

VALID UNNAMED MINERALS, UPDATE 2012-01

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Users making reference to this compilation should refer to the primary source (Dorian G.W. Smith & Ernest H. Nickel (2007): *A System of Codification for Unnamed Minerals: Report of the Subcommittee for Unnamed Minerals of the IMA Commission on New Minerals, Nomenclature and Classification. Canadian Mineralogist v. 45, p.983-1055*), and to this website. Additions and changes to the original publication are shown in blue print; deletions are "greyed out and struck through".

<u>IMA Code</u>	<u>Primary Reference</u>	<u>Secondary Reference</u>	<u>Comments</u>
UM1886-01-OC:HNNa	*Bull. Soc. Minéral. 9, 51	Dana (7th) 2, 1104	Probably an oxalate but if not is otherwise similar to lecontite
UM1892-01-F:CaY	*Am. J. Sci. 44, 386	Dana (7th) 2, 37	Low analytical total because F not reported; unlike any other known fluoride
UM1910-01-PO:CaFeMg	US Geol. Surv. Bull. 419, 1	Am. Mineral. 34, 513	(Ca,Fe,Mg)Fe ³⁺ 2(PO ₄) ₂ (OH) ₂ ·2H ₂ O; some similarities to mitridalite
UM1913-01-AsO:CaCuV	*Am. J. Sci. 35, 441	Dana (7th) 2, 818	Possibly As-bearing calciovolborthite
UM1922-01-O:CuHUV	*Izv. Ross. Akad. Nauk [6], 16, 505	Dana (7th) 2, 1048	Some similarities to sengierite
UM1926-01-O:HNbTaTiU	*Bol. Inst. Brasil Sc., 2, 56	Dana (7th) 1, 807	(Y,Er,U,Th,Fe ³⁺) ₃ (Ti,Nb,Ta) ₁₀ O ₂₆ ; some similarities to samarskite-(Y)
UM1927-01-O:CaTaTiW	*Gornyi Zhurn. 12, 740	Dana (7th) 1, 741	No chemically similar minerals are known
UM1936-01-F:AlCaHMgNaS	*Accad. Sci. Lett. Arti, Modena Att. [5], 1, 33	Dana (7th) 2, 127	(Na,K) ₉ (Mg,Ca) ₇ (Al,Fe) ₁₃ [(S,Si)O ₄](F,Cl) ₃₆ (OH) ₁₀ ·11H ₂ O
UM1940-01-SO:AlHP	Am. Mineral. 25, 213	Dana (7th) 2, 634	Al ₄ (SO ₃) ₄ (P ₂ O ₅)O ₆ ·24H ₂ O; resembles alunogen in appearance but has some compositional similarities to sanjuanite
UM1941-01-F:AlCaHMgNa	*Dokl. Akad. Nauk SSSR 33, 140	Am. Mineral. 28, 283	NaCaMgAl ₃ F ₁₄ ·4H ₂ O; later, the name "boldyrevite" was proposed but never formally accepted by the IMA; some gross compositional similarities to ralstonite
UM1941-02-SiO:AlCaFeMn	*Mad. Tet. Arama Enst. Mecmuasi 6, 208	Mineral. Abst. 10, 123	(Fe,Mn) ₈ Al ₄ Si ₁₃ O ₄₀
UM1943-01-AsO:Bi	Am. Mineral. 28, 536	Dana (7th) 2, 907	Perhaps a polymorph of rooseveltite
UM1943-02-OH:Bi	Am. Mineral. 28, 521	Mineral. Abst. 9, 5	Bi(OH) ₃ ; diffraction pattern not similar to any Bi ₂ O ₃ polymorph
UM1948-01-O:HMn	Am. Mineral. 33, 695; 35, 485	Hey (1962), 7.2.4a	(Mn,Fe,Al,Na)Mn ₃ O ₇ ; might be disordered cryptomelane; also some similarities to busierite and birnessite
UM1949-01-PO:Fe	Am. Mineral. 34, 513		FePO ₄ ; referred to as a "dufrenite-like mineral"
UM1949-02-PO:FeMn	Am. Mineral. 34, 513		Referred to as a "dufrenite-like mineral"; later described more fully as UM1982-08-PO:FeHMn; transferred to Invalid list
UM1949-03-PO:FeMn	Am. Mineral. 34, 513	ICDD 15-0442	Dufrenite-like mineral". No chemical analysis; perhaps kidwellite; X-ray powder diffraction pattern later reported as mixture; transferred to Invalid list
UM1954-01-O:HU	Am. Mineral. 39, 1018		UO ₃ ·2H ₂ O; alteration product of ianthinite; possibly a polymorph of (para)schoepite.
