

A SYSTEMATIC CLASSIFICATION
OF NONSILICATE MINERALS

JAMES A. FERRAIOLO

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ABSTRACT

Palache, Berman, and Frondel published two volumes of the seventh edition of James Dwight Dana's *System of Mineralogy* in 1944 and 1951. As with the sixth edition published in 1892, the seventh edition soon became the recognized authority in mineralogy.

Greatly improved analytical techniques, crystal structure analysis, and other new technologies have led to a great increase in the number of new species and to the improvement of the data for older species. Over 400 new nonsilicate species have been approved by the International Mineralogical Association's Commission on New Minerals and Mineral Names in the last eight years. For comparison, the seventh edition of Dana's *System* assigned classification numbers to 1043

accepted species, and briefly described another 227 poorly defined species. Of this total 69 have been discredited and 158 have been redefined. There have been over 1200 new nonsilicate species described in the last 30 years, and the growth continues. Obviously, with the number of nonsilicate species more than doubled since 1951, an updated classification is required.

The preparation of this volume began in 1977, when a revised classification of the known phosphate, arsenate and vanadate minerals was prepared and privately circulated. This was received favorably, so a revised classification of all nonsilicate minerals was undertaken; the results are given here.

INTRODUCTION

This is a new systematic classification of the nonsilicate minerals. It is based on, and adapted from, the seventh edition of *The System of Mineralogy of James Dwight Dana* (1944, 1951), hereafter referred to as *DSM*. This is not a new edition of *DSM*, because the necessary and voluminous mineralogical data needed for such an undertaking is beyond the scope of this effort. This is a simplified classification based on the same taxonomy as *DSM*. All new mineral species, redefinitions, and "refinements" are included. Rather than duplicate the basic conventions used in preparing the seventh edition of Dana's *System*, I refer the reader to Palache *et al.* (1944), pages 1-3. While the classification and arrangement have remained the same, there are various additions and deletions to the classification presented in the seventh edition.

The CLASS numbers have been left the same, numbered 1 to 50. CLASS 12, Compound Halides, has been retained, although no mineral species have been placed in the CLASS. CLASS 16, Carbonates containing Hydroxyl or Halogen, has been divided into two new CLASSES: 16a, Anhydrous Carbonates containing Hydroxyl or Halogen, and 16b, Hydrated Carbonates containing Hydroxyl or Halogen. This division is need-

ed because of the large increase in CLASS 16 mineral species that would have made the original CLASS extremely unwieldy.

The total number of TYPES have been greatly increased. Eighty-nine new TYPES have been added, reflecting the diversity in anion/cation ratios in the large number of new nonsilicate species. A comparison of species listed in *DSM* and those in this classification is given in table 1.

Other changes in the classification of *DSM* occur in the Sulfosalts (CLASS 3) and in CLASSES 25 and 26 of the Borates. Different, more structurally related classifications have been adapted for these species. The "subclassifications" used are briefly described at the beginning of each CLASS. Personal preference determined which of equally valid alternative "subclassifications" would be used, especially for the Sulfosalts.

This classification is presented in a tabular format which was chosen to show species relationships easily while providing essential information.

ARRANGEMENT OF THE CLASSIFICATION: The classification is set in eight columns. The first lists the "Revised Dana Number." This consists of a three- or four-position number, with each position separated by periods. The

first position indicates CLASS; the second designates the TYPE; the third represents the mineral species within the TYPE. In cases of species related chemically and structurally, a fourth position is used to indicate the relationship. Many mineralogists feel that these Dana numbers are not really necessary. They do, however, help to maintain Dana-type numbering systems already in use and can be used as reference numbers for various purposes.

The second and third columns, labeled NC and NM respectively, demonstrate the revisions and additions to the nonsilicate mineral literature since the publication of *DSM*. NC (New Composition) is X-marked for a species described in *DSM* for which changes in the chemical composition have been published. An X mark in the NM (New Mineral) column indicates: 1) that the mineral was not listed as a valid species in *DSM* but has subsequently been shown to be valid; 2) that the mineral's description has been published since the publication of *DSM*.

The name of the mineral is given in the fourth column. The spellings used are essentially those of Fleischer (1980), with the following exceptions: umlauts (") anglicized in Fleischer (1980) have been restored (i.e., grünlingite instead of gruenlingite); dimorphs designated with *beta* are listed with the Greek letter β as a prefix (i.e., β -fergusonite instead of fergusonite- β). There are exceptions: loellingite is the preferred spelling, and the dimorphs of duftite are listed as duftite- α and duftite- β .

The chemical composition is given in the fifth column. Fleischer (1980) is the source for most of the formulae used. Exceptions, especially in the Borate Group minerals, are based on available literature and are derived from the most logical interpretation of available data. Doubtful or tentative formulae are followed by a question mark (?).

Mineral descriptions considered to be inadequate are indicated by an X mark in the sixth column, labeled SSD (Species Status Doubtful).

The final two columns list the crystal system and space group of the mineral species. The crystal system is given using standard abbreviations:

Cubic = Cubic
 Hexagonal = Hex.
 Hexagonal-rhombohedral (Trigonal) = Trig.
 Tetragonal = Tet.
 Orthorhombic = Orth.
 Monoclinic = Mon.
 Triclinic = Tric.

In cases of questionable symmetry, a question mark (?) is used. Other abbreviations pertinent to this section are Amor. and Ps. Minerals considered non-crystalline, or having no discernible crystal structure are designated Amor. for Amorphous. Ps. (pseudo-) is a prefix with a crystal system abbreviation to designate that the mineral may have apparent symmetry close to the symmetry of another crystal system, i.e., Mon., ps-Orth., means that although the mineral is placed in the monoclinic system, it has nearly orthorhombic (pseudo-orthorhombic) symmetry.

Space groups are given in standard international notation [Henry and Lonsdale (1969)] but not italicized. Where multiple space groups are listed, the preferred space group is listed first. Again, in cases of questionable symmetry, a question mark (?) is used.

BIBLIOGRAPHY AND INDEX: The Bibliography and Index are presented as a single section beginning on page 109. These will be discussed below as two separate entities, although they are presented as one section.

The Index, which is on the left-hand side of the Bibliography-Index pages, consists of an alphabetical listing of mineral names, page numbers, Revised Dana Numbers, and the Previous Dana Numbers. The latter, taken from *DSM*, are included to facilitate updating and correcting of any existing catalogues that have been maintained using *DSM*.

The Bibliography, contained on the right-hand side of the Bibliography-Index pages, consists of the Dana Reference, which lists the volume and page number from *DSM*, for the species listed there. Other references listed are major papers published after *DSM*; in general, no references cited in *DSM* have been included. The majority of references are descriptive, crystallographic, or structural papers. Very few "new locality" papers

are cited, unless new physical, x-ray, chemical or crystallographic data are presented.

The Bibliography is presented by mineral species, paralleling the Index entries. Within each species listing, the references are given chronologically, with one reference to a line, terminated by a semicolon (;). A reference may consist of either:

- (1) an original paper
- (2) an abstract of an original paper or
- (3) a combination of (1) and (2).

Bibliographic entries for original papers are cited with a journal title, volume number, first page and year of publication, e.g., AM 66, 148 (1981). Occasionally, an entry is a reference to the General Bibliography, beginning on page 236. This is given as author, (year), and page number, e.g., Picot and Johan (1977), 219. Abstracts following an original paper are bracketed ([]), cited as an original paper, omitting the year of publication, and suffixed with a letter "a" signifying "abstract." Examples of this are:

CM 12, 280 (1974) [AM 61, 177]a
ZVMO 105, 85 (1976) [MA 77-851]a

Abstracts cited in lieu of an original paper are presented as an original paper is presented, but followed by the "a" suffix. Examples of this are:

AM 40, 941 (1955)a
MA 14, 138 (1959)a
MA 74-2465)a

A special series of abbreviations have been utilized for the journals cited in the Bibliography, rather than the standard abbreviations. These abbreviations are listed on page 110. References cited from journals not listed in the special abbreviations are cited using standard abbreviations.

No attempt has been made to list all synonyms or varietal names of the nonsilicate mineral species although a certain amount of synonymy is necessary, if only to help correct improper usage. The synonymy previously cited in *DSM* has not, in general, been repeated here. Doubtful species or varieties given in *DSM* have been verified by additional published data where possible, and

listed in the Bibliography to demonstrate their present status. Discredited minerals and mineral names that have appeared in the literature since *DSM* are also included. For a more complete listing of synonymy, please refer to BRGM (1968, 1973), Embrey and Fuller (1980), and Hey (1955, 1963, 1974).

An addendum section is included for new minerals and mineral data published after the completion of the Bibliography.

In the preparation of this classification, errors may have occurred and been missed in proof; for these I offer apologies. Your suggestions and corrections will be appreciated. They may be sent to me, % Department of Mineral Sciences, American Museum of Natural History, New York, New York 10024.

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TABLE 1
Nonsilicate Species Comparison

Group	Class(es)	Total species ^a	Total species ^b	New species (NM)	Redefined (NC)
Native elements	1	39	77	40	2
Sulfides	2	104	314	214	6
Sulfosalts	3	83	153	82	20
Oxides	4-8	145	311	195	22
Halides	9-12	98	105	33	7
Carbonates	13-17	69	156	81	5
Nitrates	18-20	8	12	4	0
Iodates	21-23	5	7	2	1
Borates	24-27	45	116	70	2
Sulfates	28-32	148	228	85	16
Selenates, tellurates, selenites, tellurites	33-34	9	48	40	3
Chromates	35-36	6	12	7	1
Phosphates, arsenates, and vanadates	37-43	223	532	296	65
Antimonates	44	8	18	12	2
Antimonites	45-46	9	22	14	4
Vanadium Oxysalts	47	20	30	21	0
Molybdates and tungstates	48-49	16	30	16	2
Organic compounds	50	8	28	20	0
Totals		1043	2199	1232	158

^a Palache *et al.* (1944, 1951).

^b This work (May, 1981).

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 1 NATIVE ELEMENTS AND ALLOYS							
Type 1		Metals, other than the Platinum Group					
1.1.1.1			Gold	Au		Cubic	Fm3m
1.1.1.2			Maldonite	Au ₂ Bi		Cubic	Fd3m
1.1.2.1			Silver(-3C)	Ag		Cubic	Fm3m
1.1.2.2	X		Silver-4H, -2H	Ag		Hex.	P6 ₃ mc
1.1.3.1	X		Schachnerite	Au _{1.1} Hg _{0.9}		Hex.	P6 ₃ /mmc
1.1.3.2	X		Paraschachnerite	Au ₃ Hg ₂		Orth.	Cmcm
1.1.4			Copper	Cu		Cubic	Fm3m
1.1.5	X		Auricupride	Cu ₃ Au		Cubic	?
1.1.6	X		Kolymite	Cu ₇ Hg ₆		Cubic	Im3m
1.1.7			Mercury	Hg		-----	----
1.1.8			Moschellands- bergite	Hg ₃ Ag ₂		Cubic	Im3m
1.1.9	X		Altmarkite	HgPb ₂	X	Tet.	?
1.1.10			Zinc	Zn		Hex.	P6 ₃ /mmc
1.1.11	X		Cadmium	Cd	X	Hex.	P6 ₃ /mmc
1.1.12.1			Iron	Fe		Cubic	Im3m
1.1.12.2			Nickel	Ni		Cubic	Fm3m
1.1.13.1			Kamacite	α-(Fe,Ni)		Cubic	?
1.1.13.2			Taenite	β-(Fe,Ni)		Cubic	?
1.1.14	X		Tetrataenite	FeNi		Tet.	P4/mmm
1.1.15			Cohenite	(Fe,Ni) ₃ C		Orth.	Pnma
1.1.16	X		Haxonite	(Fe,Ni) ₂₃ C ₆		Cubic	?
1.1.17	X		Suessite	Fe ₃ Si		Cubic	?
1.1.18.1	X		Fersilicite	FeSi	X	Cubic	?
1.1.18.2	X		Ferdisilicite	FeSi ₂	X	Cubic	?
1.1.19			Siderazot	Fe ₅ N ₂		Hex.	P3/m
1.1.20			Barringerite	(Fe,Ni) ₂ P		Hex.	P62m
1.1.21			Schreibersite	(Fe,Ni) ₃ P		Tet.	I4̄
1.1.22	X		Perryite	(Ni,Fe) ₅ (Si,P) ₂		?	?
1.1.23	X		Wairauite	CoFe		Cubic	?
1.1.24	X		Aluminum	Al	X	Cubic	Fm3m
1.1.25	X		Indium	In		Tet.	I4/mmm
1.1.26			Tin	Sn		Tet.	I4 ₁ /cmd
1.1.27			Lead	Pb		Cubic	Fm3m
1.1.28			Osbornite	TiN		Cubic	Fm3m
1.1.29	X		Carlsbergite	CrN		Cubic	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 2		Platinum Group Metals and Alloys					
1.2.1.1			Platinum	Pt		Cubic	Fm3m
1.2.1.2	X		Tetraferro- platinum	PtFe		Tet.	?
1.2.1.3	X		Isoferroplatinum	Pt ₃ Fe		Cubic	?
1.2.1.4	X		Tulameenite	Pt ₂ FeCu		Tet.	?
1.2.1.5	X		Niggliite	PtSn		Hex.	P6 ₃ /mmc
1.2.1.6	X		Rustenburgerite	(Pt,Pd) ₃ Sn		Cubic	?
1.2.2.1	X		Iridium	Ir		Cubic	Fm3m
1.2.2.2	X		Osmiridium	(Ir,Os)		Cubic	Fm3m
1.2.2.3	X		Ruthenosmiridium	(Ir,Os,Ru)	X	Cubic	Fm3m
1.2.2.4			Platiniridium	(Ir,Pt)		Cubic	Fm3m
1.2.3.1	X		Osmium	Os		Hex.	P6 ₃ /mmc
1.2.3.2			Iridosmine	(Os,Ir)		Hex.	P6 ₃ /mmc
1.2.3.3	X		Rutheniridosmine	(Os,Ir,Ru)		Hex.	P6 ₃ /mmc
1.2.4	X		Ruthenium	Ru		Hex.	P6 ₃ /mmc
1.2.5	X		Rhenium	Re		Hex.	P6 ₃ /mmc
1.2.6	X		Rhodium	Rh		Cubic	?
1.2.7			Palladium	Pd		Cubic	Fm3m
1.2.8	X		Potarite	PdHg		Tet.	P4/mmm
1.2.9	X		Atokite	(Pd,Pt) ₃ Sn		Cubic	Fm3m
1.2.10	X		<i>to be published</i>				
1.2.11	X		<i>to be published</i>				
1.2.12	X		Paolovite	Pd ₂ Sn		Orth.	Pbnm
1.2.13	X		Stannopalladinite	(Pd,Cu) ₃ Sn ₂	X	Hex.	?
1.2.14	X		Zvyagintsevite	(Pd,Pt,Au) ₃ (Pb,Sn)		Cubic	Pm3m
1.2.15	X		Plumbopalladinite	Pd ₃ Pb ₂		Hex.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3		Semi-metals and non-metals					
1.3.1.1			Arsenic	As		Trig.	R $\bar{3}m$
1.3.1.2			Arsenolamprite	As		Orth.	?
1.3.1.3		X	Stibarsen	SbAs		Trig.	R $\bar{3}m$
1.3.1.4			Antimony	Sb		Trig.	R $\bar{3}m$
1.3.1.5			Bismuth	Bi		Trig.	R $\bar{3}m$
1.3.2.1			Selenium	Se		Trig.	P 3_1 21 or P 3_2 21
1.3.2.2			Selen-tellurium	(Se,Te)		Trig.	P 3_1 21 or P 3_2 21
1.3.2.3			Tellurium	Te		Trig.	P 3_1 21 or P 3_2 21
1.3.3.1			Sulfur	S		Orth.	Fddd
1.3.3.2			Rosickyite	S		Mon.	P2/c
1.3.4.1			Diamond	C		Cubic	Fd $\bar{3}m$
1.3.4.2			Graphite	C		Hex.	P 6_3 /mmc
1.3.4.3		X	Lonsdaleite	C		Hex.	P 6_3 /mmc
1.3.4.4		X	Chaoite	C		Hex.	P6/mmm
1.3.4.5		X	Cliftonite	C		Cubic	?
1.3.5			Moissanite	α -SiC		Hex.	P 6_3 mc
1.3.6		X	Sinoite	Si $_2$ N $_2$ O		Orth.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 2 SULFIDES							
Type 1 $A_m X_p$, with $m:p > 3:1$							
2.1.1			Algodonite	Cu_6As		Hex.	$P6_3/mmc$
2.1.2			Horsfordite	Cu_5Sb		?	?
2.1.3		X	Telargpalite	$(Pd,Ag)_{4+x}Te$ (?)		Cubic	?
2.1.4		X	Duranusite	As_4S		Orth.	?
2.1.5		X	Bogdanovite	$Au_5(Cu,Fe)_3(Te,Pb)_2$		Orth., ps-Cub.	?
2.1.6		X	Bessmertovite	$Au_4Cu(Te,Pb)$		Orth.	?
Type 2 $A_m B_n X_p$, with $(m+n):p = 3:1$							
2.2.1.1			Dyscrasite	Ag_3Sb		Orth.	$Pmm2$
2.2.1.2		X	Allargentum	$Ag_{1-x}Sb_x$		Hex.	$P6_3$
2.2.2.1			Domeykite	Cu_3As		Cubic	$I\bar{4}3d$
2.2.2.2		X	Kutinaite	Cu_2AgAs		Cubic	?
2.2.2.3		X	Dienerite	Ni_3As		Cubic	?
2.2.3		X	Hexatestibio- panickelite	$(Ni,Pd)_2SbTe$		Hex.	?
2.2.4		X	Guanglinitite	Pd_3As		Orth.	?
2.2.5		X	Atheneite	$(Pd,Hg)_3As$		Hex.	$P6/mmm$
2.2.6		X	Vincentite	$(Pd,Pt)_3(As,Sb,Te)$?	?
2.2.7		X	Keithconnite	$Pd_{3-x}Te$		Trig.	$R\bar{3}$
2.2.8		X	Bilibinskite	$Au_3Cu_2PbTe_2$		ps-Cubic	?
Type 3 $A_m B_n X_p$, with $(m+n):p = 5:2$							
2.3.1		X	Koutekite	Cu_5As_2		Hex.	?
2.3.2		X	Orcelite	$Ni_{5-x}As_2$		Hex.	?
2.3.3		X	Stibiopalladinite	$Pd_{5+x}Sb_{2-x}$ ($x=0.5$)		Hex.	$P6_3/mmc(?)$
2.3.4		X	Parkerite	$Ni_3(Bi,Pb)_2S_2$		Mon.	$C2/m$
2.3.5		X	Shandite	$Ni_3Pb_2S_2$		Trig.	$R\bar{3}m$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4			$A_m B_n X_p$, with $(m+n):p=2:1$				
2.4.1.1			Argentite	Ag_2S		Cubic	Im3m
2.4.1.2			Aguilarite	Ag_4SeS		Orth.	?
2.4.1.3			Naumannite	Ag_2Se		Orth.	$P2_12_12_1$
2.4.2.1			Acanthite	Ag_2S		Mon.	$P2_1/n$
2.4.2.2			Hessite	Ag_2Te		Mon.	$P2_1/c$
2.4.3.1		X	Uytenbogaardtite	Ag_3AuS_2		Tet.	$P4_122$ or $P4_1$
2.4.3.2		X	Fischesserite	Ag_3AuSe_2		Cubic	I432
2.4.3.3			Petzite	Ag_3AuTe_2		Cubic	$I4_132$
2.4.4			Jalpaite	Ag_3CuS_2		Tet.	$I4_1/amd$
2.4.5		X	Mckinstryite	$(Ag,Cu)_2S$		Orth.	Pnam or $Pna2_1$
2.4.6.1			Stromeyerite	$AgCuS$		Orth.	Bbmm
2.4.6.2			Eucairite	$AgCuSe$		Orth.	?
2.4.7.1			Chalcocite	Cu_2S		Mon.	$P2_1/c$
2.4.7.2		X	Djurleite	$Cu_{31}S_{16}$		Mon.	$P2_1/n$
2.4.7.3		X	Bellidoite	Cu_2Se		Tet.	$P4_2/n$
2.4.8			Berzelianite	Cu_2Se		Cubic	Fm3m
2.4.9		X	Cuprostibite	$Cu_2(Sb,Tl)$		Tet.	?
2.4.10		X	Crookesite	Cu_7TlSe_4		Tet.	$I4/mmm$
2.4.11		X	Carlinite	Tl_2S		Trig.	?
2.4.12		X	Palladoarsenide	Pd_2S		Mon.	$P2/m$
2.4.13		X	Palladobismuth- arsenide	$Pd_2(As,Bi)$		Orth.	Pmcn or $P2_1cn$
2.4.14		X	Majakite	$PdNiAs$		Hex.	?
Type 5			$A_m B_n X_p$, with $(m+n):p=3:2$				
2.5.1			Umangite	Cu_3Se_2		Tet.	$P\bar{4}2_1m$
2.5.2			Bornite	Cu_5FeS_4		Orth., ps-Tet.	Pbca
2.5.3		X	Heazlewoodite	Ni_3S_2		Trig.	R32
2.5.4		X	Oregonite	Ni_2FeAs_2		Hex.	?
2.5.5.1		X	Thalcusite	$Tl_2Cu_3FeS_4$		Tet.	$I\bar{4}m2, I\bar{4}2m,$ $I4mm, I422$
2.5.5.2		X	Bukovite	$Tl_2Cu_{3+x}FeS_{4-x}$ ($x=0.14$)		Tet.	$I\bar{4}2m, I4mm,$ or $I4/mmm$
2.5.5.3		X	<i>to be published</i>				

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Type 5							
2.5.6.1			Argyrodite	Ag_8GeS_6		Orth.	$Pna2_1$ or $Pnam$
2.5.6.2			Canfieldite	Ag_8SnS_6		Orth.	$Pna2_1$ or $Pnam$
2.5.7		X	Daomanite	$CuPtAsS_2$		Orth.	$Amam, Ama2,$ or $A2am$
Type 6 $A_m B_n X_p$, with $(m+n):p=4:3$							
2.6.1			Dimorphite	As_4S_3		Orth.	$Pna2_1$ or $Pn2_1a$
2.6.2.1		X	Ikunolite	$Bi_4(S,Se)_3$		Trig.	$R\bar{3}m$
2.6.2.2		X	Laitakarite	$Bi_4(Se,S)_3$		Trig.	$R\bar{3}m$
2.6.2.3		X	Joseite	Bi_4TeS_2		Trig.	$R\bar{3}m$
2.6.2.4		X	β -Joseite	Bi_4Te_2S		Trig.	$R\bar{3}m$
2.6.3		X	Novakite	$(Cu,Ag)_4As_3$		Tet.	?
2.6.4		X	Genkinite	$(Pt,Pd)_4Sb_3$		Tet.	$P4_12_12_1$
2.6.5		X	Temagamite	Pd_3HgTe_3		Orth.	?
Type 7 $A_m B_n X_p$, with $(m+n):p=9:8$							
2.7.1.1			Pentlandite	$(Fe,Ni)_9S_8$		Cubic	$Fm\bar{3}m$
2.7.1.2		X	Argento- pentlandite	$Ag(Fe,Ni)_8S_8$		Cubic	$Fm\bar{3}m$
2.7.1.3		X	Cobalt- pentlandite	Co_9S_8		Cubic	$Fm\bar{3}m$
2.7.1.4		X	Shadlunite	$(Pb,Cd)(Fe,Ni)_8S_8$		Cubic	$Fm\bar{3}m$
2.7.1.5		X	Manganese- shadlunite	$(Mn,Pb)(Fe,Ni)_8S_8$		Cubic	$Fm\bar{3}m$
2.7.1.6		X	<i>to be published</i>				
2.7.2		X	Mackinawite	$(Fe,Ni)_9S_8$		Tet..	$P4/nmm$
2.7.3		X	Mawsonite	$Cu_6Fe_2SnS_8$		Tet.	$P\bar{4}m2$
2.7.4		X	Yarrowite	Cu_9S_8		Trig.	$P3m1, P\bar{3}m1,$ or $p321$

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Type 8			$A_m X_p$, with m:p=1:1				
2.8.1.1			Galena	PbS		Cubic	Fm3m
2.8.1.2			Clausthalite	PbSe		Cubic	Fm3m
2.8.1.3			Altaite	PbTe		Cubic	Fm3m
2.8.1.4			Alabandine	MnS		Cubic	Fm3m
2.8.1.5			Oldhamite	CaS		Cubic	Fm3m
2.8.1.6		X	Ninningerite	(Mg,Fe)S		Cubic	?
2.8.2.1			Sphalerite	ZnS		Cubic	F $\bar{4}$ 3m
2.8.2.2		X	Stilleite	ZnSe		Cubic	F $\bar{4}$ 3m
2.8.3		X	Polhemusite	(Zn,Hg)S		Tet., ps-Cubic	P4/n, P4 ₂ /n, P4/nbn, or P4/nmn
2.8.4.1			Metacinnabar	HgS		Cubic	F $\bar{4}$ 3m
2.8.4.2			Tiemannite	HgSe		Cubic	F $\bar{4}$ 3m
2.8.4.3			Coloradoite	HgTe		Cubic	F $\bar{4}$ 3m
2.8.5		X	Hawleyite	CdS		Cubic	F $\bar{4}$ 3m
2.8.6		X	Xingzhongite	(Ir,Cu,Rh)S		Cubic	?
2.8.7.1			Cooperite	PtS		Tet.	P4/mmc
2.8.7.2		X	Vysotskite	PdS		Tet.	P4 ₂ /n
2.8.8		X	Polarite	Pd(Bi,Pb)		Orth.	?
2.8.9.1			Wurtzite	ZnS		Hex.	P6 ₃ mc
2.8.9.2		X	Hypercinnabar	γ -HgS		Hex.	?
2.8.9.3			Greenockite	CdS		Hex.	P6 ₃ mc
2.8.9.4			Cadmoselite	CdSe		Hex.	P6 ₃ mc
2.8.10.1			Pyrrhotite	Fe _{1-x} S (x=0-0.2)		Hex.	P3 ₁
2.8.10.2		X	Troilite	FeS		Hex.	P $\bar{6}$ 2c
2.8.11.1			Nickeline	NiAs		Hex.	P6 ₃ /mmc
2.8.11.2			Breithauptite	NiSb		Hex.	P6 ₃ /mmc
2.8.11.3		X	Sederholmite	NiSe		Hex.	P6 ₃ /mmc
2.8.12.1			Covellite	CuS		Hex.	P6 ₃ /mmc
2.8.12.2			Klockmannite	CuSe		Hex.	P6 ₃ /mmc
2.8.13		X	Vulcanite	CuTe		Orth.	Pmm

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Type 8							
2.8.14			Cinnabar	HgS		Hex.	$P3_12_1$ or $P3_221$
2.8.15		X	Matraite	ZnS		Trig.	R3m
2.8.16.1			Millerite	NiS		Trig.	$R\bar{3}m$
2.8.16.2		X	Mäkinenite	NiSe		Trig.	R3m
2.8.16.3		X	Imgreite	NiTe		Trig.	?
2.8.17.1		X	Sudburyite	(Pd,Ni)Sb		Hex.	$P6_3/mmc$
2.8.17.2		X	Kotulskite	Pd(Te,Bi)		Hex.	$P6_3/mmc$
2.8.18		X	Sobolevskite	PdBi		Tet.	?
2.8.19		X	Stumpflite	Pt(Sb,Bi)		Hex.	?
2.8.20		X	Ruthenarsenite	(Ru,Ni)As		Orth.	Pnma
2.8.21		X	Modderite	(Co,Fe)As		Orth?	?
2.8.22		X	Langisite	(Co,Ni)As		Hex.	?
2.8.23		X	Westerveldite	(Fe,Ni,Co)As		Orth.	Pm $\bar{c}n$
2.8.24		X	Freboldite	CoSe		Hex.	$P6_3/mmc$
2.8.25		X	Tsumoite	Bi_2Te_2		Trig.	$P\bar{3}m1$
2.8.26		X	<i>to be published</i>				
2.8.27		X	Grünlingite	Bi_4TeS_3		Trig.	?
2.8.28.1			Realgar	AsS		Mon.	$P2_1/n$
2.8.28.2		X	Pararealgar	AsS		Mon.	Pc or $P2/c$
2.8.29		X	Paradocrasite	$Sb_2(Sb,As)_2$		Mon.	C2
2.8.30			Herzenbergite	SnS		Orth.	Pm $\bar{c}n$
2.8.31		X	Stistaite	SnSb		Trig.	?
2.8.32.1			Empressite	AgTe		Orth.	Pmnm or Pmn2
2.8.32.2			Muthmannite	(Ag,Au)Te		Orth?	?

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Type 9		A _m B _n X _p , with (m+n):p=1:1					
2.9.1.1			Chalcopyrite	CuFeS ₂		Tet.	I $\bar{4}$ 2d
2.9.1.2	X		Eskebornite	CuFeSe ₂		Tet.	I $\bar{4}$ 2d
2.9.1.3	X		Gallite	CuGaS ₂		Tet.	I $\bar{4}$ 2d
2.9.1.4	X		Roquesite	CuTlS ₂		Tet.	I $\bar{4}$ 2d
2.9.2	X		Putoranite	Cu ₁₆₋₁₈ (Fe,Ni) ₁₈₋₁₉ S ₃₂		Cubic	?
2.9.3.1	X		Talnakhite	Cu ₉ (Fe,Ni) ₈ S ₁₆		Cubic	I $\bar{4}$ 3m
2.9.3.2	X		Haycockite	Cu ₄ Fe ₅ S ₈		Orth.	?
2.9.3.3	X		Mooihoekite	Cu ₉ Fe ₉ S ₁₆		Tet.	P $\bar{4}$ 2m
2.9.4	X		Raguinite	TlFeS ₂		Orth.	?
2.9.5			Teallite	PbSnS ₂		Orth.	Pbnm
2.9.6	X		Volynskite	AgBiTe ₂		Orth.	?
2.9.7	X		Rasvumite	KFe ₂ S ₃		Orth.	Cmcm
2.9.8.1			Sternbergite	AgFe ₂ S ₃		Orth.	Ccmm
2.9.8.2	X		Picotpaulite	TlFe ₂ S ₃		Orth.	C222, Cmm2, Cmmm, Amm2
2.9.9.1			Cubanite	CuFe ₂ S ₃		Orth.	Pcmm
2.9.9.2	X		Argentopyrite	AgFe ₂ S ₃		Orth.	Pmmm
2.9.10	X		Kesterite	Cu ₂ ZnSnS ₄		Tet., ps-Cubic	I $\bar{4}$
2.9.11.1			Stannite	Cu ₂ FeSnS ₄		Tet.	I $\bar{4}$ 2m
2.9.11.2	X		Černyite	Cu ₂ CdSnS ₄		Tet.	I $\bar{4}$ 2m
2.9.11.3	X		Briartite	Cu ₂ FeGeS ₄		Tet.	I $\bar{4}$,md or I $\bar{4}$ d2
2.9.11.4	X		Kuramite	Cu ₃ SnS ₄		Tet.	I $\bar{4}$ 2m
2.9.11.5	X		Sakuraiite	Cu ₃ InS ₄		Tet.	?
2.9.11.6	X		Hocartite	Ag ₂ FeSnS ₄		Tet.	?
2.9.11.7	X		<i>to be published</i>				
2.9.12	X		Velikite	Cu _{3.75} Hg _{1.75} Sn ₂ S ₈		Tet.	I $\bar{4}$ 2m
2.9.13.1	X		Renierite	Cu ₃ (Fe,Ge)(S,As) ₄		Tet.	P $\bar{4}$ 3n
2.9.13.2	X		Germanite	Cu ₃ (Ge,Fe)(S,As) ₄		Tet.	P $\bar{4}$ 3n
2.9.14.1	X		Morozeviczite	Pb ₃ (Ge,Fe)S ₄		Cubic	?
2.9.14.2	X		Polkovicite	Pb ₃ (Fe,Ge)S ₄		Cubic	?
2.9.15	X		Idaite	Cu ₃ FeS ₄ (?)	X	Hex?	?
2.9.16	X		Nukundamite	(Cu,Fe) ₄ S ₄		Trig.	P $\bar{3}$ m1
2.9.17	X		Hemusite	Cu ₆ SnMoS ₈		Cubic	?

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Type 10			$A_m B_n X_p$, with $(m+n):p=3:4$				
2.10.1.1			Linnaeite	$CoCo_2S_4$		Cubic	Fd3m
2.10.1.2			Carrollite	$Cu(Co,Ni)_2S_4$		Cubic	Fd3m
2.10.1.3	X		Fletcherite	$Cu(Ni,Co)_2S_4$		Cubic	Fd3m
2.10.1.4	X		Tyrellite	$(Cu,Co,Ni)_3Se_4$		Cubic	Fd3m
2.10.1.5	X		Bornhardtite	$CoCo_2Se_4$		Cubic	Fd3m
2.10.1.6			Siegenite	$(Ni,Co)_3S_4$		Cubic	Fd3m
2.10.2.1			Polydymite	$NiNi_2S_4$		Cubic	Fd3m
2.10.2.2			Violarite	$Fe^{2+}Ni_2S_4$		Cubic	Fd3m
2.10.2.3	X		Trüsteditite	$NiNi_2Se_4$		Cubic	Fd3m
2.10.2.4	X		Griegite	$Fe^{2+}Fe_2^{3+}S_4$		Cubic	Fd3m
2.10.2.5			Daubreelite	$Fe^{2+}Cr_2S_4$		Cubic	Fd3m
2.10.2.6	X		Indite	$Fe^{2+}In_2S_4$		Cubic	Fd3m
2.10.3	X		Heideite	$(Fe,Cr)_{1+x}(Ti,Fe)_2S_4$		Mon.	I2/m
2.10.4	X		Wilkmanite	$NiNi_2Se_4$		Mon.	C2/m
2.10.5	X		Brezinaite	Cr_3S_4		Mon.	?
2.10.6	X		Dayingite	$CuCoPtS_4$		Cubic	Fm3m
2.10.7	X		Rucklidgeite	$(Bi,Pb)_3Te_4$		Trig.	R3m
2.10.8	X		Poubaite	$PbBi_2(Se,Te,S)_4$		Trig.	R3m
2.10.9	X		Rhodostannite	$Cu_2FeSn_3S_8$		Tet.	I4 ₁ /a
2.10.10			Badenite	$(Co,Ni,Fe)_3(As,Bi)_4?$	X	?	?
Type 11			$A_m B_n X_p$, with $(m+n):p=2:3$				
2.11.1.1			Orpiment	As_2S_3		Mon.	P2 ₁ /n
2.11.1.2	X		Getchellite	$AsSbS_3$		Mon.	P2 ₁ /a
2.11.1.3	X		<i>to be published</i>				
2.11.2.1			Stibnite	Sb_2S_3		Orth.	Pbnm
2.11.2.2			Bismuthinite	Bi_2S_3		Orth.	Pbnm
2.11.2.3			Guanajuatite	Bi_2Se_3		Orth.	Pbnm
2.11.3	X		Metastibnite	As_2S_3		Amor.	----

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Type 11							
2.11.4.1			Tellurobismuthite	Bi_2Te_3		Trig.	$R\bar{3}m$
2.11.4.2		X	Tellurantimony	Sb_2Te_3		Trig.	$R\bar{3}m$
2.11.4.3		X	Paraguajuatite	$\text{Bi}_2(\text{Se},\text{S})_3$		Trig.	$R\bar{3}m$
2.11.4.4		X	Csiklovaite	$\text{Bi}_2\text{Te}(\text{S},\text{Se})_2 ?$		Trig.	?
2.11.5.1			Tetradymite	$\text{Bi}_2\text{Te}_2\text{S}$		Trig.	$R\bar{3}m$
2.11.5.2		X	Kawazulite	$\text{Bi}_2\text{Te}_2\text{Se}$		Trig.	$R\bar{3}m, R3m$ or $R32$
2.11.6		X	Montbrayite	$(\text{Au},\text{Sb})_2\text{Te}_3$		Tric.	$P\bar{1}$
2.11.7		X	Ottemannite	Sn_2S_3		Orth.	Pnam
2.11.8		X	Paxite	Cu_2As_3		Orth.	?
2.11.9			Nagyagite	$\text{Pb}_5\text{Au}(\text{Te},\text{Sb})_4\text{S}_{5-8}$		Orth?	?
2.11.10		X	<i>to be published</i>				
Type 12 $A_m B_n X_p$, with $(m+n):p=1:2$							
2.12.1.1			Pyrite	FeS_2		Cubic	$\text{Pa}3$
2.12.1.2		X	Vaesite	NiS_2		Cubic	$\text{Pa}3$
2.12.1.3		X	Cattierite	CoS_2		Cubic	$\text{Pa}\bar{3}$
2.12.1.4			Penroseite	$(\text{Ni},\text{Co},\text{Cu})\text{Se}_2$		Cubic	$\text{Pa}3$
2.12.1.5		X	Trogtalite	CoSe_2		Cubic	$\text{Pa}3$
2.12.2.1		X	Villamaninite	$(\text{Cu},\text{Ni},\text{Co},\text{Fe})\text{S}_2$		Cubic	$\text{Pa}3$
2.12.2.2		X	Malanite	$(\text{Cu},\text{Pt},\text{Ir})\text{S}_2$		Cubic	?
2.12.2.3		X	Fukuchilite	Cu_3FeS_8		Cubic	?
2.12.2.4		X	Krutaitite	CuSe_2		Cubic	$\text{Pa}3$
2.12.2.5			Hauerite	MnS_2		Cubic	$\text{Pa}3$
2.12.3.1			Laurite	RuS_2		Cubic	$\text{Pa}3$
2.12.3.2		X	Aurostibite	AuSb_2		Cubic	$\text{Pa}3$
2.12.3.3			Sperrylite	PtAs_2		Cubic	$\text{Pa}3$
2.12.3.4		X	Geversite	PtSb_2		Cubic	$\text{Pa}3$
2.12.3.5		X	Insizwaite	$\text{Pt}(\text{Bi},\text{Sb})_2$		Cubic	$\text{Pa}3$
2.12.3.6		X	Erlichmanite	OsS_2		Cubic	$\text{Pa}3$
2.12.4.1		X	Michenerite	$(\text{Pd},\text{Pt})\text{BiTe}$		Cubic	$\text{P}2_13(?)$
2.12.4.2		X	Maslovite	$(\text{Pt},\text{Pd})\text{BiTe}$		Cubic	$\text{Pa}3$
2.12.4.3		X	Testibiopalladite	$\text{Pd}(\text{Sb},\text{Bi})\text{Te}$		Cubic	?

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Type 12							
2.12.5		X	Bambollaite	$\text{Cu}(\text{Te},\text{Se})_2$		Tet.	$I4_1/\text{amd}$
2.12.6.1			Marcasite	FeS_2		Orth.	Pnmm
2.12.6.2		X	Ferroselite	FeSe_2		Orth.	Pnmm
2.12.6.3		X	Frohbergite	FeTe_2		Orth.	Pnmm
2.12.6.4		X	Hastite	CoSe_2		Orth.	Pnmm
2.12.6.5		X	Mattagamite	CoTe_2		Orth.	Pnmm?
2.12.6.6		X	Kullerudite	NiSe_2		Orth.	Pnmm
2.12.7.1			Cobaltite	CoAsS		Cubic	$\text{Pa}3$
2.12.7.2			Gersdorffite	NiAsS		Cubic	$\text{P}2_13$
2.12.7.3			Ullmannite	NiSbS		Tric.	$\text{P}1$
2.12.7.4		X	Willyamite	CoSbS		Ps-Cubic	?
2.12.7.5		X	<i>to be published</i>				
2.12.8.1		X	Platarsite	PtAsS		Cubic	$\text{Pa}3$
2.12.8.2		X	Irarsite	IrAsS		Cubic	$\text{Pa}3$
2.12.8.3		X	Hollingsworthite	RhAsS		Cubic	$\text{Pa}3$
2.12.9.1			Arsenopyrite	FeAsS		Mon.	$\text{P}2_1/\text{c}$
2.12.9.2			Gudmundite	FeSbS		Mon.	$\text{P}2_1/\text{a}$
2.12.9.3		X	Alloclasite	$(\text{Co},\text{Fe})\text{AsS}$		Mon.	$\text{P}2_1$
2.12.10.1		X	Osarsite	$(\text{Os},\text{Ru})\text{AsS}$		Mon.	?
2.12.10.2		X	Ruarsite	$(\text{Ru},\text{Os})\text{AsS}$		Mon.	?
2.12.11		X	Iridoarsenite	$(\text{Ir},\text{Ru})\text{As}_2$		Mon.	?
2.12.12.1		X	Omeiite	$(\text{Os},\text{Ru})\text{As}_2$		Orth.	Pnmm or Pnn2
2.12.12.2		X	Anduoite	$(\text{Ru},\text{Os})\text{As}_2$		Orth.	Pnmm or Pnn2
2.12.13			Lautite	CuAsS		Orth.	$\text{P}2_12_12_1$
2.12.14.1			Loellingite	FeAs_2		Orth.	Pnmm
2.12.14.2		X	Seinajokite	$(\text{Fe},\text{Ni})(\text{Sb},\text{As})_2$		Orth.	?
2.12.14.3			Safflorite	CoAs_2		Orth.	Pnmm
2.12.14.4			Rammelsbergite	NiAs_2		Orth.	Pnmm
2.12.14.5		X	Nisbite	NiSb_2		Orth.	Pnmm
2.12.15			Para- rammelsbergite	NiAs_2		Orth.	Pbca
2.12.16		X	Clinosafflorite	CoAs_2		Mon.	$\text{P}2_1/\text{n}$
2.12.17		X	Krutovite	NiAs_2		Cubic	$\text{P}2_13$

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Type 12							
2.12.18.1		X	Costibite	CoSbS		Orth.	Pmn2 ₁
2.12.18.2			Glaucodot	CoAsS		Orth.	Cmmm
2.12.18.3		X	Paracostibite	CoSbS		Orth.	Pbca
2.12.19.1			Molybdenite-2H	MoS ₂		Hex.	P6 ₃ /mmc
2.12.19.2		X	Drysdallite	Mo(Se,S) ₂		Hex.	P6 ₃ /mmc
2.12.19.3			Tungstenite-2H	WS ₂		Hex.	P6 ₃ /mmc
2.12.19.4		X	Berndtite-6C	SnS ₂		Hex.	P6 ₃ mc
2.12.20.1		X	Molybdenite-3R	MoS ₂		Trig.	R3m
2.12.20.2		X	Berndtite-3R	SnS ₂		Trig.	P3m1
2.12.20.3		X	Tungstenite-3R	WS ₂		Trig.	R3m
2.12.21		X	Jordisite	MoS ₂		Amor.	----
2.12.22			Jeromite	As(S,Se) ₂	X	Amor.	----
2.12.23.1			Krennerite	AuTe ₂		Orth.	Pma2
2.12.23.2			Calaverite	AuTe ₂		Mon.	C2/m or C2
2.12.23.3			Sylvanite	AgAuTe ₄		Mon.	P2/c
2.12.23.4		X	Kostovite	CuAuTe ₄		Mon.	?
2.12.24.1			Melonite	NiTe ₂		Trig.	P3m1
2.12.24.2		X	Kitkaite	NiTeSe		Trig.	P3m1
2.12.25.1		X	Moncheite	(Pt,Pd)(Te,Bi) ₂		Hex.	P3m
2.12.25.2		X	Merenskyite	(Pd,Pt)(Te,Bi) ₂		Hex.	P3m
2.12.25.3		X	Urvantsevite	Pd(Bi,Pb) ₂		Hex.	?
2.12.25.4		X	Borishanskiite	Pd _{1+x} (As,Pb) ₂ , x=0-0.2		Orth.	?
2.12.26		X	Froodite	PdBi ₂		Mon.	C2/m
2.12.27.1			Skutterudite	CoAs ₂₋₃		Cubic	Im3
2.12.27.2			Nickel- skutterudite	NiAs ₂₋₃		Cubic	Im3
Type 13 Oxysulfides							
2.13.1			Kermesite	Sb ₂ S ₂ O		Mon.	C2/m
2.13.2		X	Sarabauite	CaSb ₁₀ O ₁₀ S ₆		Mon.	C2/c

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 14			Hydroxysulfides and Hydrated Sulfides				
2.14.1	X		Valleriite	$4(\text{Fe,Cu})\text{S} \cdot 3(\text{Mg,Al})(\text{OH})_2$		Hex.	$R\bar{3}m$
2.14.2		X	Tochilinite	$6\text{Fe}_{0.9}\text{S} \cdot 5(\text{Mg,Fe}^{2+})(\text{OH})_2$		Tric.	?
2.14.3		X	Haapalaite	$2(\text{Fe,Ni})_2\text{S}_2 \cdot 3(\text{Mg,Fe}^{2+})(\text{OH})_2$		Hex.	?
2.14.4		X	Erdite	$\text{NaFeS}_2 \cdot 2\text{H}_2\text{O}$		Mon.	$C2/c$
2.14.5		X	<i>to be published</i>				
2.14.6		X	<i>to be published</i>				
Type 15			Chlor-sulfides				
2.15.1		X	<i>to be published</i>				
2.15.2		X	Djerfisherite	$\text{K}_6\text{Na}(\text{Fe,Cu,Ni})_{24}\text{S}_{26}\text{Cl}$		Cubic	$\text{Pm}3m$
2.15.3		X	Thalferisite	$\text{Tl}_6(\text{Fe,Ni,Cu})_{25}\text{S}_{26}\text{Cl}$		Cubic	?
2.15.4		X	Dadsonite	$\text{Pb}_{21}\text{Sb}_{23}\text{S}_{55}\text{Cl}$		Mon.	$\text{P}2_1, \text{Pm}, \text{or P}2_1/m$
Type 16			Miscellaneous				
2.16.1		X	Stillwaterite	Pd_8As_3		Hex.	$\text{P}3 \text{ or } \text{P}\bar{3}$
2.16.2		X	Arsenopalladinite	$\text{Pd}_8(\text{As,Sb})_3$		Tric.	?
2.16.3		X	Mertieite II	$\text{Pd}_8(\text{Sb,As})_3$		Trig.	?
2.16.4		X	Isomertieite	$\text{Pd}_{11}\text{Sb}_2\text{As}_2$		Cubic	$\text{Fd}3m$
2.16.5		X	Mertieite I	$\text{Pd}_{11}(\text{Sb,As})_4$		Trig.	?
2.16.6		X	Telluro-palladinite	Pd_9Te_4		Mon.	$\text{P}2_1/c$
2.16.7		X	Hedleyite	Bi_7Te_3		Trig.	$R\bar{3}m$
2.16.8		X	Balkanite	$\text{Cu}_9\text{Ag}_5\text{HgS}_8$		Orth.	$\text{P}222, \text{Pmm}2, \text{or Pmmm}$
2.16.9		X	Betekhtinite	$\text{Cu}_{10}(\text{Fe,Pb})\text{S}_6$		Orth.	Immm
2.16.10	X		Digenite	Cu_9S_5		Cubic	$\text{Fm}3m$
2.16.11		X	Larosite	$(\text{Cu,Ag})_{21}(\text{Pb,Bi})_2\text{S}_{13}$		Orth.	?
2.16.12		X	Anilite	Cu_7S_4		Orth.	Pnma
2.16.13		X	Sabatierite	Cu_6TlSe_4		Orth.	?
2.16.14		X	<i>to be published</i>				
2.16.15.1			Weissite	Cu_5Te_3		Hex., ps-Cubic	$\text{P}6/\text{mmm}$
2.16.15.2		X	Stützite	$\text{Ag}_{5-x}\text{Te}_3$		Hex.	$\text{P}6/\text{mmm}$
2.16.16		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 16							
2.16.17.1	X		Rickardite	Cu_7Te_5		Orth.	?
2.16.17.2	X		Oosterboschite	$(\text{Pd,Cu})_7\text{Se}_5$		Orth.	?
2.16.18	X		Geerite	$\text{Cu}_{1.60}\text{S}$		Cubic	$F\bar{4}3m$
2.16.19	X		Spionkopite	$\text{Cu}_{39}\text{S}_{28}$		Trig.	$P3m1, P\bar{3}m1$
2.16.20			Maucherite	$\text{Ni}_{11}\text{As}_8$		Tet.	$P4_12_12$
2.16.21	X		Athabascaite	Cu_5Se_4		Orth.	?
2.16.22	X		Godlevskite	$(\text{Ni,Fe})_7\text{S}_6$		Orth.	$C222, Cm2m,$ $Cmm2$ or $Cmmm$
2.16.23	X		Palladesite	$\text{Pd}_{17}\text{Se}_{15}$		Cubic	$Pm\bar{3}m$
2.16.24	X		Stannoidite	$\text{Cu}_8(\text{Fe,Zn})_3\text{Sn}_2\text{S}_{12}$		Orth.	$I222$
2.16.25	X		Bartonite	$\text{K}_6\text{Fe}_{21}\text{S}_{26}(\text{S,Cl})$		Tet.	$I4/mmm$
2.16.26	X		Smythite	$(\text{Fe,Ni})_9\text{S}_{11}$		Trig.	$R\bar{3}m$
2.16.27	X		Wakabayashilite	$\text{Sb}_2\text{As}_{20}\text{S}_{36}$		Mon.	$P2_1/m$
2.16.28	X		Patronite	$\text{V}(\text{S}_2)_2$		Mon.	$I2/c$
2.16.29	X		Dzhezkazganite	lead-rhenium sulfide		Amor.	----
2.16.30	X		Castaingite	CuMo_2S_5 ?		Hex.	$P6_3/mmc$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP																																																																																																								
CLASS 3 SULFOSALTS																																																																																																															
<p>For the classification of the Sulfosalts, we have adapted the classification proposed by Nowacki(1969) and Edenharter (1976). A sulfosalt is regarded as having the general formula</p> $A(1)_{x_1}A(2)_{x_2}[B_yC_z]$ <p>Only mono- and divalent metals occur in sulfosalts. The metals located in the A(1) position are: Ag, Cu, Hg, Tl, and Zn. The A(2) position can be filled by Pb, Hg, Mn, Fe, Co, Ni, (Sb,Bi), and Tl. The $[B_yC_z]$ unit, with B= As,Sb,Bi; and C= S,(Se,Te), represents the structural network formed by the BS_3-pyramids or the BS_4-tetrahedra. The Nowacki classification is based on the ϕ-factor, where $\phi = z/y$. This is the ratio of the non-metal to semimetal atoms in the $[B_yC_z]$ unit. For this classification, the ϕ-factor is used as the basis for the Type division, and the minerals in each Type are listed according to a decreasing ϕ-factor. The additional structural subdivisions used in the original classification have not been used here.</p>																																																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Type 1</th> <th colspan="2" style="text-align: center;">$\phi > 4$</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>3.1.1</td> <td>X</td> <td></td> <td>Cylindrite</td> <td>$Pb_3FeSn_4Sb_2S_{14}$</td> <td></td> <td>Tric.</td> <td>A1</td> </tr> <tr> <td>3.1.2</td> <td>X</td> <td></td> <td>Franckeite</td> <td>$Pb_5Sn_4Sb_2S_{14}$</td> <td></td> <td>Tric.</td> <td>P1</td> </tr> <tr> <td>3.1.3</td> <td></td> <td>X</td> <td>Incaite</td> <td>$(Pb,Ag)_4FeSn_4Sb_2S_{14}$</td> <td></td> <td>Mon.</td> <td>A2,Am, or A2/m</td> </tr> <tr> <td>3.1.4</td> <td></td> <td>X</td> <td><i>to be published</i></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3.1.5</td> <td></td> <td>X</td> <td>Miharaite</td> <td>$Cu_4FePbBiS_6$</td> <td></td> <td>Orth.</td> <td>Pbmm,Pb2m, or Pb2₁/m</td> </tr> <tr> <td>3.1.6</td> <td></td> <td>X</td> <td>Billingsleyite</td> <td>$Ag_7(Sb,As)S_6$</td> <td></td> <td>Orth.</td> <td>C222₁</td> </tr> <tr> <td>3.1.7</td> <td></td> <td></td> <td>Epigenite</td> <td>$(Cu,Fe)_5AsS_6$</td> <td>X</td> <td>Orth.</td> <td>?</td> </tr> <tr> <td>3.1.8.1</td> <td></td> <td></td> <td>Arsenpolybasite</td> <td>$Ag_{16}As_2S_{11}$</td> <td></td> <td>Mon.</td> <td>C2/m</td> </tr> <tr> <td>3.1.8.2</td> <td></td> <td></td> <td>Polybasite</td> <td>$Ag_{16}Sb_2S_{11}$</td> <td></td> <td>Mon.</td> <td>C2/m</td> </tr> <tr> <td>3.1.9.1</td> <td></td> <td></td> <td>Pearceite</td> <td>$Ag_{16}As_2S_{11}$</td> <td></td> <td>Mon.</td> <td>C2/m</td> </tr> <tr> <td>3.1.9.2</td> <td></td> <td></td> <td>Antimonpearceite</td> <td>$Ag_{16}Sb_2S_{11}$</td> <td></td> <td>Mon.</td> <td>C2/m</td> </tr> <tr> <td>3.1.10</td> <td></td> <td>X</td> <td>Petrovicite</td> <td>$Cu_3HgPbBiSe_5$</td> <td></td> <td>Orth.</td> <td>Pnam or Pna2₁</td> </tr> </tbody> </table>								Type 1		$\phi > 4$						3.1.1	X		Cylindrite	$Pb_3FeSn_4Sb_2S_{14}$		Tric.	A1	3.1.2	X		Franckeite	$Pb_5Sn_4Sb_2S_{14}$		Tric.	P1	3.1.3		X	Incaite	$(Pb,Ag)_4FeSn_4Sb_2S_{14}$		Mon.	A2,Am, or A2/m	3.1.4		X	<i>to be published</i>					3.1.5		X	Miharaite	$Cu_4FePbBiS_6$		Orth.	Pbmm,Pb2m, or Pb2 ₁ /m	3.1.6		X	Billingsleyite	$Ag_7(Sb,As)S_6$		Orth.	C222 ₁	3.1.7			Epigenite	$(Cu,Fe)_5AsS_6$	X	Orth.	?	3.1.8.1			Arsenpolybasite	$Ag_{16}As_2S_{11}$		Mon.	C2/m	3.1.8.2			Polybasite	$Ag_{16}Sb_2S_{11}$		Mon.	C2/m	3.1.9.1			Pearceite	$Ag_{16}As_2S_{11}$		Mon.	C2/m	3.1.9.2			Antimonpearceite	$Ag_{16}Sb_2S_{11}$		Mon.	C2/m	3.1.10		X	Petrovicite	$Cu_3HgPbBiSe_5$		Orth.	Pnam or Pna2 ₁
Type 1		$\phi > 4$																																																																																																													
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3.1.10		X	Petrovicite	$Cu_3HgPbBiSe_5$		Orth.	Pnam or Pna2 ₁																																																																																																								

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Type 2			$\phi = 4$				
3.2.1			Enargite	Cu_3AsS_4		Orth.	Pnm
3.2.2.1	X		Luzonite	Cu_3AsS_4		Tet.	$I\bar{4}2m$
3.2.2.2			Famatinite	Cu_3SbS_4		Tet.	$I\bar{4}2m$
3.2.2.3	X		Permingeatite	Cu_3SbSe_4		Tet.	$I\bar{4}2m$
3.2.3.1	X		Arsenosulvanite	$\text{Cu}_3(\text{As},\text{V})\text{S}_4$		Cubic	$P\bar{4}3m$
3.2.3.2			Colusite	$\text{Cu}_3(\text{As},\text{Sn},\text{V})\text{S}_4$		Cubic	$P\bar{4}3m$
3.2.3.3			Sulvanite	Cu_3VS_4		Cubic	$P\bar{4}3m$
3.2.4	X		Borovskite	Pd_3SbTe_4		Cubic	?
3.2.5			Stephanite	Ag_5SbS_4		Orth.	$\text{Cmc}2_1$
3.2.6.1	X		Bismuto- hauchecornite	$\text{Ni}_9\text{BiBiS}_8$		Tet.	$P4/mmm$
3.2.6.2	X		Telluro- hauchecornite	$\text{Ni}_9\text{BiTeS}_8$		Tet.	$P4/mmm$
3.2.6.3	X		Hauchecornite	$\text{Ni}_9\text{BiSbS}_8$		Tet.	$P4/mmm$
3.2.6.4	X		Arseno- hauchecornite	$\text{Ni}_9\text{BiAsS}_8$		Tet.	$P4/mmm$
3.2.6.5	X		Tucekite	$\text{Ni}_9\text{SbSbS}_8$		Tet.	$P4/mmm$
3.2.7	X		Arcubisite	$\text{Ag}_6\text{CuBiS}_4$?	?
3.2.8	X		Chalcothallite	$\text{Tl}_2(\text{Cu},\text{Fe})_6\text{SbS}_4$		Tet.	?
3.2.9	X		Giessenite	$\text{Pb}_{16}\text{Cu}_2\text{Bi}_{12}\text{Sb}_3\text{S}_{60}$ (?)		Orth.	$P2_12_12_1$
3.2.10	X		<i>to be published</i>				
Type 3			$3 < \phi < 4$				
3.3.1.1	X		Jordanite	$\text{Pb}_{28}\text{As}_{12}\text{S}_{46}$		Mon.	$P2_1/m$
3.3.1.2	X		Geocronite	$\text{Pb}_{28}\text{As}_{4+x}\text{Sb}_{8-x}\text{S}_{46}$ ($0 \leq x \leq 8$)		Mon.	$P2_1/m$
3.3.2			Gratonite	$\text{Pb}_9\text{As}_4\text{S}_{15}$		Trig.	$R3m$
3.3.3	X		Heyrovskyite	$\text{Pb}_{10}\text{AgBi}_5\text{S}_{18}$		Orth.	Bbmm or Bbm2
3.3.4	X		Nuffieldite	$\text{Pb}_2\text{Cu}(\text{Pb},\text{Bi})\text{Bi}_2\text{S}_7$		Orth.	Pbnm
3.3.5	X		Meneghinite	$\text{Pb}_{13}\text{CuSb}_7\text{S}_{24}$		Orth.	$\text{Pn}2_1m$
3.3.6.1			Tennantite	$(\text{Cu},\text{Fe})_{12}\text{As}_4\text{S}_{13}$		Cubic	$I\bar{4}3m$
3.3.6.2			Tetrahedrite	$(\text{Cu},\text{Fe})_{12}\text{Sb}_4\text{S}_{13}$		Cubic	$I\bar{4}3m$
3.3.6.3	X		Freibergite	$(\text{Ag},\text{Cu})_{12}(\text{Sb},\text{As})_4\text{S}_{13}$		Cubic	$I\bar{4}3m$
3.3.6.4	X		Hakite	$(\text{Cu},\text{Hg})_{12}\text{Sb}_4(\text{Se},\text{S})_{13}$		Cubic	$I\bar{4}3m$
3.3.6.5	X		<i>to be published</i>				
3.3.6.6	X		Goldfieldite	$\text{Cu}_{12}(\text{Sb},\text{As})_4(\text{Te},\text{S})_{13}$		Cubic	$I\bar{4}3m$
3.3.7			Lengenbachite	$\text{Pb}_6(\text{Ag},\text{Cu})_2\text{As}_4\text{S}_{13}$		Mon.	$P2_1/m$

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Type 4			$\phi = 3$				
3.4.1.1			Proustite	Ag_3AsS_3		Trig.	R3c
3.4.1.2			Pyragyrite	Ag_3SbS_3		Trig.	$\text{R}\bar{3}\text{m}$
3.4.2.1			Xanthoconite	Ag_3AsS_3		Mon.	C2/c
3.4.2.2			Pyrostitpnite	Ag_3SbS_3		Mon.	$\text{P}2_1/\text{c}$
3.4.3.1			Seligmannite	PbCuAsS_3		Orth.	$\text{Pn}2_1\text{m}$
3.4.3.2			Bournonite	PbCuSbS_3		Orth.	$\text{Pn}2_1\text{m}$
3.4.3.3	X		Soucekite	$\text{PbCuBi}(\text{S},\text{Se})_3$		Orth.	$\text{Pn}2_1\text{m}?$
3.4.4			Aikinite	PbCuBiS_3		Orth.	Pnma
3.4.5.1	X		Marrite	PbAgAsS_3		Mon.	$\text{P}2_1/\text{a}$
3.4.5.2	X		Freieslebenite	PbAgSbS_3		Mon.	$\text{P}2_1/\text{a}$
3.4.6			Wittichenite	Cu_3BiS_3		Orth.	$\text{P}2_12_12_1$
3.4.7	X		Skinnerite	Cu_3SbS_3		Mon.	$\text{P}2_1/\text{c}$
3.4.8	X		Ellisite	Tl_3AsS_3		Trig.	?
3.4.9.1	X		Christite	TlHgAsS_3		Mon.	$\text{P}2_1/\text{n}$
3.4.9.2	X		Laffittite	AgHgAsS_3		Mon.	$\text{P}2_1/\text{c}$
3.4.10	X		Routhierite	TlHgAsS_3		Tet.	$\text{I}4\text{mm}, \text{I}\bar{4}\text{m}2,$ $\text{I}\bar{4}2\text{m}, \text{I}4/\text{mmm},$ or $\text{I}422$
3.4.11			Samsonite	$\text{Ag}_4\text{MnSb}_2\text{S}_6$		Mon.	$\text{P}2_1/\text{n}$
3.4.12.1	X		Nowackiite	$\text{Cu}_6\text{Zn}_3\text{As}_4\text{S}_{12}$		Trig.	R3
3.4.12.2	X		Aktashite	$\text{Cu}_6\text{Hg}_3\text{As}_4\text{S}_{12}$		Trig.	R3 or $\text{R}\bar{3}$
3.4.12.3	X		<i>to be published</i>				
3.4.13	X		Galkhaite	$(\text{Hg},\text{Cu},\text{Zn})_{12}\text{TlAs}_8\text{S}_{24}$		Cubic	$\text{I}\bar{4}3\text{m}$
3.4.14			Lillianite	$\text{Pb}_3\text{Bi}_2\text{S}_6$		Orth.	Bbmm
3.4.15	X		Bursaite	$\text{Pb}_5\text{Bi}_4\text{S}_{11}$	X	?	?
Type 5			$2.5 < \phi < 3$				
3.5.1		X	Neyite	$\text{Pb}_7(\text{Cu},\text{Ag})_2\text{Bi}_6\text{S}_{17}$		Mon.	C2/m
3.5.2			Boulangerite	$\text{Pb}_5\text{Sb}_4\text{S}_{11}$		Mon.	$\text{P}2_1/\text{a}$
3.5.3	X		Sterryite	$\text{Pb}_{12}(\text{Sb},\text{As})_{10}\text{S}_{27}$		Orth.	Pba2 or Pbam
3.5.4			Diaphorite	$\text{Pb}_2\text{Ag}_3\text{Sb}_3\text{S}_8$		Mon.	$\text{P}2_1/\text{c}$
3.5.5			Semseyite	$\text{Pb}_9\text{Sb}_8\text{S}_{21}$		Mon.	C2/c
3.5.6	X		Friedrichite	$\text{Pb}_5\text{Cu}_5\text{Bi}_7\text{S}_{18}$		Orth.	$\text{Pb}2_1\text{m}$
3.5.7	X		Schirmerite	$\text{Pb}_6\text{Ag}_3\text{Bi}_7\text{S}_{18}$ — $\text{Pb}_3\text{Ag}_3\text{Bi}_9\text{S}_{18}$		Orth.	Bbmm, Bb2m, or Bbm2

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 5							
3.5.8		X	Madocite	$Pb_{17}(Sb,As)_{16}S_{41}$		Orth.	Pba2 or Pbam
3.5.9		X	Ourayite	$Pb_{30}Ag_{25}Bi_{41}S_{104}$		Orth.	Bbmm or Bb2 ₁ m
3.5.10.1		X	Wallisite	$PbTlCuAs_2S_5$		Tric.	P $\bar{1}$
3.5.10.2		X	Hatchite	$(Pb,Tl)_2AgAs_2S_5$		Tric.	P $\bar{1}$
3.5.11.1			Cosalite	$Pb_2Bi_2S_5$		Orth.	Pbnm
3.5.11.2		X	Veenite	$Pb_2(Sb,As)_2S_5$		Orth.	P2 ₁ cn or Pmcn
3.5.12			Dufrenoyite	$Pb_2As_2S_5$		Mon.	P2 ₁
3.5.13			Owyheeite	$Pb_5Ag_2Sb_6S_{15}$		Orth.	Pnam
3.5.14		X	Imhofite	$Tl_6CuAs_{16}S_{40}?$		Mon.	P2 ₁ /n
Type 6 $2 < \phi < 2.49$							
3.6.1		X	Proudite	$Pb_{7.5}CuBi_9(S,Se)_{22}$		Mon.	C2/m
3.6.2		X	Eskimoite	$Pb_{10}Ag_7Bi_{15}S_{36}$		Mon.	B2/m or Bm
3.6.3		X	Treasurite	$Pb_6Ag_7Bi_{15}S_{32}$		Mon.	B2/m, B2, or Bm
3.6.4		X	Playfairite	$Pb_{16}Sb_{18}S_{43}$		Mon.	P2, Pm or P2/m
3.6.5			Heteromorphite	$Pb_7Sb_8S_{19}$		Mon.	?
3.6.6.1		X	Cannizzarite	$Pb_{46}Bi_{54}S_{127}$		Mon.	P2 ₁ /m
3.6.6.2		X	Wittite	$Pb_{45}Bi_{55}(S,Se)_{127}?$		Mon.	C2/m or P2/m
3.6.7		X	Launayite	$Pb_{22}Sb_{26}S_{61}$		Mon.	C2, Cm or C2/m
3.6.8.1			Jamesonite	$Pb_4FeSb_6S_{14}$		Mon.	P2 ₁ /m
3.6.8.2		X	<i>to be published</i>				
3.6.9		X	Parajamesonite	$Pb_4FeSb_6S_{14}$		Orth.	?
3.6.10		X	Vikingite	$Pb_8Ag_5Bi_{13}S_{30}$		Mon.	B2/m or Bm
3.6.11		X	Sorbyite	$Pb_{17}(Sb,As)_{22}S_{50}$		Mon.	C2/m or P2/m
3.6.12		X	Baumhauerite	$Pb_3As_4S_9$		Tric.	P $\bar{1}$
3.6.13			Hammarite	$Pb_2Cu_2Bi_4S_9$		Orth.	Pnam
3.6.14		X	Sinnerite	$Cu_{12}[As_3S_7][As_5S_{11}]$		Tric.	P $\bar{1}$
3.6.15			Fizelyite	$Pb_5Ag_2Sb_8S_{18}$		Mon.	?
3.6.16		X	Berryite	$Pb_2(Cu,Ag)_3Bi_5S_{11}$		Mon.	P2 ₁ /m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 6							
3.6.17		X	Robinsonite	$Pb_4Sb_6S_{13}$		Tric.	$P\bar{1}$
3.6.18		X	Liveingite	$Pb_9As_{13}S_{28}$		Mon.	$P2_1$
3.6.19		X	Lindströmite	$Pb_3Cu_3Bi_7S_{15}$		Orth.	Pbnm
3.6.20		X	Weibullite	$Pb_6Bi_8(S,Se)_{18}$		Orth.	Pnma
3.6.21.1		X	Kobellite	$Pb_5Bi_8S_{17}$		Orth.	Pnmm
3.6.21.2		X	Tintinaite	$Pb_5(Sb,Bi)_8S_{17}$		Orth.	Pnnm
3.6.22			Plagionite	$Pb_5Sb_8S_{17}$		Mon.	$C2/c$
Type 7 $\phi = 2$							
3.7.1.1			Miargyrite	$AgSbS_2$		Mon.	$A2/a$
3.7.1.2			Smithite	$AgAsS_2$		Mon.	$A2/a$ or Aa
3.7.1.3			Matildite	$AgBiS_2$		Mon.	$A2/a$ or Aa
3.7.2			Trechmannite	$AgAsS_2$		Trig.	$R\bar{3}m$
3.7.3			Aramayoite	$Ag(Sb,Bi)S_2$		Tric.	$P\bar{1}$
3.7.4		X	Bohdanowiczite	$AgBiSe_2$		Hex.	$P\bar{3}m1$
3.7.5.1			Chalcostibite	$CuSbS_2$		Orth.	Pnam
3.7.5.2			Emplectite	$CuBiS_2$		Orth.	Pnma
3.7.6			Lorandite	$TlAsS_2$		Mon.	$P2_1/a$
3.7.7		X	Weissbergite	$TlSbS_2$		Tric.	$P1$ or $P\bar{1}$
3.7.8.1			Sartorite	$PbAs_2S_4$		Mon., ps-Orth.	$P2_1/n$
3.7.8.2		X	Guettardite	$Pb(Sb,As)_2S_4$		Mon.	$P2_1/a$
3.7.9.1			Galenobismutite	$PbBi_2S_4$		Orth.	Pnam
3.7.9.2		X	Sakharovite	$(Pb,Fe)(Bi,Sb)_2S_4$		Orth.	?
3.7.9.3			Berthierite	$FeSb_2S_4$		Orth.	Pnam
3.7.9.4		X	Garavellite	$FeSbBiS_4$		Orth.	?
3.7.10		X	Twinnite	$Pb(Sb,As)_2S_4$		Tric?, ps-Orth.	?
3.7.11		X	Aleksite	$PbBi_2Te_2S_2$? ps-Trig.	?
3.7.12.1			Andorite	$PbAgSb_3S_6$		Orth.	Pmma
3.7.12.2		X	Gustavite	$PbAgBi_3S_6$		Orth.	$Bbmm, Bb2_1m,$ or $Bbm2$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 7							
3.7.13	X		Ramdohrite	$\text{PbAgSb}_3\text{S}_6$		Orth.	Pmcm or P2cn
3.7.14		X	Krupkaite	$\text{PbCuBi}_3\text{S}_6$		Orth.	Pmc2 ₁
3.7.15	X		Livingstonite	HgSb_4S_8		Mon.	A2/a
3.7.16	X		Rathite	$(\text{Pb,Tl})_3\text{As}_5\text{S}_{10}$		Mon.	P2 ₁ /a
3.7.17		X	Nordströmite	$\text{CuPb}_3\text{Bi}_7(\text{S,Se})_{14}$		Mon.	P2 ₁ /m
3.7.18		X	Junoite	$\text{Pb}_3\text{Cu}_2\text{Bi}_8(\text{S,Se})_{16}$		Mon.	C2/m
3.7.19	X		Vrbaite	$\text{Hg}_3\text{Tl}_4\text{As}_8\text{Sb}_2\text{S}_{20}$		Orth.	C2ca
3.7.20		X	Rohaite	$\text{Tl}_2\text{Cu}_{8.67}\text{Sb}_2\text{S}_4$		Orth.	P222, Pmm2, or Pmmm
Type 8 1 < φ < 2							
3.8.1			Zinkenite	$\text{Pb}_6\text{Sb}_{14}\text{S}_{27}$		Hex.	P6 ₃
3.8.2		X	Cuprobismutite	$\text{Cu}_{10}\text{Bi}_{22}\text{S}_{23}$		Mon.	C2/m
3.8.3		X	Tvalchrelidzeite	$\text{Hg}_{12}(\text{Sb,As})_8\text{S}_{15}$		Mon.	?
3.8.4			Fülöppite	$\text{Pb}_3\text{Sb}_8\text{S}_{15}$		Mon.	C2/c
3.8.5		X	Hodrushite	$\text{Cu}_8\text{Bi}_{12}\text{S}_{22}$		Mon.	A2, Am, or A2/m
3.8.6.1			Gladite	$\text{PbCuBi}_5\text{S}_9$		Orth.	Pbnm
3.8.6.2	X		Hutchinsonite	$(\text{Pb,Tl})_2\text{As}_5\text{S}_9$		Orth.	Pbca
3.8.7		X	Bonchevite	PbBi_4S_7 ?		Orth.	Bbmm
3.8.8	X		Benjaminite	$(\text{Ag,Cu})_3(\text{Bi,Pb})_7\text{S}_{12}$		Mon.	C2/m
3.8.9		X	Pierrotite	$\text{Tl}_2(\text{Sb,As})_{10}\text{S}_{17}$		Orth.	Pnam?
3.8.10		X	Gerstleyite	$(\text{Na,Li})_4\text{As}_2\text{Sb}_8\text{S}_{17} \cdot 6\text{H}_2\text{O}$		Mon.	?
3.8.11.1		X	Pavonite	$(\text{Ag,Cu})\text{Bi}_3\text{S}_5$		Mon.	C2/m
3.8.11.2		X	Cupropavonite	$\text{PbAgCu}_2\text{Bi}_5\text{S}_{10}$		Mon.	Cm or C2/m
3.8.12		X	Ustarasite	$\text{Pb}(\text{Bi,Sb})_6\text{S}_{10}$?	?
3.8.13		X	Pekoite	$\text{PbCuBi}_{11}(\text{S,Se})_{18}$		Orth.	P2 ₁ am
3.8.14		X	Chabourneite	$(\text{Tl,Pb})_5(\text{Sb,As})_{21}\text{S}_{34}$ (?)		Tric.	P1
3.8.15		X	Parapierrotite	$\text{Tl}(\text{Sb,As})_5\text{S}_8$		Mon.	Pn
3.8.16			Platynite	$\text{PbBi}_2(\text{Se,S})_3$		Trig.	R3m

REVISED DANA NUMBER	N C	M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 4 SIMPLE OXIDES							
Type 1		A ₂ X					
4.1.1			Cuprite	Cu ₂ O		Cubic	Pn3m
4.1.2			Ice	H ₂ O		Hex.	P6 ₃ /mmc
Type 2		AX					
4.2.1.1			Periclase	MgO		Cubic	Fm3m
4.2.1.2			Bunsenite	NiO		Cubic	Fm3m
4.2.1.3			Manganosite	MnO		Cubic	Fm3m
4.2.1.4			Monteponite	CdO		Cubic	Fm3m
4.2.1.5			Lime	CaO		Cubic	Fm3m
4.2.1.6		X	Wüstite	FeO		Cubic	Fm3m
4.2.1.7		X	Hongquite	TiO		Cubic	Fm3m
4.2.2.1			Zincite	ZnO		Hex.	P6 ₃ mc
4.2.2.2			Bromellite	BeO		Hex.	P6 ₃ mc
4.2.3			Tenorite	CuO		Mon.	C2/c
4.2.4			Litharge	PbO		Tet.	P4/nmm
4.2.5		X	Romarchite	SnO		Tet.	P4/nmm
4.2.6			Montroydite	HgO		Orth.	Pnma
4.2.7			Massicot	PbO		Orth.	Pbma
Type 3		A ₂ X ₃					
4.3.1.1			Corundum	Al ₂ O ₃		Trig.	R3c
4.3.1.2			Hematite	Fe ₂ O ₃		Trig.	R3c
4.3.1.3		X	Eskolaite	Cr ₂ O ₃		Trig.	R3c
4.3.1.4		X	Melanostibite	Mn(Sb,Fe)O ₃		Trig.	R3c
4.3.1.5		X	Karelianite	V ₂ O ₃		Trig.	R3c
4.3.2.1		X	Akdalaite	4Al ₂ O ₃ ·H ₂ O		Hex.	P6 ₁ 22 or P6 ₁
4.3.2.2		X	Ferrihydrite	5Fe ₂ O ₃ ·9H ₂ O		Hex.	?
4.3.3.1			Perovskite	CaTiO ₃		Orth.	Pnma
4.3.3.2		X	Latrappite	(Ca,Na)(Nb,Ti)O ₃		Orth.	Pcmn
4.3.3.3		X	Loparite	(Ce,Na,Ca) ₂ (Ti,Nb) ₂ O ₆		Orth?	?
4.3.3.4		X	Lueshite	NaNbO ₃		Mon.	?
4.3.4		X	Natroniobite	NaNbO ₃		Mon.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3							
4.3.5.1			Ilmenite	FeTiO ₃		Trig.	R $\bar{3}$
4.3.5.2			Geikelite	MgTiO ₃		Trig.	R $\bar{3}$
4.3.5.3			Pyrophanite	MnTiO ₃		Trig.	R $\bar{3}$
4.3.5.4		X	<i>to be published</i>				
4.3.6		X	Macedonite	PbTiO ₃		Tet.	?
4.3.7.1			Maghemite	γ -Fe ₂ O ₃		Cubic	P4 ₁ 32-P4 ₂ 32
4.3.7.2			Bixbyite	(Mn,Fe) ₂ O ₃		Cubic	Ia3
4.3.8		X	Avicennite	Tl ₂ O ₃		Cubic	Ia3
4.3.9.1			Arsenolite	As ₂ O ₃		Cubic	Fd3m
4.3.9.2			Senarmontite	Sb ₂ O ₃		Cubic	Fd3m
4.3.9.3			Sillenite	Bi ₂ O ₃		Cubic	I23
4.3.10.1			Claudetite	As ₂ O ₃		Mon.	P2 ₁ /n
4.3.10.2			Bismite	Bi ₂ O ₃		Mon.	P2 ₁ /c
4.3.11			Valentinite	Sb ₂ O ₃		Orth.	Pccn
Type 4 AX ₂							
4.4.1.1			Rutile	TiO ₂		Tet.	P4/mnm
4.4.1.2			Pyrolusite	MnO ₂		Tet.	P4 ₂ /mnm
4.4.1.3			Cassiterite	SnO ₂		Tet.	P4 ₂ /mnm
4.4.1.4			Plattnerite	PbO ₂		Tet.	P4 ₂ /mnm
4.4.1.5		X	<i>to be published</i>				
4.4.2		X	Varlamoffite	(Sn,Fe)(O,OH) ₂	X	Tet?	?
4.4.3.1		X	Downeyite	SeO ₂		Tet.	P4/mbc
4.4.3.2		X	Paratellurite	TeO ₂		Tet.	P4 ₁ 2 ₁ 2 or P4 ₃ 2 ₁ 2
4.4.4			Anatase	TiO ₂		Tet.	I4/amd
4.4.5			Brookite	TiO ₂		Orth.	Pcab
4.4.6			Tellurite	TeO ₂		Orth.	Pbca
4.4.7		X	Ramsdellite	MnO ₂		Orth.	Pbnm
4.4.8		X	Nsutite	Mn _x ²⁺ Mn _{1-x} ⁴⁺ O _{2-2x} (OH) _{2x}		Hex.	?
4.4.9		X	Vernadite	(Mn ⁴⁺ ,Fe ³⁺ ,Ca,Na)(O,OH) ₂ .nH ₂ O		Hex.	?
4.4.10		X	Paramontroseite	VO ₂		Orth.	Pbnm

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Type 4							
4.4.11		X	Cerianite	$(\text{Ce,Th})\text{O}_2$		Cubic	Fm3m
4.4.12		X	Tazheranite	$(\text{Zr,Ca,Ti})\text{O}_2$		Cubic	Fm3m, F432, or F43c
4.4.13			Baddeleyite	ZrO_2		Mon.	$P2_1/c$
4.4.14		X	Tugarinovite	MoO_2		Mon.	$P2_1/c$
4.4.15			Cervantite	$\text{Sb}^{3+}\text{Sb}^{5+}\text{O}_4$		Orth.	$\text{Pna}2_1$
4.4.16.1		X	Ilmenorutile	$(\text{Ti,Nb,Fe})_3\text{O}_6$		Tet.	?
4.4.16.2		X	Strüverite	$(\text{Ti,Ta,Fe})_3\text{O}_6$		Tet.	?
4.4.17		X	Lenoblite	$\text{V}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$		Orth.	$P2_12_12_1$
Type 5 AX_3							
4.5.1		X	Molybdate	MoO_3		Orth.	Pbnm
4.5.2			Tungstate	$\text{WO}_3 \cdot \text{H}_2\text{O}$		Orth.	?
4.5.3		X	Meymacite	$\text{WO}_3 \cdot 2\text{H}_2\text{O}$		Amor.	----
4.5.4		X	Alumotungstate	$(\text{W,Al})_{16}(\text{O,OH})_{48} \cdot \text{H}_2\text{O} (?)$		Trig.	?
Type 6 Miscellaneous							
4.6.1		X	Shcherbinaite	V_2O_5		Orth.	?
4.6.2		X	Navajoite	$\text{V}_2\text{O}_5 \cdot 3\text{H}_2\text{O}$		Mon.	?
4.6.3			Ilsemanite	$\text{Mo}_3\text{O}_8 \cdot n\text{H}_2\text{O}$?	?
4.6.4		X	Paramelaconite	$\text{Cu}_2^{2+}\text{Cu}_2^+\text{O}_3$		Tet.	$I4_1/amd$
4.6.5		X	Murdochite	$\text{PbCu}_6(\text{O,Cl,Br})_8$		Cubic	Fm3m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 5 OXIDES CONTAINING URANIUM OR THORIUM							
Type 1			$AXO_2 \cdot xH_2O$				
5.1.1.1			Uraninite	UO_2		Cubic	Fm3m
5.1.1.2			Thorianite	ThO_2		Cubic	Fm3m
Type 2			$AXO_3 \cdot xH_2O$				
5.2.1.1		X	Metaschoepite	$UO_3 \cdot nH_2O$ (n>2)		Orth.	Pbna
5.2.1.2		X	Paraschoepite	$UO_3 \cdot 2H_2O$?		Orth.	Pbca
5.2.1.3	X		Schoepite	$UO_3 \cdot 2H_2O$		Orth.	Pbca
5.2.2		X	Masuyite	$UO_3 \cdot 2H_2O$?		Orth.	Pban
Type 3			$AXO_4 \cdot xH_2O$				
5.3.1		X	Studdite	$UO_4 \cdot 4H_2O$		Mon.	C2, Cm, or C2/m
5.3.2			Vandenbrandeite	$CuUO_4 \cdot 2H_2O$		Tric.	P $\bar{1}$
Type 4			$AX_2O_7 \cdot xH_2O$				
5.4.1	X		Clarkeite	$(Na, Ca, Pb)_2U_2(O, OH)_7$?	?
5.4.2.1		X	Calciouranoite	$(Ca, Ba, Pb)U_2O_7 \cdot 5H_2O$		Amor.	----
5.4.2.2		X	Bauranoite	$BaU_2O_7 \cdot 4-5H_2O$?	?
5.4.3.1		X	Metacalcio- uranoite	$(Ca, Na, Ba)U_2O_7 \cdot 2H_2O$?	?
5.4.3.2		X	Wölsendorfite	$(Pb, Ca)U_2O_7 \cdot 2H_2O$		Orth.	?
Type 5			$AX_3O_{10} \cdot xH_2O$				
5.5.1		X	Agrinierite	$(K_2, Ca, Sr)U_3O_{10} \cdot 4H_2O$		Orth.	Cmmm
5.5.2		X	Rameauite	$K_2CaU_6O_{20} \cdot 9H_2O$		Mon.	C2/c or Cc
Type 6			$AX_6O_{17} \cdot xH_2O$				
5.6.1			Ianthinite	$U^{4+}U_5^{6+}O_{17} \cdot 10H_2O$		Orth.	?

