Mirabilite II	1.490	Evansite II	1.8—2.2
Calclacite II	1.5	Moraesite II	1.805
Oxammite II	1.5	Wattevilleite II	1.81
Salammoniac II	1.532	Idrizite II	1.829
Teschemacherite II	1.57 (S)	Letovicite II	1.83 (S)
Carnallite II	1.602	Fibroferrite II	1.84-2.52
Bischofite II	1.604	Mallardite II	1.846 (S)
Stepanovite II	1.61	Kurnakovite II	1.85
Stercorite II	1.615	Allophane	1.85—1.89
Mellite II	1.64	Nesquehonite II	1.852
Ammonia alum II	1.645	Inderite II	1.860
Julienite II	1.648 (S)	Pascoite II	1.87
Cadwaladerite II	1.66	Inyoite II	1.875
Aluminite II	1.66—1.82	Bilinite II	1.875
Tachyhydrite II	1.667	Tincalconite II	1.880
Soda alum II	1.67	Halotrichite II	1.89
Epsomite II	1.677 (S)	Hannayite II	1.893
Lansfordite II	1.692	Melanterite II	1.898
Struvite II	1.711	Nitrocalcite II	1.90
Borax II	1.715	Slavikite II	1.905—1.99
Pentahydrite II	1.718 (S)	Kernite II	1.908
Ammonia-niter II	1.72	Pisanite II	1.91
Boussingaultite II	1.722 (S)	Faujasite	1.92
Phosphorroesslerite II	1.725	Kribergite II	1.92
Mendozite II	1.730—1.765	Trudellite II	1.93
Pickeringite II	1.73—1.79	Weddellite II	1.94
Pentahydrocalcite II	1.75	Racewinite	1.94—1.98
Hexahydrite II	1.757	Roesslerite II	1.943 (S)
Potash alum II	1.757	Earlandite II	1.95
Redingtonite II	1.761	Sulphur I	1.95—2.07

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Morenosite II	1.953	Kaliborite II	2.128
Ulexite II	1.955	Fluellite II	2.139—2.17
Vashegyite II	1.96	Probertite II	2.14
Bieberite II	1.96	Trona II	2.14
Goslarite II	1.978	Botryogen II	2.14
Koenenite II	1.98	Brugnatellite I	2.14
Gaylussite II	1.991	Quenstedtite II	2.147
Sylvite II	1.993	Ferrierite	2.150
Inderborite II	2.00	Taranakite II	2.15
Kremersite II	2.00 (S)	Hydrocalumite I	2.15
Erionite	2.0	Kainite II	2.15
Sepiolite	2.	Sideronatrite II	2.15—2.35
Diadochite II	2.0—2.4	Bararite II	2.152
Lindackerite II	2.0—2.5	Ezcurrite II	2.153
Cryptohalite II	2.004	Stichtite I	2.16
Zinc-melanterite II	2.02	Dachiardite	2.165
Artinite II	2.02	Hydroboracite II	2.167
Picromerite II	2.028 (S)	Halite II	2.168
Retgersite II	2.04	Kalicinite II	2.168 (S)
Gmelinite	2.04—2.17	Roemerite II	2.174
Lueneburgite II	2.05	Amarantite II	2.189
Manasseite I	2.05	Gonnardite	2.19
Bayleyite II	2.05	Lechatelierite	2.19
Hydrotalcite I	2.06	Amarillite II	2.19
Tamarugite II	2.07	Bobierrite II	2.195 (S)
Bianchite II	2.07	Berillite	2.196
Teepleite II	2.076	Yugawaralite	2.198—2.20
Minguzzite II	2.08—2.092	Darapskite II	2.20
Chabazite	2.08—2.16	Heulandite	2.2
Copiapite II	2.08—2.17	Laubanite	2.2
Cuprocopiapite II	2.08—2.17	Phillipsite	2.2
Magnesiocopiapite II	2.08—2.17	Spadaite	2.2
Ginorite II	2.09	Hohmannite II	2.2
Koktaite II	2.09	Dewelyite	2.2—2.4
Levynite	2.09—2.16	Cacoxenite II	2.2—2.4
Stilbite	2.09—2.20	Pitticite II	2.2—2.5
Graphite I	2.09—2.23	Montmorillonite	2.2—2.7
Newberyite II	2.10	Leonite II	2.201
Barbertonite I	2.10	Nahcolite II	2.21
Mordenite	2.1	Ondrejite	2.217
Miloschite	2.1	Hydrophilite II	2.22
Boothite II	2.1	Analcite	2.22—2.29
Opal	2.1	Cyanochroite II	2.224 (S)
Halloysite	2.1—2.6	Knipovichite II	2.229
Niter II	2.109	Portlandite I	2.230
Paternoite II	2.11	Lotrite	2.23
Sjögrenite I	2.11	Whewellite II	2.23
Paracoquimbite II	2.11	Gordonite II	2.23
Coquimbite II	2.11	Rhomboclase II	2.23
Meyerhofferite II	2.120	Laumontite	2.23
Pyroaurite I	2.12	Alumohydrocalcite II	2.231
Basaluminite II	2.12	Hydromagnesite II	2.236

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Bobkovite	2.238	Loeweite II	2.374
Soda-niter II	2.24—2.29	Northupite II	2.380
Epistilbite	2.25	Woodwardite II	2.38
Natrolite	2.25	Lazurite	2.38—2.45
Ilesite II	2.25 (S)	Sulphoborite II	2.38—2.45
Bloedite II	2.25	Brucite I	2.39
Thomsonite	2.25—2.40	Vauxite II	2.39
Thermonatrite II	2.255 (S)	Kolbeckite II	2.39
Wairakite	2.26	Vermiculite	2.4
Zincaluminite II	2.26	Chrysocolla	2.4