UM1954-02-SiO:HKMnNa	*Trud. Mineral. Muz. Akad. Nauk SSSR 6, 117.	Mineral. Abst. 13, 209.	(K,Na) ₄ Mn ₄ Si ₆ O ₂₂ ·H ₂ O; similar to chingluisite and perhaps the K analogue of that mineral; but note differences in Ti content
UM1955-01-PO:FeHMn	Am. Mineral. 40, 50		Mineral "B"; XRD pattern similar to that of ernstite
UM1955-02-SiO:AlCaFeHMg	*Trud. Mineral. Muz. Akad. Nauk SSSR 7, 70.	Mineral. Abst. 13, 209.	(Ca,Fe ²⁺)(Fe ³⁺ ,Mg,Al) ₂ [Si ₂ Al ₂]O ₁₀ (OH) ₂ ; perhaps an Fe-analogue of clintonite
UM1955-03-SiO:FeMn	*Smirnov (1955), 18	Am. Mineral. 43, 793	(Mn,Fe,Mg) ₃ Si ₂ O ₇ ; composition is analogous to synthetic Mn ₃ Si ₂ O ₇ (Glaser, Centralbl. Mineral. Abt. A, 81) after removing calcite & bustamite impurities; also similar to tephroite
UM1955-04-OH:U	Bull. Soc. fr. Minéral. Crist. 78, 1		UO ₂ ·84·H ₂ O
UM1956-01-O:HPbU	Am. Mineral. 41, 539		Mineral "C"; XRD pattern similar to wölsendorfit
UM1956-02-SiO:CaHU	Am. Mineral. 41, 539		CaUSiO ₆ ·H ₂ O; mineral "B"; the Ca-analogue of kasolite
UM1957-01-SiO:U	Am. Mineral. 42, 222		Mineral "X"; X-ray powder diffraction and optical data
UM1957-02-SiO:AlFeHMnREE	*Sci. Rept. Tohoku Univ., ser.3, 5, 345	Eur. J. Mineral. 18, 569	Mn ²⁺ (REE)Al ₃ AlFe ²⁺ Si ₄ O ₄ Si ₂ O ₇ (OH); unnamed member of allanite subgroup of the epidote group
UM1958-01-PO:CaMn	Am. Mineral. 43, 1148		Mineral "B"; possibly a member of the wylleite group
UM1958-02-PO:Fe	Am. Mineral. 43, 1148		Mineral "A"; some similarity to azovskite; incomplete optical properties and X-ray powder diffraction data
UM1958-03-SiO:AlCaFeKNa	*Akad. Nauk SSSR, Kola Filial 1 (1958), 146	Am. Mineral. 44, 909.	(K,Na) ₄ Ca ₂ (Al,Fe)(Si,Al) ₆ (O,OH,F) ₁₈ ·0.6NaCl; mineral "no. 3"; later named delhayelite: Vopr. Geol. Mineral. Kol'sk. P-va, #1 (1959), 146; moved to Invalid list
UM1958-04-SiO:AlHK	*Akad. Nauk SSSR, Kola Filial 1 (1958), 146	Am. Mineral. 44, 909	K ₂ Al ₃ Si ₇ O ₁₈ (OH,F) ₃ ; mineral "no. 4"
UM1958-05-AsO:HU	Jahr. geol. Landes. Baden-Wurtemberg 31, 17	Aufschluss 9, 279	(UO ₂)H(AsO ₃)·H ₂ O; mineral "D"
UM1959-02-CO:HNa	*Semenov (1959)	Mineral. Abst. 15, 363	Na ₂ CO ₃ ·H ₂ O; has the composition of the thermanatrite, but optical properties different
UM1959-03-S:CuGeNi	Fortsch. Mineral. 37, 87	Mineral. Abst. 15, 290	(Ni,Cu) ₂ GeS ₄ ; mineral "S"
UM1959-04-SiO:AlH	*Zap. Vses. Mineral. Ob. 88, 554	Mineral. Abst. 14, 501	"Analogue of allevardite"; possibly rectorite
UM1959-05-SiO:FeHTH	US Geol. Surv. Bull. 1072-H, 491	Mineral. Abst. 15, 45	"A hydrated thortite-like mineral"
UM1960-01-AsO:CaHPbU	CSIRO Minerag. Invest. Tech. Paper 2, 44	ICDD 15-0530	Mineral "D"; X-ray powder diffraction and optical data; may be related to zeunerite

UM1960-02-F:KMg	*Bull. Acad. Roy. Sci. Outre-Mer 6, 964	Hey (1963) 8.4.1b	No X-ray powder diffraction data but composition is unique; Povarennykh used the name "kamaflagite" for this compound; formula: KMgF ₃