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Type 7			$AX_6O_{19} \cdot xH_2O$				
5.7.1.1		X	Compreignacite	$K_2U_6O_{19} \cdot 11H_2O$		Orth.	Pnmm
5.7.1.2		X	Becquerelite	$CaU_6O_{19} \cdot 11H_2O$		Orth.	Pnmm or Pn2 ₁ a
5.7.1.3		X	Billietite	$BaU_6O_{19} \cdot 11H_2O$		Orth.	Pnmm or Pn2n
Type 8			$AX_7O_{22} \cdot xH_2O$				
5.8.1.1		X	Vandendriessche- ite	$PbU_7O_{22} \cdot 12H_2O$		Orth.	Pmma, P2 ₁ ma, or Pm2a ¹
5.8.1.2		X	Metavanden- driesscheite	$PbU_7O_{22} \cdot nH_2O$ (n<12)		?	?
Type 9			Miscellaneous				
5.9.1			Uranosphaerite	$Bi_2U_2O_9 \cdot 3H_2O$		Mon.	?
5.9.2			Fourmarierite	$PbU_4O_{13} \cdot 4H_2O$		Orth.	Bbmm or Bbm2
5.9.3		X	Curite	$Pb_6(UO_2)_{16}O_{16}(OH)_{12} \cdot 4H_2O$		Orth.	Pnam
5.9.4		X	Mourite	$U^{4+}Mo_5^{6+}O_{12}(OH)_{10}$		Mon.	?
5.9.5		X	Richetite	oxide of Pb and U		Mon.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 6 HYDROXIDES AND OXIDES CONTAINING HYDROXYL							
Type 1 XO(OH)							
6.1.1.1	X		Diaspore	AlO(OH)		Orth.	Pbnm
6.1.1.2	X		Goethite	FeO(OH)		Orth.	Pbnm
6.1.1.3		X	Groutite	MnO(OH)		Orth.	Pbnm
6.1.1.4		X	Montroseite	(V,Fe)O(OH)		Orth.	Pbnm
6.1.1.5		X	Bracewellite	CrO(OH)		Orth.	Pbnm
6.1.2.1			Boehmite	AlO(OH)		Orth.	Amam
6.1.2.2			Lepidocrocite	FeO(OH)		Orth.	Amam
6.1.2.3		X	Guyanaite	CrO(OH)		Orth.	Pnnm
6.1.3			Manganite	MnO(OH)		Mon.	B ₂ /d
6.1.4.1		X	Heterogenite-2H	CoO(OH)		Hex.	P6 ₃ /mmc
6.1.4.2		X	Feitnechtite	MnO(OH)		Hex.	?
6.1.4.3		X	Feroxyhyte	FeO(OH)		Hex.	?
6.1.5.1		X	Heterogenite-3R	CoO(OH)		Trig.	R $\bar{3}$ m
6.1.5.2		X	Grimaldiite	CrO(OH)		Trig.	R3m
6.1.6		X	Akaganeite	FeO(OH,Cl)		Tet.	I4/m
Type 2 X(OH) ₂							
6.2.1.1			Brucite	Mg(OH) ₂		Trig	P3m
6.2.1.2		X	Amakinite	Fe(OH) ₂		Trig.	R3m
6.2.1.3			Pyrochroite	Mn(OH) ₂		Trig.	P $\bar{3}$ m1
6.2.1.4			Portlandite	Ca(OH) ₂		Trig.	P $\bar{3}$ m1
6.2.1.5		X	<i>to be published</i>				
6.2.2		X	Behoite	Be(OH) ₂		Orth.	P2 ₁ 2 ₁ 2 ₁
6.2.3		X	<i>to be published</i>				
6.2.4		X	Calumetite	Cu(OH,Cl) ₂ ·2H ₂ O		Orth.	?
6.2.5		X	Anthonyite	Cu(OH,Cl) ₂ ·3H ₂ O		Mon.	2/m
6.2.6		X	Duttonite	(VO)(OH) ₂		Orth.	I2/c
6.2.7		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3			X(OH) ₃				
6.3.1			Gibbsite	Al(OH) ₃		Mon.	P2 ₁ /n
6.3.2	X		Bayerite	Al(OH) ₃		Mon.	P2 ₁ /a
6.3.3	X		Nordstrandite	Al(OH) ₃		Tric.	P $\bar{1}$
6.3.4	X		<i>to be published</i>				
6.3.5.1	X		Dzhalindite	In(OH) ₃		Cubic	Ia3
6.3.5.2	X		Söhngeite	Ga(OH) ₃		Cubic	Im3
6.3.6.1	X		Wickmanite	MnSn(OH) ₆		Cubic	Pn3m
6.3.6.2	X		Schoenfliesite	MgSn(OH) ₆		Cubic	Pn3
6.3.6.3	X		<i>to be published</i>				
6.3.6.4	X		<i>to be published</i>				
6.3.6.5	X		<i>to be published</i>				
6.3.7.1	X		Stottite	FeGe(OH) ₆		Tet.	P4 ₂ /n
6.3.7.2	X		Tetrawickmanite	MnSn(OH) ₆		Tet.	P4 ₂ /n
6.3.7.3	X		<i>to be published</i>				
6.3.8	X		Jamborite	(Ni ²⁺ , Ni ³⁺ , Fe)(OH) ₂ (OH, S, H ₂ O)		Hex.	?
Type 4			Miscellaneous				
6.4.1.1	X		Lithiophorite	(Al, Li)MnO ₂ (OH) ₂		Mon.	C2/m
6.4.1.2			Quenselite	PbMnO ₂ (OH) ₂		Mon.	P2/a
6.4.2	X		Hydroromarchite	Sn ₃ O ₂ (OH) ₂		Tet.	P4/mmc or P4nc
6.4.3	X		Häggite	(VO) ₂ (OH) ₃		Mon.	C2/m
6.4.4			Hydrocalumite	Ca ₂ Al(OH) ₇ ·3H ₂ O (?)		Mon.	P2 ₁
6.4.5	X		Iowaite	Mg ₄ Fe(OH) ₈ OCl _{1.2} ·4H ₂ O		Hex.	?
6.4.6	X		Roubaultite	Cu ₂ (UO ₂) ₃ (OH) ₁₀ ·5H ₂ O		Tric.	P1 or P $\bar{1}$
6.4.7	X		Meixnerite	Mg ₆ Al ₂ (OH) ₁₈ ·4H ₂ O		Trig.	R $\bar{3}$ m
6.4.8	X		Janggunite	Mn ₅ ⁴⁺ (Mn ²⁺ , Fe ³⁺) ₈ (OH) ₆		Orth.	?
6.4.9	X		Redledgeite	Mg ₄ Cr ₆ Ti ₂₃ Si ₂ O ₆₁ (OH) ₄ (?)		Tet.	I4 ₁ /a
6.4.10	X		<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 7 MULTIPLE OXIDES							
Type 1		ABX ₂					
7.1.1.1			Delafossite	CuFeO ₂		Trig.	R $\bar{3}$ m
7.1.1.2		X	Mcconnellite	CuCrO ₂		Trig.	R $\bar{3}$ m
7.1.2		X	Crednerite	CuMnO ₂		Mon.	A2/m
Type 2		AB ₂ X ₄					
7.2.1.1			Spinel	MgAl ₂ O ₄		Cubic	Fd3m
7.2.1.2			Galaxite	MnAl ₂ O ₄		Cubic	Fd3m
7.2.1.3			Hercynite	Fe ²⁺ Al ₂ O ₄		Cubic	Fd3m
7.2.1.4			Gahnite	ZnAl ₂ O ₄		Cubic	Fd3m
7.2.2.1			Magnesioferrite	MgFe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.2.2			Jacobsite	MnFe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.2.3			Magnetite	Fe ²⁺ Fe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.2.4			Franklinite	ZnFe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.2.5			Trevorite	NiFe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.2.6		X	Cuprospinel	CuFe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.2.7		X	Brunogeierite	Ge ²⁺ Fe ₂ ³⁺ O ₄		Cubic	Fd3m
7.2.3.1			Magnesiochromite	MgCr ₂ O ₄		Cubic	Fd3m
7.2.3.2		X	Manganochromite	(Mn, Fe ²⁺)(Cr, V) ₂ O ₄		Cubic	Fd3m
7.2.3.3			Chromite	Fe ²⁺ Cr ₂ O ₄		Cubic	Fd3m
7.2.3.4		X	Nichromite	(Ni, Co)(Cr, Fe ³⁺) ₂ O ₄		Cubic	Fd3m
7.2.3.5		X	Cochromite	(Co, Ni)(Cr, Al) ₂ O ₄		Cubic	Fd3m
7.2.4.1		X	<i>to be published</i>				
7.2.4.2			Coulsonite	Fe ²⁺ V ₂ O ₄		Cubic	Fd3m
7.2.5.1		X	<i>to be published</i>				
7.2.5.2		X	Ulvöspinel	Fe ₂ ²⁺ TiO ₄		Cubic	Fd3m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 2							
7.2.6.1		X	Donathite	$\text{Fe}^{2+}\text{Cr}_2\text{O}_4$		Tet.	$P4/nnm$
7.2.6.2		X	Iwakiite	$\text{Mn}^{2+}(\text{Fe}^{3+}, \text{Mn}^{3+})_2\text{O}_4$		Tet.	$P4_2/nnm$
7.2.7.1			Hausmannite	$\text{Mn}^{2+}\text{Mn}_2^{3+}\text{O}_4$		Tet.	$I4_1/amd$
7.2.7.2			Hetaerolite	$\text{ZnMn}_2^{3+}\text{O}_4$		Tet.	$I4_1/amd$
7.2.7.3			Hydrohetaerolite	$\text{Zn}_2\text{Mn}_4^{3+}\text{O}_8 \cdot \text{H}_2\text{O} ?$		Tet.	$I4_1/amd$
7.2.8			Minium	$\text{Pb}^{4+}\text{Pb}_2^{2+}\text{O}_4$		Tet.	$P4_2/mbc$
7.2.9			Chrysoberyl	BeAl_2O_4		Orth.	Pmab
7.2.10		X	Marokite	CaMn_2O_4		Orth.	Pmab
7.2.11		X	Taaffeite-4H	$\text{MgBeAl}_4\text{O}_8$		Hex.	$P6_322$
7.2.12.1		X	Taaffeite-9R	$\text{MgBeAl}_4\text{O}_8$		Trig.	$R32, R3m,$ or $R3m$
7.2.12.2		X	<i>to be published</i>				
7.2.13		X	<i>to be published</i>				
Type 3 AB_2X_5							
7.3.1.1			Pseudobrookite	$\text{Fe}_2^{3+}\text{TiO}_5$		Orth.	Bbmm
7.3.1.2		X	Kennedyite	$\text{MgFe}_2^{3+}\text{TiTi}_2\text{O}_{10}$		Orth.	Bbmm
7.3.1.3		X	Armalcolite	$(\text{Mg}, \text{Fe})^{2+}\text{Ti}_2\text{O}_5$		Orth.	Bbmm
7.3.2		X	<i>to be published</i>				
Type 4 AB_3X_7							
7.4.1.1		X	Todorokite	$(\text{Mn}^{2+}, \text{Ca}, \text{Mg})\text{Mn}_3^{4+}\text{O}_7 \cdot \text{H}_2\text{O}$		Mon.	?
7.4.1.2		X	Woodruffite	$(\text{Zn}, \text{Mn})\text{Mn}_3^{4+}\text{O}_7 \cdot 1-2\text{H}_2\text{O}$		Mon.	?
7.4.2.1		X	Chalcophanite	$(\text{Zn}, \text{Fe})^{2+}\text{Mn}_3^{4+}\text{O}_7 \cdot 3\text{H}_2\text{O}$		Tric.	$P\bar{1}$
7.4.2.2		X	Aurorite	$(\text{Mn}, \text{Ag}, \text{Ca})\text{Mn}_3^{4+}\text{O}_7 \cdot 3\text{H}_2\text{O}$		Tric.	$P\bar{1}$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 5			AB_8X_{16}				
7.5.1.1			Hollandite	$Ba(Mn^{4+}, Mn^{2+})_8O_{16}$		Mon., ps-Tet.	I4/m
7.5.1.2		X	Cryptomelane	$K(Mn^{4+}, Mn^{2+})_8O_{16}$		Mon., ps-Tet.	I4/m
7.5.1.3		X	Manjiroite	$(Na, K)Mn_8O_{16} \cdot nH_2O$		Tet.	?
7.5.1.4			Coronadite	$Pb(Mn^{4+}, Mn^{2+})_8O_{16}$		Tet.	I4/m
7.5.2		X	Romanechite	$BaMn^{2+}Mn_8^{4+}O_{16}(OH)_4$		Orth.	?
7.5.3		X	Freudenbergite	$Na_2(Ti, Fe)_8O_{16}$		Mon.	C2/m
7.5.4		X	Priderite	$(K, Ba)(Ti, Fe)_8O_{16}$		Tet.	I4/m
Type 6			AB_4X_9				
7.6.1.1		X	Rancieite	$(Ca, Mn)Mn_4^{4+}O_9 \cdot 3H_2O$		Hex.	?
7.6.1.2		X	Takanelite	$(Mn, Ca)Mn_4^{4+}O_9 \cdot H_2O$		Hex.	?
7.6.2		X	Karibibite	$Fe_2^{3+}As_4^{3+}(O, OH)_9$		Orth.	?
Type 7			Miscellaneous				
7.7.1		X	Muskoxite	$Mg_7Fe_4^{3+}O_{13} \cdot 10H_2O$		Trig?	?
7.7.2		X	Brownmillerite	$Ca_2(Al, Fe)_2O_5$		Orth.	Ibm2
7.7.3		X	Mayenite	$Ca_{12}Al_{14}O_{33}$		Cubic	$I\bar{4}3d$
7.7.4		X	Schneiderhöhnite	$Fe_8^{2+}As_{10}^{3+}O_{23}$		Tric.	P1 or P $\bar{1}$
7.7.5		X	Hematophanite	$Pb_4Fe_3O_8(OH, Cl)$		Tet.	P4mm
7.7.6		X	Aerugite	$Ni_9As_3^{5+}O_{16}$		Mon.	C2/m, C2, or Cm
7.7.7		X	Cesarolite	$H_2PbMn_3O_8$?	?
7.7.8		X	<i>to be published</i>				
7.7.9		X	Kamiokite	$Fe_2^{2+}Mo_3^{4+}O_8$		Hex.	P6 $_3$ mc
7.7.10			Plumboferrite	$PbFe_4O_7$		Cubic	P312
7.7.11		X	Otjismeite	$Pb^{2+}Ge_4^{4+}O_9$		Tric.	P1 or P $\bar{1}$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 7							
7.7.12		X	Hibonite	$(Ca,Ce)Al_{12}O_{19}$		Hex.	$P6_3/mmc$
7.7.13		X	Magnetoplumbite	$Pb(Fe^{3+},Mn^{3+})_{12}O_{19}$		Hex.	$P6_3/mmc$
7.7.14		X	Högbomite	$(Mg,Fe^{2+})_2(Al,Ti)_5O_{10}$		Trig.	$R\bar{3}m$
7.7.15.1		X	Braunite	$Mn^{2+}Mn_6^{3+}SiO_{12}$		Tet.	$I4_1/acd$
7.7.15.2		X	<i>to be published</i>				
7.7.16		X	Welinite	$Mn^{4+}Mn_3^{2+}SiO_7$		Hex.	$P6_3$
7.7.17		X	Painite	$CaZrB[Al_9O_{18}]$		Hex.	$P6_3$
7.7.18		X	Nigerite	$ZnSn_2(Al,Fe^{3+})_{12}O_{22}(OH)_2$		Trig.	$P\bar{3}m$ or $P3m1$
7.7.19		X	Birnessite	$Na_4Mn_{14}O_{27} \cdot 9H_2O$		Orth.	?
7.7.20		X	Rilandite	$(Cr,Al)_6SiO_{11} \cdot 5H_2O$ (?)		?	?
7.7.21		X	Kleberite	$FeTi_6O_{13} \cdot 4H_2O$ (?)		Hex.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 8 MULTIPLE OXIDES CONTAINING NIOBIUM, TANTALUM OR TITANIUM							
Type 1 ABO_4							
8.1.1.1			Fergusonite	$YNbO_4$		Tet.	$I4_1/a$
8.1.1.2			Formanite	$YTaO_4$		Tet.	$I4_1/a$
8.1.2.1	X		β -Fergusonite	$YNbO_4$		Mon.	I2
8.1.2.2	X		β -Fergusonite-(Ce)	$(Ce,La)NbO_4$		Mon.	I2
8.1.3.1			Yttrotantalite	$(Y,U,Fe)(Ta,Nb)O_4$		Orth.	?
8.1.3.2	X		Yttrocolumbite	$(Y,U,Fe)(Nb,Ta)O_4$		Orth.	?
8.1.4.1			Polymignite	$(Ca,Fe)(Nb,Ti,Ta)O_4$		Orth.	?
8.1.4.2			Ishikawaite	$(U,Fe,Y,Ca)(Nb,Ta)O_4$		Orth.	?
8.1.5			Loranskite	$(Y,Ce,Ca)TaO_4?$		Orth?	?
8.1.6.1			Stibiocolumbite	$SbNbO_4$		Orth.	$Pc2_1n$
8.1.6.2			Stibiotantalite	$SbTaO_4$		Orth.	$Pc2_1n$
8.1.6.3			Bismutotantalite	$Bi(Ta,Nb)O_4$		Orth.	$Pcmn$ or $Pcn2_1$
8.1.7	X		<i>to be published</i>				
8.1.8	X		Wodginite	$MnTa(Ta,Nb,Sn,Fe)_2O_8$		Mon.	Cc
8.1.9.1	X		Liandratite	$U^{6+}(Nb,Ta)_2O_8$		Trig.	$P\bar{3}1m$
8.1.9.2	X		Petscheckite	$U^{4+}Fe^{2+}(Nb,Ta)_2O_8$		Trig.	$P\bar{3}1m$
8.1.10	X		Staringite	$Fe_{0.5}Sn_{4.5}TaO_{12}$		Tet.	$P4/mnm$
8.1.11.1	X		Ixiolite	$(Ta,Nb,Sn,Fe,Mn)_4O_8$		Orth.	Pbcn
8.1.11.2	X		Ashanite	$(Nb,Ta,U,Fe,Mn)_4O_8$		Orth.	Pbcn
Type 2 $A_2B_2O_6(O,OH,F)$							
8.2.1.1			Pyrochlore	$(Na,Ca)_2Nb_2O_6(OH,F)$		Cubic	Fd3m
8.2.1.2	X		Kalipyrochlore	$(K,Sr)_{2-x}Nb_2O_6(O,OH).nH_2O$		Cubic	Fd3m
8.2.1.3	X		Bariopyrochlore	$(Ba,Sr)_2(Nb,Ti)_2(O,OH)_7$		Cubic	Fd3m
8.2.1.4	X		Yttropyrochlore	$(Y,Na,Ca,U)_{1-2}(Nb,Ta)_2(O,OH)_7$		Cubic	Fd3m
8.2.1.5	X		Ceripyrochlore	$(Ce,Ca,Y)_2(Nb,Ta)_2O_6(OH,F)$		Cubic	Fd3m
8.2.1.6	X		Plumbopyrochlore	$(Pb,Ca)_2(Nb,Ta)_2O_6(OH)$		Cubic	Fd3m
8.2.1.7	X		Uranpyrochlore	$(U,Ca,Ce)_2(Nb,Ta)_2O_6(OH)$		Cubic	Fd3m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 2							
8.2.2.1			Microlite	$(\text{Na,Ca})_2\text{Ta}_2\text{O}_6(\text{O,OH,F})$		Cubic	Fd3m
8.2.2.2		X	Bariomicrolite	$(\text{Ba,Sr})_2(\text{Ta,Nb})_2(\text{O,OH})_7$		Cubic	Fd3m
8.2.2.3		X	Yttromicrolite	$(\text{Y,Ca})_2(\text{Ta,Nb})_2\text{O}_6(\text{OH})$		Cubic	Fd3m
8.2.2.4		X	Plumbomicrolite	$(\text{Pb,Ca})_2(\text{Ta,Nb})_2\text{O}_6(\text{O,OH,F})$		Cubic	Fd3m
8.2.2.5		X	Uranmicrolite	$(\text{U,Ca})_2(\text{Ta,Nb})_2\text{O}_6(\text{OH})$		Cubic	Fd3m
8.2.2.6		X	Bismutomicrolite	$(\text{Bi,Ca})(\text{Ta,Nb})_2\text{O}_6(\text{OH})$		Cubic	Fd3m
8.2.2.7		X	Stannomicrolite	$\text{Sn}_2\text{Ta}_2\text{O}_7$		Cubic	Fd3m
8.2.3.1			Betafite	$(\text{Ca,Na,U})_2(\text{Ti,Nb})_2\text{O}_6(\text{OH})$		Cubic	Fd3m
8.2.3.2		X	Yttrobetafite	$(\text{Y,Ce})_2(\text{Ti,Nb})_2\text{O}_6(\text{OH,F})$		Cubic	Fd3m
8.2.3.3		X	Plumbobetafite	$(\text{Pb,U,Ca})\text{Ta}_2\text{O}_6(\text{OH,F})$		Cubic	Fd3m
8.2.3.4		X	Stibiobetafite	$(\text{Ca,Sb})_2(\text{Ti,Nb})_2(\text{O,OH})_7$		Cubic	Fd3m
8.2.4		X	<i>to be published</i>				
8.2.5		X	Zirkelite	$(\text{Ca,Th,Ce})\text{Zr}(\text{Ti,Nb})_2\text{O}_7$		Mon., ps-Cubic	?
8.2.6		X	Scheteligite	$(\text{Ca,Y,Sb})_2(\text{Ti,Ta,Nb})_2\text{O}_6(\text{OH})$		Orth?	?
8.2.7		X	Orthobrannerite	$\text{U}^{6+}\text{U}^{4+}\text{Ti}_4\text{O}_{12}(\text{OH})_2$		Orth.	P2 ₁ 22 ?
Type 3 AB_2O_6							
8.3.1			Tapiolite	$\text{Fe}(\text{Ta,Nb})_2\text{O}_6$		Tet.	P4 ₂ /mnm
8.3.2.1		X	Ferrotantalite	FeTa_2O_6		Orth.	Pcan
8.3.2.2		X	Ferrocolumbite	FeNb_2O_6		Orth.	Pcan
8.3.2.3		X	Manganotantalite	MnTa_2O_6		Orth.	Pcan
8.3.2.4		X	Manganocolumbite	MnNb_2O_6		Orth.	Pcan
8.3.2.5		X	Magnocolumbite	$(\text{Mg,Fe,Mn})(\text{Nb,Ta})_2\text{O}_6$		Orth.	Pnca
8.3.3		X	Fersmite	$(\text{Ca,Ce,Na})(\text{Nb,Ti})_2(\text{O,OH,F})_6$		Orth.	Pcan
8.3.4.1		X	Brannerite	$(\text{U,Ca,Ce})(\text{Ti,Fe})_2\text{O}_6$		Mon.	I2/m
8.3.4.2		X	Thorutite	$(\text{Th,U,Ca})\text{Ti}_2(\text{O,OH})_6$		Mon.	C2/m
8.3.5			Samarskite	$(\text{Y,Ce,U,Ca})(\text{Nb,Ta,Ti})_2\text{O}_6$		Mon.	P2/c
8.3.6.1			Aeschnite-(Ce)	$(\text{Ce,Ca,Fe})(\text{Ti,Nb})_2(\text{O,OH})_6$		Orth.	Pmnb
8.3.6.2		X	Niobo-aeschnite -(Ce)	$(\text{Ce,Ca,Th})(\text{Nb,Ti})_2(\text{O,OH})_6$		Orth.	Pmab?
8.3.6.3		X	Aeschnite-(Y)	$(\text{Y,Ca,Fe})(\text{Ti,Nb})_2(\text{O,OH})_6$		Orth.	Pmnb
8.3.6.4		X	Tantaloeschnite -(Y)	$(\text{Y,Ce,Ca})(\text{Ta,Ti})_2\text{O}_6$		Orth.	Pmnb?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3							
8.3.7.1		X	Vigezzite	$(Ca,Ce)(Nb,Ta,Ti)_2O_6$		Orth.	Pmnb
8.3.7.2		X	Rynersonite	$Ca(Ta,Nb)_2O_6$		Orth.	Pmnb
8.3.8.1			Polycrase	$(Y,Ca,Ce)(Ti,Nb,Ta)_2O_6$		Orth.	Pcan?
8.3.8.2			Euxenite	$(Y,Ca,Ce)(Nb,Ta,Ti)_2O_6$		Orth.	Pcan
8.3.8.3		X	Tanteuxenite	$(Y,Ca,Ce)(Ta,Nb,Ti)_2(O,OH)_6$		Orth.	Pcan?
8.3.8.4	X		Yttrocrasite	$(Y,Th,U)Ti_2(O,OH)_6$		Orth.	?
8.3.9		X	Kassite	$CaTi_2O_4(OH)_2$		Orth.	?
8.3.10	X		Thoreaulite	$SnTa_2O_6$		Mon.	C2/c or Cc
8.3.11		X	Changbaiite	$PbNb_2O_6$		Trig.	?
8.3.12		X	Kobeite	$(Y,U)(Ti,Nb)_2(O,OH)_6$ (?)		Amor.	----
Type 4 Miscellaneous							
8.4.1		X	Murataite	$(Na,Y)_4(Zn,Fe)_3(Ti,Nb)_6^{--}O_{18}(F,OH)_4$		Cubic	F432, Fm3m, or Fm3
8.4.2.1		X	Landauite	$Na[MnZn_2(Ti,Fe^{3+})_6Ti_{12}]O_{38}$		Trig.	R $\bar{3}$
8.4.2.2		X	Lovingite	$(Ca,Ce)(Ti,Fe^{3+},Cr)_{21}O_{38}$		Trig.	R $\bar{3}$
8.4.2.3		X	Crichtonite	$(Sr,La,Ce)(Ti,Fe,Mn)_{21}O_{38}$		Trig.	R $\bar{3}$
8.4.2.4	X		Senaite	$Pb(Ti,Fe,Mn,Mg)_{21}O_{38}$		Trig.	R $\bar{3}$
8.4.2.5		X	Davidite	$(La,Ce)(Ti,Fe)_{21}O_{38}$		Trig.	R $\bar{3}$
8.4.3			Uhligite	$Ca_3(Ti,Al,Zr)_9O_{20}$ (?)	X	?	?
8.4.4		X	Cafetite	$Ca(Fe,Al)_2Ti_4O_{12} \cdot 4H_2O$		Orth.	?
8.4.5.1		X	Schreyerite	$V_2^{3+}Ti_3O_9$		Mon.	?
8.4.5.2		X	<i>to be published</i>				
8.4.6		X	Pseudorutile	$Fe_2^{3+}Ti_3O_9$		Hex.	P6 $\bar{3}$ 22
8.4.7		X	Calzirtite	$CaZr_3TiO_9$		Tet.	I4 $\bar{1}$ /acd
8.4.8		X	Simpsonite	$Al_4(Ta,Nb)_3O_{13}(F,OH)$		Tric.	P1 or P $\bar{1}$
8.4.9		X	Rankamaite	$(Na,K,Pb)_3(Ta,Nb)_{11}(O,OH)_{30}$		Orth.	C222, Cmm2, Cm2m or Cmmm
8.4.10		X	<i>to be published</i>				
8.4.11.1		X	Belyankinite	$Ca_{1-2}(Ti,Zr,Nb)_5O_{12} \cdot 9H_2O$		Amor.	----
8.4.11.2		X	Mangan- belyankinite	$(Mn,Ca)(Ti,Nb)_5O_{12} \cdot 9H_2O$		Amor.	----
8.4.11.3		X	Gerasimovskite	$(Mn,Ca)(Nb,Ta)_5O_{12} \cdot 9H_2O$		Amor.	----
8.4.12		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 9 NORMAL HALIDES							
Type 1			AX				
9.1.1.1			Halite	NaCl		Cubic	Fm3m
9.1.1.2			Sylvite	KCl		Cubic	Fm3m
9.1.1.3			Villiaumite	NaF		Cubic	Fm3m
9.1.1.4	X		Carobbiite	KF		Cubic	Fm3m
9.1.2	X		Hydrohalite	NaCl·2H ₂ O		Mon.	P2 ₁ /a
9.1.3			Salammoniac	(NH ₄)Cl		Cubic	Pm3m
9.1.4.1			Chlorargyrite	AgCl		Cubic	Fm3m
9.1.4.2			Bromargyrite	AgBr		Cubic	Fm3m
9.1.5			Iodargyrite	AgI		Hex.	P6 ₃ mc
9.1.6	X		Tocornalite	silver mercury iodide		?	?
9.1.7.1			Nantokite	CuCl		Cubic	F43m
9.1.7.2			Miersite	(Ag,Cu)I		Cubic	F43m
9.1.7.3			Marshite	CuI		Cubic	F43m
9.1.8			Calomel	Hg ₂ Cl ₂		Tet.	I4/mmm
Type 2			AX ₂				
9.2.1.1			Fluorite	CaF ₂		Cubic	Fm3m
9.2.1.2	X		Frankdicksonite	BaF ₂		Cubic	Fm3m
9.2.1.3	X		Tveitite	Ca _{1-x} ^Y X ^Y F _{2+2x} (x=0.3)		Trig., ps-Cubic	R3̄ or R3
9.2.2			Sellaite	MgF ₂		Tet.	P4 ₂ /mnm
9.2.3.1			Lawrencite	FeCl ₂		Trig.	R3̄m
9.2.3.2			Scacchite	MnCl ₂		Trig.	R3̄m
9.2.4	X		Rokühnite	FeCl ₂ ·2H ₂ O		Mon.	C2/m
9.2.5	X		Sinjarite	CaCl ₂ ·2H ₂ O		Tet.	?
9.2.6	X		Antarcticite	CaCl ₂ ·6H ₂ O		Trig.	P321
9.2.7			Cotunnite	PbCl ₂		Orth.	Pmnb
9.2.8			Eriochalcite	CuCl ₂ ·2H ₂ O		Orth.	Pbmn
9.2.9.1			Bischofite	MgCl ₂ ·6H ₂ O		Mon.	C2/m
9.2.9.2	X		Nickel-bischofite	NiCl ₂ ·6H ₂ O		Mon.	C2/m
9.2.9.3	X		Albrittonite	CoCl ₂ ·6H ₂ O		Mon.	C2/m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3			AX_3				
9.3.1			Molysite	$FeCl_3$		Trig.	$R\bar{3}$
9.3.2		X	Hydromolysite	$FeCl_3 \cdot 6H_2O$?	?
9.3.3			Chloraluminite	$AlCl_3 \cdot 6H_2O$		Trig.	$R\bar{3}c$
9.3.4.1			Fluocerite-(Ce)	$(Ce,La)F_3$		Hex.	$P\bar{3}c$
9.3.4.2		X	Fluocerite-(La)	$(La,Ce)F_3$		Hex.	$P\bar{3}c$
CLASS 10 OXYHALIDES AND HYDROXYHALIDES							
Type 1			$A_2(O,OH)_3X_q$				
10.1.1			Atacamite	$Cu_2(OH)_3Cl$		Orth.	Pmcn
10.1.2			Paratacamite	$Cu_2(OH)_3Cl$		Trig.	$R\bar{3}$
10.1.3			Botallackite	$Cu_2(OH)_3Cl$		Mon.	$P2_1/m$
10.1.4			Kempite	$Mn_2(OH)_3Cl$		Orth.	Pnam
10.1.5		X	<i>to be published</i>				
Type 2			$A(O,OH)X_q$				
10.2.1.1		X	Zavaritskite	BiOF		Tet.	$P4/nmm$
10.2.1.2			Bismoclite	BiOCl		Tet.	$P4/nmm$
10.2.1.3			Daubreeite	$BiO(OH,Cl)$		Tet.	$P4/nmm$
10.2.1.4			Matlockite	PbFCl		Tet.	$P4/nmm$
10.2.2			Laurionite	$Pb(OH)Cl$		Orth.	Pcmn
10.2.3			Paralaurionite	$Pb(OH)Cl$		Mon.	$C2/m$
10.2.4		X	Blixite	$Pb_2(O,OH)_2Cl$		Orth.	?
10.2.5.1		X	Perite	$PbBiO_2Cl$		Orth.	Bmmb
10.2.5.2			Nadorite	$PbSbO_2Cl$		Orth.	Cmcm
Type 3			$A_3(O,OH)_2X_q$				
10.3.1			Mendipite	$Pb_3O_2Cl_2$		Orth.	$P2_12_12_1$
10.3.2			Fiedlerite	$Pb_3(OH)_2Cl_4$		Mon.	$P2_1/a$
10.3.3		X	Corderoite	$Hg_3S_2Cl_2$		Cubic	$I2_13$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4			$A_2(O,OH)X_q$				
10.4.1			Penfieldite	$Pb_2(OH)Cl_3$		Hex.	P6/m
10.4.2			Terlinguaite	Hg_2OCl		Mon.	C2/c
10.4.3			Kleinite	$Hg_2N(Cl,SO_4) \cdot nH_2O$		Hex.	$C6_3/mmc$
Type 5			$A_m(O,OH)_pX_q$				
10.5.1			Cadwaladerite	$Al(OH)_2Cl \cdot 4H_2O$		Amor.	----
10.5.2		X	<i>to be published</i>				
10.5.3		X	Pinchite	$Hg_5O_4Cl_2$		Orth.	Ibam
10.5.4		X	Eglestonite	$(Hg_2)_3Cl_3O_2H$		Cubic	Ia3d
10.5.5		X	<i>to be published</i>				
10.5.6		X	Claringbullite	$Cu_4(OH)_7Cl \cdot 0.5H_2O$		Hex.	?
10.5.7		X	Onoratoite	$Sb_8^{3+}O_{11}Cl_2$		Tric.	$P\bar{1}$
Type 6			$A_mB_n(O,OH)_pX_q$				
10.6.1			Diaboleite	$Pb_2CuCl_2(OH)_4$		Tet.	P4mm
10.6.2		X	Koenenite	$Na_4Mg_9Al_4(OH)_{22}Cl_{12}$		Trig.	$R\bar{3}m$
10.6.3		X	Yedlinite	$Pb_6CrCl_6(O,OH)_8$		Trig.	$R\bar{3}$
10.6.4			Chloroxiphite	$Pb_3CuO_2(OH)_2Cl_2$		Mon.	$P2_1/m$
10.6.5		X	Zirklerite	$(Fe,Mg)_9Al_4(OH)_{22}Cl_2 \cdot 14H_2O$		Trig.	?
10.6.6		X	Boleite	$Pb_{26}Ag_9Cu_{24}Cl_{62}(OH)_{48}$		Cubic	Pm3m
10.6.7		X	Cumengite	$Pb_{19}Cu_{24}Cl_{42}(OH)_{44}$		Tet.	I4/mmm
10.6.8		X	Pseudoboleite	$Pb_5Cu_4Cl_{10}(OH)_8 \cdot 2H_2O$		Tet.	I4/mmm
10.6.9		X	Bideauxite	$Pb_2AgCl_3(F,OH)_2$		Cubic	Fd3m
10.6.10		X	Chlormanasseite	$(Mg,Fe)_5Al_3(OH)_{16}(Cl,OH)_3 \cdot 3H_2O$		Hex.	?
10.6.11		X	Kuznetsovite	$Hg_6As_2Cl_2O_9$		Cubic	Pm3m, P432, or P43m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 11 HALIDE COMPLEXES							
Type 1		$A_m BX_3$					
11.1.1		X	Neighborite	$NaMgF_3$		Orth.	Pcmm
11.1.2			Carnallite	$KMgCl_3 \cdot 6H_2O$		Orth.	Pbnn
Type 2		$A_m BX_4$					
11.2.1			Pseudocotunnite	K_2PbCl_4		Orth.	?
11.2.2			Avogadrite	$(K,Cs)BF_4$		Orth.	Pnma
11.2.3			Ferruccite	$NaBF_4$		Orth.	Cmcm
Type 3		$A_m BX_4 \cdot xH_2O$					
11.3.1			Douglasite	$K_2Fe^{2+}Cl_4 \cdot 2H_2O$		Mon.	?
11.3.2			Mitscherlichite	$K_2CuCl_4 \cdot 2H_2O$		Tet.	$P4_2/mnm$
Type 4		$A_m BX_5 \cdot xH_2O$					
11.4.1.1			Erythrosiderite	$K_2Fe^{3+}Cl_5 \cdot H_2O$		Orth.	Pnma
11.4.1.2			Kremersite	$(NH_4,K)_2Fe^{3+}Cl_5 \cdot H_2O$		Orth.	Pnma
Type 5		$A_m BX_6$					
11.5.1.1			Hieratite	K_2SiF_6		Cubic	Fm3m
11.5.1.2			Cryptohalite	$(NH_4)_2SiF_6$		Cubic	Fm3m
11.5.2.1			Malladrite	Na_2SiF_6		Trig.	P321
11.5.2.2			Bararite	$(NH_4)_2SiF_6$		Trig.	$R\bar{3}m$
11.5.3			Rinneite	$K_3NaFe^{2+}Cl_6$		Trig.	$R\bar{3}c$
11.5.4			Chlormanganokalite	K_2MnCl_6		Trig.	$R\bar{3}c$
11.5.5			Tachyhydrite	$Mg_2CaCl_6 \cdot 12H_2O$		Trig.	$R\bar{3}$
11.5.6		X	Gagarinite	$NaCaY(F,Cl)_6$		Hex.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 6		Alumino-fluorides					
11.6.1			Cryolite	Na_3AlF_6		Mon.	$P2_1/n$
11.6.2			Elpasolite	K_2NaAlF_6		Cubic	Pa3
11.6.3		X	Colquiriite	CaLiAlF_6		Trig.	$P\bar{3}1c$
11.6.4			Cryolithionite	$\text{Li}_3\text{Na}_3\text{Al}_2\text{F}_{12}$		Cubic	Ia3d
11.6.5			Pachnolite	$\text{NaCaAlF}_6 \cdot \text{H}_2\text{O}$		Mon.	C2/c or Cc
11.6.6			Thomsenolite	$\text{NaCaAlF}_6 \cdot \text{H}_2\text{O}$		Mon.	$P2_1/c$
11.6.7			Carlhintzeite	$\text{Ca}_2\text{AlF}_7 \cdot \text{H}_2\text{O}$		Tric., ps-Mon.	$C\bar{1}$ or C1
11.6.8			Gearsutite	$\text{CaAl(OH)F}_4 \cdot \text{H}_2\text{O}$		Mon.	?
11.6.9			Prosopite	$\text{CaAl}_2(\text{F,OH})_8$		Mon.	C2/c
11.6.10.1			Jarlite	$\text{NaSr}_3\text{Al}_3(\text{F,OH})_{16}$		Mon.	C2/m, C2, or Cm
11.6.10.2		X	Calcjarlite	$\text{NaCa}_3\text{Al}_3(\text{F,OH})_{16}$		Mon.	?
11.6.11			Chiolite	$\text{Na}_5\text{Al}_3\text{F}_{14}$		Tet.	$P4/mmc$
11.6.12		X	Ralstonite	$\text{Na}_x\text{Mg}_x\text{Al}_{2-2x}(\text{F,OH})_6 \cdot \text{H}_2\text{O}$		Cubic	Fd3m
11.6.13			Weberite	$\text{Na}_2\text{MgAlF}_7$		Orth.	?
11.6.14		X	Usovite	$\text{Ba}_2\text{CaMgAl}_2\text{F}_{12}$		Orth.	?
11.6.15		X	Yaroslavite	$\text{Ca}_3\text{Al}_2(\text{OH})_2\text{F}_{10} \cdot \text{H}_2\text{O}$		Orth.	?
11.6.16		X	Tikhonenkovite	$\text{SrAl(OH)F}_4 \cdot \text{H}_2\text{O}$		Mon.	?
CLASS 12		COMPOUND HALIDES					
Type 1		Miscellaneous					
			NONE				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 13 ACID CARBONATES							
Type 1			Miscellaneous				
13.1.1			Nahcolite	NaHCO_3		Mon.	$P2_1/n$
13.1.2			Kalicinite	KHCO_3		Mon.	$P2_1/a$
13.1.3			Teschemacherite	$(\text{NH}_4)\text{HCO}_3$		Orth.	$Pnaa$
13.1.4			Trona	$\text{Na}_3(\text{CO}_3)(\text{HCO}_3) \cdot 2\text{H}_2\text{O}$		Mon.	$I2/a$
13.1.5		X	Nesquehonite	$\text{Mg}(\text{HCO}_3)(\text{OH}) \cdot 2\text{H}_2\text{O}$		Mon.	$P2_1/n$
13.1.6		X	Wegscheiderite	$\text{Na}_5(\text{CO}_3)(\text{HCO}_3)_3$		Tric.	$P\bar{1}$
13.1.7		X	Sergeevite	$\text{Ca}_2\text{Mg}_{11}(\text{CO}_3)_9(\text{HCO}_3)_4(\text{OH})_4 \cdot 6\text{H}_2\text{O}$		Trig.	?
CLASS 14 ANHYDROUS NORMAL CARBONATES							
Type 1			$A(\text{XO}_3)$				
14.1.1.1			Calcite	CaCO_3		Trig.	$R\bar{3}c$
14.1.1.2			Magnesite	MgCO_3		Trig.	$R\bar{3}c$
14.1.1.3			Siderite	FeCO_3		Trig.	$R\bar{3}c$
14.1.1.4			Rhodochrosite	MnCO_3		Trig.	$R\bar{3}c$
14.1.1.5			Sphaerocobaltite	CoCO_3		Trig.	$R\bar{3}c$
14.1.1.6			Smithsonite	ZnCO_3		Trig.	$R\bar{3}c$
14.1.1.7			Otavite	CdCO_3		Trig.	$R\bar{3}c$
14.1.1.8		X	Gaspeite	$(\text{Ni},\text{Mg})\text{CO}_3$		Trig.	$R\bar{3}c$
14.1.2			Vaterite	CaCO_3		Hex.	$P6_3/mmc$
14.1.3.1			Aragonite	CaCO_3		Orth.	$Pm\bar{c}n$
14.1.3.2			Witherite	BaCO_3		Orth.	$Pm\bar{c}n$
14.1.3.3			Strontianite	SrCO_3		Orth.	$Pnma$
14.1.3.4			Cerussite	PbCO_3		Orth.	$Pm\bar{c}n$
14.1.4			Rutherfordine	$(\text{UO}_2)\text{CO}_3$		Orth.	$Pm\bar{m}n$
14.1.5		X	Widenmannite	$\text{Pb}_2(\text{UO}_2)(\text{CO}_3)_3$		Orth.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 2			AB(XO ₃) ₃				
14.2.1.1			Dolomite	CaMg(CO ₃) ₂		Trig.	R $\bar{3}$
14.2.1.2			Ankerite	CaFe(CO ₃) ₂		Trig.	R $\bar{3}$
14.2.1.3			Kutnohorite	CaMn(CO ₃) ₂		Trig.	R $\bar{3}$
14.2.1.4	X		<i>to be published</i>				
14.2.2.1	X		Norsethite	BaMg(CO ₃) ₂		Trig.	R32
14.2.2.2	X		Paralstonite	BaCa(CO ₃) ₂		Trig.	P321
14.2.3	X		Benstonite	Ba ₆ Ca ₆ Mg(CO ₃) ₁₃		Trig.	R $\bar{3}$
14.2.4	X		Ewaldite	BaCe(CO ₃) ₂		Hex.	P6 ₃ mc
14.2.5			Alstonite	BaCa(CO ₃) ₂		Tric., ps-Orth?	?
14.2.6			Barytocalcite	BaCa(CO ₃) ₂		Mon.	P2 ₁ /m
Type 3			A ₂ B(XO ₃) ₂				
14.3.1	X		Buetschliite	K ₂ Ca(CO ₃) ₂		Trig.	R $\bar{3}$
14.3.2	X		Eitelite	Na ₂ Mg(CO ₃) ₂		Trig.	R $\bar{3}$
14.3.3			Fairchildite	K ₂ Ca(CO ₃) ₂		Hex.	P6/mmc
14.3.4	X		Nyerereite	Na ₂ Ca(CO ₃) ₂		Orth., ps-Hex.	Cmc2 ₁
14.3.5	X		Natro- fairchildite	Na ₂ Ca(CO ₃) ₂	X	?	?
Type 4			Miscellaneous				
14.4.1			Shortite	Na ₂ Ca ₂ (CO ₃) ₃		Orth.	C2mm
14.4.2	X		Sahamalite	(Mg, Fe ²⁺)Ce ₂ (CO ₃) ₄		Mon.	P2 ₁ /a
14.4.3	X		Huntite	Mg ₃ Ca(CO ₃) ₄		Trig.	R32
14.4.4.1	X		Burbankite	(Na, Ca) ₃ (Sr, Ba, Ca) ₃ (CO ₃) ₅		Hex.	P6 ₃ /mmc
14.4.4.2	X		Carbocernaite	(Na, Ca) ₃ (Ca, Sr, Ba) ₃ (CO ₃) ₅		Orth.	Pb2m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	SSD	CRYSTAL SYSTEM	SPACE GROUP
CLASS 15 HYDRATED NORMAL CARBONATES							
Type 1		$A(XO_3) \cdot xH_2O$					
15.1.1			Thermonatrite	$Na_2CO_3 \cdot H_2O$		Orth.	$P2_1ab$
15.1.2			Natron	$Na_2CO_3 \cdot 10H_2O$		Mon.	$I2/a$
15.1.3	X		Monohydrocalcite	$CaCO_3 \cdot H_2O$		Hex.	$P3_112$
15.1.4	X		Ikaite	$CaCO_3 \cdot 6H_2O$		Mon.	$C2/c$ or Cc
15.1.5	X		Barringtonite	$MgCO_3 \cdot 2H_2O$		Tric.	$P1$ or $P\bar{1}$
15.1.6			Lansfordite	$MgCO_3 \cdot 5H_2O$		Mon.	$P2_1/m$
15.1.7	X		Hellyerite	$NiCO_3 \cdot 6H_2O$?	?
15.1.8.1	X		Sharpite	$(UO_2)CO_3 \cdot H_2O$		Orth.	?
15.1.8.2	X		Joliotite	$(UO_2)CO_3 \cdot nH_2O \quad (n \sim 2)$		Orth.	?
Type 2		$A_m B_n (XO_3)_p \cdot xH_2O$, where $(m+n):p > 1:1$					
15.2.1			Pirssonite	$Na_2Ca(CO_3)_2 \cdot 2H_2O$		Orth.	$Fdd2$
15.2.2			Gaylussite	$Na_2Ca(CO_3)_2 \cdot 5H_2O$		Mon.	$C2/c$ or Cc
15.2.3	X		Chalconatronite	$Na_2Cu(CO_3)_2 \cdot 3H_2O$		Mon.	$P2_1/n$
15.2.4	X		Baylissite	$K_2Mg(CO_3)_2 \cdot 4H_2O$		Mon.	$P2_1/a$
15.2.5			Andersonite	$Na_2Ca(UO_2)(CO_3)_3 \cdot 6H_2O$		Trig.	$R\bar{3}$
15.2.6	X		Grimselite	$K_3Na(UO_2)(CO_3)_3 \cdot H_2O$		Hex.	$P\bar{6}2c$
Type 3		$A_m B_n (XO_3)_p \cdot xH_2O$, where $(m+n):p = 1:1$					
15.3.1.1		X	Zellerite	$Ca(UO_2)(CO_3)_2 \cdot 5H_2O$		Orth.	$Pmmm$ or $Pmn2_1$
15.3.1.2		X	Metazellerite	$Ca(UO_2)(CO_3)_2 \cdot 3H_2O$		Orth.	$Pbn2_1$ or $Pbnm$
15.3.2	X		Liebigite	$Ca_2(UO_2)(CO_3)_3 \cdot 10H_2O$		Orth.	$Bba2$
15.3.3.1			Bayleyite	$Mg_2(UO_2)(CO_3)_3 \cdot 18H_2O$		Mon.	$P2_1/a$
15.3.3.2			Swartzite	$CaMg(UO_2)(CO_3)_3 \cdot 18H_2O$		Mon.	$P2_1/m$
15.3.4.1	X		Donnayite	$NaCaSr_3Y(CO_3)_6 \cdot 3H_2O$		Tric.	$P1$
15.3.4.2	X		Mckelveyite	$NaCaBa_3Y(CO_3)_6 \cdot 3H_2O$		Tric.	$P1$
15.3.4.3	X		Weloganite	$Na_2Sr_3Zr(CO_3)_6 \cdot 3H_2O$		Tric.	$P1$
15.3.5			Voglite	$Ca_2Cu(UO_2)(CO_3)_4 \cdot 6H_2O (?)$		Mon.	$P2_1$ or $P2_1/m$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4		$A_m B_n (XO_3)_p \cdot xH_2O$, where $(m+n):p < 1:1$					
15.4.1		X	Calkinsite	$(Ce,La)_2(CO_3)_3 \cdot 4H_2O$		Orth.	$P2_122_1$
15.4.2.1			Lanthanite-(La)	$(La,Ce)_2(CO_3)_3 \cdot 8H_2O$		Orth.	Pbnb
15.4.2.2		X	Lanthanite-(Nd)	$(Nd,La)_2(CO_3)_3 \cdot 8H_2O$		Orth.	Pbnb
15.4.3		X	Lokkaite	$(Y,Ca)_2(CO_3)_3 \cdot 2H_2O$		Orth.	Pb2m, Pbm2, or Pbmm
CLASS 16A		ANHYDROUS CARBONATES CONTAINING HYDROXYL OR HALOGEN					
Type 1		$(AB)(XO_3)Z_q$					
16a.1.1.1			Bastnaesite-(Ce)	$(Ce,La)(CO_3)F$		Hex.	$C\bar{6}2c$
16a.1.1.2		X	Hydroxyl-bastnaesite-(Ce)	$(Ce,La)(CO_3)(OH)$		Hex.	$C\bar{6}2c$
16a.1.1.3		X	Bastnaesite-(La)	$(La,Ce)(CO_3)F$		Hex.	$C\bar{6}2c$
16a.1.1.4		X	Bastnaesite-(Y)	$(Y,Ce)(CO_3)F$		Hex.	$C\bar{6}2c$
16a.1.2.1			Synchysite-(Ce)	$Ca(Ce,La)(CO_3)_2F$		Hex.	?
16a.1.2.2		X	Synchysite-(Y)	$Ca(Y,Ce)(CO_3)_2F$		Hex.	?
16a.1.2.3		X	Synchysite-(Nd)	$Ca(Nd,La)(CO_3)_2F$		Hex.	?
16a.1.3		X	Huanghoite	$BaCe(CO_3)_2F$		Trig.	?
16a.1.4			Parisite	$Ca(Ce,La)_2(CO_3)_3F_2$		Trig.	R3
16a.1.5			Cordylite	$Ba(Ce,La)_2(CO_3)_3F_2$		Hex.	$P6_3/mmc$
16a.1.6		X	Röntgenite	$Ca_2(Ce,La)_3(CO_3)_5F_3$		Trig.	R3
Type 2		$(AB)_3(XO_3)_2Z_q$					
16a.2.1			Azurite	$Cu_3(CO_3)_2(OH)_2$		Mon.	$P2_1/c$
16a.2.2			Hydrocerussite	$Pb_3(CO_3)_2(OH)_2$		Hex.	?
16a.2.3			Beyerite	$(Ca,Pb)Bi_2(CO_3)_2O_2$		Tet.	I4/mmm

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3			$(AB)_2(XO_3)_2Z_q$				
16a.3.1.1			Rosasite	$(Cu,Zn)_2(CO_3)(OH)_2$		Mon.?	?
16a.3.1.2		X	Glaukosphaerite	$(Cu,Ni)_2(CO_3)(OH)_2$		Mon.?	?
16a.3.1.3		X	Kolwezite	$(Cu,Co)_2(CO_3)(OH)_2$		Tric.?	P1 or PT
16a.3.1.4		X	Zincrosasite	$(Zn,Cu)_2(CO_3)(OH)_2$		Mon.?	?
16a.3.1.5		X	Mcguinnessite	$(Mg,Cu)_2(CO_3)(OH)_2$		Mon.?	?
16a.3.2.1			Malachite	$Cu_2(CO_3)(OH)_2$		Mon.?	P2 ₁ /a
16a.3.2.2		X	Nullaginite	$Ni_2(CO_3)(OH)_2$		Mon.?	?
16a.3.3			Phosgenite	$Pb_2(CO_3)Cl_2$		Tet.	P4/mbm
16a.3.4			Bismutite	$Bi_2(CO_3)_2O_2$		Tet.	I4/mmm
16a.3.5		X	Brenkite	$Ca_2(CO_3)F_2$		Orth.	Pbcn
16a.3.6		X	Kettnerite	$CaBi(CO_3)OF$		Tet.	P4/nmm
16a.3.7		X	Dawsonite	$NaAl(CO_3)(OH)$		Orth.	Imam
16a.3.8			Northupite	$Na_3Mg(CO_3)_2Cl$		Cubic	Fd3
Type 4			$(AB)_5(XO_3)_2Z_q$				
16a.4.1			Hydrozincite	$Zn_5(CO_3)_2(OH)_6$		Mon.	C2/m
16a.4.2			Aurichalcite	$(Zn,Cu)_5(CO_3)_2(OH)_6$		Orth.	B22 ₁ 2
Type 5			Miscellaneous				
16a.5.1		X	Plumbonacrite	$Pb_{10}(CO_3)_6(OH)_6O ?$	X	Hex.	?
16a.5.2		X	Tunisite	$NaCa_2Al_4(CO_3)_4(OH)_8Cl$		Tet.	P4/nmm
16a.5.3		X	Stenonite	$(Sr,Ba,Na)_2Al(CO_3)F_5$		Mon.	P2 ₁ /m
16a.5.4			Loseyite	$(Mn,Zn)_7(CO_3)_2(OH)_{10}$		Mon.	A2/a
16a.5.5		X	Sabinaite	$(Na,Ca)_9(Zr,Ti)_6(CO_3)_8O_9$		Orth.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	SYSD	CRYSTAL SYSTEM	SPACE GROUP
CLASS 16B HYDRATED CARBONATES CONTAINING HYDROXYL OR HALOGEN							
Type 1 $A_m B_n (XO_3)_p Z_q \cdot xH_2O$, with $(m+n):p=1:1$							
16b.1.1.1			Ancylite	$SrCe(CO_3)_2(OH) \cdot H_2O$		Orth.	Pmcm
16b.1.1.2			Calcioancylite	$(Ca,Sr)Ce(CO_3)_2(OH) \cdot H_2O$		Orth.	Pmcm
16b.1.2	X		Thorbastnaesite	$Th(Ca,Ce)(CO_3)_2F_2 \cdot 3H_2O$		Hex.	?
16b.1.3	X		Tengerite	$CaY_3(CO_3)_4(OH)_4 \cdot 3H_2O$		Mon.	$P2_1/m$ or $P2_1$
16b.1.4	X		Indigirite	$Mg_2Al_2(CO_3)_4(OH)_{12} \cdot 15H_2O$?	?
Type 2 $A_m B_n (XO_3)_p Z_q \cdot xH_2O$, with $(m+n):p=3:2$							
16b.2.1.1			Dundasite	$PbAl_2(CO_3)_2(OH)_4 \cdot H_2O$		Orth.	Pbnm
16b.2.1.2	X		Dresserite	$Ba_2Al_4(CO_3)_4(OH)_8 \cdot 3H_2O$		Orth.	Pbnm
16b.2.1.3	X		Strontio- dresserite	$SrAl_2(CO_3)_2(OH)_4 \cdot H_2O$		Orth.	?
16b.2.2	X		Hydrodresserite	$BaAl_2(CO_3)_2(OH)_4 \cdot 3H_2O$		Tric.	?
16b.2.3.1	X		Alumohydrocalcite	$CaAl_2(CO_3)_2(OH)_4 \cdot 3H_2O$		Tric?	?
16b.2.3.2	X		Para- alumohydrocalcite	$CaAl_2(CO_3)_2(OH)_4 \cdot 6H_2O$?	?
Type 3 $A_m B_n (XO_3)_p Z_q \cdot xH_2O$, with $(m+n):p=2:1$							
16b.3.1.1			Artinite	$Mg_2(CO_3)(OH)_2 \cdot 3H_2O$		Mon.	$C2/m$
16b.3.1.2	X		Cuproartinite	$(Cu,Mg)_2(CO_3)(OH)_2 \cdot 3H_2O$		Mon.	$C2$
16b.3.2	X		Otwayite	$(Ni,Mg)_2(CO_3)(OH)_2 \cdot H_2O$		Orth.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4		$A_m B_n (XO_3)_p Z_q \cdot xH_2O$, with $(m+n):p=8:1$					
16b.4.1.1			Manasseite	$Mg_6Al_2(CO_3)(OH)_{16} \cdot 4H_2O$		Hex.	$P6_3/mmc$
16b.4.1.2			Barbertonite	$Mg_6Cr_2(CO_3)(OH)_{16} \cdot 4H_2O$		Hex.	$P6_3/mmc$
16b.4.1.3			Sjögrenite	$Mg_6Fe_2^{3+}(CO_3)(OH)_{16} \cdot 4H_2O$		Hex.	$P6_3/mmc$
16b.4.2.1			Hydrotalcite	$Mg_6Al_2(CO_3)(OH)_{16} \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
16b.4.2.2			Stichtite	$Mg_6Cr_2(CO_3)(OH)_{16} \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
16b.4.2.3			Pyroaurite	$Mg_6Fe_2^{3+}(CO_3)(OH)_{16} \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
16b.4.2.4	X		Desautelsite	$Mg_6Mn_2(CO_3)(OH)_{16} \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
16b.4.3.1	X		Reevesite	$Ni_6Fe_2^{3+}(CO_3)(OH)_{16} \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
16b.4.3.2	X		Takovite	$Ni_6Al_2(CO_3)(OH)_{16} \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
16b.4.3.3	X		Comblainite	$(Ni_x^{2+}Co_{1-x}^{3+})(OH)_2(CO_3)_{(1-x)/2} \cdot yH_2O$ ($x=2/3$)		Trig.	$R\bar{3}m$, $R\bar{3}$, $R32$ or $R3$
Type 5		Miscellaneous					
16b.5.1.1			Hydromagnesite	$Mg_5(CO_3)_4(OH)_2 \cdot 4H_2O$		Mon.	$P2_1/c$
16b.5.1.2	X		Cupro- hydromagnesite	$(Cu,Mg)_5(CO_3)_4(OH)_2 \cdot 4H_2O$		Mon.	$P2_1/c$
16b.5.2.1	X		Dypingite	$Mg_5(CO_3)_4(OH)_2 \cdot 5H_2O$?	?
16b.5.2.2	X		Giorgiosite	$Mg_5(CO_3)_4(OH)_2 \cdot 5H_2O$ (?)		?	?
16b.5.3	X		Rabbittite	$Ca_2Mg_3(UO_2)_2(CO_3)_6(OH)_4 \cdot 18H_2O$		Mon.	?
16b.5.4	X		Schuilngite	$Pb_3Ca_6Cu_2(CO_3)_8(OH)_6 \cdot 6H_2O$ (?)		Mon.	?
16b.5.5			Zaratite	$Ni_3(CO_3)(OH)_4 \cdot 4H_2O$		Cubic	?
16b.5.6	X		Callaghanite	$Cu_2Mg_2(CO_3)(OH)_6 \cdot 2H_2O$		Mon.	$C2/c$
16b.5.7	X		Wyartite	$Ca_3U^{4+}(UO_2)_6(CO_3)_2(OH)_{18} \cdot 6H_2O$		Orth.	$P2_12_12_1$, $Pmcn, P2_1cn$
16b.5.8			Brugnatellite	$Mg_6Fe^{3+}(CO_3)(OH)_{13} \cdot 4H_2O$		Trig.	$P3$ or $P\bar{3}$
16b.5.9	X		Coalingite	$Fe^{3+}Mg_{10}(CO_3)(OH)_{24} \cdot 2H_2O$		Trig.	$R\bar{3}m$
16b.5.10	X		Wermlandite	$Ca_2Mg_{14}Al_4(CO_3)(OH)_{42} \cdot 24H_2O$		Trig.	$P3c1$
16b.5.11	X		Carbonate- cyanotrichite	$Cu_4Al_2(CO_3,SO_4)(OH)_{12} \cdot 2H_2O$		Orth.	?
16b.5.12	X		Georgeite	$Cu_5(CO_3)_3(OH)_4 \cdot 6H_2O$		Amor.	---

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 5							
16b.5.13		X	Defernite	$\text{Ca}_6(\text{CO}_3)(\text{OH},\text{Cl})_8 \cdot 2\text{H}_2\text{O}$		Orth.	$\text{Pna}2_1$ or Pnam
16b.5.14.1		X	Scarbroite	$\text{Al}_5(\text{CO}_3)(\text{OH})_{13} \cdot 5\text{H}_2\text{O}$		Tric.	P1 or $\text{P}\bar{1}$
16b.5.14.2		X	Hydroscarbroite	$\text{Al}_{14}(\text{CO}_3)_3(\text{OH})_{36} \cdot n\text{H}_2\text{O}$?	X	?	?
CLASS 17 COMPOUND CARBONATES							
Type 1 Miscellaneous							
17.1.1.1			Tychite	$\text{Na}_6\text{Mg}_2(\text{CO}_3)_4(\text{SO}_4)$		Cubic	$\text{Fd}3$
17.1.1.2		X	<i>to be published</i>				
17.1.2			Leadhillite	$\text{Pb}_4(\text{CO}_3)_2(\text{SO}_4)(\text{OH})_2$		Mon.	$\text{P}2_1/a$
17.1.3			Susannite	$\text{Pb}_4(\text{CO}_3)_2(\text{SO}_4)(\text{OH})_2$		Trig.	$\text{R}\bar{3}$
17.1.4			Schroekingerite	$\text{NaCa}_3(\text{UO}_2)(\text{CO}_3)(\text{SO}_4)\text{F} \cdot 10\text{H}_2\text{O}$		Tric.	P1 ?
17.1.5		X	Nasledovite	$\text{PbMn}_3\text{Al}_4(\text{CO}_3)_4(\text{SO}_4)_5 \cdot 5\text{H}_2\text{O}$?	?
17.1.6		X	Motukoreaite	$\text{Na}_2\text{Mg}_{38}\text{Al}_4(\text{CO}_3)_{13}(\text{SO}_4)_3(\text{OH})_{108} \cdot 56\text{H}_2\text{O}$		Hex.	?
17.1.7		X	Canavesite	$\text{Mg}_2(\text{CO}_3)(\text{HBO}_3) \cdot 5\text{H}_2\text{O}$		Mon.	$2/m$
17.1.8		X	Harkerite	$\text{Ca}_{48}\text{Mg}_{16}\text{Al}_3(\text{CO}_3)_{19}(\text{BO}_3)_{17}(\text{SiO}_4)_3 \cdot 4\text{H}_2\text{O}$		Trig.	$\text{R}3m$
17.1.9.1		X	Tundrite-(Ce)	$\text{Na}_3(\text{Ce},\text{La})_4(\text{Ti},\text{Nb})_2(\text{CO}_3)_3(\text{SiO}_4)_2\text{O}_2(\text{OH}) \cdot 2\text{H}_2\text{O}$		Tric.	P1
17.1.9.2		X	Tundrite-(Nd)	$\text{Na}_3(\text{Nd},\text{La})_4(\text{Ti},\text{Nb})_2(\text{CO}_3)_3(\text{SiO}_4)_2\text{O}_2(\text{OH}) \cdot 2\text{H}_2\text{O}$		Tric.	P1
			Carboborite	[with Borates]			
			Gaudefroyite	[with Borates]			
			Borcarite	[with Borates]			
			Sakhaite	[with Borates]			
			Hanksite	[with Sulfates]			
			Nakauriite	[with Sulfates]			
			Caledonite	[with Sulfates]			
			Wherryite	[with Sulfates]			
			Burkeite	[with Sulfates]			
			Tatarskite	[with Sulfates]			
			Jouravskite	[with Sulfates]			
			Mroseite	[with Tellurites]			
			Bradleyite	[with Phosphates]			
			Sidorenkite	[with Phosphates]			
			Kovdorskite	[with Phosphates]			
			Armangite	[with Arsenites]			

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 18 NORMAL NITRATES							
Type 1			AXO ₃ ·xH ₂ O, where x can equal zero			Trig. Orth.	R $\bar{3}$ c Pmcn
18.1.1			Nitratite	NaNO ₃			
18.1.2			Niter	KNO ₃			
Type 2			A(XO ₃) ₂ ·xH ₂ O, where x can equal zero				
18.2.1			Nitrobarite	Ba(NO ₃) ₂	Cubic Mon. Mon.	Pa3 ? P2 ₁ /c	
18.2.2			Nitrocalcite	Ca(NO ₃) ₂ ·4H ₂ O			
18.2.3			Nitromagnesite	Mg(NO ₃) ₂ ·6H ₂ O			
CLASS 19 NITRATES CONTAINING HYDROXYL OR HALOGEN							
Type 1			Miscellaneous			Orth. Hex.	P2 ₁ 2 ₁ 2 ₁ P6 ₃ /mmc
19.1.1			Gerhardtite	Cu ₂ (NO ₃)(OH) ₂			
19.1.2			Buttgenbachite	~Cu ₃₇ (NO ₃) ₂ (OH) ₆₄ (Cl,NO ₃) ₈ ·2H ₂ O			
19.1.3	X		<i>to be published</i>				
CLASS 20 COMPOUND NITRATES							
Type 1			Miscellaneous			Mon. Orth.	P2 ₁ /m Pc2 ₁ n
20.1.1			Darapskite	Na ₃ (NO ₃)(SO ₄)·H ₂ O			
20.1.2	X		Likasite	Cu ₁₂ (NO ₃) ₄ (PO ₄) ₂ (OH) ₄			
20.1.3.1	X		<i>to be published</i>				
20.1.3.2	X		<i>to be published</i>				
			Humberstonite	[with Sulfates]			

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP	
CLASS 21 NORMAL IODATES								
Type 1			Miscellaneous					
21.1.1			Lautarite	$\text{Ca}(\text{IO}_3)_2$	Mon.			$P2_1/n$
21.1.2		X	Brüggerite	$\text{Ca}(\text{IO}_3)_2 \cdot \text{H}_2\text{O}$	Mon.			$P2_1/c$
21.1.3			Bellingrite	$\text{Cu}_3(\text{IO}_3)_6 \cdot 2\text{H}_2\text{O}$	Tric.			$P\bar{1}$
CLASS 22 IODATES CONTAINING HYDROXYL OR HALOGEN								
Type 1			Miscellaneous					
22.1.1			Salesite	$\text{Cu}(\text{IO}_3)(\text{OH})$	Orth.			Pnma
22.1.2		X	Seeligerite	$\text{Pb}_3(\text{IO}_3)\text{OCl}_3$	Orth., ps-Tet.			$C222_1$
22.1.3		X	Schwartzembergite	$\text{Pb}_6(\text{IO}_3)_2\text{O}_2(\text{OH})_2\text{Cl}_4$	Orth., ps-Tet.			Fmm2, F222, or Fmmm
CLASS 23 COMPOUND IODATES								
Type 1			Miscellaneous					
23.1.1			Dietzeite	$\text{Ca}_2(\text{IO}_3)_2(\text{CrO}_4)$	Mon.			$P2_1/c$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 24 ANHYDROUS BORATES							
Type 1 A_2XO_4							
24.1.1		X	Sinhalite	$MgAl[BO_4]$		Orth.	Pbmm
24.1.2		X	Behierite	$(Ta,Nb)[BO_4]$		Tet.	$I4_1/amd$
Type 2 $A_2BO_2[XO_3]$							
24.2.1			Warwickite	$Mg(Mg,Al)O[BO_3]$		Orth.	Pnam
24.2.2.1			Ludwigite	$Mg_2Fe^{3+}O_2[BO_3]$		Orth.	Pbam
24.2.2.2		X	Vonsenite	$Fe_2^{2+}Fe^{3+}O_2[BO_3]$		Orth.	Pbam
24.2.2.3		X	Azoproteite	$(Mg,Fe)_2^{2+}(Fe^{3+},Ti,Mg)O_2[BO_3]$		Orth.	Pbam
24.2.2.4		X	Bonaccordite	$Ni_2Fe^{3+}O_2[BO_3]$		Orth.	Pbam
24.2.3			Hulsite	$(Fe^{2+},Mg)_2(Fe^{3+},Sn)O_2[BO_3]$		Mon.	$P2/m$
24.2.4			Pinakiolite	$(Mg,Mn)_2^{2+}Mn^{3+}O_2[BO_3]$		Mon.	$C2/m$
24.2.5		X	Orthopinakiolite	$(Mg,Mn)_2^{2+}Mn^{3+}O_2[BO_3]$		Orth.	Pnmm
24.2.6		X	Takeuchiite	$(Mg,Mn)^{2+}(Mn,Fe)^{3+}O_2[BO_3]$		Orth.	Pnmm
Type 3 $A_mB_n[XO_3]_p$							
24.3.1			Sassolite	H_3BO_3		Tric.	$P\bar{1}$
24.3.2.1			Kotoite	$Mg_3[BO_3]_2$		Orth.	Pnmm
24.3.2.2		X	Jimboite	$Mn_3[BO_3]_2$		Orth.	Pnmm
24.3.3			Nordenskiöldine	$CaSn[BO_3]_2$		Trig.	$R\bar{3}$
Type 4 $A_2[X_2O_5]$							
24.4.1		X	Suanite	$Mg_2[B_2O_5]$		Mon.	$P2_1/a$
24.4.2		X	Kurchatovite	$Ca(Mg,Mn)[B_2O_5]$		Orth.	$P2_12_12_1$
Type 5 Miscellaneous							
24.5.1		X	Metaborite	HBO_2		Cubic	$P\bar{4}3n$
24.5.2		X	Calciborite	$Ca[B_2O_4]$		Mon.	?
24.5.3		X	Johachidolite	$CaAlB_3O_7$		Orth.	$Cmma$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 25 ANHYDROUS BORATES CONTAINING HYDROXYL OR HALOGEN							
<p>The Borate Classes 25 and 26 are classified by a system adapted from the crystal-chemical classification proposed by Christ and Clark(1977). This classification makes use of fundamental building blocks (FBB) from which borate polyanions can be constructed. Boron will link with either three oxygens to form a triangle or with four to form a tetrahedron. A short-hand notation using n and symbols: Δ=triangle and T=tetrahedron is used so that the polyanions can be easily characterized. 1:Δ and 1:T are isolated triangles and tetrahedra, respectively. 2:Δ and 2:T are isolated pairs. These two, isolated singles and isolated pairs, are the first two Types in Classes 25 and 26. The other polyanions are grouped as Triborates, Tetraborates, etc. and the structural notation will be given following the composition. Borates with undetermined structures that comfortably "fit" into one of the structure groups have been so placed, with their composition written into an acceptable structural formula for that group. The structural notation will be marked with an asterisk to denote it being a theoretical structure.</p> <p>Borates with unknown structures that cannot be placed theoretically are grouped in the Miscellaneous Types.</p>							
Type 1			FBB = 1: Δ ; 1:T				
25.1.1			Hambergite	$Be_2[BO_3](OH)$ [1: Δ]*		Orth.	Pbca
25.1.2			Fluoborite	$Mg_3[BO_3](F,OH)_3$ [1: Δ]*		Hex.	$P6_3/m$
25.1.3			Frolovite	$Ca[B(OH)_4]_2$ [1:T]		Tric.	P1 or P $\bar{1}$
25.1.4.1			Teepelite	$Na_2Cl[B(OH)_4]_2$ [1:T]		Tet.	$P4/nmm$
25.1.4.2			Bandykite	$CuCl[B(OH)_4]_2$ [1:T]		Tet.	$P4/n$
25.1.5	X		Vimsite	$Ca[BO(OH)_2]_2$ [1: ∞ T]		Mon.	C2/c
25.1.6	X		Olshanskyite	$Ca_3(OH)_2[B(OH)_4]_4$ [1:T]*		Mon.	?
Type 2			FBB = 2: Δ ; 2:T				
25.2.1.1			Sussexite	$Mn_2(OH)[B_2O_4(OH)]$ [2: Δ]		Orth.	$P2_12_12_1$
25.2.1.2			Szaibelyite	$Mg_2(OH)[B_2O_4(OH)]$ [2: Δ]		Orth.	$P2_12_12_1$
25.2.2	X		Sibirskite	$Ca_2(OH)[B_2O_4(OH)]$? [2: Δ]*		Orth.	?
25.2.3			Pinnoite	$Mg[B_2O(OH)_2]_2$ [2:T]		Tet.	$P4_2$ or $P4_2/m$