Saponite	2.26	Hauynite	2.4—2.5
Gismondite	2.27	Xylotile	2.4—2.55
Mesolite	2.27	Pholidolite	2.41
Tridymite	2.27	Liebigite II	2.41
Pinnoite II	2.27	Mitscherlichite II	2.418
Chalconatronite II	2.27	Petalite	2.42
Humboldtine II	2.28	Priceite II	2.42
Okenite	2.28—2.33	Cancrinite	2.42—2.5
Wellsite	2.28—2.37	Colemanite II	2.423
Chalcanthite II	2.286 (S)	Goldichite II	2.43
Ungemachite II	2.287	Smolianinovite II	2.43—2.49
Chalcoalumite II	2.29	Dawsonite II	2.44
Kingite II	2.30	Sterrettite II	2.44
Ardealite II	2.300	Laueite II	2.44—2.49
Scolecite	2.3	Harmotome	2.44—2.50
Swartzite II	2.3	Brewsterite	2.45
Noselite	2.3—2.4	Searlesite	2.45
Apophyllite	2.3—2.4	Rossite II	2.45
Gibbsite I	2.3—2.4	Minyulite II	2.45
Kornelite II	2.306	Tychite II	2.456
Mercallite II	2.310	Tobermorite	2.458
Chlormanganokalite II	2.31	Lithiophosphate II	2.46
Gypsum II	2.317	Ussingite	2.46
Misenite II	2.32	Metasideronatrite II	2.46
Belyankinite I	2.32—2.40	Pseudolaueite	2.463
Chloromagnesite II	2.325 (S)	Leucite	2.47
Brushite II	2.328	Mooreite II	2.47
Cristobalite	2.33	Eriochalcite II	2.47 (S)
Felsöbányaite	2.33	Ferruccite II	2.496
Bikitaite	2.34	Sulphohalite II	2.500
Gyrolite	2.34—2.45	Uranospathite II	2.50
Metavauxite II	2.345	Foshallassite	2.5
Rinneite II	2.347	Connarite	2.5
Sodalite	2.35	Metavoltine II	2.5
Pirssonite II	2.352	Nacrite	2.5
Hambergite II	2.359	Iddingsite	2.5—2.84
Wavellite II	2.36	Glauconite	2.5—2.86
Paravauxite II	2.36	Potassium Fluoride II	2.505
Rhodesite	2.36	Avogadrite II	2.505—3.305
Mountainite	2.36	Schroeckingerite II	2.51
Chrysotile	2.36—2.5	Metahewettite II	2.51—2.94
Erythrosiderite II	2.372 (S)	Anauxite	2.52

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Serpierite II	2.52	Schairerite II	2.612
Calcioferrite II	2.53	Ishkyldite	2.62
Overite II	2.53	Dickite	2.62
Montgomeryite II	2.53	Antigorite	2.62
Howlite II	2.53—2.59	Szaibelyite II	2.62
Pharmacolite II	2.53—2.73	Donbassite	2.628
Metavariscite II	2.54	Afwillite	2.63
Karpinskyite	2.545	Trihydrocalcite II	2.63(?)
Parabutlerite II	2.55	Ransomite II	2.632
Microcline	2.55	Dipyre	2.635
Eudidymite	2.55	Oligoclase	2.64
Epididymite	2.55	Berlinite II	2.64
Butlerite II	2.55	Simplotite II	2.64
Ferrinatrite II	2.55—2.61	Illite	2.642—2.688
Hewettite II	2.55—2.618	Quartz	2.65
Chalcedony	2.55—2.63	Englishite II	2.65
Nepheline	2.55—2.65	Beryl	2.65—2.9
Navajoite I	2.56	Scapolite	2.65—2.74
Anorthoclase	2.56—2.6	Apthitalite II	2.659–2.71
Ralstonite II	2.56—2.62	Faheyite II	2.660
Hanksite II	2.562	Chkalovite	2.66
Sanidine	2.57	Arcanite II	2.663
Adularia	2.57	Thenardite II	2.664
Milarite	2.57	Torreyite II	2.665
Leifite	2.57	Hieratite II	2.665 (S)
Orthoclase	2.57	Andesine	2.67
Burkeite II	2.57	Eucryptite	2.67
Rabbittite II	2.57	Foshagite	2.67
Variscite II	2.57	Chlorothionite II	2.67 (S)
Cordierite	2.57—2.66	Chalcophyllite II	2.67
Zaratite II	2.57—2.69	Dillnite	2.675
Coeruleolactite II	2.57—2.69	Errite	2.68
Kieserite II	2.57	Vivianite II	2.68
Syngenite II	2.579—2.60	Cookeite	2.69
Picropharmacolite II	2.58	Hillebrandite	2.69
Marialite	2.58	Lopezite II	2.69
Elpidite	2.58	Lanthanite II	2.69—2.74
Dimorphite I	2.58	Bassanite II	2.69—2.76
Sarmientite II	2.58	Vanthoffite II	2.694
Oldhamite I	2.58 (S)	Huntite II	2.696
Veatchite II	2.58—2.69	Augelite II	2.696
Eguëite II	2.60	Mizzonite	2.70
Shortite II	2.60	Labradorite	2.70
Kaolinite	2.60—2.68	Borickite II	2.70
Bertrandite	2.6	Foucherite II	2.7
Natroalunite II	2.6	Voltaite II	2.7
Zirklerite II	2.6	Edingtonite	2.7—2.78
Turquois II	2.6—2.84	Stilpnomelane	2.7—3.0
Galeite II	2.605	Xonotlite	2.71
Kaliophilite	2.61	Didymolite	2.71
Albite	2.61	Hilgardite II	2.71
Ashcroftine	2.61	Parahilgardite II	2.71

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Callaghanite II	2.71	Wardite II	2.81—2.87
Calcite II	2.7102	Talc	2.82
Creedite II	2.713	Corvusite I	2.82 (?)
