

Mineral Powder Diffraction File

Search Manual

CHEMICAL NAME

BRINWALT NUMERICAL

PANXNUMERICAL

MINERAL NAME



INTERNATIONAL CENTRE FOR DIFFRACTION DATA

Mineral Powder Diffraction File Search Manual

Chemical Name • Hanawalt • Fink • Mineral Name

Compiled by the JCPDS—International Centre for Diffraction Data in cooperation with the American Ceramic Society, American Crystallographic Association, American Society for Testing and Materials, Australian X-Ray Analytical Association, The Clay Minerals Society, Deutsche Mineralogische Gesellschaft, The Institute of Physics, The Mineralogical Association of Canada, The Mineralogical Society of America, Mineralogical Society of Great Britain and Ireland, National Association of Corrosion Engineers, and Société Française de Minéralogie et de Cristallographie.



INTERNATIONAL CENTRE FOR DIFFRACTION DATA

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Preface

During the last six years, a systematic search has been made for diffraction data of minerals not recorded in the 1980 edition of *Mineral Powder Diffraction File*. This Mineral File now contains 2700 species represented by 3400 patterns including about 850 new patterns added since 1980.

The data book has been ordered alphabetically on mineral name, because it groups together patterns of the same mineral (e.g. polytypes, order-disorder, different hydrates, chemical varieties, rare-earth species) and the data of a mineral may be found directly without having to use an index. All data have been reedited with special references to mineral nomenclature, polytype symbols, chemical formula, unit cell, space group, Z, calculated density, indices of refraction, mineral group and subgroup, and indexing.

Mineral nomenclature usage follows the International Mineralogical Association. Since no usage is available for the chlorite group and halloysite, that of A.I.P.E.A. (International Clay Minerals Association) has been followed. When confusion exists in the literature such as the serpentine group and wollastonite, polytype designations or basal d-spacings have been added as a hyphenated suffix to the mineral name. A mineral group name is arbitrarily defined as three or more similar minerals, but they are not necessarily iso-

structural, whereas subgroups are based upon chemical or isostructural criteria.

The revision of the Mineral File has been guided by the decisions of The International Mineralogical Association (*Mineral. Mag.* 46, 513-14; 43, 1053-5; 38, 102-5; 36, 1143-5; 36, 131-6; 33, 260-3); the *Glossary of Mineral Species*, 1983 (M. Fleischer) with revisions *Mineral Record*. 15, 51-54 (1984) and 16, 155-158 (1985); *A Manual of New Mineral Names 1892-1978* (P. G. Embrey and J. P. Fuller) with updates Thirty-second list of new mineral names (M. H. Hey, *Mineral. Mag.* 46, 515-28, 1982) and Thirty-third list of new mineral names (E. E. Fejer and M. H. Hey, *Mineral. Mag.* 48, 569-586, 1984).

Because the publication of new data is certain to continue, the annual updates giving additions and corrections to the Mineral File will continue to be published in the Powder Diffraction File. Your advice and suggestions will be appreciated. Please send them to me, c/o Geology and Geophysics, University of Calgary, Alberta, Canada T2N 1N4. The Mineral File wishes to acknowledge a few individuals, who have made outstanding contributions: Louis J. Cabri, Alan J. Criddle, Mike Fleischer, R. F. Hamilton, Max H. Hey, Akira Kato, Bernie F. Leonard, John S. White, and M. Jeff Wilson.

Peter Bayliss

Use of Hanawalt and Fink Search Manuals

An identification procedure may include the steps as follows:

- 1.) Tabulate the measured d -spacings and relative intensities of the experimental pattern in numerical order of d -spacing.

For the Hanawalt search manual, write down opposite each reflection its order in decreasing relative intensities. The larger d -spacing listed first, if reflections have relative intensities within 20% (approximate accuracy for many relative intensity measurements).

- 2.) Start the search by using the strongest reflection to locate the Hanawalt (or Fink) group in the Hanawalt (or Fink) search manual.
- 3.) Use the 2nd strongest reflection to locate the position within the Hanawalt group or the next smaller d -spacing (very weak reflections may be excluded) to locate the position within the Fink group. Only those 2nd strongest reflections or next smaller d -spacing that lie within expected experimental error (see table below) and solid solution variation (normally $\pm 1\%$ variation in d -spacing) are considered further.

Expected Experimental Precision

d -spacing $\text{\AA}$	114 mm dia Debye camera $\pm \Delta d \text{\AA}$	114 mm dia Guinier camera $\pm \Delta d \text{\AA}$
5	0.028	0.007
4	0.018	0.005
3	0.010	0.003
2	0.004	0.001
1	0.001	0.001

Next compare the 3rd to 8th d -spacings and their relative intensities for agreement.

- 4.) If a preliminary identification is achieved, then the experimental pattern is compared with all the d -spacings and relative intensities on the mineral data-card to achieve a final identification.

- 5.) If a preliminary identification is not achieved, then the next strongest reflection or the next smaller d -spacing is used to locate the position within the Hanawalt group or Fink group and so on as in steps 3 and 4. This procedure is repeated with continuing weaker reflections or the next smaller d -spacings as in steps 3 and 4. In case the strongest reflection in the experimental pattern has not been resolved into two reflections, the strongest reflections should also be treated as the next strongest reflection or next smaller d -spacing and so on as in steps 3 and 4.

If a preliminary identification is not achieved with the Fink search manual and if the d -spacing of the strongest reflection lies within twice the experimental error as listed above of a Fink group edge, then this Fink group should be searched as in steps 3 through 5.

- 6.) If a preliminary identification has still not been achieved, then the second strongest reflection is used to locate the Hanawalt or Fink group and so on in steps 2 through 5. This procedure may be repeated with continuing weaker reflections as in steps 2 through 5.

- 7.) If one pair of d -spacings leads to a reference pattern all of whose d -spacings and relative intensities correspond closely to the experimental pattern except that it does not account for all the d -spacings, then further search must be made using additional pairs of these unassigned d -spacings as per steps 2 through 6.

Chemical Name
Section

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		File No.				
	Acetamide	5.70 ₁	3.154 ₁	2.86 ₁	3.32 ₁	29-2001
	Acetate Chloride Hydrate : Calcium	8.27 ₁	3.124 ₁	2.43 ₁	6.87 ₁	12- 869
c	Acid : Uric	3.09 ₁	3.118 ₁	4.91 ₁	6.55 ₁	28-2016
*	Aluminum :	2.34 ₁	2.092 ₁	1.22 ₁	1.43 ₁	4- 787
c	Aluminum Antimony Iron Oxide :	3.24 ₁	3.119 ₁	4.70 ₁	2.41 ₁	29- 2
	Aluminum Antimony Niobium Tantalum Oxide : Potassium Sodium	Sosedkite	3.95 ₁	3.03 ₁	1.97 ₁	35- 687
	Aluminum Antimony Oxide Hydrate : Copper	Cyanaphillite	4.84 ₁	9.657 ₁	2.59 ₁	35- 507
	Aluminum Antimony Oxide Hydroxide :	Bahianite	3.24 ₁	3.119 ₁	2.16 ₁	29- 3
	Aluminum Antimony Oxide Silicate : Manganese	Katoptrite	2.94 ₁	4.412 ₁	2.79 ₁	14- 338
	Aluminum Antimony Silicate : Magnesium Manganese Iron	Katoptrite	2.96 ₁	8.838 ₁	2.60 ₁	19- 274
