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Mineral composition of Thanatia's crust

Mineral	Formula	MW g/mole	Abundance mass, %
Quarz	SiO_2	60.08	2.29E+01
Albite	$NaAlSi_3O_8$	263.02	1.35E+01
Oligoclase	$Na_{0,8}Ca_{0,2}Al_{1,2}Si_{2,8}O_8$	265.42	1.19E+01
Orthoclase	$KAlSi_3O_8$	278.33	1.18E+01
Andesine	$Na_{0,6}Ca_{0,4}Al_{1,4}Si_{2,6}O_8$	268.62	5.46E+00
Paragonite	$NaAl_3Si_3O_{10}(OH)_2$	800.00	3.96E+00
Biotite	$KMg_{2,5}Fe_{0,5}^{2+}AlSi_3O_{10}(OH)_{1,75}F_{0,25}$	433.53	3.82E+00
Hydromuscovite/ Illite	$K_{0,6}(H_3O)_{0,4}Al_2Mg_{0,4}Fe_{0,1}^{2+}Si_{3,5}O_{10}(OH)_2$	392.65	3.03E+00
Augite	$Ca_{0,9}Na_{0,1}Mg_{0,9}Fe_{0,2}^{2+}Al_{0,4}Ti_{0,1}Si_{1,9}O_6$	236.35	3.00E+00
Hornblende (Fe)	$Ca_2Fe_4^{2+}Al_{0,75}Fe_{0,25}^{3+}(Si_7AlO_{22})(OH)_2$	947.32	2.63E+00
Labradorite	$Na_{0,5}Ca_{0,5}Al_{1,5}Si_{2,5}O_8$	270.21	2.50E+00
Nonttronite	$Na_{0,3}Fe_2^{3+}Si_{3,7}Al_{0,3}O_{10}(OH)_2 \cdot 4(H_2O)$	496.67	1.93E+00
Opal	$SiO_2 \cdot 1,5(H_2O)$	87.11	1.24E+00
Ripidolite	$Mg_{3,75}Fe_{1,25}^{2+}Si_3Al_2O_{10}(OH)_8$	595.22	1.20E+00
Almandine	$Fe_3^{3+}Al_2(SiO_4)_3$	497.75	1.04E+00
Muscovite	$KAl_3Si_3O_{10}(OH)_{1,8}F_{0,2}$	398.71	1.01E+00
Sillimanite	Al_2SiO_5	162.05	9.97E-01
Epidote	$Ca_2Fe^{3+}Al_2(SiO_4)_3(OH)$	483.23	9.06E-01
Kaolinite	$Al_2Si_2O_5(OH)_4$	258.16	8.36E-01
Calcite	$CaCO_3$	100.09	8.00E-01
Magnetite	$Fe_2^{3+}Fe^{2+}O_4$	231.54	7.95E-01
Riebeckite	$Na_2Fe_3^{2+}Fe_2^{3+}(Si_8O_{22})(OH)_2$	935.90	5.74E-01
Beidellite	$Na_{0,33}Al_{2,33}Si_{3,67}O_{10}(OH)_2$	367.54	5.10E-01
Ilmenite	$Fe^{2+}TiO_3$	151.73	4.71E-01
Titanite	$CaTiSiO_5$	196.04	4.46E-01
Clinochlore	$Mg_{3,75}Fe_{1,25}^{2+}Si_3Al_2O_{10}(OH)_8$	595.22	4.37E-01
Sepiolite	$Mg_4Si_6O_{15}(OH)_2 \cdot 6(H_2O)$	613.82	3.48E-01
Aegirine	$NaFe^{3+}Si_2O_6$	231.00	3.04E-01
Diopside	$CaMgSi_2O_6$	216.55	3.04E-01
Natrolite	$Na_2Al_2Si_3O_{10} \cdot 2(H_2O)$	380.22	2.97E-01
Cummingtonite	$Mg_7(Si_8O_{22})(OH)_2$	780.82	2.91E-01
Ankerite	$CaFe_{0,6}^{2+}Mg_{0,3}Mn_{0,1}^{2+}(CO_3)_2$	206.39	2.82E-01
Phosphate rock	$Ca_3(PO_4)_2$	310.00	2.79E-01
Hypersthene	$MgFe^{2+}Si_2O_6$	232.32	2.72E-01