UM1960-03-O:CaFeHMgPbU UM1960-04-O:HU	CSIRO Minerag. Invest. Tech. Paper 2, 47 CSIRO Minerag. Invest. Tech. Paper 2, 39	ICDD 15-0444 ICDD 15-0569	Mineral "G"; X-ray powder data. Minor Al, As, Cu, Si, Th & V reported Mineral "B"; X-ray powder data; minor Ca and trace Al, Cu, Fe, Si & Th; identified later under the name heisenbergite: Neues Jh. Mineral. Abh. 189 (2) (2012), 117
UM1960-05-PO:CaFeHU UM1960-06-SiO:Be UM1960-07-SiO:CaHU UM1960-08-SiOPO:CaCeFeHLA UM1960-09-VO:Ca	CSIRO Minerag. Invest. Tech. Paper 2, 48 *Dokl. Earth Sci. 133, 812 CSIRO Minerag. Invest. Tech. Paper 2, 37 Mineral. Mag. 32, 389 CSIRO Minerag. Invest. Tech. Paper 2, 46	ICDD 15-0443 Am. Mineral. 46, 241 ICDD 15-0529 ICDD 15-0609	Mineral "H"; unique X-ray powder diffraction data X-ray powder data unlike those for any other beryllium silicate Mineral "A"; X-ray powder diffraction and optical data X-ray powder data (not reported) indicate the structure may be similar to monazite Mineral "F"; X-ray powder diffraction data; minor U, Pb, Mg & Si reported
UM1961-01-As:IrOsPt UM1961-02-AsO:FePbZn UM1961-03-Bi:Pd	Mineral. Mag. 32, 833 *Jahr. geol. Landes. Baden-Wurtemberg 4, 7 *Geol. Rudn. Mest. (1961) (5), 64	Am. Mineral. 47, 418. Am. Mineral. 47, 810	Pt(Ir,Os) ₂ As ₄ ; no X-ray powder data but composition is unique Qualitative compositional, and optical data only; might be zincgartrellite Pd ₅ Bi ₂ ; X-ray powder diffraction and some chemical data; d-values correspond to those of sobolevskite
UM1961-04-E:CuPtSn	Mineral. Mag. 32, 833		No X-ray powder data but composition is unique; suggested formula: Pt ₄ Cu ₄ Sn ₃ ; but perhaps tatyanaite
UM1961-05-F:OPb UM1961-06-O:Mn UM1961-07-S:FeNi UM1961-08-Sb:BiPd UM1961-09-Sb:CuPd	Science 133, 2017 Am. Mineral. 46, 355 Mineral. Mag. 32, 833. Mineral. Mag. 32, 833 Mineral. Mag. 32, 833	Am. Mineral. 46, 1021	X-ray powder diffraction data identical to synthetic Pb ₂ OF ₂ X-ray powder diffraction and chemical data; possibly related to romanechite (Fe,Ni) ₂ S; no X-ray powder diffraction data but composition is unique Pd ₅ Sb ₄ Bi ₃ ; or perhaps a Bi-rich sudburyite; no X-ray data; transferred to Invalid list Pd ₂ CuSb; no X-ray powder diffraction data; composition is similar to UM1990-48-Sb:CuPd but optics are different Pd ₅ CuSb ₃ ; no X-ray powder diffraction data but composition is unique Pd ₅ Bi ₂ Te ₆
UM1961-10-Sb:CuPd UM1961-11-Te:BiPd	Mineral. Mag. 32, 833 *Geol. Rudn. Mest. (1961) (5), 64	Am. Mineral. 47, 809	
UM1962-01-CO:AlCaH	*Kwart. Geol. Warsaw 5, 539-570	Mineral. Abst. 17, 766	A polymorph given a temporary, working name "beta-alumohydrocalcite"; this name was rejected by the IMA
UM1962-02-SiO:AlCaFeMgTi	Geochim. Cosmochim. Acta 26, 1085		"Mokoia SW"; in the Mokoia carbonaceous chondrite; said to resemble terrestrial chlorites or serpentines