i	Aluminum Antimony Tantalum Silicate Borate Hydroxide :	Hobite	10.3 ₁	2.924 ₁	5.69 ₁	25-1209
i	Aluminum Arsenate Hydrate :	Mannite	5.50 ₁	4.411 ₁	3.12 ₁	23- 123
	Aluminum Arsenate Hydrate : Hydrogen Uranyl	Antenuraphite	14.6 ₁	7.652 ₁	3.46 ₁	31- 586
	Aluminum Arsenate Hydroxide Hydrate : Barium	Pharmacosiderite, barian, aluminum	7.80 ₁	2.73 ₁	3.87 ₁	19- 94
i	Aluminum Arsenate Hydroxide Hydrate : Copper	Goudite	11.6 ₁	2.92 ₁	4.41 ₁	29- 526
*	Aluminum Arsenate Hydroxide Hydrate : Copper	Ureanite	6.52 ₁	6.03 ₁	3.01 ₁	12- 526
i	Aluminum Arsenate Hydroxide Hydrate : Copper	Cerulite	5.65 ₁	7.30 ₁	5.93 ₁	29- 525
i	Aluminum Arsenate Hydroxide Hydrate : Copper	Lucite	3.50 ₁	7.211 ₁	2.51 ₁	29- 527
	Aluminum Arsenate Hydroxide Hydrate : Lead	Philipsite	3.06 ₁	5.815 ₁	3.59 ₁	35- 540
i	Aluminum Arsenate Hydroxide Hydrate : Potassium	Alumopharmacosiderite	7.77 ₁	2.74 ₁	4.48 ₁	35- 670
	Aluminum Arsenate Sulfate Hydroxide : Barium	Wellite, sulfation	3.01 ₁	5.80 ₁	3.54 ₁	19-1419
	Aluminum Arsenate Sulfate Hydroxide Hydrate : Copper	Chalcophyllite	9.54 ₁	4.79 ₁	2.59 ₁	19- 379
	Aluminum Arsenate Sulfate Hydroxide : Lead	Nilegite	2.98 ₁	5.73 ₁	3.51 ₁	6- 380
	Aluminum Arsenate Sulfate Hydroxide : Oxonium Calcium	Schlossmacherite	2.95 ₁	4.92 ₁	2.98 ₁	33- 973
	Aluminum Arsenate Sulfate Hydroxide : Strontium Rhenium	Kemmlitzite-(Ln)	2.96 ₁	3.51 ₁	1.90 ₁	22-1268
c	Aluminum Arsenite Arsenate Hydroxide : Magnesium Manganese	Hannite	4.14 ₁	12.21 ₁	5.64 ₁	33- 868
i	Aluminum Beryllium Chloride Silicate : Sodium	Tugtupite	3.52 ₁	6.13 ₁	3.57 ₁	19-1182
	Aluminum Beryllium Silicate Hydroxide : Lithium Calcium	Bityite-ZnI	2.48 ₁	1.45 ₁	2.04 ₁	11- 400
*	Aluminum Borate : Calcium	Jahnschite	2.63 ₁	1.96 ₁	2.43 ₁	29- 280
	Aluminum Borate Carbonate Silicate Hydrate : Calcium Magnesium	Harkerite	2.61 ₁	1.84 ₁	2.13 ₁	10- 465
	Aluminum Borate Chloride Hydrate : Potassium Sodium	Sentinite	3.20 ₁	9.50 ₁	6.30 ₁	25-1350
i	Aluminum Borate Hydroxide :	Jeromevite, hydroxyl, syn	4.29 ₁	3.80 ₁	2.81 ₁	25- 10
	Aluminum Borate Hydroxide : Cesium Beryllium	Riedite	2.98 ₁	3.27 ₁	2.44 ₁	18- 327
i	Aluminum Borate : Magnesium	Sinhalite, syn	1.63 ₁	3.25 ₁	2.62 ₁	25-1379
	Aluminum Borate Silicate Hydrate : Calcium Rhenium	Yttrite-(Y), heand	2.80 ₁	1.85 ₁	2.73 ₁	27-1063
	Aluminum Borate Silicate Hydroxide : Calcium Magnesium	Uvite	2.97 ₁	2.58 ₁	2.04 ₁	29- 342
i	Aluminum Borate Silicate Hydroxide Fluoride : Lithium Sodium	Elbait	2.56 ₁	2.93 ₁	3.96 ₁	26- 964
*	Aluminum Borate Silicate Hydroxide : Lithium Calcium	Liddite	2.93 ₁	2.66 ₁	3.96 ₁	30- 748
*	Aluminum Borate Silicate Hydroxide : Magnesium	Kornerupine	3.01 ₁	2.63 ₁	2.10 ₁	29- 852
i	Aluminum Borate Silicate Hydroxide : Sodium Magnesium	Dravite, chromian	3.49 ₁	2.97 ₁	2.58 ₁	25-1307
i	Aluminum Borate Silicate Hydroxide : Sodium Magnesium	Dravite	2.58 ₁	3.99 ₁	2.96 ₁	14- 76
i	Aluminum Borate Silicate Sulfate Hydroxide Hydrate : Calcium	Charlesite	9.70 ₁	5.58 ₁	3.86 ₁	35- 606
i	Aluminum Boron Silicate : Calcium Magnesium	Serendibite	2.85 ₁	2.60 ₁	2.46 ₁	29- 343
	Aluminum Boron Silicate Hydroxide : Calcium Iron	Ferrosinhalite	2.81 ₁	3.16 ₁	3.46 ₁	27- 76
i	Aluminum Boron Silicate Hydroxide : Calcium Magnesium	Magnesiozinne	2.80 ₁	3.44 ₁	3.14 ₁	29- 344
	Aluminum Boron Silicate Hydroxide : Calcium Manganese	Tinzenite	2.81 ₁	3.46 ₁	6.30 ₁	6- 444
i	Aluminum Boron Silicate Hydroxide : Calcium Manganese Iron	Manganosinhalite	3.16 ₁	3.47 ₁	2.81 ₁	27- 84
	Aluminum Boron Silicate Hydroxide : Sodium Iron	Schorl, syn	2.91 ₁	2.58 ₁	1.63 ₁	22- 469
i	Aluminum Boron Silicate : Magnesium Iron	Grandierite	5.17 ₁	5.04 ₁	5.48 ₁	18- 581
i	Aluminum Boron Zirconium Oxide : Calcium	Painite	5.76 ₁	2.52 ₁	3.70 ₁	10- 405
	Aluminum Calcium Yttrium Phosphate Silicate Hydroxide Hydrate :	Saryarkite	3.01 ₁	2.83 ₁	1.85 ₁	16- 712
i	Aluminum Carbonate Fluoride : Hydrogen Sodium	Barents	2.78 ₁	2.66 ₁	2.89 ₁	35- 693
	Aluminum Carbonate Hydroxide :	Scarbrite	8.66 ₁	3.72 ₁	5.99 ₁	12- 627
i	Aluminum Carbonate Hydroxide Hydrate : Barium	Hydrodrossite	8.52 ₁	3.42 ₁	3.10 ₁	29- 145
i	Aluminum Carbonate Hydroxide Hydrate : Barium	Dresserite	8.09 ₁	6.23 ₁	3.66 ₁	23- 617
	Aluminum Carbonate Hydroxide Hydrate : Calcium	Para-alumohydrocalcite	7.90 ₁	6.20 ₁	3.32 ₁	30- 222
c	Aluminum Carbonate Hydroxide Hydrate : Calcium	Alumohydrocalcite	6.25 ₁	6.50 ₁	3.23 ₁	22- 138
o	Aluminum Carbonate Hydroxide Hydrate : Lead	Dundasite	7.94 ₁	3.60 ₁	3.24 ₁	33- 731
o	Aluminum Carbonate Hydroxide Hydrate : Magnesium	Hydrocalcite, syn	7.84 ₁	3.90 ₁	2.60 ₁	22- 700
	Aluminum Carbonate Hydroxide Hydrate : Magnesium	Hydrocalcite	7.69 ₁	3.88 ₁	2.58 ₁	14- 191
	Aluminum Carbonate Hydroxide Hydrate : Magnesium	Manasseite	7.67 ₁	1.84 ₁	2.60 ₁	14- 525
o	Aluminum Carbonate Hydroxide Hydrate : Magnesium	Indigirite	5.80 ₁	7.62 ₁	5.24 ₁	25- 510
i	Aluminum Carbonate Hydroxide Hydrate : Strontium	Strontiodresserite	7.93 ₁	4.39 ₁	3.00 ₁	29-1295
i	Aluminum Carbonate Hydroxide : Sodium	Dawsonite	5.67 ₁	2.78 ₁	2.60 ₁	19-1175
i	Aluminum Carbonate Silicate Hydroxide : Lead	Surite	4.05 ₁	16.2 ₁	5.40 ₁	31- 676
c	Aluminum Carbonate Silicate : Sodium Calcium	Concinnite, carbonation	3.21 ₁	4.63 ₁	6.30 ₁	34- 176
	Aluminum Carbonate Silicate Sulfate Hydroxide : Calcium	Ettringite	9.67 ₁	5.60 ₁	3.88 ₁	31- 251
i	Aluminum Carbonate Silicate Sulfate Hydroxide Hydrate : Potassium Sodium Cal	Tuscanite	11.5 ₁	2.87 ₁	3.07 ₁	29-1035
c	Aluminum Carbonate Silicate Sulfate : Potassium Calcium	Latiumite	2.84 ₁	2.95 ₁	2.86 ₁	25-1202
o	Aluminum Carbonate Sulfate Hydroxide Hydrate : Copper	Carbonate-cyanotrichite	4.21 ₁	10.1 ₁	5.03 ₁	16- 365
i	Aluminum Carbonate Sulfate Silicate Hydroxide Hydrate : Sodium Calcium	Franzinite	3.72 ₁	3.59 ₁	3.81 ₁	30-1170
	Aluminum Cerium Phosphate Hydroxide :	Florentite-(Ce)	2.93 ₁	5.63 ₁	2.16 ₁	8- 143
o	Aluminum Cerium Yttrium Fluoride Sulfate Hydrate : Calcium	Chukrovite-(Y)	2.19 ₁	1.83 ₁	3.26 ₁	27- 61
	Aluminum Chlorate Silicate : Sodium	Marialite	3.44 ₁	3.03 ₁	3.78 ₁	2- 412
	Aluminum Chloride Carbonate Hydroxide Hydrate : Iron Magnesium	Chloromannite	7.67 ₁	1.84 ₁	2.34 ₁	33- 653
i	Aluminum Chloride Carbonate Silicate : Sodium Calcium	Marialite, calcian	3.47 ₁	3.06 ₁	3.82 ₁	31-1279
	Aluminum Chloride Fluoride Silicate Hydroxide :	Zunyte	8.07 ₁	4.21 ₁	2.68 ₁	14- 698
i	Aluminum Chloride Hydrate :	Chloraluminite, syn	3.30 ₁	3.25 ₁	2.31 ₁	8- 453
i	Aluminum Chloride Nitrate Hydroxide Hydrate : Potassium	Sveite	10.2 ₁	2.44 ₁	3.69 ₁	30- 986
i	Aluminum Chloride Silicate Hydrate : Potassium Sodium Calcium	Delhayite	3.08 ₁	12.3 ₁	6.16 ₁	12- 286
	Aluminum Chloride Silicate Hydroxide : Potassium Boron	Kalborite	3.08 ₁	2.79 ₁	3.44 ₁	33- 999
i	Aluminum Chloride Silicate : Potassium Sodium Calcium	Meionite, sodian	3.46 ₁	3.07 ₁	3.82 ₁	29-1036
	Aluminum Chloride Silicate : Potassium Sodium Calcium Iron Magnesium	Hastingsite, chlorian, potassian	8.52 ₁	3.16 ₁	2.59 ₁	20- 378
i	Aluminum Chloride Silicate : Sodium	Sodalite	3.63 ₁	6.30 ₁	2.10 ₁	20-1070
c	Aluminum Chloride Silicate : Sodium	Sodalite	3.62 ₁	6.27 ₁	2.09 ₁	20- 495
i	Aluminum Chloride Silicate Sulfate : Potassium Sodium Calcium	Microsommit	4.81 ₁	3.69 ₁	3.29 ₁	20- 743
	Aluminum Chloride Silicate Sulfate : Potassium Sodium Calcium	Giuseppite	3.71 ₁	3.45 ₁	3.13 ₁	35- 479
i	Aluminum Chloride Silicate Sulfate : Sodium Calcium Potassium	Davine	4.80 ₁	3.67 ₁	3.28 ₁	20- 379
	Aluminum Chloride Sulfate Hydrate : Copper	Aubertite	4.50 ₁	4.25 ₁	3.95 ₁	33- 447
	Aluminum Chloride Sulfate Hydroxide Hydrate : Copper	Spangolite	7.10 ₁	3.59 ₁	2.54 ₁	5- 142