REVISED DANA NUMBER	N C	M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3			Triborates				
25.3.1		X	Ameghinite	$\text{Na}[\text{B}_3\text{O}_3(\text{OH})_4]$ [3:2 +T]		Mon.	C2/c
25.3.2		X	Solongoite	$\text{Ca}_2\text{Cl}[\text{B}_3\text{O}_4(\text{OH})_4]$ [3: Δ +2T]i		Mon.	P2 ₁ /c
25.3.3		X	Fabianite	$\text{Ca}[\text{B}_3\text{O}_5(\text{OH})]$ [3: Δ +2T]s		Mon.	P2 ₁ /a
25.3.4		X	Uralborite	$\text{Ca}_2[\text{B}_3\text{O}_3(\text{OH})_5 \cdot \text{OB}(\text{OH})_3]$ [3:(3T)+T]		Mon.	P2 ₁ /n
25.3.5			Howlite	$\text{Ca}_2[\text{B}_3\text{O}_4(\text{OH})_2 \cdot \text{OSiB}_2\text{O}_4(\text{OH})_3]$		Mon.	P2 ₁ /c
Type 4			Tetraborates				
25.4.1.1			Roweite	$\text{Ca}_2\text{Mn}_2(\text{OH})_4[\text{B}_4\text{O}_7(\text{OH})_2]$ [4-1:2 Δ +2T]		Orth.	Pbam
25.4.1.2		X	Fedorovskite	$\text{Ca}_2\text{Mg}_2(\text{OH})_4[\text{B}_4\text{O}_7(\text{OH})_2]$ [4-1:2 Δ +2T]*		Orth.	Pbam
Type 5			Pentaborates				
25.5.1			Priceite	$\text{Ca}_2[\text{B}_5\text{O}_6(\text{OH})_3](\text{OH})_4$ [5:2 Δ +3T]*		Tric.	P1 or P $\bar{1}$
Type 6			Hexaborates				
25.6.1.1			Boracite	$\text{Mg}_3\text{Cl}[\text{B}_6\text{O}_{10} \cdot \text{OB}\text{O}_2]$ [6:6T]		Orth.	Pca2 ₁
25.6.1.2		X	Ericaite	$\text{Fe}_3^{2+}\text{Cl}[\text{B}_6\text{O}_{10} \cdot \text{OB}\text{O}_2]$ [6:6T]*		Orth.	Pca2 ₁ ?
25.6.1.3		X	Chambersite	$\text{Mn}_3\text{Cl}[\text{B}_6\text{O}_{10} \cdot \text{OB}\text{O}_2]$ [6:6T]*		Orth.	Pca2 ₁
25.6.2		X	Congolite	$\text{Fe}_3^{2+}\text{Cl}[\text{B}_6\text{O}_{10} \cdot \text{OB}\text{O}_2]$ [6:6T]*		Trig.	R3c
25.6.3		X	Volkovskite	$(\text{Ca}, \text{Sr})[\text{B}_6\text{O}_7(\text{OH})_6]$ [6:3 Δ +3T]i*		Mon.	P2 ₁
25.6.4		X	Strontioborite	$\text{Sr}[\text{B}_6\text{O}_9(\text{OH}) \cdot \text{OB}_2\text{O}(\text{OH})_3]$ [6:3 Δ +3T]		Mon.	P2 ₁

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Type 7			Nonaborates				
25.7.1		X	Preobrazhenskite	$\text{HMg}_3\{\text{B}_9\text{O}_{12}(\text{OH})_4 \cdot [\text{O}_2\text{B}(\text{OH})_2]_2\}$ $9:\alpha_2[4\Delta+5\text{T}]$		Orth.	Pbcn
Type 8			Miscellaneous				
25.8.1			Wiserite	$\text{Mn}_4(\text{B}_2\text{O}_5)(\text{OH},\text{Cl})_4$		Tet.	?
25.8.2.1		X	Cl-tyretskite	$\text{Ca}_2(\text{B}_5\text{O}_8)(\text{OH})_2\text{Cl}$		Tric.	P1
25.8.2.2		X	Tyretskite	$\text{Ca}_2(\text{B}_5\text{O}_8)(\text{OH})_3$		Tric.	P1 or P1̄
25.8.3			Jeremejevite	$\text{Al}_6(\text{B}_5\text{O}_{15})(\text{OH})_3$		Hex.	$\text{C6}_3/\text{m}$
25.8.4			Rhodizite	$\text{CsAl}_4\text{Be}_4(\text{B}_{11}\text{O}_{25})(\text{OH})_4$		Cubic	$\text{P}\bar{4}3\text{m}$
25.8.5		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 26 HYDRATED BORATES CONTAINING HYDROXYL OR HALOGEN							
Type 1 FBB = 1:Δ ; 1:T							
26.1.1		X	Berberite	$\text{Be}_2[\text{BO}_3](\text{OH},\text{F})\cdot\text{H}_2\text{O}$ [1:Δ]*		Trig.	P321 ?
26.1.2		X	Wightmanite	$\text{Mg}_5[\text{BO}_3]_2(\text{OH})_5\cdot 2\text{H}_2\text{O}$ [1:Δ]*		Mon.	I2/m
26.1.3		X	Shabynite	$\text{Mg}_5[\text{BO}_3](\text{Cl},\text{OH})_2(\text{OH})_5\cdot 4\text{H}_2\text{O}$		Mon?	?
26.1.4		X	Hexahydroborite	$\text{Ca}[\text{B}(\text{OH})_4]_2\cdot 2\text{H}_2\text{O}$ [1:T]		Mon.	P2/a
Type 2 FBB = 2:Δ ; 2:T							
26.2.1		X	Pentahydroborite	$\text{Ca}[\text{B}_2\text{O}(\text{OH})_6]\cdot 2\text{H}_2\text{O}$ [2:T]		Tric.	P $\bar{1}$
Type 3 Triborates							
26.3.1.1			Inyoite	$\text{Ca}_2[\text{B}_3\text{O}_3(\text{OH})_5]_2\cdot 8\text{H}_2\text{O}$ [3:Δ+2T]i		Mon.	P $_2$ /a
26.3.1.2			Inderborite	$\text{CaMg}[\text{B}_3\text{O}_3(\text{OH})_5]_2\cdot 6\text{H}_2\text{O}$ [3:Δ+2T]i		Mon.	C2/c
26.3.1.3			Inderite	$\text{Mg}[\text{B}_3\text{O}_3(\text{OH})_5]\cdot 5\text{H}_2\text{O}$ [3:Δ+2T]i		Mon.	P $_2$ /c
26.3.2			Meyerhofferite	$\text{Ca}_2[\text{B}_3\text{O}_3(\text{OH})_5]_2\cdot 8\text{H}_2\text{O}$ [3:Δ+2T]i		Tric.	P $\bar{1}$
26.3.3			Kurnakovite	$\text{Mg}[\text{B}_3\text{O}_3(\text{OH})_5]\cdot 5\text{H}_2\text{O}$ [3:Δ+2T]i		Tric.	P $\bar{1}$
26.3.4		X	Hydrochlorborite	$\text{Ca}_2[\text{B}_3\text{O}_3(\text{OH})_4\cdot \text{OB}(\text{OH})_3]\text{Cl}\cdot 7\text{H}_2\text{O}$ [3:(Δ+2T)+T]		Mon.	I2/a
26.3.5.1			Colemanite	$\text{Ca}_2[\text{B}_3\text{O}_4(\text{OH})_3]_2\cdot 2\text{H}_2\text{O}$ [3:Δ+2T]c		Mon.	P $_2$ /a
26.3.5.2		X	Balavinskite	$\text{Sr}_2[\text{B}_3\text{O}_4(\text{OH})_3]_2\cdot \text{H}_2\text{O}$ [3:Δ+2T]c*		?	?
26.3.6			Hydroboracite	$\text{CaMg}[\text{B}_3\text{O}_3(\text{OH})_5]_2\cdot \text{H}_2\text{O}$ [3:Δ+2T]c		Mon.	P2/c
26.3.7		X	Nifontovite	$\text{Ca}_3[\text{B}_3\text{O}_3(\text{OH})_6]_2\cdot 2\text{H}_2\text{O}$ [3:3T]i		Mon.	C2/c

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Type 4			Tetraborates				
26.4.1			Borax	$\text{Na}_2[\text{B}_4\text{O}_5(\text{OH})_4] \cdot 8\text{H}_2\text{O}$ [4-1:2Δ+2T]i		Mon.	A2/a
26.4.2			Tinalconite	$\text{Na}_2[\text{B}_4\text{O}_5(\text{OH})_4] \cdot 3\text{H}_2\text{O}$ [4-1:2Δ+2T]i		Trig.	R32
26.4.3	X		Hungchaoite	$\text{Mg}_2[\text{B}_4\text{O}_5(\text{OH})_4] \cdot 7\text{H}_2\text{O}$ [4-1:2Δ+2T]i		Tric.	P $\bar{1}$
26.4.4	X		Halurgite	$\text{Mg}_2[\text{B}_4\text{O}_5(\text{OH})_4] \cdot 3\text{H}_2\text{O}$ [4-1:2Δ+2T]i*		Mon.	?
26.4.5			Kernite	$\text{Na}_2[\text{B}_4\text{O}_6(\text{OH})_2] \cdot 3\text{H}_2\text{O}$ [4-1:2Δ+2T]c		Mon.	P2 ₁ /n
Type 5			Pentaborates				
26.5.1	X		Sborgite	$\text{Na}[\text{B}_5\text{O}_6(\text{OH})_4] \cdot 3\text{H}_2\text{O}$ [5:4Δ+T]i		Mon.	C2/c
26.5.2	X		Santite	$\text{K}[\text{B}_5\text{O}_6(\text{OH})_4] \cdot 2\text{H}_2\text{O}$ [5:4Δ+T]i		Orth.	Aba2
26.5.3			Ammonioborite	$(\text{NH}_4)_3[\text{B}_5\text{O}_6(\text{OH})_3 \cdot \text{OB}_5(\text{OH})_2 \cdot \text{OB}_5\text{O}_6(\text{OH})_3] \cdot 4\text{H}_2\text{O}$ [5:4Δ+T] ₃		Mon.	C2/c
26.5.4			Larderellite	$(\text{NH}_4)[\text{B}_5\text{O}_7(\text{OH})_2] \cdot \text{H}_2\text{O}$ [5:4Δ+T]c		Mon.	P2 ₁ /c
26.5.5	X		Ezcurrite	$\text{Na}_2[\text{B}_5\text{O}_7(\text{OH})_3] \cdot 2\text{H}_2\text{O}$ [5:3Δ+2T]c		Tric.	P $\bar{1}$
26.5.6	X		Nasinite	$\text{Na}_2[\text{B}_5\text{O}_8(\text{OH})] \cdot 2\text{H}_2\text{O}$ [5:3Δ+2T]s		Orth.	Pna2 ₁
26.5.7	X		Biringuccite	$\text{Na}_4[\text{B}_5\text{O}_8(\text{OH})]_2 \cdot 2\text{H}_2\text{O}$ [5:3Δ+2T]s		Mon.	P2 ₁ /c
26.5.8	X		Gowerite	$\text{Ca}[\text{B}_5\text{O}_8(\text{OH}) \cdot \text{B}(\text{OH})_3] \cdot 3\text{H}_2\text{O}$ [5:3Δ+2T]s,i		Mon.	P2 ₁ /n
26.5.9.1			Veatchite	$\text{Sr}_2[\text{B}_5\text{O}_8(\text{OH})]_2 \cdot \text{B}(\text{OH})_3 \cdot \text{H}_2\text{O}$ [5:3Δ+2T]s,i		Mon.	Aa
26.5.9.2	X		P-Veatchite	$\text{Sr}_2[\text{B}_5\text{O}_8(\text{OH})]_2 \cdot \text{B}(\text{OH})_3 \cdot \text{H}_2\text{O}$ [5:3Δ+2T]s,i		Mon.	P2 ₁
26.5.10	X		Veatchite-A	$\text{Sr}_2[\text{B}_5\text{O}_8(\text{OH})]_2 \cdot \text{B}(\text{OH})_3 \cdot \text{H}_2\text{O}$ [5:3Δ+2T]s,i*		Tric.	A1 or A1
26.5.11			Ulexite	$\text{NaCa}[\text{B}_5\text{O}_6(\text{OH})_6] \cdot 5\text{H}_2\text{O}$ [5:2Δ+3T]i		Tric.	P $\bar{1}$
26.5.12			Probertite	$\text{NaCa}[\text{B}_5\text{O}_7(\text{OH})_4] \cdot 3\text{H}_2\text{O}$ [5:2Δ+3T]c		Mon.	P2 ₁ /a

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Type 5							
26.5.13			Kaliborite	$\text{HKMg}_2[\text{B}_5\text{O}_7(\text{OH})_3 \cdot \text{OB}(\text{OH})_2]_3 \cdot 4\text{H}_2\text{O}$ [5:2Δ+3T]c,m		Mon.	C2/c
26.5.14	X		Hilgardite	$\text{Ca}_2[\text{B}_5\text{O}_9]\text{Cl} \cdot \text{H}_2\text{O}$ [5:2Δ+3T]		Mon.	Cc
26.5.15	X		Parahilgardite	$\text{Ca}_2[\text{B}_5\text{O}_9]\text{Cl} \cdot \text{H}_2\text{O}$ [5:2Δ+3T]		Tric.	P1
Type 6 Hexaborates							
26.6.1		X	Rivadavite	$\text{Na}_6\text{Mg}[\text{B}_6\text{O}_7(\text{OH})_6]_4 \cdot 10\text{H}_2\text{O}$ [6:3Δ+3T]i		Mon.	$\text{P2}_1/\text{m}$
26.6.2		X	Mcallisterite	$\text{Mg}_2[\text{B}_6\text{O}_7(\text{OH})_6]_2 \cdot 9\text{H}_2\text{O}$ [6:3Δ+3T]i		Trig.	$\text{R}\bar{3}\text{c}$
26.6.3		X	Admontite	$\text{Mg}_2[\text{B}_6\text{O}_7(\text{OH})_6]_2 \cdot 9\text{H}_2\text{O}$ [6:3Δ+3T]i*		Mon.	?
26.6.4		X	Aksaite	$\text{Mg}[\text{B}_6\text{O}_7(\text{OH})_6] \cdot 2\text{H}_2\text{O}$ [6:3Δ+3T]i		Orth.	Pbca
26.6.5		X	Aristarainite	$\text{Na}_2\text{Mg}[\text{B}_6\text{O}_8(\text{OH})_4]_2 \cdot 4\text{H}_2\text{O}$ [6:3Δ+3T]c		Mon.	$\text{P2}_1/\text{a}$
26.6.6.1		X	Nobleite	$\text{Ca}[\text{B}_6\text{O}_9(\text{OH})_2] \cdot 3\text{H}_2\text{O}$ [6:3Δ+3T]s		Mon.	$\text{P2}_1/\text{a}$
26.6.6.2		X	Tunellite	$\text{Sr}[\text{B}_6\text{O}_9(\text{OH})_2] \cdot 3\text{H}_2\text{O}$ [6:3Δ+3T]s		Mon.	$\text{P2}_1/\text{a}$
26.6.7.1			Ginorite	$\text{Ca}_2[\text{B}_6\text{O}_9(\text{OH})_2 \cdot \text{OB}_6\text{O}_8(\text{OH}) \cdot \text{OB}_2\text{O}(\text{OH})_3] \cdot 5\text{H}_2\text{O}$ [6:3Δ+3T]s,m		Mon.	$\text{P2}_1/\text{a}$?
26.6.7.2		X	Strontioginorite	$\text{SrCa}[\text{B}_6\text{O}_9(\text{OH})_2 \cdot \text{OB}_6\text{O}_8(\text{OH}) \cdot \text{OB}_2\text{O}(\text{OH})_3] \cdot 5\text{H}_2\text{O}$ [6:3Δ+3T]s,m		Mon.	$\text{P2}_1/\text{a}$
Type 7 Miscellaneous							
26.7.1		X	Kurgantaite	$(\text{Sr}, \text{Ca})\text{B}_4\text{O}_8 \cdot \text{H}_2\text{O}$?	?
26.7.2		X	Korzhinskite	$\text{CaB}_2\text{O}_4 \cdot \text{H}_2\text{O}$?	?
26.7.3		X	Aldzhanite	$\text{CaMgB}_2\text{O}_4\text{Cl} \cdot 7\text{H}_2\text{O}$ (?)	X	Orth.	?
26.7.4		X	Chelkarite	$\text{CaMgB}_2\text{O}_4\text{Cl}_2 \cdot 7\text{H}_2\text{O}$ (?)		Orth.	Pbca
26.7.5		X	Ekaterinite	$\text{Ca}_2\text{B}_4\text{O}_7(\text{Cl}, \text{OH})_2 \cdot 2\text{H}_2\text{O}$?	?
26.7.6		X	Satimolite	$\text{KNa}_4\text{Al}_4(\text{B}_6\text{O}_{15})\text{Cl}_3 \cdot 13\text{H}_2\text{O}$		Orth.	?
26.7.7		X	Tertschite	$\text{Ca}_4\text{B}_{10}\text{O}_{19} \cdot 20\text{H}_2\text{O}$		Mon?	?
26.7.8		X	Braitschite	$(\text{Ca}, \text{Na})_7(\text{Ce}, \text{La})_2\text{B}_{22}\text{O}_{43} \cdot 7\text{H}_2\text{O}$		Hex.	?
26.7.9		X	Wardsmithite	$\text{Ca}_5\text{MgB}_{24}\text{O}_{42} \cdot 6\text{H}_2\text{O}$		Hex.? (ps-Hex.)	?

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CLASS 27 COMPOUND BORATES							
Type 1		Miscellaneous					
27.1.1	X		Carboborite	$\text{Ca}_2\text{Mg}(\text{B}_2\text{O}_3)(\text{CO}_3)(\text{OH})_4 \cdot 8\text{H}_2\text{O}$		Mon.	?
27.1.2	X		Gaudefroyite	$\text{Ca}_4\text{Mn}_{3-x}(\text{BO}_3)_3(\text{CO}_3)(\text{O},\text{OH})_3$		Hex.	P6_3
27.1.3	X		Borcarite	$\text{Ca}_4\text{Mg}[\text{B}_4\text{O}_6(\text{OH})_6](\text{CO}_3)_2$		Mon.	$\text{C2}/\text{m}$
27.1.4	X		Sakhaite	$\text{Ca}_{12}\text{Mg}_4(\text{BO}_3)_7(\text{CO}_3)_4(\text{OH})_4 \cdot \text{Cl} \cdot \text{H}_2\text{O}$		Cubic	$\text{F4}_1\text{32}$
27.1.5			Sulfoborite	$\text{Mg}_3(\text{OH})_2[\text{B}(\text{OH})_4]_2(\text{SO}_4)$		Orth.	Pnma
27.1.6			Teruggite	$\text{Ca}_4\text{Mg}[\text{B}_6\text{O}_7(\text{OH})_6 \cdot 0\text{AsO}_3]_2 \cdot 14\text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{a}$
27.1.7			Bakerite	$\text{Ca}_4\text{B}_4(\text{BO}_4)(\text{SiO}_4)_3(\text{OH})_5 \cdot \text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{c}$
27.1.8	X		Garrelsite	$\text{Ba}_3\text{NaSi}_2\text{B}_7\text{O}_{16}(\text{OH})_4$		Mon.	$\text{C2}/\text{c}$
			Canavesite	[with carbonates]			
			Harkerite	[with carbonates]			
			Heidornite	[with sulfates]			
			Cahnite	[with phosphates]			
			Seamanite	[with phosphates]			
			Luenebergite	[with phosphates]			

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CLASS 28 ANHYDROUS ACID AND NORMAL SULFATES							
Type 1 Anhydrous Acid Sulfates							
28.1.1			Mercallite	KHSO_4		Orth.	Pbca
28.1.2			Misenite	$6\text{KHSO}_4 \cdot \text{K}_2\text{SO}_4$		Mon.	?
28.1.3			Letovicite	$(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$		Mon.	?
Type 2 A_2XO_4							
28.2.1.1			Mascagnite	$(\text{NH}_4)_2\text{SO}_4$		Orth.	Pmcr1
28.2.1.2			Arcanite	K_2SO_4		Orth.	Pmcrn
28.2.1.3			Taylorite	$(\text{K}, \text{NH}_4)_2\text{SO}_4$		Orth.	Pmcrn
28.2.2			Aphthitalite	$(\text{K}, \text{Na})_3\text{Na}(\text{SO}_4)_2$		Trig.	$\text{P}\bar{3}\text{m}$
28.2.3			Thenardite	Na_2SO_4		Orth.	Fddd
28.2.4		X	Gianellaite	$(\text{NHg}_2)_2\text{SO}_4$		Cubic	$\text{F}\bar{4}3\text{m}$
Type 3 AXO_4							
28.3.1.1			Barite	BaSO_4		Orth.	Pnma
28.3.1.2			Celestite	SrSO_4		Orth.	Pnma
28.3.1.3			Anglesite	PbSO_4		Orth.	Pbnm
28.3.2			Anhydrite	CaSO_4		Orth.	Bmbb
28.3.3			Chalcocyanite	CuSO_4		Orth.	Pmnb
28.3.4		X	Yavapaiite	$\text{KFe}^{3+}(\text{SO}_4)_2$		Mon.	$\text{C}2, \text{C}2/\text{m},$ or Cm
Type 4 Miscellaneous							
28.4.1			Vanhtoffite	$\text{Na}_6\text{Mg}(\text{SO}_4)_4$		Mon.	$\text{P}2_1/\text{c}$
28.4.2			Glauberite	$\text{Na}_2\text{Ca}(\text{SO}_4)_2$		Mon.	$\text{C}2/\text{c}$
28.4.3.1			Palmierite	$(\text{K}, \text{Na})_2\text{Pb}(\text{SO}_4)_2$		Trig.	$\text{R}\bar{3}\text{m}$
28.4.3.2		X	Kalistrontite	$\text{K}_2\text{Sr}(\text{SO}_4)_2$		Trig.	$\text{R}\bar{3}\text{m}1$?
28.4.4.1			Langbeinite	$\text{K}_2\text{Mg}_2(\text{SO}_4)_3$		Cubic	$\text{P}2_13$
28.4.4.2			Manganolangbeinite	$\text{K}_2\text{Mn}_2(\text{SO}_4)_3$		Cubic	$\text{P}2_13$
28.4.5		X	Millosevichite	$(\text{Al}, \text{Fe})_2(\text{SO}_4)_3$?	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 29 HYDRATED ACID AND NORMAL SULFATES							
Type 1		Hydrated Acid Sulfates					
29.1.1			Rhomboclase	$\text{HFe}^{3+}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$		Orth.	Pnma
29.1.2		X	Matteuccite	$\text{HNaSO}_4 \cdot \text{H}_2\text{O}$		Mon.	Cc
29.1.3		X	Monsmedite	$\text{H}_8\text{K}_2\text{Tl}_2^{3+}(\text{SO}_4)_8 \cdot 11\text{H}_2\text{O}$		Cubic	?
Type 2		$\text{A}_2\text{XO}_4 \cdot x\text{H}_2\text{O}$					
29.2.1			Leontite	$\text{Na}(\text{NH}_4, \text{K})\text{SO}_4 \cdot 2\text{H}_2\text{O}$		Orth.	$\text{P}2_12_12_1$
29.2.2			Mirabilite	$\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$		Mon.	$\text{P}2_1/a$
Type 3		$\text{A}_2\text{B}(\text{XO}_4)_2 \cdot x\text{H}_2\text{O}$					
29.3.1.1			Syngenite	$\text{K}_2\text{Ca}(\text{SO}_4)_2 \cdot \text{H}_2\text{O}$		Mon.	$\text{P}2_1/m$
29.3.1.2			Koktaite	$(\text{NH}_4)_2\text{Ca}(\text{SO}_4)_2 \cdot \text{H}_2\text{O}$		Mon.	$\text{P}2_1/m$ or $\text{P}2_1$
29.3.2			Kröhnkite	$\text{Na}_2\text{Cu}(\text{SO}_4)_2 \cdot 2\text{H}_2\text{O}$		Mon.	$\text{P}2_1/c$
29.3.3.1			Bloedite	$\text{Na}_2\text{Mg}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon.	$\text{P}2_1/a$
29.3.3.2			Leonite	$\text{K}_2\text{Mg}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon.	$\text{C}2/m$
29.3.3.3		X	Nickel-bloedite	$\text{Na}_2\text{Ni}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon.	?
29.3.4			Wattevillite	$\text{Na}_2\text{Ca}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$ (?)		Orth?	?
29.3.5.1			Picromerite	$\text{K}_2\text{Mg}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$		Mon.	$\text{P}2_1/a$
29.3.5.2			Cyanochroite	$\text{K}_2\text{Cu}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$		Mon.	$\text{P}2_1/c$
29.3.6.1		X	Mohrite	$(\text{NH}_4)_2\text{Fe}^{2+}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$		Mon.	$\text{P}2_1/c$
29.3.6.2			Boussingaultite	$(\text{NH}_4)_2\text{Mg}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$		Mon.	$\text{P}2_1/a$
29.3.6.3		X	Nickel-boussingaultite	$(\text{NH}_4)_2\text{Ni}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$		Mon.	$\text{P}2_1/a$
29.3.7		X	Mosesite	$\text{Hg}_2\text{N}(\text{SO}_4) \cdot \text{H}_2\text{O}$		Cubic	$\text{F}\bar{4}3m$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4		$A_m B_n (XO_4)_p \cdot xH_2O$, with $(m+n) < 3:2$ and $> 1:1$					
29.4.1		X	Hydroglauberite	$Na_4Ca(SO_4)_3 \cdot 2H_2O$		Orth?	?
29.4.2		X	<i>to be published</i>				
29.4.3		X	Loewite	$Na_{12}Mg_7(SO_4)_{13} \cdot 15H_2O$		Trig.	$R\bar{3}$
29.4.4			Ferrinatrite	$Na_3Fe^{3+}(SO_4)_3 \cdot 3H_2O$		Trig.	$P\bar{3}$
29.4.5.1			Polyhalite	$K_2MgCa_2(SO_4)_4 \cdot 2H_2O$		Tric.	$P1$ or $P\bar{1}$
29.4.5.2			Leightonite	$K_2CuCa_2(SO_4)_4 \cdot 2H_2O$		Tric., ps-Orth.	$P1$ or $P\bar{1}$
29.4.6		X	Metavoltine	$K_2Na_6Fe^{2+}Fe_6^{3+}(SO_4)_{12}O_2 \cdot 18H_2O$		Trig.	$P3$
29.4.7		X	Görgeyite	$K_2Ca_5(SO_4)_6 \cdot H_2O$		Mon.	$C2/c$
Type 5		$AB(XO_4)_2 \cdot xH_2O$					
29.5.1			Krausite	$KFe^{3+}(SO_4)_2 \cdot H_2O$		Mon.	$P2_1/m$
29.5.2		X	Goldichite	$KFe^{3+}(SO_4)_2 \cdot 4H_2O$		Mon.	$P2_1/c$
29.5.3.1			Tamarugite	$NaAl(SO_4)_2 \cdot 6H_2O$		Mon.	$P2_1/a$
29.5.3.2			Amarillite	$NaFe^{3+}(SO_4)_2 \cdot 6H_2O$		Mon.	?
29.5.4.1			Mendezite	$NaAl(SO_4)_2 \cdot 11H_2O$		Mon.	$C2/c$
29.5.4.2			Kalinite	$KAl(SO_4)_2 \cdot 11H_2O$		Mon.	?
29.5.5.1			Potassium Alum	$KAl(SO_4)_2 \cdot 12H_2O$		Cubic	$Pa3$
29.5.5.2			Sodium Alum	$NaAl(SO_4)_2 \cdot 12H_2O$		Cubic	$Pa3$
29.5.5.3			Tschermigite	$(NH_4)Al(SO_4)_2 \cdot 12H_2O$		Cubic	$Pa3$
Type 6		$AXO_4 \cdot xH_2O$					
29.6.1			Bassanite	$2CaSO_4 \cdot H_2O$		Trig.	?
29.6.2.1			Kieserite	$MgSO_4 \cdot H_2O$		Mon.	Cc
29.6.2.2			Szomolnokite	$Fe^{2+}SO_4 \cdot H_2O$		Mon.	$C2/c$
29.6.2.3			Szmikite	$Mn^{2+}SO_4 \cdot H_2O$		Mon.	$C2/c$
29.6.2.4		X	Poitevinite	$(Cu, Fe, Zn)SO_4 \cdot H_2O$		Mon.	$C2/c$
29.6.2.5		X	Gunningite	$(Zn, Mn)SO_4 \cdot H_2O$		Mon.	$C2/c$
29.6.3			Gypsum	$CaSO_4 \cdot 2H_2O$		Mon.	$C2/c$
29.6.4		X	Sanderite	$MgSO_4 \cdot 2H_2O$?	?
29.6.5		X	Bonattite	$CuSO_4 \cdot 3H_2O$		Mon.	Cc

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Type 6							
29.6.6.1		X	Rozenite	$\text{Fe}^{2+}\text{SO}_4 \cdot 4\text{H}_2\text{O}$		Mon.	$P2_1/n$
29.6.6.2		X	Starkeyite	$\text{MgSO}_4 \cdot 4\text{H}_2\text{O}$		Mon.	$P2_1/n$
29.6.6.3			Ilesite	$\text{MnSO}_4 \cdot 4\text{H}_2\text{O}$		Mon.	$P2_1/n$
29.6.6.4		X	Aplowite	$\text{CoSO}_4 \cdot 4\text{H}_2\text{O}$		Mon.	$P2_1/n$
29.6.6.5		X	Boyleite	$\text{ZnSO}_4 \cdot 4\text{H}_2\text{O}$		Mon.	$P2_1/n$
29.6.7.1			Chalcanthite	$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$		Tric.	$P\bar{1}$
29.6.7.2			Siderotil	$\text{Fe}^{2+}\text{SO}_4 \cdot 5\text{H}_2\text{O}$		Tric.	$P\bar{1}$
29.6.7.3			Pentahydrate	$\text{MgSO}_4 \cdot 5\text{H}_2\text{O}$		Tric.	$P\bar{1}$
29.6.7.4		X	Jokokuite	$\text{MnSO}_4 \cdot 5\text{H}_2\text{O}$		Tric.	$P\bar{1}$
29.6.8.1			Hexahydrate	$\text{MgSO}_4 \cdot 6\text{H}_2\text{O}$		Mon.	$C2/c$
29.6.8.2			Bianchite	$\text{ZnSO}_4 \cdot 6\text{H}_2\text{O}$		Mon.	$C2/c$
29.6.8.3		X	Ferrohexahydrate	$\text{Fe}^{2+}\text{SO}_4 \cdot 6\text{H}_2\text{O}$		Mon.	$C2/c$
29.6.8.4		X	Nickel- hexahydrate	$\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$		Mon.	$C2/c$
29.6.8.5		X	Moorhouseite	$\text{CoSO}_4 \cdot 6\text{H}_2\text{O}$		Mon.	$C2/c$
29.6.9			Retgersite	$\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$		Tet.	$P4_12_12$ or $P4_32_12$
29.6.10.1			Melanterite	$\text{Fe}^{2+}\text{SO}_4 \cdot 7\text{H}_2\text{O}$		Mon.	$P2_1/c$
29.6.10.2			Boothite	$\text{CuSO}_4 \cdot 7\text{H}_2\text{O}$		Mon.	$P2_1/c ?$
29.6.10.3		X	Zinc-melanterite	$\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$		Mon.	$P2_1/c ?$
29.6.10.4			Bieberite	$\text{CoSO}_4 \cdot 7\text{H}_2\text{O}$		Mon.	$P2_1/c$
29.6.10.5			Mallardite	$\text{MnSO}_4 \cdot 7\text{H}_2\text{O}$		Mon.	$P2_1/c ?$
29.6.11.1			Epsomite	$\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$		Orth.	$P2_12_12_1$
29.6.11.2			Goslarite	$\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$		Orth.	$P2_12_12_1$
29.6.11.3			Morenosite	$\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$		Orth.	$P2_12_12_1$
29.6.12		X	Minasragrite	$(\text{VO})\text{SO}_4 \cdot 5\text{H}_2\text{O}$		Mon.	$P2_1/a$
29.6.13		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 7			$AB_2(XO_4)_4 \cdot xH_2O$				
29.7.1			Ransomite	$CuFe_2^{3+}(SO_4)_4 \cdot 6H_2O$		Mon.	$P2_1/c$
29.7.2			Roemerite	$Fe^{2+}Fe_2^{3+}(SO_4)_4 \cdot 14H_2O$		Tric.	$P\bar{1}$
29.7.3.1			Pickeringite	$MgAl_2(SO_4)_4 \cdot 22H_2O$		Mon.	$P2$
29.7.3.2			Halotrichite	$Fe^{2+}Al_2(SO_4)_4 \cdot 22H_2O$		Mon.	$P2/m$
29.7.3.3			Apjohnite	$Mn^{2+}Al_2(SO_4)_4 \cdot 22H_2O$		Mon.	$P2_1/c$
29.7.3.4			Dietrichite	$ZnAl_2(SO_4)_4 \cdot 22H_2O$		Mon.	$P2$
29.7.3.5			Bilinite	$Fe^{2+}Fe_2^{3+}(SO_4)_4 \cdot 22H_2O$		Mon.	?
29.7.3.6			Redingtonite	$(Fe^{2+},Mg)(Cr,Al)_2(SO_4)_4 \cdot 22H_2O$		Mon.	?
Type 8			$A_2(XO_4)_3 \cdot xH_2O$				
29.8.1			Lausenite	$Fe_2^{3+}(SO_4)_3 \cdot 6H_2O$		Mon.	?
29.8.2			Kornelite	$Fe_2^{3+}(SO_4)_3 \cdot 7H_2O$		Mon.	$P2_1/n$
29.8.3			Coquimbite	$Fe_2^{3+}(SO_4)_3 \cdot 9H_2O$		Trig.	$P\bar{3}c$
29.8.4			Paracoquimbite	$Fe_2^{3+}(SO_4)_3 \cdot 9H_2O$		Trig.	$R\bar{3}$
29.8.5			Quenstedtite	$Fe_2^{3+}(SO_4)_3 \cdot 10H_2O$		Tric.	$P\bar{1}$
29.8.6			Alunogen	$Al_2(SO_4)_3 \cdot 17H_2O$		Tric.	$P\bar{1}$
29.8.7	X		Meta-alunogen	$Al_4(SO_4)_6 \cdot 27H_2O$		Mon.	?
Type 9			Miscellaneous				
29.9.1	X		Voltaite	$K_2Fe_5^{2+}Fe_4^{3+}(SO_4)_{12} \cdot 18H_2O$		Cubic	$Fd3c$
29.9.2		X	Challantite	$6Fe_2^{3+}(SO_4)_3 \cdot Fe_2O_3 \cdot 63H_2O$?	?
29.9.3		X	Zircosulfate	$Zr(SO_4)_2 \cdot 4H_2O$		Orth.	$Fddd$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 30 ANHYDROUS SULFATES CONTAINING HYDROXYL OR HALOGEN							
Type 1 $(AB)_m(XO_4)_pZ_q$, where $m:p>2:1$							
30.1.1		X	Sundiusite	$Pb_{10}(SO_4)Cl_2O_8$		Mon.	C2, Cm, or C2/m
30.1.2		X	Elyite	$Pb_4Cu(SO_4)(OH)_8$		Mon.	P2 ₁ /a
30.1.3			Brochantite	$Cu_4(SO_4)(OH)_6$		Mon.	P2 ₁ /a
30.1.4		X	<i>to be published</i>				
30.1.5		X	Kleibelsbergite	$Sb_4O_4(SO_4)(OH)_2$		Orth.	Pc2 ₁ b
30.1.6		X	Kogarkoite	$Na_3(SO_4)F$		Mon.	P2 ₁ /m or P2 ₁
30.1.7			Sulphohalite	$Na_6(SO_4)_2FCI$		Trig., ps-Cubic	P3m1
30.1.8		X	Galeite	$Na_{15}(SO_4)_5F_4Cl$		Trig.	P31m
30.1.9		X	Schairerite	$Na_{21}(SO_4)_7F_6Cl$		Trig.	P31m
30.1.10		X	D'Ansite	$Na_{21}Mg(SO_4)_{10}Cl_3$		Cubic	I43m
30.1.11			Chlorothionite	$K_2Cu(SO_4)Cl_2$		Orth.	Pnma
30.1.12			Antlerite	$Cu_3(SO_4)(OH)_4$		Orth.	Pnam
30.1.13		X	Schuetite	$Hg_3(SO_4)O_2$		Hex.	P3 ₁ 21
Type 2 $(AB)_2(XO_4)_2Z_q$							
30.2.1			Lanarkite	$Pb_2(SO_4)O$		Mon.	C2/m
30.2.2			Dolerophanite	$Cu_2(SO_4)O$		Mon.	C2/m
30.2.3			Linarite	$PbCu(SO_4)(OH)_2$		Mon.	P2 ₁ /m
30.2.4.1			Alunite	$KAl_3(SO_4)_2(OH)_6$		Trig.	R3m
30.2.4.2			Natroalunite	$NaAl_3(SO_4)_2(OH)_6$		Trig.	R3m
30.2.4.3		X	Schlossmacherite	$(H_3O)Al_3(SO_4)_2(OH)_6$		Trig.	R3m
30.2.4.4		X	Osarizawaite	$PbCuAl_2(SO_4)_2(OH)_6$		Trig.	R3m
30.2.4.5		X	<i>to be published</i>				
30.2.5.1			Jarosite	$KFe_3^+(SO_4)_2(OH)_6$		Trig.	R3m
30.2.5.2			Natrojarosite	$NaFe_3^+(SO_4)_2(OH)_6$		Trig.	R3m
30.2.5.3			Hydronium jarosite	$(H_3O)Fe_3^+(SO_4)_2(OH)_6$		Trig.	R3m

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Type 2							
30.2.5.4			Ammoniojarosite	$(\text{NH}_4)\text{Fe}_3^{3+}(\text{SO}_4)_2(\text{OH})_6$		Trig.	R3m
30.2.5.5			Argentojarosite	$\text{AgFe}_3^{3+}(\text{SO}_4)_2(\text{OH})_6$		Trig.	$\bar{R}3m$
30.2.5.6			Plumbojarosite	$\text{PbFe}_3^{3+}(\text{SO}_4)_2(\text{OH})_6$		Trig.	R3m
30.2.5.7			Beaverite	$\text{Pb}(\text{Cu}, \text{Fe}^{3+}, \text{Al})_3(\text{SO}_4)_6$		Trig.	R3m
30.2.6		X	Itoite	$\text{Pb}_3\text{Ge}(\text{SO}_4)_2\text{O}_2(\text{OH})_2$		Orth.	Pnma
30.2.7		X	Texasite	$\text{Pr}_2(\text{SO}_4)_2\text{O}_2$		Orth.	Imm2 or I222
Type 3 Miscellaneous							
30.3.1		X	Euchlorine	$(\text{K}, \text{Na})_8\text{Cu}_9(\text{SO}_4)_{10}(\text{OH})_{10}$ (?)		Orth.	?
30.3.2		X	Caracolite	$\text{Na}_3\text{Pb}_2(\text{SO}_4)_3\text{Cl}$		Hex.	$\text{P}6_3/\text{m}$
30.3.3		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 31			HYDRATED SULFATES CONTAINING HYDROXYL OR HALOGEN				
Type 1			$(AB)_m(XO_4)_pZ_q \cdot xH_2O$, where $m:p>6:1$				
31.1.1			Connellite	$Cu_{37}(SO_4)_2(OH)_{62}Cl_8 \cdot 8H_2O$		Hex.	$P6_3/mmc$
31.1.2	X		Glaucokeirinite	$(Zn,Cu)_{10}Al_4(SO_4)(OH)_{30} \cdot 2H_2O$?	?
31.1.3	X		Mooreite	$Mg_9Mn_2Zn_4(SO_4)_2(OH)_{26} \cdot 8H_2O$		Mon.	$P2_1/a$
31.1.4.1	X		Torreyite	$(Mg,Mn)_5^{2+}Zn_2(SO_4)(OH)_{12} \cdot 4H_2O(?)$		Mon.	$P2_1/c$
31.1.4.2		X	Lawsonbauerite	$(Mn,Mg)_5^{2+}Zn_2(SO_4)(OH)_{12} \cdot 4H_2O(?)$		Mon.	$P2_1/c$
31.1.5			Spangolite	$Cu_6Al(SO_4)(OH)_{12} \cdot 4H_2O$		Trig.	$P3c1$
Type 2			$(AB)_6(XO_4)Z_q \cdot xH_2O$				
31.2.1			Cyanotrichite	$Cu_4Al_2(SO_4)(OH)_{12} \cdot 2H_2O$		Orth.	?
31.2.2			Woodwardite	$Cu_4Al_2(SO_4)(OH)_{12} \cdot 2H_2O(?)$?	?
31.2.3			Zincaluminite	$Zn_6Al_6(SO_4)_2(OH)_{26} \cdot 5H_2O$		Hex?	?
31.2.4			Uranopilite	$(UO_2)_6(SO_4)(OH)_{10} \cdot 12H_2O$		Mon.	?
31.2.5			Meta-uranopilite	$(UO_2)_6(SO_4)(OH)_{10} \cdot 5H_2O$		Orth.	?
31.2.6.1		X	Chukhrovite-(Y)	$Ca_3Al_2(Y,Ce)(SO_4)F_{13} \cdot 10H_2O$		Cubic	Fd3
31.2.6.2		X	Chukhrovite-(Ce)	$Ca_3Al_2(Ce,Nd)(SO_4)F_{13} \cdot 10H_2O$		Cubic	Fd3
Type 3			$(AB)_5(XO_4)Z_q \cdot xH_2O$				
31.3.1		X	Creedite	$Ca_3Al_2(SO_4)(F,OH) \cdot 2H_2O$		Mon.	$C2/c$
31.3.2			Chalcoalumite	$CuAl_4(SO_4)(OH)_{12} \cdot 3H_2O$		Mon.	$P2_1$
Type 4			$(AB)_4(XO_4)Z_q \cdot xH_2O$				
31.4.1		X	Posnjakite	$Cu_4(SO_4)(OH)_6 \cdot H_2O(?)$		Mon.	Pa
31.4.2		X	Wroewolfeite	$Cu_4(SO_4)(OH)_6 \cdot 2H_2O$		Mon.	Pc or $P2/c$
31.4.3			Langite	$Cu_4(SO_4)(OH)_6 \cdot 2H_2O$		Orth.	$Pmc2_1$
31.4.4			Felsöbanyaite	$Al_4(SO_4)(OH)_{10} \cdot 5H_2O$		Orth.?	?
31.4.5			Basaluminite	$Al_4(SO_4)(OH)_{10} \cdot 5H_2O$		Hex.?	?
31.4.6			Hydrobasaluminite	$Al_4(SO_4)(OH)_{10} \cdot 12-36H_2O$?	?

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Type 5			$(AB)_3(XO_4)_q \cdot xH_2O$				
31.5.1			Sideronatrite	$Na_2Fe^{3+}(SO_4)(OH) \cdot 3H_2O$		Orth.	Pbnm
31.5.2			Metasidero- natrite	$Na_4Fe_2^{3+}(SO_4)_2(OH)_2 \cdot 3H_2O$		Orth.	?
Type 6			$(AB)_5(XO_4)_2Z_q \cdot xH_2O$				
31.6.1			Devilline	$CaCu_4(SO_4)_2(OH)_6 \cdot 3H_2O$		Mon.	$P2_1/c$
31.6.2			Serpierite	$CaCu_4(SO_4)_2(OH)_6 \cdot 3H_2O$		Mon.	$C2/c$
31.6.3	X		Ktenasite	$ZnCu_4(SO_4)_2(OH)_6 \cdot 6H_2O$		Mon.	$P2_1/c$
31.6.4	X		Peretaite	$CaSb_4O_4(SO_4)_2(OH)_2 \cdot 2H_2O$		Mon.	$C2/c$
31.6.5			Arnimite	$Cu_5(SO_4)_2(OH)_6 \cdot 3H_2O$ (?)	X	Orth.	?
Type 7			$(AB)_2(XO_4)_q \cdot xH_2O$				
31.7.1			Kainite	$KMg(SO_4)Cl \cdot 3H_2O$		Mon.	$C2/m$
31.7.2	X		Uklonskovite	$NaMg(SO_4)(OH) \cdot 2H_2O$		Mon.	$P2_1/m$
31.7.3			Ungemachite	$Na_8K_3Fe^{3+}(SO_4)_6(OH)_2 \cdot 10H_2O$		Trig.	$R\bar{3}$
31.7.4			Clinoungemachite	$Na_9K_3Fe^{3+}(SO_4)_6(OH)_3 \cdot 9H_2O$ (?)		Mon.	?
31.7.5			Aluminite	$Al_2(SO_4)(OH)_4 \cdot 7H_2O$		Mon.	$P2_1/c$
31.7.6	X		Meta-aluminite	$Al_2(SO_4)(OH)_4 \cdot 5H_2O$		Mon.	?
31.7.7.1	X		Despujolsite	$Ca_3Mn^{4+}(SO_4)_2(OH)_6 \cdot 3H_2O$		Hex.	$P\bar{6}2c$
31.7.7.2	X		Schaurteite	$Ca_3Ge^{4+}(SO_4)_2(OH)_6 \cdot 3H_2O$		Hex.	$P\bar{6}2c$ or $P6_3/mmc$
31.7.7.3	X		Fleischerite	$Pb_3Ge^{4+}(SO_4)_2(OH)_6 \cdot 3H_2O$		Hex.	$P\bar{6}2c$
Type 8			$(AB)_3(XO_4)_2Z_q \cdot xH_2O$				
31.8.1			Natrochalcite	$NaCu_2(SO_4)_2(OH) \cdot H_2O$		Mon.	$C2/m$
31.8.2			Johannite	$Cu(UO_2)_2(SO_4)_2(OH)_2 \cdot 6H_2O$		Tric.	$P\bar{1}$

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Type 9		(AB)(XO ₄)Z _q .xH ₂ O					
31.9.1			Butlerite	Fe ³⁺ (SO ₄)(OH).2H ₂ O		Mon.	P2 ₁ /m
31.9.2			Parabutlerite	Fe ³⁺ (SO ₄)(OH).2H ₂ O		Orth.	Pmnb
31.9.3	X		Amarantite	Fe ₂ ³⁺ (SO ₄) ₂ O.7H ₂ O		Tric.	P $\bar{1}$
31.9.4	X		Hohmannite	Fe ₂ ³⁺ (SO ₄) ₂ O.8H ₂ O		Tric.	P $\bar{1}$
31.9.5			Metahohmannite	Fe ₂ ³⁺ (SO ₄) ₂ (OH) ₂ .3H ₂ O (?)		Tric.?	P1 or P $\bar{1}$?
31.9.6.1			Botryogen	Fe ³⁺ Mg(SO ₄) ₂ (OH).7H ₂ O		Mon.	P2 ₁ /n
31.9.6.2	X		Zincbotryogen	Fe ³⁺ Zn(SO ₄) ₂ (OH).7H ₂ O		Mon.	P2 ₁ /n
31.9.7			Guildite	CuFe ³⁺ (SO ₄) ₂ (OH).4H ₂ O		Mon.	P2 ₁ /m
31.9.8	X		Aubertite	CuAl(SO ₄) ₂ Cl.14H ₂ O		Tric.	P $\bar{1}$
31.9.9	X		Wilcoxite	MgAl(SO ₄) ₂ F.18H ₂ O		Tric.	P1 or P $\bar{1}$
31.9.10	X		Jurbanite	Al(SO ₄)(OH).5H ₂ O		Mon.	P2 ₁ /n
31.9.11	X		Rostite	Al(SO ₄)(OH).5H ₂ O		Orth.	Pcab
31.9.12			Fibroferrite	Fe ³⁺ (SO ₄)(OH).xH ₂ O (x=5)		Trig.	R $\bar{3}$
31.9.13	X		Slavikite	NaMg ₂ Fe ₅ ³⁺ (SO ₄) ₇ (OH) ₆ .33H ₂ O		Trig.	R $\bar{3}$
31.9.14	X		Lannonite	HCa ₄ Mg ₂ Al ₄ (SO ₄) ₈ F ₉ .32H ₂ O		Tet.	?
Type 10		Miscellaneous					
31.10.1	X		Carrboydite	(Ni,Cu) ₁₄ Al ₉ (SO ₄ ,CO ₃) ₆ (OH) ₄₃ . 7H ₂ O		Hex.	?
31.10.2.1			Ettringite	Ca ₆ Al ₂ (SO ₄) ₃ (OH) ₁₂ .26H ₂ O		Hex.	P6 ₃ /mmc
31.10.2.2	X		Bentorite	Ca ₆ Cr ₂ (SO ₄) ₃ (OH) ₁₂ .26H ₂ O		Hex.	P6 ₃ /mmc
31.10.3	X		Zaherite	Al ₁₂ (SO ₄) ₅ (OH) ₂₆ .20H ₂ O		?	?

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Type 10							
31.10.4.1	X		Zippeite	$K_4(UO_2)_6(SO_4)_3(OH)_{10} \cdot 4H_2O$		Orth.	?
31.10.4.2		X	Sodium-zippeite	$Na_4(UO_2)_6(SO_4)_3(OH)_{10} \cdot 4H_2O$		Orth.	?
31.10.4.3		X	Magnesium-zippeite	$Mg_2(UO_2)_6(SO_4)_3(OH)_{10} \cdot 16H_2O$		Orth.	?
31.10.4.4		X	Nickel-zippeite	$Ni_2(UO_2)_6(SO_4)_3(OH)_{10} \cdot 16H_2O$		Orth.	?
31.10.4.5		X	Zinc-zippeite	$Zn_2(UO_2)_6(SO_4)_3(OH)_{10} \cdot 16H_2O$		Orth.	?
31.10.4.6		X	Cobalt-zippeite	$Co(UO_2)_6(SO_4)_3(OH)_{10} \cdot 16H_2O$		Orth.	?
31.10.5		X	Aluminocopiapite	$AlFe_6^{3+}(SO_4)_9(OH)_3 \cdot 30H_2O$		Tric.	$P\bar{1}$
31.10.6.1			Copiapite	$Fe^{2+}Fe_4^{3+}(SO_4)_6(OH)_2 \cdot 20H_2O$		Tric.	$P\bar{1}$
31.10.6.2			Magnesiocopiapite	$MgFe_4^{3+}(SO_4)_6(OH)_2 \cdot 20H_2O$		Tric.	$P\bar{1}$
31.10.6.3			Cuprocopiapite	$CuFe_4^{3+}(SO_4)_6(OH)_2 \cdot 20H_2O$		Tric.	$P\bar{1}$
31.10.6.4		X	Ferricopiapite	$Fe_5^{3+}(SO_4)_6O(OH) \cdot 20H_2O$		Tric.	$P\bar{1}$
31.10.6.5		X	Calcicocopiapite	$CaFe_4^{3+}(SO_4)_6(OH)_2 \cdot 19H_2O$		Tric.	?
31.10.6.6		X	Zincocopiapite	$ZnFe_4^{3+}(SO_4)_6(OH)_2 \cdot 18H_2O$		Tric.	$P\bar{1}$
31.10.7		X	Honessite	$Ni_6^{2+}Fe_2^{3+}(OH)_{16}(SO_4) \cdot 4H_2O$		Trig.	$R\bar{3}m$ or $R3m$
31.10.8		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 32 COMPOUND SULFATES							
Type 1		Miscellaneous					
32.1.1			Hanksite	$\text{KNa}_{22}(\text{SO}_4)_9(\text{CO}_3)_2\text{Cl}$		Hex.	$\text{P6}_3/\text{m}$
32.1.2	X		Nakauriite	$(\text{Mn}, \text{Ni}, \text{Cu})_8(\text{SO}_4)_4(\text{CO}_3)(\text{OH})_6 \cdot 48\text{H}_2\text{O}$		Orth.	?
32.1.3			Caledonite	$\text{Cu}_2\text{Pb}_5(\text{SO}_4)_3(\text{CO}_3)(\text{OH})_6$		Orth.	$\text{Pmn}2_1$
32.1.4			Wherryite	$\text{CuPb}_4(\text{SO}_4)_3(\text{CO}_3)(\text{Cl}, \text{OH})_2\text{O}$		Mon.	$\text{C}2, \text{Cm}$ or $\text{C}2/\text{m}$
32.1.5	X		Hauckite	$\text{Fe}_3^{3+}(\text{Mg}, \text{Mn})_{24}\text{Zn}_{18}(\text{SO}_4)_4(\text{CO}_3)_2^-$ $(\text{OH})_{81}(\text{?})$		Hex.	?
32.1.6	X		<i>to be published</i>				
32.1.7			Burkeite	$\text{Na}_6(\text{SO}_4)_2(\text{CO}_3)$		Orth.	Pmm or $\text{Pmn}2_1$
32.1.8	X		Tatarskite	$\text{Ca}_6\text{Mg}_2(\text{SO}_4)_2(\text{CO}_3)_2\text{Cl}_4(\text{OH})_4 \cdot 7\text{H}_2\text{O}$		Orth.	?
32.1.9	X		Jouravskite	$\text{Ca}_3\text{Mn}^{4+}(\text{SO}_4)(\text{CO}_3)(\text{OH})_6 \cdot 12\text{H}_2\text{O}$		Hex.	P6_3
32.1.10	X		<i>to be published</i>				
32.1.11	X		Heidornite	$\text{Na}_2\text{Ca}_3(\text{SO}_4)[\text{B}_5\text{O}_8(\text{OH})_2]\text{Cl}$		Mon.	$\text{C}2/\text{c}$
32.1.12	X		Humberstonite	$\text{Na}_7\text{K}_3\text{Mg}_2(\text{SO}_4)_6(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$		Trig.	$\text{R}\bar{3}$
32.1.13	X		Olsacherite	$\text{Pb}_2(\text{SO}_4)(\text{SeO}_4)$		Orth.	$\text{P}2_12_12_1$
Tychite			[with carbonates]	Woodhouseite		[with phosphates]	
Leadhillite			[with carbonates]	Weilerite		[with phosphates]	
Susannite			[with carbonates]	Tsumebite		[with phosphates]	
Schroekingierite			[with carbonates]	Arsentsumebite		[with phosphates]	
Nasledovite			[with carbonates]	Sarmientite		[with phosphates]	
Motukoreaite			[with carbonates]	Bukovskyite		[with phosphates]	
Darapskite			[with nitrates]	Sanjuanite		[with phosphates]	
Poughite			[with tellurites]	Diadochite		[with phosphates]	
Tlapallite			[with tellurites]	Pitticite		[with phosphates]	
Ardealite			[with phosphates]	Zykaitite		[with phosphates]	
Orpheite			[with phosphates]	Sasaitite		[with phosphates]	
Beudantite			[with phosphates]	Coconinoite		[with phosphates]	
Corkite			[with phosphates]	Xiangjangite		[with phosphates]	
Hidalgoite			[with phosphates]	Kribergite		[with phosphates]	
Svanbergite			[with phosphates]	Parnauite		[with phosphates]	
Hinsdalite			[with phosphates]	Chalcophyllite		[with phosphates]	
Kemmlitzite			[with phosphates]	Schiefflinite		[with tellurates]	

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CLASS 33 SELENATES AND TELLURATES							
Type 1 $(AB)_m(XO_4)_pZ_q$							
33.1.1		X	Schmiederite	$(Pb,Cu)_2(SeO_4)(OH)_2$ (?)		Mon?	?
33.1.2		X	Xocomecatlite	$Cu_3(Te^{6+}O_4)(OH)_4$		Orth?	?
33.1.3		X	Khinite	$Cu_3Pb(Te^{6+}O_4)(OH)_6$		Orth.	Fddd
33.1.4		X	Parakhinite	$Cu_3Pb(Te^{6+}O_4)(OH)_6$		Hex.	$P6_222$
Type 2 $(AB)_m(XO_6) \cdot xH_2O$, where x can equal zero							
33.2.1		X	Kuranakhite	$PbMn^{4+}(Te^{6+}O_6)$		Orth., ps-Hex.	?
33.2.2			Montanite	$Bi_2(Te^{6+}O_6) \cdot 2H_2O$	X	Mon.	?
33.2.3		X	Cuzticite	$Fe_2^{3+}(Te^{6+}O_6) \cdot 3H_2O$		Hex.	?
Type 3 Compound Selenates and Tellurates							
33.3.1		X	Schiefflinite	$Pb_8(Te^{6+}O_4)_5(SO_4)_3 \cdot 8H_2O$		Orth.	Cmcm
33.3.2		X	Tlalocite	$(Cu,Zn)_{16}(Te^{4+}O_3)(Te^{6+}O_4)_2^-$ $Cl(OH)_{25} \cdot 27H_2O$		Mon.	?
33.3.3		X	Girdite	$H_2Pb_3(Te^{4+}O_3)(Te^{6+}O_6)$		Mon.	?
			Olsacherite	[with sulfates]			
			Tlapallite	[with tellurites]			
			Oboyerite	[with tellurites]			
			Dugganite	[with phosphates]			

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CLASS 34 SELENITES AND TELLURITES							
Type 1 $A(XO_3)$							
34.1.1		X	Molybdomenite	$PbSeO_3$		Mon.	$P2_1/n$
34.1.2		X	Fairbankite	$PbTe^{4+}O_3$		Tric.	$P\bar{1}$
34.1.3		X	Balyakinite	$CuTe^{4+}O_3$		Orth.	Pmcn
34.1.4		X	<i>to be published</i>				
34.1.5		X	Moctezumite	$Pb(UO_2)(Te^{4+}O_3)_2$		Mon.	$P2_1/c$
34.1.6		X	Schmitterite	$(UO_2)(Te^{4+}O_3)$		Orth.	Pmab or $P2_1ab$
Type 2 $A(XO_3) \cdot xH_2O$							
34.2.1		X	Graemite	$CuTe^{4+}O_3 \cdot H_2O$		Orth.	Pcmm
34.2.2.1			Chalcomenite	$CuSeO_3 \cdot 2H_2O$		Orth.	$P2_12_12_1$
34.2.2.2		X	Teineite	$CuTe^{4+}O_3 \cdot 2H_2O$		Orth.	$P2_12_12_1$
34.2.3.1		X	Clinochalcomenite	$CuSeO_3 \cdot 2H_2O$		Mon.	$P2_1/n$
34.2.3.2			Cobaltomenite	$CoSeO_3 \cdot 2H_2O$		Mon.	$P2_1/n$
34.2.3.3		X	Ahlfeldite	$NiSeO_3 \cdot 2H_2O$		Mon.	$P2_1/n$
34.2.4		X	Choloalite	$CuPb(Te^{4+}O_3)_2 \cdot H_2O$		Cubic	?
Type 3 $A_2(XO_3)_3 \cdot xH_2O$							
34.3.1		X	Cliffordite	$UTe_3^{4+}O_9$		Cubic	Pa3
34.3.2.1		X	Zemannite	$(H,Na)_2(Zn,Fe)_2(Te^{4+}O_3)_3 \cdot nH_2O$		Hex.	$P6_3/m$
34.3.2.2		X	<i>to be published</i>				
34.3.3			Emmonsite	$Fe_2^{3+}(Te^{4+}O_3)_3 \cdot 2H_2O$		Tric.	?
34.3.4		X	Mandarinoite	$Fe_2^{3+}(SeO_3)_3 \cdot 4H_2O$		Mon.	$P2_1/c$
34.3.5			Blakeite	ferric tellurite		?	?
Type 4 $A(X_2O_5)$							
34.4.1		X	Denningite	$(Mn^{2+}, Zn)(Te_2^{4+}O_5)$		Tet.	$P4_2/nbc$
34.4.2		X	Rajite	$CuTe_2^{4+}O_5$		Mon.	$P2_1/c$

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Type 5			A(X ₃ O ₈)				
34.5.1		X	Spiroffite	(Mn,Zn) ₂ Te ₃ ⁴⁺ O ₈		Mon.	Cc or C2/c
34.5.2		X	Winstanleyite	TiTe ₃ ⁴⁺ O ₈		Cubic	Ia3
34.5.3		X	Carlfriesite	CaTe ₂ ⁴⁺ Te ⁶⁺ O ₈		Mon.	C2/c
Type 6			Anhydrous Selenites and Tellurites containing Hydroxyl or Halogen				
34.6.1		X	Mackayite	Fe ³⁺ Te ₂ ⁴⁺ O ₅ (OH)		Tet.	I4 ₁ /acd
34.6.2		X	Rodalquilarite	H ₃ Fe ³⁺ (Te ⁴⁺ O ₃) ₄ Cl		Tric.	P1 or P1̄
34.6.3		X	Quetzalcoatlite	Cu ₄ Zn ₈ (Te ⁴⁺ O ₃) ₃ (OH) ₁₈		Hex.	C6 ₃ 2
Type 7			Hydrated Selenites and Tellurites containing Hydroxyl or Halogen				
34.7.1		X	Sonoraite	Fe ³⁺ (Te ⁴⁺ O ₃)(OH)·H ₂ O		Mon.	P2 ₁ /c
34.7.2		X	Cesbronite	Cu ₅ (Te ⁴⁺ O ₃) ₂ (OH) ₆ ·2H ₂ O		Orth.	Pbcn
34.7.3		X	Guilleminite	Ba(UO ₂) ₃ (SeO ₃) ₂ (OH) ₄ ·3H ₂ O		Orth.	Pbcn
34.7.4		X	Marthozite	Cu(UO ₂) ₃ (SeO ₃) ₃ (OH) ₂ ·7H ₂ O		Orth.	Pnma or Pn2 ₁ a
34.7.5		X	Derriksite	Cu ₄ (UO ₂)(SeO ₃) ₂ (OH) ₆ ·H ₂ O		Orth.	Pnmm or Pnm2
34.7.6		X	Demesmaekerite	Pb ₂ Cu ₅ (UO ₂) ₂ (SeO ₃) ₆ (OH) ₆ ·2H ₂ O		Tric.	P1 or P1̄
Type 8			Compound Selenites and Tellurites				
34.8.1		X	Poughite	Fe ₂ ³⁺ (Te ⁴⁺ O ₃) ₂ (SO ₄)·3H ₂ O		Orth.	Pmnb
34.8.2		X	Tlapallite	H ₆ Ca ₂ Cu ₃ (Te ⁴⁺ O ₃) ₄ (Te ⁶⁺ O ₄)(SO ₄)		Mon.	?
34.8.3		X	Oboyerite	H ₆ Pb ₆ (Te ⁴⁺ O ₃) ₃ (Te ⁶⁺ O ₆) ₂ ·2H ₂ O		Tric.	?
34.8.4		X	Mroseite	Ca(Te ⁴⁺ O ₂)(CO ₃)		Orth.	Pbca
34.8.5		X	Eztlite	Fe ₆ ³⁺ Pb ₂ (Te ⁴⁺ O ₃)(Te ⁶⁺ O ₆)(OH) ₁₀ · 8H ₂ O		Mon.	?
			Girdite Tlalocite	[with tellurates] [with tellurates]			

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CLASS 35 ANHYDROUS CHROMATES							
Type 1		A_2XO_4					
35.1.1			Tarapacaite	K_2CrO_4		Orth.	Pm $\bar{c}n$
35.1.2	X		Phoenicochroite	$Pb_2(CrO_4)O$		Mon.	C2/m
Type 2		$A_2X_2O_7$					
35.2.1			Lopezite	$K_2Cr_2O_7$		Tric.	P $\bar{1}$
Type 3		AXO_4					
35.3.1			Crocoite	$PbCrO_4$		Mon.	P2 $_1$ /n
35.3.2		X	Chromatite	$CaCrO_4$		Tet.	I4 $_1$ /amd
35.3.3		X	<i>to be published</i>				
Type 4		Miscellaneous					
35.4.1		X	Santanaite	$9PbO \cdot 2PbO_2 \cdot CrO_3$		Hex.	P6 $_3$ 22
CLASS 36 COMPOUND CHROMATES							
Type 1		Miscellaneous					
36.1.1.1			Vauquelinite	$Pb_2Cu(CrO_4)(PO_4)(OH)$		Mon.	P2 $_1$ /n
36.1.1.2		X	Fornacite	$(Pb,Cu)_3(CrO_4)[(As,P)O_4](OH)$		Mon.	P2 $_1$ /c
36.1.2.1		X	Iranite	$Pb_{10}Cu(CrO_4)_6(SiO_4)_2(F,OH)_2$		Tric.	P1
36.1.2.2		X	Hemihedrite	$Pb_{10}Zn(CrO_4)_6(SiO_4)_2F_2$		Tric.	P1
36.1.3		X	Macquartite	$Pb_3Cu(CrO_4)(SiO_3)(OH)_4 \cdot 2H_2O$		Mon.	C2/m ?
			Dietzeite	[with iodates]			
			Embreyite	[with phosphates]			

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	SSD	CRYSTAL SYSTEM	SPACE GROUP
CLASS 37 ANHYDROUS ACID PHOSPHATES, ETC.							
Type 1			Miscellaneous				
37.1.1.1			Monetite	$\text{Ca}[\text{HPO}_4]$		Tric.	$P\bar{1}$
37.1.1.2	X		Weilite	$\text{Ca}[\text{HAsO}_4]$		Tric.	$P\bar{1}$
37.1.2			Schultenite	$\text{Pb}[\text{HAsO}_4]$		Mon.	Pa or $P2_1/c$
37.1.3	X		Phosphammite	$(\text{NH}_4)_2[\text{HPO}_4]$		Mon.	$P2_1/c$
37.1.4.1	X		Biphosphammite	$(\text{NH}_4, \text{K})\text{H}_2\text{PO}_4$		Tet.	$I\bar{4}2d$
37.1.4.2	X		Archerite	KH_2PO_4		Tet.	?
CLASS 38 ANHYDROUS NORMAL PHOSPHATES, ETC.							
Type 1			ABXO_4				
38.1.1.1			Triphylite	$\text{Li}(\text{Fe}^{2+}, \text{Mn}^{2+})\text{PO}_4$		Orth.	$Pnma$ or $Pmnb$
38.1.1.2			Lithiophilite	$\text{Li}(\text{Mn}^{2+}, \text{Fe}^{2+})\text{PO}_4$		Orth.	$Pmnb$
38.1.2.1	X		Maričite	$\text{NaFe}^{2+}(\text{PO}_4)$		Orth.	$Pmnb$
38.1.2.2			Natrophilite	$\text{NaMn}^{2+}(\text{PO}_4)$		Orth.	$Pnam$
38.1.2.3	X		Buchwaldite	$\text{NaCa}(\text{PO}_4)$		Orth.	$Pmn2$
38.1.3	X		Olgite	$\text{NaSr}(\text{PO}_4)$		Trig.	$P\bar{3}m1$, $P3m1$, or $P321$
38.1.4.1			Ferrisicklerite	$\text{Li}_x(\text{Fe}, \text{Mn})_x^{2+}\text{Fe}_{1-x}^{3+}(\text{PO}_4)$		Orth.	$Pmnb$
38.1.4.2			Sicklerite	$\text{Li}(\text{Mn}^{2+}, \text{Fe}^{3+})\text{PO}_4$		Orth.	$Pmnb$
38.1.5			Beryllonite	$\text{NaBe}(\text{PO}_4)$		Mon.	$P2_1/n$
38.1.6	X		Panethite	$(\text{Na}, \text{Ca})_2(\text{Mg}, \text{Fe})_2^{2+}(\text{PO}_4)_2$		Mon.	$P2_1/n$
38.1.7	X		Brianite	$\text{Na}_2\text{CaMg}(\text{PO}_4)_2$		Orth.	$P222$
38.1.8	X		Vitusite	$\text{Na}_3\text{Ce}(\text{PO}_4)_2$		Orth.	$Pcmb$ or $Pc2_1b$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 2		(AB) ₅ (XO ₄) ₃					
38.2.1.1			Berzeliite	(Ca,Na) ₃ (Mg,Mn) ₂ (AsO ₄) ₃		Cubic	Ia3d
38.2.1.2			Manganberzeliite	(Ca,Na) ₃ (Mn,Mg) ₂ (AsO ₄) ₃		Cubic	Ia3d
38.2.2			Caryinite	(Na,Ca) ₂ (Mn,Mg) ₃ (AsO ₄) ₃ (?)		Mon.	C2/c
38.2.3.1		X	Ferrohagendorfite	Na ₄ Ca ₄ Fe ₄ ²⁺ Fe ₈ ²⁺ (PO ₄) ₁₂		Mon.	C2/c
38.2.3.2		X	Hagendorfite	Na ₄ Ca ₄ Mn ₄ ²⁺ Fe ₈ ²⁺ (PO ₄) ₁₂		Mon.	C2/c
38.2.3.3		X	Varulite	Na ₄ Ca ₄ Mn ₄ ²⁺ Mn ₈ ²⁺ (PO ₄) ₁₂		Mon.	C2/c
38.2.3.4		X	Maghagendorfite	□ ₄ Na ₄ Mn ₄ ²⁺ Mg ₈ ²⁺ (PO ₄) ₁₂		Mon.	C2/c
38.2.3.5		X	Ferroalluauite	□ ₄ Na ₄ Fe ₄ ²⁺ Fe ₈ ³⁺ (PO ₄) ₁₂		Mon.	C2/c
38.2.3.6		X	Alluauite	□ ₄ (Na,Ca) ₄ Mn ₄ ²⁺ Fe ₈ ²⁺ (PO ₄) ₁₂		Mon.	C2/c
38.2.4.1		X	Ferrowyllieite	Na ₄ □ ₂ Mn ₂ ²⁺ Fe ₄ ²⁺ Fe ₄ ³⁺ Al ₄ (PO ₄) ₁₂		Mon.	P2 ₁ /n
38.2.4.2		X	Wyllieite	Na ₄ □ ₂ Ca ₂ Mn ₄ ²⁺ Fe ₄ ³⁺ Al ₄ (PO ₄) ₁₂		Mon.	P2 ₁ /n
38.2.4.3		X	Rosemaryite	Na ₄ □ ₂ (Mn,Ca) ₂ Mn ₄ ²⁺ Fe ₄ ³⁺ Al ₄ (PO ₄) ₁₂		Mon.	P2 ₁ /n
38.2.5.1		X	Fillowite	Na ₁₂ Ca ₄ (Mn,Fe) ₄₄ ²⁺ (PO ₄) ₃₆		Trig.	R $\bar{3}$
38.2.5.2		X	Johnsomervilleite	Na ₁₀ Ca ₆ Mg ₁₈ (Fe ²⁺ ,Mn) ₂₅ (PO ₄) ₃₆		Trig.	?
38.2.6.1		X	O'Danielite	Na(Zn,Mg) ₃ H ₂ (AsO ₄) ₃		Mon.	C2/c
38.2.6.2		X	<i>to be published</i>				
Type 3		(AB) ₃ (XO ₄) ₂					
38.3.1.1		X	Sarcopsidite	(Fe,Mg) ₃ ²⁺ (PO ₄) ₂		Mon.	P2 ₁ /a
38.3.1.2		X	Farringtonite	Mg ₃ ²⁺ (PO ₄) ₂		Mon.	P2 ₁ /n
38.3.2		X	Xanthiosite	Ni ₃ (AsO ₄) ₂		Mon.	P2 ₁ /a
38.3.3.1		X	Graftonite	(Ca,Mn)(Fe,Mn) ₂ ²⁺ (PO ₄) ₂		Mon.	P2 ₁ /c
38.3.3.2		X	Beusite	(Ca,Mn)(Mn,Fe) ₂ ²⁺ (PO ₄) ₂		Mon.	P2 ₁ /c
38.3.4.1		X	Merrillite-(Ca)	Ca ₁₉ (Mg,Fe) ₂ ²⁺ (PO ₄) ₁₄		Trig.	R3c
38.3.4.2		X	Merrillite-(Na)	Ca ₁₈ Na ₂ (Mg,Fe) ₂ ²⁺ (PO ₄) ₁₄		Trig.	R3c
38.3.4.3		X	Merrillite-(Y)	Ca ₁₆ Y ₂ (Mg,Fe) ₂ ²⁺ (PO ₄) ₁₄		Trig.	R3c
38.3.4.4		X	Whitlockite	Ca ₁₈ H ₂ (Mg,Fe) ₂ ²⁺ (PO ₄) ₁₄		Trig.	R3c