UM1962-03-SiO:AlFeMg	Geochim. Cosmochim. Acta 26, 1085		"Mokoia HT"; in the Mokoia carbonaceous chondrite; said to resemble terrestrial chlorites or serpentines
UM1962-04-SiO:AlFeMg	Geochim. Cosmochim. Acta 26, 1085		"Murray F"; in the Mighei carbonaceous chondrite; said to resemble terrestrial chlorites or serpentines
UM1962-05-SiO:AlFeMgNi	Geochim. Cosmochim. Acta 26, 1085		"Haripura M"; in the Haripura carbonaceous chondrite; said to resemble terrestrial chlorites or serpentines
UM1962-06-SiO:CaFeMg UM1962-07-SiO:FeMg	Acta Geol. Hungarica 7, 315 Geochim. Cosmochim. Acta 26, 1085	Mineral. Abst. 16, 399	X-ray diffraction data suggests the mineral has the talc structure "Orgueil LM"; in the Orgueil carbonaceous chondrite; said to resemble terrestrial chlorites or serpentines
UM1962-08-SO:HNa	Proc. Ann. Mtg. MSA, 162A	Hey (1962), 25.1.4a	Na ₂ SO ₄ ·7H ₂ O
UM1963-01-AsO:MgU	Bull. Soc. fr. Minéral. Crist. 86, 17	Mineral. Abst. 16, 457	U,Mg-arsenate with distinctive X-ray powder diffraction pattern; later described under the name seelite: Mineral. Record (1993) 24, 463. Transferred to Invalid list
UM1963-02-PO:AlCaH UM1963-03-PO:HU	Am. Mineral. 48, 1144 *Voprosy Priklad. Radiogeol. Sbornik (1963) 174-177	Am. Mineral. 50, 265.	CaAl ₃ (PO ₄) ₂ (OH) ₅ ·H ₂ O; appears to be a polymorph of crandallite (UO ₂) ₃ (PO ₄) ₂ ·12H ₂ O; appears to be a P-analogue of trögerite
UM1963-04-SiO:BaTi UM1963-05-SiO:BeHREEY	*Trudy IMGRE, 16, 141 *Kristallografiya 8, 677	Am. Mineral. 50, 265 Am. Mineral. 49, 443	Some resemblance to bario-orthojoaquinite (UO ₂) ₃ (PO ₄) ₂ ·12H ₂ O; distinctive X-ray powder diffraction pattern
UM1964-01-CO:HZn	Can. Mineral. 8, 92	Am. Mineral. 50, 267	Zn ₅ (CO ₃) ₂ (OH) ₆ ·H ₂ O; powder pattern is similar to but distinct from that of hydrozincite; compositional similarities to brianyoungite
UM1964-02-CO:MnNa UM1964-03-S:NiSe UM1964-04-Se:Ni UM1964-05-SiO:Fe	*Kristallografiya 9, 109 Geologi (Helsinki) 16 (5), 53 Geologi (Helsinki) 16 (5), 53 Nature, Phys. Sci. 201, 596	Am. Mineral. 49, 1154 ICDD 16-0376	Probably a carbonate Ni ₃ (S,Se) ₄ ; possibly just a Se-bearing polydymite Ni(Se,Te) ₂ ; possibly not distinct from kullerudite Qualitative chemistry; questionable X-ray powder diffraction data; transferred to Invalid list
UM1965-01-E:AgAu UM1965-02-E:AgAu UM1965-03-E:AgAuCu UM1965-04-E:AuCu UM1965-05-E:AuCu UM1965-06-E:CuSn UM1965-07-E:CuSn	Trans. Inst. Mining Metall. 74, 933 Trans. Inst. Mining Metall. 74, 933 Trans. Inst. Mining Metall. 74, 933 Trans. Inst. Mining Metall. 74, 933 Trans. Inst. Mining Metall. 74, 933 Trans. Inst. Mining Metall. 74, 933 Trans. Inst. Mining Metall. 74, 933	Am. Mineral. 58, 347 *Zap. Vses. Mineral. Ob. 102, 437	Ag ₂ Au Au ₃ Ag ₂ AuAgCu Au ₇ Cu ₃ Au ₃ Cu ₄ Cu ₆ Sn ₅ ; described again several times subsequently Cu ₃ Sn