Malladrite II	2.714 (S)	Langbeinite II	2.83
Guildite II	2.72	Millisite II	2.83
Bytownite	2.73	Taeniolite	2.83—2.86
Bultfonteinite	2.73	Nenadkevichite	2.84—2.89
Hoernesite II	2.73	Krausite II	2.840
Bradleyite II	2.734	Pyrophyllite	2.84
Bavenite	2.74	Murmanite	2.84
Tarapacaite II	2.74 (S)	Dalyite	2.84
Pectolite	2.74—2.88	Miserite	2.84
Glaucocerinite II	2.749	Tilleyite	2.84
Gorgeyite II	2.75	Ganophyllite	2.84
Catapleite	2.75	Bermanite II	2.84
Meionite	2.75	Sincosite II	2.84
Narsarsukite	2.75	Combeite	2.844
Phlogopite	2.75	Haidingerite II	2.848
Alunite II	2.75	Paragonite	2.85
Glauberite II	2.75—2.85	Davisonite II	2.85
Heidornite II	2.753	Dolomite II	2.85
Zeophyllite	2.76	Anthophyllite	2.86
Armenite	2.76	Rankinite	2.86
Anorthite	2.76	Eastonite	2.86
Metastrengite II	2.76	Tuhualite	2.87
Cyanotrichite II	2.76—2.95	Zunyite	2.87
Muscovite	2.76—3.0	Strengite II	2.87
Gearksutite II	2.768	Hurlbutite II	2.877
Cryolithionite II	2.770	Calciborite II	2.878
Scawtite	2.77	Vinogradovite	2.878
Astrolite	2.78	Prosopite II	2.88—2.894
Polyhalite II	2.78	Bakerite II	2.88
Crandallite II	2.79—2.92	Salmonsite II	2.88
Amesite	2.79	Manandonite	2.89
Foshagite	2.79	Epistolite	2.89
Ekmannite	2.79	Lehiite II	2.89
Villiaumite II	2.79	Tuhualite	2.89
Pharmacosiderite II	2.797	Kroehnkite II	2.90
Werthemanite II	2.80	Labuntzovite	2.901
Shilkinite	2.8	Molysite II	2.90 (S)
Neotocite	2.8	Carpholite	2.9
Andersonite II	2.8	Pollucite	2.9
Xanthoxenite II	2.8—2.97	Datolite	2.9—3.0
Beraunite II	2.8—3.08	Liroconite II	2.9—3.0
Eudialyte	2.8—3.1	Carbonate-apatite II	2.9—3.1
Biotite	2.8—3.2	Hydroxylapatite II	2.9—3.1
Lepidolite	2.8—3.3	Tourmaline	2.9—3.2
Wad I	2.8—4.4	Suanite II	2.91
Ceruleite II	2.803	Boracite II	2.9—3.10
Bandylite II	2.810	Jarosite II	2.9—3.26
Anapaite II	2.81	Wollastonite	2.915
Beryllonite II	2.81	Parawollastonite	2.915

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Prehnite	2.915	Margarite	3.0—3.1
Sarcolite	2.92	Euclase	3.0—3.1
Isoclasite II	2.92	Clintonite	3. —3.15
Roscherite II	2.92	Spodumene	3.0—3.2
Faustite II	2.92	Reddingite II	3.0—3.2
Roweite II	2.92	Phosphoferrite II	3.0—3.2
Monetite II	2.929 (S)	Tyrolite II	3.0—3.2
Aminoffite	2.94	Symplesite II	3.01
Stewartite II	2.94	Boehmite I	3.01—3.06
Jezekite II	2.94	Gonyerite	3.01
Kempite II	2.94	Woodhouseite II	3.012
Aragonite II	2.947	Bromellite I	3.017
Leucophosphite II	2.948	Bityite	3.02
Leightonite II	2.95	Manganolangbeinite II	3.02
Åkermanite	2.95	Ankerite II	3.02
Deltaite II	2.95	Landesite II	3.026
Hydroxyl-herderite II	2.95—3.01	Inesite	3.03
Harkerite	2.959	Mansfieldite II	3.03
Cebollite	2.96	Szomolnokite II	3.03—3.07
Leucophanite	2.96	Gorceixite II	3.036—3.19
Weberite II	2.96	Ferrocarpholite	3.04
Likasite II	2.96—2.98	Gehlenite	3.04
Shcherbakovite	2.968	Dehrnite II	3.04—3.09
Ktenasite II	2.969	Natromontebrasite II	3.04—3.1
Cryolite II	2.97	Actinolite	3.047
Schizolite	2.97—3.13	Harstigite	3.05
Clinophaeite II	2.979	Orientite	3.05
Tremolite	2.98	Leucosphenite	3.05
Phenakite	2.98	Weinschenkite II	3.05—3.26
Anhydrite II	2.98	Hopeite II	3.05
Scacchite II	2.98	Pennantite	3.06
Montebrasite II	2.98	Banalsite	3.06
Fluoborite II	2.98—2.85	Erythrite II	3.06
Partzite I	2.98—3.96	Eosphorite II	3.06