Hastingsite	$NaCa_2Fe_4^{2+}Fe^{3+}(Si_6Al_2O_{22})(OH)_2$	990.86	2.58E-01

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Mineral	Formula	MW g/mole	Abundance mass, %
Bytownite	$Na_{0.2}Ca_{0.8}Al_{1.8}Si_{2.2}O_8$	275.01	2.50E-01
Actinolite	$Ca_2Mg_3Si_8O_{22}(OH)_2Fe_2^{2+}$	875.45	2.47E-01
Hydrobiotite	$Mg_{2.3}Fe_{0.6}^{3+}K_{0.3}Ca_{0.1}Si_{2.8}Al_{1.3}O_{10}(OH)_{1.8}F_{0.2} \cdot 3(H_2O)$	463.51	2.44E-01
Montmorillonite	$Na_{0.165}Ca_{0.0835}Al_{2.33}Si_{3.67}O_{10}(OH)_2$	367.09	2.39E-01
Andalusite	Al_2SiO_5	162.05	2.03E-01
Lawsenite	$CaAl_2Si_2O_7$	314.24	2.00E-01
Diaspore	$AlO(OH)$	59.99	1.77E-01
Pennine	$Mg_{3.75}Fe_{1.25}^{2+}Si_3Al_2O_{10}(OH)_8$	595.22	1.71E-01
Glauconite	$K_{0.6}Na_{0.05}Fe_{1.3}^{3+}Mg_{0.4}Fe_{0.2}^{2+}Al_{0.3}Si_{3.8}O_{10}(OH)_2$	426.93	1.56E-01
Prehnite	$Ca_2Al_2Si_3O_{10}(OH)_2$	395.38	1.41E-01
Dolomite	$CaMg(CO_3)_2$	184.40	1.41E-01
Hydrargillite/ Gibbsite	$Al(OH)_3$	78.00	1.38E-01
Ulvspinel	$TiFe_2^{2+}O_4$	223.57	1.16E-01
Goethite	$Fe^{3+}O(OH)$	88.85	1.04E-01
Neptunite	$KNa_2LiFe^{2+}Mn_{0.5}^{2+}Ti_2Si_8O_{24}$	907.69	9.97E-02
Hematite	Fe_2O_3	159.69	9.66E-02
Lepidomelane/ Annite	$KFe_{2.5}^{2+}Mg_{0.5}Fe_{0.75}^{3+}Al_{0.25}Si_3O_{10}(OH)_2$	512.40	9.11E-02
Sanidine	$K_{0.75}Na_{0.25}AlSi_3O_8$	274.30	7.31E-02
Barite	$BaSO_4$	233.39	7.09E-02
Distene/ Kyanite	Al_2SiO_5	162.05	7.08E-02
Celestine	$SrSO_4$	183.68	6.70E-02
Staurolite	$Fe^{2+}Al_9Si_4O_{23}(OH)$	851.86	6.54E-02
Thuringite/ Chamosite	$Fe_3^{2+}Mg_2Al_0.5^{3+}Fe_{0.5}^{3+}Si_3AlO_{10}(OH)_2$	562.80	6.43E-02
Ferrosilite	$Fe^{2+}MgSi_2O_6$	263.86	6.11E-02
Halite	$NaCl$	58.44	5.89E-02
Boehmite	$AlO(OH)$	59.99	5.79E-02
Thomsonite	$NaCa_2Al_5Si_5O_{20} \cdot 6(H_2O)$	806.56	4.99E-02
Serpentine/ Clinochrysotile	$Mg_3Si_2O_5(OH)_4$	277.11	4.56E-02
Pigeonite	$Mg_{1.35}Fe_{0.55}^{2+}Ca_{0.1}Si_2O_6$	219.70	4.37E-02
Bronzite	$MgFe^{2+}Si_2O_6$	232.32	4.11E-02
Apatite	$Ca_5(PO_4)_3(OH)_{0.33}F_{0.33}Cl_{0.33}$	509.12	4.03E-02
Zircon	$ZrSiO_4$	183.31	3.88E-02
Stilpnomelane	$K_{0.8}Fe_8^{2+}Al_{0.8}Si_{11.1}O_{21}(OH)_{8.6} \cdot 6(H_2O)$	1391.50	3.85E-02