UM1965-08-OH:FeMgNi UM1965-09-S:Cr UM1965-10-S:CuFeGeZn UM1965-11-S:IrOsRu	Am. Mineral. 50, 1708 Geochim. Cosmochim. Acta 29, 1131 Bull. Soc. fr. Minéral. Crist. 88, 432 Trans. Inst. Mining Metall. 74, 933	Am. Mineral. 51, 1816 Minerals Sci. Eng. 4, 3	Same group but distinct from desautelsite & pyraurite with Ni replacing Mn CrS Cu ₂ (Zn,Fe)GeS ₄ ; the zinc analogue of briartite (Ru,Os,Ir) _{1+x} S ₂
UM1966-01-As:CoNiS UM1966-02-E:FeNi	Mineralium Deposita 1, 113 Am. Mineral. 51, 37	Mineral Abst. 69-1531	(Co,Ni,Fe) ₂ As ₂ S Fe _{0.94} Ni _{0.06} ; Tetragonal unit cell; different from tetrataenite

UM1966-03-S:AsCoNi	Mineralium Deposita 1, 113	Mineral Abst. 69-1531	Mineral Y; (Co,Ni) ₄ (S,As) ₁₁
UM1966-04-S:AsPb	Neues Jb. Mineral. Mh. (1966), 353		Pb ₁₁ As ₈ S ₃₁
UM1966-05-SeO:BaHPbU	C.R. Acad. Sci. Paris, Ser. D, 263, 465	Mineral. Abst. 20, 69-559	Some similarities to guilleminite
UM1966-06-SiOPO:CaFFeHMnNaPREEY	*Zap. Vses. Mineral. Ob. 95, 339	Mineral. Abst. 18, 125	Later described under the name proshchenkoite-(Y); Mineral. Mag. 72 (2008), 1071; transferred to Invalid list
UM1967-01-AsO:CeFeHY	USGS Prof. Paper 575-B, 108	Am. Mineral. 53, 349	(Y,Ce) ₆ Fe ³⁺ ₂ As ₄ O ₂₂ •14H ₂ O
UM1967-02-AsO:Mn	Can. Mineral. 9, 301		Ineligible (abstract only); mineral No.10; later described under the name magnussonite; Mineral. Mag. 42, (1978), 129
UM1967-03-Bi:PbPd	*Zap. Vses. Mineral. Ob. 96, 432	CIM Sp. Vol. 23, 177	Pd ₃ Pb ₃ Bi (CIM Sp. Vol. 23, 182)
UM1967-04-E:CuPdSbSn	*Zap. Vses. Mineral. Ob. 96, 432	CIM Sp. Vol. 23, 177	(Pd,Cu) ₄ .75(Sn,Sb) (CIM Sp. Vol. 23, 188)
UM1967-05-E:PbPd	*Zap. Vses. Mineral. Ob. 96, 432	CIM Sp. Vol. 23, 177	Compositionally indistinguishable from plumbopalladinite but with discrepancies in VHN & reflectance properties (CIM Sp. Vol. 23, 184)
UM1967-06-O:HNb	*Semenov (1967), 30	Am. Mineral. 54, 1496	Nb ₂ O ₅ •5H ₂ O
UM1967-07-O:HMnPb	Econ. Geol. 62, 186	Mineral. Abst. 19, 126	PbMn ₅ O ₁₁ •5H ₂ O
UM1967-08-PO:CaGI	Can. Mineral. 9, 286		Ca ₅ (PO ₄) ₃ Cl; a monoclinic polymorph of chlorapatite; later named chlorapatite-M; Eur. J. Mineral. 22 (2010), 163; transferred to the Invalid list
UM1967-09-SiO:AlHKNa	*Semenov (1967), 14	Am. Mineral. 53, 1777	(K,Na)AlSi ₂ O ₆ •H ₂ O; probably a zeolite
UM1967-10-SiO:AlHNa	*Semenov (1967), 14	Am. Mineral. 54, 1497	NaAlSiO ₄ •H ₂ O; probably a zeolite
UM1967-11-SiO:HMnNaZr	*Semenov (1967), 3	Am. Mineral. 54, 1222	(Na,K,Ca) ₂ MnZrSi ₄ O ₁₂ •6H ₂ O; some similarities to gaidonnayite
UM1967-12-SiO:HNazr	*Semenov (1967), 3	Am. Mineral. 54, 1222	NaZrSi ₄ O ₁₀ (OH)•2H ₂ O
UM1967-13-SiO:FeHNazr	*Semenov (1967), 14	Khomyakov (1995)	(Na,□) ₂ (Zr,Fe ³⁺)Si ₃ (O,OH) ₉ •nH ₂ O; mineral "M36"; perhaps the "HFe-analogue" of gaidonnayite
UM1967-14-SiO:HMnNaZr	*Semenov (1967), 14	Khomyakov (1995)	(Na,□) ₂ (Zr,Mn ³⁺)Si ₃ (O,OH) ₉ •nH ₂ O; mineral "M35"; perhaps the "H,Mn-analogue" of gaidonnayite (equivalent to UM1967-11?)