Thomsenolite II	2.981	Pyrosmalite	3.06—3.19
Pachnolite II	2.983	Ellestadite II	3.068
Brazilianite II	2.983	Lamprophanite II	3.07
Ferrimolybdite II	2.99	Parasymplesite II	3.07
Collinsite II	2.99	Annabergite II	3.07
Minnesotaite	2.99—3.03	Lewistonite II	3.08
Elpasolite II	2.995	Seamanite II	3.08
Chiolite II	2.998	Lazulite II	3.08
Magnesite II	3.00	Daphnite	3.08
Herderite II	3.0	Fairfieldite II	3.08
Spurrite	3.	Cyrilovite II	3.085
Hisingerite	3.	Souzalite II	3.087
Greenalite	3.	Grothine	3.09
Mosandrite	3.0	Kotoite II	3.10
Grandidierite	3.0	Merrillite II	3.10
Kasoite	3.0	Bassetite II	3.10
Danburite	3.0	Wilkeite II	3.1
Meliphanite	3.0	Wadeite	3.1

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Moissanite I	3.1	Hornblende	3.2
Bementite	3.1	Crocidolite	3.2
Lawsonite	3.1	Monticellite	3.2
Andalusite	3.1—3.2	Forsterite	3.2
Chondrodite	3.1—3.2	Humite	3.2—3.3
Autunite II	3.1—3.2	Pumpellyite	3.2—3.3
Chlorapatite II	3.1—3.2	Heterosite II	3.2—3.4
Fluorapatite II	3.1—3.2	Purpurite II	3.2—3.4
Dufrenite II	3.1—3.34	Ferri-sicklerite II	3.2—3.4
Amblygonite II	3.11	Celsian	3.2—3.45
Tengerite II	3.12	Oxyhornblende	3.2—3.5
Whitlockite II	3.12	Cummingtonite	3.2—3.5
Kutnahorite II	3.12	Guarinite	3.2—3.5
Ludlamite II	3.12—3.19	Friedelite	3.21
Lacroixite II	3.126	Vladimirite II	3.21
Glaucophane	3.13	Serandite	3.215
Manganpyrosmalite	3.13	Torbernite II	3.22
Hibschite	3.13	Svanbergite II	3.22
Forbesite II	3.13	Chalcosiderite II	3.22
Devillite II	3.13	Kupletskite	3.229
Phosphophyllite II	3.13	Mullite	3.23
Gotzenite	3.138	Duttonite I	3.24 (C)
Norbergite	3.14	Neptunite	3.24
Strigovite	3.14	Kornerupine	3.24—3.27
Spencerite II	3.14	Nitrobarite II	3.250 (S)
Churchite II	3.14	Surassite	3.25
Spangolite II	3.14	Pyrochroite I	3.25
Valleriite I	3.14 (?)	Sillimanite	3.25
Lithiophorite I	3.14—3.36	Childrenite II	3.25
Siderazot I	3.147	Dundasite II	3.25
Wagnerite II	3.15	Axinite	3.25—3.31
Sellaite II	3.15	Zoisite	3.25—3.36
Merwinite	3.15	Goyazite II	3.26
Szmikite II	3.15	Dumortierite	3.26—3.36
Hureaulite II	3.15—3.19	Chloritoid	3.26—3.57
Cahnite II	3.156	Saléeite II	3.27
Eckermannite	3.16	Loseyite II	3.27
Lawrencite II	3.16 (S)	Doloresite I	3.27—3.33
Noemesselite II	3.16	Olivine	3.27—3.37
Clinohumite	3.17—3.25	Jeremejevite II	3.27
Ericaite II	3.17—3.27	Clinoenstatite	3.28
Fluorite II	3.180	Calkinsite II	3.28
Enstatite	3.18	Scorodite II	3.28
Natrojarosite II	3.18	Diopside	3.28 (S)
Stokesite	3.19	Tavorite II	3.29
Siderophyllite	3.19	Sussexite II	3.30
Raimondite II	3.19—3.22	Isokite II	3.3
Akrochordite II	3.194	Plancheite	3.3
Sampleite II	3.20	Rosenbuschite	3.3
Helvite	3.20	Lime I	3.3
Sabugalite II	3.20	Johnstrupite	3.3
Riebeckite	3.2	Ottrelite	3.3

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Astrophyllite	3.3—3.4	Serendibite	3.42
Diaspore I	3.3—3.5	Ramsayite	3.43
Rhodizite II	3.305—3.38	Bustamite	3.43
Goethite I	3.3—4.3	Nordite	3.43
Parahopeite II	3.31	Roeblingite	3.43
Ferghanite II	3.31	Fillowite II	3.43
Kruzhanovskite II	3.31	Fersmanite	3.44
Johannite II	3.32	Euchroite II	3.44
Koettigite II	3.33	Arfvedsonite	3.447
Laubmannite II	3.33	Cronstedtite	3.45
Clinohedrite	3.33	Hemimorphite	3.45
Buttgenbachite II	3.33	Sicklerite II	3.45