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3							
38.3.5		X	Stanfieldite	$\text{Ca}_7(\text{Ca},\text{Mg})_2\text{Mg}_9(\text{PO}_4)_{12}$		Mon.	$P2_1/c$?
38.3.6		X	Hurlbutite	$\text{CaBe}_2(\text{PO}_4)_2$		Mon.	$P2_1/c$
38.3.7		X	Stranskiite	$\text{CuZn}_2(\text{AsO}_4)_2$		Tric.	$P\bar{1}$
38.3.8		X	Keyite	$(\text{Cu},\text{Zn},\text{Cd})_3(\text{AsO}_4)_2$		Mon.	$I2/m, Im,$ or $I2$
38.3.9		X	<i>to be published</i>				
Type 4 AXO_4							
38.4.1.1			Heterosite	$(\text{Fe},\text{Mn})^{3+}(\text{PO}_4)$		Orth.	Pmnb
38.4.1.2			Purpurite	$(\text{Mn},\text{Fe})^{3+}(\text{PO}_4)$		Orth.	Pmnb
38.4.2			Berlinite	AlPO_4		Trig.	$P3_121$ or $P3_221$
38.4.3.1			Monazite-(Ce)	$(\text{Ce},\text{La})\text{PO}_4$		Mon.	$P2_1/n$
38.4.3.2		X	Monazite-(La)	$(\text{La},\text{Ce})\text{PO}_4$		Mon.	$P2_1/n$
38.4.3.3		X	Cheralite	$(\text{Ca},\text{Th},\text{Ce})(\text{P},\text{Si})\text{O}_4$ (?)		Mon.	$P2_1/n$
38.4.3.4		X	Brabantite	$\text{CaTh}(\text{PO}_4)_2$		Mon.	$P2_1/n$
38.4.4.1			Rooseveltite	BiAsO_4		Mon.	$P2_1/n$
38.4.4.2		X	Clinobisvanite	BiVO_4		Mon.	?
38.4.5			Pucherite	BiVO_4		Orth.	Pnca
38.4.6.1		X	Lithiophosphate	Li_3PO_4		Orth.	Pmnb
38.4.6.2		X	Olympite	Na_3PO_4		Orth.	?
38.4.7		X	<i>to be published</i>				
38.4.8.1			Xenotime	YPO_4		Tet.	$I4_1/amd$
38.4.8.2		X	Chernovite	YAsO_4		Tet.	$I4_1/amd$
38.4.8.3		X	Wakefieldite	YVO_4		Tet.	$I4_1/amd$
38.4.8.4		X	Kusuite	$(\text{Ce}^{3+},\text{Pb}^{2+},\text{Pb}^{3+})\text{VO}_4$		Tet.	$I4_1/amd$
Type 5 Miscellaneous							
38.5.1		X	Gainesite	$\text{Na}_2(\text{Zr},\text{Mn}^{3+},\text{Fe}^{3+})_2(\text{Be},\text{Al})(\text{PO}_4)_4$		Tet.	$I4_1/amd$
38.5.2		X	Ludlockite	$(\text{Fe},\text{Pb})\text{As}_2\text{O}_6$ [meta-arsenate]		Tric.	$P1$ or $P\bar{1}$
38.5.3.1		X	Chervetite	$\text{Pb}_2\text{V}_2\text{O}_7$ [pyrovanadate]		Mon.	$P2_1/a$
38.5.3.2		X	Ziesite	$\text{Cu}_2\text{V}_2\text{O}_7$ [pyrovanadate]		Mon.	$C2/c$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 39 HYDRATED ACID PHOSPHATES, ETC.							
Type 1 $A[HXO_4] \cdot xH_2O$							
39.1.1.1			Brushite	$Ca[HPO_4] \cdot 2H_2O$		Mon.	I2/a
39.1.1.2			Pharmacolite	$Ca[HAsO_4] \cdot 2H_2O$		Mon.	A2/a
39.1.2		X	Fluckite	$CaMn[HAsO_4]_2 \cdot 2H_2O$		Tric.	P1 or P $\bar{1}$
39.1.3		X	Krautite	$Mn[HAsO_4] \cdot H_2O$		Mon.	P2 $_1$
39.1.4.1		X	Koritnigite	$Zn[HAsO_4] \cdot H_2O$		Tric.	P $\bar{1}$
39.1.4.2		X	<i>to be published</i>				
39.1.5			Haidingerite	$Ca[HAsO_4] \cdot H_2O$		Orth.	Pcnb
39.1.6			Newberyite	$Mg[HPO_4] \cdot 3H_2O$		Orth.	Pbca
39.1.7		X	Brassite	$Mg[HAsO_4] \cdot 4H_2O$		Orth.	Pbca
39.1.8		X	Dorfmanite	$Na_2[HPO_4] \cdot 2H_2O$		Orth.	?
39.1.9.1			Rösslerite	$Mg[HAsO_4] \cdot 7H_2O$		Mon.	C2/c
39.1.9.2			Phosphor- rösslerite	$Mg[HPO_4] \cdot 7H_2O$		Mon.	C2/c
39.1.10		X	Trögerite	$(UO_2)_2[HAsO_4]_2 \cdot 12H_2O$ (?)		Tet.	P4/nmm
Type 2 $H_2(AB)_5(XO_4)_4 \cdot xH_2O$							
39.2.1.1		X	Hureaulite	$Mn_5[HPO_4]_2[PO_4]_2 \cdot 4H_2O$		Mon.	C2/c
39.2.1.2		X	Sainfeldite	$Ca_5[HAsO_4]_2[AsO_4]_2 \cdot 4H_2O$		Mon.	C2/c
39.2.2.1		X	Vladimirite	$H_2Ca_5(AsO_4)_4 \cdot 5H_2O$		Mon.	P2 $_1$ /c
39.2.2.2		X	Guerinite	$Ca_5[HAsO_4]_2[AsO_4]_2 \cdot 9H_2O$		Mon.	P2 $_1$ /n
39.2.3		X	Ferrarisite	$Ca_5[HAsO_4]_2[AsO_4]_2 \cdot 9H_2O$		Tric.	P $\bar{1}$
39.2.4		X	Picropharmacolite	$Ca_4Mg[HAsO_4]_2[AsO_4]_2 \cdot 11H_2O$		Tric.	P $\bar{1}$
39.2.5		X	Irhtemite	$H_2Ca_4Mg(AsO_4)_4 \cdot 4H_2O$		Mon.	?
39.2.6		X	Chudobaite	$H_2(Mg,Zn)_5(AsO_4)_4 \cdot 10H_2O$		Tric.	P $\bar{1}$
39.2.7		X	Lindackerite	$H_2Cu_5(AsO_4)_4 \cdot 8-9H_2O$		Mon.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 3		Miscellaneous					
39.3.1	X		Natrophosphate	$\text{HNa}_6(\text{PO}_4)_2\text{F}\cdot 17\text{H}_2\text{O}$ (?)		Cubic	Fd3c
39.3.2			Stercorite	$\text{Na}(\text{NH}_4)[\text{HPO}_4]\cdot 4\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$
39.3.3	X		Schertelite	$\text{Mg}(\text{NH}_4)_2[\text{HPO}_4]_2\cdot 4\text{H}_2\text{O}$		Orth.	Pbca
39.3.4	X		<i>to be published</i>				
39.3.5			Hannayite	$\text{Mg}_3(\text{NH}_4)_2[\text{HPO}_4]_2\cdot 8\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$
39.3.6.1			Taranakite	$\text{H}_6\text{K}_3\text{Al}_5(\text{PO}_4)_8\cdot 18\text{H}_2\text{O}$		Trig.	R3c or $\text{R}\bar{3}\text{c}$
39.3.6.2	X		Francoanellite	$\text{H}_6\text{K}_3\text{Al}_5(\text{PO}_4)_8\cdot 13\text{H}_2\text{O}$		Trig.	R3c or $\text{R}\bar{3}\text{c}$
39.3.7.1	X		Uranospathite	$\text{HA1}(\text{UO}_2)_2(\text{PO}_4)_4\cdot 40\text{H}_2\text{O}$		Tet.	$\text{P4}_2/\text{n}$
39.3.7.2	X		Sabugalite	$\text{HA1}(\text{UO}_2)_2(\text{PO}_4)_4\cdot 16\text{H}_2\text{O}$		Tet.	I4/mmm
39.3.8	X		Arsenuranospathite	$\text{HA1}(\text{UO}_2)_2(\text{AsO}_4)_4\cdot 40\text{H}_2\text{O}$		Tet.	$\text{P4}_2/\text{n}$
39.3.9	X		<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 40 HYDRATED NORMAL PHOSPHATES, ETC.							
Type 1 AB(XO ₄) ₂ ·xH ₂ O							
40.1.1			Struvite	Mg(NH ₄)(PO ₄) ₂ ·6H ₂ O		Orth.	Pmn2 ₁
40.1.2.1		X	Dittmarite	Mg(NH ₄)(PO ₄) ₂ ·H ₂ O		Orth.	Pmn2 ₁
40.1.2.2		X	<i>to be published</i>				
40.1.3		X	<i>to be published</i>				
Type 2 AB ₂ (XO ₄) ₂ ·xH ₂ O							
40.2.1			Anapaite	Ca ₂ Fe ²⁺ (PO ₄) ₂ ·4H ₂ O		Tric.	P $\bar{1}$
40.2.2.1			Fairfieldite	Ca ₂ (Mn,Fe ²⁺)(PO ₄) ₂ ·2H ₂ O		Tric.	P $\bar{1}$
40.2.2.2		X	Messelite	Ca ₂ (Fe ²⁺ ,Mn)(PO ₄) ₂ ·2H ₂ O		Tric.	P $\bar{1}$
40.2.2.3			Collinsite	Ca ₂ (Mg,Fe ²⁺)(PO ₄) ₂ ·2H ₂ O		Tric.	P $\bar{1}$
40.2.2.4		X	Cassidyite	Ca ₂ (Ni,Mg)(PO ₄) ₂ ·2H ₂ O		Tric.	P $\bar{1}$
40.2.2.5		X	Talmessite	Ca ₂ Mg(AsO ₄) ₂ ·2H ₂ O		Tric.	P $\bar{1}$
40.2.2.6		X	Gaitite	H ₂ Ca ₂ Zn(AsO ₄) ₂ (OH) ₂		Tric.	P1 or P $\bar{1}$
40.2.2.7		X	β -Roselite	Ca ₂ Co(AsO ₄) ₂ ·2H ₂ O		Tric.	P $\bar{1}$
40.2.3.1			Roselite	Ca ₂ Co(AsO ₄) ₂ ·2H ₂ O		Mon.	P2 ₁ /c
40.2.3.2			Brandtite	Ca ₂ (Mn,Mg)(AsO ₄) ₂ ·2H ₂ O		Mon.	P2 ₁ /c
40.2.4		X	Prosperite	HCaZn ₂ (AsO ₄) ₂ (OH)		Mon.	C2/c or Cc
40.2.5		X	Parascholzite	CaZn ₂ (PO ₄) ₂ ·2H ₂ O		Mon.	C2/c or Cc
40.2.6		X	Scholzite	CaZn ₂ (PO ₄) ₂ ·2H ₂ O		Orth.	Pbcm or Pbc2 ₁
40.2.7			Phosphophyllite	Zn ₂ (Fe ²⁺ ,Mn)(PO ₄) ₂ ·2H ₂ O		Mon.	P2 ₁ /c
40.2.8.1		X	Brackebuschite	Pb ₂ Mn(VO ₄) ₂ ·H ₂ O		Mon.	P2 ₁ /m
40.2.8.2		X	Arsenbrackebuschite	Pb ₂ (Fe ²⁺ ,Zn)(AsO ₄) ₂ ·H ₂ O		Mon.	P2/m
40.2.9		X	Tsumcorite	PbZnFe ²⁺ (AsO ₄) ₂ ·2H ₂ O		Mon.	C2/m
40.2.10		X	Helmutwinklerite	Zn ₂ (Pb,Cu)(AsO ₄) ₂ ·2H ₂ O		Tric.	P1 or P $\bar{1}$
40.2.11		X	Wicksite	NaCa ₂ MgFe ³⁺ (Fe ²⁺ ,Mn ²⁺) ₄ (PO ₄) ₆ ·2H ₂ O		Orth.	Pbca

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 2a		$AB_2(XO_4)_2 \cdot xH_2O$, containing $(UO_2)^{2+}$					
40.2a.1.1			Autunite	$Ca(UO_2)_2(PO_4)_2 \cdot 10-12H_2O$		Tet.	I4/mmm
40.2a.1.2	X		Meta-autunite	$Ca(UO_2)_2(PO_4)_2 \cdot 2-6H_2O$		Tet.	P4/nmm or P4 ₂ 22
40.2a.1.3	X		Pseudo-autunite	$(H_3O)_4Ca_2(UO_2)_2(PO_4)_4 \cdot 5H_2O$		Orth?	?
40.2a.2.1			Uranospinite	$Ca(UO_2)_2(AsO_4)_2 \cdot 10H_2O$		Tet.	I4/mmm
40.2a.2.2	X		Meta-uranospinite	$Ca(UO_2)_2(AsO_4)_2 \cdot 6H_2O$		Tet.	P4/nmm
40.2a.3.1			Uranocircite I	$Ba(UO_2)_2(PO_4)_2 \cdot 12H_2O$		Tet.	P4/nnc (?)
40.2a.3.2	X		Uranocircite II	$Ba(UO_2)_2(PO_4)_2 \cdot 10H_2O$		Tet.	P4/nnc
40.2a.3.3			Meta-urano- circite I	$Ba(UO_2)_2(PO_4)_2 \cdot 8H_2O$		Orth.	?
40.2a.3.4	X		Meta-urano- circite II	$Ba(UO_2)_2(PO_4)_2 \cdot 6H_2O$		Orth.	?
40.2a.4.1	X		Heinrichite	$Ba(UO_2)_2(AsO_4)_2 \cdot 10-12H_2O$		Tet.	?
40.2a.4.2	X		Metaheinrichite	$Ba(UO_2)_2(AsO_4)_2 \cdot 8H_2O$		Tet.	P4 ₂ 22, P4 ₂ /m or P4 ₂
40.2a.5	X		Sodium autunite	$Na_2(UO_2)_2(PO_4)_2 \cdot 8H_2O$		Tet.	P4/nmm
40.2a.6	X		Sodium uranospinite	$Na_2(UO_2)_2(AsO_4)_2 \cdot 8H_2O$		Tet.	P4/nmm
40.2a.7	X		Uramphite	$(NH_4)_2(UO_2)_2(PO_4)_2 \cdot 6H_2O$		Orth?	?
40.2a.8	X		Meta-ankoleite	$K_2(UO_2)_2(PO_4)_2 \cdot 6H_2O$		Tet.	P4/nmm
40.2a.9	X		Abernathyite	$K_2(UO_2)_2(AsO_4)_2 \cdot 8H_2O$		Tet.	P4/ncc
40.2a.10.1	X		Novacekite I	$Mg(UO_2)_2(AsO_4)_2 \cdot 12H_2O$		Tet.	P4 ₂ /n
40.2a.10.2	X		Novacekite II	$Mg(UO_2)_2(AsO_4)_2 \cdot 10H_2O$		Tet.	P4 ₂ /n
40.2a.10.3	X		Metanovacekite	$Mg(UO_2)_2(AsO_4)_2 \cdot 8H_2O$		Tet.	P4/n
40.2a.11	X		Saleeite	$Mg(UO_2)_2(PO_4)_2 \cdot 10H_2O$		Mon.	P2 ₁ /n
40.2a.12.1			Torbernite	$Cu(UO_2)_2(PO_4)_2 \cdot 12H_2O$		Tet.	I4/mmm
40.2a.12.2			Metatorbernite	$Cu(UO_2)_2(PO_4)_2 \cdot 8H_2O$		Tet.	P4/n
40.2a.13.1			Zeunerite	$Cu(UO_2)_2(AsO_4)_2 \cdot 12H_2O$		Tet.	P4/nnc
40.2a.13.2			Metazeunerite	$Cu(UO_2)_2(AsO_4)_2 \cdot 8H_2O$		Tet.	P4 ₂ /n
40.2a.14.1	X		Kahlerite	$Fe^{2+}(UO_2)_2(AsO_4)_2 \cdot 12H_2O$		Tet.	?
40.2a.14.2	X		Metakahlerite	$Fe^{2+}(UO_2)_2(AsO_4)_2 \cdot 8H_2O$		Tet.	I4/mmm
40.2a.15			Bassetite	$Fe^{2+}(UO_2)_2(PO_4)_2 \cdot 8H_2O$		Mon.	?

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Type 2a							
40.2a.16		X	Meta-kirchheimerite	$\text{Co}(\text{UO}_2)_2(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Tet.	I4/mmm
40.2a.17		X	Metalodevite	$\text{Zn}(\text{UO}_2)_2(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Tet.	$\text{P4}_2/\text{m}$
40.2a.18			Parsonsite	$\text{Pb}_2(\text{UO}_2)(\text{PO}_4)_2 \cdot 2\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$
40.2a.19		X	Hallimondite	$\text{Pb}_2(\text{UO}_2)(\text{AsO}_4)_2 \cdot 0\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$
40.2a.20.1		X	Przhevalskite	$\text{Pb}(\text{UO}_2)_2(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$		Orth.	?
40.2a.20.2		X	Dewindtite	$\text{Pb}(\text{UO}_2)_2(\text{PO}_4)_2 \cdot 3\text{H}_2\text{O}$		Orth.	Bmb2 or Bmbb
40.2a.21		X	Fritzscheite	$\text{Mn}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 10\text{H}_2\text{O}$		Tet.	?
40.2a.22.1			Tyuyamunite	$\text{Ca}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 5-8\text{H}_2\text{O}$		Orth.	Pnam
40.2a.22.2		X	Metatyuyamunite	$\text{Ca}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 3-5\text{H}_2\text{O}$		Orth.	Pnam
40.2a.23.1		X	Francevillite	$\text{Ba}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 5\text{H}_2\text{O}$		Orth.	Pcan
40.2a.23.2		X	Curienite	$\text{Pb}(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 5\text{H}_2\text{O}$		Orth.	Pcan
40.2a.24.1			Carnotite	$\text{K}_2(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 1-3\text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{a}$
40.2a.24.2		X	<i>to be published</i>				
40.2a.25		X	Strelkinite	$\text{Na}_2(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 6\text{H}_2\text{O}$		Orth.	Pnmn or Pnm2
40.2a.26		X	Vanuranylite	$(\text{H}_3\text{O})_2(\text{UO}_2)_2(\text{VO}_4)_2 \cdot 4\text{H}_2\text{O}$	X	Orth?	?
Type 3			$\text{A}_3(\text{XO}_4)_2 \cdot x\text{H}_2\text{O}$				
40.3.1		X	Warikahnite	$\text{Zn}_3(\text{AsO}_4)_2 \cdot 2\text{H}_2\text{O}$		Tric.	P1 or $\text{P}\bar{1}$
40.3.2.1			Phosphoferrite	$\text{Fe}^{2+}\text{Fe}^{2+}(\text{H}_2\text{O})_3(\text{PO}_4)_2$		Orth.	P2na
40.3.2.2		X	Kryzhanovskite	$\text{Fe}^{3+}\text{Fe}^{3+}(\text{OH})_3(\text{PO}_4)_2$		Orth.	Pbna
40.3.2.3			Reddingite	$\text{Mn}^{2+}\text{Mn}^{2+}(\text{H}_2\text{O})_3(\text{PO}_4)_2$		Orth.	Pbna
40.3.2.4		X	Landesite	$\text{Fe}^{3+}\text{Mn}^{2+}(\text{OH})(\text{H}_2\text{O})_2(\text{PO}_4)_2$		Orth.	Pbna
40.3.3			Parahopeite	$\text{Zn}_3(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{a}$
40.3.4			Hopeite	$\text{Zn}_3(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$		Orth.	Pnma
40.3.5.1			Ludlamite	$\text{Fe}^{2+}(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon.	?
40.3.5.2		X	Switzerite	$\text{Mn}_3^{2+}(\text{PO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon.	P2/a
40.3.5.3		X	Sterlinghillite	$\text{Mn}_3^{2+}(\text{AsO}_4)_2 \cdot 4\text{H}_2\text{O}$		Mon. or Tric.	?

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Type 3							
40.3.6.1			Vivianite	$\text{Fe}_3^{2+}(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	C2/m
40.3.6.2		X	Barićite	$\text{Mg}_3^{2+}(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	C2/m
40.3.6.3			Erythrite	$\text{Co}_3(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	C2/m
40.3.6.4			Annabergite	$\text{Ni}_3(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	I2/m
40.3.6.5			Köttigite	$\text{Zn}_3(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	C2/m
40.3.6.6		X	Parasymplesite	$\text{Fe}_3^{2+}(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	C2/m
40.3.6.7			Hoernesite	$\text{Mg}_3(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	C2/m
40.3.7.1			Bobierite	$\text{Mg}_2(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	$\text{P}2_1/\text{c}$
40.3.7.2		X	Manganese- hoernesite	$\text{Mn}_3^{2+}(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Mon.	$\text{P}2_1/\text{c}$
40.3.8.1			Symplesite	$\text{Fe}_3^{2+}(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$
40.3.8.2		X	<i>to be published</i>				
40.3.8.3		X	Metavivianite	$\text{Fe}_3^{2+}(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$ or $\text{P}\bar{1}$
40.3.9			Volborthite	$\text{Cu}_3(\text{VO}_4)_2 \cdot 3\text{H}_2\text{O}$		Mon.	C2, Cm or C2/m
40.3.10		X	Machatschkiite	$\text{Ca}_3(\text{AsO}_4)_2 \cdot 9\text{H}_2\text{O}$		Trig.	R**
40.3.11		X	Rauenthalite	$\text{Ca}_3(\text{AsO}_4)_2 \cdot 10\text{H}_2\text{O}$		Tric.	$\text{P}\bar{1}$
40.3.12		X	<i>to be published</i>				
40.3.13		X	Ferrazite	$(\text{Pb,Ba})_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O} (?)$?	?

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Type 4			$AXO_4 \cdot xH_2O$				
40.4.1.1			Variscite	$AlPO_4 \cdot 2H_2O$		Orth.	Pcab
40.4.1.2			Strengite	$Fe^{3+}PO_4 \cdot 2H_2O$		Orth.	Pcab
40.4.1.3			Scorodite	$Fe^{3+}AsO_4 \cdot 2H_2O$		Orth.	Pcab
40.4.1.4			Mansfieldite	$AlAsO_4 \cdot 2H_2O$		Orth.	Pcab
40.4.2	X		Koninckite	$Fe^{3+}PO_4 \cdot 3H_2O$		Tet.	?
40.4.3.1			Metavariscite	$AlPO_4 \cdot 2H_2O$		Mon.	$P2_1/n$
40.4.3.2			Phosphosiderite	$Fe^{3+}PO_4 \cdot 2H_2O$		Mon.	$P2_1/n$
40.4.4	X		Kankite	$Fe^{3+}AsO_4 \cdot 3.5H_2O$		Mon.	?
40.4.5	X		Steigerite	$AlVO_4 \cdot 3H_2O$	X	Mon.	?
40.4.6	X		Kolbeckite	$ScPO_4 \cdot 2H_2O$		Mon.	$P2_1/m$
40.4.7	X		Churchite	$(Y,Er)PO_4 \cdot 2H_2O$		Mon.	A2a or Aa
40.4.8.1	X		Rhabdophane-(Ce)	$(Ce,La)PO_4 \cdot H_2O$		Hex.	$P6_322$
40.4.8.2	X		Rhabdophane-(La)	$(La,Ce)PO_4 \cdot H_2O$		Hex.	$P6_322$
40.4.8.3	X		Rhabdophane-(Nd)	$(Nd,La)PO_4 \cdot H_2O$		Hex.	$P6_322$
40.4.8.4	X		Grayite	$(Th,Pb,Ca)PO_4 \cdot H_2O$		ps-Hex.	$P6_222$
40.4.8.5	X		Brockite	$(Ca,Th,Ce)(PO_4,CO_3) \cdot H_2O$		Hex.	$P622$
40.4.9	X		Ningyoite	$(U,Ca,Ce)_2(PO_4)_2 \cdot 1-2H_2O$		Orth.	$P222$
40.4.10	X		Schubnelite	$Fe_2^{3+}(VO_4)_2 \cdot 2H_2O$		Tric.	$P\bar{1}$
40.4.11	X		Fervanite	$Fe_4^{3+}(VO_4)_4 \cdot 5H_2O$		Mon.	?
Type 5			Miscellaneous				
40.5.1		X	Faheyite	$(Mn,Mg)Fe_2^{3+}Be_2(PO_4)_4 \cdot 6H_2O$		Hex.	$P6_322$
40.5.2	X		Smolianinovite	$(Co,Ni,Mg)_3Fe_2^{3+}(AsO_4)_4 \cdot 11H_2O$		Orth.	?
40.5.3	X		Walpurgite	$(BiO)_4(UO_2)(AsO_4)_2 \cdot 3H_2O$		Tric.	$P\bar{1}$
40.5.4	X		Attakolite	$(Ca,Mn,Sr)_3Al_6(PO_4,SiO_4)_7 \cdot 3H_2O$		Orth.	?
40.5.5	X		Lermontovite	$(U,Ca,Ce)_3(PO_4)_4 \cdot 6H_2O$	X	?	?
40.5.6	X		Kolovratite	hydrous vanadate of Ni and Zn		?	?

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CLASS 41 ANHYDROUS PHOSPHATES, ETC. CONTAINING HYDROXYL OR HALOGEN							
Type 1		$A_m(XO_4)_pZ_q$, with $m:p>4:1$					
41.1.1.1	X		Chlorophoenicite	$Mn_3Zn_2(AsO_4)(OH)_7$		Mon.	C2/m
41.1.1.2	X		Magnesium-chlorophoenicite	$Mg_3Zn_2(AsO_4)(OH)_7$		Mon.	C2/m
41.1.2		X	Theisite	$Cu_5Zn_5(AsO_4)_2(OH)_{10}O_2$		Orth.	?
41.1.3		X	Bøggildite	$Na_2Sr_2Al_2(PO_4)F_9$		Mon.	$P2_1/c$
41.1.4		X	Sahlinite	$Pb_{14}(AsO_4)_2Cl_4O_9$		Mon.	?
Type 2		$(AB)_7(XO_4)_2Z_q$					
41.2.1			Allactite	$Mn_7(AsO_4)_2(OH)_8$		Mon.	$P2_1/a$
41.2.2		X	Heyite	$Pb_5Fe_2^{2+}(VO_4)_2O_4$		Mon.	$P2_1/m$
Type 3		$(AB)_3(XO_4)Z_q$					
41.3.1			Clinoclase	$Cu_3(AsO_4)(OH)_3$		Mon.	$P2_1/c$
41.3.2			Cornetite	$Cu_3(PO_4)(OH)_3$		Orth.	Pbca
41.3.3			Georgiadesite	$Pb_3(AsO_4)Cl_3$	X	Orth.	?
41.3.4		X	Flinkite	$Mn_2^{2+}Mn^{3+}(AsO_4)(OH)_4$		Orth.	Pnma
41.3.5		X	Retzian	$Mn_2^{2+}Ce(AsO_4)(OH)_4$		Orth.	Pban
41.3.6		X	Viitaniemiite	$Na(Ca,Mn)Al(PO_4)(F,OH)_3$		Mon.	$P2_1$ or $P2_1/m$
41.3.7		X	Nacaphite	$Na_2Ca(PO_4)F$		Orth.	$Cmma$ or $C2ma$
Type 4		$(AB)_5(XO_4)_2Z_q$					
41.4.1			Arsenoclasite	$Mn_5(AsO_4)_2(OH)_4$		Orth.	$P2_12_12_1$
41.4.2		X	Cornubite	$Cu_5(AsO_4)_2(OH)_4$		Tric.	$P1$ or $P\bar{1}$
41.4.3			Pseudomalachite	$Cu_5(PO_4)_2(OH)_4$		Mon.	$P2_1/c$
41.4.4			Turanite	$Cu_5(VO_4)_2(OH)_4$		Orth?	?
41.4.5		X	Stoiberite	$Cu_5(VO_4)_2O_2$		Mon.	$P2_1/n$
41.4.6		X	Nealite	$Fe^{2+}Pb_4(AsO_4)_2Cl_4$		Tric.	$P1$ or $P\bar{1}$
41.4.7		X	Tancoite	$HLiNa_2Al(PO_4)_2(OH)$		Orth.	$Cmma, Cmmb,$ $Cm2a, C2mb$

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Type 5			$(AB)_2(PO_4)_2Z_q$				
41.5.1.1			Adelite	$CaMg(AsO_4)(OH)$		Orth.	$P2_12_12_1$
41.5.1.2			Conichalcite	$CaCu(AsO_4)(OH)$		Orth.	$P2_12_12_1$
41.5.1.3			Austinite	$CaZn(AsO_4)(OH)$		Orth.	$P2_12_12_1$
41.5.1.4			Duftite- β	$PbCu(AsO_4)(OH)$		Orth.	$P2_12_12_1$
41.5.1.5		X	Gabrielsonite	$PbFe(AsO_4)(OH)$		Orth.	$P2_1ma$
41.5.1.6			Calciovolborthite	$CaCu(VO_4)(OH)$		Orth.	$P2_12_12_1$
41.5.2.1			Descloizite	$PbZn(VO_4)(OH)$		Orth.	Pnma
41.5.2.2			Mottramite	$PbCu(VO_4)(OH)$		Orth.	Pnam
41.5.2.3			Pyrobelonite	$PbMn(VO_4)(OH)$		Orth.	Pnam
41.5.2.4		X	<i>to be published</i>				
41.5.2.5		X	<i>to be published</i>				
41.5.2.6		X	Duftite- α	$PbCu(AsO_4)(OH)$		Orth.	Pnma
41.5.3		X	Babephte	$BaBe(PO_4)(O,F)$		Tet.	$I4/amd$
41.5.4.1			Herderite	$CaBe(PO_4)(F,OH)$		Mon.	$P2_1/c$
41.5.4.2			Hydroxyl-herderite	$CaBe(PO_4)(OH,F)$		Mon.	$P2_1/c$
41.5.4.3		X	Väyrynenite	$MnBe(PO_4)(OH)$		Mon.	$P2_1/a$
41.5.5.1			Lacroixite	$NaAl(PO_4)F$		Mon.	$C2/c$
41.5.5.2			Durangite	$NaAl(AsO_4)F$		Mon.	$C2/c$
41.5.6.1			Tilasite	$CaMg(AsO_4)F$		Mon.	Cc
41.5.6.2		X	Isokite	$CaMg(PO_4)F$		Mon.	$C2/c$
41.5.6.3		X	<i>to be published</i>				
41.5.7			Brazilianite	$NaAl_3(PO_4)_2(OH)_4$		Mon.	$P2_1/n$
41.5.8.1			Amblygonite	$(Li,Na)Al(PO_4)(F,OH)$		Tric.	$P\bar{1}$
41.5.8.2			Montebrasite	$(Li,Na)Al(PO_4)(OH,F)$		Tric.	$P\bar{1}$
41.5.8.3			Natromontebrasite	$(Na,Li)Al(PO_4)(OH,F)$		Tric.	$P\bar{1}$
41.5.9		X	Tavorite	$LiFe^{3+}(PO_4)(OH)$		Tric.	$P1$ or $P\bar{1}$
41.5.10.1		X	Dussertite	$BaFe_3^{3+}(AsO_4)_2(OH)_5$		Trig.	$R\bar{3}m$ (?)
41.5.10.2			Florencite-(Ce)	$CeAl_3(PO_4)_2(OH)_6$		Trig.	$R\bar{3}m$
41.5.10.3		X	Florencite-(La)	$(La,Ce)Al_3(PO_4)_2(OH)_6$		Trig.	$R\bar{3}m$
41.5.10.4		X	Florencite-(Nd)	$(Nd,La)Al_3(PO_4)_2(OH)_6$		Trig.	$R\bar{3}m$
41.5.11.1		X	Waylandite	$(Bi,Ca)Al_3[(P,Si)_4O_{12}](OH)_6$		Trig.	$R\bar{3}m$
41.5.11.2		X	Eylettersite	$(Th,Pb)_{1-x}Al_3[(P,Si)_4O_{12}](OH)_6$		Trig.	$R\bar{3}m$
41.5.11.3		X	Zaïrite	$Bi(Fe,Al)_3(PO_4)_2(OH)_6$		Trig.	$R\bar{3}m$

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Type 5							
41.5.12		X	Vesignieite	$BaCu_3(VO_4)_2(OH)_2$		Mon.	C2/c
41.5.13		X	Bayldonite	$PbCu_3(AsO_4)_2(OH)_2$		Mon.	C2/c
41.5.14		X	Curetonite	$Ba_4Al_3Ti(PO_4)_4(O,OH)_6$		Mon.	$P2_1/m$
41.5.15		X	Thadeuite	$MgCa(Mg,Fe)_2(PO_4)_2(OH,F)_2$		Orth.	C222 ₁
41.5.16		X	Upalite	$Al(UO_2)_3(PO_4)_2(OH)_3$		Orth.	Bbcm or Bba2
41.5.17		X	<i>to be published</i>				
Type 6 $A_2(XO_4)_2Z_q$							
41.6.1.1		X	Zwieselite	$(Fe^{2+},Mn)_2(PO_4)(F,OH)$		Mon.	I2/a
41.6.1.2			Triplite	$(Mn,Fe^{2+})_2(PO_4)(F,OH)$		Mon.	I2/a
41.6.1.3		X	Magniotriplite	$(Mg,Fe,Mn)_2(PO_4)F$	X	Mon.	?
41.6.2			Wagnerite	$Mg_2(PO_4)F$		Mon.	$P2_1/c$
41.6.3.1			Wolfeite	$(Fe^{2+},Mn)_2(PO_4)(OH)$		Mon.	$P2_1/a$
41.6.3.2			Triplodite	$(Mn,Fe^{2+})_2(PO_4)(OH)$		Mon.	$P2_1/a$
41.6.3.3			Sarkinite	$Mn_2(AsO_4)(OH)$		Mon.	$P2_1/a$
41.6.4.1		X	Satterlyite	$(Fe^{2+},Mn)_2(PO_4)(OH)$		Hex.	$P\bar{3}1m, P31m,$ or $P312$
41.6.4.2		X	Holtehdahlite	$Mg_2(PO_4)(OH)$		Hex.	$P321, P\bar{3}m1,$ or $P\bar{3}m1$
41.6.5.1			Olivenite	$Cu_2(AsO_4)(OH)$		Orth.	Pnmm
41.6.5.2			Libethenite	$Cu_2(PO_4)(OH)$		Orth.	Pnmm
41.6.5.3			Adamite	$Zn_2(AsO_4)(OH)$		Orth.	Pnmm
41.6.5.4		X	Eveite	$Mn_2(AsO_4)(OH)$		Orth.	Pnmm
41.6.6		X	Althausite	$Mg_4(PO_4)_2(OH,O)(F,\square)$		Orth.	Pnma
41.6.7.1			Tarbuttite	$Zn_2(PO_4)(OH)$		Tric.	$P\bar{1}$
41.6.7.2		X	Paradamite	$Zn_2(AsO_4)(OH)$		Tric.	$P\bar{1}$
41.6.8			Augelite	$Al_2(PO_4)(OH)_3$		Mon.	C2/m
41.6.9		X	Ernstite	$(Mn_{1-x}^{2+}Fe_x^{3+})Al(PO_4)(OH)_{2x}O_x$		Mon.	C2/c or Cc
41.6.10			Arsenobismite	$Bi_2(AsO_4)(OH)_3$		Cubic	?
41.6.11		X	Angelellite	$Fe_4^{3+}(AsO_4)_2O_3$		Tric.	$P\bar{1}$
41.6.12		X	Spodiosite	$Ca_2(PO_4)F$	X	Orth?	?

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Type 7		$(AB)_m(XO_4)_4Z_q$					
41.7.1.1		X	Palermoite	$(Li,Na)_2SrAl_4(PO_4)_4(OH)_4$		Orth.	Imcb
41.7.1.2		X	Bertossaite	$(Li,Na)_2CaAl_4(PO_4)_4(OH)_4$		Orth.	Imaa or Iaa2
41.7.2.1		X	Arrojadite	$KNa_4CaAl(Fe^{2+},Mn)_{14}(PO_4)_{12}(F,OH)_2$		Mon.	C2/m
41.7.2.2		X	Dickinsonite	$KNa_4CaAl(Mn,Fe^{2+})_{14}(PO_4)_{12}(F,OH)_2$		Mon.	C2/m
Type 8		$A_5(XO_4)_3Z_q$					
41.8.1.1			Fluorapatite	$Ca_5(PO_4)_3F$		Hex.	$P6_3/m$
41.8.1.2			Chlorapatite	$Ca_5(PO_4)_3Cl$		Hex.	$P6_3/m$
41.8.1.3			Hydroxylapatite	$Ca_5(PO_4)_3(OH)$		Hex.	$P6_3/m$
41.8.1.4			Carbonate-fluorapatite	$Ca_5(PO_4,CO_3)_3F$		Hex.	$P6_3/m$
41.8.1.5			Carbonate-hydroxylapatite	$Ca_5(PO_4,CO_3)_3(OH)$		Hex.	$P6_3/m$
41.8.1.6		X	Belovite	$(Sr,Ce,Na,Ca)_5(PO_4)_3(OH)$		Hex.	$P6_3/m ?$
41.8.1.7		X	Strontium-apatite	$(Sr,Ca)_5(PO_4)_3(OH,F)$		Hex.	$P6_3/m$
41.8.2.1			Ellestadite	$Ca_5[(Si,P,S)O_4]_3(OH,F) (?)$		Hex.	$P6_3/m$
41.8.2.2		X	Britholite-(Ce)	$(Ce,Ca)_5[(Si,P)O_4]_3(OH,F)$		Hex.	$P6_3/m$
41.8.2.3		X	Britholite-(Y)	$(Y,Ca)_5[(Si,P)O_4]_3(OH,F)$		Hex.	$P6_3/m$
41.8.2.4			Wilkeite	$Ca_5[(Si,P,S)O_4]_3(O,OH,F) (?)$		Hex.	$P6_3/m$
41.8.3.1			Svabite	$Ca_5(AsO_4)_3F$		Hex.	$P6_3/m$
41.8.3.2			Hedyphane	$(Ca,Pb)_5(AsO_4)_3Cl$		Hex.	$P6_3/m$
41.8.3.3		X	Johnbaumite	$Ca_5(AsO_4)_3(OH)$		Hex.	$P6_3/m$
41.8.3.4			Fermorite	$(Ca,Sr)_5[(As,P)O_4]_3(F,OH)$		Hex.	$P6_3/m$
41.8.4.1			Pyromorphite	$Pb_5(PO_4)_3Cl$		Hex.	$P6_3/m$
41.8.4.2			Mimetite	$Pb_5(AsO_4)_3Cl$		Mon., ps-Hex.	$P2_1/b$
41.8.4.3			Vanadinite	$Pb_5(VO_4)_3Cl$		Hex.	$P6_3/m$
41.8.5.1		X	Morelandite	$Ba_5(AsO_4)_3Cl$		Hex.	$P6_3$ or $P6_3/m$
41.8.5.2		X	<i>to be published</i>				

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	CLASS D	CRYSTAL SYSTEM	SPACE GROUP
Type 9			$(AB)_5(XO_4)_3Z_q$				
41.9.1.1		X	Kulanite	$BaFe_2^{2+}Al_2(PO_4)_3(OH)_3$		Tric., ps-Mon.	$P1$ or $P\bar{1}$
41.9.1.2		X	Penikisite	$BaMg_2Al_2(PO_4)_3(OH)_3$		Tric., ps-Mon.	$P1$ or $P\bar{1}$
41.9.1.3		X	Bjarebyite	$BaMn_2^{2+}Al_2(PO_4)_3(OH)_3$		Mon.	$P2_1/m$
41.9.1.4		X	Perloffite	$BaMn_2^{2+}Fe_2^{3+}(PO_4)_3(OH)_3$		Mon.	$P2_1/m$
41.9.2.1	X		Rockbridgeite	$(Fe,Mn)^{2+}Fe_4^{3+}(PO_4)_3(OH)_3$		Orth.	Bbmm
41.9.2.2	X		Frondelite	$(Mn,Fe^{2+})Fe_4^{3+}(PO_4)_3(OH)_3$		Orth.	Bbmm
41.9.3	X		Griphite	$(Mn,Na,Li)_6CaFe^{2+}(Al,Fe^{3+})_2^-$ $(PO_4)_6F_2$		Cubic	$Pa3$
Type 10			$(AB)_3(XO_4)_2Z_q$				
41.10.1.1			Lazulite	$(Mg,Fe^{2+})Al_2(PO_4)_2(OH)_2$		Mon.	$P2_1/c$
41.10.1.2			Scorzalite	$(Fe^{2+},Mn)Al_2(PO_4)_2(OH)_2$		Mon.	$P2_1/n$
41.10.2		X	Jagowerite	$BaAl_2(PO_4)_2(OH)_2$		Tric.	$P\bar{1}$
41.10.3		X	Goedkenite	$(Sr,Ca)_2Al(PO_4)_2(OH)$		Mon.	$P2_1/m$
41.10.4		X	Barbosalite	$Fe^{2+}Fe_2^{3+}(PO_4)_2(OH)_2$		Mon.	$P2_1/c$
41.10.5		X	Lipscombite	$(Fe^{2+},Mn)Fe_2^{3+}(PO_4)_2(OH)_2$		Tet.	$P4_12_12_1$
41.10.6		X	Melonjosephite	$CaFe^{2+}Fe^{3+}(PO_4)_2(OH)$		Orth.	Pbam
41.10.7			Carminite	$PbFe_2^{3+}(AsO_4)_2(OH)_2$		Orth.	Amaa
41.10.8		X	Mounanaite	$PbFe_2^{3+}(VO_4)_2(OH)_2$		Tric.	$P\bar{1}$
41.10.9		X	Samuelsonite	$(Ca,Ba)Fe_2^{2+}Mn_2^{2+}Ca_8Al_2(PO_4)_{10}(OH)_2$		Mon.	$C2/m$
Type 11			Miscellaneous				
41.11.1	X		Andrewsite	$(Cu,Fe^{2+})Fe_3^{3+}(PO_4)_3(OH)_2$		Orth.	$B22_12_1$
41.11.2		X	Trolleite	$Al_4(PO_4)_3(OH)_3$		Mon.	$I2/a$
41.11.3		X	<i>to be published</i>				
41.11.4			Laubmannite	$Fe_3^{2+}Fe_6^{3+}(PO_4)_4(OH)_{12}$		Orth.	Pbma
41.11.5	X		Atelestite	$Bi_8(AsO_4)_3(OH)_5O_5$		Mon.	$P2_1/a$

REVISED DANA NUMBER	N	N	MINERAL NAME	COMPOSITION	S	CRYSTAL SYSTEM	SPACE GROUP
CLASS 42 HYDRATED PHOSPHATES, ETC., CONTAINING HYDROXYL OR HALOGEN							
Type 1		$A_3(XO_4)_2Z_q \cdot xH_2O$					
42.1.1.1			Veszelyite	$(Cu,Zn)_3(PO_4)(OH)_3 \cdot 2H_2O$		Mon.	$P2_1/a$
42.1.1.2	X		Kamiokalite	$(Zn,Cu)_3(PO_4)(OH)_3 \cdot 2H_2O$		Mon.	$P2_1/a$
42.1.2	X		Alvanite	$Al_6(VO_4)_2(OH)_{12} \cdot 5H_2O$		Mon.	?
42.1.3			Liskeardite	$(Al,Fe^{3+})_3(AsO_4)(OH)_6 \cdot 5H_2O$		Orth?	?
42.1.4			Evansite	$Al_3(PO_4)(OH)_6 \cdot 6H_2O$		Amor.	?
Type 2		$(AB)_3(XO_4)_2Z_q \cdot xH_2O$					
42.2.1			Liroconite	$Cu_2Al(AsO_4)(OH)_4 \cdot 4H_2O$		Mon.	$I2/a$
42.2.2	X		Ranunculite	$HAl(UO_2)(PO_4)(OH)_3 \cdot 4H_2O$		Mon.	?
Type 3		$A_5(XO_4)_2Z_q \cdot xH_2O$					
42.3.1			Cornwallite	$Cu_5(AsO_4)_2(OH)_3 \cdot H_2O$		Mon.	$P2_1/a$
42.3.2	X		Rusakovite	$(Fe^{3+},Al)_5[(V,P)O_4]_2(OH)_9 \cdot 3H_2O$	X	?	?
Type 4		$(AB)_5(XO_4)_2Z_q \cdot xH_2O$					
42.4.1			Akrochordite	$Mn_4Mg(AsO_4)_2(OH)_4 \cdot 4H_2O$		Mon.	$P2_1/c$
42.4.2	X		Morinite	$Ca_2NaAl_2(PO_4)_2(OH)_4F_4 \cdot 2H_2O$		Mon.	$P2_1/m$
42.4.3	X		Tyrolite	$Cu_9Ca_2(AsO_4)_4(OH)_{10} \cdot 10H_2O$		Orth.	Pmma
42.4.4	X		Clinotyrolite	$Cu_9Ca_2(AsO_4)_4(OH)_{10} \cdot 10H_2O$		Mon.	Pa or $P2_1/a$
42.4.5.1			Dumontite	$Pb_2[(UO_2)_3(PO_4)_2(OH)_2](OH)_2 \cdot 3H_2O$		Mon.	$P2_1/m$
42.4.5.2	X		Hügelite	$Pb_2[(UO_2)_3(AsO_4)_2(OH)_2](OH)_2 \cdot 3H_2O$		Mon.	$P2_1/m$
42.4.5.3	X		Bergenite	$Ba_2(UO_2)_3(PO_4)_2(OH)_4 \cdot 5.5H_2O$		Mon.	$P2_1/c$
42.4.6	X		Phuralumite	$Al_2[(UO_2)_3(PO_4)_2(OH)_3](OH)_4 \cdot 10H_2O$		Mon.	$P2_1/a$
42.4.7	X		Phurcalite	$Ca_2[(UO_2)_3(PO_4)_2(OH)_2](OH)_2 \cdot 4H_2O$		Orth.	Pbca
42.4.8			Phosphuranylite	$Ca[(UO_2)_3(PO_4)_2(OH)_2] \cdot 6H_2O$		Orth.	$C222_1$
42.4.9.1	X		Arsenuranylite	$Ca(UO_2)_4(AsO_4)_2(OH)_4 \cdot 6H_2O$		Orth.	?
42.4.9.2			Renardite	$Pb(UO_2)_4(PO_4)_2(OH)_4 \cdot 7H_2O$	X	Orth.	Bmbb
42.4.9.3	X		Kivuite	$(Th,Ca)H_2(UO_2)_4(PO_4)_2(OH)_8 \cdot 7H_2O$		Orth?	Bmbm
42.4.10	X		Glucine	$Ca_2Be_8(PO_4)_4(OH)_8 \cdot H_2O$	X	?	?
42.4.11	X		<i>to be published</i>				

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Type 5			$A_2(XO_4)Z_q \cdot xH_2O$				
42.5.1.1		X	Moraesite	$Be_2(PO_4)(OH) \cdot 4H_2O$		Mon.	Cc or C2/c
42.5.1.2		X	Bearsite	$Be_2(AsO_4)(OH) \cdot 4H_2O$		Mon.	Cc or C2/c
42.5.2			Isoclasite	$Ca_2(PO_4)(OH) \cdot 2H_2O$	X	Mon.	?
42.5.3			Euchroite	$Cu_2(AsO_4)(OH) \cdot 3H_2O$		Orth.	$P2_12_12_1$
42.5.4.1	X		Legrandite	$Zn_2(AsO_4)(OH) \cdot H_2O$		Mon.	$P2_1/c$
42.5.4.2			Spencerite	$Zn_4(PO_4)_2(OH)_2 \cdot 3H_2O$		Mon.	$P2/c$
42.5.5		X	Strashmirite	$Cu_8(AsO_4)_4(OH)_4 \cdot 5H_2O$		Mon.	$P2/m, P2,$ or Pm
42.5.6.1		X	Delvauxite	$CaFe_4^{3+}(PO_4)_2(OH)_8 \cdot 4-6H_2O$ (?)		Amor.	-----
42.5.6.2			Borickite	hydrous phosphate of Ca and Fe	X	Amor.	-----
42.5.7		X	Senegalite	$Al_2(PO_4)(OH)_3 \cdot H_2O$		Orth.	$P2_1nb$
42.5.8		X	Fluellite	$Al_2(PO_4)(OH)F_2 \cdot 7H_2O$		Orth.	Fddd
42.5.9		X	Bolivarite	$Al_2(PO_4)(OH)_3 \cdot 4-5H_2O$		Amor.	-----
42.5.10		X	Sengierite	$Cu_2(UO_2)(VO_4)_2(OH)_2 \cdot 6H_2O$		Mon.	$P2_1/a$
Type 6			$(AB)_2(XO_4)Z_q \cdot xH_2O$				
42.6.1.1			Childrenite	$(Fe^{2+}, Mn) Al(PO_4)(OH)_2 \cdot H_2O$		Mon.	Bba2
42.6.1.2			Eosphorite	$(Mn, Fe^{2+}) Al(PO_4)(OH)_2 \cdot H_2O$		Mon.	Bbam
42.6.2		X	Foggite	$CaAl(PO_4)(OH)_2 \cdot H_2O$		Mon.	$A2_122$
42.6.3.1			Crandallite	$CaAl_3(PO_4)_2(OH)_5 \cdot H_2O$		Trig.	$R\bar{3}m$
42.6.3.2			Gorceixite	$BaAl_3(PO_4)_2(OH)_5 \cdot H_2O$		Mon., ps-Trig.	Cm, Cc or C2
42.6.3.3			Goyazite	$SrAl_3(PO_4)_2(OH)_5 \cdot H_2O$		Trig.	$R\bar{3}m$
42.6.3.4		X	Lusungite	$(Sr, Pb) Fe_3^{3+}(PO_4)_2(OH)_5 \cdot H_2O$		Trig.	$R\bar{3}m$
42.6.3.5			Plumbogummite	$PbAl_3(PO_4)_2(OH)_5 \cdot H_2O$		Trig.	$R\bar{3}m$
42.6.3.6		X	<i>to be published</i>				
42.6.4			Davisonite	$Ca_3Al(PO_4)_2(OH)_3 \cdot H_2O$	X	Hex?	?
42.6.5		X	Nissonite	$Ca_2Mg_2(PO_4)_2(OH)_2 \cdot 5H_2O$		Mon.	C2/c or Cc
42.6.6		X	Uralolite	$CaBe_3(PO_4)_2(OH)_2 \cdot 4H_2O$		Mon.	?
42.6.7.1		X	Roscherite-(Fe)	$Ca(Fe^{2+}, Mn)_2Be_3(PO_4)_3(OH)_3 \cdot 2H_2O$		Mon.	C2/c
42.6.7.2		X	Roscherite-(Mn)	$Ca(Mn, Fe)_2(Be, Al)_3(PO_4)_3(OH)_3 \cdot 2H_2O$		Mon.	C2/c
42.6.7.3		X	Roscherite-(Mg)	$Ca(Mg, Fe)_2(Be, Al)_3(PO_4)_3(OH)_3 \cdot 2H_2O$		Mon.	C2/c

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Type 6							
42.6.8.1		X	Cyrilovite	$\text{NaFe}_3^{3+}(\text{PO}_4)_2(\text{OH})_4 \cdot 2\text{H}_2\text{O}$		Tet.	$P4_12_12$ or $P4_32_12$
42.6.8.2	X		Wardite	$\text{NaAl}_3(\text{PO}_4)_2(\text{OH})_4 \cdot 2\text{H}_2\text{O}$		Tet.	$P4_12_12$ or $P4_32_12$
42.6.9			Millisite	$(\text{Na},\text{K})\text{CaAl}_6(\text{PO}_4)_4(\text{OH})_9 \cdot 3\text{H}_2\text{O}$		Tet.	?
42.6.10.1			Chenevixite	$\text{Cu}_2\text{Fe}_2^{3+}(\text{AsO}_4)_2(\text{OH})_4 \cdot \text{H}_2\text{O}$		Mon.	$P2_1/m$
42.6.10.2	X		Luetheite	$\text{Cu}_2\text{Al}_2(\text{AsO}_4)_2(\text{OH})_4 \cdot \text{H}_2\text{O}$		Mon.	$P2_1/m$
42.6.11	X		Olmsteadite	$\text{K}_2\text{Fe}_4^{2+}(\text{Nb},\text{Ta})_2(\text{PO}_4)_4\text{O}_4 \cdot 4\text{H}_2\text{O}$		Orth.	$\text{Pb}2_1m$
42.6.12	X		Furongite	$\text{Al}_2(\text{UO}_2)_3(\text{PO}_4)_2(\text{OH})_3 \cdot 8\text{H}_2\text{O}$		Tric.	$P1$ or $P\bar{1}$
42.6.13	X		<i>to be published</i>				
42.6.14	X		Ogdensburgite	$\text{Ca}_3\text{ZnFe}_6^{3+}(\text{AsO}_4)_5(\text{OH})_{11} \cdot 5\text{H}_2\text{O}$?	?
Type 7 $(\text{AB})_5(\text{XO}_4)_3\text{Z}_q \cdot x\text{H}_2\text{O}$							
42.7.1.1	X		Pharmacosiderite	$\text{KFe}_4^{3+}(\text{AsO}_4)_3(\text{OH})_4 \cdot 6\text{H}_2\text{O}$		Cubic	$P\bar{4}3m$
42.7.1.2		X	Alumo-pharmacosiderite	$\text{KAl}_4(\text{AsO}_4)_3(\text{OH})_4 \cdot 6 \cdot 5\text{H}_2\text{O}$		Cubic	$P\bar{4}3m$
42.7.1.3	X		Barium-pharmacosiderite	$\text{BaFe}_4^{3+}(\text{AsO}_4)_3(\text{OH})_5 \cdot 5\text{H}_2\text{O}$		Cubic	$P\bar{4}3m$
42.7.1.4	X		Barium-alumo-pharmacosiderite	$\text{Ba}(\text{Al},\text{Fe}^{3+})_4(\text{AsO}_4)_3(\text{OH})_5 \cdot \text{H}_2\text{O}$	X	Cubic	$P\bar{4}3m$
42.7.2	X		Kidwellite	$\text{NaFe}_9^{3+}(\text{PO}_4)_6(\text{OH})_{10} \cdot 5\text{H}_2\text{O}$		Mon.	$A2/m$, Am or $A2$
42.7.3	X		Schoonerite	$\text{Mn}_2^{2+}\text{Fe}_4^{2+}\text{Fe}_2^{3+}\text{Zn}_2(\text{PO}_4)_6(\text{OH})_4 \cdot 18\text{H}_2\text{O}$		Orth.	$Pmab$
42.7.4.1	X		Mitridatite	$\text{Ca}_6\text{Fe}_9^{3+}(\text{PO}_4)_9\text{O}_6 \cdot 9\text{H}_2\text{O}$		Mon.	Aa
42.7.4.2	X		Robertsite	$\text{Ca}_6\text{Mn}_9^{3+}(\text{PO}_4)_9\text{O}_6 \cdot 9\text{H}_2\text{O}$		Mon.	$A2/a$
42.7.4.3	X		Arsenosiderite	$\text{Ca}_6\text{Fe}_9^{3+}(\text{AsO}_4)_9\text{O}_6 \cdot 9\text{H}_2\text{O}$		Mon.	$A2/a$
42.7.5	X		Yukonite	$\text{Ca}_3\text{Fe}_7^{3+}(\text{AsO}_4)_6(\text{OH})_9 \cdot 18\text{H}_2\text{O} (?)$?	?
42.7.6	X		Mapimite	$\text{Zn}_2\text{Fe}_3^{3+}(\text{AsO}_4)_3(\text{OH})_4 \cdot 10\text{H}_2\text{O}$		Mon.	Cm
42.7.7	X		Shubnikovite	$\text{Cu}_8\text{Ca}_2(\text{AsO}_4)_6(\text{OH})_{11} \cdot 7\text{H}_2\text{O} (?)$		Orth?	?

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Type 8			$(AB)_7(XO_4)_4Z_q \cdot xH_2O$				
42.8.1.1		X	Burangaitite	$(Na,Ca)_2(Fe^{2+},Mg)_2Al_{10}(PO_4)_8(OH,O)_{12} \cdot 4H_2O$		Mon.	C2/c
42.8.1.2	X		Dufrenite	$CaFe_2^{2+}Fe_8^{3+}(PO_4)_8(OH)_{12} \cdot 4H_2O$		Mon.	C2/c
42.8.2.1			Souzalite	$(Mg,Fe^{2+})_3(Al,Fe^{3+})_4(PO_4)_4(OH)_6 \cdot 2H_2O$		Mon.	A2/m or A2
42.8.2.2		X	Gormanite	$(Fe^{2+},Mg)_3(Al,Fe^{3+})_4(PO_4)_4(OH)_6 \cdot 2H_2O$		Tric.	P1 or P1
42.8.3.1			Turquoise	$CuAl_6(PO_4)_4(OH)_8 \cdot 5H_2O$		Tric.	P1
42.8.3.2		X	Coeruleolactite	$(Ca,Cu)Al_6(PO_4)_4(OH)_8 \cdot 4-5H_2O$		Tric.	P1
42.8.3.3		X	Faustite	$(Zn,Cu)Al_6(PO_4)_4(OH)_8 \cdot 5H_2O$		Tric.	P1
42.8.3.4			Chalcosiderite	$CuFe_6^{3+}(PO_4)_4(OH)_8 \cdot 4H_2O$		Tric.	P1
42.8.3.5		X	<i>to be published</i>				
42.8.4.1			Sampleite	$NaCaCu_5(PO_4)_4Cl \cdot 1.5H_2O$		Orth.	?
42.8.4.2		X	Lavendulan	$NaCaCu_5(AsO_4)_4Cl \cdot 1.5H_2O$		Orth.	?
42.8.5		X	Duhamelite	$Cu_4Pb_2Bi(VO_4)_4(OH)_3 \cdot 8H_2O$		Orth.	?
Type 9			$A_3(XO_4)_2Z_q \cdot xH_2O$				
42.9.1		X	Ferrisymplesite	$Fe_3^{3+}(AsO_4)_2(OH)_3 \cdot 5H_2O$	X	Tric.	?
42.9.2			Wavellite	$Al_3(PO_4)_2(OH)_3 \cdot 5H_2O$		Orth.	Pcmm
42.9.3		X	Kingite	$Al_3(PO_4)_2(OH,F)_3 \cdot 9H_2O$		Tric.	P1 or P1
42.9.4			Tinticite	$Fe_6^{3+}(PO_4)_4(OH)_6 \cdot 7H_2O$	X	Orth.	?
42.9.5		X	Gutsevichite	$(Al,Fe^{3+})_3[(P,V)O_4]_2(OH)_3 \cdot 8H_2O$	X	?	?

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Type 10			(AB) ₃ (XO ₄) ₂ Z _q ·xH ₂ O				
42.10.1.1		X	Segelerite	Ca ₂ Mg ₂ Fe ₂ ³⁺ (PO ₄) ₄ (OH) ₂ ·8H ₂ O		Orth.	Pbca
42.10.1.2	X		Overite	Ca ₂ Mg ₂ Al ₂ (PO ₄) ₄ (OH) ₂ ·8H ₂ O		Orth.	Pbca
42.10.2.1		X	Jahnsite	CaMn(Mg, Fe ²⁺) ₂ Fe ₂ ³⁺ (PO ₄) ₄ (OH) ₂ ·8H ₂ O	Mon.		P2/a
42.10.2.2		X	Whiteite-(Ca)	Ca(Fe ²⁺ , Mn)Mg ₂ Al ₂ (PO ₄) ₄ (OH) ₂ ·8H ₂ O	Mon.		P2/a
42.10.2.3		X	Whiteite-(Mn)	Mn ²⁺ (Fe, Mn) ²⁺ Mg ₂ Al ₂ (PO ₄) ₄ (OH) ₂ · 8H ₂ O	Mon.		P2/a
42.10.3		X	Keckite	Ca(Mn, Zn) ₂ Fe ₃ ³⁺ (PO ₄) ₄ (OH) ₃ ·2H ₂ O	Mon.		P2/a
42.10.4			Minyulite	KA ₁₂ (PO ₄) ₂ F·4H ₂ O		Orth.	Pba2
42.10.5.1		X	Leucophosphite	K ₂ Fe ₄ ³⁺ (PO ₄) ₄ (OH) ₂ ·4H ₂ O	Mon.		P2 ₁ /n
42.10.5.2		X	<i>to be published</i>				
42.10.6		X	Giniite	Fe ²⁺ Fe ₄ ³⁺ (PO ₄) ₄ (OH) ₂ ·2H ₂ O	Mon.		P2/a
42.10.7.1	X		Montgomeryite	Ca ₄ MgAl ₄ (PO ₄) ₆ (OH) ₄ ·12H ₂ O	Mon.		C2
42.10.7.2		X	Kingsmountite	(Ca, Mn) ₄ Fe ²⁺ Al ₄ (PO ₄) ₆ (OH) ₄ ·12H ₂ O	Mon.		C2
42.10.8		X	Strunzite	Mn ²⁺ Fe ₂ ³⁺ (PO ₄) ₂ (OH) ₂ ·6H ₂ O		Tric., ps-Mon.	P $\bar{1}$
42.10.9.1		X	Laueite	Mn ²⁺ Fe ₂ ³⁺ (PO ₄) ₂ (OH) ₂ ·8H ₂ O		Tric.	P $\bar{1}$
42.10.9.2	X		Stewartite	Mn ²⁺ Fe ₂ ³⁺ (PO ₄) ₂ (OH) ₂ ·8H ₂ O		Tric.	P $\bar{1}$
42.10.9.3			Pseudolaueite	Mn ²⁺ Fe ₂ ³⁺ (PO ₄) ₂ (OH) ₂ ·8H ₂ O	Mon.		P2 ₁ /a
42.10.10			Metavauxite	Fe ²⁺ Al ₂ (PO ₄) ₂ (OH) ₂ ·8H ₂ O	Mon.		P2 ₁ /c
42.10.11.1		X	Gatumbaite	CaAl ₂ (PO ₄) ₂ (OH) ₂ ·H ₂ O	Mon.		P2 ₁ /m, P2, or Pm
42.10.11.2		X	Kleemanite	ZnAl ₂ (PO ₄) ₂ (OH) ₂ ·3H ₂ O	Mon.		P2, P2 ₁ , P2/m or P2 ₁ /m
42.10.12		X	Drugmanite	Pb ₂ (Fe ³⁺ , Al)(PO ₄) ₂ (OH)·H ₂ O	Mon.		P2 ₁ /a

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 10							
42.10.13.1		X	Vanuralite	$Al(UO_2)_2(VO_4)_2(OH) \cdot 11H_2O$		Mon.	C2/c
42.10.13.2		X	Metavanuralite	$Al(UO_2)_2(VO_4)_2(OH) \cdot 8H_2O$		Tric.	P1 or P $\bar{1}$
42.10.13.3		X	Threadgoldite	$Al(UO_2)_2(PO_4)_2(OH) \cdot 8H_2O$		Mon.	Cc
42.10.14.1			Vauxite	$Fe^{2+}Al_4(PO_4)_4(OH)_4 \cdot 12H_2O$		Tric.	P $\bar{1}$
42.10.14.2			Paravauxite	$Fe^{2+}Al_2(PO_4)_2(OH)_2 \cdot 8H_2O$		Tric.	P $\bar{1}$
42.10.14.3		X	Sigloite	$(Fe^{2+}, Fe^{3+})Al_2(PO_4)_2(O, OH)_2 \cdot 8H_2O$		Tric.	P $\bar{1}$
42.10.14.4			Gordonite	$MgAl_2(PO_4)_2(OH)_2 \cdot 8H_2O$		Tric.	P $\bar{1}$
42.10.15			Xanthoxenite	$Ca_4Fe_2^{3+}(PO_4)_4(OH)_2 \cdot 3H_2O$		Tric.	P1 or P $\bar{1}$
42.10.16	X		Beraunite	$Fe^{2+}Fe_5^{3+}(PO_4)_4(OH)_5 \cdot 7H_2O$		Mon.	C2/c
42.10.17	X		Bermanite	$Mn^{2+}Mn_2^{3+}(PO_4)_2(OH)_2 \cdot 4H_2O$		Mon.	P2 $_1$
42.10.18.1		X	Whitmoreite	$Fe^{2+}Fe_2^{3+}(PO_4)_2(OH)_2 \cdot 4H_2O$		Mon.	P2 $_1$ /c
42.10.18.2		X	Arthurite	$CuFe_2^{3+}(AsO_4)_2(OH)_2 \cdot 4H_2O$		Mon.	P2 $_1$ /c
42.10.18.3		X	Ojuelaite	$ZnFe_2^{3+}(AsO_4)_2(OH)_2 \cdot 4H_2O$		Mon.	P2 $_1$ /c
42.10.19	X		Sincosite	$CaV_2^{4+}(PO_4)_2(OH)_4 \cdot 3H_2O$		Tet.	?
42.10.20		X	Kehoeite	$\sim(Zn, Ca)Al_2(PO_4)_2(OH)_2 \cdot 5H_2O$	X	Cubic?	Ia3d ?
Type 11 $(AB)_4(XO_4)_3Z_q \cdot xH_2O$							
42.11.1	X		Calcioferrite	$Ca_2Fe_2^{3+}(PO_4)_8(OH)_{22} \cdot 32H_2O$		Orth.	?
42.11.2			Vashegyite	$Al_4(PO_4)_3(OH)_3 \cdot 13H_2O$		Amor.	-----

REVISED DANA NUMBER	N C	M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 12		Miscellaneous					
42.12.1		X	Aldermanite	$Mg_5Al_{12}(PO_4)_8(OH)_{22} \cdot 32H_2O$		Orth.	?
42.12.2			Richellite	$Ca_3Fe_{10}^{3+}(PO_4)_8(OH)_2 \cdot nH_2O$		Tet.	$P\bar{4}$
42.12.3		X	Matulaite	$Ca[Al_9(H_2O)_2(OH)_{10}(PO_4)_6]_2 \cdot 24H_2O$		Mon.	$P2_1/c$
42.12.4		X	Jungite	$Ca_2(H_2O)_6[Zn_4Fe_8^{3+}(OH)_9(PO_4)_9] \cdot 10H_2O$		Orth.	Pcmm or $Pcm2_1$
42.12.5		X	Cacoxenite	$Fe_9^{3+}(PO_4)_4(OH)_{15} \cdot 18H_2O$		Hex.	$P6/mmm$
42.12.6		X	Ceruleite	$Cu_2Al_7(AsO_4)_4(OH)_{13} \cdot 11.5H_2O$		Tric.	$P1$ or $P\bar{1}$
42.12.7.1		X	Mixite	$BiCu_6(AsO_4)_3(OH)_6 \cdot 3H_2O$		Hex.	$P6_3/m$
42.12.7.2		X	Agardite	$(Y,Ca)Cu_6(AsO_4)_3(OH)_6 \cdot 3H_2O$		Hex.	$P6_3/m$
42.12.7.3		X	<i>to be published</i>				
42.12.7.4		X	Goudeyite	$AlCu_6(AsO_4)_3(OH)_6 \cdot 3H_2O$		Hex.	$P6_3/m$ or $P6_3$
42.12.8		X	Zapatalite	$Cu_3Al_4(PO_4)_3(OH)_9 \cdot 4H_2O$		Tet.	?
42.12.9			Rosieresite	$PbAl_{12}(PO_4)_4(OH)_2 \cdot 57H_2O$ (?)	X	?	?
42.12.10		X	Englishite	$K_4Na_2Ca_9Al_{18}(PO_4)_6(HPO_4)_{12} \cdot (OH)_{36} \cdot 8H_2O$ (?)		Mon.	$A2/a$ or Aa
42.12.11			Lehiite	$(K,Na)_2Ca_5Al_8(PO_4)_8(OH)_{12} \cdot 6H_2O$	X	?	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 43 COMPOUND PHOSPHATES, ETC.							
Type 1 Acid Compound Phosphates, etc.							
43.1.1			Ardealite	$\text{HCa}_2(\text{PO}_4)(\text{SO}_4) \cdot 4\text{H}_2\text{O}$		Mon.	?
43.1.2	X		Orpheite	$\text{H}_6\text{Pb}_{10}\text{Al}_{20}(\text{PO}_4)_{12}(\text{SO}_4)_5(\text{OH})_{40}^-$ $11\text{H}_2\text{O} (?)$		Trig.	?
			Betpakdalite	[with molybdates]			
			Melkovite	[with molybdates]			
Type 2 Anhydrous Normal Compound Phosphates, etc.							
43.2.1.1			Bradleyite	$\text{Na}_3\text{Mg}(\text{PO}_4)(\text{CO}_3)$		Mon.	$\text{P}2_1/\text{m}$
43.2.1.2	X		Sidorenkite	$\text{Na}_3\text{Mn}(\text{PO}_4)(\text{CO}_3)$		Mon.	$\text{P}2_1/\text{m}$ or $\text{P}2_1$
43.2.2	X		<i>to be published</i>				
Type 3 Hydrated Normal Compound Phosphates, etc.							
43.3.1.1		X	Schoderite	$\text{Al}_2(\text{PO}_4)(\text{VO}_4) \cdot 8\text{H}_2\text{O}$		Mon.	$\text{P}2_1/*$
43.3.1.2		X	Metaschoderite	$\text{Al}_2(\text{PO}_4)(\text{VO}_4) \cdot 6\text{H}_2\text{O}$		Mon.	$\text{P}2/\text{m}$
43.3.2		X	Embreyite	$\text{Pb}_5(\text{PO}_4)_2(\text{CrO}_4)_2 \cdot \text{H}_2\text{O}$		Mon.	$\text{P}2_1/\text{m}$
43.3.3		X	Phosinaite	$\text{Na}_{12}(\text{Ca,Ce})_4[\text{Si}_4\text{O}_{12}](\text{PO}_4)_4 \cdot 4\text{H}_2\text{O}$		Orth.	$\text{P}22_12$ or $\text{P}22_12_1$
			Sodium- betpakdalite	[with molybdates]			
Type 4 Anhydrous Compound Phosphates, etc., Containing Hydroxyl or Halogen							
43.4.1.1			Beudantite	$\text{PbFe}_3^+(\text{AsO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m}$
43.4.1.2			Corkite	$\text{PbFe}_3^+(\text{PO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m}$
43.4.1.3		X	Hidalgoite	$\text{PbAl}_3(\text{AsO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m} (?)$
43.4.1.4			Hinsdalite	$\text{PbAl}_3(\text{PO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m}$
43.4.1.5			Svanbergite	$\text{SrAl}_3(\text{PO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m}$
43.4.1.6		X	Kemmlitzite	$\text{SrAl}_3(\text{AsO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m} (?)$
43.4.1.7			Woodhouseite	$\text{CaAl}_3(\text{PO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m}$
43.4.1.8		X	Weilerite	$\text{BaAl}_3(\text{AsO}_4)(\text{SO}_4)(\text{OH})_6$		Trig.	$\text{R}\bar{3}\text{m} (?)$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4							
43.4.2.1			Tsumebite	$Pb_2Cu(PO_4)(SO_4)(OH)$		Mon.	$P2_1/m$
43.4.2.2	X		Arsentsumbite	$Pb_2Cu(AsO_4)(SO_4)(OH)$		Mon.	$P2_1/m$
43.4.3			Cahnite	$Ca_2(AsO_4)[B(OH)_4]$		Tet.	$P\bar{4}$
43.4.4	X		Seamanite	$Mn_3(PO_4)[B(OH)_4](OH)_2$		Orth.	Pbnm
43.4.5	X		Hematolite	$(Mn^{2+}, Mg, Al)_{15}(As^{3+}O_3)(As^{5+}O_4)_2(OH)_{23}$		Trig.	R3
43.4.6	X		Holdenite	$(Mn, Mg)_6Zn_3(AsO_4)_2(SiO_4)(OH)_8$		Orth.	Abma
43.4.7	X		Kolicite	$Mn_7Zn_4(AsO_4)_2(SiO_4)_2(OH)_8$		Orth.	Cmca
43.4.8	X		Mcgovernite	$(Mn, Mg)_9Zn_3(AsO_3)(AsO_4)_3(SiO_4)_3(OH)_{21}(?)$		Trig. c	$R\bar{3}c$ or R3c
43.4.9	X		Kraisslite	$Fe_2^{3+}Mg_4Mn_{44}Zn_6(AsO_3)_4(AsO_4)_6(SiO_4)_{12}(OH)_{36}$		Hex.	$P6_322$
43.4.10	X		Ardennite	$Mn_4^{2+}(Mg, Al)_2Al_2[(As, V)O_4]_2[SiO_4]_2[Si_3O_{10}](OH)_6$		Orth.	Pnmm
43.4.11	X		Dugganite	$Pb_3Zn_3(TeO_6)_x(AsO_4)_{2-x}(OH)_{6-3x}$ ($x=0.94-1.33$)		Hex.	$P6/mmm$
			Likasite	[with nitrates]			
			Vauquelinite	[with chromates]			
			Fornacite	[with chromates]			
			Dixenite	[with arsenites]			

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 5		Hydrated Compound Phosphates, etc. Containing Hydroxyl or Halogen					
43.5.1.1			Sarmientite	$\text{Fe}_2^{3+}(\text{AsO}_4)(\text{SO}_4)(\text{OH}) \cdot 5\text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{c}$
43.5.1.2		X	Bukovskyite	$\text{Fe}_2^{3+}(\text{AsO}_4)(\text{SO}_4)(\text{OH}) \cdot 7\text{H}_2\text{O}$		Mon.	?
43.5.1.3		X	Sanjuanite	$\text{Al}_2(\text{PO}_4)(\text{SO}_4)(\text{OH}) \cdot 9\text{H}_2\text{O}$		Mon.	?
43.5.2			Diadochite	$\text{Fe}_2^{3+}(\text{PO}_4)(\text{SO}_4)(\text{OH}) \cdot 5\text{H}_2\text{O}$		Tric.	P1 or $\text{P}\bar{1}$
43.5.3.1			Pitticite	$\text{Fe}_2^{3+}(\text{AsO}_4)(\text{SO}_4)(\text{OH}) \cdot n\text{H}_2\text{O}$ (?)		Amor.	-----
43.5.3.2		X	Zykaite	$\text{Fe}_4^{3+}(\text{AsO}_4)_3(\text{SO}_4)(\text{OH}) \cdot 15\text{H}_2\text{O}$		Orth?	?
43.5.4		X	Sasaite	$(\text{Al}, \text{Fe}^{3+})_{14}(\text{PO}_4)_{11}(\text{SO}_4)(\text{OH})_{7-83}\text{H}_2\text{O}$		Orth.	?
43.5.5		X	Coconinoite	$\text{Fe}_2^{3+}\text{Al}_2(\text{UO}_2)_2(\text{PO}_4)_4(\text{SO}_4)(\text{OH})_{2-20}\text{H}_2\text{O}$		Mon.	?
43.5.6		X	Xiangjiangite	$(\text{Fe}^{3+}, \text{Al})(\text{UO}_2)_2(\text{PO}_4)_2(\text{SO}_4)(\text{OH})_{-22}\text{H}_2\text{O}$		Mon., or Orth., ps-Tet.	?
43.5.7			Kribergite	$\text{Al}_5(\text{PO}_4)_3(\text{SO}_4)(\text{OH})_4 \cdot 2\text{H}_2\text{O}$	X	?	?
43.5.8		X	Kovdorskite	$\text{Mg}_4(\text{PO}_4)_2(\text{CO}_3)(\text{OH})_2 \cdot 4.5\text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{c}$
43.5.9		X	Viseite	$5\text{CaO} \cdot 6\text{Al}_2\text{O}_3 \cdot 3\text{SiO}_2 \cdot 3.5\text{P}_2\text{O}_5 \cdot 1.5\text{F}-36\text{H}_2\text{O}$		Cubic?	?
43.5.10		X	Perhamite	$3\text{CaO} \cdot 3.5\text{Al}_2\text{O}_3 \cdot 3\text{SiO}_2 \cdot 2\text{P}_2\text{O}_5 \cdot 18\text{H}_2\text{O}$		Hex.	$\text{P6}_3/\text{mmm}$
43.5.11			Luenebergite	$\text{Mg}_3\text{B}_2(\text{PO}_4)_2(\text{OH})_6 \cdot 5\text{H}_2\text{O}$		Mon.	$\text{C2}/\text{m}$
43.5.12		X	Synadelphite	$\text{Mn}_9^{2+}(\text{AsO}_3)(\text{AsO}_4)_2(\text{OH})_9 \cdot 2\text{H}_2\text{O}$		Orth.	Pnma
43.5.13		X	Parnauite	$\text{Cu}_9(\text{AsO}_4)_2(\text{SO}_4)(\text{OH})_{10} \cdot 7\text{H}_2\text{O}$		Orth.	P2_122
43.5.14		X	Chalcophyllite	$\text{Cu}_9\text{Al}(\text{AsO}_4)_2(\text{SO}_4)_{1.5}(\text{OH})_{12} \cdot 18\text{H}_2\text{O}$		Trig.	$\text{R}\bar{3}\text{m}$
			Teruggite	[with borates]			

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 44		ANTIMONATES					
Type 1		$A_2X_2O_6(O, OH, F)$					
44.1.1.1	X		Stibiconite	$Sb^{3+}Sb^{5+}_2O_6(OH)$		Cubic	Fd3m
44.1.1.2			Bindheimite	$PbSb^{5+}_2O_6(O, OH)$		Cubic	Fd3m
44.1.1.3			Romeite	$(Ca, Fe^{2+})_2(Sb^{5+}, Ti)_2O_6(O, OH, F)$		Cubic	Fd3m
44.1.1.4	X		Lewisite	$(Ca, Fe^{2+})_2(Sb^{5+}, Ti)_2O_7 (?)$		Cubic	?
44.1.1.5	X		Stetefeldtite	$Ag_2Sb^{5+}_2(O, OH)_7 (?)$		Cubic	Fd3m
44.1.2	X		Partzite	$Cu_2Sb^{5+}_2(O, OH)_7 (?)$		Cubic ?	Fd3m
Type 2		AX_2O_6					
44.2.1	X		Tripuhuite	$Fe^{2+}Sb^{5+}_2O_6$		Tet.	?
44.2.2.1	X		Byströmite	$MgSb^{5+}_2O_6$		Tet.	$P4_2/mnm$
44.2.2.2	X		Ordonezite	$ZnSb^{5+}_2O_6$		Tet.	$P4/mnm$
Type 3		Miscellaneous					
44.3.1			Monimolite	$(Pb, Ca)_3Sb^{5+}_2O_8$	X	Cubic	?
44.3.2			Swedenborgite	$NaBe_4Sb^{5+}O_7$		Hex.	$P6_3mc$
44.3.3	X		Manganostibite	$(Mn, Fe^{2+})_7Sb^{5+}As^{5+}O_{12}$		Orth.	Ibmm
44.3.4	X		Parwelite	$Mn^{2+}_{10}Sb^{5+}_2As^{5+}_2Si_2O_{24}$		Mon.	Aa
44.3.5	X		Langbanite	$(Mn^{2+}, Ca)_4(Mn, Fe^{3+})_9Sb^{5+}_2Si_2O_{24}$		Trig.	?
44.3.6	X		Katoptrite	$(Mn^{2+}_5Sb^{5+}_2)(Mn^{2+}_8Al_4Si_2)O_{28}$		Mon.	$C2/m$
44.3.7	X		Yeatmanite	$(Mn^{2+}_5Sb^{5+}_2)(Mn^{2+}_2Zn_8Si_4)O_{28}$		Tric.	$P1$ or $P\bar{1}$
44.3.8	X		Bahianite	$Al_5Sb^{5+}_3O_{14}(O, OH)_2$		Mon.	$C2/m$
44.3.9	X		Shahovite	$Hg_8Sb^{5+}_2O_{13}$		Tric.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 45 ACID AND NORMAL ANTIMONITES AND ARSENITES							
Type 1		Miscellaneous					
45.1.1		X	Reinerite	$Zn_3(As^{3+}O_3)_2$		Orth.	Pbam
45.1.2	X		Trigonite	$Pb_3Mn(As^{3+}O_3)_2(HAs^{3+}O_3)$		Mon.	Pn
45.1.3		X	Asbecasite	$Ca_3(Ti,Sn)Si_{12}Be_2O_2(As^{3+}O_3)_6$		Trig.	P3c1
45.1.4		X	Cafarsite	$(Ca,Mn)_8(Ti,Fe^{2+})_{6-7}(As^{3+}O_3)_{12-}$ $4-5H_2O$		Cubic	Pn3
45.1.5			Trippkeite	$CuAs_2^{3+}O_4$		Tet.	$P4_2/mbc$
45.1.6	X		Schafarzikite	$Fe^{2+}Sb_2^{3+}O_4$		Tet.	$P4_2/mbc$
45.1.7		X	Leiteite	$ZnAs_2^{3+}O_4$		Mon.	$P2_1/a$
45.1.8		X	Paulmooreite	$Pb_2[As_2^{3+}O_5]$		Mon.	$P2_1$ or $P2_1/m$
45.1.9		X	Apuanite	$Fe^{2+}Fe_2^{3+}Fe_2^{3+}Sb_2^{3+}O_{12}S$		Tet.	$P4_2/mbc$
45.1.10		X	Versiliaite	$Fe_4^{2+}Fe_4^{3+}Fe_4^{3+}Sb_{12}^{3+}O_{32}S_2$		Orth.	Pbam
45.1.11		X	Stibivanite	$V Sb_2O_5$ [or $V OSb_2O_4$]		Mon.	$C2/c$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 46 ANTIMONITES AND ARSENITES CONTAINING HYDROXYL OR HALOGEN							
Type 1			$(AB)_m(XO_3)_pZ_q$				
46.1.1			Finnemanite	$Pb_5(As^{3+}O_3)_3Cl$		Hex.	$P6_3/m$
46.1.2	X		Nanlingite	$CaMg_4(As^{3+}O_3)_2F_4$		Trig.	$R\bar{3}m$ or $R3m$
46.1.3	X		Magnussonite	$Mn_9^{2+}[As_6^{3+}Mn^{1+}O_{18}]Cl$		Cubic	$Ia\bar{3}d$
46.1.4	X		Stenhuggarite	$Ca_2Fe_2^{3+}Sb^{3+}(As^{3+}O_3)_2O$		Tet.	$I4_1/a$
Type 2 Miscellaneous							
46.2.1			Ecdemite	$Pb_6As_2^{3+}O_7Cl_4$		Tet.	?
46.2.2			Heliophyllite	$Pb_6As_2^{3+}O_7Cl_4$		Orth.	?
46.2.3.1	X		Tomichite	$(V^{3+}, Fe^{3+})_4Ti_3^{4+}As^{3+}O_{13}(OH)$		Mon.	$P2_1/m$ or $P2_1$
46.2.3.2	X		Derbylite	$Fe_4^{3+}Ti_3^{4+}Sb^{3+}O_{13}(OH)$		Mon.	$P2_1/m$
46.2.4	X		<i>to be published</i>				
Type 3 Compound Antimonites and Arsenites Containing Hydroxyl or Halogen							
46.3.1	X		Armangite	$Mn_{26}^{2+}[As_6^{3+}(OH)_4O_{14}][As_6^{3+}O_{18}]_2(CO_3)$		Hex.	$P\bar{3}$
46.3.2	X		Dixenite	$Mn_{14}^{2+}Fe^{3+}[(Si, As)O_4]_3[As^{3+}O_3]-[As^{3+}Cu^{1+}O_{12}](OH, O)_3$		Trig.	?
			Hematolite	[with phosphates]			
			Mcgovernite	[with phosphates]			
			Kraisslite	[with phosphates]			