UM1968-01-Bi:Pd	*Dokl. Akad. Nauk SSSR 170, 183	Mineral. Abst. 18, 125	Bi ₃ Pd (see also Am. Mineral. 56, 358)
UM1968-02-OH:CrV	Bull. Geol. Soc. Finland 40, 125	Mineral. Abst. 20, 69-1536	(Cr,V) ₄ •3H ₂ O
UM1968-03-SO:FeHMg	*Geol. Geofiz. (1968) (6), 15	Am. Mineral. 63, 599	(Mg,Fe ²⁺)Fe ³⁺ ₂ (SO ₄) ₄ .15•5H ₂ O; a Mg-analogue of römerite
UM1968-04-SiO:CaZn	Am. Mineral. 53, 231		~(Zn,Pb)CaSi ₃ O ₈
UM1968-05-Te:Bi	*Dokl. Earth Sci. 181, 443	Am. Mineral. 54, 1218	Bi ₂ Te ₅
UM1969-01-E:CuPbPdSn	*Zap. Vses. Mineral. Ob. 98, 708	CIM Sp. Vol. 23, 177	Pd ₁₂ Sn ₅ PbCu ₂ ; Sn content in error in secondary reference (CIM Sp. Vol. 23, 186)
UM1969-02-MoO:CaHNaU	*Zap. Vses. Mineral. Ob. 98, 679	Mineral. Abst. 21, 70-3433	(Ca _{0.4} Na _{0.6})(UO ₂) ₄ (MoO ₄) ₄ (OH) ₂ •10-13H ₂ O to Na ₂ (UO ₂) ₅ (MoO ₄) ₅ (OH) ₂ •8H ₂ O; "Group B"
UM1969-03-MoO:CaHNaU	*Zap. Vses. Mineral. Ob. 98, 679	Mineral. Abst. 21, 70-3433	Na(UO ₂) ₄ (MoO ₄) ₄ (OH)•12H ₂ O; Group "C"
UM1969-04-MoO:CaHU	*Zap. Vses. Mineral. Ob. 98, 679	Mineral. Abst. 21, 70-3433	Suggested formula: (Ca _{0.9} Na _{0.1})(UO ₂) ₄ (MoO ₄) ₄ (OH) ₂ •14H ₂ O, does not balance exactly; "Group A"
UM1969-05-PO:CaHREE	*Semenov (1969), 41	Am. Mineral. 55, 2136	(Ce,Ca)PO ₄ •H ₂ O; other REE present; similarities to rhabdophane-(Ce)
UM1969-06-S:AgBiCu	*Zap. Vses. Mineral. Ob. 98, 452	Am. Mineral. 57, 1313	(Cu,Ag) ₂ Bi ₆ S ₁₃ ; some similarities to pavonite and benjaminite
UM1969-07-S:AgSbTe	*Altai Izv. Akad. Nauk Kaz. SSR, Ser. Geol. 26, 74	Am. Mineral. 58, 1114	Ag ₁₀ Sb ₂ Te ₅ S; mineral "U"
UM1969-08-S:AgSbTe	*Altai Izv. Akad. Nauk Kaz. SSR, Ser. Geol. 26, 74	Am. Mineral. 58, 1114	Ag ₈ SbTe ₂ S ₅ ; mineral "X"
UM1969-09-S:AgTe	*Altai Izv. Akad. Nauk Kaz. SSR, Ser. Geol. 26, 74	Am. Mineral. 58, 1114	Ag ₁₁ Te ₃ S ₄ ; mineral "Z"
UM1969-10-S:AgTe	*Altai Izv. Akad. Nauk Kaz. SSR, Ser. Geol. 26, 74	Am. Mineral. 58, 1114	Ag ₅ Te ₂ S ₃ ; mineral "Y"
UM1969-11-S:BiPb	Schweiz. Mineral. Petrog. Mitt. 49, 97	Am. Mineral. 55, 533	Pb ₈ Bi ₆ S ₁₇ ; compositional similarities to lillianite
UM1969-12-SiO:AlFeHK	*Semenov (1969), 106	Am. Mineral. 55, 2138	(Na,Ca,K)(Fe,Mg)Al ₂ Si ₄ O ₁₃ •2H ₂ O; may be a zeolite
UM1969-13-SiO:AlHNa	*Semenov (1969), 96	Am. Mineral. 55, 2139	(Na,Li)Al ₄ (AlSi ₃)O ₁₀ (OH) ₈ ; probably an Na-analogue of cookeite
UM1969-14-SiO:FeHMn	*Semenov (1969), 103	Am. Mineral. 55, 2138	(Mn,Fe) ₉ Si ₂ O ₃₀ (OH) ₆ •10H ₂ O; "Red Mn-silicate"
UM1969-15-Te:Ag	Geol. Soc. Am. Mem. 109, 107	Am. Mineral. 55, 1067	No known silver tellurides with similar diffraction lines
UM1969-16-SiO:HNazr	*Semenov (1969)	Khomyakov (1995)	Formula given as H ₃ NaZrSi ₆ O ₁₆ •nH ₂ O, but compositionally rather variable; Khomyakov's mineral "M37"
UM1969-17-OH:CFeMg	Am. Mineral. 54, 437	Mineral. Mag. 76, 1289	~Mg ₁₀ Fe ³⁺ ₂ (OH) ₂₄ [OH,CO ₃]:2H ₂ O; perhaps the hydroxide analogue of coalingite
UM1970-01-As:NiPd	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₃ Ni ₄ As ₅
UM1970-02-Bi:PbPd	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₃ Pb ₂ Bi