Aluminum Chromium Oxide : Magnesium Iron	Magnesiochromite, ferroan	2.49 ₁	1.47 ₁	1.59 ₁	2.07 ₁	9- 353
Aluminum Chromium Silicate Hydroxide : Magnesium	Clinoclase-IIIb, chromian	2.55 ₁	7.15 ₁	1.54 ₁	14.1 ₁	7- 160
Aluminum Chromium Sulfate Hydroxide Hydrate : Calcium	Bentorite	9.66 ₁	5.59 ₁	1.94 ₁	3.60 ₁	33- 246
Aluminum Chromium Vanadium Oxide Hydrate :	Steigerite, chromian	2.99 ₁	1.77 ₁	2.04 ₁	1.90 ₁	29- 20
Aluminum Fluoride : Barium Magnesium	Usovite	3.41 ₁	2.04 ₁	1.75 ₁	1.21 ₁	19-1391
Aluminum Fluoride Borate Hydroxide :	Jeromeite	4.28 ₁	3.79 ₁	2.06 ₁	2.65 ₁	35- 504
Aluminum Fluoride Borate Silicate : Sodium Iron	Buergerite	2.56 ₁	2.95 ₁	3.96 ₁	3.47 ₁	25- 703
Aluminum Fluoride Carbonate : Strontium	Stenonite	3.39 ₁	2.17 ₁	1.93 ₁	2.24 ₁	15- 366
Aluminum Fluoride Hydroxide : Calcium	Carthageite	3.48 ₁	4.56 ₁	3.69 ₁	2.85 ₁	33- 249
Aluminum Fluoride Hydrate : Sodium Calcium	Thomsonite	4.02 ₁	1.96 ₁	2.00 ₁	2.92 ₁	5- 343
Aluminum Fluoride Hydrate : Sodium Calcium	Pachnolite	3.95 ₁	1.97 ₁	2.79 ₁	2.16 ₁	5- 356
Aluminum Fluoride Hydrate : Sodium Calcium	Thomsonite	3.91 ₁	1.96 ₁	2.92 ₁	4.01 ₁	22-1360
Aluminum Fluoride Hydroxide : Calcium	Prosopeite	4.35 ₁	2.13 ₁	1.84 ₁	1.81 ₁	5- 307
Aluminum Fluoride Hydroxide Hydrate : Calcium	Gearhartite	4.55 ₁	3.15 ₁	2.28 ₁	1.93 ₁	5- 393
Aluminum Fluoride Hydroxide Hydrate : Calcium	Yaroslavlite	3.45 ₁	2.23 ₁	3.66 ₁	4.51 ₁	18- 272
Aluminum Fluoride Hydroxide Hydrate : Sodium Magnesium	Ralskite	5.74 ₁	1.77 ₁	2.88 ₁	3.01 ₁	13-1085
Aluminum Fluoride Hydroxide Hydrate : Sodium Magnesium Strontium	Jarosite	2.98 ₁	3.19 ₁	2.15 ₁	3.11 ₁	5- 594
Aluminum Fluoride Hydroxide Hydrate : Strontium	Tikhonenkovite	4.89 ₁	3.64 ₁	3.27 ₁	2.10 ₁	17- 501
Aluminum Fluoride Hydroxide : Sodium Calcium Strontium	Calcijarite	2.96 ₁	3.04 ₁	3.16 ₁	3.51 ₁	29-1195
Aluminum Fluoride Hydroxide : Sodium Magnesium Strontium	Jarite, calcium	2.96 ₁	3.14 ₁	2.14 ₁	3.08 ₁	5- 595
Aluminum Fluoride : Lithium Calcium	Colquirite	3.23 ₁	2.22 ₁	1.74 ₁	3.98 ₁	33- 794
Aluminum Fluoride : Lithium Sodium	Cryolithionite	4.28 ₁	3.03 ₁	1.97 ₁	2.21 ₁	22- 416
Aluminum Fluoride Phosphate Hydroxide Hydrate :	Fluellite	6.48 ₁	3.24 ₁	3.09 ₁	2.67 ₁	19- 38
Aluminum Fluoride Phosphate Hydroxide Hydrate : Sodium Calcium	Morinite	3.47 ₁	2.95 ₁	2.89 ₁	2.94 ₁	33-1219
Aluminum Fluoride Phosphate Hydroxide Hydrate : Sodium Calcium	Morinite	2.94 ₁	3.47 ₁	1.78 ₁	4.70 ₁	11- 666
Aluminum Fluoride Phosphate Hydroxide : Potassium Sodium Calcium Manganese	Arjojadite	3.04 ₁	2.71 ₁	3.22 ₁	2.77 ₁	34- 149
Aluminum Fluoride Phosphate Hydroxide : Sodium Calcium	Vittemite	2.91 ₁	3.25 ₁	2.19 ₁	2.97 ₁	35- 598
Aluminum Fluoride Phosphate Hydroxide : Sodium Calcium Manganese	Vittemite, manganian	2.88 ₁	2.94 ₁	3.22 ₁	2.16 ₁	33-1226
Aluminum Fluoride Phosphate : Lithium	Amblygonite	3.15 ₁	4.64 ₁	2.96 ₁	3.24 ₁	22-1138
Aluminum Fluoride Phosphate : Sodium Strontium	Boggsite	3.16 ₁	3.89 ₁	3.96 ₁	3.13 ₁	14- 417
Aluminum Fluoride : Potassium Sodium	Elpasolite, syn	2.87 ₁	2.03 ₁	2.35 ₁	1.44 ₁	22-1235
Aluminum Fluoride Silicate :	Tapez	2.94 ₁	3.20 ₁	3.69 ₁	2.36 ₁	12- 765
Aluminum Fluoride Silicate Hydroxide : Lithium Barium Magnesium	Balophyllite	10.1 ₁	4.06 ₁	3.37 ₁	3.40 ₁	33- 787
Aluminum Fluoride Silicate Hydroxide : Lithium Potassium	Lepidolite-ST	3.32 ₁	2.52 ₁	10.0 ₁	4.98 ₁	10- 484
Aluminum Fluoride Silicate Hydroxide : Potassium Lithium	Lepidolite-DM2	3.58 ₁	1.99 ₁	10.0 ₁	5.00 ₁	14- 11
Aluminum Fluoride Silicate Hydroxide : Potassium Lithium Iron	Lepidolite-IM, ferroan	9.90 ₁	3.30 ₁	2.58 ₁	3.62 ₁	14- 565
Aluminum Fluoride Silicate Hydroxide : Potassium Magnesium	Phlogopite-IM, syn	10.0 ₁	2.61 ₁	3.38 ₁	3.33 ₁	34- 159
Aluminum Fluoride Silicate : Lithium Potassium Manganese	Muscovite-IM	3.32 ₁	10.1 ₁	3.35 ₁	3.09 ₁	29- 822
Aluminum Fluoride Silicate : Lithium Sodium Iron Magnesium	Clinoholmepolite	7.93 ₁	2.99 ₁	2.70 ₁	4.40 ₁	25- 498
Aluminum Fluoride Silicate : Potassium Barium Magnesium	Margarite	3.63 ₁	3.20 ₁	2.59 ₁	2.43 ₁	18- 766
Aluminum Fluoride Silicate : Potassium Lithium	Polyolithionite-IM, syn	3.59 ₁	3.31 ₁	3.07 ₁	4.93 ₁	21- 952
Aluminum Fluoride Silicate : Potassium Magnesium	Phlogopite-IM, syn	9.96 ₁	3.33 ₁	2.00 ₁	3.36 ₁	16- 944
Aluminum Fluoride Silicate : Potassium Magnesium Lithium	Phlogopite-IM, syn	9.98 ₁	2.62 ₁	3.38 ₁	3.13 ₁	32- 158
Aluminum Fluoride Silicate : Sodium Calcium Beryllium	Meliphanite	2.76 ₁	2.97 ₁	3.60 ₁	1.70 ₁	23- 249
Aluminum Fluoride : Sodium	Chiolite, syn	2.91 ₁	2.33 ₁	5.20 ₁	2.00 ₁	30-1144
Aluminum Fluoride : Sodium	Cryolite, syn	2.75 ₁	1.94 ₁	3.89 ₁	4.54 ₁	25- 772
Aluminum Fluoride : Sodium Magnesium	Weberite	1.78 ₁	2.96 ₁	2.90 ₁	5.06 ₁	5- 733
Aluminum Fluoride Sulfate Hydrate : Calcium	Creedite	3.48 ₁	7.30 ₁	6.90 ₁	3.92 ₁	8- 72
Aluminum Fluoride Sulfate Hydrate : Hydrogen Calcium Magnesium	Lannite	14.0 ₁	4.84 ₁	3.46 ₁	3.96 ₁	35- 576
Aluminum Fluoride Sulfate Hydrate : Magnesium	Wilcoxite	4.91 ₁	5.65 ₁	4.37 ₁	3.38 ₁	35- 575
Aluminum Germanium Oxide Hydroxide : Iron	Carboirite	4.53 ₁	2.73 ₁	2.48 ₁	3.02 ₁	35- 586
Aluminum Hydrogen Arsenate Hydroxide : Borium	Weilerite	3.02 ₁	5.84 ₁	3.55 ₁	2.30 ₁	35- 648
Aluminum Hydrogen Arsenate Phosphate Hydroxide : Calcium Strontium Barium	Arsenocrandallite	2.99 ₁	3.55 ₁	5.84 ₁	1.77 ₁	35- 647
Aluminum Hydrogen Carbonate Hydroxide : Sodium Calcium	Tunisite	5.62 ₁	2.59 ₁	3.55 ₁	3.29 ₁	27-1001
Aluminum Hydrogen Phosphate Hydrate : Potassium	Taranakite	15.9 ₁	3.82 ₁	7.46 ₁	3.14 ₁	29- 981
Aluminum Hydrogen Phosphate Hydrate : Potassium	Francoeurite	13.8 ₁	3.41 ₁	2.81 ₁	6.86 ₁	29- 980
Aluminum Hydrogen Phosphate Sulfate Hydroxide Hydrate : Lead	Orpheite	5.66 ₁	2.97 ₁	3.50 ₁	1.90 ₁	29- 756
Aluminum Hydroxide :	Gibbsite	4.85 ₁	4.38 ₁	4.33 ₁	2.39 ₁	29- 41
Aluminum Hydroxide :	Gibbsite	4.85 ₁	4.37 ₁	4.32 ₁	2.45 ₁	7- 324
Aluminum Hydroxide :	Gibbsite, syn	4.85 ₁	4.37 ₁	2.39 ₁	4.32 ₁	33- 18
Aluminum Hydroxide :	Nordstrandite, syn	4.79 ₁	2.27 ₁	4.32 ₁	2.39 ₁	24- 6
Aluminum Hydroxide :	Bayerite, syn	2.22 ₁	4.71 ₁	4.35 ₁	1.72 ₁	20- 11
Aluminum Hydroxide : Calcium	Katoite	2.30 ₁	2.04 ₁	5.13 ₁	2.81 ₁	24- 217
Aluminum Hydroxide Hydrate :	Scorbroite	8.66 ₁	9.81 ₁	4.33 ₁	4.91 ₁	31- 18
Aluminum Hydroxide Hydrate : Calcium	Hydrocalumite	7.86 ₁	3.93 ₁	2.89 ₁	2.44 ₁	16- 333
Aluminum Iron Arsenate Hydroxide Hydrate :	Liskeardite	17.6 ₁	3.33 ₁	8.65 ₁	7.85 ₁	11- 146
Aluminum Iron Carbonate Hydroxide Hydrate : Calcium Magnesium	Wormlandite	7.98 ₁	11.2 ₁	4.63 ₁	5.62 ₁	25- 153
Aluminum Iron Chromium Silicate Hydroxide : Magnesium	Clinoclase-IIIb, ferroan	7.12 ₁	14.2 ₁	3.56 ₁	4.75 ₁	24- 506
Aluminum Iron Magnesium Silicate : Calcium	Augite, aluminian	2.99 ₁	2.55 ₁	2.13 ₁	1.43 ₁	24- 202
Aluminum Iron Manganese Silicate Hydroxide : Calcium	Piemontite	2.91 ₁	3.50 ₁	2.84 ₁	2.70 ₁	19- 897
Aluminum Iron Manganese Tellurium Silicate Oxide Hydroxide Hydrate : Lead	Burckhardtite	3.11 ₁	12.8 ₁	3.70 ₁	2.60 ₁	33- 730
Aluminum Iron Oxide Borate Silicate :	Dumortierite	2.55 ₁	5.89 ₁	5.84 ₁	5.09 ₁	7- 71
Aluminum Iron Oxide : Calcium	Brownmillerite, syn	2.64 ₁	7.25 ₁	1.82 ₁	2.67 ₁	30- 226
Aluminum Iron Oxide Hydroxide : Tin Zinc	Nigerite-6H	2.83 ₁	2.42 ₁	1.54 ₁	4.65 ₁	26-1391
Aluminum Iron Phosphate Hydroxide : Bismuth	Zairite	2.95 ₁	5.71 ₁	3.50 ₁	2.73 ₁	29- 226
Aluminum Iron Phosphate Hydroxide Hydrate : Copper	Turquoise, ferroan	3.70 ₁	2.93 ₁	3.31 ₁	2.91 ₁	25- 260
Aluminum Iron Phosphate Hydroxide Hydrate : Sodium	Drugmanite	3.75 ₁	4.63 ₁	2.91 ₁	3.35 ₁	33- 732
Aluminum Iron Phosphate Sulfate Hydroxide Hydrate :	Natrodufrenite	3.15 ₁	12.0 ₁	3.40 ₁	3.20 ₁	35- 570
Aluminum Iron Silicate : Calcium Magnesium	Sassaite	11.5 ₁	2.90 ₁	6.99 ₁	7.51 ₁	31- 20
Aluminum Iron Silicate : Calcium Magnesium	Fassaite, ferroan	2.98 ₁	2.55 ₁	2.50 ₁	2.02 ₁	25-1217
Aluminum Iron Silicate Hydrate : Sodium Potassium Barium	Harmotome, sodian	7.13 ₁	3.17 ₁	8.13 ₁	6.36 ₁	25- 855
Aluminum Iron Silicate Hydroxide : Calcium	Julgondite	2.95 ₁	3.83 ₁	2.57 ₁	2.78 ₁	23- 117
Aluminum Iron Silicate Hydroxide : Calcium	Epidote	2.90 ₁	2.68 ₁	2.69 ₁	4.02 ₁	17- 514
Aluminum Iron Silicate Hydroxide : Calcium	Clinozoisite	2.89 ₁	2.79 ₁	2.59 ₁	2.68 ₁	21- 128
Aluminum Iron Silicate Hydroxide : Calcium Lead Strontium	Hancockite	2.91 ₁	3.49 ₁	2.60 ₁	2.81 ₁	17- 212
Aluminum Iron Silicate Hydroxide : Calcium Magnesium	Ugrandite, hydroxian	2.71 ₁	1.61 ₁	3.02 ₁	1.12 ₁	30- 253
Aluminum Iron Silicate Hydroxide : Calcium Rareearth	Allanite-(Ce)	2.92 ₁	2.71 ₁	3.53 ₁	2.63 ₁	25- 169
Aluminum Iron Silicate Hydroxide : Calcium Yttrium Borate	Hellandite	2.81 ₁	4.69 ₁	2.64 ₁	2.60 ₁	25- 184
Aluminum Iron Silicate Hydroxide Hydrate : Calcium	Julgondite	2.95 ₁	3.84 ₁	4.80 ₁	2.57 ₁	24- 198
Aluminum Iron Silicate Hydroxide Hydrate : Calcium	Pumpellyite	2.90 ₁	3.79 ₁	2.74 ₁	2.45 ₁	10- 447