Vesuvianite	3.33—3.45	Uranospinite II	3.45
Frondelite II	3.3—3.49	Lamprophyllite	3.45—3.54
Rockbridgeite II	3.3—3.49	Rinkite	3.46
Jadeite	3.335	Chlorophoenicite II	3.46
Augite	3.34	Hauerite I	3.463
Lithiophilite II	3.34	Trimerite	3.47
Kainosite	3.34—3.61	Sinhalite II	3.47—3.50
Hydrogrossular	3.35	Talktriplite	3.47
Annite	3.35	Andrewsite II	3.475
Warwickite II	3.35	Melanovanadite II	3.477
Chalcomenite II	3.35	Realgar I	3.477—3.56
Danalite	3.35—3.43	Glaucochroite	3.48
Epidote	3.35—3.5	Langite II	3.48—3.50
Hellandite	3.35—3.70	Hematolite II	3.49
Homilite	3.36	Orpiment I	3.49
Babingtonite	3.36	Natrochalcite II	3.49
Connellite II	3.36	Burbankite II	3.50
Ampangabeite I	3.36—4.64	Belovite II	3.50
Schallerite	3.37	Acmite	3.5
Hypersthene	3.37	Dioptase	3.5
Magnesium-chlorophoenicite II	3.37	Lavenite	3.5
Scorzalite II	3.38	Johannsenite	3.5
Shubnikovite II	3.38	Diamond I	3.50—3.53
Dickinsonite II	3.38—3.41	Topaz	3.5—3.57
Griphite II	3.40	Hühnerkobelite II	3.5—3.6
Hardystonite	3.40 (S)	Metatorbernite II	3.5—3.7
Gillespite	3.4	Roselite II	3.50—3.74
Veselyite II	3.4	Pyroxmangite	3.5—3.8
Gerhardtite II	3.40—4.43	Pyrope	3.5—3.8
Steenstrupine	3.4—3.47	Hydrozincite II	3.5—3.8
Sapphirine I	3.4—3.5	Svabite II	3.5—3.8
Mangan-alluaudite II	3.4—3.5	Triplite II	3.5—3.9
Sphene	3.4—3.56	Fermorite II	3.518
Grossularite	3.4—3.6	Meta-uranocircite II	3.53
Uvarovite	3.4—3.8	Lavendulan II	3.54
Cymrite	3.41	Sklodowskite	3.54
Natrophilite II	3.41	Arrojadite II	3.55
Pigeonite	3.42	Hedenbergite	3.55
Woehlerite	3.42	Spinel I	3.55 (S)
		Periclase I	3.56 (S)

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Aluminian-Ferroanthophyllite	3.566	Adelite II	3.73
Magniotriplite II	3.57	Abernathyite II	3.74 (C)
Synadelphite II	3.57—3.79	Paratacamite II	3.74
Alluaudite II	3.576	Enigmatite	3.74—3.85
Thortveitite	3.58	Chrysoberyl I	3.75
Chapmanite	3.58	Dussertite II	3.75
Gageite	3.58	Atacamite II	3.760
Triphylite II	3.58	Magnalumoxide I	3.76
Florencite II	3.586—3.71	Strontianite II	3.76
Barbosalite II	3.60	Tilasite II	3.77
Arseniosiderite II	3.60	Azurite II	3.773
Ludwigite II	3.6	Shattuckite	3.79
Novacekite II	3.6	Mixite II	3.79
Botallackite II	3.6	Geikielite I	3.79—4.05
Kyanite	3.6	Teineite II	3.80
Rhönite	3.6	Hyalotekite	3.8
Ardennite	3.6—3.65	Uranophane	3.8—4.
Taaffeite I	3.613	Ilvaite	3.8—4.1
Dietzeite II	3.617	Hoegbomite I	3.81
Gerstleyite II	3.62	Daubreelite I	3.81
Metazeunerite II	3.64	Metatyuyaminite II	3.81—3.93
Aurichalcite II	3.64	Wolfeite II	3.83
Sarcopside II	3.64—3.73	Allactite II	3.83
Benitoite	3.65	Hibonite I	3.84
Hemafibrite II	3.65	Leucophenicite	3.85
Hinsdalite II	3.65	Lombaardite	3.85
Chalcocyanite II	3.65	Priderite I	3.86
Staurolite	3.65—3.77	Sulvanite I	3.86—4.00
Barytocalcite II	3.66—3.71	Arsenolite I	3.87
Triploidite II	3.66	Jarlite II	3.87
Bøggildite II	3.66	Flinkite II	3.87
Argentojarosite II	3.66	Pinakiolite II	3.88
Plumbojarosite II	3.665	Antlerite II	3.88
Brandtite II	3.67	Joaquinite	3.89
Todorokite I	3.67	Doverite II	3.89
Alstonite II	3.67—3.70	Synchisite II	3.90
Graftonite II	3.67—3.79	Anatase I	3.90
Schorlomite	3.67—3.88	Allanite	3.9—4.0
Tyuyamunite II	3.67—4.35	Sphalerite I	3.9—4.1
Garrelsite II	3.68	Willemite	3.9—4.1