UM1970-03-Bi:Pd	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₂ Bi; but compound Pd ₂ Bi is not known in the synthetic system; (CIM Sp. Vol. 23, 186)
UM1970-04-E:CuPbPdSbSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	~(Pd,Pb,Sb) ₅ CuSn
UM1970-05-E:CuPdPtSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	(Pd,Pt) ₂ SnCu (CIM Sp. Vol. 23, 183)
UM1970-06-E:CuPdPtSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	(Pd,Pt,Cu) ₃ Sn (CIM Sp. Vol. 23, 185); see also UM1973-08-E:AsPdPtSn

UM1970-07-E:CuPdSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₃ SnCu (CIM Sp. Vol. 23, 186)
UM1970-08-E:CuPdSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₅ Cu ₂ Sn ₂ ; some similarities to cabriite
UM1970-09-E:PbPdPtSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	(Pd,Pt) ₃ (Pb,Sn)
UM1970-10-E:PbPdSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₅ SnPb
UM1970-11-E:PtPtSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₃ Pt ₂ Sn ₂ ; the mineral may be a Pt-bearing atokite (CIM Sp. Vol. 23, 192)
UM1970-12-E:PtPtSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pd ₃ Pt ₃ Sn ₂ ; the mineral may be Pt-bearing atokite (CIM Sp. Vol. 23, 192)
UM1970-13-E:PtPtSn	Geokhimiya No. 10, 1155	Geochem. Internat. 7, 788	Pt ₃ Pd ₂ Sn ₂
UM1970-14-O:CrFeMgTiV	Norg. Geol. Unders. 266, 86	Am. Mineral. 57, 1004	~(Mg,Fe)Ti ₃ (V,Cr,Fe) ₂ O ₁₀
UM1970-15-O:Pb	Mineralium Deposita 5, 86	Am. Mineral. 55, 1813	Pb ₉ O ₁₆ ; mineral "X"
UM1970-16-OH:GeMn	Neues Jb. Mineral. Abh. 114, 89	Am. Mineral. 56, 1488	(Mn,Fe)(Ge,Sn)(OH) ₆ ; unnamed mineral "B"; Ge-analogue of wickmanite
UM1970-17-PO:Fe	Carnegie Inst. Wash. Year book 68, 330	Am. Mineral. 55, 1814	Fe ₄ (PO ₄) ₃ ; some similarities to lipscombite
UM1970-18-S:As	Am. Mineral. 55, 1338		Equivalent to synthetic alpha-As ₄ S ₄ ; a polymorph of realgar
UM1970-19-S:As	Am. Mineral. 55, 1338		Equivalent to synthetic beta-As ₄ S ₄ ; a polymorph of realgar
UM1970-20-S:AsSbTI	Bull. Soc. fr. Minéral. Crist. 93, 66	Mineral. Abst. 21, 70-3428	Tl(As,Sb) ₁₀ S ₁₆ ; mineral is amorphous and compositionally somewhat similar to bernardite
UM1970-21-S:BiPbTe	*Geol. Geofiz. (1970) (11), 123	Am. Mineral. 56, 1839	Proposed formula: (Bi,Pb) ₃ TeS is clearly in error; composition is much closer to Bi ₃ Te ₂ S ₂ ; mineral "M"
UM1970-22-S:BiTe	*Geol. Geofiz. (1970) (11), 123	Am. Mineral. 56, 1839	Proposed formula: Bi ₉ Te ₂ S ₂ is clearly in error; composition is much closer to Bi ₉ Te ₄ S ₂ ; mineral "K"
UM1970-23-S:BiTe	*Geol. Geofiz. (1970) (11), 123	Am. Mineral. 56, 1839	Proposed formula: Bi ₁₅ TeS ₄ is clearly in error; composition is much closer to Bi ₁₅ Te ₂ S ₈ or Bi ₆ TeS ₃ ; Mineral "P"
UM1970-24-S:CuFe	Econ. Geol. 65, 590	Am. Mineral. 56, 632	(Fe,Cu) ₂ S
UM1970-25-S:CuFeH	Am. Mineral. 55, 2110		2(Fe,Cu) ₂ S·1.47[Fe(OH) ₂]; a vallerite-type mineral
UM1970-26-S:CuZn	Am. Mineral. 55, 1021	Mineral. Abst. 21, 70-3390	Cu ₃ ZnS ₄
UM1970-27-Te:BiPd	*Yushko-Zakharova et al. (1970)	CIM Sp. Vol. 23, 177	Pd ₂ Bi ₂ Te ₃ ; see CIM Sp. Vol. 23, 181