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 47 VANADIUM OXYSALTS							
Type 1 Normal Anhydrous Vanadium Oxysalts							
47.1.1		X	Doloresite	$H_8V_6O_{16}$		Mon.	C2/m
47.1.2		X	Nolanite	$Fe_3V_7O_{16}$		Hex.	$P6_3mc$
47.1.3		X	<i>to be published</i>				
Type 2 Anhydrous Vanadium Oxysalts Containing Hydroxyl or Halogen							
47.2.1		X	Gamagarite	$Ba_4(Fe,Mn)_2^{2+}V_4O_{15}(OH)_2$ (?)		Mon.	?
Type 3 Hydrated Vanadium Oxysalts							
47.3.1.1			Metarossite	$CaV_2O_6 \cdot 2H_2O$		Tric.	$P1$ or $P\bar{1}$
47.3.1.2			Rossite	$CaV_2O_6 \cdot 4H_2O$		Tric.	$P\bar{1}$
47.3.2.1		X	Delrioite	$CaSrV_2O_6(OH)_2 \cdot 3H_2O$		Mon.	Ia or I2/a
47.3.2.2		X	Metadelrioite	$CaSrV_2O_6(OH)_2$		Tric.	$P\bar{1}$ or $P1$
47.3.3		X	Pintadoite	$Ca_2V_2O_7 \cdot 9H_2O$?	?
47.3.4		X	Simplotite	$CaV_4O_9 \cdot 5H_2O$		Mon.	A2/m, Am, or A2
47.3.5		X	Barnesite	$Na_2V_6O_{16} \cdot 3H_2O$		Mon.	P2/m
47.3.6.1			Hewettite	$CaV_6O_{16} \cdot 19H_2O$		Orth.	?
47.3.6.2			Metahebettite	$CaV_6O_{16} \cdot 9H_2O$		Orth.	?
47.3.7			Uvanite	$U_2V_6O_{21} \cdot 15H_2O$ (?)		Orth.	?
47.3.8		X	Santafeite	$Na_2Mn_6^{2+}Mn_3^{4+}(V,As)_6O_{28} \cdot 8H_2O$ (?)		Orth.	$B22_12$
47.3.9		X	Hummerite	$K_2Mg_2[V_{10}O_{28}] \cdot 16H_2O$		Tric.	$P\bar{1}$
47.3.10		X	Huemulite	$Na_4Mg[V_{10}O_{28}] \cdot 24H_2O$		Tric.	$P1$ or $P\bar{1}$
47.3.11			Pascoite	$Ca_3[V_{10}O_{28}] \cdot 17H_2O$		Tric.	$P1$
47.3.12			Rauvite	$Ca(UO_2)_2V_{10}O_{28} \cdot 16H_2O$ (?)		?	?
47.3.13		X	Vanalite	$Na_2Al_8V_{10}O_{37} \cdot 30H_2O$		Mon.	P2/m, P2, or Pm

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
Type 4		Hydrated Vanadium Oxysalts Containing V ⁴⁺ and V ⁵⁺					
47.4.1		X	Bariandite	V ₂ ⁴⁺ V ₈ ⁵⁺ O ₂₂ ·12H ₂ O		Mon.	Cc or C2/c
47.4.2		X	Corvusite	V ₂ ⁴⁺ V ₁₂ ⁵⁺ O ₃₄ ·nH ₂ O		?	?
47.4.3		X	Vanoxite	V ₄ ⁴⁺ V ₂ ⁵⁺ O ₁₃ ·8H ₂ O	X	Hex?	?
47.4.4		X	Hendersonite	Ca ₂ V ⁴⁺ V ₅ ⁵⁺ O ₂₄ ·8H ₂ O		Orth.	Pnam or Pna2 ₁
47.4.5			Fernandinite	CaV ₂ ⁴⁺ V ₁₀ ⁵⁺ O ₃₀ ·14H ₂ O (?)		?	?
47.4.6			Melanovanadite	Ca ₂ V ₄ ⁴⁺ V ₆ ⁵⁺ O ₂₅ ·nH ₂ O		Tric.	P1
47.4.7		X	Grantsite	Na ₄ Ca _x V _{2x} ⁴⁺ V _{12-2x} ⁵⁺ O ₃₂ ·8H ₂ O		Mon.	C2/m, Cm, or C2
47.4.8		X	Satpaevite	Al ₁₂ V ₂ ⁴⁺ V ₆ ⁵⁺ O ₃₇ ·30H ₂ O		Orth.(?)	?
47.4.9		X	Bokite	KAl ₃ Fe ₆ ³⁺ V ₆ ⁴⁺ V ₂₀ ⁵⁺ O ₇₆ ·30H ₂ O	X	?	?
47.4.10		X	Sherwoodite	Ca _{4.5} AlV ₂ ⁴⁺ V ₁₂ ⁵⁺ O ₄₀ ·28H ₂ O		Tet.	I4/amd

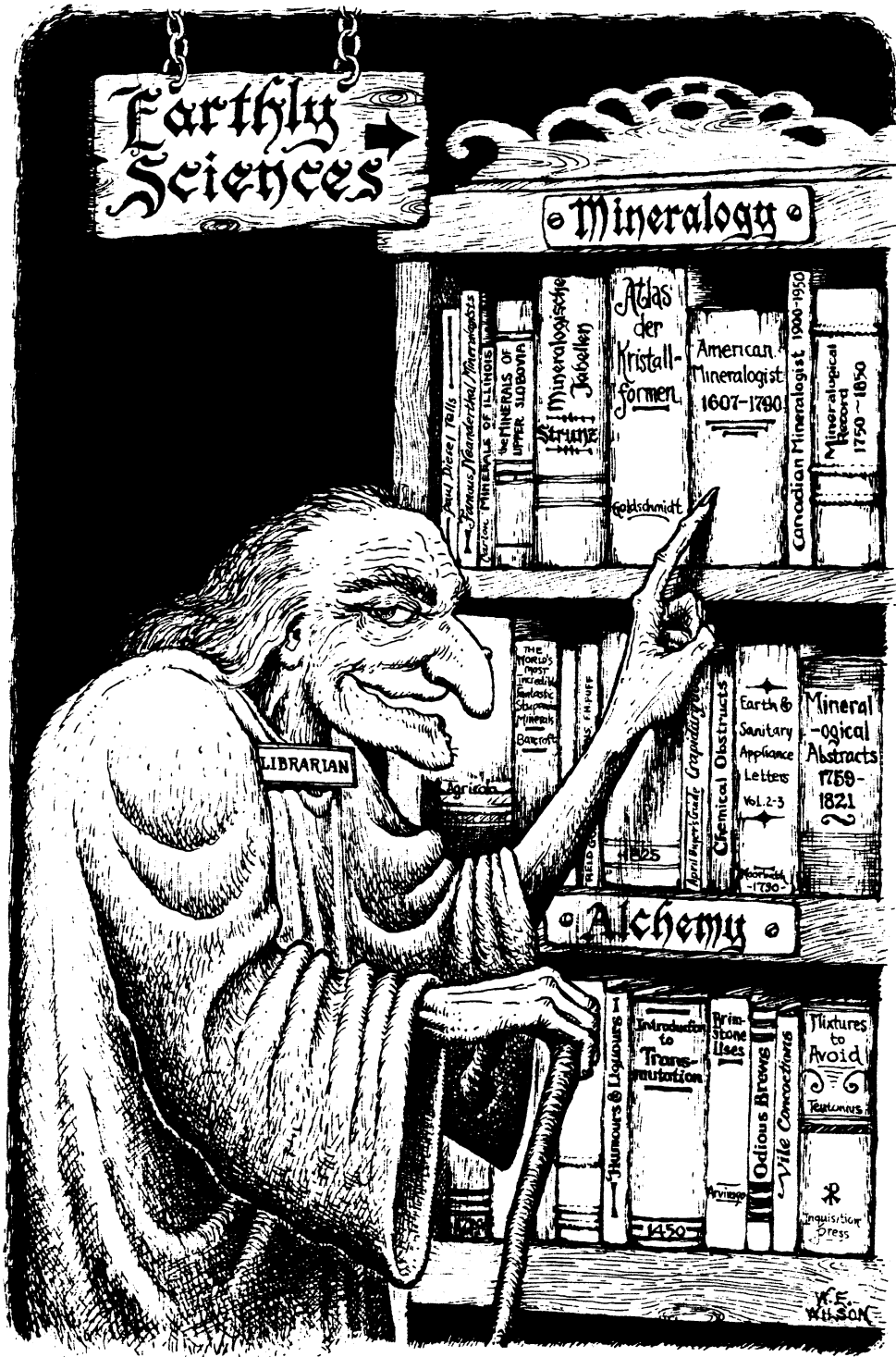
REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 48 ANHYDROUS MOLYBDATES AND TUNGSTATES							
Type 1 AXO ₄							
48.1.1.1			Huebnerite	MnWO ₄		Mon.	P2/c
48.1.1.2			Ferberite	Fe ²⁺ WO ₄		Mon.	P2/c
48.1.2			Sanmartinite	ZnWO ₄		Mon.	P2/c
48.1.3.1			Scheelite	CaWO ₄		Tet.	I4 ₁ /a
48.1.3.2			Powellite	CaMoO ₄		Tet.	I4 ₁ /a
48.1.4.1			Wulfenite	PbMoO ₄		Tet.	I4 ₁ /a
48.1.4.2			Stolzite	PbWO ₄		Tet.	I4 ₁ /a
48.1.5			Raspite	PbWO ₄		Mon.	P2 ₁ /n
Type 2 A ₂ XO ₄							
48.2.1	X		Russellite	(BiO) ₂ WO ₄		Tet.	I4̄2d or I4/amd
48.2.2			Koehlinite	(BiO) ₂ MoO ₄		Orth.	Pca2 ₁
Type 3 Basic Anhydrous Molybdates and Tungstates							
48.3.1			Lindgrenite	Cu ₃ (MoO ₄) ₂ (OH) ₂		Mon.	P2 ₁ /n
48.3.2			Cuprotungstite	Cu ₂ (WO ₄)(OH) ₂		?	?
48.3.3.1	X		Cerotungstite	(Ce,Nd)(W ₂ O ₆)(OH) ₃		Mon.	?
48.3.3.2	X		Yttrotungstite	Y(W ₂ O ₆)(OH) ₃ (?)		Mon.	?
48.3.4	X		Anthionite	Al(WO ₃)(OH) ₃ (?)		Tric.	?
Type 4 Miscellaneous							
48.4.1		X	Sedovite	U(MoO ₄) ₂		Orth.	?
48.4.2		X	Jixianite	Pb(W,Fe ³⁺) ₂ (O,OH) ₇		Cubic	Fd3m

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 49 HYDRATED MOLYBDATES AND TUNGSTATES							
Type 1 Acid Hydrated Molybdates and Tungstates							
49.1.1		X	Hydrotungstite	$H_2WO_4 \cdot H_2O$		Mon.	P2/m
49.1.2		X	Moluranite	$H_4U^{4+}(UO_2)_3(MoO_4)_7 \cdot 18H_2O$		Amor.	-----
Type 2 Hydrated Normal Molybdates and Tungstates							
49.2.1			Ferrimolybdite	$Fe_2^{3+}(MoO_4)_3 \cdot 8H_2O$		Orth.	?
49.2.2		X	Ferritungstite	$Ca_2Fe_2^{2+}Fe_2^{3+}(WO_4)_7 \cdot 9H_2O$ (?)		Cubic	Fd3m
49.2.3		X	Umohoite	$(UO_2)(MoO_4) \cdot 4H_2O$		Mon.	P2 ₁ /m or P2 ₁
49.2.4		X	Iriginite	$(UO_2)(Mo_2O_7) \cdot 3H_2O$		Mon.	?
49.2.5		X	Mpororoite	$(Al, Fe^{3+})_2W_2O_9 \cdot 6H_2O$ (?)		Mon. (?)	?
Type 3 Hydrated Molybdates and Tungstates Containing Hydroxyl or Halogen							
49.3.1		X	Calcurmolite	$Ca(UO_2)_3(MoO_4)_3(OH)_2 \cdot 11H_2O$?	?
49.3.2		X	Cousinite	$Mg(UO_2)_2(MoO_4)_2(OH)_2 \cdot 5H_2O$ (?)		?	?
Type 4 Compound Molybdates and Tungstates							
49.4.1		X	Betpakdalite	$H_8CaFe_2^{3+}(MoO_4)_5(AsO_4)_2 \cdot 10H_2O$		Mon.	?
49.4.2		X	<i>to be published</i>				
49.4.3		X	Melkovite	$H_6CaFe_2^{3+}(MoO_4)_4(PO_4) \cdot 6H_2O$		Mon.	?
49.4.4		X	Sodium betpakdalite	$H_8(Na, Ca)_3Fe_2^{3+}(MoO_4)_6(AsO_4)_2 \cdot 11H_2O$		Mon.	?

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	S S D	CRYSTAL SYSTEM	SPACE GROUP
CLASS 50 ORGANIC COMPOUNDS							
Type 1 Oxalates							
50.1.1			Whewellite	$\text{CaC}_2\text{O}_4 \cdot \text{H}_2\text{O}$		Mon.	$\text{P2}_1/\text{n}$
50.1.2			Weddellite	$\text{CaC}_2\text{O}_4 \cdot (2+x)\text{H}_2\text{O}$ ($x < 0.5$)		Tet.	$\text{I4}/\text{m}$
50.1.3.1			Humboldtine	$\text{Fe}^{2+}\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$		Mon.	$\text{C2}/\text{c}$
50.1.3.2		X	Glushinskite	$\text{MgC}_2\text{O}_4 \cdot 4\text{H}_2\text{O}$		Mon.	$\text{C2}/\text{c}$
50.1.4		X	Minguzzite	$\text{K}_3\text{Fe}^{3+}(\text{C}_2\text{O}_4)_3 \cdot 3\text{H}_2\text{O}$		Mon.	?
50.1.5			Oxammite	$(\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$		Orth.	$\text{P2}_12_12_1$
50.1.6		X	<i>to be published</i>				
50.1.7.1		X	Stepanovite	$\text{NaMgFe}^{3+}(\text{C}_2\text{O}_4)_3 \cdot 8-9\text{H}_2\text{O}$		Trig.	?
50.1.7.2		X	Zhemchuzhnikovite	$\text{NaMgAl}(\text{C}_2\text{O}_4)_3 \cdot 8\text{H}_2\text{O}$		Trig.	?
Type 2 Mellitates, Citrates, Cyanates, and Acetates							
50.2.1			Mellite	$\text{Al}_2[\text{C}_6(\text{COO})_{16}] \cdot 18\text{H}_2\text{O}$		Tet.	P4_22 or P4_322
50.2.2			Earlandite	$\text{Ca}_3(\text{C}_6\text{H}_5\text{O}_2)_2 \cdot 4\text{H}_2\text{O}$?	?
50.2.3			Julienite	$\text{Na}_2\text{Co}(\text{CSN})_4 \cdot 8\text{H}_2\text{O}$		Tet.	$\text{P4}_2/\text{n}$
50.2.4			Calclacite	$\text{CaCl}_2 \cdot \text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 10\text{H}_2\text{O}$	X	Mon?	?
50.2.5		X	Kafehydrocyanite	$\text{K}_4\text{Fe}^{2+}(\text{CN})_6 \cdot 3\text{H}_2\text{O}$ (?)		?	?
Type 3 Hydrocarbons							
50.3.1		X	Kratochvilite	$\text{C}_{13}\text{H}_{10}$		Orth.	?
50.3.2		X	Simonellite	$\text{C}_{15}\text{H}_{20}$		Orth.	Pnaa
50.3.3		X	Fichtelite	$\text{C}_{19}\text{H}_{34}$		Mon.	P2_1
50.3.4		X	Evenkite	$\text{C}_{21}\text{H}_{44}$		Mon.	$\text{P2}_1/\text{a}$
50.3.5		X	Karpatite	$\text{C}_{24}\text{H}_{42}$		Mon.	$\text{P2}_1/\text{c}$ or $\text{P2}/\text{c}$

REVISED DANA NUMBER	N C	N M	MINERAL NAME	COMPOSITION	CLASS D	CRYSTAL SYSTEM	SPACE GROUP
Type 4		Miscellaneous					
50.4.1		X	Refikite	$C_{20}H_{32}O_2$ (Δ -13-dihydro-d-pimaric acid)		Orth.	$P2_12_12_1$
50.4.2		X	Hoelite	$C_{14}H_8O_2$ (anthraquinone)		Orth.	?
50.4.3		X	Flagstaffite	$C_{10}H_{22}O_3$ (<i>cis</i> -terpin hydrate)		Orth.	Fdd2
50.4.4		X	Uricite	$C_5H_4N_4O_3$ (2,6,8-trihydroxypurine)		Mon.	?
50.4.5		X	Guanine	$C_5H_3(NH_2)N_4O$ (2-amino-6-hydroxypurine)		Mon.	?
50.4.6		X	Urea	$CO(NH_2)_2$ (carbamide)		Tet.	$P\bar{4}2_1m$
50.4.7		X	Acetamide	CH_3CONH_2 (ethanamide)		Trig.	?
50.4.8		X	Kladnoite	$C_6H_4(CO)_2NH$ (phthalimide)		Mon.	?
50.4.9		X	Abelsonite	$C_{31}H_{32}N_4Ni$ (nickel porphyrin)		Tric.	P^*

Bibliography and Index



Abbreviation	Journal Title
AC	Acta Crystallographica
AKMG	Arkiv for Kemi, Mineralogi och Geologi
AM	American Mineralogist
AMG	Arkiv for Mineralogi och Geologi
ANLR	Accademia Nazionale dei Lincei, Rendicotte classe di scienze fisiche, matematiche e naturali
AST	Atti della Accademia della Scienze di Torino
BGSA	Bulletin of the Geological Society of America
BGSD	Bulletin of the Geological Society of Denmark
BGSF	Bulletin of the Geological Society of Finland
BIG	Bulletin of the Institute of Geology, Sofia
BM	Bulletin de Mineralogie [prior to vol.101, Bulletin de la Societie francaise de Mineralogie et de Crystallographie]
BSBG	Bulletin de la Societie Belgie Geologie
CCM	Clays and Clay Minerals
CE	Chemie der Erde
CJP	Czechoslovakian Journal of Physics
CM	Canadian Mineralogist
CMP	Contributions to Mineralogy and Petrology
CSMQ	Colorado School of Mines Quarterly
DA	Der Aufschluss
DANS	Doklady Akademia Nauk SSSR
EG	Economic Geology
EPSL	Earth and Planetary Science Letters
ERS	Estratto dei Rendicotti della Societa Italiano di Mineralogie e Petrologia
GCA	Geochimica et Cosmochimica Acta
GJ	Geochemical Journal (Japan)
GSPP	Geological Society of America Professional Paper
IC	Inorganic Chemistry
IGR	International Geological Review
JACS	Journal of the American Chemical Society
JCP	Journal of Chemical Physics
JCS	Journal of the Chemical Society (London)
JLBW	Jahrshefte geologie Landesamtes Baden-Wurtemberg
KT	Kexue Tongbao
KUS	Kali und Steinsalz
LIT	Lithos
MA	Mineralogical Abstracts
MD	Mineralium Deposita
MJJ	Mineralogical Journal (Japan)
MM	Mineralogical Magazine
MR	Mineralogical Record
NAT	Nature
NJMA	Neues Jahrbuch für Mineralogie, Abhandlungen
NJMM	Neues Jahrbuch für Mineralogie, Monatshefte
NW	Naturwissenschaften
PCM	Physics and Chemistry of Minerals
PM	Periodico di Mineralogie
SCI	Science
SMPM	Schweizerische Mineralogische und Petrographische Mitteilungen
SPC	Soviet Physics-Crystallography
SPD	Soviet Physics-Doklady
SS	Scientia Sinica
TMPM	Tschermaks Mineralogische und Petrographische Mitteilungen
USGS	United States Geological Survey Bulletin
ZK	Zeitschrift für Kristallographie
ZVMO	Zapiski Vsesoyuznyi Mineralogicheskoe Obshchestva

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Abelsonite, 108	50.4.9	-----	-----	AM 61,502(1976) ^a ; AM 63,930(1978)
Abernathyite, 81	40.2a.9	-----	-----	AM 41,82(1956); AM 49,1578(1964); AM 50,1(1965)
Absite=Brannerite	-----	-----	-----	AM 48,1419(1963)
Abukumalite=Britholite-(Y)		-----	-----	AM 46,1514(1961)
Acanthite, 5	2.4.2.1	2.3.2.3	I,191	ZK 110,136(1958); CM 12,365(1974)
Acetamide, 108	50.4.7	-----	-----	ZVMO 104,326(1975)[AM 61,338] ^a
Achrematite=mixture of Mimetite and Wulfenite			-----	AM 62,170(1977)
Adamite, 87	41.6.5.3	41.6.5.3	II,864	CM 14,143(1976); AM 61,979(1976); MJJ 6,320(1977); NJMM 134,147(1979)
Adelite, 86	41.5.1.1	41.5.1.1	II,804	MR 10,160(1979); CM 18,191(1979)
Adelphite=Samarskite	-----	-----	-----	AM 51,1553(1966) ^a
Admontite, 57	26.6.3	-----	-----	TMPM 26,69(1979)[AM 65,205] ^a
Aerugite, 31	7.7.6	-----	-----	MM 35,72(1965)[AM 50,2108] ^a
Aeschynite-(Ce), 34	8.3.6.1	8.3.5.1	I,793	AM 46,1436(1961) ^a ; DANS 142,181(1962); NJMA 1965,1
Aeschynite-(Y), 34	8.3.6.3	8.3.5.2	I,793	SMPM 52,75(1972); AM 61,178(1976) ^a
Agardite, 96	42.12.7.2	-----	-----	BM 92,420(1969)[AM 55,1447] ^a ; CE 29,36(1970)[AM 56,362] ^a
Agrinierite, 25	5.5.1	-----	-----	MM 38,781(1972)[AM 58,205] ^a
Agularite, 5	2.4.1.2	2.3.1.2	I,178	AM 35,337(1950); MM 38,961(1972); CM 12,365(1974)
Ahlfeldite, 72	34.2.3.3	33.1.1	II,635	BM 76,422(1953)[AM 39,850] ^a ; AM 48,1183(1963) ^a ; AM 54,448(1969); CM 12,304(1974)
Aikinite, 18	3.4.4	3.4.1.3	I,412	ZK 132,71(1970); NJMM 113,29(1970); AC B27,1245(1971)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Akaganeite, 27	6.1.6	-----	-----	MM 33,270(1962)[AM 48,711]a; NJMM 113,29(1970)[AM 56,639]a; GCA 41,539(1977)
Akdalaite, 22	4.3.2.1	-----	-----	ZVMO 99,333(1970)[AM 56,635]a; IGR 13,675(1971)
Akrochordite, 90	42.4.1	42.3.3	II,927	AMG 4,425(1967)[AM 53,1779]a
Aksaite, 57	26.6.4	-----	-----	ZVMO 91,447(1962)[AM 48,209]a; AM 48,930(1963); AM 56,1553(1971)
Aktashite, 18	3.4.12.2	-----	-----	AM 56,358(1971)a; AM 58,362(1973)a
Alabandine, 7	2.8.1.4	2.6.1.4	I,207	NJMM 1971,179
Alaskaite=a mixture of sulfosalts		3.8.4	I,475	AM 58,349(1973)
Alazanite=Pyrrhotite	-----	-----	-----	DANS 213,688(1973)[AM 60,161]a
Albrittonite, 36	9.2.9.3	-----	-----	AM 63,410(1978)
Aldanite=Thorianite	-----	-----	-----	AM 40,369(1955)
Aldzhanite, 57	26.7.3	-----	-----	AM 56,1122(1971)a
Aleksite, 20	3.7.11	-----	-----	IGR 21,1223(1979); AM 64,652(1979)a
Algodonite, 4	2.1.1	2.1.3.1	I,171	EG 66,133(1971)
Allactite, 85	41.2.1	41.2.4	II,785	AM 53,733(1968)
Allargentum, 4	2.2.1.2	-----	-----	AM 39,691(1954)a; CM 10,163(1970)[AM 56,638]a; CM 14,139(1976)
Allcharite=Goethite	-----	-----	I,486	AM 54,1498(1969)a; BM 101,531(1978)
Allemontite= a mixture of Stibarsen and either As or Sb		1.2.1.3	I,130	AM 59,1331(1974)a
Allenite=Pentahydrate	-----	-----	-----	JCS 1949,2239[AM 36,641]a
Alloclasite, 12	2.12.9.3	-----	I,324	CM 14,561(1976)
Allodelphite=Synadelphite		-----	II,780	
Allopalladium=Stibiopalladinite		1.1.6.7	I,113	AM 63,796(1978)a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Alluaudite, 76	38.2.3.6	38.1.4.1	II,674	AM 40,1100(1955); AM 55,1955(1970); MM 43,227(1979)
Almeriite=Natroalunite	-----	-----	-----	MM 33,353(1963)[AM 48,1184]a
Alstonite, 42	14.2.5	14.2.2	II,218	LIT 8,199(1975)
Altaite, 7	2.8.1.3	2.6.1.3	I,205	AM 34,361(1949)
Althausite, 87	41.6.6	-----	-----	LIT 8,215(1975)[AM 61,502]a; LIT 12,287(1979); AM 65,488(1980)
Altmarkite, 1	1.1.9	-----	-----	AM 64,652(1979)a
Alum= a general term for hydrous alkali Al sulfates				
Alumian=Natroalunite	-----	-----	II,560	AM 43,1225(1958)a
Aluminite, 67	31.7.5	31.4.5	II,600	AC B34,2407(1978); ZK 151,141(1980)
Aluminum, 1	1.1.24	-----	-----	AM 65,205(1980)a
Aluminocopiapite, 69	31.10.5	-----	II,625	AM 52,1220(1967)
Alumocobaltomelane= mixture of Lithiophorite and and Manganese oxides			-----	AM 46,767(1961)a
Alumoferroascharite= mixture of Szaibelyite and Hydrotalcite			-----	AM 49,1501(1964)a
Alumohydrocalcite, 46	16b.2.3.1	16.2.4	II,280	NJMA 1969,30; IGR 18,321(1976); DA 28,269(1977)[AM 63,795]a
Alumoludwigite=aluminian Ludwigite		-----	-----	ZVMO 93,13(1964)
Alumotungstite, 24	4.5.4	-----	-----	MR 12, 81(1981)
Alunite, 64	30.2.4.1	30.2.4.1	II,556	AC 18,249(1965); NJMM 1976,406; GSPP 1076A,2(1978)
Alunogen, 63	29.8.6	29.8.6	II,537	AM 49,1763(1964); BM 96,385(1973); TMPM 21,164(1974); AM 61,311(1976)
Alvanite, 90	42.1.2	-----	-----	ZVMO 88,157(1959)[AM 44,1325]a
Alvarolite=Mangantantalite		-----	-----	AM 39,159(1954)a; AM 41,168(1956)a
Amakinite, 27	6.2.1.2	-----	-----	ZVMO 91,72(1962)[AM 47,1218]a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Amalgam=Moschellandsbergite		-----	I,103	
Amarantite, 68	31.9.3	31.6.4	II,611	ZK 127,261(1968); MM 42,144(1978)
Amarillite, 61	29.5.3.2	29.5.3.2	II,468	
Amblygonite, 86	41.5.8.1	41.5.5.1	II,823	AC 12,988(1959); AM 58,291(1973)
Ameghinite, 53	25.3.1	-----	-----	AM 52,935(1967); AM 60,879(1975)
Ammonia-alum=Tschemmigite		29.5.5.3	II,475	
Ammonioborite, 56	26.5.3	25.1.2.1	II,366	AM 44,1150(1959); SCI 171,377(1971)
Ammoniojarosite, 65	30.2.5.4	30.2.4.4	II,562	
Ampangabeite=Samarskite		8.4.3	I,806	BM 83,295(1960)[AM 46,770]a
Amphitalite= a mixture, mostly Augelite			II,873	AM 44,910(1959)a
Anapaite, 80	40.2.1	40.2.9	II,731	BM 102,314(1979)
Anarakite=zincian Paratacamite		-----	-----	NJMM 1972,335[AM 58,560]a
Anatase, 23	4.4.4	4.5.2	I,583	JACS 77,4708(1955); AM 49,1709(1964)
Ancylite, 46	16b.1.1.1	16.2.10	II,291	AM 38,1172(1953); AM 46,1433(1961); AM 60,280(1975)
Andersonite, 43	15.2.5	15.2.8	II,239	USGS 1064,115(1958)
Andorite, 20	3.7.12.1	3.7.1.1	I,457	AM 50,1498(1965)
Andrewsite, 89	41.11.1	41.4.5	II,802	
Anduoite, 12	2.12.12.2	-----	-----	KT 15,704(1979)[AM 65,808]a
Angelellite, 87	41.6.11	-----	-----	NJMM 1959,122[AM 44,1322]a; NJMM 1959,145[AM 44,1322]a; NJMA 94,1203(1960); NJMA 132,91(1978)
Anglesite, 59	28.3.1.3	28.3.1.3	II,420	AM 63,506(1978)
Anhydrite, 59	28.3.2	28.3.2	II,424	AC 16,767(1969); CM 13,289(1975); AC B31,2164(1975)
Anilite, 14	2.16.12	-----	-----	AM 54,1256(1969); AC B26,915(1970)

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Ankerite, 42	14.2.1.2	14.2.1.2	II,208	AM 43,1210(1958)
Annabergite, 83	40.3.6.4	40.2.15.3	II,746	
Antamokite=mixture of Petzite and Calaverite			I,187	AM 32,374(1947)a
Antarcticite, 36	9.2.6	-----	-----	SCI 149,975(1965)[AM 50,2098]a; AM 54,1018(1969); AC B33,2938(1975)
Anthoinite, 105	48.3.4	-----	II,1097	BGSF 42,95(1970)
Anthonyite, 27	6.2.5	-----	-----	AM 48,614(1963)
Antimonpearceite, 16	3.1.9.2	-----	-----	AM 48,565(1963); CM 8,172(1965)[AM 50,1507]a; AM 52,1311(1977)
Antimony, 3	1.3.1.4	1.2.1.4	I,132	AC 16,451(1963); AC 17,760(1964)
Antlerite, 64	30.1.12	30.1.2	II,544	MJJ 3,223(1961); NAT 197,70(1963)
Antofagastite=Eriochalcite		-----	I,44	MM 29,34(1950)[AM 36,384]a
Apatite=Fluorapatite	-----	-----	II,877	
Aphthitalite, 59	28.2.2	28.2.2	II,400	NJMM 1973,75
Apjohnite, 63	29.7.3.3	27.7.3.3	II,527	MM 40,599(1976)
Aplowite, 62	29.6.6.4	-----	-----	CM 8,166(1965)[AM 50,809]a
Appelite=Calcite	-----	-----	-----	AM 63,796(1978)a
Apuanite, 101	45.1.9	-----	-----	AM 64,1230(1980); AM 64,1235(1980)
Aragonite, 41	14.1.3.1	14.1.3.1	II,182	AM 50,1490(1965); AM 56,758(1971); AM 56,768(1971)
Arakawaite=Veszelyite	-----	-----	II,916	
Aramayoite, 20	3.7.3	3.5.5	I,427	AM 36,436(1951); ZK 139,54(1974)
Arandisite, probably a mixture of Cassiterite and Quartz			-----	AM 15,274(1930)
Arcanite, 59	28.2.1.2	28.2.1.2	II,399	AC B28,2845(1951); NJMM 1973,75
Archerite, 75	37.1.4.2	-----	-----	MM 41,33(1977)[AM 62,1057]a

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Arcubisite, 17	3.2.7	-----	-----	LIT 9,253(1976)[AM 63,424]a
Ardealite, 97	43.1.1	43.2.2	II,1010	
Ardennite, 98	43.4.10	-----	-----	Dana(1892),542 AC B24,845(1968)
Arequipite=Bindheimite	-----	-----	II,1025	MM 30,100(1953)[AM 39,405]a
Argentite, 5	2.4.1.1	2.3.1.1	I,176	
Argentocuproaurite= cuproan argentoan Gold			-----	AM 62,593(1977)a
Argentojarosite, 65	30.2.5.5	30.2.4.6	II,565	AM 58,936(1973)
Argentopentlandite, 6	2.7.1.2	-----	-----	CM 12,169(1973); IGR 21,695(1979)
Argentopyrite, 9	2.9.9.2	-----	I,248	AM 39,475(1954); AM 54,1198(1969)
Argyrodite, 6	2.5.6.1	3.1.3.1	I,356	NJMM 1978,269
Argyropyrite=Sternbergite		-----	I,248	
Aristarainite, 57	26.6.5	-----	-----	AM 59,647(1974); AM 62,979(1977)
Arizonite=Pseudorutile	-----	8.2.1	I,733	AM 35,117(1950); AM 60,898(1975)
Armalcolite, 30	7.3.1.3	-----	-----	AM 55,2136(1970)a; SCI 175,521(1972); AM 60,566(1975); EPSL 29,91(1976)
Armangite, 102	46.3.1	45.1.1	II,1031	AM 64,748(1979)
Arnimite(perhaps= Antlerite), 67	31.6.5	31.3.4	I,592	
Arrojadite, 88	41.7.2.1	38.1.7	II,679	AM 43,194(1958); MM 43,227(1979)
Arsenate-belovite= Talmessite		-----	-----	
Arsenbrackebuschite,80	40.2.8.2	-----	-----	NJMM 1978,193[AM 63,1282]a; TPM 25,153(1978)
Arsendestinezite= Bukovskiyite		-----	-----	AM 54,994(1969)a
Arsenic, 3	1.3.1.1	1.2.1.1	I,128	
Arseniopleite= Caryinite		41.5.12	II,844	AMG 4,425(1967)[AM 53,1779]a

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Arsenosiderite, 92	42.7.4.3	42.6.4	II,953	AM 59,48(1974); IC 16,1096(1977)
Arsenobismite, 87	41.6.10	41.7.10	II,907	
Arsenoclasite, 85	41.4.1	41.4.4	II,801	AMG 4,425(1967)[AM 53,1779]a; AM 56,1539(1971)
Arsenohauchecornite, 19	3.2.6.4	-----	-----	MM 43,877(1980)[AM 66,436]a
Arsenolamprite, 3	1.3.1.2	1.2.1.2	I,130	CE 20,71(1959)[AM 45,479]a; MM 37,732(1970)
Arsenolite, 23	4.3.9.1	4.4.2.1	I,543	
Arsenopalladinite, 14	2.16.2	-----	-----	MM 39,528(1974)[AM 59,1332]a; CM 15,70(1977)[AM 64,658]a
Arsenopyrite, 12	2.12.9.1	2.9.5.1	I,316	AM 39,475(1954); AM 46,1448(1961)
Arsenostibite=arsenian	Stibiconite	-----	I,599	AM 37,982(1952)
Arsenosulvanite, 17	3.2.3.1	-----	-----	ZVMO 70,161(1941)[AM 40,368]a; ZVMO 70,165(1941)[AM 40,368]a; DANS 202,169(1972)[MA 73-1892]a
Arsenpolybasite, 16	3.1.8.1	-----	-----	AM 48,565(1963); CM 8,172(1965)[AM 50,1507]a; AM 52,1311(1967)
Arsenrösslerite=Rösslerite		-----	-----	AM 25,313(1940)
Arsentsumebite, 98	43.4.2.2	-----	II,918	AM 51,258(1966); MM 36,522(1967)
Arsenuranospathite, 79	39.3.8	-----	-----	MM 42,117(1978)[AM 64,465]a
Arsenuranylite, 90	42.4.9.1	-----	-----	ZVMO 87,589(1958)[AM 44,208]a
Arthurite, 95	42.10.18.2	-----	-----	MM 33,937(1964)[AM 50,522]a; MM 37,519(1969)[AM 55,1817]a; NJMA 133,291(1978)
Artinite, 46	16b.3.1.1	16.1.10	II,263	TMPM 10,297(1965); AC B33,3951(1977)
Asbecasite, 101	45.1.3	-----	-----	SMPM 46,367(1966)[AM 52,1583]a; ANLR 46,457(1967)[AM 55,1818]a
Ascharite=Szaibelyite	-----	-----	II,374	AM 49,224(1964)
Ashanite, 33	8.1.11.2	-----	-----	KT 25,510(1980)[AM 66,217]a
Astrakhanite=Bloedite	-----	-----	II,447	

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Atacamite, 37	10.1.1	10.1.11.1	II,69	
Atelestite, 89	41.11.5	41.3.4	II,792	CM 7,547(1963)
Athabascaite, 15	2.16.21	-----	-----	CM 10,207(1970)[AM 56,632]a
Atheneite, 4	2.2.5	-----	-----	MM 39,528(1974)[AM 59,1330]a
Atokite, 2	1.2.9	-----	-----	CM 13,146(1975)[AM 61,338]a
Attakolite, 84	40.5.4	-----	II,845	AMG 3,537(1964)[AM 51,534]a
Aubertite, 68	31.9.8	-----	-----	BM 102,348(1979)[AM 65,205]a; AC B35,2499(1979)
Augelite, 87	41.6.8	41.6.8	II,871	AM 43,194(1958); AM 53,1096(1968); NJMA 136,1(1979)
Aurichalcite, 45	16a.4.2	16.1.4	II,249	CM 8,385(1965); <i>Geol. Surv. Canada Paper</i> 74-18, 172(1974)
Auricupride, 1	1.1.5	-----	-----	AM 53,350(1968)a
Aurocuproite=auroan palladian Copper		-----	-----	AM 62,593(1977)a
Aurorite, 30	7.4.2.2	-----	-----	EG 62,186(1967)[AM 52,1581]a
Aurostibite, 11	2.12.3.2	-----	-----	AM 37,461(1952); MA 12,574(1955)a
Austinite, 86	41.5.1.3	41.5.1.3	II,809	AM 56,1359(1971); CM 12,262(1974); CM 18,191(1980)
Autunite, 81	40.2a.1.1	42.8.13.2	II,984	USGS 1064,160(1958); AM 46,812(1961)
Avelinoite=Cyrllovite	-----	-----	-----	AM 42,586(1957)a
Avicennite, 23	4.3.8	-----	-----	AM 44,1324(1959)a; MA 72-3282)a
Avogadrite, 39	11.2.2	11.2.2	II,97	MA 11,535(1952)a
Azoproite, 51	24.2.2.3	-----	-----	ZVMO 99,225(1970)[AM 56,360]a; IGR 13,1183(1971)
Azurite, 44	16a.2.1	16.1.5	II,264	AC 11,866(1958); ZK 135,416(1972)

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Babefphite, 86	41.5.3	-----	-----	DANS 167,895(1966)[AM 51,1547]a; DANS 176,1392(1967)[MA 70-2143]a
Baddeleyite, 24	4.4.13	5.1.1	I,608	AM 40,275(1955); AC 12,507(1959); AC 18,983(1965)
Badenite, 10	2.10.10	2.7.3	I,266	
Bahianite, 100	44.3.8	-----	-----	NJMA 126,113(1976); MM 42,170(1978)[AM 64,464]a
Bakerite, 58	27.1.7	25.1.7	II,363	AM 41,689(1956); AM 47,919(1962)
Balavinskite, 55	26.3.5.2	-----	-----	AM 54,575(1969)a
Baldaufite=Hureaulite	-----	-----	II,702	NJMM 1954,166[AM 40,370]a
Balkanite, 14	2.16.8	-----	-----	AM 58,11(1973)
Balyakinite, 72	34.1.3	-----	-----	DANS 253,1448(1980)[AM 66,436]a
Bambollaite, 12	2.12.5	-----	-----	CM 11,738(1972)[AM 58,805]a
Bandykite, 52	25.1.4.2	26.1.4	II,373	AC 4,204(1951) AM 44,875(1959)
Bararite, 39	11.5.2.2	11.4.2.2	II,106	
Barbertonite, 47	16b.4.1.2	6.1.6.2	I,659	AM 26,295(1941); MM 39,377(1973)
Barbosalite, 89	41.10.4	-----	-----	AM 40,952(1955); AC 12,695(1959)
Barcenite=mixture of Stibiconite and Cinnabar			II,1025	AM 37,998(1952)a
Bariandite, 104	47.4.1	-----	-----	BM 94,49(1971)[AM 57,1555]a
Baricite, 83	40.3.6.2	-----	-----	CM 14,403(1976)[AM 61,1053]a
Bariomicrolite, 34	8.2.2.2	-----	-----	AM 48,1415(1963)a; AM 62,403(1977)
Bariopyrochlore, 33	8.2.1.3	-----	-----	MM 32,10(1959)[AM 44,1324]a; AM 62,403(1977)
Barite, 59	28.3.1.1	28.3.1.1	II,408	AM 52,1877(1967); CM 15,522(1977); AM 63,506(1978)
Barium-alumo-pharmacosiderite, 92	42.7.1.4	-----	-----	TMPM 11,121(1966)[AM 52,1584]a

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Barium-pharmacosiderite, 92	42.7.1.3	-----	-----	TMPM 11,121(1966)[AM 52,1585]a <i>Casopis Min.Geol.</i> 20,423(1975)
Barium-phosphuranylite=Bergenite		-----	-----	AM 45,909(1960)a
Barnesite, 103	47.3.5	-----	-----	AM 48,1187(1963)
Barringerite, 1	1.1.20	-----	-----	SCI 165,169(1969)[AM 55,317]a
Barringtonite, 43	15.1.5	-----	-----	MM 34,370(1965)[AM 50,2103]a
Barthite=cuprian Austinite		-----	II,808	AM 30,550(1945)
Bartonite, 15	2.16.25	-----	-----	AM 64,241(1979)a
Barytocalcite, 42	14.2.6	14.2.3	II,220	AMG 2,399(1960); AM 62,36(1977)
Basaluminite, 66	31.4.5	31.2.4	II,586	AM 53,722(1968); CM 9,644(1969); MM 37,291(1969); MM 43,931(1980)
Basiliite=mixture of Hausmannite and Feitknechtite			II,1025	AM 58,562(1973)a
Bassanite, 61	29.6.1	29.6.1	II,476	AM 38,1266(1953)
Bassetite, 81	40.2a.15	42.8.15	II,994	AM 39,683(1954); USGS 1064,200(1958)
Bastinite=Hureaulite	-----	-----	-----	AM 49,398(1964)
Bastnaesite-(Ce), 44	16a.1.1.1	16.2.9	II,289	AM 38,932(1953); AM 60,351(1975)
Bastnaesite-(La), 44	16a.1.1.3	-----	-----	<i>Trudy Min.museya Akad. Nauk SSSR</i> 18,206(1968)
Bastnaesite-(Y), 44	16a.1.1.4	-----	-----	ZVMO 99,328(1970)[AM 57,594]a; IGR 13,644(1971)
Baumhauerite, 19	3.6.12	3.7.3	I,460	AC 14,1210(1961); ZK 129,178(1969)
Bauranoite, 25	5.4.2.2	-----	-----	ZVMO 102,75(1973)[AM 58,1111]a
Bauxite= mixture of Al hydroxides		6.2.3	I,667	
Bayerite, 28	6.3.2	-----	-----	MM 33,723(1963)[AM 49,819]a; AC 17,1312(1964); ZK 125,317(1967); AC B32,1719(1976)
Bayldonite, 87	41.5.13	42.4.1	II,929	MM 39,716(1974); AC B35,819(1979) AM 66,148(1981)

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Bayleyite, 43	15.3.3.1	15.2.6	II,237	USGS 1064,112(1958); GSPP 400B,440(1960)
Baylissite, 43	15.2.4	-----	-----	SMPM 56,187(1976)
Bearsite, 86	42.5.1.2	-----	-----	ZVMO 91,442(1962)[AM 48,210]a
Beaverite, 65	30.2.5.7	30.2.4.8	II,568	AM 47,1085(1962)
Becquerelite, 26	5.7.1.2	5.2.3	I,625	USGS 1064,62(1958); AM 45,1026(1960); ZK 113,132(1960)
Beegerite=mixture of Matildite and Schirmerite		3.3.3	I,392	AM 27,109(1942)
Behierite, 51	24.1.2	-----	-----	AM 46,767(1961)a; AM 47,414(1962)a
Behoite, 27	6.2.2	-----	-----	AM 55,1(1970)
Bellidoite, 5	2.4.7.3	-----	-----	EG 70,384(1975)[AM 60,736]a
Bellingerite, 50	21.1.3	21.1.2	II,313	AC B30,965(1974)
Bellite=chromatian Mimete		-----	II,895	AM 43,798(1958)a; BM 103,469(1980)
Belovite, 88	41.8.1.6	-----	-----	DANS 96,613(1954)[AM 40,367]a; ZVMO 85,297(1956)[AM 42,583]a
Belyankinite, 35	8.4.11.1	-----	-----	DANS 71,925(1950)[AM 37,882]a
Benjaminite, 21	3.8.8	3.5.12	I,441	DANS 74,675(1967)[AM 53,350]a; CM 13,394(1975); CM 17,607(1979)
Benstonite, 42	14.2.3	-----	-----	NW 16,550(1961)[AM 46,1517]a; AM 47,585(1962); MR 1,140(1970); NJMA 136,326(1979)
Bentorite, 68	31.10.2.2	-----	-----	<i>Israel J. Earth Sci.</i> 29,81(1980)
Beraunite, 95	42.10.16	42.7.2	II,959	AC 22,173(1967); AM 55,135(1970)
Berberite, 55	26.1.1	-----	-----	DANS 174,114(1967)[AM 53,348]a; MA 74-168)a
Beresovite=Phoenicochroite		36.1.2	II,653	AM 49,1501(1964)a
Bergenite, 90	42.4.5.3	-----	-----	AM 41,919(1956); NJMM 1959,232[AM 45,909]a BM 104,16(1981)

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Berlinite, 77	38.4.2	38.4.3	II,696	AM 43,195(1958); MM 33,613(1963); AC 17,82(1964); ZK 123,161(1966)
Bermanite, 95	42.10.17	42.8.1	II,967	AM 52,1060(1967); AM 53,416(1968); AM 61,1241(1976)
Berndtite-3R, 13	2.12.20.2	-----	-----	NJMM 1964,94[AM 50,2107]a
Berndtite-6C, 13	2.12.19.4	-----	-----	NW 59,361(1972)[AM 58,347]a
Berryite, 19	3.6.16	-----	-----	CM 8,407(1966)[AM 52,928]a; CM 8,414(1966)[AM 52,928]a; CM 11,1016(1973)
Berthierite, 20	3.7.9.3	3.8.10	I,481	AM 40,226(1955)
Berthonite=Bournonite	-----	3.4.2	I,413	AM 32,485(1947)
Bertossaite, 88	41.7.1.2	-----	-----	CM 8,660(1960)[AM 52,1583]a; MR 4,103(1973)
Beryllonite, 75	38.1.5	38.1.6	II,677	AM 39,397(1954); TMPM 20,1(1973)
Berzelianite, 5	2.4.8	2.3.1.5	I,182	MA 75-3085)a
Berzeliite, 76	38.2.1.1	38.2.1.1	II,681	AMG 2,417(1959); AC 832,1581(1976)
Bessmertovite, 4	2.1.6	-----	-----	DANS 249,185(1979)
β -Fergusonite, 33	8.1.2.1	-----	-----	AM 60,485(1975)a
β -Fergusonite-(Ce), 33	8.1.2.2	-----	-----	AM 60,485(1975)a; AM 62,397(1977)a
Betafite, 34	8.2.3.1	8.4.1	I,803	USGS 1064,320(1958); CM 6,610(1961)[AM 46,1519]a; AM 62,403(1977)
β -Joseite, 6	2.6.2.4	-----	-----	AM 34,367(1949)
β -Roselite, 80	40.2.2.7	-----	-----	AM 40,828(1955); BM 83,118(1960)[AM 45,1315]a
Betekhtinite, 14	2.16.9	-----	-----	AM 41,371(1956)a; AC 12,646(1959); NJMM 1960,121; NJMM 1962,21; NJMM 1973,416
Betpakdalite, 106	49.4.1	-----	-----	ZVMO 90,425(1961)[AM 47,172]a; IC 16,1096(1977)

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Beudantite, 97	43.4.1.1	43.1.1.1	II,1001	
Beusite, 76	38.3.3.2	-----	-----	AM 53,1799(1968); MR 4,103(1973)
Beyerite, 44	16a.2.3	16.2.5	II,282	AM 54,1720(1969)
Beyrichite=Violarite	-----	-----	I,241	AM 40,767(1955)
Bialite=Wavellite	-----	-----	II,906	MM 37,125(1969)[AM 54,1742]a
Bianchite, 62	29.6.8.2	29.6.6.2	II,495	MA 75-1368)a
Bideauxite, 38	10.6.9	-----	-----	MM 37,637(1970)[AM 56,634]a; AM 57,1003(1972)a
Bieberite, 62	29.6.10.4	29.6.8.5	II,505	
Bilibinskite, 4	2.2.8	-----	-----	AM 64,652(1979)a; IGR 21,1411(1979)
Bilinite, 63	29.7.3.5	29.7.3.5	II,529	
Billietite, 26	5.7.1.3	-----	-----	BSBG 70,B212(1947)[AM33,384]a; AM 38,1019(1953); USGS 1064,68(1958); ZK 113,132(1960); AM 45,1026(1960)
Billingsleyite, 16	3.1.6	-----	-----	AM 53,1791(1968)
Bindheimite, 100	44.1.1.2	44.1.1.1	II,1018	MM 30,100(1953)
Binnite=Tennantite	-----	-----	I,379	
Biphosphammite, 75	37.1.4.1	-----	-----	MM 38,965(1972)[AM 58,806]a; AC B29,2721(1973)
Biringuccite, 56	26.5.7	-----	-----	ANLR 30,74(1961)[AM 48,709]a; AM 59,1005(1974)
Birnessite, 32	7.7.19	-----	-----	MM 31,283(1956)[AM 42,440]a; AM 45,871(1960)
Bischofite, 36	9.2.9.1	9.2.8	II,46	
Bismite, 23	4.3.10.2	4.4.7	I,599	AM 28,521(1949)
Bismoclite, 37	10.2.1.2	10.1.6.2	II,60	CM 8,390(1965)
Bismuth, 3	1.3.1.5	1.2.1.5	I,134	
Bismuthinite, 10	2.11.2.2	2.8.2.2	I,275	TMPM 14,55(1970); NJMM 1971,19; NJMM 1974,316

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Bismuth Jamesonite= Sakharovite		-----	-----	AM 45,1134(1960)a
Bismutite, 45	16a.3.4	16.1.8	II,259	MA 14,138(1959)a
Bismutohauchecornite, 17	3.2.6.1	-----	-----	MM 43,873(1980)[AM 66,436]a
Bismutomicrolite, 34	8.2.2.6	-----	-----	AM 43,1223(1958)a; AM 48,215(1963)a; AM 62,403(1977)
Bismutosphaerite=Bismutite		-----	II,261	AM 28,521(1943)
Bismutotantalite, 33	8.1.6.3	8.1.9	I,769	NJMM 1955,241; AM 42,178(1957)
Biteplallidite=Merenskyite		-----	-----	AM 61,174(1976)a
Biteplatinite=Moncheite		-----	-----	AM 61,174(1976)a
Bixbyite, 23	4.3.7.2	4.4.5	I,550	ZK 107,370(1956); ZK 129,360(1969); NJMM 1973,426
Bjarebyite, 89	41.9.1.3	-----	-----	MR 4,283(1973)[AM 59,873]a; AM 59,567(1974); SMPM 55,9(1975)[MA 76-869]a
Blackjack=Sphalerite	-----	-----	I,210	
Blakeite, 72	34.3.5	34.2.3	II,643	
Blanchardite=Brochantite		-----	-----	MR 3,229(1972)[AM 58,562]a
Blende=Sphalerite	-----	-----	I,210	AM 49,224(1964)
Blixite, 37	10.2.4	-----	-----	AMG 2,411(1958)[AM 45,908]a
Blockite=Penroseite	-----	-----	I,294	AM 22,319(1937)
Bloedite, 60	29.3.3.1	29.3.5.1	II,447	AC 11,789(1958)
Blomstrandine=Aeschnyite-(Y)		-----	I,793	
Bobierrite, 83	40.3.7.1	40.2.16	II,753	AM 58,635(1973)
Boehmite, 27	6.1.2.1	6.1.2.2	I,645	AC 17,1312(1964); CCM 27,81(1979)
Bogdanovite, 4	2.1.5	-----	-----	AM 64,1329(1979)a
Bøggildite, 85	41.1.3	-----	-----	AM 39,848(1954)a; AM 41,959(1956)a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Bohdanowiczite, 20	3.7.4	-----	-----	AM 55,2135(1970)a; MM 43,131(1979)[AM 64,1333]a; BM 103,107(1980); CM 18,353(1980)
Bokite, 104	47.4.9	-----	-----	ZVMO 92,51(1963)[AM 48,1180]a
Bokspatite=mixture of Bismutite and Massicot			II,261	AM 32,365(1947)a
Boleite, 38	10.6.6	10.2.1	II,78	<i>J.Solid State Chem.</i> 6,86(1973) [MA 74-956]a; MR 5,280(1974)
Boldyrevite=Ralstonite(?)		-----	-----	AM 36,640(1951)a
Boleslavite=Galena	-----	-----	-----	AM 46,1517(1961)a
Bolivariite, 91	42.5.9	-----	II,872	MM 32,419(1960)[AM 45,910]a; MM 38,418(1971)
Bombollaite=Bambollaite	-----	-----	-----	MM 39,606(1974)
Bonaccordite, 51	24.2.2.4	-----	-----	AM 61,502(1976)a
Bonattite, 61	29.6.5	-----	-----	AM 43,180(1958)a; CM 7,245(1962)[AM 47,1223]a; AC B24,508(1968)
Bonchevite, 21	3.8.7	-----	-----	MM 31,821(1958)[AM 43,1221]a; TMPM 13,149(1959)[AM 55,1449]a
Boodtite=Heterogenite	-----	-----	I,652	MM 33,253(1962)[AM 48,217]a
Boothite, 62	29.6.10.2	29.6.8.2	II,504	
Boracite, 53	25.6.1.1	26.1.7	II,378	ZK 138,64(1973); AM 58,691(1973)
Borax, 56	26.4.1	25.1.4	II,339	MJJ 2,1(1956)
Borickite,Borickyite (=Delvauxite?), 91	42.5.6.2	42.1.1	II,915	TMPM 26,79(1979)[AM 64,813]a
Borishanskiite, 13	2.12.25.4	-----	-----	ZVMO 104,57(1975)[AM 61,502]a
Bornhardtite, 10	2.10.1.5	-----	-----	NJMM 1955,13[AM 41,164]a
Bornite, 5	2.5.2	2.4.3	I,195	AM 34,824(1949); AM 40,1002(1955); AM 46,1270(1961); AC 17,351(1964); AC B31,2268(1975)
Boronatrocalcite=Ulexite		-----	II,345	
Borovskite, 17	3.2.4	-----	-----	ZVMO 102,427(1973)[AM 61,502]a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Botallackite, 37	10.1.3	10.1.13	II,76	MM 29,34(1950)[AM 36,384]a
Botryogen, 68	31.9.6.1	31.6.7	II,617	AC B24,760(1968)
Boulangerite, 18	3.5.2	3.5.1	I,420	AM 45,1266(1960)
Bournonite, 18	3.4.3.2	3.4.1.1	I,416	ZK 130,254(1969); ZK 131,397(1970)
Boussingaultite, 60	29.3.6.2	29.3.7.3	II,455	
Boyleite, 62	29.6.6.5	-----	-----	CE 37,73(1978)[AM 64,464]a
Brabantite, 77	38.4.3.4	-----	-----	NJMM 1980,247
Bracewellite, 27	6.1.1.5	-----	-----	GSPP 887,13(1976)[AM 62,593]a
Brackebuschite, 80	40.2.8.1	47.1.9	II,1052	AM 40,597(1955); AM 48,9(1963); AM 60,960(1975)
Bradleyite, 97	43.2.1.1	17.1.2	II,295	USGS 405,34(1962)
Braggite = intermediate -Vysotskite series	in Cooperite series	2.6.12	I,259	AC B29,1446(1973); AM 63,832(1978)
Braitschite, 57	26.7.8	-----	-----	AM 53,1081(1968)
Brandtite, 80	40.2.3.2	40.2.4.2	II,725	AM 44,199(1959)
Brannerite, 34	8.3.4.1	8.2.4	I,774	USGS 1064,333(1958); NJMM 106,1(1966); AC 21,974(1966); CSMQ 66,#4(1971)
Brassite, 78	39.1.7	-----	-----	BM 96,365(1973)[AM 60,945]a; AC B32,1460(1976)
Braunite, 32	7.7.15.1	4.4.6	I,551	AKMG 16,1(1943); AM 52,20(1967); AM 60,1098(1975); AM 61,1226(1976)
Bravoite=an intermediate member of Pyrite-Vaesite-Cattierite series		2.9.1.2	I,290	NJMM 1962,76; CM 9,629(1969); AM 54,1075(1969); NJMM 1969,323
Brazilianite, 86	41.5.7	41.5.10	II,841	MA 16,63(1963)a; AC B30,1311(1974)
Breislakite=Vonsenite	-----	-----	-----	AM 43,626(1958)a
Breithauptite, 7	2.8.11.2	2.6.5.4	I,238	
Brenkite, 45	16a.3.5	-----	-----	NJMM 1978,223[AM 64,241]a

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Brezinaite, 10	2.10.5	-----	-----	AM 54,1509(1969)
Brianite, 75	38.1.7	-----	-----	GCA 31,1711(1967)[AM 53,508]a; GCA 38,1379(1974); AM 60,717(1975)
Briartite, 9	2.9.11.3	-----	-----	BM 88,432(1965)[AM 51,1816]a; AM 56,411(1971); NJMA 118, 7(1973); NJMM 1974,8; BM 99,334(1976)
Britholite-(Ce), 88	41.8.2.2	-----	-----	CE 5,37(1930); AM 46,1514(1961)
Britholite-(Y), 88	41.8.2.3	-----	-----	MM 25,621(1938); MA 12,443(1954)a;
Brocenite= β -Fergusonite-(Ce)		-----	-----	AM 60,485(1975)a
Brochantite, 64	30.1.3	30.1.1	II,541	
Brockite, 84	40.4.8.5	-----	-----	AM 47,1346(1962)
Bröggerite=thorian Uraninite		-----	I,613	
Bromargyrite, 36	9.1.4.2	9.1.1.5	II,11	AM 47,982(1962)
Bromellite, 22	4.2.2.2	4.2.2.2	I,506	
Bromlite=Alstonite	-----	-----	II,218	
Bromyrite=Bromargyrite	-----	-----	II,11	AM 49,224(1964)
Brookite, 23	4.4.5	4.5.3	I,588	AC 14,214(1961)
Brostenite=mixture including Rhodonite, Tephroite and Friedelite			I,569	AM 60,489(1975)a
Brownmillerite, 31	7.7.2	-----	-----	NJMM 1964,22[AM 50,2106]a; AC B27,2311(1971)
Brucite, 27	6.2.1.1	6.1.1.1	I,636	AM 48,86(1963); AM 50,1896(1965)
Brüggenite, 50	21.1.2	-----	-----	AM 57,1911(1972)a; MA 75-1389)a
Brugnatellite, 47	16b.5.8	6.1.7	I,660	
Brunckite=Sphalerite	-----	-----	I,214	TMPM 1,417(1950)[AM 36,383]a
Brunogeierite, 29	7.2.2.7	-----	-----	NJMM 1972,263[AM 58,348]a

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Brushite, 78	39.1.1.1	39.2.1.1	II,704	ZK 97,229(1937)
Bruyerite=Calcite	-----	-----	-----	AM 43,624(1958)a
Buchwaldite, 75	38.1.2.3	-----	-----	AM 62,362(1977)
Buetschliite, 42	14.3.1	15.2.1	II,231	AM 52,929(1967)a; AM 59,353(1974); NJMM 1980,230
Bukovite, 5	2.5.5.2	-----	-----	BM 94,529(1971)[AM 57,1910]a; NJMA 138,122(1980)
Bukovskyite, 99	43.5.1.2	-----	-----	AM 54,576(1969)a; AM 54,991(1969)a
Bunsenite, 22	4.2.1.2	4.2.1.2	I,500	
Burangaite, 93	42.8.1.1	-----	-----	BGSF 49,33(1977)[AM 63,793]a
Burbankite, 42	14.4.4.1	-----	-----	AM 38,1169(1953); CM 12,342(1974); AM 62,158(1977); <i>unpublished data</i> (V.T.King)
Burkeite, 70	32.1.7	32.1.4	II,633	MM 43,341(1979)
Bursaite, 18	3.4.15	-----	-----	AM 41,671(1956)a; AM 57,328(1972)a
Buszite=Bastnaesite-(Ce)		-----	-----	BM 76,124(1953)[AM 39,406]a
Butlerite, 68	31.9.1	31.6.2	II,608	AM 40,477(1955); AM 56,751(1971)
Buttgenbachite, 49	19.1.2	31.1.12	II,572	MM 39,264(1973)
Byströmite, 100	44.2.2.1	-----	-----	AM 36,20(1951); AM 37,53(1952)
Cabrerite=magnesian Annabergite		-----	II,749	
Cacoxenite, 96	42.12.5	42.9.2	II,997	AM 43,623(1958)a; AM 51,1811(1966)
Cadmium, 1	1.1.11	-----	-----	DANS 248,1426(1979)[AM65,1065]a
Cadmoselite, 7	2.8.9.4	-----	-----	ZVMO 86,626(1957)[AM 43,623]a
Cadwaladerite, 38	10.5.1	10.1.14	II,77	
Cafarsite, 101	45.1.4	-----	-----	SMPM 46,367(1966)[AM 52,1584]a; SMPM 57,1(1977)[AM 63,795]a
Cafetite, 35	8.4.4	-----	-----	ZVMO 88,444(1959)[AM 45,476]a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Cahnite, 98	43.4.3	27.1.2	II,386	MM 32,666(1960); AM 46,1077(1961); DANS 166,695(1966)[MA 69-2347]a
Calafatite=Alunite	-----	-----	II,559	AM 48,1184(1963)a
Calaverite, 13	2.12.23.2	2.9.7.2	I,335	AM 34,347(1949); AC 5,375(1952)
Calcioancylite, 46	16b.1.1.2	-----	II,291	MR 2,18(1971)
Calciborite, 51	24.5.2	-----	-----	AM 41,815(1956)a; AM 49,820(1964)
Calciocopiapite, 69	31.10.6.5	-----	-----	AM 47,807(1962)a
Calcioferrite, 95	42.11.1	42.8.9	II,976	GSPP 600D,204(1968)
Calciotantalite=mixture		-----	I,787	MM 38,765(1972)[AM 58,807]a
Calciouranoite, 25	5.4.2.1	-----	-----	ZVMO 103,103(1974)[AM 60,161]a; IGR 16,1255(1974)
Calciovolborthite, 86	41.5.1.6	41.5.2.4	II,817	
Calcite, 41	14.1.1.1	14.1.1.1	II,142	AC 10,567(1957); AM 46,1283(1961); CMP 50,247(1975)
Calcjarlite, 40	11.6.10.2	-----	-----	ZVMO 99,458(1970)[AM 59,873]a; IGR 13,1351(1971)
Calclacite, 107	50.2.4	50.2.4	II,1107	
Calcurmolite, 106	49.3.1	-----	-----	AM 49,1152(1964)a
Caledonite, 70	32.1.3	32.1.2	II,630	NW 57,127(1970); AC B29,1986(1973)
Calkinsite, 44	15.4.1	-----	-----	AM 38,1169(1953)
Callaghanite, 47	16b.5.6	-----	-----	AM 39,630(1954); AC 11,169(1958); AM 58,551(1973)
Calomel, 36	9.1.8	9.1.5	II,25	
Calumetite, 27	6.2.4	-----	-----	AM 48,614(1963)
Calzirtite, 35	8.4.7	-----	-----	AM 46,1515(1961)a; MM 35,544(1965); AM 52,1880(1967); MM 36,770(1968)
Canavesite, 48	17.1.7	-----	-----	CM 16,69(1978)[AM 64,652]a

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Canfieldite, 6	2.5.6.2	3.1.3.2	I,356	NJMM 1978,269
Cannizzarite, 19	3.6.6.1	-----	I,472	AM 38,536(1961)a; AC B35,133(1979); AM 64,244(1979)a
Caracolite, 65	30.3.2	30.1.3	II,546	NJMM 1967,284
Carboborite, 58	27.1.1	-----	-----	SS 13,813(1964)[AM 50,262]a
Carbocernaite, 42	14.4.4.2	-----	-----	AM 46,1202(1961)a; DANS 175,175(1967)[MA 70-2597]a CM 11,812(1972); <i>unpublished data</i> (V.T.King)
Carbonate-cyanotrichite, 47	16b.5.11	-----	-----	ZVMO 92,458(1963)[AM 49,441]a
Carbonate-fluorapatite, 88	41.8.1.4	41.7.1.4	II,879	
Carbonate-hydroxyapatite, 88	41.8.1.5	41.7.1.4	II,879	
Cardosonite=Dufrenite?	-----	-----	-----	AM 41,165(1956)a
Carlfriesite, 73	34.5.3	-----	-----	MM 40,127(1975)[AM 61,1053]a; AM 63,847(1978)
Carlhintzeite, 40	11.6.7	-----	-----	CM 17,103(1979)[AM 65,205]a
Carlinite, 5	2.4.11	-----	-----	AM 60,559(1975)
Carlsbergite, 1	1.1.29	-----	-----	NAT 233,113(1971)[AM 57,1311]a
Carminite, 89	41.10.7	41.8.3	II,912	AM 48,1(1963); AM 60,460(1975)
Carnallite, 39	11.1.2	11.1.2	II,92	MM 29,667(1951); NJMM 1973,100
Carnotite, 82	40.2a.24.1	47.1.1	II,1043	USGS 1064,243(1958); AM 50,827(1965)
Carobbiite, 36	9.1.1.4	-----	II,28	AM 42,117(1957)a
Carpathite=Karpatite	-----	-----	-----	
Carphosiderite=Hydronium Jarosite		30.2.4.7	II,566	AM 46, 243(1961)a; AM 50,1595(1965)
Carrboydite, 68	31.10.1	-----	-----	AM 61,366(1976)
Carrollite, 10	2.10.1.2	2.7.1.3	I,262	MJJ 7,552(1975)

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Caryinite, 76	38.2.2	38.2.2	II,683	AMG 2,333(1957); NJMM 1960,7; AM 47,163(1962); AM 56,1969(1971)
Cassidyite, 80	40.2.2.4	-----	-----	AM 52,1190(1967)
Cassiterite, 23	4.4.1.3	4.5.1.5	I,574	AM 41,47(1956); AM 62,100(1977)
Castaingite, 15	2.16.30	-----	-----	NJMA 100,317(1963)[AM 50,264]a
Cathophorite=Brabantite		-----	-----	KT 23,743(1978)
Cattierite, 11	2.12.1.3	-----	-----	AM 30,483(1945); AM 54,1075(1969); ZK 150,163(1979)
Celestite, 59	28.3.1.2	28.3.1.2	II,415	AM 46,189(1961); ZK 121,204(1965); CM 13,181(1975)
Cerargyrite=Chlorargyrite		-----	II,11	AM 49,224(1964)
Cerianite, 24	4.4.11	-----	-----	AM 40,560(1955); USGS 1064,53(1958)
Cerriopyrochlore, 33	8.2.1.5	-----	-----	AM 62,403(1977)
Černyite, 9	2.9.11.2	-----	-----	CM 16,139(1978)[AM 64,653]a; CM 16,147(1978)
Cerotungstite, 105	48.3.3.1	-----	-----	BGSF 42,223(1970)[AM 57,1558]a
Ceruleite, 96	42.12.6	42.3.4	II,927	NJMM 1976,418[AM 62,598]a
Cerussite, 41	14.1.3.4	14.1.3.4	II,200	MM 36,633(1968); ZK 139,215(1974)
Cervantite, 24	4.4.15	4.5.6	I,595	AM 37,987(1952); NJMM 1962,93[AM 47,1221]a; AC B33,1271(1977)
Cesarolite, 31	7.7.7	7.7.1.3	I,744	CE 27,258(1967)
Cesbronite, 73	34.7.2	-----	-----	MM 39,744(1974)[AM 64,653]a
Ceylonite=ferroan Spinel		-----	I,692	
Chabourneite, 21	3.8.14	-----	-----	AM 64,242(1979)a; BM 104,10(1981)
Chalcanthite, 62	29.6.7.1	29.6.5.1	II,488	AM 37,95(1952); AC B28,1448(1972)
Chalcoalumite, 66	31.3.2	31.1.9	II,580	

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Chalcocite, 5	2.4.7.1	2.3.2.1	I,187	NAT 232,69(1971); SCI 203,356(1979); ZK 150,299(1979)
Chalcocyanite, 59	28.3.3	28.3.3	II,429	AM 45,794(1960); AM 46,758(1961)
Chalcolamprite=Pyrochlore		-----	I,754	AM 62,403(1977)
Chalcolite=Torbernite	-----	-----	II,981	
Chalcomenite, 72	34.2.2.1	34.1.1	II,638	AC 11,377(1958)
Chalconatronite, 43	15.2.3	-----	-----	SCI 122,75(1955)[AM 40,943]a; ZK 148,165(1978)
Chalcophanite, 30	7.4.2.1	7.6.1	I,739	AM 35,490(1950); AC 8,165(1955)
Chalcophyllite, 99	43.5.14	43.2.1	II,1008	AM 58,792(1973); ZK 151,129(1980)
Chalcopyrite, 9	2.9.1.1	2.9.1.1	I,219	AM 44,977(1959); AC B29,579(1973); CM 13,168(1975)
Chalcosiderite, 93	42.8.3.4	42.6.2.2	II,947	AM 50,227(1965)
Chalcostibite, 20	3.7.5.1	3.5.9.1	I,433	CM 17,601(1979)
Chalcothallite, 17	3.2.8	-----	-----	AM 53,1775(1968)a; AM 64,658(1979)a; NJMA 138,122(1980)
Chalcotrichite=acicular variety of Cuprite			I,491	
Challantite, 63	29.9.2	-----	-----	AM 60,736(1975)a
Chalmersite=Cubanite	-----	-----	I,243	
Chambersite, 53	25.6.1.3	-----	-----	AM 47,665(1962)
Changbaiite, 35	8.3.11	-----	-----	AM 64,242(1979)a
Chaoite, 3	1.3.4.4	-----	-----	SCI 161,363(1968)[AM 54,326]a; NW 56,493(1969)[AM 55,1067]a
Chelkarite, 57	26.7.4	-----	-----	AM 56,1122(1971)a; MA 76-877)a
Chenevixite, 92	42.6.10.1	41.5.9	II,840	BM 87,626(1964); MM 41,27(1977)[AM 62,1058]a
Chengbolite=Moncheite	-----	-----	-----	AM 60,485(1975)a

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Cheralite, 77	38.4.3.3	-----	-----	AM 38,734(1953); MM 30,93(1953)[AM 39,403]a; AM 52,13(1967); MM 43,885(1980)
Chernovite, 77	38.4.8.2	-----	-----	ZVMO 96,699(1967)[AM 53,1777]a; MM 35,145(1973); MA 79-4086)a
Chervetite, 77	38.5.3.1	-----	-----	BM 86,117(1963)[AM 48,1416]a; BM 88,126(1965); BM 96,391(1973)
Chessylite=Azurite	-----	-----	II,264	
Childrenite, 91	42.6.1.1	42.5.2.1	II,936	AM 35,793(1950); AM 36,509(1951); AM 43,765(1958)
Childro-eosphorite=ferroan Eosphorite			-----	AM 42,920(1957)
Chile-loewite=Humberstonite		-----	II,447	KUS 5,190(1969)[AM 55,1072]a; AM 55,1518(1970)
Chillagite=tungstenian Wulfenite		-----	II,1085	
Chinoite=Libethenite	-----	-----	-----	AM 38,191(1953); BM 76,367(1953)[AM 39,690]a
Chiolite, 40	11.6.11	11.5.8	II,123	AM 35,161(1950); BGSD 26,95(1977)[MA 78-877]a
Chloanthite=arsenic-deficient var. of Nickel-skutterudite		2.10.14	I,342	
Chloraluminite, 37	9.3.3	9.3.3	II,50	AC B27,1069(1971)
Chlorapatite, 88	41.8.1.2	41.7.1.2	II,879	AM 55,170(1970); CM 10,252(1970); LIT 5,315(1972)
Chlorargyrite, 36	9.1.4.1	9.1.1.4	II,11	
Chlormanganokalite, 39	11.5.4	11.4.4	II,109	
Chlormanasseite, 38	10.6.10	-----	-----	IGR 21,1229(1979); AM 64,1329(1979)a; NJMM 1966,161
Chloroarsenian=Allactite		-----	II,684	AM 58,562(1973)a
Chlorophoenicite, 85	41.1.1.1	41.1.4.1	II,778	AM 53,1110(1968)
Chlorothionite, 64	30.1.11	30.1.4	II,549	ZK 144,226(1976)