		File No.					
o	Aluminum Iron Silicate Hydroxide Hydrate : Calcium Magnesium	Nontronite-15A	14.6 _x	4.53 ₂	1.52 ₂	2.60 ₂	34- 842
	Aluminum Iron Silicate Hydroxide : Magnesium	Clinoclinoite-1a, ferroan	7.10 _x	3.55 ₂	1.42 ₂	2.40 ₂	16- 362
	Aluminum Iron Silicate Hydroxide : Potassium	Annite-1M, syn	10.3 _x	3.38 ₂	2.65 ₂	2.47 ₂	14- 233
	Aluminum Iron Silicate Hydroxide : Sodium Calcium	Cornebeite	2.66 _x	2.61 ₂	3.30 ₂	3.72 ₂	25- 800
	Aluminum Iron Silicate : Magnesium	Unnamed mineral	2.82 _x	1.75 ₂	1.52 ₂	1.01 ₂	15- 445
c	Aluminum Iron Sulfate Hydroxide Hydrate : Magnesium	Aluminocapapite, magnesium	9.20 _x	18.1 ₂	5.58 ₂	6.17 ₂	20- 659
	Aluminum Iron Sulfate Hydroxide : Lead Copper	Oscarzawaite	5.77 _x	3.01 ₂	3.54 ₂	2.29 ₂	34- 165
	Aluminum Iron Tungsten Oxide Hydrate :	Mporonite	8.21 _x	3.08 ₂	4.09 ₂	5.69 ₂	25-1496
	Aluminum Iron Uranyl Phosphate Sulfate Hydroxide Hydrate :	Cocconite	11.1 _x	5.56 ₂	3.30 ₂	5.64 ₂	25- 16
	Aluminum Iron Uranyl Phosphate Sulfate Hydroxide Hydrate :	Cocconite	11.1 _x	3.74 ₂	3.29 ₂	2.94 ₂	29-1401
o	Aluminum Iron Vanadium Oxide Hydrate : Potassium	Bekite	10.2 _x	3.45 ₂	2.62 ₂	2.08 ₂	15- 279
	Aluminum Iron Vanadium Oxide Phosphate Hydroxide Hydrate :	Gurzevichite	4.08 _x	2.51 ₂	1.82 ₂	1.45 ₂	14- 139
	Aluminum Magnesium Borate :	Sinhalite	2.14 _x	1.63 ₂	3.25 ₂	2.62 ₂	34- 157
	Aluminum Manganese Oxide Hydroxide : Lithium	Lithiophorite	4.71 _x	2.37 ₂	1.88 ₂	9.45 ₂	16- 364
	Aluminum Manganese Phosphate Hydroxide : Sodium	Griffithite	2.73 _x	3.04 ₂	2.95 ₂	2.49 ₂	25- 774
i	Aluminum Manganese Silicate :	Andalusite, manganian	5.61 _x	2.81 ₂	4.53 ₂	2.50 ₂	18- 36
	Aluminum Manganese Silicate Hydroxide : Calcium	Macfite	3.40 _x	3.89 ₂	2.96 ₂	2.71 ₂	35- 471
	Aluminum Mellite Hydrate :	Mellite	7.99 _x	4.23 ₂	5.80 ₂	5.17 ₂	28-2001
	Aluminum Nitrate Sulfate Hydroxide Hydrate : Copper Nickel	Hydrobambomulite	10.5 _x	5.23 ₂	3.49 ₂	2.49 ₂	35- 697
	Aluminum Nitrate Sulfate Hydroxide Hydrate : Copper Nickel	Niobomulite	8.55 _x	4.27 ₂	7.87 ₂	4.55 ₂	35- 696
i	Aluminum Nitrate Sulfate Hydroxide Hydrate : Copper Nickel	Nickelalunite	8.54 _x	4.27 ₂	7.88 ₂	2.00 ₂	35- 698
	Aluminum Oxide :	Corundum, syn	2.09 _x	2.55 ₂	1.60 ₂	3.48 ₂	10- 173
	Aluminum Oxide : Beryllium	Chrysoberyl	3.24 _x	2.09 ₂	1.62 ₂	4.01 ₂	11- 448
	Aluminum Oxide : Beryllium Iron	Pelhamite-9R	2.42 _x	2.86 ₂	1.43 ₂	2.67 ₂	35- 503
	Aluminum Oxide : Beryllium Magnesium	Taaffeite-4H	2.42 _x	2.60 ₂	2.04 ₂	4.58 ₂	35- 701
i	Aluminum Oxide : Beryllium Magnesium	Musgravite-9R	2.41 _x	1.42 ₂	2.05 ₂	2.66 ₂	34- 191
	Aluminum Oxide : Calcium	Mayenite, syn	2.68 _x	4.89 ₂	2.45 ₂	3.00 ₂	9- 413
	Aluminum Oxide : Calcium	Hibonite-5H, syn	2.62 _x	2.48 ₂	1.39 ₂	1.53 ₂	33- 253
	Aluminum Oxide : Calcium	Hibonite-5H	1.40 _x	2.64 ₂	2.13 ₂	1.59 ₂	25- 121
	Aluminum Oxide Carbonate Hydroxide Hydrate : Nickel	Takovite	7.54 _x	2.55 ₂	3.77 ₂	2.27 ₂	15- 87
i	Aluminum Oxide Carbonate Sulfate Hydrate : Lead Manganese	Nasledite	3.26 _x	2.03 ₂	2.02 ₂	1.46 ₂	25- 438
	Aluminum Oxide Hydrate :	Diapore	3.99 _x	2.32 ₂	2.13 ₂	2.08 ₂	5- 355
	Aluminum Oxide Hydrate :	Akdalite	2.11 _x	1.42 ₂	1.39 ₂	2.49 ₂	25- 17
	Aluminum Oxide Hydrate : Calcium Sodium Silicate	Gonnardite	2.92 _x	5.93 ₂	4.44 ₂	6.70 ₂	10- 473
	Aluminum Oxide Hydrate : Magnesium	Koenenite	11.7 _x	10.7 ₂	1.92 ₂	1.52 ₂	11- 492
i	Aluminum Oxide Hydroxide :	Boehmite, syn	6.11 _x	3.16 ₂	2.35 ₂	1.86 ₂	21-1307
	Aluminum Oxide : Iron	Herynite, syn	2.46 _x	2.88 ₂	1.44 ₂	1.57 ₂	34- 192
	Aluminum Oxide : Iron Magnesium Titanium	Hogbenite-1BR	2.44 _x	2.87 ₂	1.43 ₂	2.69 ₂	16- 167
	Aluminum Oxide : Magnesium	Spinel, syn	2.44 _x	2.02 ₂	1.43 ₂	1.56 ₂	21-1152
	Aluminum Oxide : Magnesium Iron	Spinel, formic	2.47 _x	1.45 ₂	2.05 ₂	2.90 ₂	21- 540
i	Aluminum Oxide : Manganese	Galaxite, syn	2.47 _x	2.90 ₂	1.58 ₂	1.45 ₂	29- 880
	Aluminum Oxide Phosphate Hydroxide : Iron Manganese	Ernsite	2.83 _x	2.84 ₂	2.44 ₂	4.36 ₂	24- 730
	Aluminum Oxide Sulfate Hydrate :	Jurbanite, syn	6.75 _x	5.73 ₂	4.46 ₂	4.00 ₂	17- 388
	Aluminum Oxide : Titanium Iron Magnesium	Hogbenite-5H	2.43 _x	1.43 ₂	2.49 ₂	2.08 ₂	16- 336
	Aluminum Oxide : Zinc	Gahnite, syn	2.44 _x	2.86 ₂	1.43 ₂	1.56 ₂	5- 669
i	Aluminum Phosphate :	Berlinite, syn	3.37 _x	4.28 ₂	1.84 ₂	1.55 ₂	10- 423
	Aluminum Phosphate Hydrate :	Metavariscite	4.76 _x	2.71 ₂	4.55 ₂	4.23 ₂	33- 32
	Aluminum Phosphate Hydrate :	Variscite	4.29 _x	5.39 ₂	4.83 ₂	4.41 ₂	25- 18
	Aluminum Phosphate Hydrate :	Variscite	3.04 _x	4.26 ₂	5.36 ₂	2.91 ₂	33- 33
	Aluminum Phosphate Hydrate : Calcium Iron Magnesium Manganese	Whiteite	9.30 _x	2.79 ₂	4.66 ₂	4.85 ₂	31- 273
o	Aluminum Phosphate Hydrate : Hydrogen Uranyl	Uranospathite	15.2 _x	7.60 ₂	4.93 ₂	3.50 ₂	31- 587
	Aluminum Phosphate Hydrate : Iron	Sigloite	9.69 _x	6.46 ₂	4.86 ₂	3.23 ₂	14- 171
	Aluminum Phosphate Hydrate : Iron	Koninkite	8.42 _x	3.77 ₂	2.98 ₂	5.99 ₂	22- 339
	Aluminum Phosphate Hydrate : Iron	Strengite, aluminian, syn	5.46 _x	4.33 ₂	3.08 ₂	2.96 ₂	15- 391
	Aluminum Phosphate Hydrate : Magnesium	Lazulite	3.24 _x	3.21 ₂	3.08 ₂	3.15 ₂	34- 136
i	Aluminum Phosphate Hydride Hydrate : Calcium Zinc	Kehoeite	3.35 _x	4.28 ₂	2.97 ₂	1.91 ₂	27- 94
	Aluminum Phosphate Hydroxide :	Augelite	3.34 _x	3.52 ₂	4.01 ₂	4.71 ₂	34- 151
	Aluminum Phosphate Hydroxide :	Trolleite	3.21 _x	3.10 ₂	3.08 ₂	2.52 ₂	26-1009
	Aluminum Phosphate Hydroxide : Barium	Jagowite	3.26 _x	3.14 ₂	3.00 ₂	5.54 ₂	28- 123
	Aluminum Phosphate Hydroxide : Barium	Jagowite	3.00 _x	3.26 ₂	3.14 ₂	5.53 ₂	35- 636
i	Aluminum Phosphate Hydroxide : Barium Calcium Iron Manganese	Samuelsonite	3.06 _x	2.66 ₂	3.03 ₂	1.71 ₂	29- 154
	Aluminum Phosphate Hydroxide : Barium Iron Magnesium	Penikisite	3.09 _x	2.92 ₂	2.65 ₂	8.81 ₂	29- 169
	Aluminum Phosphate Hydroxide : Barium Iron Magnesium Manganese	Kulanite	3.11 _x	2.93 ₂	3.04 ₂	2.66 ₂	29- 170
	Aluminum Phosphate Hydroxide : Barium Iron Manganese	Bjarebyite	8.95 _x	3.12 ₂	2.90 ₂	2.71 ₂	29- 171
	Aluminum Phosphate Hydroxide : Barium Manganese Iron	Bjarebyite	8.79 _x	3.09 ₂	3.03 ₂	2.91 ₂	28- 145
o	Aluminum Phosphate Hydroxide : Calcium Iron	Richellite, heated	3.24 _x	1.59 ₂	3.58 ₂	3.15 ₂	15- 632
	Aluminum Phosphate Hydroxide : Calcium Strontium	Goedkenite	3.06 _x	2.59 ₂	2.84 ₂	7.76 ₂	29- 383
	Aluminum Phosphate Hydroxide Hydrate :	Vashegyite	11.3 _x	2.91 ₂	7.50 ₂	6.26 ₂	35- 597
	Aluminum Phosphate Hydroxide Hydrate :	Vashegyite	10.3 _x	7.49 ₂	7.04 ₂	2.92 ₂	35- 704
	Aluminum Phosphate Hydroxide Hydrate :	Vashegyite	9.80 _x	9.20 ₂	7.24 ₂	2.90 ₂	29- 68
i	Aluminum Phosphate Hydroxide Hydrate :	Kingite	9.10 _x	3.45 ₂	3.48 ₂	5.28 ₂	24- 10
	Aluminum Phosphate Hydroxide Hydrate :	Wavellite	8.67 _x	6.42 ₂	3.22 ₂	5.65 ₂	25- 20
	Aluminum Phosphate Hydroxide Hydrate : Barium	Gorceixite	3.00 _x	5.73 ₂	3.52 ₂	2.29 ₂	33- 130
	Aluminum Phosphate Hydroxide Hydrate : Barium Calcium	Gorceixite	2.98 _x	5.73 ₂	3.52 ₂	1.91 ₂	19- 535
	Aluminum Phosphate Hydroxide Hydrate : Beryllium Calcium Iron Magnesium	Roscherite-M	9.48 _x	5.93 ₂	2.77 ₂	3.16 ₂	30- 172
i	Aluminum Phosphate Hydroxide Hydrate : Calcium	Matulite	9.96 _x	6.37 ₂	4.42 ₂	2.40 ₂	33- 258
	Aluminum Phosphate Hydroxide Hydrate : Calcium	Foggite	4.24 _x	2.69 ₂	3.11 ₂	6.96 ₂	29- 282
	Aluminum Phosphate Hydroxide Hydrate : Calcium	Gatumbaitite	4.21 _x	2.24 ₂	1.73 ₂	2.77 ₂	29- 283
	Aluminum Phosphate Hydroxide Hydrate : Calcium	Coeruleolactite	2.96 _x	3.70 ₂	3.48 ₂	3.34 ₂	12- 166
	Aluminum Phosphate Hydroxide Hydrate : Calcium	Crandallite	2.94 _x	2.16 ₂	1.89 ₂	2.98 ₂	33- 257
i	Aluminum Phosphate Hydroxide Hydrate : Calcium Iron	Kingsmountite	5.15 _x	2.62 ₂	12.2 ₂	2.95 ₂	35- 694
	Aluminum Phosphate Hydroxide Hydrate : Calcium Iron Magnesium	Whiteite	9.27 _x	2.78 ₂	2.94 ₂	4.82 ₂	30- 254
	Aluminum Phosphate Hydroxide Hydrate : Calcium Lead Strontium	Crandallite	2.97 _x	2.18 ₂	5.75 ₂	3.53 ₂	16- 162
	Aluminum Phosphate Hydroxide Hydrate : Calcium Magnesium	Montgomeryite	12.0 _x	5.11 ₂	2.90 ₂	2.58 ₂	35- 624
	Aluminum Phosphate Hydroxide Hydrate : Calcium Magnesium	Montgomeryite	5.12 _x	12.1 ₂	2.62 ₂	2.90 ₂	28- 225
o	Aluminum Phosphate Hydroxide Hydrate : Calcium Magnesium	Overite	2.83 _x	9.40 ₂	5.29 ₂	2.89 ₂	16- 157
	Aluminum Phosphate Hydroxide Hydrate : Copper	Zapatolite	7.62 _x	11.6 ₂	5.75 ₂	6.82 ₂	25- 261
	Aluminum Phosphate Hydroxide Hydrate : Copper	Turquoise	3.68 _x	2.91 ₂	6.17 ₂	3.44 ₂	6- 214
	Aluminum Phosphate Hydroxide Hydrate : Copper Zinc	Faustite	3.68 _x	2.89 ₂	6.70 ₂	6.14 ₂	6- 216
	Aluminum Phosphate Hydroxide Hydrate : Iron	Vauxite	10.9 _x	5.46 ₂	5.91 ₂	2.96 ₂	33- 640