Spodumene	$LiAlSi_2O_6$	186.09	3.83E-02
Psilomelane	$Ba_2Mn_5^{3+}O_{10} \cdot H_2O$	745.37	3.80E-02
Leucoxene	$CaTiSiO_5$	196.04	3.72E-02
Tremolite	$Ca_2Mg_5Si_8O_{22}(OH)_2$	812.37	3.48E-02
Clinozoisite	$Ca_2Al_3(SiO_4)_3(OH)$	454.36	3.41E-02
Crossite	$Na_2Mg_2Fe^{2+}Al_2(Si_8O_{22})(OH)_2$	815.09	3.31E-02
Pyrite	FeS_2	119.98	3.30E-02
Niter	KNO_3	101.10	3.00E-02
Talc	$Mg_3Si_4O_{10}(OH)_2$	379.27	2.91E-02
Vermiculite	$Mg_3Si_4O_{10}(OH)_2 \cdot 2(H_2O)$	415.30	2.81E-02
Enstatite	$Mg_2Si_2O_6$	200.78	2.78E-02
Anorthite	$CaAl_2Si_2O_8$	277.41	2.75E-02
Rutile	TiO_2	79.88	2.73E-02
Zoisite	$Ca_2Al_3Si_3O_{12}(OH)$	454.36	2.58E-02
Nitratine	$NaNO_3$	84.99	2.52E-02

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Mineral	Formula	MW g/mole	Abundance mass, %
Braunite	$Mn^{2+}Mn_6^{3+}SiO_{12}$	604.64	2.45E-02
Siderite	$Fe^{2+}CO_3$	115.86	2.41E-02
Graphite	C	12.01	2.41E-02
Spessartine	$Mn^{2+}3Al_2(SiO_4)_3$	495.03	2.36E-02
Anhydrite	$CaSO_4$	136.14	2.36E-02
Olivine	$Mg_{1.6}Fe_{0.4}^{2+}(SiO_4)$	153.31	2.34E-02
Hollandite	$Ba_{0.8}Pb_{0.2}Na_{0.125}Mn_6^{4+}Fe_{1.3}^{3+}Mn_{0.5}^{2+}Al_{0.2}Si_{0.1}O_{16}$	848.06	2.23E-02
Analcime	$NaAlSi_2O_6 \cdot (H_2O)$	220.15	2.23E-02
Carborundum	C	12.01	2.21E-02
Chromite	$Fe^{2+}Cr_2O_4$	223.84	1.98E-02
Vesuvianite/ Idocrase	$Ca_{10}Mg_2Al_4(SiO_4)_5(Si_2O_7)_2(OH)_4$	1422.09	1.71E-02
Pyrrhotite	$Fe^{2+}S$	87.91	1.57E-02
Tephroite	$Mn_2^{2+}(SiO_4)$	201.96	1.27E-02
Gypsum	$CaSO_4 \cdot 2H_2O$	158.14	1.26E-02
Corundum	Al_2O_3	101.96	1.22E-02
Rhodochrosite	$MnCO_3$	114.95	1.09E-02
Arfvedsonite	$Na_3Fe_4^{2+}Fe^{3+}(Si_8O_{22})(OH)_2$	958.89	1.05E-02
Monazite (Ce)	$Ce_{0.5}La_{0.25}Nd_{0.2}Th_{0.05}(PO_4)$	240.21	1.03E-02
Sphalerite	ZnS	97.44	9.96E-03
Jadeite	$NaAl_{0.9}Fe_{0.1}^{3+}(Si_2O_6)$	205.03	9.80E-03
Dispersed V	V	51.00	9.71E-03
Pumpellyite	$Ca_2MgAl_2(SiO_4)(Si_2O_7)(OH)_2 \cdot (H_2O)$	502.25	9.49E-03
Diodochic Rb	Rb	85.00	8.30E-03
Aragonite	$CaCO_3$	100.09	7.64E-03
Nepheline	$Na_{0.75}K_{0.25}Al(SiO_4)$	146.08	7.43E-03
Forsterite	Mg_2SiO_4	140.69	6.96E-03
Hedenbergite	$CaFe^{2+}Si_2O_6$	248.09	6.82E-03