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Chlorotile=Agardite	-----	-----	II,944	NJMM 1960,223; CE 29,36(1970); AM 56,362(1971)a
Chloroxiphite, 38	10.6.4	10.2.6	II,84	MM 41,357(1977); MM 43,901(1980)
Choloalite, 72	34.2.4	-----	-----	<i>to be published</i> (S.A.Williams)
Christite, 18	3.4.9.1	-----	-----	ZK 144,367(1976); AM 62,421(1977)
Chromatite, 74	35.3.2	-----	-----	NW 50,612(1963)[AM 49,438]a
Chrome-cerussite=chromian Cerussite		-----	-----	MM 38,902(1969)
Chrominium=Phoenicochroite		-----	-----	MD 5,86(1970)[AM 55,1813]a
Chromite, 29	7.2.3.3	7.2.1.12	I,709	AM 38,1148(1953); AM 45,579(1960)
Chromrutile=Redledgeite		-----	-----	AM 46,1201(1961)
Chrysoberyl, 30	7.2.9	7.2.3	I,718	AM 48,804(1963); NJMA 134,117(1979)
Chubutite=Lorettoite (an artifact)		-----	-----	AM 64,1303(1979)
Chudobaite, 78	39.2.6	-----	-----	NJMM 1960,1[AM 45,1130]a; NW 63,243(1976)[AM 62,599]
Chukhrovite-(Ce), 66	31.2.6.2	-----	-----	CE 38,331(1978)[AM 65,1065]a
Chukhrovite-(Y), 66	31.2.6.1	-----	-----	ZVMO 89,15(1960)[AM 45,1132]a; DANS 163,183(1965)[MA 19,181]a; NAT 212,392(1966)
Churchite, 84	40.4.7	40.3.7	II,773	MM 30,211(1953)[AM 45,1132]a; MR 2,166(1971)
Cinnabar, 8	2.8.14	2.6.9	I,251	AM 44,471(1959); BM 96,218(1973)
Claringbullite, 38	10.5.6	-----	-----	MM 41,433(1977)[AM 63,793]a
Clarkeite, 25	5.4.1	5.2.2	I,624	USGS 1064,95(1958)
Claudetite, 23	4.3.10.1	4.4.3	I,545	AM 36,833(1951); AM 49,1671(1964)
Clausthalite, 7	2.8.1.2	2.6.1.2	I,204	AM 35,356(1950)
Cliffordite, 72	34.3.1	-----	-----	AM 54,697(1969); AC B27,608(1971)[AM 57,597]a
Cliftonite, 3	1.3.4.5	-----	I,154	AM 37,700(1952)a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Clinobisvanite, 77	38.4.4.2	-----	-----	MM 39,847(1974)
Clinochalcomenite, 72	34.2.3.1	-----	-----	KT 25,89(1980)[AM 66,217]a
Clinoclase, 85	41.3.1	41.3.1	II,787	AC 18,777(1965)
Clinosafflorite, 12	2.12.16	-----	-----	CM 10,877(1971)[AM 57,1552]a
Clinotyrolite, 90	42.4.4	-----	-----	<i>Acta Geol.Sinica</i> 54,134(1980)
Clinoungemachite, 67	31.7.4	31.4.3	II,597	
Cl-tyretskite, 54	25.8.2.1	-----	-----	KUS 7,165(1977)[AM 63,598]a
Coalingite, 47	16b.5.9	-----	-----	AM 50,1002(1965); AM 50,1893(1965); MM 38,286(1971)
Cobaltite, 12	2.12.7.1	2.9.2.1	I,296	AM 50,1004(1965)
Cobaltoadamite=cobaltian Adamite		-----	II,864	
Cobaltocalcite=Sphaerocobaltite		14.1.1.5	II,175	AM 37,361(1952)
Cobaltomenite, 72	34.2.3.2	34.1.2	II,639	NW 50,333(1963)[AM 48,1183]a; CM 12,304(1974)
Cobalt-pentlandite, 6	2.7.1.3	-----	-----	AC 15,1195(1962); NJMM 1964,240[AM 50,2107]a; CM 13,75(1975)
Cobalt-zippeite, 69	31.10.4.6	-----	-----	CM 14,429(1976); MM 43,539(1979)
Cochromite, 29	7.2.3.5	-----	-----	AM 65,811(1980)a
Cocinerite=mixture of Chalcocite and Silver		2.1.3.4	I,173	AM 52,1214(1967)
Coconinoite, 99	43.5.5	-----	-----	AM 51,651(1966)
Coeruleolactite, 93	42.8.3.2	-----	II,961	AM 43,1224(1958)a
Cohenite, 1	1.1.15	1.1.7.3	I,122	SPD 7,872(1963); GCA 28,1745(1964)
Colemanite, 55	26.3.5.1	25.1.8	II,349	AM 38,411(1953); AM 39,321(1954); AM 43,1163(1958); AC 11,761(1958)
Collinsite, 80	40.2.2.3	40.2.3.2	II,722	AM 36,484(1951); MM 39,577(1974); MA 75-1944)a
Coloradoite, 7	2.8.4.3	2.6.2.4	I,624	AM 34,363(1949)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Columbite:see Ferrocolumbite, Magno-Columbite, Manganocolumbite		8.3.2.1	I,780	
Colusite, 17	3.2.3.2	3.3.1.3	I,386	AM 38,794(1953); AM 45,1282(1960); AM 55,1787(1970)
Comblainite, 47	16b.4.3.3	-----	-----	BM 103,113(1980)[AM 65,1065]a
Compreignacite, 26	5.7.1.1	-----	-----	BM 87,365(1964)[AM 50,807]a; BM 88,211(1965)
Comstockite=cuproan zincian Pentahydrate			-----	AM 36,641(1951)a
Comuccite=Jamesonite	-----	-----	I,454	
Condurrite=mixture of Tenorite and Cuprite			I,172	MM 31,979(1958)[AM 44,210]a
Congolite, 53	25.6.2	-----	-----	KUS 6,1(1972)[AM 57,1315]a; ZK 138,64(1973)
Conichalcite, 86	41.5.1.2	41.5.1.2	II,806	AM 38,557(1953); AM 39,416(1954); CM 7,561(1963); CM 12,262(1974); CM 18,191(1980)
Connellite, 66	31.1.1	31.1.1.1	II,572	AM 57,426(1972)
Cooperite, 7	2.8.7.1	2.6.11	I,578	ZVMO 97,85(1968)[MA 70-686]a; AM 63,847(1978)
Copiapite, 69	31.10.6.1	31.6.11.1	II,623	ZK 135,34(1972); AM 58,314(1973)
Copper, 1	1.1.4	1.1.1.4	I,99	
Copperas=Melanterite	-----	-----	II,499	
Coquimbite, 63	29.8.3	29.8.3	II,532	AM 55,1534(1970); NJMM 1974,89
Corderoite, 37	10.3.3	-----	-----	AM 59,652(1974); MA 73-2425)a; AC B24,156(1968)
Cordylite, 44	16a.1.5	16.2.7	II,285	
Corkite, 97	43.4.1.2	43.1.1.2	II,1002	
Cornetite, 85	41.3.2	41.3.2	II,789	AM 35,365(1950); AM 35,379(1950); JCP 41,1910(1964)
Cornubite, 85	41.4.2	-----	-----	MM 32,1(1959)[AM 44,1321]a

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Cornwallite, 90	42.3.1	42.3.1	II,925	AM 36,484(1951)
Coronadite, 31	7.5.1.4	7.7.1.1	I,742	AM 35,489(1950)
Coronguite=argentian Bindheimite		-----	II,1025	MM 30,100(1953)[AM 39,405]a
Corundum, 22	4.3.1.1	4.4.1.1	I,520	AC 15,222(1962); ZK 117,235(1962); ZK 120,342(1964)
Corvusite, 104	47.4.2	-----	I,602	AM 44,331(1959)
Cosalite, 19	3.5.11.1	3.6.2.1	I,445	ZK 113,385(1960); ZK 140,114(1974)
Costibite, 13	2.12.18.1	-----	-----	AM 55,10(1970); CM 13,188(1975)
Cotunnite, 36	9.2.7	9.2.6	II,42	MA 69-1075)a
Coulsonite, 29	7.2.4.2	-----	I,702	AM 47,1284(1962)
Cousinite, 106	49.3.2	-----	-----	AM 44,910(1959)a
Covellite, 7	2.8.12.1	2.6.8.1	I,248	AM 39,504(1954); TMPM 22,242(1975); AM 61,996(1976); MJJ 8,311(1977)
Crandallite, 91	42.6.3.1	41.5.8.4	II,835	AM 59,41(1974); NJMM 1974, 22; MM 40,863(1976)
Crednerite, 29	7.1.2	7.2.4	I,722	AM 41,276(1956); SPC 3,703(1960)[MA 15,261]a; BM 89,80(1966)[AM 51,1819]a
Creedite, 66	31.3.1	12.1.1	II,129	AM 37,787(1952); NJMM 1953,241
Crichtonite, 35	8.4.2.3	-----	I,537	MM 37,349(1969)[AM 55,534]a; AM 61,1203(1976)
Crocoite, 74	35.3.1	35.3.1	II,646	ZK 117,259(1962); AC 19,287(1965)
Crookesite, 5	2.4.10	2.3.1.6	I,183	AM 35,347(1950); BM 101,557(1978); NJMA 138,122(1980)
Cryolite, 40	11.6.1	11.5.1	II,110	AM 35,149(1950); CM 13,377(1975); BGSD 26,95(1977)[MA 78-877]a

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Cryolithionite, 40	11.6.4	11.2.4	II,99	AM 35,149(1950); AM 56,18(1971); BGSD 26,95(1977)[MA 78-877]a
Cryptohalite, 39	11.5.1.2	11.4.1.2	II,104	
Cryptomelane, 31	7.5.1.2	-----	-----	AM 27,607(1942); MM 32,166(1959)
Cryptomorphite=Ginorite		-----	-----	MM 29,955(1952)[AM 39,408]a
Csiklovaite, 11	2.11.4.4	-----	-----	AM 35,333(1950)a; NJMM 1974,316
Cubanite, 9	2.9.9.1	2.6.6	I,243	AM 32,415(1947); AM 44,977(1959); ZK 132,276(1970); ZK 140,218(1974)
Cumengite, 38	10.6.7	10.2.2	II,79	NJMM 1970,116; MR 5,280(1974)
Cuprite, 22	4.1.1	4.1.1	I,491	DA 26,1(1979)
Cuproadamite=cuproan Adamite		-----	II,864	
Cuproartinite, 46	16b.3.1.2	-----	-----	AM 64,886(1979)
Cuproauride=Auricupride		-----	-----	AM 62,595(1977)a
Cuprobismutite, 21	3.8.2	-----	I,437	AM 37,447(1952); NJMM 1975,99; ZK 142,161(1975); AC B31,703(1975)
Cuprocopiapite, 69	31.10.6.3	31.6.11.3	II,623	
Cuprodescloizite=Mottramite		-----	II,811	
Cuprohydromagnesite,47	16b.5.1.2	-----	-----	AM 64,886(1979)
Cupropavonite, 21	3.8.11.2	-----	-----	BM 102,351(1979)[AM 65,206]a CM 18,181(1980)
Cuprospinel, 29	7.2.2.6	-----	-----	CM 11,1003(1973)[AM 59,381]a
Cuprostitibite, 5	2.4.9	-----	-----	ZVMO 98,716(1969)[AM 55,1810]a
Cuprotungstite, 105	48.3.2	49.1.1	II,1091	BM 92,497(1969); MM 43,448(1979)
Curetonite, 87	41.5.14	-----	-----	MR 10,219(1979)[AM 65,206]a

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Curienite, 82	40.2a.23.2	-----	-----	BM 91,453(1968)[AM 54,1220]a; BM 94,8(1974)
Curite, 26	5.9.3	5.3.2	I,629	USGS 1064,92(1958); TPM 26,279(1979)
Curtisite=an organic mixture		-----	-----	AM 61,1055(1976)a
Cyanochroite, 60	29.3.5.2	29.3.7.2	II,454	<i>Min. Petr. Acta</i> 14,23(1968) [MA 72-1845]a
Cyanotrichite, 66	31.2.1	31.1.6	II,578	
Cylindrite, 16	3.1.1	3.8.11	I,482	NJMM 1971,385; NJMM 1971,404; NJMM 1974,235
Cyprusite=Jarosite or Natrojarosite		-----	II,566	MM 31,407(1957)[AM 42,586]a
Cyrilovite, 92	42.6.8.1	-----	-----	NJMM 1956,187[AM 42,586]a; MR 4,103(1973)
Dadsonite, 14	2.15.4	-----	-----	MM 37,437(1969)[AM 55,1445]a; CM 17,595(1979); CM 17,601(1979)
Dahllite=Carbonate-hydroxyapatite		-----	II,879	
Dakeite=Schroekingite		-----	II,236	
Danaite=cobaltoan Arsenopyrite		-----	I,319	
D'Ansite, 64	30.1.10	-----	-----	NW 45,362(1958)[AM 43,1221]a; NJMM 1958,152; ZK 152,83(1980)
Daomanite, 6	2.5.7	-----	-----	AM 61,184(1976)a; AM 65,408(1980)a
Darapskite, 49	20.1.1	20.1.1	II,309	ANLR 42,874(1967); AM 55,1500(1970); MM 41,548(1971)
Daubreeite, 37	10.2.1.3	10.1.6.3	II,60	
Daubreelite, 10	2.10.2.5	2.7.2	I,265	NJMM 1950,175; AKMG 178,1(1963); <i>J. Geophys. Res.</i> 75,6945(1968); NJMM 1968,453
Davidite, 35	8.4.2.5	-----	I,542	USGS 1064,337(1958); AM 46,700(1961); AM 64,1010(1979)
Daviesite=Hemimorphite	-----	10.1.5	II,58	AM 49,1501(1955)a

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Davisonite, 91	42.6.4	42.5.3	II,939	AM 37,362(1952)a; CSMQ 70,69(1975)
Dawsonite, 45	16a.3.7	16.2.1	II,276	EG 61,1029(1966); CM 9,51(1967); NJMM 1975,360; NJMM 1977,381
Dayingite, 10	2.10.6	-----	-----	AM 61,184(1976)a
Defernite, 48	16b.5.13	-----	-----	BM 103,185(1980)[AM 65,1066]a
Dehrnite=Carbonate-fluorapatite		41.7.4	II,902	MM 42,282(1978)[AM 64,466]a
Delafossite, 29	7.1.1.1	7.1.1	I,674	AM 31,539(1946); MM 35,731(1966)[AM 53,1779]a; MM 36,651(1968)[AM 53,1779]a
Delatorreite=Todorokite		-----	-----	AM 45,1167(1960); AM 45,1174(1960)
Delorenzite=Tanteuxenite		8.4.4	I,808	MM 32,308(1959)[AM 45,756]a
Delrioite, 103	47.3.2.1	-----	-----	AM 44,261(1959); AM 55,185(1970)
Deltaite=Crandallite	-----	41.5.8.5	II,837	AM 46,467(1961)a; AM 59,41(1974)
Delta-mooreite=Torreyite		-----	II,575	AM 34,589(1949)
Delvauxite, 91	42.5.6.1	42.4.7	II,935	TMPM 26,79(1979)[AM 65,813]a
Demesmaekerite, 73	34.7.6	-----	-----	BM 88,422(1966)[AM 51,1815]a
Denningite, 72	34.4.1	-----	-----	CM 7,443(1963)[AM 48,1419]a; AM 47,1484(1962)a; TMPM 10,241(1965)
Dennisonite=Davisonite	-----	-----	II,939	AM 37,362(1952)
Derbylite, 102	46.2.3.2	44.2.1	II,1025	NJMA 127,292(1976)[AM 62,396]a; MM 43,469(1979)
Derriksite, 73	34.7.5	-----	-----	BM 94,534(1971)[AM 57,1912]a
Desautelsite, 47	16b.4.2.4	-----	-----	AM 64,127(1979)
Descloizite, 86	41.5.2.1	41.5.2.1	II,811	AC 6,102(1953); NJMM 1953,68; NJMM 1953,193; AM 39,416(1954); CM 8,23(1964); AC B35,717(1979)

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Despujolsite, 67	31.7.7.1	-----	-----	BM 91,43(1968)[AM 54,326]a; MM 39,377(1973)
Destinezite=Diadochite	-----	-----	II,1011	
Devilline, 67	31.6.1	31.3.3	II,590	ZK 121,467(1965); ANLR 43,369(1967)[AM 54,329]a; AC B28,1182(1972)
Dewindtite,82	40.2a.20.2	41.6.10	II,875	AM 39,444(1954); USGS 1064,230(1958)
Diaboleite, 38	10.6.1	10.2.5	II,82	MM 36,933(1968); NJMM 1970,116; ZK 134,69(1971)
Diadochite, 99	43.5.2	43.2.4	II,1011	
Dialogite=Rhodochrosite		-----	I,171	AM 49,224(1964)
Diamond, 3	1.3.4.1	1.2.4.1	I,146	AM 46,953(1961); AC 23,708(1967)
Diaphorite, 18	3.5.4	3.4.3	I,414	ZK 110,169(1958)
Diaspore, 27	6.1.1.1	7.1.2.1	I,675	AC 11,798(1958); PCM 5,179(1979)
Dickinsonite, 88	41.7.2.2	40.2.1	II,717	AM 50,1647(1965); MM 43,227(1979)
Dienerite, 4	2.2.2.3	-----	I,175	
Dietrichite, 63	29.7.3.4	29.7.3.4	II,528	
Dietzeite, 50	23.1.1	23.1.1	II,318	
Digenite, 14	2.16.10	2.3.1.4	I,187	AM 27,712(1942); AM 43,230(1958); AM 56,1889(1971)
Dimorphite, 6	2.6.1	2.5.1	I,197	ZK 138,161(1973)[AM 59,632]a
Dittmarite, 80	40.1.2.1	-----	II,699	GSPP 750A,A-115(1972)[AM57, 1316]a
Dixenite, 102	46.3.2	-----	-----	AM 6,93(1921); ZK 127,309(1963); AM 63,150(1978); <i>GSA Annual Meeting, Abstracts, w. Programs</i> 11,380(1979)a
Djalmaite=Uranmicrolite	-----	8.4.2	I,805	AM 62,403(1977)

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Djerfisherite, 14	2.15.2	-----	-----	SCI 153,166(1966); AM 51,1815(1966)a; AM 55,1071(1970)a; AM 64,776(1979)
Djurleite, 5	2.4.7.2	-----	-----	AM 47,1181(1962); MJJ 3,338(1962)[AM 48,215]a; ZK 125,404(1967); ZK 125,414(1967); ZK 150,299(1979)
Dneprovskite=Cassiterite		-----	-----	AM 45,256(1960)a
Dolerophanite, 64	30.2.2	30.2.2	II,551	AM 46,147(1961); AC 16,1009(1963)
Dolomite, 42	14.2.1.1	14.2.1.1	II,208	AM 43,1212(1958); AM 44,679(1959); AM 44,1291(1959); AM 62,772(1977)
Doloresite, 103	47.1.1	-----	-----	AM 42,587(1957); AC 11,56(1958); AM 45,1144(1960); ZK 116,482(1961)
Domeykite, 4	2.2.2.1	2.1.3.1	I,172	ZK 146,334(1977)
Donathite, 30	7.2.6.1	-----	-----	NJMM 1969,49[AM 54,1218]a
Donnayite, 43	15.3.4.1	-----	-----	CM 16,335(1978)[AM 64,653]a
Dorfmanite, 78	39.1.8	-----	-----	ZVMO 109,211(1980)[AM 66,217]a
Douglasite, 39	11.3.1	11.3.1	II,100	
Doverite=Synchysite-(Y)	-----	-----	-----	AM 51,152(1966)
Downeyite, 23	4.4.3.1	-----	-----	AM 62,316(1977)
Dresserite, 46	16b.2.1.2	-----	-----	CM 10,84(1969)[AM 55,1447]a
Drugmanite, 94	42.10.12	-----	-----	MM 43,463(1979)[AM 65,809]a
Drysdallite, 13	2.12.19.2	-----	-----	NJMM 1973,433[AM 59,1139]a
Dufrenite, 93	42.8.1.2	41.6.9	II,873	AM 55,135(1970)
Dufrenoyite, 19	3.5.12	3.6.9	I,442	ZK 124,409(1967); ZK 130,15(1969)
Duftite- α , 86	41.5.2.6	-----	-----	BM 79,7(1956)[AM 42,123]a
Duftite- β , 86	41.5.1.4	41.5.1.4	II,810	BM 79,7(1956)[AM 42,123]a; CM 18,191(1980)

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Dugganite, 98	43.4.11	-----	-----	AM 63,1016(1978)
Duhamelite, 93	42.8.5	-----	-----	<i>to be published</i> (S.A.Williams)
Dumontite, 90	42.4.5.1	42.3.6	II,928	USGS 1064,236(1958)
Dundasite, 46	16b.2.1.1	16.2.3	II,279	BM 83,121(1960); MM 38,564(1972)
Durangite, 86	41.5.5.2	41.5.7	II,829	CM 12,262(1974)
Duranusite, 4	2.1.4	-----	-----	BM 96,131(1973)[AM 60,945]a
Durdenite=Emmonsite	-----	-----	II,641	
Dussertite, 86	41.5.10.1	41.5.8.7	II,839	
Duttonite, 27	6.2.6	-----	-----	SCI 123,990(1956)[AM 41,958]a; AM 42,455(1957); AC 11,56(1958)
Dypingite, 47	16b.5.2.1	-----	-----	AM 55,1457(1970)
Dysanalyte=niobian Perovskite		-----	I,732	
Dyscrasite, 4	2.2.1.1	2.2.1	I,173	CM 14,139(1976)
Dzhalindite, 28	6.3.5.1	-----	-----	ZVMO 92,445(1963)[AM 49,439]a; CM 10,781(1971)
Dzhezkazganite, 15	2.16.29	-----	-----	DANS 146,433(1962)[AM 48,209]a; MM 35,871(1966)
Dzhulukulite=nickeloan Cobaltite		-----	-----	DANS 121,724(1958)[AM 44,209]a
Eardleyite=Takovite	-----	-----	-----	AM 47,807(1962) a; AM 62,449(1977)
Earlandite, 107	50.2.2	50.2.2	II,1105	
Ecdemite, 102	46.2.1	46.1.1	II,1036	
Edgarite=Osarizawaitite	-----	-----	-----	AM 47,1079(1962)
Edisonite=Anatase	-----	-----	I,560	
Eggonite=Kolbeckite	-----	-----	II,965	AM 45,257(1960)
Eglestonite, 38	10.5.4	10.1.1	II,51	TMPM 23,105(1976)[AM 62,396]a
Ehlite=Pseudomalachite	-----	-----	II,799	AM 35,365(1950)
Eitelite, 42	14.3.2	-----	-----	AM 40,326(1955) a; AM 58,211(1973); NJMM 1980,230

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Ekaterinite, 57	26.7.5	-----	-----	ZVMO 109,469(1980)[AM 66,437]a
Electrum=Gold cont. 10-15% Silver		-----	I,91	
Ellestadite, 88	41.8.2.1	41.7.8	II,906	
Ellisite, 18	3.4.8	-----	-----	AM 64,701(1979); ZK 150,169(1979); ZK 151,249(1980)
Ellsworthite=Uranpyrochlore		-----	II,755	AM 62,603(1977)
Ellweilerite=Sodium-uranospinite		-----	-----	AM 46,465(1961)a
Elpasolite, 40	11.6.2	11.5.2	II,114	
Elroquite=mixture of Quartz and ferrian Variscite		-----	-----	CM 7,676(1963)[AM 48,1421]a
Elyite, 64	30.1.2	-----	-----	AM 57,364(1972)
Embolite=bromian Chlorargyrite		-----	II,11	
Embreyite, 97	43.3.2	-----	-----	MM 38,790(1972)[AM 58,806]a
Emmonsite, 72	34.3.3	34.2.1	II,640	TMPM 18,157(1972); MR 3,82(1972)
Emplectite, 20	3.7.5.2	3.5.9.2	I,435	ZK 141,387(1975)
Empressite, 8	2.8.32.1	2.6.14.1	I,260	AM 36,458(1951); AM 41,722(1956); AM 49,325(1964)
Enargite, 17	3.2.1	3.3.2.2	I,389	AC B26,1878(1970)
Endlichite=arsenian Wulfenite		-----	II,897	
Englishite, 96	42.12.10	42.6.8	II,957	MM 40,863(1970)
Eosphorite, 91	42.6.1.2	42.5.2.2	II,936	AM 35,793(1950); AM 43,195(1958); AM 43,765(1958); AC 13,384(1960)
Epigenite, 16	3.1.7	3.1.5	I,361	
Epiianthinite=Schoepite		-----	-----	AM 44,1004(1959)a
Epsomite, 62	29.6.11.1	29.6.9.1	II,509	AC 17,1361(1964); JCS 1973,816
Erdite, 14	2.14.4	-----	-----	AM 65,509(1980); AM 65,516(1980)

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Ericaite, 53	25.6.1.2	-----	-----	CE 17,211(1955)[AM 41,372]a; KUS 11,33(1955)[AM 41,372]a; DA 1,24(1958); ZK 138,64(1973)
Erikite=Monazite	-----	-----	-----	AM 44,1329(1959)a; AM 47,419(1962)
Erinite=Cornwallite	-----	41.4.2	II,798	AM 36,484(1951)
Eriochalcite, 36	9.2.8	9.2.7	II,44	
Erlichmanite, 11	2.12.3.6	-----	-----	AM 56,1501(1971)
Ernstite, 87	41.6.9	-----	-----	NJMM 1970,19[AM 56,737]a
Erubescite=Bornite	-----	-----	I,195	AM 49,224(1964)
Erythrite, 83	40.3.6.3	40.2.15.2	II,746	CM 9,493(1968)
Erythrosiderite, 39	11.4.1.1	11.3.3.1	II,101	
Eskebornite, 9	2.9.1.2	-----	-----	AM 39,691(1954)a; NJMA 94,1160(1960)[AM 46,467]a; CM 10,786(1971)[AM 57,1560]a
Eskimoite, 19	3.6.2	-----	-----	NJMA 131,56(1977)[AM 64,243]a
Eskolaite, 22	4.3.1.3	-----	-----	AM 43,1098(1958); ZK 117,235(1962); GSPP 887,9(1976)
Ettringite, 68	31.10.2.1	31.3.2	II,589	AM 45,1137(1960); AC B27,594(1971); MM 39,377(1973)
Eucairite, 5	2.4.6.2	2.3.1.7	I,183	AM 35,345(1950); ZK 108,389(1957)
Euchlorine, 65	30.3.1	30.2.5	II,570	
Euchroite, 91	42.5.3	42.4.6	II,934	AM 36,484(1951); AC B21,437(1966)
Euxenite, 35	8.3.8.2	8.3.3.1	I,787	AM 50,2084(1965); NJMA 103,1(1965); ZK 152,69(1980)
Evansite, 90	42.1.4	42.2.6	II,923	
Eveite, 87	41.6.5.4	-----	-----	CM 9,301(1967); AM 53,1841(1968); AMG 4,473(1969)[AM 55,319]a

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Evenkite, 107	50.3.4	-----	-----	DANS 88,717(1953)[AM 40,368]a; NJMM 1965,19[AM 50,2109]a
Ewaldite, 42	14.2.4	-----	-----	TMPM 15,185(1971)[AM 56,2156]a; TMPM 15,201(1971)
Eylattersite, 86	41.5.11.2	-----	-----	AM 56,1366(1971); BM 95,98(1972)[AM 59,208]a
Ezcurrite, 56	26.5.5	-----	-----	EG 52,426(1957)[AM 42,919]a; AM 58,110(1973)
Fabianite, 53	25.3.3	-----	-----	NW 43,230(1962)[AM 48,212]a; KUS 3,285(1962)[AM 48,212]a; AC 15,207(1962); CM 10,108(1969); ZK 132,241(1970)
Faheyite, 84	40.5.1	-----	-----	AM 38,263(1953); AM 49,395(1964)
Fairbankite, 72	34.1.2	-----	-----	MM 43,453(1979)[AM 65,809]a
Fairchildite, 42	14.3.3	14.3.1	II,222	AM 40,830(1955); AM 52,929(1967)a
Fairfieldite, 80	40.2.2.1	40.2.3.1	II,720	AM 43,453(1958); AC B26,640(1970)
Falkenhayenite=Tetrahedrite		-----	I,382	AM 39,852(1952)a
Falkmanite=Boulangerite		-----	-----	AM 33,716(1948)
Famatinite, 17	3.2.2.2	3.3.2.1	I,387	AM 42,772(1957)
Farringtonite, 76	38.3.1.2	-----	-----	GCA 24,198(1961)[AM 46,1513]a; AM 58,949(1973); MM 41,91(1977)
Faustite, 93	42.8.3.3	-----	-----	AM 38,964(1953)
Fedorovskite, 53	25.4.1.2	-----	-----	ZVMO 105,71(1976)[AM 62,173]a; IGR 19,113(1977)
Feitknechtite, 27	6.1.4.2	-----	-----	AM 50,1296(1965)
Felsöbanyaite, 66	31.4.4	31.2.3	II,585	AM 50,812(1965)a
Femolite=ferrian Molybdenite(?)		-----	-----	ZVMO 93,436(1964)[AM 50,261]a
Fengluangite=antimonian Guanglinite		-----	-----	AM 61,184(1976)a; AM 63,424(1978); AM 65,408(1980)a
Fenhuangite=thorian Britholite		-----	-----	SS 11,677(1978)[AM 48,211]a

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Ferberite, 105	48.1.1.2	48.1.1.3	II,1064	NJMA 113,13(1970); MR 8,393(1977); ZK 127,61(1978)
Ferdisilicite, 1	1.1.18.2	-----	-----	AM 54,1737(1969)a; ZVMO 106,236(1977)[MA 79-720]a
Fergusonite, 33	8.1.1.1	8.1.1	I,757	AM 46,1095(1961)a; AM 46,1517(1961)a; AM 52,1536(1967)
Fermorite, 88	41.8.3.4	41.7.6	II,904	
Fernandinite, 104	47.4.5	47.1.20	II,1062	AM 44,331(1959)
Feroxyhyte, 27	6.1.4.3	-----	-----	AM 62,1057(1977)a; IGR 19,873(1977); CCM 28,272(1980)
Ferrarisite, 78	39.2.3	-----	-----	BM 103,533(1980); BM 103,541(1980)
Ferrazite, 83	40.3.13	-----	II,832	
Ferricopiapite, 69	31.10.6.4	-----	II,625	AM 58,314(1973)
Ferrihydrite, 22	4.3.2.2	-----	-----	AM 60,485(1975)a; IGR 16,1131(1974); <i>Clay Miner.</i> 14,109(1979); AM 65,1044(1980)
Ferrimolybdate, 106	49.2.1	49.1.5	II,1095	AM 48,14(1963); BSBG 80,159(1971)
Ferrinatrium, 61	29.4.4	29.4.1	II,456	TMPM 23,317(1976); MM 41,375(1977)
Ferrisicklerite, 75	38.1.4.1	38.1.3.1	II,672	BM 99,274(1976); AC B32,2761(1976)
Ferrisymplesite, 93	42.9.1	-----	II,753	
Ferritungstite, 106	49.2.2	49.1.3	II,1093	AM 42,83(1957); BM 87,374(1974)
Ferroalluaudite, 76	38.2.3.5	-----	-----	MM 43,227(1979)[AM 65,810]a
Ferrocolumbite, 34	8.3.2.2	-----	I,783	NJMA 106,1(1966)
Ferrohagendorfite, 76	38.2.3.1	-----	-----	MM 43,227(1979)
Ferrohalotrichite=Halotrichite		-----	-----	AM 56,1122(1971)a
Ferrohexasulfate, 62	29.6.8.3	-----	-----	ZVMO 91,490(1962)[AM 48,433]a

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Ferroselite, 12	2.12.6.2	-----	-----	DANS 105,812(1955)[AM 41,671]a; GCA 15,73(1958); GCA 16,296(1959)
Ferrostibian=Langbanite		-----	II,1026	AMG 4,449(1967)[AM 53,1779]a
Ferrotantalite, 34	8.3.2.1	-----	I,783	NJMA 106,1(1966)
Ferrowyllieite, 76	38.2.4.1	-----	-----	MR 4,131(1973); AM 59,280(1974); AM 59,843(1974); MM 43,227(1979)[AM 65,810]a
Ferruccite, 39	11.2.3	11.2.3	II,98	
Fersilicite, 1	1.1.18.1	-----	-----	AM 54,1737(1969)a
Fersmite, 34	8.3.3	-----	-----	AM 32,373(1947)a; AM 44,1(1959); AC 23,939(1967); AM 55,90(1970)
Ferutite=Davidite	-----	-----	-----	AM 49,447(1964)a
Fervanite, 84	40.4.11	47.1.6	II,1049	AM 44,322(1959)
Fibroferrite, 68	31.9.12	31.6.6	II,614	TMPM 28,17(1981)
Fichtelite, 107	50.3.3	-----	-----	NW 49,9(1962)
Fiedlerite, 37	10.3.2	10.1.10	II,67	
Fillowite, 76	38.2.5.1	40.2.2	II,719	AM 50,1654(1965); AM 51,1647(1966); <i>unpublished data</i> (P.B.Moore)
Finnemannite, 102	46.1.1	46.1.3	II,1038	AMG 2,1(1955); TMPM 26,95(1979)
Fischerite=Wavellite	-----	-----	II,762	AM 41,537(1956)a
Fischesserite, 5	2.4.3.2	-----	-----	BM 94,381(1971)[AM 57,1554]a
Fizelyite, 19	3.6.15	3.6.4	I,450	
Flagstaffite, 108	50.4.3	-----	-----	NJMM 1965,19[AM 50,2109]a
Flajolotite=Tripuhyite	-----	44.1.4	II,1024	MM 30,100(1953)[AM 39,405]a
Fleischerite, 67	31.7.7.3	-----	-----	NJMM 1960,132[AM 45,1313]a; MM 39,377(1973); NJMA 123,160(1975)
Fletcherite, 10	2.10.1.3	-----	-----	EG 72,480(1977)[AM 62,1057]a

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Flinkite, 85	41.3.4	41.3.5	II,793	AM 52,1603(1957); CM 7,547(1963)
Florencite-(Ce), 86	41.5.10.2	41.5.8.6	II,838	MM 33,281(1962)
Florencite-(La), 86	41.5.10.3	-----	-----	CM 18,301(1980)
Florencite-(Nd), 86	41.5.10.4	-----	-----	MR 2,166(1971)
Fluckite, 78	39.1.2	-----	-----	BM 103,122(1980)[AM 65,1066]a; BM 103,129(1980)[AM 65,1066]a
Fluellite, 91	42.5.8	11.5.9	II,124	AM 51,1579(1966); MA 76-1980)a; MR 8,392(1977)
Fluocerite-(Ce), 37	9.3.4.1	9.3.2	II,48	AK 5,73(1953); AM 45,455(1960); AC B28,2903(1972)
Fluocerite-(La), 37	9.3.4.2	-----	-----	Fleischer (1980), 54
Fluorapatite, 88	41.8.1.1	41.7.1.1	II,879	AM 47,12(1962); ZK 124,452(1967); NJMM 1968,224; GSPP 650-D,84(1969); AM 55,170(1970)
Fluorite, 36	9.2.1.1	9.2.1	II,29	AM 37,916(1952); AM 45,855(1960); AM 52,1003(1967); GSPP 650-D,69(1969)
Foggite, 91	42.6.2	-----	-----	AM 60,957(1975); AM 60,965(1975)
Forbesite=mixture of Annabergite and Arsenolite		39.2.4	II,711	CM 14,414(1976)
Formanite, 33	8.1.1.2	8.1.3.2	I,757	AM 29,456(1944)
Fornacite, 74	36.1.1.2	-----	II,652	BM 85,309(1962)[AM 49,447]a; AC 21,A47(1966); ZK 124,385(1967); ZK 126,433(1968)
Foucherite=Delvauxite(?)		-----	II,915	TMPM 26,79(1979)[AM 65,813]a
Fourmarierite, 26	5.9.2	5.3.1	I,628	USGS 1064,87(1958); ZK 113,132(1960); AM 45,1026(1960)
Francevillite, 82	40.2a.23.1	-----	-----	AM 43,180(1958)a
Franckeite, 16	3.1.2	3.6.3	I,448	AM 33,203(1948)a; BM 84,350(1961)

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Francoanellite, 79	39.3.6.2	-----	-----	NJMM 1976,49[AM 61,1054]a; NJMM 1979,363
Francolite=Carbonate-fluorapatite		-----	II,884	
Frankdicksonite, 36	9.2.1.2	-----	-----	AM 59,885(1974)
Franklinite, 29	7.2.2.4	7.2.1.7	I,698	AM 50,1672(1965); LIT 5,69(1972); MA 74-2431)a
Franquenite=Slavikite	-----	-----	II,622	AM 35,136(1950)a
Freboldite, 8	2.8.24	-----	-----	AM 41,164(1956)a; AM 44,907(1959)a
Freibergite, 17	3.3.6.3	-----	I,379	TMPM 18,147(1972); MD 9,117(1974)[AM 60,489]a
Freieslebenite, 18	3.4.5.2	3.4.4	I,416	ZK 109,284(1957); ZK 139,85(1974)
Freirinite=Lavendulan	-----	42.2.4	II,920	AM 42,123(1957)
Fremontite=Natromontebasite		-----	II,823	
Freudenbergite, 31	7.5.3	-----	-----	NJMM 1961,12[AM 46,765]a; ZK 120,396(1964); ZK 121,9(1965); ZK 132,157(1970); AC B34,255(1978)
Friedrichite, 18	3.5.6	-----	-----	CM 16,127(1978)[AM 64,654]a
Frieseite=Sternbergite	-----	-----	I,236	
Frigidite=intergrowth of Tetrahedrite and Ni-bearing minerals			-----	MM 43,99(1979)[AM 64,1334]a
Fritzscheite, 82	40.2a.21	-----	II,984	USGS 1064,195(1958)
Frohbergite, 12	2.12.6.3	-----	-----	AM 32,210(1947)a; AM 34,360(1949); CM 9,709(1969)
Frolovite, 52	25.1.3	-----	-----	ZVMO 86,622(1957)[AM 43,385]a; AM 45,337(1960); SPD 17,1(1972); SPD 21,471(1976)
Frondelite, 89	41.9.2.2	41.6.6.1	II,867	AM 43,195(1958); GSPP 400-B,429(1960)
Froodite, 13	2.12.26	-----	-----	CM 6,200(1958)[AM 44,207]a

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Fukuchilite, 11	2.12.2.3	-----	-----	MJJ 5,399(1969)[AM 55,1811]a
Fülöppite, 21	3.8.4	3.7.4.1	I,630	NJMM 1974,92; AC B31,151(1975); ZK 142,196(1975)
Furongite, 92	42.6.12	-----	-----	AM 63,425(1978)a; SS 22,199(1979)
Gabrielsonite, 86	41.5.1.5	-----	-----	AMG 4,401(1967)[AM 53,1063]a; CM 18,191(1980)
Gagarinite, 39	11.5.6	-----	-----	DANS 141,954(1961)[AM 47,805]a; DANS 149,672(1963)[MA 18,283]a
Gahnite, 29	7.2.1.4	7.2.1.3	I,689	ZK 120,476(1964)
Gainesite, 77	38.5.1	-----	-----	<i>to be published</i> (P.B.Moore)
Gaitite, 80	40.2.2.6	-----	-----	CM 18,197(1980)
Gajite=mixture of Calcite and Brucite	-----	-----	II,264	NJMA 94,1200(1960)[AM 46,467]a
Galaxite, 29	7.2.1.2	7.2.1.4	I,689	
Galeite, 64	30.1.8	-----	-----	AM 41,672(1956)a; AM 48,485(1963); AM 56,174(1971); MM 40,357(1975)
Galena, 7	2.8.1.1	2.6.1.1	I,200	AM 36,102(1951)
Galenobismutite, 20	3.7.9.1	3.8.3	I,471	AMG 1,219(1951); AC 15,691(1962)
Galkhaite, 18	3.4.13	-----	-----	DANS 205,1194(1972)[AM 59,208]a ZK 142,262(1975); NJMM 1975,291
Gallite, 9	2.9.1.3	-----	-----	NJMM 1958,241[AM 44,906]a
Gamagarite, 103	47.2.1	-----	-----	AM 28,329(1943)
Gamma-MnO ₂ =Nsutite	-----	-----	-----	
Gamma-sulfur=Rosickyite	-----	1.2.3.3	I,145	
Garavellite, 20	3.7.9.4	-----	-----	MM 43,99(1979)[AM 64,1329]a
Garrelsite, 58	27.1.8	-----	-----	AM 41,672(1956)a; SMPM 53,199(1973)[AM 59,632]a; NW 60,349(1973)[AM 59,632]a; AC B32,824(1976)

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Gaspeite, 41	14.1.1.8	-----	-----	AM 51,677(1966); MM 39,113(1973)
Gatumbaite, 94	42.10.11.1	-----	-----	NJMM 1977,561[AM 63,793]a
Gauefroyite, 58	27.1.2	-----	-----	BM 87,216(1964)[AM 50,806]a
Gaylussite, 43	15.2.2	15.2.3	II,234	AM 48,848(1963); AM 52,1570(1967); ZK 126,392(1968)
Gearsutite, 40	11.6.8	11.5.6	II,119	AM 34,383(1949)
Geikelite, 23	4.3.5.2	4.4.1.4	I,535	AM 34,837(1949); AM 44,879(1959)
Genaruttite=Monteponite		-----	-----	AM 36,638(1951)a
Genkinite, 6	2.6.4	-----	-----	CM 15,389(1954)[AM 64,659]a
Geocronite, 17	3.3.1.2	3.3.5	I,395	AM 39,908(1954); AM 61,963(1976)
Georgeite, 47	16b.5.12	-----	-----	MM 43,97(1979)[AM 64,1330]a
Georgiadesite, 85	41.3.3	41.3.3	II,791	
Gerasimovskite, 35	8.4.11.3	-----	-----	AM 43,1220(1958)a
Gerhardtite, 49	19.1.1	19.1.1	II,308	ZK 113,478(1960)
Germanite, 9	2.9.13.2	3.3.1.2	I,385	AM 38,794(1953); EG 52,612(1957); NJMA 114,89(1970)
Gersdorffite, 12	2.12.7.2	2.9.2.2	I,298	AM 50,1012(1965); MM 36,38(1967); MM 36,940(1968)
Gerstleyite, 21	3.8.10	-----	-----	AM 41,839(1956)
Getchellite, 10	2.11.1.2	-----	-----	AM 50,1817(1965); BM 91,403(1968); AC 829,2536(1973)
Geversite, 11	2.12.3.4	-----	-----	MM 32,833(1961)[AM 46,1518]a
Gianellaite, 59	28.2.4	-----	-----	NJMM 1977,119[AM 62,1057]a
Gibbsite, 28	6.3.1	6.2.2	I,633	ZK 139,129(1974); AC 832,1719(1976)
Giessenite, 17	3.2.9	-----	-----	SMPM 43,471(1963)[AM 50,264]a; MA 74-3432)a
Gilpinite=Johannite	-----	-----	II,606	

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Giniite, 94	42.10.6	-----	-----	NJMM 1980,49[AM 65,1066]a
Ginorite, 57	26.6.7.1	25.1.19	II,364	
Giobertite=Magnesite	-----	-----	II,162	AM 49,224(1964)
Giorgiosite, 47	16b.5.2.2	-----	II,274	NJMM 1975,196
Girdite, 71	33.3.3	-----	-----	MM 43,453(1979)[AM 65,809]a
Gladite, 21	3.8.6.1	3.8.12	I,483	AM 61,15(1976); AC B32,2401(1976)
Glaserite=Aphthitalite	-----	-----	II,400	
Glauberite, 59	28.4.2	28.4.2	II,431	ZK 122,175(1965); AM 52,1272(1967)
Glaucodot, 13	2.12.18.2	2.9.5.2	I,322	AM 32,199(1947)
Glaucokeinite, 66	31.1.2	31.1.2	II,574	
Glaukosphaerite, 45	16a.3.1.2	-----	-----	MM 39,737(1974); BM 98,175(1975); CM 14,574(1976);
Globosite=Strengite	-----	-----	II,762	
Glockerite=Lepidocrocite		31.2.6	II,587	AM 62,600(1977)a
Glucine, 90	42.4.10	-----	-----	ZVMO 92,691(1963)[AM 49,1152]a
Glushinskite, 107	50.1.3.2	-----	-----	ZVMO 91,204(1962)[AM 47,1482]a; MM 43,837(1980)[AM 66,439]a
Godlevskite, 15	2.16.22	-----	-----	AM 55,317(1970)a; CM 11,879(1972)
Goedkenite, 89	41.10.3	-----	-----	AM 60,957(1975)
Goethite, 27	6.1.1.2	7.1.2.2	I,680	AM 32,659(1947); AM 44,254(1959)
Gold, 1	1.1.1.1	1.1.1.1	I,90	AM 33,484(1948)
Goldfieldite, 17	3.3.6.6	3.2.5	I,384	
Goldichite, 61	29.5.2	-----	-----	AM 40,469(1955); AM 50,505(1965); AM 56,1917(1971)a
Goongarrite=Heyrovskyite		3.3.10	I,401	AM 62,397(1977)a
Gorceixite, 91	42.6.3.2	41.5.8.2	II,833	AM 43,688(1958); BM 86,379(1963); NJMM 1980,157

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Gordonite, 95	42.10.14.4	41.5.8.2	II,975	AM 43,194(1958)
Görgeyite, 61	29.4.7	-----	-----	NJMM 1953,35[AM 39,403]a; NJMM 1965,126; ZK 151,49(1980)
Goslarite, 62	29.6.11.2	29.6.9.2	II,513	
Goudeyite, 96	42.12.7.4	-----	-----	AM 63,704(1978)
Gowerite, 56	26.5.8	-----	-----	AM 44,911(1959); AM 57,381(1972)
Goyazite, 91	42.6.3.3	41.5.8.3	II,834	AM 43,195(1958); MM 33,281(1962); NJMM 1971,241
Graemite, 72	34.2.1	-----	-----	MR 6,32(1975)[AM 60,486]a
Graftonite, 76	38.3.3.1	38.3.2	II,686	AM 49,1150(1964)a; AM 53,742(1968); MR 4,103(1973)
Grantsite, 104	47.4.7	-----	-----	GSPP 424-B,293(1961)[AM47,414]a AM 49,1511(1964)
Graphite, 3	1.3.4.2	1.2.4.2	I,152	AC 4,558(1961); NAT 193,671(1962)
Gratonite, 17	3.3.2	3.3.6	I,397	NJMA 99,307(1963); ZK 128,321(1969)
Grayite, 84	40.4.8.4	-----	-----	MM 31,961(1958); AM 47,419(1962)a
Greenockite, 7	2.8.9.3	2.6.4.2	I,228	AM 42,185(1957)
Greigite, 10	2.10.2.4	-----	-----	AM 49,543(1964); AM 53,2087(1968); ZVMO 97,321(1968)[AM 54,328]a
Grimaldite, 27	6.1.5.2	-----	-----	AC 10,423(1957); GSPP 887,17(1976)[AM 62,593]a
Grimselite, 43	15.2.6	-----	-----	SMPM 52,93(1972)[AM 58,139]a
Griphite, 89	41.9.3	41.5.11	II,843	AM 57,269(1972); BM 101,536(1978); BM 101,543(1978)[AM 54,328]a
Groutite, 27	6.1.1.3	-----	-----	AM 32,654(1947); AM 44,877(1959); AC B24,1233(1968)
Grünlingite, 8	2.8.27	2.1.1.3	I,164	

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Guadarramite=mixture of Ilmenite and Monazite			I,539	AM 37,1061(1952)
Guanajuatite, 10	2.11.2.3	2.8.2.3	I,278	
Guanglinitite, 4	2.2.4	-----	-----	AM 61,15(1976); AM 184(1976)a; AM 65,408(1980)a
Guanine, 108	50.4.5	-----	-----	MM 39,889(1974)
Gudmundite, 12	2.12.9.2	2.9.5.3	I,325	NJMM 1976,331
Guerinite, 78	39.2.2.2	-----	-----	AM 47,416(1962)a; BM 87,169(1964)[AM 50,812]a; AC B30,1789(1974)
Guettardite, 20	3.7.8.2	-----	-----	CM 9,191(1967)[AM 53,1425]a; CM 18,13(1980)
Guildite, 68	31.9.7	31.6.8	II,619	AM 55,502(1970); AM 63,478(1978)
Guilleminite, 73	34.7.3	-----	-----	BM 88,132(1965)[AM 50,2103]a
Güitermanite=Jordanite	-----	3.3.9	I,401	
Gummite=term for secondary uranium oxides		5.2.1	I,622	AM 41,539(1956)
Gunningite, 61	29.6.2.5	-----	-----	CM 7,209(1962)[AM 47,1218]a
Gustavite, 20	3.7.12.2	-----	-----	CM 10,173(1970)[AM 56,633]a; CM 13,411(1975)
Gutsevichite, 93	42.9.5	-----	-----	AM 46,1200(1961)a
Guyanaite, 27	6.1.2.3	-----	-----	GSPP 887,10(1976)[AM 62,593]a
Gypsum, 61	29.6.3	29.6.3	II,482	AC B30,921(1974)
Haapalaite, 14	2.14.3	-----	-----	BGSF 45,103(1973)[AM 55,1111]a
Hagendorfite, 76	38.2.3.2	-----	-----	NJMM 1954,252[AM 40,553]a; AM 56,1955(1971); MM 43,227(1979)[AM 65,810]a
Häggite, 28	6.4.3	-----	-----	AM 45,1144(1960); AC 11,56(1958)[AM 43,485]a; ZK 116,482(1961)
Haidingerite, 78	39.1.5	39.2.2	II,708	BM 89,18(1966); AC B28,209(1972)
Hakite, 17	3.3.6.4	-----	-----	BM 94,45(1971)[AM 57,1553]a

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Halite, 36	9.1.1.1	9.1.1.1	II,4	
Hallimondite, 82	40.2a.19	-----	-----	JLBW 4,7(1961)[AM 47,414]a; AM 50,1143(1965)
Halotrichite, 63	29.7.3.2	29.7.3.2	II,523	CM 10,958(1973)
Halurgite, 56	26.4.4	-----	-----	DANS 143,693(1962)[AM 47,1217]a
Hambergite, 52	25.1.1	26.1.2	II,370	AC 16,1144(1963); AM 50,85(1965)
Hammarite, 19	3.6.13	3.5.13	I,442	DANS 187,886(1969)[AM 55,535]a; AM 52,1874(1967); AM 53,351(1968)a; AM 61,15(1976); CM 14,536(1976)
Hanksite, 70	32.1.1	32.1.1	II,628	AC B28,3614(1972); AM 58,799(1973)
Hannayite, 79	39.3.5	39.1.2	II,699	AM 48,635(1963); AC B32,2842(1976)
Harbortite=mixture including Crandallite			II,951	
Harkerite, 48	17.1.8	-----	-----	MM 29,621(1951)[AM 37,359]a; CM 10,689(1970); NJMM 1976,228; AM 62,263(1977)
Harttite=calcian Svanbergite		-----	II,1005	AM 36,927(1951)a
Hastite, 12	2.12.6.4	-----	-----	NJMM 1955,133[AM 41,164]a
Hatchettolite=Uranpyrochlore		-----	I,754	AM 62,403(1977)
Hatchite, 19	3.5.10.2	-----	-----	AM 49,446(1964); NJMM 1967,43[AM 56,361]a; ZK 125,250(1967); NJMM 1968,69[AM 56,361]a; SMPM 58,215(1978)
Hauecornite, 17	3.2.6.3	-----	-----	AM 35,440(1950); CM 11,819(1972); CM 12,269(1974); MM 43,873(1980)[AM 66,436]a
Hauckite, 70	32.1.5	-----	-----	AM 65,192(1980)
Hauerite, 11	2.12.2.5	2.9.1.3	I,293	MA 70-1595)a
Hausmannite, 30	7.2.7.1	7.2.2.1	I,712	AM 50,1305(1965)
Hawleyite, 7	2.8.5	-----	-----	AM 40,555(1955)

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Haxonite, 1	1.1.16	-----	-----	NAT 229,61(1971)[AM 59,209]a
Haycockite, 9	2.9.3.2	-----	-----	AM 57,689(1972); AM 58,1110(1973); AC B31,2105(1975); CM 13,168(1975)
Heazlewoodite, 5	2.5.3	-----	I,243	AM 32,484(1947)a; AM 62,341(1977); AC B36,1179(1980)
Hedleyite, 14	2.16.7	-----	-----	AM 34,364(1949); AM 48,435(1963)
Hedyphane, 88	41.8.3.2	41.7.3.2	II,900	AM 65,1143(1980)
Heideite, 10	2.10.3	-----	-----	<i>Meteoritics</i> 8,48(1973); AM 59,465(1974)
Heidornite, 70	32.1.11	-----	-----	AM 42,120(1957)a; NJMM 1967,157
Heinrichite, 81	40.2a.4.1	-----	-----	AM 43,1134(1958)
Heliophyllite, 102	46.2.2	46.1.2	II,1037	
Hellyerite, 43	15.1.7	-----	-----	AM 44,533(1959); MM 33,663(1963)
Helmutwinklerite, 80	40.2.10	-----	-----	NJMM 1980,118[AM 65,1067]a
Hemafibrite=Synadelphite		42.2.3	II,919	AMG 4,425(1967)[AM 53,1779]a
Hematite, 22	4.3.1.2	4.4.1.2	I,527	AM 47,1332(1962); AM 51,123(1966)
Hematolite, 98	43.4.5	41.1.3	II,777	ZK 127,309(1968); AM 63,150(1978)
Hematophanite, 31	7.7.5	7.3.4	I,728	AM 56,625(1971); MM 39,49(1973)[AM 59,384]a
Hematostibite=Katoptrite		-----	II,1027	AM 51,1494(1966)
Hemihedrite, 74	36.1.2.2	-----	-----	CM 9,310(1967); AM 55,1088(1970); AM 55,1103(1970); NJMM 1972,328; BM 103,469(1980)
Hemusite, 9	2.9.17	-----	-----	AM 53,1775(1968)a; AM 56,1847(1971)
Hendersonite, 104	47.4.4	-----	-----	AM 47,1252(1962)

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Henwoodite=Turquoise	-----	-----	II,951	CE 21,97(1961)[AM 46,1520]a
Hercynite, 29	7.2.1.3	7.2.1.2	I,689	AM 64,736(1979)
Herderite, 86	41.5.4.1	41.5.4.1	II,820	AM 59,919(1974); AM 63,913(1978)
Herzenbergite, 8	2.8.30	2.6.13	I,259	MM 38,186(1972)
Hessite, 5	2.4.2.2	2.3.1.8	I,184	AM 34,354(1949); AM 36,471(1951); ZK 112,44(1959)
Hetaerolite, 30	7.2.7.2	7.2.2.2	I,715	AM 50,1672(1965); MA 74-3413)a
Heterogenite-3R, 27	6.1.5.1	-----	I,652	MM 33,253(1959); NJMM 1967,215
Heterogenite-2H, 27	6.1.4.1	-----	-----	MM 39,152(1973)[AM 59,381]a
Heteromorphite, 19	3.6.5	3.7.4.3	I,465	NJMM 1975,193
Heterosite, 77	38.4.1.1	38.1.5.1	II,675	AM 57,45(1972)
Heubachite=nickelian Heterogenite-3R		-----	I,652	MM 33,253(1962)[AM 48,217]a
Hewettite, 103	47.3.6.1	47.1.18	II,1060	AM 44,322(1959)
Hexahydrite, 62	29.6.8.1	29.6.6.1	II,494	MA 74-3459)a
Hexahydroborite, 55	26.1.4	-----	-----	DANS 228,1337(1976)[AM62,1259]a ZVMO 106,691(1977)[AM63,1283]a; IGR 21,491(1979)
Heaxstannite=Stannoidite		-----	-----	AM 50,905(1965)
Hexatestibio- panickelite, 4	2.2.3	-----	-----	AM 61,182(1976)a
Heyite, 85	41.2.2	-----	-----	MM 39,65(1973)[AM 59,382]a
Heyrovskyite, 17	3.3.3	-----	-----	MD 6,133(1971)[AM 57,325]a; AC B28,649(1972); NJMA 127,62(1976)[AM 62,397]a
Hibonite, 32	7.7.12	-----	-----	NJMA 109,192(1968)[AM 42,119]a; GCA 44,685(1980)
Hidalgoite, 97	43.4.1.3	-----	-----	AM 38,1218(1953); MR 2,212(1971)
Hieratite, 39	11.5.1.1	11.4.1.1	II,103	
Higginsite=Conichalcite	-----	-----	II,806	AM 36,484(1951)

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Hilgardite, 57	26.5.14	26.1.8	II,382	AM 64,187(1979)
Hinsdalite, 97	43.4.1.4	43.1.1.3	II,1004	AM 49,607(1964)
Hintzeite=Kaliborite	-----	-----	II,368	
Histrixite=mixture of Arsenopyrite, Bismuthinite, etc.			I,469	AM 36,383(1951)a
Hjelmite=Yttromicrolite		-----	I,779	AM 64,890(1979)
Hocartite, 9	2.9.11.6	-----	-----	BM 91,383(1968)[AM 54,573]a; ZVMO 108,339(1979)
Hodrushite, 21	3.8.5	-----	-----	NJMM 1968,236; MM 37,641(1970)[AM 56,633]a; AC B31,703(1975)
Hoeferite=Biringuccite	-----	-----	-----	AM 48,709(1963)a
Hoelite, 108	50.4.2	-----	-----	MM 40,455(1976)
Hoernesite, 83	40.3.6.7	40.2.17	II,755	NJMM 1966,349
Högbomite, 32	7.7.14	7.3.1.1	I,723	AM 37,600(1952); MM 33,563(1963)[AM 49,455]a; NJMM 1977,373
Hohmannite, 68	31.9.4	31.6.5	II,613	MM 42,144(1978)
Holdenite, 98	43.4.6	41.1.2	II,775	AM 62,513(1977)
Hollandite, 31	7.5.1.1	7.7.1.2	I,743	AC 3,146(1950); AC 17,1325(1964); AC B35,530(1979)
Hollingworthite, 12	2.12.8.3	-----	-----	AM 50,1068(1965); NJMM 1972,406; AM 62,513(1977)
Holtedahlite, 87	41.6.4.2	-----	-----	LIT 12,283(1979)[AM 65,810]a
Hondurasite=Selen-tellurium		-----	-----	AM 36,639(1951)a
Honessite, 69	31.10.7	-----	-----	AM 44,995(1959); BM 103,170(1980)
Hongquiite, 22	4.2.1.7	-----	-----	AM 61,184(1976)a
Hongshiite=platinian Copper		-----	-----	AM 61,185(1976)a; AM 65,408(1980)a

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Hopeite, 82	40.3.4	40.2.11	II,734	AC 18,352(1965); MJJ 7,289(1973); AC B31,2026(1975); AM 61,987(1976); NJMM 1977,25
Horsfordite, 4	2.1.2	2.1.3.3	I,173	
Hoshiite=nickeloan Magnesite		-----	-----	AM 50,2100(1965)a
Howlite, 53	25.3.5	26.1.16	II,362	AM 42,521(1957); AM 55,716(1970)
Huanghoite, 44	16a.1.3	-----	-----	SS 10,1007(1961)[AM 48,1179]a; SS 11,251(1962)[AM 48,1179]a; AM 62,1135(1977)
Huebnerite, 105	48.1.1.1	48.1.1.1	II,1064	ZK 125,120(1967); NJMA 113,13(1970); NJMM 1976,477
Huemulite, 103	47.3.10	-----	-----	AM 51,1(1966)
Hügelite, 90	42.4.5.2	-----	II,815	JLBW 4,7(1961)[AM 47,418]a; TMPM 26,11(1979)
Hühnerkobelite=Alluaudite		38.1.1.3	II,669	AM 35,59(1950); AM 50,713(1965); MM 43,227(1979)
Hulsite, 51	24.2.3	24.1.3	II,326	NJMM 1974,95; AM 61,116(1976)
Humberstonite, 70	32.1.12	-----	-----	AM 53,507(1968)a; KUS 5,190(1969)[AM 55,1072]a; AM 55,1518(1970)
Humboldtine, 107	50.1.3.1	50.1.3	II,1102	PM 2,269(1957); BM 82,50(1959)
Hummerite, 103	47.3.9	-----	-----	AM 36,326(1951); JACS 86,4209(1964); IC 5,967(1966)
Hungchaoite, 56	26.4.3	-----	-----	SS 13,525(1964)[AM 50,262]a; AM 62,1135(1977); AM 64,369(1979)
Huntite, 42	14.4.3	-----	-----	AM 38,4(1953); AC 15,238(1962); AM 52,1332(1967)
Hureaulite, 78	39.2.1.1	39.1.3	II,700	AM 58,302(1973); AC B29,2541(1973); BM 99,261(1976)

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Hurlbutite, 77	38.3.6	-----	-----	AM 37,931(1952); AM 59,1267(1974)
Hutchinsonite, 21	3.8.6.2	3.8.1	I,468	ZK 121,321(1965); ZK 150,169(1979)
Hydrobasaluminite, 66	31.4.6	31.2.5	II,586	AM 53,773(1968); AM 54,1363(1968); MM 43,931(1980)
Hydroboracite, 55	26.3.6	25.1.10	II,353	SPC 8,665(1964); CM 16,75(1978)
Hydrocalumite, 28	6.4.4	6.2.4	I,667	BM 86,149(1963); MM 39,377(1973); NJMM 1980,322
Hydrocerussite, 44	16a.2.2	16.1.12	II,270	TMPM 3,298(1953); AM 52,563(1967)a
Hydrochlorborite, 55	26.3.4	-----	-----	SS 14,945(1965)[AM 50,2099]a; AM 62,147(1977); AM 63,814(1978)
Hydrocuprite=Cuprite	-----	-----	I,494	AM 42,115(1957)
Hydrodresserite, 46	16b.2.2	-----	-----	CM 15,399(1977)[AM 64,454]a; CM 15,408(1977)
Hydroglauberite, 61	29.4.1	-----	-----	ZVMO 98,58(1969)[AM 55,321]a
Hydrohalite, 36	9.1.2	-----	II,15	NJMM 1972,325; AC B30,2363(1974)
Hydrohausmannite=mixture of Feitknechtite and Hausmannite			I,566	AM 50,1313(1965)
Hydrohetaerolite, 30	7.2.7.3	-----	I,717	AM 41,268(1956)
Hydromagnesite, 47	16b.5.1.1	16.1.13	II,271	AC B30,2670(1974); AC B33,1273(1977)
Hydromolysite, 37	9.3.2	-----	-----	AM 44,908(1959)a; AM 51,1551(1966)a
Hydronium jarosite, 64	30.2.5.3	30.2.4.7	II,566	AM 46,243(1961)a; AM 50,1595(1965)
Hydrophilite, probably = Antarcticite or Sinjarite		9.2.4	II,41	MM 43,682(1980)[AM 65,1070]a
Hydroromarchite, 28	6.4.2	-----	-----	CM 10,916(1971)[AM 57,1555]a; AM 58,552(1973)
Hydroromeite=Stibiconite		-----	II,1022	AM 37,982(1952)

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Hydroscarbroite, 48	16b.5.14.2	-----	-----	MM 32,353(1960)[AM 45,910]a; MM 32,363(1960)[AM 45,910]a
Hydrotalcite, 47	16b.4.2.1	6.1.5.1	I,658	NJMM 1969,544; MM 39,377(1973)
Hydrotroilite,colloidal	hydrous ferrous sulfide(?)		I,236	
Hydrotungstite, 106	49.1.1	-----	-----	AM 29,192(1944); AM 48,935(1963); BGSF 43,89(1971)[MA 73-749]a
Hydroxylapatite, 88	41.8.1.3	41.7.1.3	II,879	AC 11,308(1958); CMP 22,375(1969)
Hydroxylbastnaesite -(Ce), 44	16a.1.1.2	-----	-----	DANS 159,1048(1964)[AM 50,805]a ZVMO 95,51(1966)[AM 51,1819]a
Hydroxyl-herderite, 86	41.5.4.2	41.5.4.2	II,820	AM 63,913(1978)
Hydrozincite, 45	16a.4.1	16.1.3	II,247	AC 17,1051(1964); CM 8,92(1964); CM 8,385(1965); CM 8,652(1966)
Hypercinnabar, 7	2.8.9.2	-----	-----	ZVMO 100,332(1971)[MA 72-2291]a AM 63,1148(1978)
Ianthinite, 25	5.6.1	5.3.5	I,633	USGS 1064,60(1958); BM 82, 80(1959)[AM 44,1103]a
Ice, 22	4.1.2	4.1.2	I,494	
Idaite, 9	2.9.15	-----	-----	NJMM 1958,142[AM 43,1219]a; NJMA 93,87(1959)[AM 44,1327]a; AM 48,672(1963); AM 60,1013(1975); NJMM 1976,241; MM 43,193(1979)[AM 65,407]a
Idrialite=mixture of organic compounds			-----	AM 50,2109(1965)a; AM 61,1055(1976)a
Igdloite=Lueshite	-----	-----	-----	AM 46,1004(1961)a
Ikaite, 43	15.1.4	-----	-----	AM 49,439(1964)a; GCA 39,83(1975)
Ikunolite, 6	2.6.2.1	-----	-----	MJJ 2,397(1959)[AM 45,477]a; AM 47,1431(1962)
Ilesite, 62	29.6.6.3	29.6.4	II,486	
Ilmenite, 23	4.3.5.1	4.4.1.3	I,534	AM 46,969(1961)

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Ilmenorutile, 24	4.4.16.1	-----	I,558	AM 44,620(1959); BM 82,401(1959)
Ilsemannite, 24	4.6.3	4.6.3	I,603	AM 36,609(1951)
Imgreite, 8	2.8.16.3	-----	-----	DANS 154,613(1964)[AM 49,1151]a
Imhofite, 19	3.5.14	-----	-----	AM 51,531(1966)a; AM 54,1498(1969)a; ZK 144,323(1976)
Incaite, 16	3.1.3	-----	-----	NJMM 1974,235[AM 60,486]a
Inderborite, 55	26.3.1.2	25.1.11	II,355	AC 21,A61(1961); SPD 10,808(1966)
Inderite, 55	26.3.1.3	25.1.15	II,360	AM 41,839(1956); SPC 8,414(1964); AC B32,1329(1976)
Indigirite, 46	16b.1.4	-----	-----	ZVMO 100,178(1971)[AM 57,326]a
Indite, 10	2.10.2.6	-----	-----	ZVMO 92,445(1963)[AM 49,439]a
Indium, 1	1.1.25	-----	-----	AM 52,299(1967)a
Insizwaite, 11	2.12.3.5	-----	-----	MM 38,794(1972)[AM 58,805]a
Inyoite, 55	26.3.1.1	25.1.13	II,358	AM 38,912(1953); AC 12,162(1959)
Iodargyrite, 36	9.1.5	9.1.4	II,22	
Iodyrite=Iodargyrite	-----	9.1.4	II,22	
Iowaite, 28	6.4.5	-----	-----	AM 52,1261(1967); AM 54,296(1969); ZVMO 105,85(1976)[MA 77-851]a
Iranite, 74	36.1.2.1	-----	-----	BM 86,133(1963)[AM 48,1417]a; NJMM 1972,406; BM 103,469(1980)
Irarsite, 12	2.12.8.2	-----	-----	ZVMO 95,700(1966)[AM 52,1580]a NJMM 1972,406; CM 13,266(1975)
Iraurite=iridian Gold	-----	-----	-----	AM 36,638(1951)a
Irhtemite, 78	39.2.5	-----	-----	BM 95,365(1972)[AM 59,209]a
Iridarsenite, 12	2.12.11	-----	-----	CM 12,280(1974)[AM 61,177]a
Iridium, 2	1.2.2.1	-----	-----	CM 12,104(1973)[AM 60,946]a

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Iridoplatinite=Platiniridium		-----	I,110	
Iridosmine, 2	1.2.3.2	1.1.6.5	I,111	CM 12,104(1973)[AM 60,946]a
Iriginite, 106	49.2.4	-----	-----	BM 81,157(1958); AM 43,379(1958); ZVMO 88,564(1959)[AM 45,257]a
Irinite=thorian Loparite		-----	-----	AM 40,369(1955)a
Iron, 1	1.1.12.1	1.1.7.1	I,114	NJMM 1971,124; <i>J. Geol.</i> 85,359(1959)[MA 78-829]a
Irosite=Iridosmine	-----	-----	-----	AM 36,638(1951)a
Ishiganeite=mixture of Cryptomelane and Birnessite			-----	AM 48,952(1963)
Ishikawaite, 33	8.1.4.2	8.1.6	I,766	
Isoclasite, 91	42.5.2	42.4.5	II,933	
Isoferroplatinum, 2	1.2.1.3	-----	-----	CM 13,117(1976)[AM 61,338]a
Isokite, 86	41.5.6.2	-----	-----	MM 30,681(1955)[AM 41,167]a
Isomertieite, 14	2.16.4	-----	-----	MM 39,528(1974)[AM 59,1330]a
Isoplatinocopper=platinian Copper		-----	-----	AM 63,426(1978)a
Isostannite=Kesterite	-----	-----	-----	AM 62,176(1977)a
Itoite, 65	30.2.6	-----	-----	NJMM 1960,132[AM 45,1313]a
Ixiolite, 33	8.1.11.1	-----	I,778	AM 48,961(1963); AM 59,1020(1974); CM 14,540(1976)
Iwakiite, 30	7.2.6.2	-----	-----	MJJ 9,383(1979)[AM 65,406]a
Jacobsite, 29	7.2.2.2	7.2.1.8	I,698	AM 45,734(1960)
Jagowerite, 89	41.10.2	-----	-----	CM 12,135(1973)[AM 60,945]a; AM 59,291(1974)
Jahnsite, 94	42.10.2.1	-----	-----	AM 59,48(1974); AM 59,964(1974); AM 62,692(1977)
Jalpaite, 5	2.4.4	-----	-----	AM 53,1530(1968); AM 53,1778(1968)a
Jamborite, 28	6.3.8	-----	-----	AM 58,835(1973)
Jamesonite, 19	3.6.8.1	3.6.7	I,451	ZK 109,161(1957)

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Janggunite, 28	6.4.8	-----	-----	MM 41,519(1977)[AM 63,794]a; AM 63,426(1978)a
Jarlite, 40	11.6.10.1	11.5.5	II,118	AM 34,383(1949)
Jarosite, 64	30.2.5.1	30.2.4.3	II,560	NJMM 1976,406; MJJ 8,419(1977)
Jeremejevite, 54	25.8.3	24.1.7	II,330	DANS 104,78(1956)[MA 13,418]a; AM 61,88(1976)
Jeromite, 13	2.12.22	-----	I,144	
Jeze kite=Morinite	-----	41.2.3	II,784	AM 47,398(1962)
Jimboite, 51	24.3.2.2	-----	-----	AM 48,1416(1963)a; MJJ 4,380(1965)
Jixianite, 105	48.4.2	-----	-----	AM 64,1330(1979)a
Johachidolite, 51	24.5.3	-----	II,384	NAT 240,63(1972); AM 62,327(1977)
Johannite, 67	31.8.2	31.5.4	II,606	USGS 1064,130(1958)
Johnbaumite, 88	41.8.3.3	-----	-----	AM 65,1143(1980)
Johnsomervilleite, 76	38.2.5.2	-----	-----	MM 43,833(1980)[AM 66,437]a
Jokokuite, 62	29.6.7.4	-----	-----	MJJ 9,28(1978)[AM 64,655]a
Joliotite, 43	15.1.8.2	-----	-----	SMPM 56,167(1976)
Jordanite, 17	3.3.1.1	3.3.8	I,398	ZK 139,161(1974)
Jordisite, 13	2.12.21	-----	I,331	AM 36,609(1951)
Joseite, 6	2.6.2.3	2.1.1.4	I,166	AM 34,365(1949)
Josephinite=mixture of Fe-Ni alloys, Ni-Co alloys, andradite, et al.			I,117	GJ 13,41(1979)
Jouravskite, 70	32.1.9	-----	-----	BM 88,254(1965)[AM 50,2102]a; AC B25,1943(1969); AC B27,594(1971)
Jujuyite=Tripuhyite	-----	-----	II,1024	AM 34,133(1949)a
Julienite, 107	50.2.3	50.2.3	II,1106	TMPM 3,376(1953)
Jungite, 96	42.12.4	-----	-----	DA 31,55(1980)[AM 65,1067]a
Junoite, 21	3.7.18	-----	-----	AM 60,548(1975); EG 70,369(1975)[AM 60,737]a
Jurbanite, 68	31.9.10	-----	-----	AM 61,1(1976)

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Kafhydrocyanite, 107	50.2.5	-----	-----	IGR 15,1095(1973); AM 59,209(1974)a
Kahlerite, 81	40.2a.14.1	-----	-----	AM 39,1038(1954)a; USGS 1064,204(1958)
Kainite, 67	31.7.1	31.4.1	II,594	AM 57,1325(1972)
Kaliborite, 57	26.5.13	25.1.22	II,367	AM 50,1079(1965); ANLR 41,527(1966)[MA 70-188]a; AM 57,394(1972)
Kalicinite, 41	13.1.2	13.1.2	II,136	AC B30,1155(1974)
Kalinite, 61	29.5.4.2	29.5.4.2	II,471	
Kalipyrochlore, 33	8.2.1.2	-----	-----	AM 63,528(1978)
Kalistrontite, 59	28.4.3.2	-----	-----	ZVMO 91,712(1962)[AM 48,708]a
Kamacite, 1	1.1.13.1	-----	I,115	AM 51,37(1966)
Kamarezite=Brochantite	-----	31.3.1	II,588	AM 50,1450(1965)
Kamiokalite, 90	42.1.1.2	-----	-----	AM 40,367(1955)a
Kamiokite, 31	7.7.9	-----	-----	Picot and Johan (1977),219
Kankite, 84	40.4.4	-----	-----	NJMM 1976,426[AM 62,594]a
Karelianite, 22	4.3.1.5	-----	-----	AM 48,33(1963)
Karibibite, 31	7.6.2	-----	-----	LIT 6,265(1973)[AM 59,382]a; NJMA 138,94(1980)
Karpatite, 107	50.3.5	-----	-----	AM 42,120(1957)a; AM 54,329(1969)a
Karooite=hypothetical end-member Pseudobrookite series		MgTi ₂ O ₅ in	-----	AM 46,766(1961)a
Kasparite=cobaltoan Pickeringite		-----	-----	AM 42,920(1957)a
Kassite, 35	8.3.9	-----	-----	AM 52,559(1967)a
Katoptrite, 100	44.3.6	44.2.3	II,1029	AM 51,1494(1966); NJMA 127,47(1976)[AM 62,396]a
Kawazulite, 11	2.11.5.2	-----	-----	AM 57,1312(1972)a
Kayselite=Diaspore	-----	-----	I,680	
Keckite, 94	42.10.3	-----	-----	NJMA 134,167(1979)[AM 64,1330]a
Keeleyite=Zinckenite	-----	-----	I,477	

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Kehoeite, 95	42.10.20	-----	II,944	AM 49,1500(1964); MM 33,799(1964); CM 12,352(1974)
Keithconnite, 4	2.2.7	-----	-----	CM 17,589(1979)
Kemmlitzite, 97	43.4.1.6	-----	-----	NJMM 1969,201[AM 55,320]a
Kempite, 37	10.1.4	10.1.11.2	II,73	
Kennedyite, 30	7.3.1.2	-----	-----	MM 32,676(1961)[AM 46,766]a
Kermesite, 13	2.13.1	2.8.3	I,279	MA 11,421(1949)a
Kernite, 56	26.4.5	25.1.2	II,335	SCI 154,1453(1966); ANLR 42,236(1967); AM 58,21(1973)
Kertschenite=oxidized Vivianite		-----	II,742	MA 14,312(1959)a; MR 11,307(1980)
Kesterite, 9	2.9.10	-----	-----	AM 43,1222(1958)a; ZVMO 88,165(1959)[AM 44,1329]a; CM 16,131(1978)
Kettnerite, 45	16a.3.6	-----	-----	AM 42,121(1957)a; AM 43,385(1958)a; CJP 10,195(1960)
Keyite, 77	38.3.8	-----	-----	MR 8,87(1977)[AM 62,1259]a
Khademite=Rostite	-----	-----	-----	AM 60,486(1975); NJMM 1979,193[AM 64,1331]a
Khinite, 71	33.1.3	-----	-----	AM 63,1016(1978)
Khlopinite=tantalian Samarskite		-----	I,792	AM 57,329(1972)a
Khuniite=Iranite	-----	-----	-----	MD 5,86(1970)[AM 55,1813]a; NJMM 1973,233[AM 59,633]a
Kidwellite, 92	42.7.2	-----	-----	MM 42,137(1978)[AM 64,242]a
Kieserite, 61	29.6.2.1	29.6.2.1	II,477	MM 29,667(1951)
Kingite, 93	42.9.3	-----	-----	MM 31,351(1957)[AM 42,580]a; AM 55,515(1970); MM 39,802(1974)
Kingsmountite, 94	42.10.7.2	-----	-----	CM 17,579(1979)
Kitkaite, 13	2.12.24.2	-----	-----	AM 50,581(1965)
Kittlite=selenian Metacinnabar(?)		-----	-----	AM 57,1313(1972)a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Kivuite, 90	42.4.9.3	-----	-----	BSBG 67,383(1958)[AM 44,1326]a
Kladnoite, 108	50.4.8	-----	-----	AM 31,605(1946)a; AC B28,415(1971)
Klaprothite=mixture of Wittichenite and Emplectite		3.4.5	I,418	AM 31,201(1946)
Klebersbergite, 64	30.1.5	31.2.1	II,583	AM 65,499(1980); NJMM 1980,223; AM 65,931(1980)
Kleberite, 32	7.7.21	-----	-----	AM 64,655(1979)a
Kleemanite, 94	42.10.11.2	-----	-----	MM 43,93(1979)[AM 64,1331]a
Kleinite, 38	10.4.3	10.2.10	II,87	
Klockmannite, 7	2.8.12.2	2.6.8.2	I,251	AM 34,435(1949); AM 35,360(1950); AM 39,504(1953); AC 13,361(1960)
Knipovichite=chromian Alumohydrocalcite			-----	ZVMO 82,311(1953)[AM 40,551]a; MR 6,180(1975)[AM 61,341]a
Kobeite, 35	8.3.12	-----	-----	AM 36,925(1951)a; AM 42,342(1957); MJJ 3,139(1961)
Kobellite, 20	3.6.21.1	3.6.2.2	I,447	CM 9,371(1968)[AM 54,573]a; NAT 231,133(1971)
Kobokobite=Rockbridgeite		-----	-----	AM 43,795(1958)a
Koehlinite, 105	48.2.2	49.1.2	II,1092	NJMM 1951,1; AC B29,2436(1973)
Koenenite, 38	10.6.2	10.2.8	II,86	NJMM 1966,161; ZK 126,7(1968)
Kogarkoite, 64	30.1.6	-----	-----	AM 58,116(1973); MM 43,753(1980)
Koivinite=Florencite-(Ce)		-----	-----	AM 40,944(1955)a
Koktaite, 60	29.3.1.2	29.3.2	II,444	AM 34,618(1949)a
Kolbeckite, 84	40.4.6	43.2.7	II,1015	AM 25,513(1940); AM 45,257(1960)a
Kolicite, 98	43.4.7	-----	-----	AM 64,708(1979); AM 65,483(1980)
Kolovratite, 84	40.5.6	47.1.5	II,1048	CM 7,311(1962)[AM 47,1222]a