Genthelvite	3.70	Hodgkinsonite	3.91
Rhodochrosite II	3.70	Taramellite	3.92
Rhodonite	3.7	Chenevixite II	3.93
Voltzite I	3.7—3.8	Rhabdophane II	3.94—4.01
Uranopilite II	3.7—4.0	Durangite II	3.94—4.07
Andradite	3.7—4.1	β-Uranophane	3.95
Betafite I	3.7—5.	Ancylite II	3.95
Beta-roselite II	3.71	Hidalgoite II	3.96
Woodruffite I	3.71	Siderite II	3.96
Hagendorfite II	3.71	Libethenite II	3.97
McGovernite	3.72	Celestite II	3.97
		Brochantite II	3.97

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Wurtzite I	3.98	Cornwallite II	4.166
Kamarezite II	3.98	Dolerophanite II	4.17
Margarosanite	3.99	Spessartite	4.18
Chalcophanite I	4.00	Sanbornite	4.19
Painite	4.00	Belovite (phosphate) II	4.19
Alabandite I	4.0	Roentgenite	4.19 (C)
Montroseite I	4.0	Nordenskiöldite II	4.20
Barylite	4.	Tritomite	4.2
Hancockite	4.	Magnesiochromite I	4.2
Sengierite II	4.	Argyropyrite I	4.206
Corundum I	4.0—4.1	Frieseite I	4.217
Rosasite II	4.0—4.2	Powellite II	4.23
Beudantite II	4.—4.3	Rutile I	4.23
Pseudomalachite II	4.0—4.35	Thalenite	4.23
Gadolinite	4.0—4.6	Argentopyrite I	4.25
Kalkowskyn I	4.01	Lindgrenite II	4.26
Perovskite I	4.01	Hulsite II	4.28
Legrandite II	4.01	Swedenborgite II	4.285
Plumbogummite II	4.014	Caryocerite	4.29
Zirconolite I	4.017—4.237	Caryinite II	4.29
Alleghanyite	4.02	Witherite II	4.291
Galaxite I	4.03 (S)	Corkite II	4.295
Kurumsakite	4.03	Magnussonite II	4.30
Cubanite I	4.03—4.18	Sahamalite II	4.30
Malachite II	4.05	Renierite I	4.3
Vésigniéite II	4.05	Schafarzikite II	4.3
Smythite I	4.06	Stannite I	4.3—4.5
Berzeliite II	4.08	Yttrialite	4.3—4.6
Sarkinite II	4.08—4.18	Chevkinite	4.3—4.65
Lepidocrocite I	4.09	Cordylite II	4.31
Cornetite II	4.10	Vaesite I	4.31 (S)
Carminite II	4.10	Yttrium Calcium Fluoride II	4.316
Chalcopyrite I	4.1—4.3	Adamite II	4.32—4.48
Almandite	4.1—4.3	Pseudobrookite I	4.33
Conichalcite II	4.1—4.33	Manganite I	4.33
Sternbergite I	4.101—4.215	Beaverite II	4.36
Holdenite II	4.11	Parisite II	4.36
Tephroite	4.11	Clinoclase II	4.38
Tarbuttite II	4.12	Hercynite I	4.39 (S)
Melanocerite	4.13	Cappalenite	4.4
Knebelite	4.13	Fayalite	4.4
Cobaltocalcite II	4.13	Pyrolusite I	4.4—5.06
Austinite II	4.13	Xenotime II	4.4—5.1
Stainierite I	4.13—4.47	Smithsonite II	4.43
Nantokite II	4.136 (S)	Armangite II	4.43
Brookite I	4.14	Pyrochlore I	4.45
Groutite I	4.144	Enargite I	4.45
Uhligite I	4.15	Davidite I	4.46
Claudetite I	4.15	Olivenite II	4.46
Beckelite	4.15	Manganberzeliite II	4.46
Retzian II	4.15	Germanite I	4.46—4.59
Arsenoclasite II	4.16		

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Limaite I	4.47	Zirkelite I	4.741
Merumite I	4.49	Jacobsite I	4.76
Colusite I	4.50	Salesite II	4.77
Barite II	4.50	Polymignyte I	4.77—4.85
Rowlandite	4.5	Violarite I	4.79 (C)
Katoptrite II	4.5	Selenium I	4.80
Palmierite II	4.5 (S)	Yttrocrasite I	4.80
Famatinite I	4.50—4.52	Schoepite I	4.8
Chromite I	4.5—4.8	Trippkeite II	4.8
Nigerite I	4.51	Rutherfordine II	4.82
Emmonsite II	4.52	Carrollite I	4.83
Derbylite II	4.53	Polydymite I	4.83 (C)
Pyrophanite I	4.54	Siegenite I	4.83 (C)
Cattierite I	4.55 (S)	Hausmannite I	4.84
Paradamite II	4.55	Pseudoboleite II	4.85
Magnesioferrite I	4.56—4.65	Linnaeite I	4.85 (C)
Stillwellite	4.57	Mackayite II	4.86 (?)