Chalcopyrite	$CuFeS_2$	183.53	6.64E-03
Phlogopite	$KMg_3AlSi_3O_{10}F(OH)$	419.25	6.62E-03
Witherite	$BaCO_3$	197.34	5.99E-03
Pentlandite	$Fe_{4.5}^{2+}Ni_{1.5}S_8$	771.94	5.75E-03
Cordierite	$Mg_2Al_4Si_5O_{18}$	584.95	5.57E-03
Pyrolusite	MnO_2	86.94	4.90E-03
Fayalite	$Fe_2^{2+}SiO_4$	203.78	4.77E-03
Anatase	TiO_2	79.88	4.46E-03
Francolite	$Ca_5(PO_4)_2.63(CO_3)_{0.5}F_{1.11}$	501.26	4.35E-03
Tourmaline	$NaFe_2^{2+}Al_6(BO_3)_3Si_6O_{18}(OH)_4$	1053.38	4.30E-03
Orthite-Ce/ Allanite	$Ca_{1.2}Ce_{0.4}Y_{0.133}Al_2Fe^{3+}(Si_3O_{12})(OH)$	519.03	4.05E-03
Lepidolite	$KLi_2AlSi_4O_{10}F(OH)$	388.30	3.99E-03
Gedrite	$Mg_5Al_2(Si_6Al_2O_{22})(OH)_2$	783.97	3.23E-03
Beryl	$Be_3Al_2Si_6O_{18}$	537.50	3.22E-03
Pyrophyllite	$Al_2Si_4O_{10}(OH)_2$	360.31	3.22E-03
Rhodonite	$Mn^{2+}SiO_3$	131.02	3.04E-03
Magnesite	$MgCO_3$	84.31	3.02E-03
Chloritoid	$Fe_{1.2}^{2+}Mg_{0.6}Mn_{0.2}^{2+}Al_4Si_2O_{10}(OH)_4$	484.71	3.00E-03
Ilmenorutile	$Ti_{0.7}Nb_{0.15}Fe_{0.225}^{2+}O_2$	92.01	2.96E-03
Ulexite	$NaCaB_5O_9 \cdot 8H_2O$	405.23	2.92E-03
Diadochic Ce	Ce	140.00	2.83E-03
Jacobsite	$Mn_{0.6}^{2+}Fe_{0.3}^{2+}Mg_{0.1}Fe_{1.5}^{3+}Mn_{0.5}^{3+}O_4$	227.38	2.72E-03
Clementite	$Fe_3^{2+}Mg_{1.5}AlFe^{3+}Si_3AlO_{12}(OH)_6$	692.09	2.64E-03

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Mineral	Formula	MW g/mole	Abundance mass, %
Kernite	$Na_2B_4O_7 \cdot 4H_2O$	290.28	2.61E-03
Bastnaesite	$La(CO_3)F$	219.12	2.54E-03
Colemanite	$Ca_2B_6O_{11} \cdot 5H_2O$	411.09	2.46E-03
Sassolite (natural boric acid)	H_3BO_3	61.83	2.22E-03
Cryptomelane	$KMn_7^{4+}Mn_{0.5}^{2+}O_{16}$	707.12	2.19E-03
Murmanite	$Na_4Ti_{3.6}Nb_{0.4}(Si_2O_7)_2O_4 \cdot 4(H_2O)$	773.84	2.15E-03
Anthophyllite	$Mg_7Si_8O_{22}(OH)_2$	780.82	2.09E-03
Grossular	$Ca_3Al_2(SiO_4)_3$	450.45	2.08E-03
Diadochic Ni	Ni	59.00	1.98E-03
Amblygonite	$Li_{0.75}Na_{0.25}Al(PO_4)F_{0.75}(OH)_{0.25}$	151.41	1.95E-03
Diadochic Y	Y	89.00	1.86E-03
Scapolite	$Na_2Ca_2Al_3Si_9O_{24}Cl$	287.93	1.83E-03
Pollucite	$Ca_{0.6}Na_{0.2}Rb_{0.1}Al_{0.9}Si_{2.1}O_6 \cdot (H_2O)$	290.16	1.78E-03
Dispersed Ga	Ga	70.00	1.76E-03