						File No.
Aluminum Phosphate Hydroxide Hydrate : Iron	Paravauxite	9.89 ₁	6.40 ₁	4.93 ₁	4.79 ₁	29-1424
Aluminum Phosphate Hydroxide Hydrate : Iron	Metavauxite	4.69 ₁	4.34 ₁	2.76 ₁	10.1 ₁	33- 639
Aluminum Phosphate Hydroxide Hydrate : Iron	Gormanite	3.40 ₁	2.55 ₁	2.93 ₁	4.76 ₁	33- 638
Aluminum Phosphate Hydroxide Hydrate : Iron Manganese	Childrenite, manganese	2.81 ₁	5.27 ₁	2.42 ₁	1.52 ₁	11- 621
Aluminum Phosphate Hydroxide Hydrate : Lead	Plumbogummite	2.97 ₁	5.70 ₁	3.50 ₁	2.22 ₁	35- 623
Aluminum Phosphate Hydroxide Hydrate : Magnesium	Aldermanite	13.4 ₁	7.98 ₁	5.55 ₁	2.84 ₁	35- 676
Aluminum Phosphate Hydroxide Hydrate : Magnesium	Gordonite	9.78 ₁	3.17 ₁	2.83 ₁	2.56 ₁	14- 313
Aluminum Phosphate Hydroxide Hydrate : Magnesium Iron	Sauzalite	3.39 ₁	2.55 ₁	2.92 ₁	4.76 ₁	33- 863
Aluminum Phosphate Hydroxide Hydrate : Potassium	Minyulite	5.53 ₁	3.35 ₁	3.40 ₁	3.07 ₁	27- 371
Aluminum Phosphate Hydroxide Hydrate : Potassium Sodium Calcium	Englishite	8.94 ₁	17.7 ₁	2.84 ₁	5.57 ₁	29-1037
Aluminum Phosphate Hydroxide Hydrate : Sodium	Wardite	4.74 ₁	2.99 ₁	2.59 ₁	3.09 ₁	11- 330
Aluminum Phosphate Hydroxide Hydrate : Sodium	Wardite	4.73 ₁	3.09 ₁	3.00 ₁	2.59 ₁	32-1202
Aluminum Phosphate Hydroxide Hydrate : Sodium Calcium	Millisite	4.84 ₁	4.80 ₁	4.73 ₁	2.98 ₁	13- 376
Aluminum Phosphate Hydroxide Hydrate : Sodium Calcium	Millisite	4.84 ₁	2.98 ₁	2.81 ₁	3.09 ₁	13- 371
Aluminum Phosphate Hydroxide Hydrate : Sodium Calcium Iron Magnesium	Burangaite	11.7 ₁	3.08 ₁	3.12 ₁	4.86 ₁	29-1190
Aluminum Phosphate Hydroxide Hydrate : Strontium	Goyazite	2.97 ₁	5.70 ₁	2.21 ₁	3.51 ₁	34- 152
Aluminum Phosphate Hydroxide Hydrate : Zinc	Kleinmanite	4.76 ₁	3.09 ₁	9.09 ₁	3.30 ₁	33-1465
Aluminum Phosphate Hydroxide : Hydrogen Lithium Sodium	Tenazite	4.67 ₁	3.15 ₁	3.41 ₁	2.46 ₁	33- 602
Aluminum Phosphate Hydroxide : Iron Magnesium	Schmalzite	3.21 ₁	3.25 ₁	3.15 ₁	3.08 ₁	35- 632
Aluminum Phosphate Hydroxide : Lead Thorium	Eylathopite	2.95 ₁	3.51 ₁	5.70 ₁	2.19 ₁	26- 991
Aluminum Phosphate Hydroxide : Lithium Sodium	Montebrazite	2.97 ₁	3.16 ₁	4.67 ₁	3.20 ₁	12- 448
Aluminum Phosphate Hydroxide : Lithium Sodium Strontium Calcium	Paleomonte	3.09 ₁	4.36 ₁	3.13 ₁	2.91 ₁	18- 950
Aluminum Phosphate Hydroxide : Sodium	Brasilianite	5.07 ₁	2.99 ₁	2.68 ₁	2.87 ₁	27- 630
Aluminum Phosphate Hydroxide : Sodium	Brasilianite	5.03 ₁	2.99 ₁	2.74 ₁	2.69 ₁	14- 379
Aluminum Phosphate Silicate Hydroxide Hydrate : Calcium	Perthumite	2.63 ₁	5.00 ₁	6.00 ₁	3.51 ₁	29- 284
Aluminum Phosphate Silicate Hydroxide Hydrate : Calcium Manganese	Attakolite	3.09 ₁	3.10 ₁	4.34 ₁	2.97 ₁	18- 145
Aluminum Phosphate Silicate Hydroxide Hydrate : Sodium Calcium	Vesite	2.92 ₁	1.74 ₁	3.46 ₁	5.68 ₁	5- 616
Aluminum Phosphate : Sodium Iron	Wyllieite	2.69 ₁	2.67 ₁	6.15 ₁	3.45 ₁	26-1078
Aluminum Phosphate Sulfate Hydroxide : Calcium	Woodhouseite	2.94 ₁	1.89 ₁	2.10 ₁	1.74 ₁	4- 670
Aluminum Phosphate Sulfate Hydroxide Hydrate :	Kribzite	11.6 ₁	5.02 ₁	6.62 ₁	2.86 ₁	20- 48
Aluminum Phosphate Sulfate Hydroxide Hydrate :	Sanjuanite	10.8 ₁	4.13 ₁	5.28 ₁	4.32 ₁	20- 67
Aluminum Phosphate Sulfate Hydroxide : Lead	Hindalite	2.94 ₁	2.94 ₁	5.59 ₁	5.70 ₁	16- 711
Aluminum Phosphate Sulfate Hydroxide : Lead Strontium	Hindalite	2.96 ₁	5.70 ₁	2.21 ₁	3.45 ₁	14- 185
Aluminum Phosphate Sulfate Hydroxide : Strontium	Svanbergite	2.98 ₁	2.22 ₁	5.74 ₁	3.50 ₁	4- 661
Aluminum Phosphate Sulfate Hydroxide : Strontium Calcium	Svanbergite, calcian	1.64 ₁	1.63 ₁	2.84 ₁	2.00 ₁	5- 737
Aluminum Silicate :	Andalusite	5.54 ₁	4.53 ₁	2.77 ₁	2.17 ₁	13- 122
Aluminum Silicate :	Sillimanite	3.42 ₁	3.37 ₁	2.20 ₁	2.54 ₁	22- 18
Aluminum Silicate :	Mullite, syn	3.39 ₁	3.43 ₁	2.21 ₁	5.39 ₁	15- 776
Aluminum Silicate :	Sillimanite	3.36 ₁	2.20 ₁	3.41 ₁	2.53 ₁	10- 369
Aluminum Silicate :	Kyanite	3.18 ₁	1.38 ₁	3.35 ₁	1.96 ₁	11- 46
Aluminum Silicate : Barium	Paracelsian	4.00 ₁	3.80 ₁	2.99 ₁	2.73 ₁	10- 352
Aluminum Silicate : Barium	Celsian, syn	3.35 ₁	2.58 ₁	3.46 ₁	6.51 ₁	19- 90
Aluminum Silicate : Beryllium	Beryl	2.87 ₁	3.25 ₁	7.98 ₁	4.60 ₁	9- 430
Aluminum Silicate : Calcium	Anorthite, low	3.20 ₁	3.18 ₁	4.04 ₁	3.26 ₁	12- 301
Aluminum Silicate : Calcium	Anorthite, low	3.19 ₁	3.18 ₁	3.21 ₁	3.26 ₁	20- 20
Aluminum Silicate : Calcium	Fassaite	2.94 ₁	2.48 ₁	2.86 ₁	2.54 ₁	31- 249
Aluminum Silicate : Calcium	Gehlenite	2.86 ₁	1.93 ₁	1.82 ₁	1.76 ₁	25- 123
Aluminum Silicate : Calcium	Gehlenite, syn	2.84 ₁	1.75 ₁	3.06 ₁	2.43 ₁	35- 755
Aluminum Silicate : Calcium	Grossular, syn	2.65 ₁	2.96 ₁	1.58 ₁	2.42 ₁	33- 260
Aluminum Silicate : Calcium	Grossular	2.65 ₁	1.58 ₁	2.96 ₁	1.92 ₁	26- 292
Aluminum Silicate : Calcium Iron	Rhoenite	2.95 ₁	2.55 ₁	2.69 ₁	2.09 ₁	23- 607
Aluminum Silicate : Calcium Iron Titanium Magnesium	Unnamed mineral	2.98 ₁	2.83 ₁	2.55 ₁	3.28 ₁	15- 460
Aluminum Silicate : Calcium Magnesium	Diopside, aluminian, syn	2.98 ₁	2.89 ₁	3.23 ₁	2.51 ₁	25- 154
Aluminum Silicate : Calcium Vanadium Iron	Goldmanite	2.69 ₁	3.01 ₁	1.61 ₁	2.45 ₁	16- 714
Aluminum Silicate : Calcium Zirconium	Kimzeyite	1.67 ₁	2.54 ₁	2.79 ₁	3.12 ₁	13- 130
Aluminum Silicate Carbonate Hydrate : Sodium	Cancrinite	3.21 ₁	4.64 ₁	3.64 ₁	2.10 ₁	25- 776
Aluminum Silicate Carbonate Hydroxide : Calcium	Hydrogrossular	2.71 ₁	1.62 ₁	3.03 ₁	2.21 ₁	3- 801
Aluminum Silicate Carbonate Sulfate Hydrate : Potassium Sodium Calcium	Saccharite	3.73 ₁	3.48 ₁	2.65 ₁	3.74 ₁	35- 653
Aluminum Silicate : Cesium	Pollucite, syn	3.42 ₁	3.66 ₁	2.91 ₁	2.42 ₁	29- 407
Aluminum Silicate Chloride Sulfate : Sodium Calcium	Afghanite	3.69 ₁	3.30 ₁	4.82 ₁	4.00 ₁	20-1086
Aluminum Silicate Fluoride : Calcium Sodium Beryllium	Meliphanite	2.75 ₁	2.96 ₁	1.70 ₁	3.59 ₁	31- 304
Aluminum Silicate Fluoride Hydroxide : Lithium Magnesium	Swinefordite-13A	13.0 ₁	4.53 ₁	1.51 ₁	3.09 ₁	29- 809
Aluminum Silicate Fluoride Hydroxide : Lithium Potassium	Lepidolite-2A1	2.59 ₁	2.56 ₁	1.50 ₁	2.38 ₁	24- 594
Aluminum Silicate Fluoride Hydroxide : Potassium Iron	Siderophyllite	9.99 ₁	2.62 ₁	3.36 ₁	3.27 ₁	25-1355
Aluminum Silicate Fluoride Hydroxide : Potassium Sodium Iron Magnesium	Magnesio-artvedsonite	3.11 ₁	8.38 ₁	3.24 ₁	2.69 ₁	23- 495
Aluminum Silicate Hydrate : Ammonium	Buddingtonite	3.81 ₁	6.52 ₁	3.38 ₁	3.23 ₁	17- 517
Aluminum Silicate Hydrate : Barium	Edingtonite	6.51 ₁	4.70 ₁	3.59 ₁	5.37 ₁	25- 60
Aluminum Silicate Hydrate : Barium	Edingtonite	3.58 ₁	6.51 ₁	2.74 ₁	5.38 ₁	25- 61
Aluminum Silicate Hydrate : Barium	Wellsite	3.15 ₁	4.07 ₁	2.69 ₁	1.70 ₁	12- 541
Aluminum Silicate Hydrate : Barium	Cymrite	2.96 ₁	3.96 ₁	2.67 ₁	7.71 ₁	17- 507
Aluminum Silicate Hydrate : Barium Calcium	Armenite	3.86 ₁	3.41 ₁	2.91 ₁	6.94 ₁	20- 112
Aluminum Silicate Hydrate : Calcium	Cowlesite	15.2 ₁	3.81 ₁	2.96 ₁	2.93 ₁	29- 286
Aluminum Silicate Hydrate : Calcium	Tacharanite	12.7 ₁	3.05 ₁	2.78 ₁	1.82 ₁	29- 287
Aluminum Silicate Hydrate : Calcium	Straetlingite, syn	12.5 ₁	4.18 ₁	6.27 ₁	2.88 ₁	29- 285
Aluminum Silicate Hydrate : Calcium	Stellerite	9.03 ₁	4.06 ₁	3.03 ₁	4.66 ₁	25- 124
Aluminum Silicate Hydrate : Calcium	Heulandite	8.95 ₁	3.98 ₁	7.93 ₁	2.96 ₁	25- 144
Aluminum Silicate Hydrate : Calcium	Heulandite	7.89 ₁	8.90 ₁	6.75 ₁	6.61 ₁	24- 182
Aluminum Silicate Hydrate : Calcium	Scolecite	5.85 ₁	2.88 ₁	6.59 ₁	4.39 ₁	26-1048
Aluminum Silicate Hydrate : Calcium	Goosecreekite	4.53 ₁	7.19 ₁	5.59 ₁	4.91 ₁	35- 469
Aluminum Silicate Hydrate : Calcium	Chabazite	4.32 ₁	2.93 ₁	9.34 ₁	2.88 ₁	34- 137
Aluminum Silicate Hydrate : Calcium	Laumontite, syn	4.16 ₁	3.51 ₁	9.50 ₁	3.27 ₁	26-1047
Aluminum Silicate Hydrate : Calcium	Levyite	4.08 ₁	2.81 ₁	6.69 ₁	8.15 ₁	26-1381
Aluminum Silicate Hydrate : Calcium	Mordenite	3.48 ₁	3.22 ₁	9.10 ₁	6.61 ₁	6- 239
Aluminum Silicate Hydrate : Calcium	Wairakite	3.41 ₁	5.57 ₁	2.90 ₁	6.85 ₁	7- 326
Aluminum Silicate Hydrate : Calcium	Wairakite, syn	3.41 ₁	5.57 ₁	2.90 ₁	2.49 ₁	11- 156
Aluminum Silicate Hydrate : Calcium	Gismondine	3.34 ₁	4.27 ₁	3.19 ₁	2.70 ₁	20- 452
Aluminum Silicate Hydrate : Calcium	Garronite, syn	3.14 ₁	7.13 ₁	4.15 ₁	4.95 ₁	16- 905
Aluminum Silicate Hydrate : Calcium	Yugawaralite	3.06 ₁	5.82 ₁	4.68 ₁	4.65 ₁	18- 274
Aluminum Silicate Hydrate : Calcium Iron Magnesium	Juanite	3.27 ₁	2.98 ₁	1.93 ₁	2.90 ₁	29- 335
Aluminum Silicate Hydrate : Calcium Sodium Potassium	Jusite	2.81 ₁	2.30 ₁	3.64 ₁	2.55 ₁	12- 186