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Kolwezite, 45	16a.3.1.3	-----	-----	BM 103,179(1980)[AM 65,1067]a
Kolymite, 1	1.1.6	-----	-----	ZVMO 109,206(1980)[AM 66,218]a
Koninckite, 84	40.4.2	-----	II,763	BM 91,487(1968)
Koppite=Pyrochlore	-----	-----	I,754	AM 62,403(1977)
Koritnigite, 78	39.1.4.1	-----	-----	TMPM 26,51(1979)[AM 65,206]a; NJMA 138,316(1980)
Kornelite, 63	29.8.2	29.8.2	II,530	AM 58,535(1973)
Korzhinskite, 57	26.7.2	-----	-----	ZVMO 92,555(1963)[AM 49,441]a
Kostovite, 13	2.12.23.4	-----	-----	AM 51,29(1966)
Kotoite, 51	24.3.2.1	24.1.5	II,328	MJJ 4,380(1965)
Köttigite, 83	40.3.6.5	40.2.15.4	II,751	CM 14,437(1976); BM 100,310(1977); AM 64,376(1979)
Kotulskite, 8	2.8.17.2	-----	-----	ZVMO 92,33(1963)[AM 48,1181]a; MM 35,815(1966)[AM 52,928]a
Koutekite, 4	2.3.1	-----	-----	NAT 181,1553(1958)[AM 43,794]a; CE 20,217(1960)[AM 46,467]a
Kovdorskite, 99	43.5.8	-----	-----	ZVMO 109,341(1980)[AM 66,437]a
Kraisslite, 98	43.4.9	-----	-----	AM 63,938(1978); AM 65,957(1980)
Kratochvilite, 107	50.3.1	-----	-----	AM 23,667(1938)
Krausite, 61	29.5.1	29.5.1	II,462	AM 50,504(1965); AM 50,1929(1965)
Krautite, 78	39.1.3	-----	-----	BM 98,78(1975)[AM 61,503]a; AM 64,1248(1979)
Kremersite, 39	11.4.1.2	11.3.3.2	II,101	
Krennerite, 13	2.12.23.1	2.9.7.1	I,333	AM 34,349(1949); AM 35,959(1950); AC 5,375(1952); CM 9,547(1968)
Kribergite, 99	43.5.7	43.2.3	II,1011	
Kröhnkite, 60	29.3.2	29.3.3	II,444	PM 23,223(1954)[MA 12,526]a; AC 14,738(1961); AC B31,1753(1975)

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Krupkaite, 21	3.7.14	-----	-----	NJMM 1974,533[AM 60,737]a; NJMM 1974,541[AM 60,737]a; AM 60,300(1975)
Krutaitite, 11	2.12.2.4	-----	-----	BM 95,475(1972)[AM 59,210]a
Krutovite, 12	2.12.17	-----	-----	ZVMO 195,59(1976)[AM 62,173]a; IGR 19,232(1977)
Kryzhanovskite, 82	40.3.2.2	-----	-----	DANS 72,763(1958)[AM 36,382]a; AM 56,1(1971); NAT 251,305(1974); IC 15,316(1976); MM 43,789(1980)
Ktenasite, 67	31.6.3	-----	-----	TMPM 1,342(1950)[AM 36,381]a; MM 41,65(1977)[AM 62,1262]a; ZK 147,129(1978)
Kulanite, 89	41.9.1.1	-----	-----	CM 14,127(1976)[AM 62,174]a; AM 61,339(1976)
Kullerudite, 12	2.12.6.6	-----	-----	AM 50,520(1965)a
Kuramite, 9	2.9.11.4	-----	-----	ZVMO 108,564(1979)[AM 65,1067]a
Kuranakhite, 71	33.2.1	-----	-----	ZVMO 104,310(1979)[AM 61,339]a
Kurchatovite, 51	24.4.2	-----	-----	ZVMO 95,203(1966)[AM 51,1817]a; ZVMO 102,696(1973)[MA 74-2465]a; SPD 21,294(1976); SPD 21,542(1976)
Kurgantaitite, 57	26.7.1	-----	-----	AM 40,941(1955)a
Kurnakovite, 55	26.3.3	25.1.14	II,360	SPD 14,1139(1970); AC B30,2194(1974); AC B32,1329(1976)
Kusuite, 77	38.4.8.4	-----	-----	BM 100,39(1977)[AM 62,1058]a
Kutinaite, 4	2.2.2.2	-----	-----	AM 55,1083(1970)
Kutnahorite=Kutnohorite	-----	-----	-----	
Kutnohorite, 42	14.2.1.3	14.2.1.3	II,217	AM 40,748(1955); AM 52,1751(1967)

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Lacroixite, 86	41.5.5.1	41.2.1	II,783	AM 57,1914(1972)a
Laffittite, 18	3.4.9.2	-----	-----	BM 97,48(1974)[AM 60,945]a
Laitakarite, 6	2.6.2.2	-----	-----	AM 44,908(1959)a; AM 47,806(1962)a
Lamprostibian=Melanostibite		-----	II,1030	AM 53,1779(1968)a
Lanarkite, 64	30.2.1	30.2.1	II,550	AC 4,471(1951); ZK 132,99(1970)
Landauite, 35	8.4.2.1	-----	-----	DANS 166,1420(1966)[AM51,1546]a CM 16,63(1978)
Landesite, 82	40.3.2.4	40.2.5	II,729	AM 49,1122(1964); MM 43,789(1980)
Landsbergite=Moschellandsbergite		-----	-----	MM 27,271(1946)
Langbanite, 100	44.3.5	-----	-----	AM 55,1489(1970)
Langbeinite, 59	28.4.4.1	28.4.3.1	II,434	AC 10,409(1957); NJMM 1979,182
Langisite, 8	2.8.22	-----	-----	CM 9,597(1969)[AM 57,1910]a
Langite, 66	31.4.3	31.2.2	II,583	AM 49,1132(1964); BM 81,257(1975)
Lannonite, 68	31.9.14	-----	-----	<i>to be published</i> (S.A.Williams)
Lansfordite, 43	15.1.6	15.1.5	II,228	
Lanthanite-(La), 44	15.4.2.1	15.2.10	II,241	IC 7,1340(1968); AM 62,142(1977)
Lanthanite-(Nd), 44	15.4.2.2	-----	-----	BM 102,242(1979); <i>Geol. Surv. Canada Paper 80-1C,</i> 141(1980)
Lapparentite (of Rost)=Rostite		-----	II,601	AM 64,1331(1979)a
Lapparentite (of Ungemach)=Tamarugite		-----	II,467	
Larderellite, 56	26.5.4	25.1.20	II,365	AM 45,1087(1960); AC B25,2264(1969)
Larosite, 14	2.16.11	-----	-----	CM 11,886(1972)[AM 59,382]a
Latrappite, 22	4.3.3.2	-----	-----	CM 7,683(1963)[AM 49,819]a; CM 8,121(1964)[AM 50,265]a
Laubmannite, 89	41.11.4	41.4.6	II,803	AM 55,135(1970)

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Laueite, 94	42.10.9.1	-----	-----	AM 39,1038(1954)a; AM 50,1884(1965); AC 19,485(1965); AM 54,1312(1969); NJMA 123,148(1975)
Launayite, 19	3.6.7	-----	-----	CM 9,191(1967)[AM 53,1423]a
Laurionite, 37	10.2.2	10.1.7	II,62	ZK 141,246(1975)
Laurite, 11	2.12.3.1	2.9.1.5	I,291	AM 54,1330(1969)
Lausenite, 63	29.8.1	29.8.1	II,530	
Lautarite, 50	21.1.1	21.1.1	II,312	AC B34,84(1978)
Lautite, 12	2.12.13	2.9.5.5	I,317	SMPM 44,439(1964)[AM 50,1504]a; AC 19,543(1965)
Lavendulan, 93	42.8.4.2	-----	II,750	BM 79,7(1956)[AM 42,123]a
Lazarevicite=Arsenosulvanite		-----	-----	AM 46,465(1961)
Lawrencite, 36	9.2.3.1	9.2.3.1	II,40	
Lawsonbauerite, 66	31.1.4.2	-----	-----	AM 64,949(1979)
Lazulite, 89	41.10.1.1	41.8.1.1	II,908	AM 35,1(1951); AC 12,695(1959); AMG 3,423(1963)
Lead, 1	1.1.27	1.1.1.5	I,102	DANS 174,197(1967); NJMM 1975,229
Leadhillite, 48	17.1.2	17.1.3	II,295	CM 10,141(1969)[AM 55,1449]a
Lecontite, 60	29.2.1	29.1.2	II,438	AM 36,596(1951); AM 48,180(1963); AC 22,683(1967)
Legrandite, 91	42.5.4.1	42.7.1	II,958	AM 48,1255(1963); AM 56,1147(1971); AM 61,95(1976)
Lehiite(=Foggite?), 96	42.12.11	42.5.6	II,942	AM 60,957(1975)
Lehnerite=Ludlamite	-----	-----	II,952	AM 40,144(1955)a
Leightonite, 61	29.4.5.2	29.4.3	II,461	CM 7,272(1962)
Leiteite, 101	45.1.7	-----	-----	MR 8,95(1977)[AM 62,1259]a
Lengenbachite, 17	3.3.7	3.3.7	I,398	NJMM 1967,43; NJMM 1968,69[AM 56,361]a

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Lenoblite, 24	4.4.17	-----	-----	BM 93,235(1970)[AM 56,635]a; ZVM0 100,488(1971)[MA 72-2280]a
Leonhardtite=Starkeyite		-----	-----	AM 42,443(1957)
Leonite, 60	29.3.3.2	29.3.5.2	II,450	MA 74-3459)a
Lepidocrocite, 27	6.1.2.2	6.1.2.1	I,642	AM 50,708(1965); <i>Clay Miner.</i> 14,285(1979)
Lermontovite, 84	40.5.5	-----	-----	AM 43,379(1958)a; NJMA 103,163(1965)
Lesserite=Inderite	-----	-----	-----	AM 45,732(1960)
Letovicite, 59	28.1.3	28.1.3	II,397	
Leucochalcite=Olivenite		42.4.2	II,930	AM 36,484(1951)
Leucophosphite, 94	42.10.5.1	42.5.1	II,936	AM 42,214(1957); AM 57,377(1972); AM 61,933(1976)
Lewisite, 100	44.1.1.4	-----	II,1021	
Lewistonite=Carbonate-fluorapatite		41.7.5	II,903	MM 42,282(1978)
Liandratite, 33	8.1.9.1	-----	-----	AM 63,941(1978)
Libethenite, 87	41.6.5.2	41.6.5.2	II,862	TMPM 8,614(1962); CM 16,153(1978); NJMA 134,147(1979)
Liebigite, 43	15.3.2	15.2.9	II,240	USGS 1064,108(1958)
Likasite, 49	20.1.2	-----	-----	BM 78,84(1955)[AM 40,942]a; BM 96,143(1979)
Lillianite, 18	3.4.14	3.3.12	I,404	AM 54,579(1969)a; AC B28,649(1971) NJMA 130,264(1977); NJMA 131,56(1977); NJMA 131,187(1977)
Lime, 22	4.2.1.5	4.2.1.5	I,503	
Limonite=general term for hydrous iron oxides		7.1.3	I,685	
Linarite, 64	30.2.3	30.2.3	II,553	AC 14,747(1961); MJJ 3,282(1961)
Lindackerite, 78	39.2.7	43.1.2	II,1007	BM 79,7(1956)[AM 42,124]a

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Lindgrenite, 105	48.3.1	49.1.4	II,1094	MM 30,723(1955); CM 6,31(1957)
Lindströmite, 20	3.6.19	3.7.1.2	I,459	ZK 132,71(1970); CM 15,527(1977)
Linnaeite, 10	2.10.1.1	2.7.1.1	I,262	AM 49,551(1964)
Lipscombite, 89	41.10.5	-----	-----	AM 38,612(1953); AM 47,353(1962); AM 55,397(1970)
Liroconite, 90	42.2.1	42.2.5	II,921	AM 36,484(1951); PM 31,19(1962); SPC 13,324(1968)[MA 69-2928]a
Liskeardite, 90	42.1.3	42.2.7	II,924	
Litharge, 22	4.2.4	4.2.6	I,514	AC 6,661(1953); NJMA 94,1187(1960)
Lithiophilite, 75	38.1.1.2	38.1.1.2	II,665	AC 13,325(1960); MR 8,95(1977)
Lithiophorite, 28	6.4.1.1	-----	I,569	AC 5,676(1952); SMPM 43,197(1963); AM 52,1545(1967); MM 37,618(1970); <i>J.Microscopie</i> 18,271(1973) [MA 74-2992]a
Lithiophosphate, 77	38.4.6.1	-----	-----	DANS 112,124(1957)[AM 42,585]a; AM 54,1467(1969)
Liujinyinite=Uytenbogaardtite		-----	-----	AM 65,810(1980)a
Liveingite, 20	3.6.18	3.7.3	I,462	BM 85,15(1967); NJMM 1967,353[AM 54,1498]a; ZK 131,356(1970)
Livingstonite, 21	3.7.15	3.9.1	I,485	AM 36,480(1951); ZK 109,129(1957); AM 55,919(1970); ZK 141,174(1975)
Loellingite, 12	2.12.14.1	2.9.3.1	I,303	AM 53,1856(1968)
Loewite, 61	29.4.3	29.3.4	II,446	CMP 6,201(1959); CE 25,235(1966); NJMA 113,1(1970); AM 55,378(1970)
Lokkaite, 44	15.4.3	-----	-----	BGSF 43,67(1970)[AM 56,1838]a

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Lonsdaleite, 3	1.3.4.3	-----	-----	NAT 214,587(1967)[AM 52,1579]a; SCI 155,995(1967); AM 56,333(1971); DANS 209,933(1973)[MA 80-3184]a
Loparite, 22	4.3.3.3	-----	I,732	DANS 140,1407(1961)[MA 16,465]a
Lopezite, 74	35.2.1	35.2.1	II,645	DANS 173,1068(1967); SPD 12,293(1967)[MA 69-1972]a
Lorandite, 20	3.7.6	3.5.10	I,437	AC 12,1002(1959); ZK 138,147(1973); ZK 150,169(1979)
Loranskite, 33	8.1.5	8.1.7	I,767	
Lorettoite= manmade material		10.1.3	II,56	AM 64,1303(1979)
Lossenite=mixture of Scorodite and Beudantite		-----	II,766	
Loseyite, 45	16a.5.4	16.1.1	II,244	
Louderbackite=Roemerite		-----	II,520	
Loveringite, 35	8.4.2.2	-----	-----	AM 63,28(1978); MM 42,187(1978); CM 17,635(1979)
Lucinite=Variscite	-----	-----	II,756	
Ludlamite, 82	40.3.5.1	42.6.3	II,952	AC 4,412(1951); MR 4,103(1973)
Ludlockite, 77	38.5.2	-----	-----	AM 57,1003(1972)a; MR 8(3),91(1977)
Ludwigite, 51	24.2.2.1	24.1.1.1	II,321	NJMM 1974,95
Lueneburgite, 99	43.5.11	27.1.1	II,385	
Lueshite, 22	4.3.3.4	-----	-----	AM 46,1004(1961)a
Luetheite, 92	42.6.10.2	-----	-----	MM 41,27(1977)[AM 62,1058]a
Lusungite, 91	42.6.3.4	-----	-----	AM 44,906(1959)a
Luzonite, 17	3.2.2.1	-----	I,391	AM 42,766(1957); ZK 124,1(1967)
Lyellite=Devilline	-----	-----	II,590	

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Macedonite, 23	4.3.6	-----	-----	AM 56,387(1971); LIT 4,101(1971)
Machatschkiite, 83	40.3.10	-----	-----	TMPM 24,125(1977)[AM 62,1260]a
Mackayite, 73	34.6.1	34.2.2	II,642	TMPM 13,213(1969); AM 55,1072(1970)a; NJMM 1977,145
Mackinawite, 6	2.7.2	-----	-----	AM 48,215(1963)a; GSPP 475D,64(1964)[AM 49,1497]a AM 50,682(1965)
Macquartite, 74	36.1.3	-----	-----	BM 103,530(1980)
Madocite, 19	3.5.8	-----	-----	CM 9,7(1967)[AM 53,1421]a
Maghagendorfite, 76	38.2.3.4	-----	-----	MM 43,227(1979)[AM 65,810]a
Maghemite, 23	4.3.7.1	7.2.1.10	I,708	AM 55,925(1970); CMP 69,249(1979)
Magnalumoxide=Spinel	-----	-----	-----	AM 37,360(1952)a; AM 39,405(1954)a
Magnesiochromite, 29	7.2.3.1	7.2.1.11	I,709	
Magnesiocopiapite, 69	31.10.6.2	31.6.11.2	II,623	ZK 135,34(1972)
Magnesioferrite, 29	7.2.2.1	7.2.1.5	I,701	AMG 5,1(1969)
Magnesite, 41	14.1.1.2	14.1.1.2	II,162	AM 53,1029(1973)
Magnesium-chlorophoenicite, 85	41.1.1.2	41.1.4.2	II,780	
Magnesium-zippeite, 69	31.10.4.3	-----	-----	CM 14,429(1976); MM 43,539(1979)
Magnetite, 29	7.2.2.3	7.2.1.6	I,698	
Magnetoplumbite, 32	7.7.13	7.3.3	I,728	AM 36,512(1951); AM 53,869(1968); NJMM 1980,141
Magnetostibian=Jacobsite		-----	II,1025	AM 58,562(1973)a
Magnioborite=Suanite	-----	-----	-----	AM 48,915(1963)
Magniotriplite, 87	41.6.1.3	-----	-----	DANS 77,97(1951)[AM 37,359]a; GSPP 955,1(1976)
Magniphilite=Beusite	-----	-----	-----	AM 53,1799(1968)
Magnocolumbite, 34	8.3.2.5	-----	-----	DANS 148,420(1963)[AM 48,1182]a

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Magnussonite, 102	46.1.3	-----	-----	AMG 2,133(1957)[AM 42,581]a; AMG 5,55(1970)[AM 56,639]a; AM 64,390(1979)
Majakite, 5	2.4.14	-----	-----	ZVMO 105,698(1976)[AM 62,1260]a IGR 20,96(1978)
Mäkinenite, 8	2.8.16.2	-----	-----	AM 50,520(1965)a
Malachite, 45	16a.3.2.1	16.1.6	II,252	AC 22,146(1967); ZK 145,412(1977)
Malanite, 11	2.12.2.2	-----	-----	AM 61,185(1976)a; AM 65,408(1980)a
Maldonite, 1	1.1.1.2	1.1.1.2	I,95	BM 86,429(1963)
Malladrite, 39	11.5.2.1	11.4.2.1	II,105	
Mallardite, 62	29.6.10.5	29.6.8.6	II,507	
Manasseite, 47	16b.4.1.1	6.1.6.1	I,658	AM 26,293(1941); MM 39,377(1973)
Mandarinoite, 72	34.3.4	-----	-----	CM 16,605(1978)[AM 65,206]a
Manganbelyankinite, 35	8.4.11.2	-----	-----	AM 43,1220(1958)a
Manganberzeliite, 76	38.2.1.2	38.2.1.2	II,681	AM 48,663(1963)
Manganese-hoernesite, 83	40.3.7.2	-----	-----	AMG 1,333(1951)[AM 39,159]a
Manganese-shadlunite, 6	2.7.1.5	-----	-----	ZVMO 102,63(1973)[AM 58,1114]a
Manganite, 27	6.1.3	6.1.3	I,646	ZK 118,303(1963)
Manganocolumbite, 34	8.3.2.4	-----	-----	AM 63,1166(1978)
Manganolangbeinite, 59	28.4.4.2	28.4.3.2	II,435	
Manganomossite=uranian	Manganocolumbite		I,776	AM 44,9(1959)
Manganosite, 22	4.2.1.3	4.2.1.3	I,501	BM 92,500(1969)
Manganostibiite=Katroptrite		-----	-----	AM 51,1494(1968)
Manganostibite, 100	44.3.3	-----	II,1027	AMG 4,449(1968); AM 55,1489(1970)
Manganotantalite, 34	8.3.2.3	-----	I,783	NJMA 106,1(1966); CM 14,540(1976)
Manjiroite, 31	7.5.1.3	-----	-----	AM 53,2103(1968)a
Mansfieldite, 84	40.4.1.4	40.3.1.4	II,763	

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Marcasite, 12	2.12.6.1	2.9.4	I,311	
Maricite, 75	38.1.2.1	-----	-----	CM 15,396(1977); CM 15,518(1977)[AM 64,655]a; GJ 11,207(1977)
Marignacite=Cerriopyrochlore		-----	I,755	AM 62,403(1977)
Marmatite=ferroan Sphalerite		-----	I,212	
Marokite, 30	7.2.10	-----	-----	BM 86,359(1963)[AM 49,817]a; BM 89,318(1966); AM 53,495(1968)
Marrite, 18	3.4.5.1	-----	I,487	AM 50,812(1965)a; ZK 125,459(1967)
Marshite, 36	9.1.7.3	9.1.3.3	II,20	
Marthozite, 73	34.7.4	-----	-----	BM 92,278(1969)[AM 55,533]a
Mascagnite, 59	28.2.1.1	28.2.1.1	II,398	AM 36,596(1951)
Maslovite, 11	2.12.4.2	-----	-----	AM 65,406(1980)a
Massicot, 22	4.2.7	4.2.7	I,516	NJMA 94,1187(1960)
Masuyite, 25	5.2.2	-----	-----	BSBG 70,B212(1947)[AM 33,384]a; USGS 1064,78(1958); ZK 113,132(1960); AM 45,1026(1960)
Matildite, 20	3.7.1.3	3.5.6	I,429	AM 36,436(1951); AC 12,46(1959)
Matlockite, 37	10.2.1.4	10.1.6.1	II,59	
Matraite, 8	2.8.15	-----	-----	AM 40,192(1955); AM 45,1131(1960)a
Mattagamite, 12	2.12.6.5	-----	-----	CM 12,55(1973)[AM 59,382]a
Matteuccite, 60	29.1.2	-----	-----	AM 39,848(1954)a; AST 109,532(1975)
Matulaite, 96	42.12.3	-----	-----	DA 31,55(1980)[AM 65,1067]a
Maucherite, 15	2.16.20	2.4.1	I,192	AM 58,203(1973)
Mauzeilite=plumboan Romeite		-----	II,1021	
Mawsonite, 6	2.7.3	-----	-----	AM 50,900(1965); CM 14,529(1976)
Mayenite, 31	7.7.3	-----	-----	NJMM 1964,22

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Mazapilite=Arsenosiderite		-----	II,953	
Mcallisterite, 57	26.6.2	-----	-----	AM 50,629(1965); AM 52,1776(1967); ANLR 47,353(1969); AM 58,110(1973)
Mconnellite, 29	7.1.1.2	-----	-----	JACS 77,896(1955); GSPP 887,17(1976)[AM 62,593]a
Mcgovernite, 98	43.4.8	-----	-----	AM 12,373(1927); AM 45,593(1965); ZK 127,307(1968); AM 62,513(1977); AM 63,150(1978); AM 65,957(1980)
Mckelveyite, 43	15.3.4.2	-----	-----	AM 50,593(1965); AM 52,860(1967); TPM 15,185(1971)[AM 56,2165]a; CM 15,335(1978)[AM 64,659]a
Mckinstryite, 5	2.4.5	-----	-----	EG 61,1383(1966)[AM 52,1253]a
Meixnerite, 28	6.4.7	-----	-----	TMPM 22,79(1975)[AM 61,176]a
Melaconite=Tenorite	-----	-----	I,508	AM 49,224(1964)
Melanostibian=Melanostibite		-----	II,1041	AMG 4,449(1967)[AM 53,1779]a
Melanostibite, 22	4.3.1.4	-----	-----	AMG 4,449(1967)[AM 53,1779]a; AM 53,1104(1968); AM 55,1439(1970)
Melanovanadite, 104	47.4.6	47.1.17	II,1058	
Melanterite, 62	29.6.10.1	29.6.8.1	II,499	AC 17,1167(1964)
Melkovite, 106	49.4.3	-----	-----	ZVMO 98,207(1969)[AM 55,320]a; IGR 12,1411(1970); IC 16,1096(1977)
Mellite, 107	50.2.1	50.2.1	II,1104	MM 35,542(1965); AC B29,26(1973)
Melnikovite=Greigite	-----	-----	I,288	AM 49,553(1964); AM 54,328(1969)a
Melonite, 13	2.12.24.1	2.9.8	I,341	AM 34,359(1949); MM 43,775(1980)
Melonjosephite, 89	41.10.6	-----	-----	BM 96,135(1973)[AM 60,946]a; AM 62,60(1977)
Mendipite, 37	10.3.1	10.1.4	II,56	AMG 2,299(1957); BM 94,323(1971)

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Mendozite, 61	29.5.4.1	29.5.4.1	II,469	AM 57,1081(1972)
Meneghinite, 17	3.3.5	3.3.11	I,402	ZK 113,345(1960); CM 13,388(1975)
Mercallite, 59	28.1.1	28.1.1	II,395	AC 11,349(1958); AC 17,682(1964); AC B31,302(1977)
Mercurarsite=Aktashite	-----	-----	-----	ZVMO 102,440(1973)
Mercury, 1	1.1.7	1.1.2	I,103	AC 17,760(1964); AC 19,807(1965)
Merenskyite, 13	2.12.25.2	-----	-----	MM 35,815(1966)[AM 52,926]a; MA 76-2362)a
Merrillite-(Ca), 76	38.3.4.1	-----	II,797	MR 2,277(1971); EPSL 35,347(1977)
Merrillite-(Na), 76	38.3.4.2	-----	-----	EPSL 35,347(1977)
Merrillite-(Y), 76	38.3.4.3	-----	-----	EPSL 35,347(1977)
Mertieite I, 14	2.16.5	-----	-----	AM 58,1(1973); ZVMO 103(1974)
Mertieite II, 14	2.16.3	-----	-----	CM 13,321(1975); AM 61,1249(1976)a
Merumite=mixture	-----	-----	-----	AM 34,339(1949) GSPP 887,1(1976)[AM 62,593]a
Messelite, 80	40.2.2.2	-----	II,732	AM 40,828(1955); CE 19,436(1958)[AM 44,469]a; DA 29,229(1978)
Meta-aluminite, 67	31.7.6	-----	-----	AM 53,717(1968); ZK 151,141(1980)
Meta-alunogen, 63	29.8.7	-----	II,539	
Meta-ankoleite, 81	40.2a.8	-----	-----	AM 52,560(1967)a
Meta-autunite, 81	40.2a.1.2	-----	II,985	USGS 1064,205(1958); DANS 132,673(1960)[MA 16,27]a AM 48,1389(1963); CE 24,254(1965)
Metaborite, 51	24.5.1	-----	-----	ZVMO 93,329(1964)[AM 50,261]a; AC 16,380(1963)
Metacalcioranoite, 25	5.4.3.1	-----	-----	ZVMO 102,75(1973)[AM 58,1111]a
Metacinnabar, 7	2.8.4.1	2.6.2.2	I,215	AM 44,471(1959); MJJ 3,9(1960)

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Metadelrioite, 103	47.3.2.2	-----	-----	AM 55,185(1970)
Metaheinrichite, 81	40.2a.4.2	-----	-----	AM 43,1134(1958)a; CE 24,254(1965)
Metahewettite, 103	47.3.6.2	47.1.19	II,1061	AM 44,322(1959); CM 7,219(1962); MM 43,550(1979)
Metahohmannite, 68	31.9.5	31.6.1	II,608	MM 42,M11(1978)
Metakahlerite, 81	40.2a.14.2	-----	-----	JLBW 3,17(1958)[AM 45,254]a; CE 24,254(1965)
Metakirchheimerite, 82	40.2a.16	-----	-----	BM 81,67(1958)[AM 44,466]a; CE 24,254(1965)
Metalodevite, 82	40.2a.17	-----	-----	BM 95,360(1972)[AM 59,210]a
Metanovacekite, 81	40.2a.10.3	-----	-----	JLBW 3,17(1958)[AM 45,454]a; TTPM 9,111(1964); CE 24,254(1965)
Metarossite, 103	47.3.1.1	47.1.12	II,1054	CM 6,448(1960)
Metasandbergite=Metaheinrichite		-----	-----	AM 43,1134(1958)a
Metaschoderite, 97	43.3.1.2	-----	-----	AM 47,637(1962); AM 64,713(1979)
Metaschoepite, 25	5.2.1.1	-----	-----	AM 45,1026(1960)
Metasideronatriite, 67	31.5.2	31.5.2	II,603	AM 58,1080(1973)
Metastibnite, 10	2.11.3	-----	I,275	AM 55,2103(1970)
Metastrengite=Phosphosiderite		40.3.2.2	II,769	AM 37,362(1952)
Metatorbernite, 81	40.2a.12.1	42.8.14.1	II,991	SPD 5,221(1960)[MA 16,25]a; AM 49,1603(1964); USGS 1064,208(1958)
Metatyuyamunitite, 82	40.2a.22.2	-----	-----	AM 41,187(1956); USGS 1064,254(1958)
Meta-uranocircite I, 81	40.2a.3.3	42.8.13.3	II,987	USGS 1064,254(1958); CE 24,254(1965)
Meta-uranocircite II, 81	40.2a.3.4	-----	-----	CE 24,254(1965)
Meta-uranopilite, 66	31.2.5	31.1.11	II,582	AM 37,950(1952); USGS 1064,140(1958)
Meta-uranospinite, 81	40.2a.2.2	-----	-----	JLBW 3,17(1958)[AM 45,254]a
Metavandendriesscheite, 26	5.8.1.2	-----	-----	AM 45,1026(1960)

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Metavanuralite, 95	42.10.13.2	-----	-----	BM 93,242(1970)[AM 56,637]a
Metavariscite, 84	40.4.3.1	40.3.2.1	II,767	AC B29,2292(1973)
Metavauxite, 94	42.10.10	42.8.5	II,971	NW 21,561(1967); NJMA 123,148(1975)
Metavivianite, 83	40.3.8.3	-----	-----	AM 59,896(1974)
Metavoltine, 61	29.4.6	31.6.9	II,619	TMPM 22,88(1975); TMPM 23,155(1976); MM 41,371(1977)
Metazellerite, 43	15.3.1.2	-----	-----	AM 51,1567(1966)
Metazeunerite, 81	40.2a.13.2	-----	-----	AM 42,222(1957)
Meyerhofferite, 55	26.3.2	25.1.12	II,356	ZK 114,321(1960)
Meymacite, 24	4.5.3	-----	-----	BM 88,613(1965)[AM 53,1065]a
Miargyrite, 20	3.7.1.1	3.5.4	I,424	AM 36,436(1951); AC 17,847(1964)
Michenerite, 11	2.12.4.1	-----	-----	CM 6,200(1958)[AM 44,207]a; CM 11,903(1973); CM 12,61(1973)
Microlite, 34	8.2.2.1	8.1.1.2	I,748	AM 62,403(1977)
Miersite, 36	9.1.7.2	9.1.3.2	II,19	
Miharaite, 16	3.1.5	-----	-----	AM 65,784(1980)
Mikheevite=Görgeyite	-----	-----	-----	AM 41,816(1956)a
Millerite, 8	2.8.16.1	2.6.5.5	I,239	CM 12,248(1974); CM 12,253(1974)
Millisite, 92	42.6.9	42.5.5	II,941	
Millosevichite, 59	28.4.5	-----	II,539	DANS 214,429(1974)[AM 59,1140]a
Miltonite=Bassanite	-----	-----	-----	AM 36,640(1951)a
Mimetite, 88	41.8.4.2	41.7.2.2	II,889	BM 90,479(1968); NJMM 1968,359[AM 54,993]a
Minasragrite, 62	29.6.12	29.1.2	II,437	AM 58,531(1973)
Mindigite=Heterogenite-3R		-----	I,652	MM 33,253(1962)[AM 48,217]a
Minguzzite, 107	50.1.4	-----	-----	ANLR 18,392(1955)[AM 41,370]a
Minium, 30	7.2.8	4.3.1	I,517	NJMA 94,1187(1960)

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Minyulite, 94	42.10.4	42.8.3	II,970	AM 62,256(1977)
Miomirite=plumboan Davidite		-----	-----	AM 58,560(1973)a
Mirabilite, 60	29.2.2	29.2.2	II,439	MR 1,12(1970)
Miropolskite=Bassanite(?)		-----	-----	AM 56,2156(1971)a
Misenite, 59	28.1.2	28.1.2	II,396	
Mispickel=Arsenopyrite	-----	-----	I,316	AM 49,224(1964)
Mitridatite, 92	42.7.4.1	42.6.6	II,955	AM 59,48(1974); IC 16,1096(1977); AM 69,169(1979)
Mitscherlichite, 39	11.3.2	11.3.2	II,100	
Mixite, 96	42.12.7.1	42.5.5	II,943	NJMM 1960,223; BM 92,420(1969)
Moctezumite, 72	34.1.5	-----	-----	AM 50,1158(1965)
Modderite, 8	2.8.21	-----	I,242	ZVMO 106,347(1977)[AM 63,600]a
Mohrite, 60	29.3.6.1	-----	-----	ANLR 36,524(1964)[AM 50,805]a
Mohawkite=mixture of Domeykite and Nickeline			I,170	
Mohsite=Crichtonite	-----	-----	I,534	CM 17,635(1979)
Moissanite, 3	1.3.5	1.1.7.4	I,123	BGSA 69,1633(1958); AM 48,620(1963); AM 61,1054(1976)a
Moluranite, 106	49.1.2	-----	-----	AM 43,380(1958); ZVMO 88,564(1959)[AM 45,258]a
Molybdenite-2H, 13	2.12.19.1	2.9.6.1	I,328	AM 55,1857(1970); AM 64,758(1979); AM 64,768(1979)
Molybdenite-3R, 13	2.12.20.1	-----	-----	CM 7,524(1963)[AM 48,1419]a; AM 55,1857(1970); AM 64,758(1979); AM 64,768(1979)
Molybdite, 24	4.5.1	-----	-----	AM 49,1497(1964)a
Molybdomenite, 72	34.1.1	-----	II,640	BM 76,422(1953)[AM 39,850]a; CM 8,149(1965)[AM 50,812]a; TMPM 17,196(1972)
Molysite, 37	9.3.1	9.3.1	II,47	

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Monazite-(Ce), 77	38.4.3.1	38.4.2	II,691	GCA 11,141(1957); USGS 1064,150(1958)
Monazite-(La), 77	38.4.3.2	-----	II,691	AM 51,152(1966); BM 95,42(1972)
Moncheite, 13	2.12.25.1	-----	-----	ZVMO 92,33(1963)[AM 48,1181]a; MA 76-2362)a
Monetite, 75	37.1.1.1	37.1.1	II,660	ZK 116,101(1961); AC B28,797(1971); AC B33,1223(1977)
Monheimite=ferroan Smithsonite		-----	II,178	
Monimolite, 100	44.3.1	44.1.2	II,1023	
Monohydrocalcite, 43	15.1.3	-----	-----	AM 49,1151(1964)a; AM 60,690(1975); MR 10,160(1979)
Monsmedite, 60	29.1.3	-----	-----	AM 53,2104(1968)a; AM 54,1496(1969)a
Montanite, 71	33.2.2	33.1.3	II,636	
Montbrayite, 11	2.11.6	-----	-----	AM 31,515(1946); AM 34,345(1949); AM 57,146(1962); CM 9,709(1969)
Montebrasite, 86	41.5.8.2	41.5.5.2	II,823	AC 12,988(1959); MA 18,236(1966); MM 37,414(1969); AM 58,291(1973); AM 62,559(1977)
Monteponite, 22	4.2.1.4	4.2.1.4	I,502	
Montesite=plumboan Herzenbergite		-----	-----	AM 35,334(1950); AM 60,163(1975)a
Montgomeryite, 94	42.10.7.1	42.8.11	II,978	AM 59,843(1974); AM 61,12(1976)
Montroseite, 27	6.1.1.4	-----	-----	AM 38,1235(1953); AM 38,1242(1953); AM 40,861(1955)
Montroydite, 22	4.2.6	4.2.5	I,511	<i>Acta Chem.Scand.</i> 10,852(1966)
Mooihoekite, 9	2.9.3.3	-----	-----	AM 57,689(1972); AC B29,2365(1973); CM 13,168(1975)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Mooreite, 66	31.1.3	31.1.3	II,574	AM 54,973(1969); AC B36,1304(1980)
Moorhouseite, 62	29.6.8.5	-----	-----	AC 15,1219(1962); CM 8,166(1965)[AM 50,808]a
Moraesite, 91	42.5.1.1	-----	-----	AM 38,1126(1953)
Morelandite, 88	41.8.5.1	-----	-----	CM 16,601(1978)[AM 65,207]a
Morenosite, 62	29.6.11.3	29.6.9.3	II,516	MM 33,1110(1964)
Morinite, 90	42.4.2	42.2.2	II,783	AM 43,585(1958); CM 17,93(1979)
Morozeviczite, 9	2.9.14.1	-----	-----	AM 66,437(1981)a
Moschellandsbergite, 1	1.1.8	1.1.3	I,103	
Mosesite, 60	29.3.7	10.2.11	II,89	AM 38,1225(1953)
Mossite=tantalian Ferrocolumbite		8.3.1.2	I,775	MM 43,553(1979)[AM 65,814]a
Mottramite, 86	41.5.2.2	41.5.2.2	II,811	MM 31,282(1956)
Motukoreaite, 48	17.1.6	-----	-----	MM 41,389(1977)[AM 63,598]a; MM 43,337(1979)
Mounanaite, 89	41.10.8	-----	-----	BM 92,196(1969)[AM 54,1738]a
Mourite, 26	5.9.4	-----	-----	ZVMO 91,67(1962)[AM 47,1217]a; AM 56,163(1971)
Mpororoite, 106	49.2.5	-----	-----	BGSF 44,107(1972)[AM 58,1112]a
Mroseite, 73	34.8.4	-----	-----	CM 13,286(1975)[AM 61,339]a; CM 13,383(1975)
Munkforsite=manganian Fluorapatite		-----	-----	AM 49,1778(1964)a
Murataite, 35	8.4.1	-----	-----	AM 59,172(1974)
Murdochite, 24	4.6.5	-----	-----	AM 40,905(1955); AM 40,907(1965); NJMM 1970,558; NJMM 1972,104
Musgravite=Taaffeite-9R		-----	-----	MM 36,765(1951)
Muskoxite, 31	7.7.1	-----	-----	AM 54,684(1969)
Muthmannite, 8	2.8.32.2	2.6.14.1	I,260	

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Nacaphite, 85	41.3.7	-----	-----	ZVMO 109,50(1980)[AM 66,218]a
Nadorite, 37	10.2.5.2	46.1.4	II,1039	PM 52,335(1973)
Nagyagite, 11	2.11.9	2.1.2	I,168	AM 34,363(1949)
Nahcolite, 41	13.1.1	13.1.1	II,134	MM 34,564(1974)
Nakaseite=Andorite	-----	-----	-----	ZK 113,93(1960)[AM 45,1314]a
Nakauriite, 70	32.1.2	-----	-----	AM 62,594(1977)a
Namaqualite=Cyanotrichite		-----	-----	MM 32,737(1961)[AM 46,769]a
Nanlingite, 102	46.1.2	-----	-----	AM 62,1058(1977)a
Nantokite, 36	9.1.7.1	9.1.3.1	II,18	
Nasinite, 56	26.5.6	-----	-----	ANLR 30,74(1961)[AM 48,709]a; AC B31,2405(1975)
Nasledovite, 48	17.1.5	-----	-----	AM 44,1325(1959)a
Natroalunite, 64	30.2.4.2	30.2.4.2	II,556	NJMM 1976,406
Natrochalcite, 67	31.8.1	31.5.1	II,602	DANS 123,78(1958)[MA 14-177]a
Natrosfairchildite, 42	14.3.5	-----	-----	AM 60,488(1975)a
Natrojarosite, 64	30.2.5.2	30.2.4.5	II,563	NJMM 1976,406
Natromontebasite, 86	41.5.8.3	41.5.5.3	II,823	
Natron, 43	15.1.2	15.1.6	II,230	
Natroniobite, 22	4.3.4	-----	-----	AM 47,1483(1962)a
Natrophilite, 75	38.1.2.2	38.1.2	II,670	AM 50,1096(1965); AM 57,1333(1972)
Natrophosphate, 79	39.3.1	-----	-----	ZVMO 101,80(1972)[AM 58,139]a
Naumannite, 5	2.4.1.3	2.3.1.3	I,179	AM 35,340(1950); AM 56,1882(1971); CM 12,365(1974)
Navajoite, 24	4.6.2	-----	-----	AM 40,207(1955); AM 44,322(1959)
Nealite, 85	41.4.6	-----	-----	MR 11,299(1980)
Neighborite, 39	11.1.1	-----	-----	AM 46,379(1961); AM 56,1519(1971); DANS 210,666(1973)[MA 80-3521]a
Nemalite=fibrous Brucite		-----	I,636	

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Neomesselite=mixture of Messelite and Anapaite			-----	AM 44,469(1959); MR 4,103(1973)
Neotantalite=Microelite	-----	-----	I,755	AM 59,212(1974)a
Nesquehonite, 41	13.1.5	15.1.2	II,225	AC B28,1031(1972)
Nevyanskite=Iridosmine	-----	-----	I,111	
Newberyite, 78	39.1.6	39.2.3	II,709	NJMM 1961,97; AC 23,418(1967); BM 94,556(1971)
Neyite, 18	3.5.1	-----	-----	CM 10,90(1969)[AM 55,1444]a
Nichromite, 29	7.2.3.4	-----	-----	AM 65,811(1980)a
Nickel, 1	1.1.12.2	-----	-----	AM 53,348(1968)a; MM 40,247(1975)
Nickel-bischofite, 36	9.2.9.2	-----	-----	CM 17,107(1979)[AM 65,207]a
Nickel-bloedite, 60	29.3.3.3	-----	-----	MM 41,37(1977)[AM 62,1059]a
Nickel-boussingaultite, 60	29.3.6.3	-----	-----	ZVMO 105,710(1976); AC B35,155(1979)
Nickel-hexahydrite, 62	29.6.8.4	-----	-----	AC 12,72(1959); ZVMO 94,534(1965)[AM 51,529]a; MM 39,246(1973)
Nickel-iron,see Kamacite,Taenite, and Tetrataenite		1.1.7.2	I,117	
Nickeline,Niccoline, 7	2.8.11.1	2.6.5.3	I,236	
Nickel-skutterudite,13	2.12.27.2	2.10.12	I,342	
Nickel-zippeite, 69	31.10.4.4	-----	-----	CM 14,426(1976); MM 43,539(1979)
Nifesite=intergrowth of Pentlandite and "Bravoite"			-----	AM 27,333(1942)a
Nifontovite, 55	26.3.7	-----	-----	DANS 139,836(1961)[AM 47,172]a; SPD 23,159(1978); <i>Zentralbl.Min.I</i> ,1980-1233)a
Nigerite, 32	7.7.18	-----	-----	MM 28,118(1947)[AM 33,98]a; MM 28,129(1947)[AM 33,98]a; AM 52,864(1967); MM 39,837(1974); AM 64,1255(1979)
Niggliite, 2	1.2.1.5	2.10.2	I,347	AM 56,360(1971)a; MM 38,794(1972)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Ningyoite, 84	40.4.9	-----	-----	AM 44,633(1959)
Ninningerite, 7	2.8.1.6	-----	-----	SCI 155,451(1967)[AM 52,925]a
Niobo-aeschnite -(Ce), 34	8.3.6.2	-----	-----	AM 47,417(1962)a; AM 60,309(1975)
Niobobelyankinite=Gerasimovskite		-----	-----	AM 43,1220(1958)a
Nioboloparite=niobian Loparite		-----	-----	AM 43,792(1958)a
Niobozirconolite=Zirkelite		-----	-----	AM 62,403(1977)
Nisbite, 12	2.12.14.5	-----	-----	CM 10,232(1970)[AM 56,631]a
Nissonite, 91	42.6.5	-----	-----	AM 52,927(1967)a
Niter, 49	18.1.2	18.1.2	II,303	
Nitratite, 49	18.1.1	18.1.1	II,300	AC 23,455(1967)
Nitrobarite, 49	18.2.1	18.2.1	II,305	
Nitrocalcite, 49	18.2.2	18.2.2	II,306	ZVMO 86,403(1957)[MA 14,136]a
Nitroglauherite=mixture of Darapskite and Nitratite			II,311	AM 55,560(1970)
Nitromagnesite, 49	18.2.3	18.2.3	II,307	
Nobleite, 57	26.6.6.1	-----	-----	AM 46,560(1961)
Nocerite=Fluoborite	-----	10.2.7	II,85	NW 21,496(1956)[AM 42,921]a; AM 42,288(1957)
Nogizawaite=mixture	-----	-----	-----	AM 36,794(1951)a
Nolanite, 103	47.1.2	-----	-----	AM 41,165(1965)a; AM 42,619(1957); AC 11,703(1958); AM 52,734(1967)
Nordenskiöldine, 51	24.3.3	24.1.8	II,332	
Nordstrandite, 28	6.3.3	-----	-----	NAT 196,254(1962)[AM 48,214]a; AC 21,A68(1966); NJMA 109,185(1968); AM 60,285(1975)
Nordströmite, 21	3.7.17	-----	-----	AM 65,789(1980); CM 18,343(1980)
Norsethite, 42	14.2.2.1	-----	-----	AM 46,420(1961); TMPM 12,299(1968)
Northupite, 45	16a.3.8	16.2.2	II,278	AM 54,304(1969); TMPM 22,158(1975)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Novacekite I, 81	40.2a.10.1	-----	-----	AM 36,680(1951); AM 39,675(1953); CE 24,254(1965)
Novacekite II, 81	40.2a.10.2	-----	-----	CE 24,254(1965)
Novakite, 6	2.6.3	-----	-----	CE 20,39(1959)[AM 44,1321]a; AM 46,885(1961)
Nowackiite, 18	3.4.12.1	-----	-----	AM 51,532(1966)a; ZK 124,352(1967)[AM 54,1497]a; NJMM 1975,431
Nsutite, 23	4.4.8	-----	-----	AM 47,246(1962); AM 50,170(1965)
Nuffieldite, 17	3.3.4	-----	-----	CM 9,439(1968)[AM 54,574]a; ZK 138,343(1973)[AM 59,633]a; AM 57,319(1972)
Nukundamite, 9	2.9.16	-----	-----	AM 55,913(1970); MM 43,193(1979)[AM 65,407]a
Nullaginite, 45	16a.3.2.2	-----	-----	<i>J. Geol. Soc. Australia</i> 26,61(1979)
Nyerereite, 42	14.3.4	-----	-----	AM 60,487(1975)a; ZK 145,73(1977)[AM 63,600]a
Oakite=Lithiophorite	-----	-----	-----	AM 28,615(1943)a
Oboyerite, 73	34.8.3	-----	-----	MM 43,453(1979)[AM 65,809]a
Obruchevite=Yttropyrochlore		-----	-----	AM 43,380(1958); AM 43,797(1958); AM 62,403(1977)
Ochrolite=Nadorite	-----	-----	II,1040	
Octahedrite=Anatase	-----	-----	I,583	AM 49,224(1964)
O'Danielite, 76	38.2.6.1	-----	-----	AM 66,218(1981)a
Ogdensburgite, 92	42.6.14	-----	-----	<i>to be published</i> (P.J.Dunn)
Ojuelaite, 95	42.10.18.3	-----	-----	<i>to be published</i> (S.A.Williams)
Oldhamite, 7	2.8.1.5	2.6.1.5	I,208	MM 37,144(1969)
Olgite, 75	38.1.3	-----	-----	ZVMO 109,347(1980)[AM 66,438]a
Oligisite=Hematite	-----	-----	I,527	AM 49,224(1964)
Olivinite, 87	41.6.5.1	41.6.5.1	II,859	AM 36,484(1951); AC B33,2628(1977)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Olmsteadite, 92	42.6.11	-----	-----	AM 61,5(1976)
Olsacherite, 70	32.1.13	-----	-----	AM 54,1519(1969)
Olschanskyite, 52	25.1.6	-----	-----	AM 54,1737(1969)a
Olympite, 77	38.4.6.2	-----	-----	ZVMO 109,476(1980)[AM 66,438]a
Omeiite, 12	2.12.12.1	-----	-----	AM 64,464(1979)a
Ondrejite=mixture of Huntite and Magnesite			-----	AM 49,1502(1963)a
Onofrite=selenian Metacinnabar		-----	I,216	
Onoratoite, 38	10.5.7	-----	-----	MM 36,1037(1968)[AM 54,1219]a; MR 8,285(1977)
Oosterboschite, 15	2.16.17.2	-----	-----	BM 93,476(1970)[AM 57,1553]a
Orange Bornite=Renierite, Mawsonite or Stannite			-----	NJMM 1962,217[AM 50,900]a
Orcelite, 4	2.3.2	-----	-----	AM 45,753(1960)a; BM 84,9(1961)
Ordite=Gypsum	-----	-----	-----	AM 43,1222(1958)a
Ordonezite, 100	44.2.2.2	-----	-----	AM 40,64(1955)
Oregonite, 5	2.5.4	-----	-----	NJMM 1959,239[AM 45,1130]a
Orpheite, 97	43.1.2	-----	-----	AM 61,176(1976)a
Orpiment, 10	2.11.1.1	2.8.1	I,266	MJJ 1,160(1954); ZK 136,48(1972)
Ortho-armalcolite=color variety of Armalcolite			-----	AM 59,632(1974)a
Orthobrannerite, 34	8.2.7	-----	-----	AM 64,656(1979)a
Orthopinakiolite, 51	24.2.5	-----	-----	AMG 2,551(1960)[AM 46,768]a; CM 16,475(1978)
Osarizawaite, 64	30.2.4.4	-----	-----	MJJ 3,181(1961)[AM 47,1216]a; NJMM 1977,39; NJMM 1980,401
Osarsite, 12	2.12.10.1	-----	-----	AM 57,1029(1972)
Osbornite, 1	1.1.28	1.1.7.5	I,124	MM 26,36(1941)
Osirsite=Iridosmine	-----	-----	-----	AM 36,638(1951)a
Osmiridium, 2	1.2.2.2	-----	I,111	CM 12,104(1973)[AM 60,946]a
Osmium, 2	1.2.3.1	-----	-----	BM 84,312(1961); CM 12,104(1973)[AM 60,946]a

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Otavite, 41	14.1.1.7	14.1.1.7	II,181	IGR 13,1001(1971)
Ottemannite, 11	2.11.7	-----	-----	NJMM 1964,94[AM 50,2107]a; AM 51,1551(1966)a
Otwayite, 46	16b.3.2	-----	-----	AM 62,999(1977)
Ourayite, 19	3.5.9	-----	-----	NJMA 131,56(1977)[AM 64,243]a
Overite, 94	42.10.1.2	42.8.12	II,979	AM 59,48(1974); AM 62,692(1977)
Owyheeite, 19	3.5.13	3.5.2	I,423	AM 34,398(1949); MM 33,315(1962)
Oxammite, 107	50.1.5	50.1.4	II,1103	AM 36,599(1951)
Oxychildrenite=Ernstite		-----	-----	AM 36,642(1951)a
Pachnolite, 40	11.6.5	11.5.3	II,114	
Paigeite=Vonsenite	-----	24.1.1.2	II,322	
Painite, 32	7.7.17	-----	-----	MM 31,420(1957)[AM 42,580]a; AM 61,88(1976); MM 42,518(1978)
Palermoite, 88	41.7.1.1	-----	-----	AM 38,354(1953); AM 50,777(1965); AM 60,460(1975)
Palladesite, 15	2.16.23	-----	-----	MM 41,123(1977)[AM 62,1659]a
Palladium, 1	1.2.7	1.1.6.2	I,109	CM 6,689(1961)
Palladoarsenide, 5	2.4.12	-----	-----	ZVMO 103,104(1974)[AM 60,162]a; IGR 16,1294(1974); CM 13,321(1975)
Palladobismutharsenide, 5	2.4.13	-----	-----	CM 14,410(1976)
Pallite=ferrian Millisite		-----	-----	AM 45,256(1960)a
Palmierite, 59	28.4.3.1	28.2.3	II,403	
Pandaite=Bariopyrochlore		-----	-----	MM 32,10(1959)[AM 44,1324]a; AM 62,403(1977)
Pandermite=Priceite	-----	-----	II,343	
Panethite, 75	38.1.6	-----	-----	GCA 31,1711(1967)[AM 53,509]a
Paolovite, 2	1.2.12	-----	-----	AM 59,1331(1974)a

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Para-alumohydrocalcite 46	16b.2.3.2	-----	-----	AM 63,794(1978)a
Para-armalcolite=	color variety of Armalcolite		-----	AM 59,632(1974)a
Parabayldonite=	plumboan Conichalcite		II,929	AM 42,123(1957)a
Paraboleite=	unnecessary name proposed for intermediate members of Boleite-Pseudoboleite series		-----	AM 59,221(1974)a
Parabutlerite, 68	31.9.2	31.6.3	II,610	BM 93,185(1970)
Paracoquimbite, 63	29.8.4	29.8.4	II,534	AM 56,1567(1971); NJMM 1974,89
Paracostibite, 13	2.12.18.3	-----	-----	CM 10,232(1970)[AM 56,231]a; CM 13,188(1975)
Paradamite, 87	41.6.7.2	-----	-----	SCI 123,1039(1956)[AM 41,958]a; AM 51,1218(1966); MJJ 6,419(1977); AC B35,720(1979); AM 65,353(1980)
Paradocrasite, 8	2.8.29	-----	-----	AM 56,1127(1971)
Paraguanajuatite, 11	2.11.4.3	-----	-----	AM 34,619(1949)a; AM 39,362(1950)
Parahilgardite, 57	26.5.15	26.1.9	II,383	NAT 270,594(1977); AM 64,187(1979)
Parahopeite, 82	40.3.3	40.2.10	II,733	ZK 130,261(1969); MM 36,621(1978)
Parajamesonite, 19	3.6.9	-----	-----	SMPM 27,183(1947)[AM 34,133]a
Parakhinite, 71	33.1.4	-----	-----	AM 63,1016(1978)
Paralaurionite, 37	10.2.3	10.1.8	II,64	MM 29,341(1950)
Paralstonite, 42	14.2.2.2	-----	-----	<i>Geol. Surv. Canada Paper</i> 79-1C, 99(1979); NJMM 1980,353
Paramelaconite, 24	4.6.4	4.2.4	I,510	AM 26,657(1941); AM 63,180(1978); AC B34,22(1978)
Paramontroseite, 23	4.4.10	-----	-----	AM 40,861(1955)
Parapierrotite, 21	3.8.15	-----	-----	TMPM 22,200(1975)[AM 61,504]a; ZK 150,169(1979); ZK 151,203(1980)

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Pararamelsbergite, 12	2.12.15	2.9.3.4	I,310	CM 9,128(1967); AM 57,1(1972)
Paraschachnerite, 1	1.1.3.2	-----	-----	NJMA 117,1(1972)[AM 58,347]a
Paraschoepite, 25	5.2.1.2	-----	-----	AM 32,344(1947); AM 33,513(1948); AM 45,1026(1960)
Parasymplesite, 83	40.3.6.6	-----	-----	AM 40,368(1955)a; CM 14,437(1976); BM 100,310(1977)
Paratacamite, 37	10.1.2	10.1.2	II,74	NJMM 1972,335; AC B31,183(1975)
Paratellurite, 23	4.4.3.2	-----	-----	AM 45,1272(1960); ZK 116,345(1961)
Paravauxite, 95	42.10.14.2	42.8.6	II,972	AM 47,1(1962); NJMM 1969,430
Paraveatchite=p-Veatchite		-----	-----	
Paravivianite=manganoan magnesian Vivianite			II,744	
Parbigite=Messelite	-----	-----	-----	AM 45,256(1960)a
Parisite, 44	16a.1.4	16.2.6	II,282	AM 38,932(1953); AM 60,351(1975)
Parkerite, 4	2.3.4	2.9.9	I,341	AM 28,343(1943); AM 35,425(1950); AM 58,435(1973); NJMM 1975,385
Parnauite, 99	43.5.13	-----	-----	AM 63,704(1978)
Parsonsite, 82	40.2a.18	41.8.4	II,913	USGS 1064,233(1958)
Partridgeite=Bixbyite	-----	-----	I,551	
Partzite, 100	44.1.2	-----	I,599	MM 30,100(1953)[AM 39,407]a
Parwelite, 100	44.3.4	-----	-----	AMG 4,467(1968)[AM 55,323]a; IC 16,1839(1977)
Pascoite, 103	47.3.11	47.1.13	II,1055	AM 40,314(1955); AC 21,397(1966)
Pastreite=Natrojarosite		-----	II,560	AM 42,586(1957)a
Paternoite=Kaliborite	-----	-----	II,363	AM 50,1079(1965)

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Patronite, 15	2.16.28	-----	I,347	NW 51,263(1964); NJMA 101,97(1964); NJMM 1972,339
Paulite,prob.=Arsenuranospathite		-----	-----	AM 46,465(1961)a; MM 42,117(1978)
Paulmooreite, 101	45.1.8	-----	-----	AM 64,352(1979); AM 65,340(1980)
Pavonite, 21	3.8.11.1	-----	-----	AM 38,409(1954); AM 60,621(1975); CM 13,408(1975); CM 15,339(1977); BM 102,351(1979)
Paxite, 11	2.11.8	-----	-----	AM 47,1484(1962)a
Pearceite, 16	3.1.9.1	3.1.1.2	I,353	MM 28,1(1947); AM 48,565(1963); CM 8,172(1965)[AM 50,1507]a; AM 52,1311(1967); NJMM 1971,337
Pekoite, 21	3.8.13	-----	-----	AM 61,15(1976); CM 14,322(1976); CM 14,578(1976)
Peligotite=Johannite	-----	-----	-----	AM 40,369(1955)a
Pellouxite=Lime	-----	-----	-----	AM 36,639(1951)a
Pendletonite=Karpatite	-----	-----	-----	AM 52,611(1967); AM 54,329(1969)a
Penfieldite, 38	10.4.1	10.1.9	II,66	BM 91,407(1968)
Penikisite, 89	41.9.1.2	-----	-----	CM 15,393(1977)[AM 64,657]a
Penroseite, 11	2.12.1.4	2.9.1.6	I,294	AM 35,360(1968)
Pentahydrate, 62	29.6.7.3	29.6.5.3	II,492	AC B28,1448(1972)
Pentahydroborite, 55	26.2.1	-----	-----	ZVMO 90,673(1961)[AM 47,1482]a; SPD 18,102(1977); SPC 22,35(1977)
Pentahydrocalcite, prob. a mixture		15.1.4	II,228	
Pentlandite, 6	2.7.1.1	2.6.5.6	I,242	AM 41,804(1956); CM 8,291(1965); CM 11,861(1972); CM 12,178(1973)
Percylite=Boleite, Pseudoboleite, or a mixture of the two		10.2.4	II,81	MR 5,280(1974)

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Peretaite, 67	31.6.4	-----	-----	AM 65,936(1980); AM 65,940(1980)
Perhamite, 99	43.5.10	-----	-----	MM 41,437(1977)[AM 63,794]a
Periclase, 22	4.2.1.1	4.2.1.1	I,499	
Perite, 37	10.2.5.1	-----	-----	AMG 2,565(1960)[AM 46,765]a
Perloffite, 89	41.9.1.4	-----	-----	MR 8,112(1977)[AM 62,1059]a
Permingeatite, 17	3.2.2.3	-----	-----	BM 94,162(1971)[AM 57,1554]a
Perovskite, 22	4.3.3.1	7.4.2.1	I,730	AC 10,219(1957); CM 7,683(1963)
Perryite, 1	1.1.22	-----	-----	AM 52,559(1967)a; MM 36,850(1968)[AM 54,579]a; MM 37,905(1969)[AM 56,1123]a
Petrovicite, 16	3.1.10	-----	-----	BM 99,310(1976)[AM 62,594]a
Petscheckite, 33	8.1.9.2	-----	-----	AM 63,941(1978)
Petzite, 5	2.4.3.3	2.3.1.9	I,186	AM 34,350(1949); AM 44,693(1959)
Pharmacolite, 78	39.1.1.2	39.2.1.2	II,706	CM 8,530(1966); AC B25,1544(1969); AC B27,349(1971)
Pharmacosiderite, 92	42.7.1.1	-----	II,995	ZK 125,92(1967)
Phillipite=mixture of Chalcanthite and Ransomite			II,520	
Phoenicochroite, 74	35.1.2	35.3.2	II,649	AM 55,784(1970); BM 103,469(1980)
Phosgenite, 45	16a.3.3	16.1.7	II,256	TMPM 21,101(1974)
Phosinaite, 97	43.3.3	-----	-----	ZVMO 103,567(1974)[AM 60,488]a; IGR 17,661(1975)
Phosphammite, 75	37.1.3	-----	-----	AC B28,2065(1972); MM 39,346(1973)
Phosphochromite=ferrian Variscite		-----	-----	CM 7,676(1963)[AM 48,1421]a
Phosphoferrite, 82	40.3.2.1	40.2.5.1	II,727	NJMA 87,185(1954); ZK 115,161(1961); ZK 118,327(1963); IC 15,316(1976); MM 43,789(1980)
Phosphophyllite, 80	40.2.7	40.2.12	II,738	AC 14,795(1961); AM 62,812(1977)

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Phosphorrösslerite, 78	39.1.9.2	39.2.5.2	II,713	ZK 137,246(1973)
Phosphosiderite, 84	40.4.3.2	40.3.2.2	II,769	AM 51,168(1966)
Phosphuranylite, 90	42.4.8	41.6.11	II,876	AM 35,756(1950); AM 39,444(1954); USGS 1064,222(1958)
Phuralumite, 90	42.4.6	-----	-----	BM 102,333(1979)[AM 65,208]a; AC B35,1880(1979)
Phurcalite, 90	42.4.7	-----	-----	BM 101,356(1978)[AM 64,243]a; AC B34,1677(1978)[AM 63,1283]a
Pickeringite, 63	29.7.3.1	29.7.3.1	II,523	
Picotite=chromian Spinel		-----	I,692	
Picotpaulite, 9	2.9.8.2	-----	-----	BM 93,545(1970)[AM 57,1909]a
Picromerite, 60	29.3.5.1	29.3.7.1	II,453	NW 44,350(1957); CE 24,94(1965)
Picropharmacolite, 78	39.2.4	40.2.14	II,740	BM 84,391(1961)[AM 47,1222]a; AC B25,1544(1969); AM 59,807(1974); AM 61,326(1976)
Pierrotite, 21	3.8.9	-----	-----	BM 93,66(1970)[AM 57,1909]a
Pinakiolite, 51	24.2.4	24.1.2	II,324	AM 59,985(1974); CM 16,475(1978)
Pinchite, 38	10.5.3	-----	-----	CM 12,417(1974)[AM 61,340]a
Pinnoite, 52	25.2.3	25.1.1	II,334	AC 10,653(1957); AM 45,335(1960); AC 23,500(1967)
Pintadoite, 103	47.3.3	47.1.10	II,1053	
Pirssonite, 43	15.2.1	15.2.2	II,232	GSPP 405,45(1962); AC 23,763(1967)
Pisanite=cuproan Melanterite		29.6.8.2	II,499	
Pitticite, 99	43.5.3.1	43.2.6	II,1014	NJMM 1978,134
Plagionite, 20	3.6.22	3.7.4.2	I,464	NAT 225,444(1970); ZK 139,351(1974)
Planerite=calcian Turquoise or cuprian Coeruleolactite			II,762	
Platarsite, 12	2.12.8.1	-----	-----	CM 15,385(1977)[AM 64,657]a; CM 17,117(1979)

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Platiniridium, 2	1.2.2.4	1.1.6.3	I,110	CM 12,299(1974)
Platinum, 2	1.2.1.1	1.1.6.1	I,106	CM 12,399(1974); CM 13,117(1975)
Plattnerite, 23	4.4.1.4	4.5.1.6	I,581	MR 1,75(1970)
Platynite, 21	3.8.16	3.8.5	I,474	
Playfairite, 19	3.6.4	-----	-----	CM 9,191(1967)[AM 53,1424]a
Pleonaste=ferroan Spinel		-----	I,692	
Pleonectite=Hedyphane, Tephroite or Berzeliite			II,902	AM 58,562(1973)a
Plessite=intergrowth of Kamacite and Taenite			I,118	
Pleurasite=mixture, mostly Sarkinite			II,845	AM 58,562(1973)a
Plumbobetafite, 34	8.2.3.3	-----	-----	AM 55,1068(1970)a; AM 62,403(1977)
Plumboferrite, 31	7.7.10	7.3.2	I,726	
Plumbogummite, 91	42.6.3.5	41.5.8.1	II,831	MM 36,530(1967); NJMM 1977,45
Plumbojarosite, 65	30.2.5.6	30.2.4.9	II,568	
Plumbomicrolite, 34	8.2.2.4	-----	-----	BM 84,382(1961)[AM 47,1220]a; AM 62,403(1977)
Plumbonacrite, 45	16a.5.1	-----	II,270	AC 9,391(1956); AM 52,563(1967)a
Plumbopalladinite, 2	1.2.15	-----	-----	AM 56,1121(1971)a
Plumbopyrochlore, 33	8.2.1.6	-----	-----	AM 55,1068(1970)a; AM 62,403(1977)
Poitevinite, 61	29.6.2.4	-----	-----	CM 8,109(1965)[AM 50,263]a
Polarite, 7	2.8.8	-----	-----	ZVMO 98,708(1969)[AM 55,1810]a
Polhemusite, 7	2.8.3	-----	-----	AM 63,1153(1978)
Polianite=Pyrolusite	-----	-----	I,564	
Polkovicite, 9	2.9.14.2	-----	-----	AM 66,437(1981)a
Polybasite, 16	3.1.8.2	3.1.1.1	I,351	MM 28,1(1947); AM 48,565(1963); CM 8,172(1965)[AM 50,1507]a; AM 52,1311(1967); NJMM 1971,337

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Polycrase, 35	8.3.8.1	8.3.3.2	I,787	
Polydymite, 10	2.10.2.1	2.7.1.5	I,261	
Polyhalite, 61	29.4.5.1	29.4.2	II,458	MM 29,667(1951); TPM 14,75(1970)
Polymignite, 33	8.1.4.1	8.1.5	I,764	
Portlandite, 27	6.2.1.4	6.1.1.3	I,641	AC 14,950(1961); AM 47,1241(1962); AM 48,925(1963)
Posnjakite, 66	31.4.1	-----	-----	ZVMO 96,58(1967)[AM 52,1582]a; ZK 149,249(1979)
Potarite, 2	1.2.8	1.1.5	I,105	AM 45,1093(1960)
Potash alum=Potassium alum		29.5.5.1	II,472	
Potassium alum, 61	29.5.5.1	29.5.5.1	II,472	
Poubaite, 10	2.10.8	-----	-----	NJMM 1978,9[AM 63,1283]a
Poughite, 73	34.8.3	-----	-----	AM 53,1075(1968); TPM 15,279(1971)
Powellite, 105	48.1.3.2	48.1.3.2	II,1079	SPC 13,414(1968)[MA 69-2926]a
Preobrazhenskite, 54	25.7.1	-----	-----	DANS 111,1087(1956)[AM 42,704]a AM 55,1071(1970)a; SPD 16,518(1972); PCM 2,59(1977)
Priceite, 53	25.5.1	25.1.5	II,341	AM 41,689(1956)
Priderite, 31	7.5.4	-----	-----	MM 29,496(1951)[AM 36,793]a; MM 36,867(1968)
Priorite=Aeschynite-(Y)	-----	8.3.5.2	I,793	AM 51,152(1966)
Proarizonite=mixture	-----	-----	-----	AM 49,1774(1964)a
Probertite, 56	26.5.12	25.1.6	II,343	SPC 10,513(1966)
Prosopite, 40	11.6.9	11.5.7	II,121	DANS 190,665(1970)[MA 73-3482]a
Prosperite, 80	40.2.4	-----	-----	CM 17,87(1979)[AM 65,208]a
Proudite, 19	3.6.1	-----	-----	AM 61,839(1976)
Proustite, 18	3.4.1.1	3.2.1.2	I,366	AM 48,725(1963); NJMM 1966,181
Przhevalskite, 82	40.2a.20.1	-----	-----	AM 41,816(1956)a; AM 43,381(1958)a

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Pseudo-autunite, 81	40.2a.1.3	-----	-----	AM 50,1505(1965)a
Pseudoboleite, 38	10.6.8	10.2.3	II,80	MR 5,280(1974)
Pseudobrookite, 30	7.3.1.1	7.5.1	I,736	
Pseudocotunnite, 39	11.2.1	11.2.1	II,96	
Pseudolaueite, 94	42.10.9.3	-----	-----	NW 6,128(1956)[AM 41,815]a; AM 54,1312(1969); NJMA 123,148(1975)
Pseudomalachite, 85	41.4.3	41.4.3	II,799	AM 35,365(1950); AC 16,124(1963); AM 64,1042(1977)
Pseudorutile, 35	8.4.6	-----	-----	NAT 211,179(1966)[AM 52,299]a; AM 60,898(1975); MM 43,659(1980)
Pseudowavellite=Crandallite		-----	II,835	
Psilomelane=general term for hard manganese oxides		6.1.8	I,668	
Pucherite, 77	38.4.5	47.1.8	II,1050	AM 37,423(1952); AM 38,489(1953)
Purpurite, 77	38.4.1.2	38.1.5.2	II,675	
Putoranite, 9	2.9.2	-----	-----	ZVMO 109,335(1980)
P-veatchite, 56	26.5.9.2	-----	-----	AM 44,1323(1959)a; AM 45,1221(1960); AM 56,1934(1971); SPC 16,75(1971)
Pyrargyrite, 18	3.4.1.2	3.2.1.1	I,362	AM 48,725(1963); NJMM 1966,181
Pyrite, 11	2.12.1.1	2.9.1.1	I,282	NJMM 1974,289; AM 62,1168(1977); MR 9,219(1978)
Pyroaurite, 47	16b.4.2.3	6.1.5.3	I,656	NJMM 1966,161; MM 36,465(1967); AC B24,972(1968); NJMM 1969,552; MM 39,377(1973)
Pyrobelonite, 86	41.5.2.3	41.5.2.3	II,815	NJMM 1953,68; AM 40,580(1955); CM 10,117(1969); MM 41,85(1977)
Pyrochlore, 33	8.2.1.1	8.1.1.1	I,748	AM 62,403(1977)

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Pyrochroite, 27	6.2.1.3	6.1.1.2	I,639	
Pyrolusite, 23	4.4.1.2	4.5.1.2	I,562	AM 46,964(1961)
Pyromorphite, 88	41.8.4.1	41.7.2.1	II,889	BM 91,479(1968)
Pyrophanite, 23	4.3.5.3	4.4.1.5	I,535	
Pyrostilpnite, 18	3.4.2.2	3.2.2.1	I,369	MM 29,346(1950); NJMM 1968,145
Pyrrho-arsenite=Berzeliite		-----	II,682	AM 58,562(1973)a
Pyrrhotite, 7	2.8.10.1	2.6.5.1	I,231	AM 34,462(1949); CM 9,31(1967); AC B27,1864(1971)
Quenselite, 28	6.4.1.2	7.4.1	I,729	ZK 134,321(1971)
Quenstedtite, 63	29.8.5	29.8.5	II,535	AM 59,582(1974)
Quetzalcoatlite, 73	34.6.3	-----	-----	MM 39,261(1973)[AM 59,874]a
Rabbittite, 47	16b.5.3	-----	-----	AM 40,201(1955); USGS 1064,119(1958)
Raguinite, 9	2.9.4	-----	-----	BM 92,38(1969)[AM 54,1495]a; BM 92,357(1969)[AM 54,1741]a
Raimondite=Jarosite or Natrojarosite		-----	II,529	MM 31,407(1957)[AM 42,586]a
Rajite, 72	34.4.2	-----	-----	MM 43,91(1979)[AM 64,1331]a
Ralstonite, 40	11.6.12	11.5.10	II,126	AM 50,1851(1965); MA 71-3102)a
Randohrite, 21	3.7.13	3.6.5	I,450	AM 39,161(1954); NJMM 1971,551; DANS 199,1138(1971)[AM57,1560]a
Rameauite, 25	5.5.2	-----	-----	MM 38,781(1972)[AM 58,805]a
Rammelsbergite, 12	2.12.14.4	2.9.3.3	I,309	CM 9,128(1967)
Ramsdellite, 23	4.4.7	-----	-----	AM 17,143(1932); <i>Acta Chem.Scand.</i> 3,163(1949); AM 47,47(1962)
Rancieite, 31	7.6.1.1	-----	I,572	BM 92,191(1969)[AM 54,1741]a
Rankamaite, 35	8.4.9	-----	-----	BGSF 41,47(1979)[AM 55,1814]a
Ransomite, 63	29.7.1	29.7.1	II,519	AM 55,727(1970)

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Ranunculite, 90	42.2.2	-----	-----	MM 43,321(1979)[AM 65,407]a
Raphisiderite=Hematite	-----	-----	I,534	AM 53,1066(1968)a
Raspite, 105	48.1.5	48.1.5	II,1089	AC B33,162(1977)
Rasvumite, 9	2.9.7	-----	-----	ZVMO 99,712(1970)[AM 56,1121]a; AM 64,776(1979); AM 65,477(1980)
Rathite, 21	3.7.16	3.6.8	I,455	ZK 122,433(1965)
Rathite-II=Liveingite	-----	-----	-----	AM 54,1498(1969)
Rauenthalite, 83	40.3.11	-----	-----	BM 87,169(1964)[AM 50,805]a
Rauvite, 103	47.3.12	47.1.16	II,1058	USGS 1064,263(1958)
Realgar, 8	2.8.28.1	2.6.10	I,255	AC 5,775(1952); ZK 136,48(1972)
Reddingite, 82	40.3.2.3	40.2.5.2	II,727	NJMA 87,185(1954); ZK 115,161(1961); MM 43,789(1980)
Redingtonite, 63	29.7.3.6	29.7.3.6	II,529	MR 2,152(1971)
Redledgeite, 28	6.4.9	-----	-----	NJMM 1961,107[AM 46,1201]a; NJMM 1963,116
Reevesite, 47	16b.4.3.1	-----	-----	AM 52,1190(1967); AM 56,1077(1971); MM 39,377(1973)
Refikite, 108	50.4.1	-----	-----	NJMM 1965,19[AM 50,2110]a
Reinerite, 101	45.1.1	-----	-----	NJMM 1958,160[AM 44,207]a; AM 62,1129(1977)
Reitingerite=fibrous Baddeleyite		-----	-----	AM 36,641(1951)a
Renardite, 90	42.4.9.2	42.3.5	II,928	AM 39,448(1954)
Renierite, 9	2.9.13.1	-----	-----	AM 38,794(1953); EG 52,612(1957)
Retgersite, 62	29.6.9	29.6.7	II,497	MA 19,143(1968)a
Retzian, 85	41.3.5	41.3.6	II,794	AM 52,1603(1967); AMG 4,425(1967)[AM 53,1779]a
Revoredite=amorphous sulfide glass		-----	-----	AM 43,794(1958)a; AM 44,1070(1959)
Rezbanyite=Gladite	-----	3.8.2	I,470	CM 14,194(1976)