Dispersed Co	Co	59.00	1.73E-03
Spinel	$MgAl_2O_4$	142.27	1.52E-03
Diadochic Nd	Nd	144.00	1.46E-03
Sapphirine	$Mg_4Al_6.5Si_{1.5}O_{20}$	689.23	1.40E-03
Dispersed Sc	Sc	45.00	1.40E-03
Manganite	$MnO(OH)$	87.94	1.36E-03
Cristobalite	SiO_2	60.08	1.24E-03
Fluorite	CaF_2	78.07	1.12E-03
Andradite	$Ca_3Fe_2^{2+}(SiO_4)_3$	508.18	9.99E-04
Glaucophane	$Na_2(Mg_3Al_2)Si_8O_{22}(OH)_2$	783.54	9.49E-04
Todorokite	$Na_2Mn_4^{4+}Mn_2^{3+}O_{12} \cdot 3(H_2O)$	621.65	8.33E-04
Ferrocolumbite	$Fe^{2+}Nb_2O_6$	337.66	8.10E-04
Clinohumite	$Mg_{6.75}Fe_{2.25}^{2+}(SiO_4)_4F_{1.5}(OH)_{0.5}$	695.05	7.64E-04
Pr in Monazite and Bastnasite	Pr	141.00	7.10E-04
Thorite	$ThSiO_4$	324.12	6.91E-04
Galena	PbS	239.27	6.67E-04
Marcasite	FeS_2	119.98	6.29E-04
Kornerupine	$Mg_{3.5}Fe_{0.2}^{2+}Al_{5.7}(SiO_4)_{3.7}(BO_4)_{0.3}O_{1.2}(OH)$	649.39	6.00E-04
Hf in Zr ores	Hf	178.00	5.29E-04
Vaesite	NiS_2	122.82	5.20E-04
Violarite	$Fe^{2+}Ni_2S_4$	301.49	5.20E-04
Humite	$Mg_{5.25}Fe_{1.75}^{2+}(SiO_4)_3F_{1.5}(OH)_{0.5}$	538.58	5.09E-04
Jarosite	$KFe_3^{3+}(SO_4)_2(OH)_6$	500.81	4.79E-04
Wollastonite	$CaSiO_3$	116.16	4.74E-04
Arsenopyrite	$FeAsS$	162.83	4.71E-04
Sm in Monazite and Bastnasite	Sm	150.00	4.69E-04
Kieserite	$MgSO_4 \cdot (H_2O)$	138.38	4.24E-04
Garnierite	$Ni_2MgSi_2O_5(OH)_4$	345.92	4.10E-04
Euxenite	$Y_{0.7}Ca_{0.2}Ce_{0.1}(Ta_{0.2})_2(Nb_{0.7})_2(Ti_{0.025})O_6$	385.10	3.93E-04
Dispersed Dy	Dy	163.00	3.91E-04
Cubanite	$CuFe_2S_3$	271.44	3.62E-04
Dispersed Gd	Gd	157.00	3.19E-04
Nickeline	$NiAs$	133.61	2.73E-04
Aenigmatite	$Na_2Fe_5^{2+}TiSi_6O_{20}$	861.60	2.73E-04
Scheelite	$CaWO_4$	287.93	2.67E-04

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Mineral	Formula	MW g/mole	Abundance mass, %
Cassiterite	SnO_2	150.71	2.61E-04
Carnotite	$K_2(UO_2)_2(VO_4)_2 \cdot 3H_2O$	902.18	2.52E-04
Vernadite	$Mn_{0.6}^{4+}Fe_{0.2}^{3+}Ca_{0.2}Na_{0.1}O_{1.5}(OH)_{0.5} \cdot 1.4(H_2O)$	112.17	2.45E-04
Topaz	$Al_2(SiO_4)F_{1.1}(OH)_{0.9}$	182.25	2.34E-04
Dispersed Er	Er	167.00	2.30E-04
Chrysoberyl	$BeAl_2O_4$	126.97	2.28E-04
Hisingerite	$Fe_2^{3+}Si_2O_5(OH)_4 \cdot 2(H_2O)$	351.92	2.20E-04