							File No.
i	Aluminum Silicate Hydrate : Calcium Strontium	Heulandite, strontian	3.94 _x	2.80 ₈	7.95 ₇	5.13 ₇	24- 469
i	Aluminum Silicate Hydrate : Cesium	Pollucite	3.42 _x	2.91 ₃	3.65 ₃	2.42 ₇	25- 194
i	Aluminum Silicate Hydrate : Copper Lead Iron	Creaseyite	10.7 _x	6.02 ₃	4.07 ₃	3.56 ₃	29- 566
i	Aluminum Silicate Hydrate : Lithium	Bikitaite	3.46 _x	3.37 _x	4.20 ₃	2.48 ₇	14- 168
o	Aluminum Silicate Hydrate : Manganese	Sursassite	2.82 _x	2.88 ₇	2.57 ₇	2.66 ₆	18-1286
i	Aluminum Silicate Hydrate : Potassium Beryllium Calcium	Milarite	3.31 _x	2.86 ₇	3.01 ₆	4.51 ₇	35- 459
i	Aluminum Silicate Hydrate : Potassium Calcium	Willhendersonite	9.16 _x	2.91 ₆	2.80 ₃	4.09 ₄	35- 643
i	Aluminum Silicate Hydrate : Potassium Calcium	Paulingite	8.29 _x	6.88 _x	4.78 ₆	3.26 ₇	12- 421
i	Aluminum Silicate Hydrate : Potassium Calcium	Phillipsite	7.18 _x	7.16 _x	3.21 _x	3.13 ₂	26-1310
i	Aluminum Silicate Hydrate : Potassium Calcium	Dachiardite	4.87 _x	8.83 ₂	3.44 ₄	9.74 ₃	29- 990
i	Aluminum Silicate Hydrate : Potassium Calcium	Merionoite	3.18 _x	7.12 ₆	7.08 ₆	3.26 ₇	29- 989
i	Aluminum Silicate Hydrate : Potassium Calcium Beryllium	Milarite	3.31 _x	2.88 ₆	4.16 ₇	5.21 ₃	12- 450
c	Aluminum Silicate Hydrate : Potassium Calcium Magnesium	Offretite	11.5 _x	3.77 ₂	2.86 ₇	7.58 ₂	25-1186
i	Aluminum Silicate Hydrate : Potassium Calcium Magnesium	Offretite	11.5 _x	2.88 ₇	4.35 ₆	3.84 ₃	22- 803
i	Aluminum Silicate Hydrate : Potassium Iron Magnesium	Illite (Trioctahedral)	10.0 _x	4.48 ₆	3.33 ₆	2.61 ₆	9- 343
i	Aluminum Silicate Hydrate : Potassium Iron Magnesium	Osumilite-(Mg)	3.22 _x	5.01 ₆	4.11 ₆	3.72 ₇	30- 942
i	Aluminum Silicate Hydrate : Potassium Magnesium	Osumilite-(Mg), syn	3.21 _x	2.77 ₇	5.04 ₆	2.92 ₆	29-1016
i	Aluminum Silicate Hydrate : Potassium Sodium	Tarasovite	44.0 _x	10.6 _x	21.8 ₇	3.19 ₄	26- 970
i	Aluminum Silicate Hydrate : Potassium Sodium	Erionite	11.4 _x	6.61 ₈	4.32 ₇	3.75 ₇	22- 854
i	Aluminum Silicate Hydrate : Potassium Sodium Calcium	Clinoptilolite	3.97 _x	8.99 ₇	3.91 ₇	2.98 ₇	25-1349
i	Aluminum Silicate Hydrate : Potassium Sodium Calcium	Dachiardite	3.45 _x	3.20 _x	1.87 ₈	8.90 ₃	18- 467
i	Aluminum Silicate Hydrate : Potassium Sodium Magnesium	Ferrierite	3.54 _x	3.78 ₇	9.47 ₃	7.07 ₄	22-1238
i	Aluminum Silicate Hydrate : Potassium Sodium Magnesium Iron	Osumilite	3.23 _x	2.92 ₆	2.77 ₆	4.13 ₈	25- 658
i	Aluminum Silicate Hydrate : Sodium	Faujasite	14.3 _x	5.66 _x	3.76 _x	8.70 ₆	11- 672
i	Aluminum Silicate Hydrate : Sodium	Gmelinite, syn	6.85 _x	5.01 _x	3.43 _x	2.60 _x	12- 229
i	Aluminum Silicate Hydrate : Sodium	Natrolite	6.49 _x	5.90 ₄	4.15 ₂	2.86 ₇	19-1185
i	Aluminum Silicate Hydrate : Sodium	Sodium dachiardite	3.45 _x	4.88 ₆	8.86 ₈	3.79 ₄	30-1149
i	Aluminum Silicate Hydrate : Sodium	Analcime	3.43 _x	5.60 ₆	2.93 ₃	2.23 ₄	19-1180
i	Aluminum Silicate Hydrate : Sodium	Paranatrolite	2.94 _x	5.92 ₆	4.44 ₄	4.78 ₃	35- 438
i	Aluminum Silicate Hydrate : Sodium	Herschelite	2.93 _x	4.32 ₇	9.36 ₃	5.03 ₂	19-1178
i	Aluminum Silicate Hydrate : Sodium	Tetranatrolite	2.87 _x	6.55 ₂	4.39 ₃	3.19 ₂	33-1205
i	Aluminum Silicate Hydrate : Sodium	Natrolite	2.85 _x	5.89 ₆	2.87 ₈	4.35 ₇	20- 759
i	Aluminum Silicate Hydrate : Sodium Barium	Harmotome	6.38 _x	3.13 ₈	2.67 ₄	4.08 ₆	20- 468
c	Aluminum Silicate Hydrate : Sodium Calcium	Stilbite	9.12 _x	4.06 _x	4.63 ₄	4.67 ₄	26- 584
i	Aluminum Silicate Hydrate : Sodium Calcium	Stilbite	9.04 _x	4.07 _x	3.04 ₇	4.65 ₂	18-1203
i	Aluminum Silicate Hydrate : Sodium Calcium	Gobbsinite	7.11 _x	4.12 _x	3.20 ₃	3.11 ₈	35- 559
i	Aluminum Silicate Hydrate : Sodium Calcium	Thomsonite	4.63 _x	2.94 _x	2.86 _x	2.67 ₃	35- 498
i	Aluminum Silicate Hydrate : Sodium Calcium	Garronite	4.12 _x	3.14 _x	2.66 ₃	7.15 ₈	16- 148
i	Aluminum Silicate Hydrate : Sodium Calcium	Gmelinite	4.10 _x	12.0 ₆	2.96 ₆	7.69 ₃	9- 419
i	Aluminum Silicate Hydrate : Sodium Calcium	Stilbite	4.06 _x	4.04 _x	9.11 ₆	3.18 ₉	24- 894
i	Aluminum Silicate Hydrate : Sodium Calcium	Epistilbite	3.45 _x	8.89 ₆	3.21 ₇	3.87 ₇	19- 213
i	Aluminum Silicate Hydrate : Sodium Calcium	Mesolite	2.89 _x	2.87 ₇	5.90 ₆	6.60 ₆	24-1064
i	Aluminum Silicate Hydrate : Sodium Calcium	Gismondine	2.71 _x	4.25 ₇	3.19 ₄	4.93 ₆	21- 840
i	Aluminum Silicate Hydrate : Sodium Iron	Unnamed mineral	3.00 _x	6.51 ₆	2.85 ₈	4.39 ₇	26-1318
i	Aluminum Silicate Hydrate : Sodium Potassium	Amicite	2.72 _x	4.22 ₇	3.14 ₃	7.30 ₆	33-1273
i	Aluminum Silicate Hydrate : Sodium Potassium Calcium	Barrenite	9.10 _x	4.05 ₃	3.03 ₃	3.00 ₇	29-1185
i	Aluminum Silicate Hydrate : Sodium Potassium Calcium	Mordenite	9.06 _x	4.00 ₇	3.48 ₃	3.22 ₇	29-1257
i	Aluminum Silicate Hydrate : Sodium Titanium	Zorite	6.90 _x	11.6 ₈	3.38 ₃	3.07 ₈	25-1298
*	Aluminum Silicate Hydrate : Strontium Barium	Brewsterite	4.66 _x	2.92 ₆	3.27 ₄	6.30 ₇	15- 582
i	Aluminum Silicate Hydrate : Zinc	Zinalcose	2.66 _x	7.56 ₆	2.45 ₈	4.55 ₇	33-1466
i	Aluminum Silicate Hydrate : Zinc Magnesium	Sauconite-16A, glycol	16.6 _x	8.33 ₃	4.60 ₃	1.55 ₃	8- 444
i	Aluminum Silicate Hydrate : Zinc Magnesium	Sauconite-15A	15.4 _x	2.67 _x	1.54 ₇	7.77 ₇	8- 445
i	Aluminum Silicate Hydrate : Zinc Magnesium	Sauconite-15A	15.4 _x	1.55 ₈	7.90 ₆	5.48 ₈	8- 243
c	Aluminum Silicate Hydroxide :	Nacrite-2M2	7.19 _x	3.59 ₇	4.38 ₄	4.14 ₄	34- 170
i	Aluminum Silicate Hydroxide :	Nacrite-2M2	7.18 _x	4.36 ₈	3.59 ₈	4.13 ₇	16- 606
i	Aluminum Silicate Hydroxide :	Kaolinite-1T	7.17 _x	1.49 ₉	3.58 ₇	1.62 ₇	14- 164
i	Aluminum Silicate Hydroxide :	Dickite-2M1	7.15 _x	3.58 _x	2.33 ₄	4.12 ₇	10- 446
i	Aluminum Silicate Hydroxide :	Kaolinite-1Md	7.10 _x	3.56 _x	4.41 ₆	2.33 ₂	29-1488
i	Aluminum Silicate Hydroxide :	Pyrophyllite-1Tc	4.42 _x	9.20 ₇	3.07 ₆	4.26 ₆	25- 22
o	Aluminum Silicate Hydroxide :	Halloysite-7A	4.42 _x	7.50 ₆	3.63 ₃	1.48 ₇	9- 453
i	Aluminum Silicate Hydroxide :	Halloysite-7A	4.42 _x	7.30 ₇	3.62 ₃	1.48 ₇	29-1487
i	Aluminum Silicate Hydroxide :	Pyrophyllite-2M1	3.08 _x	9.21 ₆	4.58 ₄	4.40 ₇	12- 203
o	Aluminum Silicate Hydroxide :	Pianlinite	2.56 _x	2.21 ₇	2.42 ₇	1.27 ₇	34- 520
i	Aluminum Silicate Hydroxide : Ammonium	Tobelite-2M2, syn	10.4 _x	5.16 ₃	4.50 ₃	3.44 ₃	18- 119
i	Aluminum Silicate Hydroxide : Barium Magnesium	Kinoshitalite-1M	3.37 _x	2.52 ₆	2.02 ₆	5.05 ₃	29- 180
i	Aluminum Silicate Hydroxide : Barium Potassium	Muscovite-2M2, barium	2.56 _x	9.98 ₆	4.48 ₃	3.31 ₃	10- 490
i	Aluminum Silicate Hydroxide : Beryllium	Euclase	7.15 _x	3.22 ₃	3.84 ₇	2.77 ₄	14- 65
i	Aluminum Silicate Hydroxide : Beryllium Calcium	Bavenite	3.71 _x	3.35 ₆	3.22 ₃	3.12 ₃	13- 535
i	Aluminum Silicate Hydroxide : Calcium	Roggianite	13.1 _x	9.27 ₈	6.13 ₈	3.60 ₇	25-1321
i	Aluminum Silicate Hydroxide : Calcium	Kamaishilite	3.61 _x	2.80 ₆	2.78 ₂	2.55 ₃	35- 673
i	Aluminum Silicate Hydroxide : Calcium	Margarite-2M1	3.18 _x	1.91 ₂	2.52 ₂	2.51 ₇	18- 276
i	Aluminum Silicate Hydroxide : Calcium	Prehnite	3.08 _x	3.48 ₇	2.56 ₃	3.31 ₆	29- 290
i	Aluminum Silicate Hydroxide : Calcium	Piemontite	2.90 _x	4.00 ₇	2.60 ₃	2.41 ₇	29- 288
i	Aluminum Silicate Hydroxide : Calcium	Bicchulite, syn	2.79 _x	3.61 _x	2.08 ₃	1.56 ₇	27- 66
i	Aluminum Silicate Hydroxide : Calcium	Cebollite	2.73 _x	2.88 ₇	2.59 ₇	1.62 ₇	16- 695
i	Aluminum Silicate Hydroxide : Calcium	Zoisite, syn	2.69 _x	2.87 ₇	4.03 ₃	8.09 ₃	13- 562
i	Aluminum Silicate Hydroxide : Calcium	Hydrogrossular, intermediate	2.68 _x	3.00 ₇	1.61 ₃	1.95 ₃	31- 250
i	Aluminum Silicate Hydroxide : Calcium	Chantalite	2.60 _x	4.17 ₃	3.35 ₃	1.45 ₃	29-1410
*	Aluminum Silicate Hydroxide : Calcium	Vuognatite	2.52 _x	3.00 ₇	2.64 ₃	2.22 ₇	29- 289
i	Aluminum Silicate Hydroxide : Calcium Copper	Papagoite	2.87 _x	4.29 ₇	2.20 ₃	3.44 ₃	13- 377
i	Aluminum Silicate Hydroxide : Calcium Iron Magnesium	Hastingsite, magnesian	8.43 _x	3.13 ₂	2.71 ₃	3.39 ₃	20- 469
i	Aluminum Silicate Hydroxide : Calcium Iron Rareearth	Allanite-(Ce), heated	2.96 _x	3.50 ₇	2.67 ₃	1.63 ₃	9- 474
i	Aluminum Silicate Hydroxide : Calcium Lead	Wickenburgite	10.1 _x	3.26 ₃	3.93 ₃	3.36 ₃	21- 148
i	Aluminum Silicate Hydroxide : Calcium Magnesium	Vesuvianite, syn	2.76 _x	2.60 ₇	2.46 ₃	2.96 ₇	27- 81
i	Aluminum Silicate Hydroxide : Calcium Magnesium	Clintonite-1M	2.56 _x	3.21 ₇	2.11 ₃	1.51 ₃	20- 321
i	Aluminum Silicate Hydroxide : Calcium Magnesium Iron	Saponite-15A, ferroan	15.4 _x	1.54 ₇	7.90 ₆	4.60 ₃	13- 305
i	Aluminum Silicate Hydroxide : Calcium Magnesium Iron	Magnesio-hornblende, ferroan	3.14 _x	8.51 ₇	2.72 ₃	3.29 ₃	21- 149
i	Aluminum Silicate Hydroxide : Calcium Magnesium Iron	Vesuvianite, ferrian	2.76 _x	2.60 ₇	1.63 ₃	2.95 ₃	22- 533
i	Aluminum Silicate Hydroxide : Calcium Manganese	Henritermierite	2.75 _x	2.52 ₈	4.37 ₃	3.09 ₃	22- 150
o	Aluminum Silicate Hydroxide : Copper Zinc	Fraipontite-1H	7.07 _x	3.54 ₆	2.49 ₇	2.66 ₃	34- 782