Pyrrhotite I	4.58—4.65	Hawleyite I	4.87 (C)
Lautarite II	4.59	Smithite I	4.88
Hydrotungstite I	4.60	Marcasite I	4.887
Hutchinsonite I	4.6	Bellingerite II	4.89
Hydrohetaerolite? I	4.6 (?)	Lautite I	4.9
Loranskite I	4.6	Greenockite I	4.9
Stetefeldtite I	4.6	Törnebohmite	4.9
Covellite I	4.6—4.76	Bastnaesite II	4.9—5.2
Langbanite	4.6—4.8	Ianthite II	4.94
Pentlandite I	4.6—5.0	Bixbyite I	4.947
Tetrahedrite I	4.6—5.1	Chalcostibite I	4.95
Monazite II	4.6—5.4	Hollandite I	4.95
Bindheimite II	4.6—5.6	Priorite I	4.95
Bravoite I	4.62	Otavite II	4.96 (S)
Gamagarite II	4.62	Livingstonite I	5.00
Tennantite I	4.62	Euxenite I	5.00
Gahnite I	4.62 (S)	Yeatmanite	5.0
Molybdenite I	4.62—4.73	Crednerite I	5.01
Stibnite I	4.63	Pyrite I	5.018
Berthierite I	4.64	Vandenbrandite I	5.03
Nolanite I	4.65	Dewindtite II	5.03
Cerite	4.65—4.91	Boleite II	5.05
Zircon	4.66—4.7	Bornite I	5.06—5.08
Cumengite II	4.67	Franklinite I	5.07—5.22
Kermesite I	4.68	Sartorite I	5.10
Fersmite	4.69	Coffinite	5.1
Lessingite	4.69	Romeite II	5.1
Soddyite	4.70	Caracolite II	5.1
Delorenzite I	4.7	Stibiconite I	5.1—5.6
Paigeite II	4.7	Trevorite I	5.164
Psilomelane I	4.71	Magnetite I	5.175
Molybdophyllite	4.72	Hetaerolite I	5.18
Ilmenite I	4.72	Eschynite I	5.19
Braunite I	4.72—4.83	Columbite I	5.20
Scheteligite I	4.74	Robinsonite I	5.20—5.25

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Thorite	5.2—5.4	Caledonite II	5.6—5.76
Hjelmite I	5.2—5.8	Fergusonite I	5.6—5.8
Fuloppite I	5.22	Aramayoite I	5.602
Miargyrite I	5.25	Umangite I	5.620
Stilleite I	5.259 (C)	Jamesonite I	5.63
Hematite I	5.26	Arsenic I	5.63—5.78
Cesarolite I	5.29	Miersite II	5.64
Vrbaite I	5.30	Zincite I	5.66
Becquerelite I	5.3	Marshite II	5.68
Liveingite I	5.3	Iodyrite II	5.69
Cheralite II	5.3	Samarskite I	5.69—6.2
Arsenolamprite I	5.3–5.5	Yttrotantalite I	5.7
Polycrase I	5.3—5.9	Melanotekite	5.7
Senaite I	5.301	Bystromite II	5.7
Waltherite II	5.32	Arsenobismite II	5.7
Billietite I	5.32—5.36	Phoenicochroite II	5.75
Baumhauerite I	5.329	Djalmaite I	5.75—5.88
Andorite I	5.35	Valentinite I	5.76
Linarite II	5.35	Kettnerite II	5.80
Zinkenite I	5.36	Cotunnite II	5.80 (S)
Manganosite I	5.364	Lengenbachite I	5.80—5.85
Rathite I	5.37	Formanite I	5.8
Parsonsite II	5.37	Allemontite I	5.8—6.2
Pyrobelonite II	5.377	Tenorite I	5.8—6.4
Seligmannite I	5.38—5.44	Heazlewoodite	5.82
Osbornite I	5.39 (C)	Hedyphane II	5.82
Baddeleyite I	5.4—6.02	Tripuhyite II	5.82
Delafossite I	5.41	Bournonite I	5.83
Diaboleite II	5.42	Pyrargyrite I	5.85
Ramdohrite I	5.43	Penfieldite II	5.86—6.61
Brannerite I	5.43	Fiedlerite II	5.88
Ganomalite	5.43—5.7	Franckeite I	5.90
Coronadite I	5.44	Tellurite I	5.90
Cylindrite I	5.46	Gersdorffite I	5.9
Parajamesonite I	5.48	Larsenite	5.9
Senarmontite I	5.50	Mottramite II	5.9
Millerite I	5.5	Monimolite II	5.9—7.3
Bayldonite II	5.5	Simpsonite I	5.92—6.27
Chalcocite I	5.5—5.8	Fluocerite II	5.93—6.14
Samsonite I	5.51	Pyrostilpnite I	5.94
Tungstite I	5.517	Schultenite II	5.943
Magnetoplumbite I	5.517	Stibiocolumbite I	5,98
Lorandite I	5.53	Crocoite II	5.99
Dufrenoysite I	5.53	Klockmannite I	5.99 (S)
Xanthoconite I	5.54	Weissite I	6.0
Digenite I	5.546—5.706	Laurite I	6.0—6,99
Thorotungstite II	5.55	Wittichenite I	6,01
Cerargyrite II	5.556	Vauquelinite II	6.02
Plagionite I	5.56	Diaphorite I	6.04
Proustite I	5.57	Paramelaconite I	6.04
Ferritungstite II	5.57	Freieslebenite I	6.04—6.23
Tripuhyite I	5.6	Fourmarierite I	6.046

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Brackebuschite II	6.05	Pitchblende I	6.5—8.5
Glaucodot I	6.06	Leadhillite II	6.55
Plumboferrite I	6.07	Cerussite II	6.55
Arsenopyrite I	6.07	Beyerite II	6.56
Semseyite I	6.08	Pucherite II	6.57 (C)
Scheelite II	6.10	Tyrrellite	6.6
Tellurium I	6.1—6.3	Eulytite	6.6
Trigonite II	6.1—7.1	Antimony I	6.61—6.72