Covellite	CuS	95.61	2.17E-04
Sylvite	KCl	74.55	2.05E-04
Yttrialite	$Y_{1.5}Th_{0.5}Si_2O_7$	417.54	1.94E-04
Molybdenite	MoS_2	160.07	1.83E-04
Yb in monazite	Yb	173.00	1.72E-04
Gersdorffite	$NiAsS$	165.68	1.61E-04
Dispersed Br	Br	80.00	1.60E-04
Omphacite	$Ca_{0.6}Na_{0.4}Mg_{0.6}Al_{0.3}Fe_{0.1}^{2+}Si_2O_6$	213.67	1.60E-04
Brucite	$Mg(OH)_2$	58.32	1.58E-04
Uraninite	UO_2	270.03	1.51E-04
Azurite	$Cu_3(CO_3)_2(OH)_2$	344.67	1.51E-04
Dietzeite	$Ca_2(IO_3)_2(CrO_4)$	545.96	1.51E-04
Sb in galena	Sb	879.29	1.42E-04
Dispersed Ge	Ge	73.00	1.41E-04
Bornite	Cu_5FeS_4	501.84	1.33E-04
Nosean	$Na_8Al_6Si_6O_{24}(SO_4)$	1012.38	1.31E-04
Pyrochlore	$Na_{1.5}Ca_{0.5}Nb_2O_6(OH)_{0.75}F_{0.25}$	362.38	1.26E-04
Malachite	$Cu_2(CO_3)(OH)_2$	221.12	1.21E-04
Palygorskite	$MgAlSi_4O_{10}(OH) \cdot 4(H_2O)$	412.69	1.14E-04
Lautarite	$Ca(IO_3)_2$	389.88	1.08E-04
Dispersed Eu	Eu	152.00	1.00E-04
Dispersed Tl	Tl	204.00	8.98E-05
Hydrosodalite	$Na_8(AlSiO_4)_6(OH)_2$	932.00	8.44E-05
Dispersed Ho	Ho	165.00	8.30E-05
Gadolinite	$Y_2Fe^{2+}Be_2(Si_2O_{10})$	569.31	8.05E-05
Phenakite	Be_2SiO_4	110.11	8.05E-05
Bertrandite	$Be_4Si_2O_7(OH)_2$	238.23	8.05E-05
Helvine/ Helvite	$Mn_4Be_3(SiO_4)_3S$	555.10	8.05E-05
Strontianite	$SrCO_3$	147.63	7.88E-05
Dispersed Tb	Tb	159.00	7.00E-05
Perovskite	$CaTiO_3$	135.96	6.94E-05
Tridymite	SiO_2	60.08	6.30E-05
Cryolite	Na_3AlF_6	209.94	4.95E-05
Sulphur	S_8	256.53	4.72E-05
Orpiment	As_2S_3	246.04	4.55E-05
Brookite	TiO_2	79.88	4.21E-05
Eudialyte	$Na_4Ca_2Ce_{0.5}Fe_{0.7}^{2+}Mn_{0.3}^{2+}Y_{0.1}ZrSi_8O_{22}(OH)_{1.5}Cl_{0.5}$	938.82	4.04E-05
Carnallite	$KMgCl_3 \cdot 6(H_2O)$	277.85	4.03E-05
Xenotime	$YbPO_4$	268.01	3.70E-05
Dawsonite	$NaAl(CO_3)(OH)_2$	144.00	3.62E-05
Wolframite	$Fe_{0.5}^{2+}Mn_{0.5}^{2+}(WO_4)$	303.24	3.21E-05
Dispersed Lu	Lu	175.00	3.10E-05
Dispersed Tm	Tm	169.00	3.00E-05
Stibnite	Sb_2S_3	339.70	2.75E-05
Copper	Cu	63.55	2.48E-05
Cerussite	$PbCO_3$	267.21	2.21E-05

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Table B.2: Mineralogical composition of the earth's crust according to the calculations of this study. – continued from previous page.