o	Aluminum Silicate Hydroxide Hydrate :	Imagolite	21.0 _x	4.12 _x	1.40 _x	11.7 _s	25-1493
	Aluminum Silicate Hydroxide Hydrate :	Halloysite-10A	10.0 _x	4.36 _x	3.35 _x	2.54 _x	29-1489
o	Aluminum Silicate Hydroxide Hydrate :	Smectite-kaolinite	7.24 _x	4.31 _x	3.55 _x	2.32 _x	29-1490
	Aluminum Silicate Hydroxide Hydrate :	Halloysite-10A	4.42 _x	10.1 _x	3.34 _x	1.48 _x	9- 451
	Aluminum Silicate Hydroxide Hydrate : Calcium	Beidellite, glycerol, Ca saturated	17.0 _x	4.42 _x	3.95 _x	3.54 _x	19- 150
	Aluminum Silicate Hydroxide Hydrate : Calcium	Vertumnite	4.19 _x	12.5 _x	6.28 _x	2.87 _x	29- 291
i	Aluminum Silicate Hydroxide Hydrate : Calcium	Lawsonite, syn	2.72 _x	2.62 _x	2.13 _x	3.65 _x	13- 567
	Aluminum Silicate Hydroxide Hydrate : Calcium	Lawsonite	2.62 _x	1.55 _x	2.73 _x	4.84 _x	13- 533
	Aluminum Silicate Hydroxide Hydrate : Calcium Magnesium	Montmorillonite-15A	15.0 _x	4.50 _x	5.01 _x	3.02 _x	13- 135
*	Aluminum Silicate Hydroxide Hydrate : Calcium Magnesium	Pumpellyite	2.90 _x	2.92 _x	4.37 _x	3.79 _x	25- 156
	Aluminum Silicate Hydroxide Hydrate : Calcium Magnesium Iron	Saponite-15A	15.5 _x	3.07 _x	4.57 _x	5.11 _x	29-1491
i	Aluminum Silicate Hydroxide Hydrate : Calcium Manganese	Pumpellyite-(Mn)	2.93 _x	2.73 _x	4.75 _x	3.84 _x	35- 514
o	Aluminum Silicate Hydroxide Hydrate : Iron Manganese	Stilpnomelane, manganous	7.26 _x	3.54 _x	3.61 _x	2.75 _x	15- 48
	Aluminum Silicate Hydroxide Hydrate : Magnesium	Saponite-18A, glycerol	18.8 _x	1.54 _x	2.61 _x	9.10 _x	6- 2
c	Aluminum Silicate Hydroxide Hydrate : Magnesium	Vermiculite	14.3 _x	2.39 _x	4.47 _x	2.87 _x	34- 166
	Aluminum Silicate Hydroxide Hydrate : Magnesium	Saponite-15A	14.2 _x	1.53 _x	3.67 _x	4.57 _x	13- 86
i	Aluminum Silicate Hydroxide Hydrate : Magnesium	Palygorskite	10.4 _x	6.36 _x	4.46 _x	4.14 _x	21- 958
	Aluminum Silicate Hydroxide Hydrate : Magnesium	Palygorskite	10.4 _x	4.47 _x	4.26 _x	2.54 _x	31- 783
	Aluminum Silicate Hydroxide Hydrate : Magnesium	Palygorskite	10.3 _x	3.17 _x	2.23 _x	6.34 _x	29- 855
	Aluminum Silicate Hydroxide Hydrate : Magnesium	Saponite, aluminian	4.48 _x	14.5 _x	2.61 _x	2.51 _x	30- 789
i	Aluminum Silicate Hydroxide Hydrate : Magnesium Iron	Vermiculite	14.2 _x	1.53 _x	4.57 _x	2.62 _x	16- 613
	Aluminum Silicate Hydroxide Hydrate : Magnesium Iron	Corrensite	14.0 _x	7.08 _x	3.53 _x	29.0 _x	31- 794
	Aluminum Silicate Hydroxide Hydrate : Potassium	Rectorite	4.45 _x	2.55 _x	12.2 _x	1.49 _x	29-1495
o	Aluminum Silicate Hydroxide Hydrate : Potassium	Illite-montmorillonite	3.33 _x	9.50 _x	12.6 _x	5.17 _x	35- 652
	Aluminum Silicate Hydroxide Hydrate : Potassium Magnesium Iron	Hydrobiotite	15.0 _x	12.5 _x	4.50 _x	3.40 _x	13- 465
i	Aluminum Silicate Hydroxide Hydrate : Potassium Manganese Iron	Bannisterite	12.3 _x	3.44 _x	4.09 _x	2.64 _x	21- 57
	Aluminum Silicate Hydroxide Hydrate : Potassium Sodium Calcium	Reyerite	3.15 _x	2.85 _x	1.84 _x	4.23 _x	29-1039
o	Aluminum Silicate Hydroxide Hydrate : Potassium Sodium Copper	Ajoite	12.3 _x	2.46 _x	4.08 _x	3.06 _x	35- 477
i	Aluminum Silicate Hydroxide Hydrate : Potassium Sodium Magnesium	Ferrierite	9.61 _x	3.99 _x	3.54 _x	3.49 _x	11- 429
	Aluminum Silicate Hydroxide Hydrate : Potassium Sodium Manganese	Ganophyllite	12.5 _x	3.14 _x	2.70 _x	3.46 _x	21- 359
i	Aluminum Silicate Hydroxide Hydrate : Sodium	Tosudite	30.4 _x	15.2 _x	4.48 _x	5.01 _x	22- 956
	Aluminum Silicate Hydroxide Hydrate : Sodium	Rectorite	23.8 _x	11.9 _x	3.40 _x	2.97 _x	25- 781
c	Aluminum Silicate Hydroxide Hydrate : Sodium Beryllium	Leifite	3.15 _x	3.38 _x	4.70 _x	12.4 _x	27- 1
o	Aluminum Silicate Hydroxide Hydrate : Sodium Iron	Nontronite-15A	15.2 _x	4.48 _x	2.56 _x	3.58 _x	29-1497
	Aluminum Silicate Hydroxide Hydrate : Sodium Magnesium	Montmorillonite-21A	21.5 _x	4.45 _x	3.15 _x	2.56 _x	29-1499
	Aluminum Silicate Hydroxide Hydrate : Sodium Magnesium	Montmorillonite-18A	17.6 _x	4.49 _x	1.50 _x	9.00 _x	12- 219
o	Aluminum Silicate Hydroxide Hydrate : Sodium Magnesium	Montmorillonite-15A	13.6 _x	3.13 _x	4.46 _x	2.56 _x	29-1498
	Aluminum Silicate Hydroxide Hydrate : Sodium Magnesium	Tosudite	4.53 _x	15.0 _x	4.97 _x	30.0 _x	12- 231
	Aluminum Silicate Hydroxide Hydrate : Sodium Zinc	Sauconite-15A	15.5 _x	4.53 _x	1.52 _x	5.00 _x	29-1500
i	Aluminum Silicate Hydroxide : Iron	Deerite	9.03 _x	3.01 _x	2.64 _x	2.54 _x	19- 421
*	Aluminum Silicate Hydroxide : Iron	Ferro-godrite	8.23 _x	3.04 _x	3.22 _x	8.95 _x	31- 617
	Aluminum Silicate Hydroxide : Iron	Berthierine-1H	7.12 _x	3.55 _x	2.53 _x	2.15 _x	31- 618
	Aluminum Silicate Hydroxide : Iron	Berthierine-1M	7.05 _x	3.52 _x	2.52 _x	1.56 _x	7- 315
i	Aluminum Silicate Hydroxide : Iron	Chloritoid	4.47 _x	2.96 _x	1.58 _x	2.37 _x	14- 62
	Aluminum Silicate Hydroxide : Iron	Chloritoid	4.47 _x	2.46 _x	2.97 _x	1.58 _x	14- 344
	Aluminum Silicate Hydroxide : Iron Magnesium	Stilpnomelane	12.3 _x	4.16 _x	2.55 _x	2.69 _x	29- 703
i	Aluminum Silicate Hydroxide : Iron Magnesium	Clinochlore-11b, ferroan	7.07 _x	3.54 _x	14.1 _x	4.71 _x	29- 701
	Aluminum Silicate Hydroxide : Iron Magnesium	Chamosite-1b	7.05 _x	3.53 _x	2.52 _x	14.1 _x	13- 29
i	Aluminum Silicate Hydroxide : Iron Magnesium	Chamosite-11b	7.05 _x	3.52 _x	2.60 _x	1.55 _x	21-1227
	Aluminum Silicate Hydroxide : Iron Magnesium	Ferrocarpholite	5.04 _x	5.69 _x	3.36 _x	2.60 _x	33- 655
i	Aluminum Silicate Hydroxide : Iron Magnesium	Gedrite	3.06 _x	8.27 _x	3.23 _x	8.97 _x	13- 506
	Aluminum Silicate Hydroxide : Iron Magnesium	Staurolite	3.01 _x	2.69 _x	2.37 _x	3.56 _x	15- 397
i	Aluminum Silicate Hydroxide : Iron Magnesium Manganese Zinc	Baumite-1T	7.23 _x	3.59 _x	2.51 _x	1.54 _x	29- 704
	Aluminum Silicate Hydroxide : Lithium	Cookeite-1a	2.32 _x	4.70 _x	3.52 _x	14.1 _x	16- 363
	Aluminum Silicate Hydroxide : Lithium Potassium	Lepidolite-3M	9.93 _x	3.33 _x	2.61 _x	4.89 _x	10- 483
	Aluminum Silicate Hydroxide : Lithium Potassium	Lepidolite-1M	3.34 _x	10.0 _x	4.99 _x	3.62 _x	10- 485
*	Aluminum Silicate Hydroxide : Lithium Sodium	Ephesite-2M1, syn	3.20 _x	2.52 _x	9.61 _x	2.41 _x	35- 423
	Aluminum Silicate Hydroxide : Magnesium	Clinochlore-11b	7.16 _x	4.77 _x	14.3 _x	3.58 _x	29- 853
i	Aluminum Silicate Hydroxide : Magnesium	Lizardite-6(3)T1, aluminian	7.12 _x	2.38 _x	3.56 _x	1.53 _x	31- 782
	Aluminum Silicate Hydroxide : Magnesium	Lizardite-6(2)T1, aluminian	7.09 _x	2.49 _x	3.56 _x	1.53 _x	13- 4
	Aluminum Silicate Hydroxide : Magnesium	Amesite-2H	7.06 _x	3.52 _x	1.93 _x	2.48 _x	9- 493
c	Aluminum Silicate Hydroxide : Magnesium	Amesite-2H	7.03 _x	3.52 _x	2.48 _x	4.37 _x	34- 163
	Aluminum Silicate Hydroxide : Magnesium	Magnesio-carpholite, syn	5.66 _x	2.59 _x	2.74 _x	3.79 _x	35- 489
	Aluminum Silicate Hydroxide : Magnesium	linochlore-11b	3.54 _x	7.07 _x	4.72 _x	14.1 _x	12- 242
	Aluminum Silicate Hydroxide : Magnesium	Yoderite	3.50 _x	3.03 _x	2.61 _x	2.00 _x	12- 625
	Aluminum Silicate Hydroxide : Magnesium	Lizardite-1T, aluminian	2.50 _x	7.25 _x	3.62 _x	2.15 _x	11- 386
	Aluminum Silicate Hydroxide : Magnesium	Sudoite	2.50 _x	4.52 _x	14.2 _x	4.74 _x	19- 751
	Aluminum Silicate Hydroxide : Magnesium Chromium	Clinochlore, chromian	7.21 _x	2.42 _x	14.5 _x	3.60 _x	20- 671
	Aluminum Silicate Hydroxide : Magnesium Iron	Clinochlore-11b, ferroan	7.07 _x	14.1 _x	3.54 _x	4.73 _x	7- 78
	Aluminum Silicate Hydroxide : Magnesium Iron	Magnesio-carpholite	5.66 _x	5.02 _x	2.59 _x	3.42 _x	27- 303
	Aluminum Silicate Hydroxide : Magnesium Iron	Clinochlore-11b	2.54 _x	14.0 _x	7.08 _x	3.55 _x	7- 165
i	Aluminum Silicate Hydroxide : Magnesium Nickel	Nimite-11b	7.10 _x	3.55 _x	14.2 _x	4.74 _x	22- 712
	Aluminum Silicate Hydroxide : Manganese	Pennantite-1a	7.10 _x	3.57 _x	2.43 _x	14.3 _x	29- 884
i	Aluminum Silicate Hydroxide : Manganese	Carpholite	5.73 _x	5.08 _x	2.62 _x	3.46 _x	19- 273
	Aluminum Silicate Hydroxide : Manganese	Akatereite	4.67 _x	3.31 _x	2.21 _x	9.68 _x	25- 533
	Aluminum Silicate Hydroxide : Manganese	Kellyite-2H	3.51 _x	7.00 _x	2.53 _x	2.67 _x	29- 885
i	Aluminum Silicate Hydroxide : Manganese	Davreuxite	3.51 _x	4.29 _x	2.87 _x	3.10 _x	29- 883
	Aluminum Silicate Hydroxide : Nickel	Brindleyite	7.07 _x	3.54 _x	2.62 _x	2.47 _x	31- 892
i	Aluminum Silicate Hydroxide : Potassium	Muscovite-1M, syn	10.1 _x	3.36 _x	4.49 _x	2.57 _x	7- 25
	Aluminum Silicate Hydroxide : Potassium	Muscovite-3T	9.97 _x	3.33 _x	4.99 _x	2.00 _x	7- 42
	Aluminum Silicate Hydroxide : Potassium	Illite-1M	4.43 _x	2.56 _x	3.66 _x	3.06 _x	29-1496
	Aluminum Silicate Hydroxide : Potassium	Illite-1M	3.35 _x	2.60 _x	1.99 _x	10.0 _x	31- 968
i	Aluminum Silicate Hydroxide : Potassium	Illite-2M1	3.34 _x	10.0 _x	5.02 _x	2.01 _x	26- 911
	Aluminum Silicate Hydroxide : Potassium	Muscovite-2M1	3.32 _x	9.95 _x	2.57 _x	1.99 _x	62- 263
	Aluminum Silicate Hydroxide : Potassium	Muscovite-2M2, calcian	3.20 _x	3.33 _x	3.11 _x	9.91 _x	25- 649
o	Aluminum Silicate Hydroxide : Potassium	Illite-2M2	2.58 _x	4.49 _x	3.35 _x	10.3 _x	24- 495
i	Aluminum Silicate Hydroxide : Potassium Iron	Siderophyllite-1M, syn	10.2 _x	3.37 _x	2.64 _x	2.46 _x	26- 909
	Aluminum Silicate Hydroxide : Potassium Iron	Glauconite-1M	10.1 _x	2.59 _x	4.53 _x	3.33 _x	9- 439
	Aluminum Silicate Hydroxide : Potassium Iron Magnesium	Biotite-1M	10.1 _x	3.37 _x	2.66 _x	2.45 _x	2- 45
i	Aluminum Silicate Hydroxide : Potassium Lithium	Lepidolite-12Or	3.31 _x	2.59 _x	1.98 _x	9.94 _x	15- 62