Bismutite II	6.1—7.7	Ordoñezite I	6.635
Tsumebite II	6.13	Ullmannite I	6.65
Pearceite I	6.13—6.15	Kallilite I	6.66
Phosgenite II	6.133	Beresovite II	6.69
Betekhtinite I	6.14	Walpurgite II	6.69 (C)
Cuprite I	6.14	Sanmartinite II	6.70
Paralaurionite II	6.15	Cannizzarite I	6.7 (S)
Bornhardtite I	6.173 (C)	Berzelianite I	6.71
Kentrolite	6.19	Gudmundite I	6.72
Descloizite II	6.2	Barysilite	6.72
Gratonite I	6.22	Cosalite I	6.76
Stromeyerite I	6.2—6.3	Willyamite I	6.76
Ishikawaite I	6.2—6.4	Chloroxiphite II	6.763—6.93
Boulangerite I	6.23	Bismuthinite I	6.78
Laurionite II	6.24 (S)	Hydrocerussite II	6.80
Owyheeite I	6.25	Quenselite I	6.84
Stephanite I	6.25	Rooseveltite II	6.86
Guanajuatite I	6.25—6.98	Vanadinite II	6.88
Polybasite I	6.27—6.33	Heliophyllite II	6.89
Canfieldite I	6.276	Bunsenite I	6.898
Argyrodite I	6.29	Crookesite I	6.90
Cobaltite I	6.33	Matildite I	6.9
Kobellite I	6.334	Penroseite I	6.9
Benjaminite I	6.34	Zinc I	6.9—7.2
Teallite I	6.36	Lanarkite II	6.92
Uranosphaerite I	6.36	Duftite II	6.98 (C)
Meneghinite I	6.36	Cassiterite I	6.99
Emplectite I	6.38	Schreibersite I	7.0—7.3
Jordanite I	6.38	Naumannite I	7.0—8.00
Anglesite II	6.38	Lindstromite I	7.01
Clarkeite I	6.39	Nadorite II	7.02
Pavonite I	6.39—6.54	Pyromorphite II	7.04
Hauchecornite I	6.4	Galenobismutite I	7.04
Atelestite II	6.4	Aikinite I	7.07
Microlite I	6.42	Rammelsbergite I	7.1
Geocronite I	6.45	Huttonite	7.1
Wherryite II	6.45	Georgiadesite II	7.1
Kasolite	6.46	Wittite I	7.12
Murdochite I	6.47	Pararammelsbergite I	7.12
Cuprobismutite I	6.47 (S)	Matlockite II	7.12
Bromyrite II	6.474	Huebnerite II	7.12
Alamosite	6.49	Ecdemite II	7.14
Skutterudite I	6.5	Calomel II	7.15
Wulfenite II	6.5—7.0	Trogtalite I	7.187 (C)

MINERALS ARRANGED ACCORDING TO INCREASING SPECIFIC GRAVITY

Mineral	Measured	Mineral	Measured
Cohenite I	7.20—7.65	Altaite I	8.19
Safflorite I	7.2	Tiemannite I	8.19—8.47
Acanthite I	7.2—7.3	Breithauptite I	8.23
Argentite I	7.2—7.4	Sylvanite I	8.24
Domeykite I	7.2—7.9	Koechlinite II	8.29
Ferroselite	7.219 (C)	Joseite I	8.3
Hastite	7.233 (C)	Wehrlite I	8.37—8.44
Mendipite II	7.24	Algodonite I	8.38
Mimetite II	7.24	Hessite I	8.41
Curite I	7.26	Parkerite I	8.44
Finnemanite II	7.265	Eglestonite II	8.45
Wolframite II	7.272	Raspite II	8.46
Empressite I	7.29	Krennerite I	8.62
Tetradymite I	7.3	Bismite I	8.64
Iron I	7.3—7.87	Palladinite I	8.70 (S)
Tin I	7.31	Shandite I	8.72
Russelite I	7.35	Terlinguaite II	8.725
Stibiotantalite I	7.37	Sillenite I	8.80 (C)
Schwartzembergite II	7.39	Horsfordite I	8.812
Ferberite II	7.51	Minium I	8.9—9.2 (S)
Lorettoite II	7.39—7.95	Hedleyite I	8.91
Loellingite I	7.40—7.48	Copper I	8.95
Tungstenite I	7.4	Calaverite I	9.10—9.40
Nagyagite I	7.49	Petzite I	9.13
Rickardite I	7.54	Litharge I	9.14 (S)
Daubréeite II	7.56 (C)	Plattnerite I	9.42
Galena I	7.58	Cooperite I	9.5
Aguilarite I	7.586	Stibiopalladinite I	9.5
Eucairite I	7.6—7.8	Massicot I	9.56 (S)
Thoreaulite I	7.6—7.9	Bismuth I	9.70—9.83
Metacinnabar I	7.65	Thorianite I	9.7
Hematophanite I	7.70	Dyscrasite I	9.74
Bismoclite II	7.717 (S)	Montbrayite I	9.94
Mosesite II	7.72	Aurostibite I	9.98 (S)
Melonite I	7.72	Braggite I	10.0
Niccolite I	7.784	Silver I	10.1—11.1
Nickel-Iron I	7.8—8.22	Sperrylite I	10.58
Tellurbismuth I	7.81	Tantalum I	11.2
Tapiolite I	7.90	Montroydite I	11.23
Mossite I	7.90	Lead I	11.37
Stolzite II	7.9—8.34	Palladium I	11.9
Sahlinite II	7.95	Moschellandsbergite I	13.48—13.71
Tantalite I	7.95	Mercury I	13.596
Frohbergite I	7.98 (C)	Platinum I	14.0—19.
Maucherite I	8.00	Potarite I	14.8
Kleinite II	8.0	Gold-Amalgam I	15.47
Uraninite I	8.0—10.9	Iridosmine I	19.0—21.
Clausthalite I	8.08—8.22	Siserskite I	19.0—21.
Cinnabar I	8.090	Gold I	19.3
Coloradoite I	8.10	Aurosmiridium I	20.0
Gruenlingite I	8.10	Platiniridium I	22.65—22.84
Bismutotantalite I	8.15		