Mineral	Formula	MW g/mole	Abundance mass, %
Blomstrandite/ Betafite	$U_{0,3}Ca_{0,2}Nb_{0,9}Ti_{0,8}Al_{0,1}Fe_{0,1}^{3+}Ta_{0,5}O_6(OH)$	413.09	2.05E-05
Sodalite	$Na_8Al_6Si_6O_{24}Cl_2$	969.21	1.98E-05
Britholite	$Ca_{2,9}Ce_{0,9}Th_{0,6}La_{0,4}Nd_{0,2}Si_{2,7}P_{0,5}O_{12}(OH)_{1,8}F_{0,2}$	783.69	1.71E-05
Ferrotantalite	$Fe^{2+}Ta_2O_6$	513.74	1.58E-05
Ramsayite/ Lorenzenite	$Na_2Ti_2Si_2O_9$	341.91	1.24E-05
Anglesite	$PbSO_4$	303.26	1.16E-05
Greenockite	CdS	144.48	1.16E-05
Chondrodite	$Mg_{3,75}Fe_{1,25}^{2+}(SiO_4)_2F_{1,5}(OH)_{0,5}$	382.12	1.12E-05
Axinite -Fe	$Ca_2Fe^{2+}Al_2BO_3Si_4O_{12}(OH)$	570.12	1.10E-05
Chalcocite	Cu_2S	159.16	1.09E-05
Zinc	Zn	65.39	1.01E-05
Se in copper ores	Se	79.00	9.00E-06
Loparite (Ce)	$Na_{0,6}Ce_{0,22}La_{0,11}Ca_{0,1}Ti_{0,8}Nb_{0,2}O_3$	168.78	8.13E-06
Bischofite	$MgCl_2 \cdot 6(H_2O)$	203.30	8.06E-06
Smithsonite	$ZnCO_3$	125.40	7.98E-06
Sirtolite	$ZrSiO_4$	183.31	7.37E-06
Pleonaste/ Magnesian-sioferrite	$MgFe_2^{3+}O_4$	158.04	6.96E-06
Lead	Pb	207.20	6.32E-06
Bismutite	$Bi_2(CO_3)O_2$	509.97	6.09E-06
Cinnabar	HgS	232.66	5.73E-06
In in ZnS	In	115.00	5.61E-06
Arsenolite	As_2O_3	197.84	5.55E-06
Bismuthinite	Bi_2S_3	514.16	5.10E-06
Bismite	Bi_2O_3	465.96	4.62E-06
Tin	Sn	118.69	4.59E-06
Cancrinite	$Na_6Ca_2Al_6Si_6O_{24}(CO_3)_2$	1052.50	4.42E-06
Chevkinite	$Ce_{1,7}La_{1,4}Ca_{0,8}Th_{0,1}Fe_{1,8}^{2+}Mg_{0,5}Ti_{2,5}Fe_{0,5}^{3+}Si_4O_{22}$	1212.52	3.35E-06
Bismuth	Bi	208.98	2.71E-06
Rhabdophane-Ce	$Ce_{0,75}La_{0,25}(PO_4) \cdot (H_2O)$	252.80	2.62E-06
Fergusonite	$Nd_{0,4}Ce_{0,4}Sm_{0,1}Y_{0,1}NbO_4$	294.57	2.38E-06
Native silver	Ag	107.87	2.09E-06
Iotsite	FeO	71.80	1.71E-06
Realgar	As_4S_4	106.99	1.50E-06
Pyrargirite	Ag_3SbS_3	541.55	1.29E-06
Argentite	Ag_2S	247.80	1.24E-06
Baddeleyite	ZrO_2	123.22	1.20E-06
Uranium- Thorite	$ThSiO_4$	327.12	1.04E-06
Lavenite	$Na_{0,5}Ca_{0,5}Mn_{0,5}^{2+}Fe_{0,5}^{2+}Zr_{0,8}Ti_{0,1}Nb_{0,1}(Si_2O_7)O_{0,6}(OH)_{0,3}F_{0,1}$	388.58	1.01E-06
Cobaltite	$CoAsS$	165.92	8.40E-07
Acanthite	Ag_2S	247.80	6.79E-07
Freibergite	$Ag_{7,2}Cu_{3,6}Fe_{1,2}^{2+}Sb_3AsS_{13}$	1929.46	6.79E-07
Smaltite	$CoAs_2$	125.40	6.35E-07
Powellite	$CaMoO_4$	200.02	6.10E-07
Stephanite	Ag_5SbS_4	789.36	6.09E-07
Linnaeite	Co_3S_4	305.06	5.15E-07
Microlite	$Na_{0,4}Ca_{1,6}Ta_2O_{6,6}(OH)_{0,3}F_{0,1}$	547.81	4.77E-07