						File No.
	Aluminum Silicate Hydroxide : Potassium Lithium Iron	Zinnwaldite-1M	3.29 _x	9.80 _x	1.98 ₆	3.09 ₄ 13- 227
i	Aluminum Silicate Hydroxide : Potassium Magnesium	Phlogopite-1M	10.2 _x	3.39 _x	2.62 ₉	2.44 ₅ 24- 867
	Aluminum Silicate Hydroxide : Potassium Magnesium	Phlogopite-2M1	10.1 _x	3.36 _x	2.62 _x	2.02 ₁ 10- 493
	Aluminum Silicate Hydroxide : Potassium Magnesium	Phlogopite-3T	10.1 _x	3.35 _x	2.01 _x	2.51 ₅ 10- 492
i	Aluminum Silicate Hydroxide : Potassium Magnesium	Phlogopite-1M	9.94 _x	3.35 _x	2.61 ₃	2.01 ₃ 10- 495
	Aluminum Silicate Hydroxide : Potassium Magnesium	Muscovite-1M, magnesian	4.50 _x	9.91 ₉	2.56 ₉	3.62 ₉ 21- 993
	Aluminum Silicate Hydroxide : Potassium Magnesium Iron	Celadonite-1M	2.58 _x	4.33 ₉	3.64 ₈	3.09 ₈ 17- 521
c	Aluminum Silicate Hydroxide : Potassium Sodium	Muscovite-2M2	9.98 _x	2.55 ₉	2.57 ₉	3.49 ₈ 34- 175
i	Aluminum Silicate Hydroxide : Potassium Vanadium	Roscoelite-1M, syn	2.58 _x	4.51 _x	10.2 _x	3.36 ₉ 19- 933
i	Aluminum Silicate Hydroxide : Potassium Zinc Manganese	Hendricksite-1M	10.2 _x	3.40 _x	5.09 _x	2.55 ₉ 19- 544
c	Aluminum Silicate Hydroxide : Rareearth	Toemebohmitite	3.09 _x	2.82 _x	4.60 _x	2.62 ₉ 34- 160
	Aluminum Silicate Hydroxide : Sodium	Brammellite-2M1	9.77 _x	3.17 _x	1.49 _x	4.41 ₉ 27- 20
i	Aluminum Silicate Hydroxide : Sodium	Paragonite-2M1	4.44 _x	2.34 _x	9.70 _x	2.43 ₉ 12- 165
i	Aluminum Silicate Hydroxide : Sodium	Paragonite-1M, syn	3.21 _x	9.67 _x	4.82 _x	4.44 _x 24-1047
	Aluminum Silicate Hydroxide : Sodium	Ephesite-2M1	3.20 _x	9.39 _x	1.92 _x	2.52 ₉ 19-118
c	Aluminum Silicate Hydroxide : Sodium	Ussingite	2.99 _x	6.50 _x	4.25 ₉	3.77 ₉ 28-1037
	Aluminum Silicate Hydroxide : Sodium	Ussingite	2.95 _x	2.69 _x	6.35 ₉	6.68 ₉ 14- 426
	Aluminum Silicate Hydroxide : Sodium	Paragonite-2M1	2.52 _x	4.39 ₉	3.20 ₈	2.34 ₈ 12- 187
	Aluminum Silicate Hydroxide : Sodium Calcium Iron	Ferro-pargasite	8.50 _x	3.15 _x	2.72 ₉	2.61 ₉ 26-1372
	Aluminum Silicate Hydroxide : Sodium Calcium Iron	Taramite, potassian	3.15 _x	8.53 _x	2.73 ₉	2.61 ₃ 20- 734
i	Aluminum Silicate Hydroxide : Sodium Calcium Iron Magnesium	Magnesio-hornblende	8.40 _x	3.10 _x	3.26 ₉	2.70 ₉ 20- 481
i	Aluminum Silicate Hydroxide : Sodium Calcium Iron Magnesium	Crossite	8.31 _x	3.68 ₈	2.71 ₄	4.48 ₉ 20- 376
i	Aluminum Silicate Hydroxide : Sodium Calcium Magnesium	Edenite, sodian, syn	3.15 _x	2.70 ₉	3.28 ₉	3.38 ₉ 31-1282
i	Aluminum Silicate Hydroxide : Sodium Calcium Magnesium	Pargasite	3.12 _x	8.43 _x	3.27 ₉	2.93 ₉ 23-1406
i	Aluminum Silicate Hydroxide : Sodium Calcium Magnesium	Edenite	3.12 _x	8.43 _x	3.27 ₉	2.70 ₉ 23-1405
	Aluminum Silicate Hydroxide : Sodium Calcium Magnesium Iron	Magnesio-arfvedsonite	3.12 _x	8.20 _x	2.80 ₉	3.26 ₉ 31-1283
	Aluminum Silicate Hydroxide : Sodium Calcium Magnesium Iron Manganese	Winchite	2.70 _x	8.40 _x	2.53 ₉	4.48 ₉ 20-1390
i	Aluminum Silicate Hydroxide : Sodium Iron	Arfvedsonite	3.16 _x	2.73 ₉	8.51 _x	3.42 ₉ 14- 633
i	Aluminum Silicate Hydroxide : Sodium Iron Magnesium	Ferro-glaucophane	8.31 _x	3.66 ₈	2.76 ₉	2.70 ₉ 27- 714
i	Aluminum Silicate Hydroxide : Sodium Iron Magnesium	Ferro-glaucophane	3.05 _x	8.27 _x	2.69 ₉	4.45 ₉ 31-1297
	Aluminum Silicate Hydroxide : Sodium Magnesium	Saponite-17A, glycol, syn	17.0 _x	3.37 ₉	1.54 ₉	8.50 ₉ 12- 166
o	Aluminum Silicate Hydroxide : Sodium Magnesium	Montmorillonite-14A	13.6 _x	4.47 ₂	3.34 ₉	3.23 ₉ 13- 259
*	Aluminum Silicate Hydroxide : Sodium Magnesium	Glaucophane	8.26 _x	3.66 ₇	2.69 ₉	4.45 ₉ 20- 453
	Aluminum Silicate Hydroxide : Sodium Magnesium	Eckermannite, syn	3.10 _x	2.71 ₉	3.40 ₉	3.25 ₉ 20- 386
i	Aluminum Silicate Hydroxide : Sodium Magnesium	Glaucophane, syn	2.71 _x	3.12 ₉	2.50 ₉	3.41 ₉ 15- 58
	Aluminum Silicate Hydroxide : Sodium Magnesium	Preiswerkite-2M1	2.57 _x	1.51 _x	2.46 ₉	4.52 ₉ 33-1259
	Aluminum Silicate Hydroxide : Sodium Magnesium Iron	Crossite	8.44 _x	3.15 _x	2.73 ₉	2.82 ₉ 31-1312
c	Aluminum Silicate Hydroxide : Sodium Magnesium Iron	Glaucophane	8.23 _x	2.69 ₉	3.05 ₉	4.45 ₉ 20- 616
	Aluminum Silicate Hydroxide : Sodium Manganese Iron	Howieite	9.18 _x	7.91 _x	3.25 ₉	2.62 ₉ 19- 571
i	Aluminum Silicate Hydroxide : Sodium Potassium Calcium Iron Magnesium	Ferro-hornblende, pargasitic	8.52 _x	3.16 _x	2.73 ₉	3.41 ₉ 29-1258
	Aluminum Silicate Hydroxide : Yttrium	Vyuntspakhkrite	3.47 _x	2.60 _x	7.40 _x	4.98 ₉ 35- 708
	Aluminum Silicate Hydroxide : Zinc	Fraipontite-2M1	7.00 _x	3.52 ₇	2.63 ₉	2.48 ₉ 14- 366
i	Aluminum Silicate : Iron	Sekaninaite	8.58 _x	3.39 _x	3.38 ₉	4.08 ₉ 31- 616
	Aluminum Silicate : Iron	Sekaninaite, syn	3.39 _x	8.63 _x	8.55 _x	4.09 ₉ 31- 615
	Aluminum Silicate : Iron	Almandine	2.57 _x	1.54 _x	2.87 _x	1.60 ₉ 9- 427
	Aluminum Silicate : Iron Magnesium	Surinamite	2.44 _x	1.99 _x	1.42 ₉	7.05 ₉ 29- 702
*	Aluminum Silicate : Iron Manganese	Almandine, manganous	2.59 _x	2.89 _x	1.60 ₉	1.55 ₉ 33- 658
o	Aluminum Silicate : Lead	Plumalite	4.08 _x	1.96 _x	2.78 _x	1.24 ₉ 29- 758
*	Aluminum Silicate : Lithium	Eucryptite	3.96 _x	3.37 _x	2.74 _x	2.55 ₉ 14- 667
*	Aluminum Silicate : Lithium	Petalite	3.73 _x	3.67 _x	3.65 ₉	3.51 ₉ 35- 463
*	Aluminum Silicate : Lithium	Petalite	3.73 _x	3.67 _x	3.65 ₉	3.51 ₉ 14- 90
i	Aluminum Silicate : Lithium	Virgilite	3.44 _x	1.87 _x	4.44 _x	1.61 ₉ 31- 707
*	Aluminum Silicate : Lithium	Spodumene	2.92 _x	2.79 _x	4.21 _x	6.12 ₉ 33- 786
*	Aluminum Silicate : Magnesium	Indialite, syn	8.48 _x	3.03 _x	3.14 _x	3.38 ₉ 13- 293
i	Aluminum Silicate : Magnesium	Cordierite, syn	8.45 _x	8.52 _x	3.04 _x	3.13 ₉ 13- 294
	Aluminum Silicate : Magnesium	Cordierite	3.13 _x	8.54 _x	8.45 _x	4.09 ₉ 12- 303
*	Aluminum Silicate : Magnesium	Pyrope, syn	2.56 _x	2.87 _x	1.53 ₉	2.44 ₉ 15- 742
	Aluminum Silicate : Magnesium	Sapphirine-2M	2.45 _x	2.62 _x	2.99 _x	1.44 ₉ 21- 549
i	Aluminum Silicate : Magnesium Iron	Cordierite, ferroan	8.58 _x	3.38 _x	3.04 _x	4.11 ₉ 9- 472
	Aluminum Silicate : Manganese	Spessartine, syn	2.60 _x	1.56 _x	1.61 ₉	2.91 ₉ 10- 354
	Aluminum Silicate : Manganese Calcium Iron	Calderite, calcian	2.62 _x	1.57 _x	2.92 _x	2.39 ₉ 10- 367
*	Aluminum Silicate : Potassium	Microcline, max	4.22 _x	3.26 _x	3.25 ₉	3.29 ₉ 19- 926
*	Aluminum Silicate : Potassium	Leucite, high, syn	3.36 _x	5.48 _x	2.86 ₉	3.00 ₉ 31- 967
*	Aluminum Silicate : Potassium	Sanidine, high	3.33 _x	3.28 _x	4.24 _x	3.79 ₉ 25- 618
*	Aluminum Silicate : Potassium	Orthoclase	3.31 _x	3.77 _x	4.22 _x	3.24 ₉ 31- 966
c	Aluminum Silicate : Potassium	Microcline, inter	3.29 _x	3.24 _x	4.23 _x	3.34 ₉ 22- 675
	Aluminum Silicate : Potassium	Leucite	3.27 _x	3.44 _x	5.39 _x	2.92 ₉ 15- 47
c	Aluminum Silicate : Potassium	Microcline, max	3.25 _x	4.21 _x	3.29 _x	3.37 ₉ 22- 687
i	Aluminum Silicate : Potassium	Microcline, inter	3.24 _x	3.29 _x	4.22 _x	2.16 ₉ 19- 932
*	Aluminum Silicate : Potassium	Kalsilite, syn	3.12 _x	2.58 _x	3.97 _x	2.18 ₉ 11- 579
	Aluminum Silicate : Potassium	Kaliophillite	3.09 _x	2.99 _x	2.13 _x	4.26 ₉ 11- 313
c	Aluminum Silicate : Potassium Barium	Celsian	3.35 _x	6.52 _x	3.47 _x	2.58 ₉ 21- 812
	Aluminum Silicate : Potassium Barium	Orthoclase, barian	3.33 _x	3.46 _x	3.79 _x	3.26 ₉ 19- 3
i	Aluminum Silicate : Potassium Barium	Orthoclase, barian	3.24 _x	3.31 _x	3.00 _x	3.46 ₉ 19- 2
	Aluminum Silicate : Potassium Iron Niobium	Niobophyllite	3.51 _x	18.5 _x	2.78 _x	2.57 ₉ 17- 742
*	Aluminum Silicate : Potassium Sodium	Sanidine	3.26 _x	3.22 _x	3.76 _x	3.27 ₉ 19-1227
	Aluminum Silicate : Potassium Sodium	Sanidine, high, syn	3.25 _x	3.21 _x	3.75 _x	4.12 ₉ 10- 357
i	Aluminum Silicate : Potassium Sodium	Albite, potassian, high, heated	3.21 _x	3.24 _x	4.11 _x	2.16 ₉ 9- 478
i	Aluminum Silicate : Potassium Sodium	Trikalsilite, syn	3.08 _x	3.85 _x	2.56 ₉	4.27 ₉ 12- 197
	Aluminum Silicate : Potassium Sodium	Nepheline, potassian, syn	3.07 _x	4.25 _x	4.02 _x	3.35 ₉ 12- 198
i	Aluminum Silicate : Potassium Sodium	Tetrasililite	3.07 _x	3.93 _x	2.56 ₉	4.28 ₉ 31-1081
i	Aluminum Silicate : Potassium Sodium	Nepheline, syn	3.03 _x	3.87 _x	3.29 _x	4.21 ₉ 9- 338
	Aluminum Silicate : Sodium	Albite, low	4.03 _x	3.22 _x	3.66 _x	3.20 ₉ 19-1184
*	Aluminum Silicate : Sodium	Nepheline, syn	3.83 _x	3.80 _x	4.17 _x	3.27 ₉ 35- 424
c	Aluminum Silicate : Sodium	Albite, high	3.21 _x	3.18 _x	4.03 _x	3.75 ₉ 20- 572
*	Aluminum Silicate : Sodium	Albite, low	3.20 _x	3.78 _x	6.39 _x	3.68 ₉ 9- 466
c	Aluminum Silicate : Sodium	Albite, low	3.19 _x	4.83 _x	3.21 _x	3.66 ₉ 20- 554
*	Aluminum Silicate : Sodium	Albite, high	3.18 _x	3.75 _x	3.21 _x	4.04 ₉ 10- 393
*	Aluminum Silicate : Sodium	Jadeite	2.83 _x	2.92 _x	4.29 _x	3.10 ₉ 22-1338
	Aluminum Silicate : Sodium Barium	Banalsite	3.53 _x	5.20 _x	8.50 _x	3.21 ₉ 23- 651