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Rhabdite=Schreibersite	-----	-----	I,125	
Rhabdophane-(Ce), 84	40.4.8.1	40.3.5	II,774	AC 3,337(1950); AM 50,231(1965); CE 38,331(1978)[AM 65,1065]a
Rhabdophane-(La), 84	40.4.8.2	-----	-----	ZVMO 98,593(1969); MD 12,373(1977)
Rhabdophane-(Nd), 84	40.4.8.3	-----	-----	BGSA 68,1744(1957)
Rhenium, 2	1.2.5	-----	-----	AM 63,1283(1978)a
Rhodium, 2	1.2.6	-----	-----	CM 12,399(1974)[AM 61,340]a
Rhodizite, 54	25.8.4	24.1.6	II,329	TMPM 10,409(1965)[AM 51,533]a; ZK 125,423(1967)
Rhodoarsenian=Rhodonite		-----	II,1026	AM 58,562(1973)a
Rhodochrosite, 41	14.1.1.4	14.1.1.4	II,171	AMG 3,293(1963)
Rhodophosphate=manganooan Fluorapatite			-----	AM 44,910(1959)a
Rhodostannite, 10	2.10.9	-----	-----	MM 36,1045(1968)[AM 54,1218]a; NJMM 1975,166; AC B35,2195(1979)
Rhombochase, 60	29.1.1	29.1.1	II,436	TMPM 16,155(1970); TMPM 21,216(1974); MM 39,610(1974)
Richellite, 96	42.12.2	42.6.7	I,526	
Richetite, 26	5.9.5	-----	-----	BSBG 70,B212(1947)[AM 33,384]a; USGS 1064,91(1958)
Richmondite=mixture	-----	-----	II,762	
Rickardite, 15	2.16.17.1	2.5.2	I,198	AM 34,358(1949); AM 34,441(1949); ZVMO 108,216(1979)[MA 80-3509]a
Rijkeboerite=Bariumicroilite		-----	-----	AM 48,1415(1963)a; AM 62,403(1977)
Rilandite, 32	7.7.20	-----	-----	AM 18,195(1933)
Rinneite, 39	11.5.3	11.4.3	II,107	
Rivadavite, 57	26.6.1	-----	-----	AM 52,326(1967); NW 60,350(1973)
Rivotite=mixture of Malachite and Stibiconite			I,599	AM 37,997(1952)

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Robertsite, 92	42.7.4.2	-----	-----	AM 59,48(1974); IC 16,1096(1977)
Robinsonite, 20	3.6.17	-----	-----	AM 37,438(1952); CM 13,415(1975); NJMM 1977,501
Rockbridgeite, 89	41.9.2.1	41.6.6.2	II,867	AM 35,1028(1950); AM 55,135(1970)
Rodalquilarite, 73	34.6.2	-----	-----	BM 91,28(1968)[AM 53,2104]a; AC B25,1551(1969)
Roemerite, 63	29.7.2	29.7.2	II,520	CM 6,348(1959); AM 55,78(1970)
Rohaite, 21	3.7.20	-----	-----	AM 65,208(1980)a; NJMA 138,122(1980)
Rokühnite, 36	9.2.4	-----	-----	NJMM 1980,125[AM 66,219]a
Romanechite, 31	7.5.2	-----	I,668	
Romarchite, 22	4.2.5	-----	-----	CM 10,916(1971)[AM 57,1555]a
Romeite, 100	44.1.1.3	44.1.1.2	II,1020	
Röntgenite, 44	16a.1.6	-----	-----	AM 38,868(1953); AM 38,932(1953); AM 60,351(1975)
Rooseveltite, 77	38.4.4.1	38.4.4	II,697	TMPM 17,65(1972)
Roquesite, 9	2.9.1.4	-----	-----	BM 86,7(1963)[AM 48,1178]a; AM 54,1202(1969); CM 18,361(1980)
Rosasite, 45	16a.3.1.1	16.1.5	II,251	BIG 9,197(1961)
Roscherite-(Fe), 91	42.6.7.1	42.8.2	II,968	AM 43,824(1958); TMPM 22,266(1975)
Roscherite-(Mg), 91	42.6.7.3	-----	-----	TMPM 22,266(1975); TMPM 24,169(1977)
Roscherite-(Mn), 91	42.6.7.2	-----	-----	TMPM 22,266(1975)
Roseite=Erlichmanite(?)	-----	-----	-----	AM 56,1501(1971)
Roselite, 80	40.2.3.1	40.2.4.1	II,723	CM 15,36(1977)
Rosemaryite, 76	38.2.4.3	-----	-----	MM 43,227(1979)[AM 65,810]a
Rosickyite, 3	1.3.3.2	1.2.3.3	I,145	NW 49,9(1962); AC B30,1396(1974)

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Rosieresite, 96	42.12.9	-----	II,924	
Rossite, 103	47.3.1.2	47.1.11	II,1053	CM 7,713(1963)
Rösslerite, 78	39.1.9.1	39.2.5.1	II,712	AC B29,286(1973); ZK 137,194(1973); ZK 137,246(1973)
Rostite, 68	31.9.11	-----	-----	AM 60,486(1975)a; NJMM 1979,193[AM 64,1331]a
Roubaultite, 28	6.4.6	-----	-----	BM 93,550(1970)[AM 57,1912]a
Routhierite, 18	3.4.10	-----	-----	BM 97,48(1974)[AM 60,947]a
Roweite, 53	25.4.1.1	26.1.6	II,377	AM 59,60(1974); ZVMO 105,71(1976)[MA 76-3675]a; IGR 19,113(1977)
Rozenite, 62	29.6.6.1	-----	-----	AM 46,242(1961)a; AC 15,815(1961); CM 7,751(1963)[AM 49,820]a; CM 11,958(1973)
Rozhkovite=palladian Auricupride		-----	-----	ZVMO 106,66(1971)[AM 62,595]a
Ruarsite, 12	2.12.10.2	-----	-----	AM 65,1068(1980)a; NAT 201,381(1964)
Rucklidgeite, 10	2.10.7	-----	-----	ZVMO 106,62(1977)[AM 63,599]a; IGR 19,1451(1977)
Rusakovite, 90	42.3.2	-----	-----	ZVMO 89,440(1960)[AM 46,1316]a
Russellite, 105	48.2.1	4.6.4	I,604	MM 37,705(1970)
Rustenbergitte, 2	1.2.1.6	-----	-----	CM 13,146(1975)[AM 61,340]a
Ruthenarsenite, 8	2.8.20	-----	-----	CM 12,380(1974)[AM 61,177]a
Rutheniridosmine, 2	1.2.3.3	-----	-----	CM 12,104(1973)[AM 60,946]a; CM 12,426(1974)
Ruthenium, 2	1.2.4	-----	-----	MJJ 7,438(1974)[AM 61,177]a
Ruthenosmiridium, 2	1.2.2.3	-----	I,112	CM 12,104(1973)[AM 60,946]a
Rutherfordine, 41	14.1.4	16.1.14	II,274	AM 41,127(1956); AM 41,844(1956); USGS 1064,104(1958)
Rutile, 23	4.4.1.1	4.5.1.1	I,554	JACS 77,4708(1955)
Rutosirite=Ruthenosmiridium		-----	-----	AM 36,638(1951)a
Rynersonite, 35	8.3.7.2	-----	-----	AM 63,709(1978)

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Sabatierite, 14	2.16.13	-----	-----	BM 101,557(1978)[AM 64,1331]a; NJMA 138,122(1980)
Sabinaite, 45	16a.5.5	-----	-----	CM 18,25(1980)
Sabugalite, 79	39.3.7.2	-----	-----	AM 36,671(1951); USGS 1064,195(1958); MM 42,117(1978)
Safflorite, 12	2.12.14.3	2.9.3.2	I,307	AM 53,1856(1968)
Sahamalite, 42	14.4.2	-----	-----	AM 38,741(1953)
Sahlinite, 85	41.1.4	41.1.1	II,775	
Sainfeldite, 78	39.2.1.2	-----	-----	BM 87,169(1964)[AM 50,806]a; BM 95,33(1972)
Sakhaite, 58	27.1.4	-----	-----	ZVMO 95,193(1966)[AM 51,1817]a; CM 10,689(1970)
Sakharovite, 20	3.7.9.2	-----	-----	AM 41,814(1956)a; AM 45,1134(1960)a
Sakuraiite, 9	2.9.11.5	-----	-----	AM 53,1421(1968)a
Salammoniac, 36	9.1.3	9.1.2	II,15	
Saleeite, 81	40.2a.11	42.8.13.4	II,988	BM 103,630(1980)
Salesite, 50	22.1.1	22.1.1	II,315	AC 15,1105(1962); AM 63,172(1978)
Salmoite=Tarbuttite	-----	-----	II,933	
Salmonsite=mixture of Jahnsite and Hureaulite		40.2.8	II,730	MM 42,309(1978)[AM 64,466]a
Samarskite, 34	8.3.5	8.3.6.1	I,797	DANS 160,693(1965)[MA 19,54]a
Samiresite=plumboan Uranpyrochlore		-----	I,804	AM 62,403(1977)
Sampleite, 93	42.8.4.1	42.6.1	II,945	
Samsonite, 18	3.4.11	3.3.4	I,393	AC B25,1004(1969); ZK 140,87(1974)
Samuelsonite, 89	41.10.9	-----	-----	AM 60,957(1975); AM 62,229(1977)
Sandbergite=Heinrichite	-----	-----	-----	AM 43,1134(1958)a
Sanderite, 61	29.6.4	-----	-----	NJMM 1952,52[AM 37,1072]a
Sanjuanite, 99	43.5.1.3	-----	-----	AM 53,1(1958)

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Sanmartinite, 105	48.1.2	48.1.2	II,1072	MM 42,281(1978)
Santafeite, 103	47.3.8	-----	-----	AM 43,677(1958)
Santanaite, 74	35.4.1	-----	-----	NJMM 1972,455[AM 58,966]a
Santite, 56	26.5.2	-----	-----	CMP 27,159(1970)[AM 56,636]a
Sarabauite, 13	2.13.2	-----	-----	AM 62,1260(1977)a; AM 63,715(1978); AC B34,3569(1978)
Sarcopsidite, 76	38.3.1.1	41.6.4	II,858	AM 49,1499(1964)a; AM 50,1698(1965); AM 57,24(1972)
Sarkinite, 87	41.6.3.3	41.6.3.3	II,855	TMPM 21,246(1974)
Sarmientite, 99	43.5.1.1	43.2.5	II,1013	AM 53,2077(1968)
Sartorite, 20	3.7.8.1	3.8.9	I,478	AC 14,1291(1961)
Sasaite, 99	43.5.4	-----	-----	MM 42,401(1978)[AM 64,464]a
Sassolite, 51	24.3.1	6.2.1	I,662	AM 42,56(1957)
Satimolite, 57	26.7.6	-----	-----	AM 55,1069(1970)a
Satpaevite, 104	47.4.8	-----	-----	ZVMO 88,157(1959)[AM 44,1325]a
Satterlyite, 87	41.6.4.1	-----	-----	CM 16,411(1978)[AM 64,657]a
Saukovite=cadman Metacinnabar		-----	-----	DANS 168,182(1966)[AM 51,1818]a
Sborgite, 56	26.5.1	-----	-----	ANLR 22,519(1957)[AM 43,378]a; AC B28,3559(1972)
Scacchite, 36	9.2.3.2	9.2.3.2	II,40	
Scarbroite, 48	16b.5.14.1	-----	-----	NAT 180,977(1957)[AM 43,384]a; MM 32,353(1960)[AM 45,910]a; MM 32,363(1960)[AM 45,910]a; MM 43,615(1980)
Schachnerite, 1	1.1.3.1	-----	-----	NJMA 117,1(1972)[AM 58,347]a
Schafarikite, 101	45.1.6	45.1.4	II,1035	AM 37,136(1952)a; TMPM 22,236(1975); AM 64,1235(1979)
Schairerite, 64	30.1.9	30.1.5	II,547	AM 56,174(1971); MM 40,131(1975)
Schapbachite=Matildite	-----	-----	I,430	

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Schaurteite, 67	31.7.7.2	-----	-----	AM 53,507(1968)a; MM 39,377(1973); NJMA 123,160(1975)
Scheelite, 105	48.1.3.1	48.1.3.1	II,1074	JCP 40,504(1964)
Scheibeite=Phoenicochroite		-----	-----	NJMM 1970,276[AM 56,359]a; AM 56,1840(1971)
Schertelite, 79	39.3.3	-----	II,699	AM 48,635(1963); AC B28,683(1972); AC B32,2842(1976)
Scherteligite, 34	8.2.6	8.1.2	I,757	
Schiefflinite, 71	33.3.1	-----	-----	MM 43,771(1980)[AM 66,219]a
Schirmerite, 18	3.5.7	3.5.3	I,424	CM 11,952(1972)[AM 59,384]a; NJMA 131,56(1977)[AM 64,243]a
Schlossmacherite, 64	30.2.4.3	-----	-----	NJMM 1980,215
Schmiederite, 71	33.1.1	-----	-----	AM 49,1498(1964)a; MM 43,824(1980)
Schmitterite, 72	34.1.6	-----	-----	AM 56,411(1971); AC B29,1251(1973); BM 99,334(1976)
Schneiderhöhnite, 31	7.7.4	-----	-----	NJMM 1973,817[AM 59,1139]a; NJMA 138,94(1980)
Schoderite, 97	43.3.1.1	-----	-----	AM 46,464(1961)a; AM 47,637(1962); AM 64,713(1979)
Schoenfliesite, 28	6.3.6.2	-----	-----	AC 13,601(1960); ZK 134,116(1971)[AM 57,1557]a; CM 15,437(1977)
Schoepite II=Metaschoepite		-----	-----	AM 45,1026(1960)
Schoepite III=Paraschoepite		-----	-----	AM 45,1026(1960)
Scholzite, 80	40.2.6	-----	-----	AM 36,382(1951)a; ZK 107,318(1956)[AM 46,1519]a; NW 57,192(1970); AC B28,322(1971); AM 60,1019(1975); NJMM 1977,25
Schoonerite, 92	42.7.3	-----	-----	AM 62,246(1977); AM 62,250(1977)
Schreibersite, 1	1.1.21	1.1.7.6	I,124	NW 55,387(1968); ZK 131,222(1970)

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Schreyerite, 35	8.4.5.1	-----	-----	NW 63,293(1976)[AM 62,395]a; AM 63,1182(1978)
Schroeckingerite, 48	17.1.4	15.2.4	II,236	AM 39,901(1953); USGS 1064,121(1968); AM 44,1020(1959)
Schubnelite, 84	40.4.10	-----	-----	BM 93,470(1970)[AM 57,1557]a
Schuetite, 64	30.1.13	-----	-----	AM 44,1026(1959)
Schuilingite, 47	16b.5.4	-----	-----	BBSG 70,B233(1947)[AM 33,385]a; BM 80,549(1957)[AM 43,796]a
Schultenite, 75	37.1.2	37.1.2	II,661	MM 29,287(1950); MR 8(3),98(1977)
Schulzenite=cuprian Heterogenite-3R		-----	I,652	MM 33,253(1962)[AM 48,217]a
Schwartzembergite, 50	22.1.3	22.1.2	II,317	NJMM 1970,467[AM 55,1814]a
Schwartzite=mercurian Tetrahedrite		-----	I,379	
Scleroclase=Sartorite	-----	-----	I,442	
Scorodite, 84	40.4.1.3	40.3.1.3	II,763	AC B31,322(1975); AC B32,2891(1976)
Scorzalite, 89	41.10.1.2	41.8.1.2	II,908	AC 12,695(1959); ZVMO 94,212(1965)[MA 17,397]a
Seamanite, 98	43.4.4	27.1.4	II,388	AM 56,1527(1971); SPD 16,272(1971)[MA 72-1860]a
Sederholmite, 7	2.8.11.3	-----	-----	AM 50,519(1965)a
Sedovite, 105	48.4.1	-----	-----	ZVMO 94,548(1965)[AM 51,530]a
Seeligerite, 50	22.1.2	-----	-----	NJMM 1971,210[AM 57,327]a
Segelerite, 94	42.10.1.1	-----	-----	AM 59,48(1974); AM 62,692(1977)
Seinajokite, 12	2.12.14.2	-----	-----	ZVMO 105,617(1976)[AM 62,1059]a IGR 19,1357(1977)
Selenium, 3	1.3.2.1	1.2.2.1	I,136	AM 41,156(1956); AC 21,A46(1966)
Selenjoseite=Laitakarite		-----	-----	CM 7,677(1963)[AM 48,1421]a
Selenolite,probably=Oltscherite		4.5.5	I,595	AM 62,316(1977)
Selen-tellurium, 3	1.3.2.2	1.2.2.2	I,137	

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Seligmannite, 18	3.4.3.1	3.4.1.2	I,411	ZK 130,254(1969); ZK 131,397(1970)
Sellaite, 36	9.2.2	9.2.2	II,37	NJMA 136,10(1979)
Semseyite, 18	3.5.5	3.7.4.4	I,466	
Senaite, 35	8.4.2.4	4.4.1.6	I,541	AM 53,869(1968); AM 61,1203(1976); AC B32,1509(1976)
Senarmontite, 23	4.3.9.2	4.4.2.2	I,544	AC B31,2016(1975)
Senegalite, 91	42.5.7	-----	-----	LIT 9,165(1976)[AM 62,595]a; AM 64,1243(1979)
Sengierite, 91	42.5.11	47.1.3	II,1047	AM 42,408(1957); USGS 1064,258(1958); BM 103,176(1980)[AM 66,220]a
Sergeevite, 41	13.1.7	-----	-----	ZVMO 109,217(1980)
Serpierite, 67	31.6.2	31.3.5	II,592	ANLR 43,369(1967)[AM 54,328]a; AC B24,1214(1968)
Shabynite, 55	26.1.3	-----	-----	ZVMO 109,569(1980)
Shadlunite, 6	2.7.1.4	-----	-----	ZVMO 102,63(1973)[AM 58,1114]a; IGR 15,1341(1973)
Shandite, 4	2.3.5	-----	-----	AM 35,425(1950); NJMM 1978,256
Sharpite, 43	15.1.8.1	16.1.15	II,275	USGS 1064,106(1958); AM 34,658(1959)
Shcherbinaite, 24	4.6.1	-----	-----	MA 11,422(1950)a; DANS 193,683(1970)[AM 58,560]a; ZVMO 101,464(1972)[AM 58,560]a
Sherwoodite, 104	47.4.10	-----	-----	AM 43,749(1958); AM 63,863(1978)
Shorsiite=Halotrichite	-----	-----	-----	AM 42,441(1957)
Shortite, 42	14.4.1	14.3.2	II,222	
Shubnikovite, 92	42.7.7	-----	-----	ZVMO 82,317(1953)[AM 40,552]a
Sibirskite, 52	25.2.2	-----	-----	ZVMO 91,455(1962)[AM 48,433]a
Sicklerite, 75	38.1.4.2	38.1.3.2	II,672	
Siderazot, 1	1.1.19	1.1.7.7	I,126	
Siderite, 41	14.1.1.3	14.1.1.3	II,166	NJMM 1975,101

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Sideronatrite, 67	31.5.1	31.5.3	II,604	
Siderotil, 62	29.6.7.2	29.6.5.2	II,491	CM 7,751(1963)[AM 49,820]a
Sidorenkite, 97	43.2.1.2	-----	-----	AM 64,1332(1979)a; ZVMO 109,592(1980)
Siegenite, 10	2.10.1.6	2.7.1.2	I,262	
Sigloite, 95	42.10.14.3	-----	-----	AM 47,1(1962)
Silberkies=Sternbergite or Argentopyrite			I,248	
Silicomonazite=silicatian Monazite		-----	-----	DANS 204,941(1972)[AM 58,348]a
Sillenite, 23	4.3.9.3	4.4.8	I,601	
Silver(-3C), 1	1.1.2.1	1.1.1.3	I,96	ZVMO 108,552(1979)[AM 65,1069]a
Silver-4H,-2H, 1	1.1.2.2	-----	-----	ZVMO 108,552(1979)[AM 65,1069]a
Simonellite, 107	50.3.2	-----	-----	ANLR 47,41(1969)[AM 55,1818]a
Simplotite, 103	47.3.4	-----	-----	SCI 123,1078(1956)[AM 42,116]a; AM 43,16(1958)
Simpsonite, 35	8.4.8	8.1.10	I,771	AM 25,313(1940); MM 33,458(1963); AM 59,1026(1974)
Sincosite, 95	42.10.19	42.3.4	II,1057	
Sinhalite, 51	24.1.1	-----	-----	MM 29,841(1951)[AM 37,1072]a; AM 37,700(1952)a; MM 35,196(1965); NJMM 1979,117
Sinjarite, 36	9.2.5	-----	-----	MM 43,643(1980)[AM 65,1069]a
Sinnerite, 19	3.6.14	-----	-----	SMPM 44,439(1964)[AM 50,1504]a; AM 57,824(1972); AM 60,998(1975)
Sinoite, 3	1.3.6	-----	-----	SCI 146,256(1964)[AM 50,521]a;
Siserskite=Iridosmine	-----	1.1.6.6	I,111	
Sitaparite=Bixbyite	-----	-----	I,551	
Sjögrenite, 47	16b.4.1.3	6.1.6.3	I,659	NJMM 1966,161; NJMM 1969,552; MM 36,465(1967); MM 39,377(1973)
Sjögruvite=Caryinite	-----	-----	II,845	AM 58,562(1973)a

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Skinnerite, 18	3.4.7	-----	-----	AM 59,889(1974)
Skutterudite, 13	2.12.27.1	2.10.11	I,342	AM 47,310(1962); CM 9,559(1968); AC B27,2288(1971)
Slavikite, 68	31.9.13	31.6.10	II,621	BM 87,622(1964); TMPM 12,100(1967)[AM 53,1065]a; NJMM 1973,93; NJMM 1975,27
Slavyanskite=Tunisite	-----	-----	-----	ZVMO 106,331(1977)[AM 63,599]a; AM 65,1070(1980)a
Smaltite=an arsenic-deficient var. of Skutterudite		2.10.12	I,342	AM 28,63(1943)
Smirnovite=Thorutite	-----	-----	-----	AM 43,1007(1958)a
Smithite, 20	3.7.1.2	3.5.7	I,430	NW 51,35(1964)
Smithsonite, 41	14.1.1.6	14.1.1.6	II,176	AM 39,47(1954)
Smolianinovite, 84	40.5.2	-----	-----	DANS 109,849(1956)[AM 42,307]a; AM 59,1141(1974); MM 41,385(1977)
Smythite, 15	2.16.26	-----	-----	JACS 78,2017(1956)[AM 41,815]a; AM 42,309(1957); AM 55,1650(1970); AM 57,1571(1972)
Sobolevskite, 8	2.8.18	-----	-----	ZVMO 104,568(1975)[AM 61,1054]a IGR 18,856(1976)
Soda niter=Nitratite	-----	18.1.1	II,300	
Sodium alum, 61	29.5.5.2	29.5.5.2	II,474	
Sodium autunite, 81	40.2a.5	-----	-----	AM 43,383(1958)a
Sodium betpakdalite, 106	49.4.4	-----	-----	ZVMO 100,477(1971)[AM 57,1312]a IGR 14,473(1972)
Sodium uranospinite, 81	40.2a.6	-----	-----	AM 43,383(1958)a
Sodium-zippeite, 69	31.10.4.2	-----	-----	CM 14,429(1976)
Söhngeite, 28	6.3.5.2	-----	-----	NW 50,17(1965); NW 52,493(1965)[AM 51,1815]a
Solongoite, 53	25.3.2	-----	-----	ZVMO 93,117(1974)[AM 60,162]a; IGR 17,319(1975); SPC 22,356(1977); DANS 216,1281(1974)

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Sonoraite, 73	34.7.1	-----	-----	AM 53,1828(1968); TMPM 14,27(1970); MR 3,82(1972)
Sorbyite, 19	3.6.11	-----	-----	CM 9,191(1967)[AM 53,1425]a
Soucekite, 18	3.4.3.3	-----	-----	NJMM 1979,289[AM 65,209]a
Souxite=Varlamoffite	-----	-----	-----	AM 32,372(1947)
Souzalite, 93	42.8.2.1	41.8.2	II,911	AM 43,196(1958); AM 55,135(1970)
Spangolite, 66	31.1.5	31.1.5	II,576	
Spencerite, 91	42.5.4.2	42.4.4	II,931	MM 38,687(1972)
Sperrylite, 11	2.12.3.3	2.9.1.4	I,292	ZVMO 97,594(1968)[MA 70-1599]a; CM 17,117(1979)
Sphaerocobaltite, 41	14.1.1.5	14.1.1.5	II,175	
Sphalerite, 7	2.8.2.1	2.6.2.1	I,210	AM 62,540(1977)
Spinel, 29	7.2.1.1	7.2.1.1	I,689	SPC 13,599(1968)[MA 69-2915]a; AC A36,122(1980)
Spiroffite, 73	34.5.1	-----	-----	SCI 133,2017(1961); CM 7,450(1962); AM 49,444(1964)a; NW 54,199(1967)
Spodiosite, 87	41.6.12	-----	II,848	AC 23,166(1967)
Staffelite=Carbonate-fluorapatite		-----	II,884	
Stainerite=Heterogenite-3R		6.1.4	I,650	MM 33,253(1962)[AM 48,217]a
Stanfieldite, 77	38.3.5	-----	-----	SCI 158,190(1967)[AM 53,508]a; MM 41,91(1977)
Stannite, 9	2.9.11.1	2.6.3.2	I,224	NJMM 1974,8; AC A31,567(1975); CM 16,131(1978); CM 17,125(1979)
Stannoidite, 15	2.16.24	-----	-----	AM 54,1495(1969)a; ZK 144,145(1976)
Stannomicrolite, 34	8.2.2.7	-----	-----	AM 53,2103(1968)a; AM 63,403(1977)
Stannopalladinite, 2	1.2.13	-----	-----	AM 56,360(1971)a
Staringite, 33	8.1.10	-----	-----	MM 37,447(1969)[AM 55,1446]a

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Starkeyite, 62	29.6.6.2	-----	-----	AM 41,662(1956); AC 15,815(1962); AC 17,863(1963)
Staszicite=Olivenite	-----	-----	II,806	BM 79,7(1956)[AM 42,122]a
Steigerite, 84	40.4.5	47.1.7	II,1049	AM 44,322(1959)
Stenhuggarite, 102	46.1.4	-----	-----	CM 9,301(1967)[AM 53,1427]a; AMG 5,55(1970)[AM 56,636]a; AC B33,1807(1977)
Stenonite, 45	16a.5.3	-----	-----	AM 48,1178(1965)a
Stepanovite, 107	50.1.7.1	-----	-----	AM 49,442(1964)a
Stephanite, 17	3.2.5	3.1.4	I,358	AC B26,201(1970)
Stercorite, 79	39.3.2	39.1.1	II,698	ERS 30,101(1974); AC B30,504(1974); AST 108,757(1974)
Sterlinghillite, 82	40.3.5.3	-----	-----	AM 66,182(1981)
Sternbergite, 9	2.9.8.1	2.6.7	I,246	AM 54,1198(1969)
Sterrettite=Kolbeckite	-----	42.7.5	II,965	AM 45,257(1960)
Sterryite, 18	3.5.3	-----	-----	CM 9,191(1967)[AM 53,1423]a
Stetefeldite, 100	44.1.1.5	-----	I,598	MM 30,100(1953)[AM 39,408]a
Stewartite, 94	42.10.9.2	40.2.7	II,530	AM 48,913(1963); AM 59,1272(1974); NJMA 123,148(1975)
Stibarsen, 3	1.3.1.3	-----	-----	CM 11,978(1973); AM 59,1331(1974)a
Stibianite=Stibiconite	-----	-----	I,599	AM 37,982(1952)
Stibiconite, 100	44.1.1.1	4.5.7	I,597	AM 37,982(1952)
Stibiobetafite, 34	8.2.3.4	-----	-----	CM 17,583(1979)
Stibiocolumbite, 33	8.1.6.1	8.1.8.2	I,767	
Stibiodufrenoyite=Veenite		-----	-----	NJMM 1966,353
Stibioferrite=mixture of Bindheimite and Jarosite			I,599	AM 37,982(1952)
Stibiopalladinite, 4	2.3.3	2.2.2	I,175	AM 58,1(1973); AM 61,1249(1976)
Stibiopearceite=Antimonpearceite		-----	-----	AM 64,243(1979)a

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Stibiotantalite, 33	8.1.6.2	8.1.8.1	I,767	MM 33,458(1963); AC B30,2088(1974)
Stibivanite, 101	45.1.11	-----	-----	CM 18,329(1980); CM 18,333(1980)
Stibnite, 10	2.11.2.1	2.8.2.1	I,270	ZK 114,85(1960); ZK 135,308(1972)
Stichtite, 47	16b.4.2.2	6.1.5.2	I,655	MM 39,377(1973)
Stilleite, 7	2.8.2.2	-----	-----	AM 42,584(1957)a
Stillwaterite, 14	2.16.1	-----	-----	CM 13,321(1975)[AM 62,1060]a
Stistaitite, 8	2.8.31	-----	-----	ZVMO 99,68(1970)[AM 56,358]a; IGR 12,1470(1970)
Stoiberite, 85	41.4.5	-----	-----	AM 64,941(1979); AC B29,1338(1973)
Stolzite, 105	48.1.4.2	48.1.4.2	II,1087	AM 43,156(1958)
Stottite, 28	6.3.7.1	-----	-----	NJMM 1958,85[AM 43,1006]a; NJMM 1959,67; AC 14,205(1961)
Stranskiite, 77	38.3.7	-----	-----	NW 47,376(1960)[AM 45,1315]a; ZK 124,91(1967); ZK 130,231(1969); AM 63,213(1978); TMPM 26,167(1979)
Strashmirite, 91	42.5.5	-----	-----	ZVMO 97,470(1968)[AM 54,1221]a
Strelkinite, 82	40.2a.25	-----	-----	ZVMO 103,576(1974)[AM 60,488]a; IGR 17,813(1975)
Strengite, 84	40.4.1.2	40.3.1.2	II,756	AM 43,195(1968)
Stromeyerite, 5	2.4.6.1	2.3.2.2	I,190	SMPM 12,222(1932); ZK 106,299(1955)
Strontianite, 41	14.1.3.3	14.1.3.3	II,196	ZK 131,455(1970); AM 56,758(1971); AM 61,1001(1976)
Strontioborite, 53	25.6.4	-----	-----	DANS 135,173(1960)[AM 46,768]a; AM 50,1508(1965)a; SPC 20,563(1976)
Strontiodresserite, 46	16b.2.1.3	-----	-----	CM 15,405(1977); CM 15,408(1977)
Strontioginorite, 57	26.6.7.2	-----	-----	AM 45,478(1960)a; AM 55,1911(1970)

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Strontiohilgardite=strontian Hilgardite			-----	AM 46,1102(1959)
Strontium-apatite, 88	41.8.1.7	-----	-----	DANS 142,439(1962)[AM 47,808]a
Strunzite, 94	42.10.8	-----	-----	NW 45,37(1958)[AM 43,793]a; NJMM 1958,222; CM 15,405(1977); TPM 25,77(1978)
Strüverite, 24	4.4.16.2	-----	I,558	AM 49,792(1964); MA 74-2438)a
Struvite, 80	40.1.1	40.1.1	II,715	AC B26,1429(1970); AC B35,11(1979)
Studdite, 25	5.3.1	-----	II,275	BSBG 70,B212(1947)[AM 33,384]a; USGS 1064,108(1958); AM 59,166(1974)
Stumpflite, 8	2.8.19	-----	-----	BM 95,610(1972)[AM 59,211]a
Stützite, 14	2.16.15.2	-----	I,167	AM 36,458(1951); AM 49,325(1964); AM 53,1513(1968)
Styloypite=Tetrahedrite		3.2.2.2	I,370	AM 36,697(1951)
Suanite, 51	24.4.1	-----	-----	MJJ 1,54(1953)[AM 40,941]a; AM 48,918(1963)
Sudburyite, 8	2.8.17.1	-----	-----	CM 12,275(1974)[AM 61,178]a; MA 80-1317)a
Sukulaite=Stannomicrolite		-----	-----	AM 53,2103(1968)a; AM 63,403(1977)
Sulfoborite, 58	27.1.5	27.1.1	II,387	SPD 21,296(1976); PCM 2,59(1977)
Sulfur, 3	1.3.3.1	1.2.3.1	I,140	AC 8,661(1951)
Sulphohalite, 64	30.1.7	30.1.6	II,548	MM 40,131(1975)
Sulvanite, 17	3.2.3.3	3.3.1.1	I,384	TPM 10,379(1965); AM 51,890(1966); AM 59,307(1974)
Sundiusite, 64	30.1.1	-----	-----	AM 65,506(1980)
Susannite, 48	17.1.3	17.1.4	II,298	CM 10,141(1969)[AM 55,1449]a
Sussexite, 52	25.2.1.1	26.1.5.1	II,375	AM 60,273(1975)
Svabite, 88	41.8.3.1	41.7.3.1	II,899	
Svanbergite, 97	43.4.1.5	43.1.1.4	II,1005	MJJ 8,419(1977)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Swartzite, 43	15.3.3.2	15.2.7	II,238	USGS 1064,117(1958)
Swedenborgite, 100	44.3.2	44.2.2	II,1027	
Switzerite, 82	40.3.5.2	-----	-----	AM 52,1595(1967); TMPM 26,255(1979)
Sylvanite, 13	2.12.23.3	2.9.7.3	I,338	AM 34,353(1949); AC 5,375(1952); CM 9,547(1968)
Sylvinite=mixture of Halite and Sylvite			-----	
Sylvite, 36	9.1.1.2	9.1.1.2	II,7	MM 29,669(1951)
Symplectite, 83	40.3.8.1	40.2.15.5	II,752	AC 3,1(1950); NJMA 138,94(1980)
Synadelphite, 99	43.5.12	41.1.5	II,780	AMG 4,425(1967)[AM 53,1779]a; AM 55,2023(1970)
Synchysite-(Ce), 44	16a.1.2.1	16.2.8	II,287	AM 38,932(1953); AM 60,351(1975)
Synchysite-(Nd), 44	16a.1.2.3	-----	-----	AM 64,658(1979)a
Synchysite-(Y), 44	16a.1.2.2	-----	-----	SCI 122,31(1955)[AM 40,1154]a; AM 45,92(1960); AM 47,337(1962)
Syngenite, 60	29.3.1.1	29.3.1	II,442	AC 21,A48(1966); ZK 124,398(1967); SPC 20,773(1975)[MA 77-1495]a
Szaibelyite, 52	25.2.1.2	26.1.5.2	II,375	AM 60,273(1975)
Szmikite, 61	29.6.2.3	29.6.6.3	II,481	
Szomolnokite, 61	29.6.2.2	29.6.6.2	II,479	CM 11,958(1973)
Taaffeite-4H, 30	7.2.11	-----	-----	MM 29,765(1951)[AM 37,360]a; MM 43,575(1980)
Taaffeite-9R, 30	7.2.12.1	-----	-----	MM 36,305(1967)
Tachyhydrite, 39	11.5.5	11.1.3	II,95	AC B36,2734(1980); AC B36,2736(1980)
Taenite, 1	1.1.13.2	-----	I,117	AM 51,37(1966)
Tagilite=Pseudomalachite		42.4.3	II,931	AM 35,365(1950)
Takanelite, 31	7.6.1.2	-----	-----	AM 56,1487(1971)a
Takeuchiite, 51	24.2.6	-----	-----	AM 65,1130(1980)

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Takovite, 47	16b.4.3.2	-----	-----	MA 13,624(1958)a; AM 57,1559(1972)a; AM 62,449(1977); AM 62,458(1977)
Talktripite=ferroan Wagnerite		-----	II,849	AMG 2,149(1957)[AM 42,586]a
Tallingite=Connellite	-----	-----	II,76	
Talmessite, 80	40.2.2.5	-----	-----	ZVMO 85,297(1956)[AM 42,582]a; BM 83,118(1960)[AM 45,1315]a; BM 87,169(1964)[AM 50,813]a; MA 69-1083)a; BM 100,230(1977)
Talnakhite, 9	2.9.3.1	-----	-----	AM 55,2135(1970)a; EG 60,673(1971)[AM 56,2159]a; AM 57,368(1972); CM 13,168(1975)
Tamarugite, 61	29.5.3.1	29.5.3.1	II,466	AM 51,1805(1966); AM 54,19(1969); MM 40,642(1976)
Tancoite, 85	41.4.7	-----	-----	CM 18,185(1980)
Tangeite=Calciovolborthite		-----	II,817	
Tantalaeschynite -(Y), 34	8.3.6.4	-----	-----	MM 39,571(1974)[AM 59,1331]a
Tantalite, see Ferrotantalite, Manganotantalite		8.3.2.2	I,780	
Tantalum=Tantalum Carbide		1.1.8	I,126	AM 47,786(1962)
Tanteuxenite, 35	8.3.8.3	-----	I,791	
Taosite=Högbomite	-----	-----	I,526	AM 37,136(1952)a
Tapiolite, 34	8.3.1	-----	I,775	AM 43,112(1958); MM 42,477(1978)
Taranakite, 79	39.3.6.1	42.9.4	II,999	AM 41,616(1956); AM 44,138(1959); AM 61,329(1976)
Tarapacaite, 74	35.1.1	35.1.1	II,644	AC B28,2845(1972)
Tarbuttite, 87	41.6.7.1	41.6.7	II,869	AM 51,1218(1966); ZK 123,5(1966); ZK 123,321(1966); NJMM 1977,25
Tatarskite, 70	32.1.8	-----	-----	ZVMO 92,697(1964)[AM 49,1151]a

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Tavistockite=Fluorapatite		41.7.9	II,906	AM 54,1742(1969)a
Tavorite, 86	41.5.9	-----	-----	AM 40,952(1955)
Taylorite, 59	28.2.1.3	28.2.1.3	II,400	
Tazheranite, 24	4.4.12	-----	-----	DANS 186,917(1969)[AM 55,318]a; SPC 14,922(1970)[MA 70-2597]a
Teallite, 9	2.9.5	3.5.11	I,439	MM 38,186(1972)
Teepelite, 52	25.1.4.1	26.1.3	II,372	PM 18,103(1949)[MA 11,241]a
Teineite, 72	34.2.2.2	33.1.2	II,635	AM 46,466(1961)a; AC 15,698(1962); AC 15,863(1962); TMPM 24,287(1977)
Telargpalite, 4	2.1.3	-----	-----	ZVMO 103,595(1974)[AM 60,489]a; IGR 17,817(1975)
Tellurantimony, 11	2.11.4.2	-----	-----	CM 12,55(1973)[AM 59,383]a
Tellurite, 23	4.4.6	4.5.4	I,593	ZK 116,345(1961); NW 52,155(1965); ZK 124,228(1967)
Tellurium, 3	1.3.2.3	1.2.2.3	I,138	AC 23,670(1967)
Tellurobismuthite, 11	2.11.4.1	2.1.1.1	I,160	AM 25,208(1940); AM 34,367(1949)
Tellurohauchecornite, 17	3.2.6.2	-----	-----	MM 43,877(1980)
Telluropalladinite, 14	2.16.6	-----	-----	CM 17,589(1979)
Temagamite, 6	2.6.5	-----	-----	CM 12,193(1974)[AM 60,947]a
Tengerite, 46	16b.1.3	-----	II,275	MA 75-3580)a
Tennantite, 17	3.3.6.1	3.2.4.2	I,379	ZK 123,1(1966)
Tenorite, 22	4.2.3	4.2.3	II,507	
Terlinguaite, 38	10.4.2	10.1.2	II,52	
Teremkovite=Owyheeite	-----	-----	-----	ZVMO 96,30(1967)[AM 54,990]a
Tertschite, 57	26.7.7	-----	-----	AM 39,849(1954)a
Teruggite, 58	27.1.6	-----	-----	AM 53,1815(1968); AM 58,1034(1973)
Teschemacherite, 41	13.1.3	13.1.3	II,137	AM 57,1304(1972)

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Testibiopalladite, 11	2.12.4.3	-----	-----	AM 61,182(1976)a
Tetradymite, 11	2.11.5.1	2.1.1.2	I,161	AM 34,370(1949); AM 60,994(1975)
Tetraferroplatinum, 2	1.2.1.2	-----	-----	CM 13,117(1975)[AM 61,341]a; CM 15,380(1977)
Tetragophosphite=Lazulite		-----	-----	AMG 2,371(1958)[AM 44,910]a
Tetrahedrite, 17	3.3.6.2	3.2.4.1	I,378	ZK 119,117(1963); ZK 119,437(1963); ZK 123,1(1966); NJMM 1971,337
Tetrataenite, 1	1.1.14	-----	-----	AM 65,624(1980)
Tetrawickmanite, 28	6.3.7.2	-----	-----	MR 4,24(1973)[AM 58,966]a; MR 9,41(1978)
Texasite, 65	30.2.7	-----	-----	AM 62,1006(1977); MR 9,215(1978)
Thadeuite, 87	41.5.15	-----	-----	AM 64,359(1979)
Thalcosite, 5	2.5.5.1	-----	-----	ZVMO 105,202(1976)[AM 62,596]a; IGR 19,108(1977); NJMA 138,122(1980)
Thalfenisite, 14	2.15.3	-----	-----	ZVMO 108,696(1979)[AM 66,219]a
Theisite, 85	41.1.2	-----	-----	<i>to be published</i> (S.A.Williams)
Thenardite, 59	28.2.3	28.2.4	II,404	BM 95,529(1972); CM 13,181(1975)
Thermonatrite, 43	15.1.1	15.1.1	II,224	
Thierschite=Whewellite	-----	-----	II,1099	AM 47,786(1962)
Thomsenolite, 40	11.6.6	11.5.4	II,116	AC 23,162(1967)
Thorbastnaesite, 46	16b.1.2	-----	-----	ZVMO 94,104(1965)[AM 50,1505]a
Thoreaulite, 35	8.3.10	8.3.7	I,802	AM 55,367(1970); AM 59,1020(1974); SPD 20,528(1975)
Thorianite, 25	5.1.1.2	5.1.2.2	I,620	USGS 1064,47(1958)
Thoro-aeschnite=thorian Aeschnite-(Ce)			-----	AM 50,2101(1965)a
Thorotungstite=Yttrotungstite		49.1.6	II,1097	AM 36,641(1951)a

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Thorutite, 34	8.3.4.2	-----	-----	ZVMO 87,201(1958)[AM 43,1007]a; AM 48,1419(1963)a; AC 21,974(1966)
Threadgoldite, 95	42.10.13.3	-----	-----	BM 102,338(1979)[AM 65,209]a; AC B35,3017(1979)
Thucholite=mixture of Uraninite and organic matter			-----	AM 15,499(1930); AM 38,802(1953)
Tiemannite, 7	2.8.4.2	2.6.2.3	I,217	AM 35,358(1950)
Tikhonenkovite, 40	11.6.16	-----	-----	DANS 156,345(1964)[AM 49,1774]a DANS 174,193(1967)[MA 71-125]a
Tilasite, 86	41.5.6.1	41.5.7	II,827	MR 1,68(1970); AM 57,1880(1972); MR 9,385(1978)
Tin, 1	1.1.26	1.1.9	I,126	AM 39,529(1954); NJMA 111,227(1969)
Tincal=Borax	-----	-----	II,339	
Tincalconite, 56	26.4.2	25.1.3	II,337	AM 58,523(1973)
Tinticite, 93	42.9.4	42.8.4	II,970	AM 47,1187(1962)
Tintinaite, 20	3.6.21.2	-----	-----	CM 9,371(1968)[AM 54,573]a
Titanochromite=titanian Chromite or chromian Ulvöspinel			-----	AM 55,2135(1970)a
Titanoeschynite=Aeschynite-(Ce)		-----	-----	AM 47,417(1962)a
Titanorhabdophane=Tundrite		-----	-----	AM 50,2097(1965)a
Tlalocite, 71	33.3.2	-----	-----	MM 40,221(1975)[AM 61,504]a
Tlapallite, 73	34.8.2	-----	-----	MM 42,183(1978)[AM 64,465]a
Tochilinite, 14	2.14.2	-----	-----	ZVMO 100,477(1971)[AM 57,1552]a SPC 17,667(1973)
Tocornalite, 36	9.1.6	-----	II,25	AM 58,348(1973)a
Toddite=mixture of Columbite and Samarskite			I,785	AM 47,1363(1962)
Todorokite, 30	7.4.1.1	4.5.1.4	I,573	AM 45,1167(1960); AM 64,1333(1979)a
Tomichite, 102	46.2.3.1	-----	-----	MM 43,453(1979)[AM 65,811]a
Torbernite, 81	40.2a.12.1	42.8.13.1	II,981	USGS 1064,170(1958); CE 24,254(1965)

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Torreyite, 66	31.1.4.1	31.1.4	II,575	AM 64,949(1979)
Transvaalite=Heterogenite-3R		-----	I,652	MM 33,253(1962)[AM 48,217]a
Treasurite, 19	3.6.3	-----	-----	NJMA 131,56(1977)[AM 64,243]a
Trechmannite, 20	3.7.2	3.5.8	I,432	AM 53,1208(1968); ZK 129,163(1969)
Trechmannite- α =Nowackiite		-----	I,432	NJMM 1975,431
Trevorite, 29	7.2.2.5	7.2.1.9	I,698	AM 54,1075(1969); AM 57,1524(1972)
Trichalcite=Tyrolite	-----	40.2.1.3	II,739	AM 42,123(1957)a
Trieuite=cuprian Heterogenite-3R		-----	I,652	MM 33,253(1962)[AM 48,217]a
Trigonite, 101	45.1.2	45.1.2	II,1032	TMPM 25,95(1978)
Triphylite, 75	38.1.1.1	38.1.1.1	II,665	AC 22,344(1967); SPD 22,347(1978)
Triplite, 87	41.6.1.2	41.6.2	II,849	AM 36,256(1951); ZK 130,1(1969)
Triploidite, 87	41.6.3.2	41.6.3.1	II,853	ZK 131,1(1970)
Trippkeite, 101	45.1.5	45.1.3	II,1034	TMPM 3,417(1951); TMPM 22,211(1975)
Tripuhyite, 100	44.2.1	44.1.3	II,1024	MM 30,100(1953); AM 54,299(1969)
Trögerite, 78	39.1.10	42.7.6	II,966	USGS 1064,187(1958); DANS 197,178(1971)[MA 76-874]a
Trogtalite, 11	2.12.1.5	-----	-----	NJMM 1955,133[AM 41,164]a
Troilite, 7	2.8.10.2	-----	I,233	AM 49,1350(1964); DANS 169,428(1966)[MA 76-874]a <i>Proc. Apollo 11 Lunar Conf. vol. I</i> 399(1970)
Trolleite, 89	41.11.2	-----	II,911	AM 50,267(1965)a; AM 59,974(1974)
Trona, 41	13.1.4	13.1.4	II,138	AC 9,82(1956); AM 44,274(1959)
Trudellite=mixture of Chloraluminite and Natroalunite		12.1.3	II,131	GSPP 750A,115(1972)[AM57,1317]a
Trüstedtite, 10	2.10.2.3	-----	-----	AM 50,520(1965)a
Tschermigite, 61	29.5.5.3	29.5.5.3	II,475	

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Tsumcorite, 80	40.2.9	-----	-----	NJMM 1971,305[AM 57,1558]a; AC 829,2789(1975); DA 27,375(1976)[MA 77-2175]a
Tsumebite, 98	43.4.2.1	42.2.2	II,918	AM 51,258(1966)
Tsumoite, 8	2.8.25	-----	-----	AM 63,1162(1978); AC 835,147(1979)
Tucanite=Scarbroite	-----	-----	-----	AM 50,1504(1965)a
Tucekite, 17	3.2.6.5	-----	-----	MM 42,278(1978)[AM 64,465]a; MM 43,873(1980)
Tugarinovite, 24	4.4.14	-----	-----	ZVMO 109,465(1980)[AM 66,438]a
Tulameenite, 2	1.2.1.4	-----	-----	CM 12,21(1974)[AM 59,383]a
Tundrite-(Ce), 48	17.1.9.1	-----	-----	AM 50,2097(1965)a; AM 53,1780(1968)a; SPC 14,307(1969)[MA 70-1599]a; DANS 211,426(1973)[AM 59,633]a
Tundrite-(Nd), 48	17.1.9.2	-----	-----	AM 53,1780(1968)a
Tunellite, 57	26.6.6.2	-----	-----	GSPP 424C,294(1961)[AM 47,416]a AM 49,1549(1964); NJMA 104,93(1965)
Tungstenite-2H, 13	2.12.19.3	2.9.6.2	I,331	SMPM 44,121(1963); CM 10,729(1970)
Tungstenite-3R, 13	2.12.20.3	-----	-----	CM 10,729(1970)
Tungstite, 24	4.5.2	4.6.5	I,605	AM 29,192(1944)
Tunisite, 45	16a.5.2	-----	-----	AM 54,1(1969); TMPM 28,65(1981)
Tunnerite=Woodruffite (?)		-----	I,572	AM 56,1840(1971)
Turanite, 85	41.4.4	41.5.2.5	II,818	
Turgite=Hematite with adsorbed water		-----	I,532	
Turquoise, 93	42.8.3.1	42.6.2.1	II,946	ZK 121,87(1964); AM 50,283(1965); MM 40,640(1976)
Tusuite=Calciocopiapite	-----	-----	-----	AM 47,807(1962)a
Tvalchrelidzeite, 21	3.8.3	-----	-----	DANS 225,911(1975)[AM 62,174]a
Tveitite, 36	9.2.1.3	-----	-----	LIT 10,81(1977)[AM 62,1060]a; MR 9,387(1978); AC A36,889(1980)

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Twinnite, 20	3.7.10	-----	-----	CM 9,191(1967)[AM 53,1424]a
Tychite, 48	17.1.1.1	17.1.1	II,294	AM 54,302(1969)
Tyretskite, 54	25.8.2.2	-----	-----	AM 53,2084(1968)
Tyrolite, 90	42.4.3	42.3.2	II,925	BM 79,7(1956)[AM 42,123]a
Tyrrellite, 10	2.10.1.4	-----	-----	AM 37,542(1952); CM 10,731(1970)
Tysonite=Fluocerite-(Ce)		-----	II,48	
Tyuyamunite, 82	40.2a.22.1	47.1.2	II,1045	AM 41,187(1956); USGS 1064,248(1958)
Uduminelite, poorly described phosphate(?) mineral, probably a mixture			-----	AM 58,806(1973)a
Udokanite=Antlerite(?)	-----	-----	-----	AM 56,2156(1971)a
Ufertite=Davidite	-----	-----	-----	AM 49,447(1964)a
Uhlignite, 35	8.4.3	7.4.1.2	I,735	
Uklonskovite, 67	31.7.2	-----	-----	AM 50,520(1965)a
Ulexite, 56	26.5.11	25.1.7	II,345	AM 44,712(1959); SCI 145,1295(1964); AM 63,160(1978)
Ullmannite, 12	2.12.7.3	2.9.2.3	I,301	MJJ 2,90(1957); AM 62,369(1977)
Ultrabasite=Diaphorite	-----	-----	I,416	AM 26,435(1941)
Ulvite=Ulvöspinel	-----	-----	-----	AM 40,138(1955)a
Ulvöspinel, 29	7.2.5.2	-----	-----	EG 48,677(1953)[AM 40,138]a; NJMA 94,993(1960); AC 18,857(1965); NJMA 120,31(1974); CM 18,339(1980)
Umangite, 5	2.5.1	2.4.2	I,194	AM 35,354(1950); SCI 152,345(1966)
Umohoite, 106	49.2.3	-----	-----	AM 42,657(1957); AM 44,920(1959); AM 44,1248(1959); MA 16,614(1964)a
Ungemachite, 67	31.7.3	31.4.2	II,596	
Upalite, 87	41.5.16	-----	-----	BM 102,333(1979)[AM 65,208]a

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Uralborite, 53	25.3.4	-----	-----	ZVMO 90,673(1961)[AM 47,1482]a; SPD 14,1044(1970) SPD 22,277(1977)
Uralolite, 91	42.6.6	-----	-----	ZVMO 93,156(1964)[AM 49,1776]a; MR 9,99(1978)
Uramphite, 81	40.2a.7	-----	-----	AM 44,464(1959)a
Uraninite, 25	5.1.1.1	5.1.2.1	I,611	USGS 1064,11(1958); MR 5,79(1974)
Uranmicrolite, 34	8.2.2.5	8.2.2	I,805	AM 62,403(1977)
Uranocircite I, 81	40.2a.3.1	42.8.13.3	II,987	USGS 1064,211(1958); CE 24,254(1965)
Uranocircite II, 81	40.2a.3.2	-----	-----	CE 24,254(1965)
Uranopilite, 66	31.2.4	31.1.10	II,581	AM 37,950(1952); USGS 1064,135(1958)
Uranospathite, 79	39.3.7.1	-----	II,990	MM 30,343(1954); MM 30,353(1954); MM 42,117(1978)[AM 64,465]a
Uranosphaerite, 26	5.9.1	5.3.3	I,631	
Uranospinite, 81	40.2a.2.1	42.8.13.6	II,990	USGS 1064,183(1958)
Uranothallite=Liebigite	-----	-----	II,240	AM 35,251(1950)
Uranpyrochlore, 33	8.2.1.7	-----	-----	AM 62,403(1977)
Urea, 108	50.4.6	-----	-----	AC 17,544(1964); MM 39,346(1973)[AM 59,874]a
Uricite, 108	50.4.4	-----	-----	MM 39,889(1974)
Urvantsevite, 13	2.12.25.3	-----	-----	ZVMO 105,704(1976)[AM 62,1260]a IGR 19,1351(1977)
Usovite, 40	11.6.14	-----	-----	ZVMO 96,63(1967)[AM 52,1582]a; AM 60,739(1975)a
Ustarasite, 21	3.8.12	-----	-----	AM 41,814(1956)a
Uvanite, 103	47.3.7	47.1.14	II,1056	USGS 1064,261(1958)
Uytenbogaardtite, 5	2.4.3.1	-----	-----	CM 16,651(1978)[AM 65,209]a
Uzbeckite=Volborthite	-----	-----	II,818	AM 50,2111(1965)a

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Vaesite, 11	2.12.1.2	-----	-----	AM 30,483(1945); AM 54,1075(1969); MJJ 5,431(1975)
Valentinite, 23	4.3.11	4.4.4	I,547	AC B30,458(1974)
Valleriite, 14	2.14.1	2.6.5.2	I,235	ZK 127,73(1968); AM 57,1037(1972)
Vanadinite, 88	41.8.4.3	41.7.2.3	II,895	CM 6,161(1958); BM 91,497(1968)
Vanalite, 103	47.3.13	-----	-----	ZVMO 91,307(1962)[AM 48,1180]a; ZVMO 100,523(1971)[AM 57,597]a
Vandenbrandeite, 25	5.3.2	5.3.4	I,632	AM 36,394(1951); USGS 1064,100(1958); <i>Cryst. Struct. Comm.</i> 6,53(1977)
Vandendriesscheite, 26	5.8.1.1	-----	-----	BSBG 70,8212(1947)[AM 33,384]a; USGS 1064,81(1958); AM 45,1026(1960); ZK 113,132(1960)
Vanoxite, 104	47.4.3	4.6.1	I,601	
Vanthoffite, 59	28.4.1	28.4.1	II,430	AC 17,1613(1964)
Vanuralite, 95	42.10.13.1	-----	-----	AM 48,1415(1963)a; BM 93,242(1970)[AM 56,639]a
Vanuranylite, 82	40.2a.26	-----	-----	ZVMO 94,437(1965)[AM 51,1548]a
Variscite, 84	40.4.1.1	40.3.1.1	II,756	AM 57,36(1972); AC B33,263(1977)
Varlamoffite, 23	4.4.2	-----	-----	AM 34,618(1949)a; MM 35,622(1965); ZVMO 99,232(1970)[MA 70-3411]a; MM 37,624(1970)
Varulite, 76	38.2.3.3	38.1.1.4	II,669	MM 43,227(1979)
Vashegyite, 95	42.11.2	42.9.3	II,999	MM 39,802(1974)
Vaterite, 41	14.1.2	14.1.2	II,181	MM 32,534(1960)[AM 45,1316]a; AC 16,770(1963); ZK 121,220(1965); ZK 128,183(1969); ZK 129,405(1969)
Vauquelinite, 74	36.1.1.1	36.1.1	II,650	ZK 126,433(1968); BM 103,469(1980)
Vauxite, 95	42.10.14.1	42.8.7	II,974	AM 53,1025(1968); AM 59,843(1974)

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Väyrynenite, 86	41.5.4.3	-----	-----	AM 39,848(1954); AM 41,371(1956)a; ZK 112,275(1959); ZK 117,16(1962); ZK 143,309(1976)
Veatchite, 56	26.5.9.1	25.1.8	II,348	AM 41,689(1956); AM 44,1141(1959); AM 45,1221(1960); AM 56,1934(1971)
Veatchite-A, 56	26.5.10	-----	-----	AM 64,362(1979)
Veenite, 19	3.5.11.2	-----	-----	CM 9,7(1967)[AM 53,1422]a
Velikite, 9	2.9.12	-----	-----	AM 62,1260(1977)a; SPC 22,99(1977)
Vernadite, 23	4.4.9	-----	-----	AM 31,85(1946)a; AM 64,1334(1979)a; IGR 22,58(1980)
Vernadskite=Antlerite	-----	31.5.5	II,607	AM 46,146(1961)
Versiliaite, 101	45.1.10	-----	-----	AM 64,1230(1979); AM 64,1235(1979)
Vesignieite, 87	41.5.12	-----	-----	AM 40,942(1955)a; MA 78-897)a
Veszelyite, 90	42.1.1.1	42.2.1	II,916	AM 59,573(1974)
Vibertite=Bassanite	-----	-----	-----	AM 43,791(1958)a
Vigezzite, 35	8.3.7.1	-----	-----	MM 43,459(1979)[AM 65,812]a
Viitaniemiite, 85	41.3.6	-----	-----	BGSF 314,51(1981)
Vikingite, 19	3.6.10	-----	-----	NJMA 131,56(1977)[AM 64,243]a
Villamaninite, 11	2.12.2.1	-----	I,290	MM 33,169(1962)[AM 47,1222]a; MM 41,545(1977)
Villiaumite, 36	9.1.1.3	9.1.1.3	II,10	NJMM 1981,111
Vimsite, 52	25.1.5	-----	-----	AM 54,1219(1969)a; SPD 13,974(1969)
Vincentite, 4	2.2.6	-----	-----	MM 39,525(1974)[AM 59,1332]a
Violarite, 10	2.10.2.2	2.7.1.4	I,262	EG 69,391(1974)[MA 76-842]a
Viseite, 99	43.5.9	-----	-----	AM 37,609(1952); MM 41,437(1977)[AM 63,796]a
Vitusite, 75	38.1.8	-----	-----	NJMA 137,42(1979)[AM 65,812]a

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Vivianite, 83	40.3.6.1	40.2.15.1	II,742	AC 3,1(1950); NJMA 137,208(1979); BM 103,135(1980); AM 65,361(1980)
Vladimirite, 78	39.2.2.1	-----	-----	BM 87,169(1964)[AM 50,813]a; ZVMO 99,362(1970)[AM 56,639]a
Voglite, 43	15.3.5	15.2.5	II,237	<i>J. Appl. Crystallogr.</i> 12,616(1979)
Volborthite, 83	40.3.9	41.5.3	II,818	DANS 181,967(1968)[MA 73-1323]a AM 59,372(1974)
Volgerite=Stibiconite	-----	-----	I,598	AM 37,982(1952)
Volkovite,prob.=Ginorite		-----	-----	AM 40,551(1955)a
Volkovskite, 53	25.6.3	-----	-----	ZVMO 95,45(1966)[AM 51,1550]a
Voltaite, 63	29.9.1	29.5.2	II,464	NW 1970,670; TMPM 18,185(1972)
Voltzite=Wurtzite mixed with an organometallic Zinc compound		2.6.4.3	I,230	AM 52,617(1967)
Volynskite, 9	2.9.6	-----	-----	AM 49,818(1964)a; AM 51,531(1966)a
Vonsenite, 51	24.2.2.2	-----	II,322	AM 46,786(1961); NJMM 1974,95
Vrbaite, 21	3.7.19	3.8.13	I,484	BM 90,185(1967)[AM 53,351]a; NJMM 1967,43; NJMM 1968,69[AM 56,361]a; ZK 134,360(1971)
Vredenbergite=mixture of Jacobsite and Hausmannite			I,707	
Vulcanite, 7	2.8.13	-----	-----	AM 46,258(1961)
Vysotskite, 7	2.8.7.2	-----	-----	ZVMO 91,718(1962)[AM 48,708]a; AM 63,832(1978)
Wad=general term for soft, massive Mn oxides of low density		4.5.1.3	I,566	
Wagnerite, 87	41.6.2	41.6.1	II,845	ANLR 43,212(1967)[MA 70-199]a; NJMM 1976,159; GSPP 955,1(1976)
Wairauite, 1	1.1.23	-----	-----	MM 33,942(1964)[AM 50,521]a
Wakabayashilite, 15	2.16.27	-----	-----	AM 57,1311(1972)a; CM 13,418(1975)

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Wakefieldite, 77	38.4.8.3	-----	-----	AC B24,292(1968); AM 55,1446(1970)a; AM 56,395(1971)
Wallisite, 19	3.5.10.1	-----	-----	ZK 127,349(1968); AM 54,1497(1969)a; SMPM 58,215(1978)
Walpurgite, 84	40.5.3	41.4.1	II,796	USGS 1064,239(1958)
Waltherite=Walpurgite	-----	16.1.9	II,262	CE 17,341(1955)[AM 41,960]a
Wardite, 92	42.6.8.2	42.5.4	II,940	AM 37,849(1952); MM 37,598(1970)
Wardsmithite, 57	26.7.9	-----	-----	AM 55,349(1970)
Warikahnite, 82	40.3.1	-----	-----	NJMM 1979,389[AM 65,408]a; TPM 27,187(1980)
Warrenite=Owyheeite or Jamesonite		-----	I,476	
Warthaite=mixture of Cosalite and Galena			I,401	AM 49,1501(1963)a
Warwickite, 51	24.2.1	24.1.4	II,326	AM 59,985(1974)
Wattevillite, 60	29.3.4	29.3.6	II,452	
Wavellite, 93	42.9.2	42.7.4	II,962	ZK 127,21(1968)
Waylandite, 86	41.5.11.1	-----	-----	AM 48,216(1963)a
Weberite, 40	11.6.13	11.5.11	II,127	TMPM 25,57(1978)
Weddellite, 107	50.1.2	50.1.2	II,1101	AC 18,917(1965); MM 34,256(1965); AM 65,327(1980)
Wegscheiderite, 41	13.1.6	-----	-----	AM 47,415(1962)a; AM 48,400(1963); AM 48,404(1963)
Wehrlite=mixture of Hessite and Bi_4Te_3		2.1.1.5	I,167	AM 63,1162(1978)
Weibullite, 20	3.6.20	3.8.4	I,473	AM 56,639(1971)a; AM 62,397(1977)a; CM 18,1(1980); AM 65,789(1980)
Weibyeite=mixture of Bastnaesite and Ancylyte			II,293	AM 49,1154(1964)a
Weilerite, 97	43.4.1.8	-----	-----	JBLW 4,7(1961)[AM 47,415]a; TPM 11,121(1966)[AM 52,1588]a

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Weilite, 75	37.1.1.2	-----	-----	BM 86,368(1963)[AM 49,816]a; AC B26,403(1970)
Weinschenkite=Churchite		40.3.3	II,771	AM 39,851(1954)
Weissbergite, 20	3.7.7	-----	-----	AM 63,720(1979); ZK 150,169(1979)
Weissite, 14	2.16.15.1	2.5.3	I,199	AM 34,357(1949); ZVMO 108,216(1979)[MA 80-3509]a
Welinite, 32	7.7.16	-----	-----	AMG 4,407(1967)[AM 53,1064]a; AMG 4,459(1968)
Weloganite, 43	15.3.4.3	-----	-----	CM 9,468(1968)[AM 54,576]a; CM 13,22(1975); CM 16,335(1978)
Wenzelite=Hureaulite	-----	-----	II,702	NJMM 1954,166[AM 40,370]a
Wermilandite, 47	16b.5.10	-----	-----	LIT 4,213(1971)[AM 57,327]a
Westerveldite, 8	2.8.23	-----	-----	AM 57,354(1972); NJMA 130,208(1977)
Westgrenite=Bismutomicrolite		-----	-----	AM 48,215(1963)a; AM 62,403(1977)
Wherryite, 70	32.1.4	32.1.3	II,632	BM 74,528(1951); AM 55,505(1970)
Whewellite, 107	50.1.1	50.1.1	II,1099	AM 39,208(1954); AM 53,455(1968); AM 65,327(1980)
Whiteite-(Ca), 94	42.10.2.2	-----	-----	MM 42,309(1978)[AM 64,465]a
Whiteite-(Mn), 94	42.10.2.3	-----	-----	MM 42,309(1978)[AM 64,465]a
Whitlockite, 76	38.3.4.4	38.3.1	II,684	AM 60,120(1975); MM 41,91(1977); EPSL 35,347(1977)
Whitmoreite, 95	42.10.18.1	-----	-----	AM 59,900(1974)
Whitneyite=arsenian Copper		-----	I,102	
Wickmanite, 28	6.3.6.1	-----	-----	AC 13,601(1960); AMG 4,395(1967)[AM 53,1063]a; NJMM 1970,89[AM 56,1488]a; CM 15,437(1977)
Widenmannite, 41	14.1.5	-----	-----	JLBW 4,7(1961)[AM 47,415]a; SMPM 56,167(1976)

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Wightmanite, 55	26.1.2	-----	-----	AM 47,718(1962); NAT 239,28(1972); AM 59,985(1974)
Wiikite=mixture of Yttropyrochlore and Euxenite			I,801	AM 47,812(1962); AM 62,403(1977)
Wilcoxite, 68	31.9.9	-----	-----	<i>to be published</i> (S.A.Williams)
Wilkeite, 88	41.8.2.4	41.7.7	II,905	
Wilkmanite, 10	2.10.4	-----	-----	AM 50,519(1965)a
Willyamite, 12	2.12.7.4	-----	I,302	AM 56,361(1971)a
Winklerite=mixture of Heterogenite and Malachite			I,651	MM 33,253(1962)[AM 48,217]a
Winstanleyite, 73	34.5.2	-----	-----	MM 43,453(1979)[AM 65,810]a
Wiserite, 54	25.8.1	-----	II,245	SMPM 39,85(1959)[AM 45,258]a
Witherite, 41	14.1.3.2	14.1.3.2	II,194	AM 56,758(1971); AM 64,742(1979)
Wittichenite, 18	3.4.6	3.2.3	I,373	TMPM 18,312(1972); AC B29,2528(1973); MM 43,109(1979)
Wittite, 19	3.6.6.2	3.6.6	I,451	EG 70,369(1975); AM 61,839(1976); AM 62,397(1977)a; AM 65,789(1980)
Wodginite, 33	8.1.8	-----	-----	CM 7,390(1962)[AM 48,1417]a; CM 8,461(1966); AM 59,1040(1974); CM 14,550(1976)
Wolfeite, 87	41.6.3.1	41.6.3.2	II,853	
Wolframite=intermediate member of Ferberite-Huebnerite series		48.1.1.2	II,1064	
Wolframoixiolite=tungstenian Ixiolite			-----	AM 62,1267(1977)a
Wölsendorfite, 25	5.4.3.2	-----	-----	AM 42,919(1957)a; ZK 113,132(1960); ZVMO 103,718(1974)[MA 75-3551]a
Woodfordite=Ettringite	-----	-----	-----	AM 45,1275(1960)
Woodhouseite, 97	43.4.1.7	43.1.1.5	II,1006	NJMM 1971,241; NJMM 1977,54
Woodruffite, 30	7.4.1.2	-----	-----	AM 38,761(1953)

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Woodwardite, 66	31.2.2	31.1.8	II,580	MM 40,644(1976)[AM 62,599]a
Wroewolfeite, 66	31.4.2	-----	-----	MM 40,1(1975)[AM 61,179]a
Wulfenite, 105	48.1.4.1	48.1.4.1	II,1081	ZK 121,158(1965); AM 51,1212(1966)
Wurtzite, 7	2.8.9.1	2.6.4.1	I,227	AM 62,540(1977)
Wüstite, 22	4.2.1.6	-----	I,504	AC 13,140(1960); NJMM 1960,150; MM 35,664(1966); DANS 168,1390(1960)[MA 70-708]a NJMM 1971,65
Wyartite, 47	16b.5.7	-----	-----	BM 82,80(1959)[AM 44,908]a
Wyllieite, 76	38.2.4.2	-----	-----	MM 43,227(1979)[AM 65,810]a
Xantharsenite=Sarkinite		-----	II,858	
Xanthosite, 76	38.3.2	-----	-----	MM 35,72(1965)[AM 50,2108]a
Xanthoconite, 18	3.4.2.1	3.2.2.3	I,371	MM 29,346(1950); AC B24,77(1968)
Xanthoxenite, 95	42.10.15	42.8.10	II,977	MM 42,309(1978)[AM 64,466]a
Xenotime, 77	38.4.8.1	38.4.1	II,688	MM 39,145(1973)
Xiangjiangite, 99	43.5.6	-----	-----	AM 64,466(1979)a
Xingzhongite, 7	2.8.6	-----	-----	AM 61,185(1976)a; AM 65,408(1980)a
Xocomecatlite, 71	33.1.2	-----	-----	MM 40,221(1975)[AM 61,504]a
Yanzhongite=Kotulskite	-----	-----	-----	AM 61,185(1976)a
Yaroslavite, 40	11.6.15	-----	-----	ZVMO 95,39(1966)[AM 51,1820]a
Yavapaiite, 59	28.3.4	-----	-----	AM 44,1105(1959); AM 56,1917(1971)
Yeatmanite, 100	44.3.7	-----	-----	AM 23,527(1938); AM 51,1494(1966); NJMA 127,47(1976)[AM 62,396]a; AM 65,196(1980)
Yedlinite, 38	10.6.3	-----	-----	AM 59,1157(1974); AM 59,1160(1974)
Yenerite=Boulangerite	-----	-----	-----	AM 33,704(1948)

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Yenshanite=Nickel-free Vysotskite		-----	-----	AM 60,737(1975)a
Yixunite=indian Platinum		-----	-----	AM 61,185(1976)a; AM 65,408(1980)a
Yttrobetafite, 34	8.2.3.2	-----	-----	AM 62,403(1977)
Yttrocerite=cerian Fluorite		-----	II,33	
Yttrocolumbite, 33	8.1.3.2	-----	-----	AM 25,155(1940)a
Yttrocrasite, 35	8.3.8.4	8.3.4	I,793	AM 62,1009(1977)
Yttromicrolite, 34	8.2.2.3	-----	I,779	AM 64,890(1979)
Ytropyrochlore, 33	8.2.1.4	-----	-----	AM 43,380(1958); AM 43,797(1958); AM 62,403(1977)
Yttrotantalite, 33	8.1.3.1	8.1.4	I,763	
Yttrotungstite, 105	48.3.3.2	-----	-----	AM 36,641(1951)a; MM 38,261(1971)
Yukonite, 92	42.7.5	-----	II,954	
Zaherite, 68	31.10.3	-----	-----	AM 62,1125(1977)
Zäirite, 86	41.5.11.3	-----	-----	BM 98,351(1975)[AM 62,174]a
Zapatalite, 96	42.12.8	-----	-----	MM 38,541(1972)[AM 57,1911]a
Zaratite, 47	16b.5.5	16.1.2	II,245	
Zavaritskite, 37	10.2.1.1	-----	-----	DANS 146,680(1962)[AM 48,210]a
Zellerite, 43	15.3.1.1	-----	-----	AM 51,1567(1966)
Zemannite, 72	34.3.2.1	-----	-----	SCI 133,2017(1966); TMPM 12,108(1967); CM 10,139(1969)[AM 55,1448]a
Zeugite=carbonatian Whitlockite		-----	II,686	
Zeunerite, 81	40.2a.13.1	42.8.13.5	II,989	AM 42,905(1957); MJJ 2,134(1957); USGS 1064,191(1958)
Zeyringite=mixture of Aragonite and Aurichalcite			-----	AM 48,1184(1963)a
Zhemchuzhnikovite, 107	50.1.7.2	-----	-----	AM 47,1483(1962)a; AM 49,442(1964)a
Ziesite, 77	38.5.3.2	-----	-----	AM 65,1146(1980)

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Zinc, 1	1.1.10	1.1.10	I,127	CM 6,692(1961); AM 55,1019(1970); ZVMO 100,731(1971)[MA 72-3265]a
Zincaluminite, 66	31.2.3	31.1.7	II,579	
Zinc blende=Sphalerite	-----	-----	I,210	
Zinc högbomite=zincian Högbomite		-----	-----	AM 38,426(1959)a
Zincite, 22	4.2.2.1	4.2.2.1	I,127	CM 6,642(1961)
Zinclavendulan=zincian Lavendulan		-----	-----	AM 44,1323(1959)a
Zinc-melanterite, 62	29.6.10.3	-----	II,508	
Zincobotryogen, 68	31.9.6.2	-----	-----	AM 40,1517(1961); AM 49,1776(1964)a; AC B24,760(1968); IGR 10,917(1968)
Zincocopiapite, 69	31.10.6.6	-----	-----	AM 49,1777(1964)a; IGR 10,917(1968)
Zincrosasite, 45	16a.3.1.4	-----	-----	AM 44,1323(1959)a
Zincselenide=Stilleite	-----	-----	I,215	
Zinc-zippeite, 69	31.10.4.5	-----	-----	CM 14,428(1976); MM 43,539(1979)
Zinkenite, 21	3.8.1	3.8.8	I,476	ZK 141,79(1975); BM 99,351(1976)
Zippeite, 69	31.10.4.1	31.4.4	II,598	CM 14,428(1976); MM 43,539(1979)
Zirconolite=Zirkelite	-----	-----	-----	AM 42,581(1957)a; ZVMO 103,368(1974)[AM 60,341]a
Zircosulfate, 63	29.9.3	-----	-----	ZVMO 94,530(1965)[AM 51,529]a
Zirkelite, 34	8.2.5	7.6.2	I,740	DANS 110,845(1956)[AM 42,581]a AM 62,403(1977)
Zirklerite, 38	10.6.5	10.2.9	II,87	
Zvyagintsevite, 2	1.2.14	-----	-----	CM 8,541(1966)[AM 52,1587]a; AM 52,299(1967)a
Zwieselite, 87	41.6.1.1	-----	II,849	ZK 130,1(1969)
Zykaite, 99	43.5.3.2	-----	-----	NJMM 1978,134[AM 63,1285]a

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ADDENDUM				
Aldermanite, 96	42.12.1	-----	-----	MM 44,59(1981)
Alumpharmacosiderite, 92	42.7.1.2	-----	-----	NJMM 1981,97
Anthoinite	48.3.4	-----	II,1097	add: MR 12,81(1981)
Bartonite	2.16.25	-----	-----	add: AM 66,369(1981); AM 66,379(1981)
Benjaminite	3.8.8	3.5.12	I,441	add: NJMM 1981,69
Borcarite, 58	27.1.3	-----	-----	ZVMO 94,180(1965)[AM 50,2097]a; SPD 20,799(1976)[MA 77-1501]a
Brenkite	16a.3.5	-----	-----	add: TPM 27,261(1980)
Choloalite, 72	34.2.4	-----	-----	MM 44,55(1981)
Colquiriite, 40	11.6.3	-----	-----	TPM 27,275(1980)
Cuzticite, 71	33.2.3	-----	-----	<i>to be published</i> (S.A.Williams)
Eztlite, 73	34.8.5	-----	-----	<i>to be published</i> (S.A.Williams)
Ferritungstite	49.2.2	49.1.3	II,1093	add: MR 12,81(1981)
Fluoborite, 52	25.1.2	26.1.1	II,369	AM 48,679(1963); TPM 21,94(1974); AM 61,88(1976)
Geerite, 15	2.16.18	-----	-----	CM 18,519(1980)
Giniite	42.10.6	-----	-----	add: NJMM 1981,561
Gormanite, 93	42.8.2.2	-----	-----	<i>to be published</i> (B.D.Sturman)
Kuznetsovite, 38	10.6.11	-----	-----	DANS 255,963(1980)
Manganochromite, 29	7.2.3.2	-----	-----	AM 63,1166(1978)
Mapimite, 92	42.7.6	-----	-----	MM 43,1064(1980)a
Mcguinnessite, 45	16a.3.1.5	-----	-----	MR 12,143(1981)
Mpororoite	49.2.5	-----	-----	add: MR 12,81(1981)
Natrophosphate	39.3.1	-----	-----	add: <i>Min. Zhurnal</i> 2,88(1980)
Nukundamite	2.9.16	-----	-----	add: AM 66,398(1981)
Otjisumeite, 31	7.7.11	-----	-----	NJMM 1981,49

MINERAL NAME, page	REVISED DANA NUMBER	PREVIOUS DANA NUMBER	DANA REFERENCE	REFERENCES
Pararealgar, 8	2.8.28.2	-----	-----	CM 18,525(1980)
Parascholzite, 80	40.2.5	-----	-----	<i>to be published</i> (B.D.Sturman)
Picropharmacolite	39.2.4	40.2.14	II,740	add: AM 66,385(1981)
Retzian	41.3.5	-----	-----	add: <i>personal communication</i> (P.J.Dunn)
Shahovite, 100	44.3.9	-----	-----	<i>Geol. i Geofiz.</i> 1980,128
Spionkopite, 15	2.16.19	-----	-----	CM 18,511(1980)
Stistaite	2.8.31	-----	-----	add: NJMM 1981,117
Suessite, 1	1.1.7	-----	-----	<i>Meteoritics</i> 15,312(1980)
Telargpalite	2.1.3	-----	-----	add: DANS 243,1265(1980)
Whewellite	50.1.1	50.1.1	II,1099	add: NJMM 1981,81
Wicksite, 80	40.2.11	-----	-----	<i>to be published</i> (B.D.Sturman)
Yarrowite, 6	2.7.4	-----	-----	CM 18,511(1980)
Yttrotungstite	48.3.3.2	-----	-----	add: MR 12,81(1981)

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