Lamprophyllite	$Na_2SrBaTi_3Si_4O_{16}(OH)F$	818.87	4.59E-07
Te in Cu ores	Te	128.00	4.47E-07
Thorianite	ThO_2	264.04	4.12E-07

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Mineral	Formula	MW g/mole	Abundance mass, %
Delorenzite/ Tan- teuxenite	$Y_{0.7}Ca_{0.2}Ce_{0.12}(Ta_{0.7})_2(Nb_{0.2})_2(Ti_{0.1})O_{5.5}(OH)_{0.5}$	480.83	4.00E-07
Miserite	$KCa_2Ce_3Si_8O_{22}(OH)_{1.5}F_{0.5}$	1151.28	2.30E-07
Fahlerz Group: Tennantite	$Cu_{11}Fe^{2+}As_4S_{13}$	1471.40	1.82E-07
Metatorbenite	$Cu(UO_2)_2(PO_4)_2 \cdot 8(H_2O)$	937.67	1.69E-07
Moissanite	SiC	40.10	1.41E-07
Vivianite	$Fe_3^{3+}(PO_4)_2 \cdot 8(H_2O)$	501.61	1.30E-07
Naegite	$ZrSiO_4$	183.31	1.28E-07
Gold	Au	196.97	1.28E-07
Chrysocolla	$Cu_2Si_2O_6 \cdot (H_2O)_4$	351.32	1.25E-07
Troilite	FeS	87.91	1.05E-07
Chlorargirite	$AgCl$	143.32	7.83E-08
Metacinnabar	HgS	232.66	7.38E-08
Wulfenite	$PbMoO_4$	367.14	6.10E-08
Tetrahedrite	$Cu_9Fe_3Sb_4S_{13}$	1643.31	5.70E-08
Nordite	$Na_{2.8}Mn_{0.2}^{2+}Sr_{0.5}Ca_{0.5}La_{0.33}Ce_{0.6}Zn_{0.6}Mg_{0.4}Si_6O_{17}$	758.57	5.46E-08
Samsonite	$Ag_4MnSb_2S_6$	922.31	4.87E-08
Pd in Ni-Cu ores	Pd	106.00	4.51E-08
Cooperite	$Pt_{0.6}Pd_{0.3}Ni_{0.1}S$	186.91	3.95E-08
Weinschenkite	$YPO_4 \cdot 2(H_2O)$	219.91	3.70E-08
Ru in Ni-Cu ores	Ru	101.00	3.37E-08
Sylvanite	$Au_{0.75}Ag_{0.25}Te_2$	429.89	3.27E-08
Lollingite	$FeAs_2$	205.69	2.68E-08
Calaverite	$AuTe_2$	452.17	2.58E-08
Pt in Ni-Cu ores	Pt	195.00	2.47E-08
Rinkolite/ Mosan- drite	$Na_2Ca_3Ce_{1.5}Y_{0.5}Ti_{0.4}Nb_{0.5}Zr_{0.1}(Si_2O_7)_2O_{1.5}F_{3.5}$	922.39	2.07E-08
Dispersed Re	Re	186.00	1.98E-08
Tellurite	TeO_2	159.60	1.82E-08
Tetradymite	Bi_2Te_2S	705.23	1.60E-08
Periclase	MgO	40.30	1.52E-08
Alunite	$KAl_3(SO_4)_2(OH)_6$	414.21	9.11E-09
Thortveitite	$Sc_{1.5}Y_{0.5}Si_2O_7$	280.05	7.60E-09
Dumortierite	$Al_{6.9}(BO_3)(SiO_4)_3O_{2.5}(OH)_{0.5}$	569.73	7.60E-09
Rh in Ni-Cu ores	Rh	103.00	6.01E-09
Osmium	$Os_{0.75}Ir_{0.25}$	190.71	3.00E-09
Iridium	$Ir_{0.5}Os_{0.3}Ru_{0.2}$	173.39	2.61E-09
Polycrase (Y)	$Y_{0.5}Ca_{0.1}Ce_{0.1}U_{0.1}Th_{0.1}Ti_{1.2}Nb_{0.6}Ta_{0.2}O_6$	354.85	8.71E-10
Boulangerite	$Pb_5Sb_4S_{11}$	1887.90	4.00E-10
I-Platinum	Pt	195.08	3.00E-10
Polixene/ Tetrafer- roplatinum	$PtFe$	167.00	2.00E-10
Wohlerite	$NaCa_2Zr_{0.6}Nb_{0.4}Si_2O_{8.4}(OH)_{0.3}F_{0.3}$	396.41	5.05E-11
Sum		155.2	105.0

End of the table