UM1971-01-AsO:CuFeS	Mineral. Record 2, 214	Am. Mineral. 57, 1005	Mineral "6a"; some similarities to tyrolite
UM1971-02-AsO:Fe	*Ann. Rept. Univ. Leeds Res. Inst. African Geol. 15, 63	Am. Mineral. 57, 1315	An iron arsenate later described under the name karibibite: Lithos 6 (1973), 265.; transferred to valid list
UM1971-03-CO:CeLa	Bull. Geol. Soc. Finland 43, 62		X-ray powder diffraction pattern has some similarities to that of borcarite
UM1971-04-O:FeNbTiYZr	Earth Planet Sci. Lett. 12, 145	Am. Mineral. 58, 141	~Fe(REE,Ca)ZrTi ₂ (Nb,U,Th)O ₁₁ ; "Phase I"; similarities to zirconolite
UM1971-05-S:AgBiCu	Soc. Mining Geol. Japan Spec. Issue 2, 35	Am. Mineral. 57, 1316	(Ag,Cu,Pb) ₃ Bi ₇ S ₁₂ ; "Phase II"; not distinct from benjaminite
UM1971-06-S:AgBiCu	Soc. Mining Geol. Japan Spec. Issue 2, 35	Am. Mineral. 57, 1316	AgCu ₄ Bi ₇ S ₁₃ ; "Phase IV"
UM1971-07-S:AgBiCuPb	Internat. Geol. Rev. 13, 1628	Am. Mineral. 57, 1314	X-ray powder diffraction data suggest affinities with benjaminite; poor quality analytical data
UM1971-08-S:AgBiCuPb	Soc. Mining Geol. Japan Spec. Issue 2, 35	Am. Mineral. 57, 1316	~(Cu,Ag,Pb) ₃ Bi ₇ S ₁₂ ; "Phase III"; some similarities to makovickite
UM1971-09-S:AgBiCuPb	Can. Mineral. 10, 871	Mineral Abst. 23, 72-2327	Ag ₄ Cu ₆ Bi ₁₂ Pb ₁₈ S ₄₁ ; mineral "A";
UM1971-10-S:AgBiCuPb	Soc. Mining Geol. Japan Spec. Issue 2, 35	Am. Mineral. 57, 1316	Ag ₅ Cu ₂ PbBi ₁₃ S ₂₄ ; phase "V"; not compositionally distinct from dantopaite described later; transferred to Invalid list
UM1971-11-S:AgBiCuPb	Soc. Mining Geol. Japan Spec. Issue 2, 35	Am. Mineral. 57, 1316	(Ag,Cu) ₄ PbBi ₆ S ₁₂ ; phase "VI"
UM1971-12-S:BiCu	Mineralium Deposita 6, 111	Am. Mineral. 57, 326	~Cu ₈ Bi ₆ S; mineral "II"
UM1971-13-S:BiCuFePb	Can. Mineral. 10, 871	Mineral Abst. 23, 72-2327	Bi ₄ Cu ₈ Fe ₁₀ Pb ₁₂ S ₃₇ ; mineral "B"
UM1971-14-S:BiCuFePb	*Vest. Mosk. Univ. Geol. Ser. 1971 (3), 60	Zap. Vses. Mineral. Ob. 102, 442	(Cu,Fe) ₃ Pb ₇ Bi ₁₂ S ₂₀
UM1971-15-S:BiCuPb	Mineralium Deposita 6, 111	Am. Mineral. 57, 326	~Cu ₈ Bi ₃ Pb ₃ S ₂₁ ; mineral "I"
UM1971-16-S:CoFeNi	Tscherm. Mineral. Petrog. Mitt. 16, 215	Mineral Abst. 23, 72-1408	Distinctly different from pentlandite and cobalt-pentlandite
UM1971-17-S:Mo	Nature Phys. Sci. 234, 177	Am. Mineral. 57, 1559	MoS _{2.85-3.1}
UM1971-18-S:MoPbSb	*Trudy Inst. Geol. Nauk AN KazSSR 31,162	Zap. Vses. Mineral. Ob. 102, 440	Pb ₈ Mo ₆ Sb ₂ S ₂₃
UM1971-19-SO:AlCu	Mineral. Record 2, 214	Am. Mineral. 57, 1004	Some similarities to cyanotrichite; later described under the name grandviewite: Austral. J. Mineral. 14 (2) (2008), 3; transferred to Invalid list
UM1971-20-SiO:Mo	Nature Phys. Sci. 234, 177	Am. Mineral. 57, 1559	Possibly a Mo-analogue of chrysocolite
UM1971-21-SiO:AlCaMgTi	Am. Mineral. 56, 2053	Mineral. Mag. 72, 839	Ca ₄ (Mg ⁷ AlTi ³⁺ ₂ Ti ⁴⁺ ₂)O ₄ [Si ₅ Al ₇ O ₃₆]; Ti ³⁺ -bearing Mg-analogue of rhönite
UM1971-22-SiO:CaClFeHMgMnNaNbZr	Tscherm. Mineral. Petrog. Mitt. 16, 105	Cryst. Reports 52, 47	Na ₁₂ Ca ₅ (Ce,La,Y,Ca)Zr ₃ (Zr,Nb) _{0-0.9} (Fe,Mn) ₃ [Si ₉ O ₂₄₋₂₆ (OH) ₁₋₃] ₂ [Si ₃ O ₉] ₂ Cl _{0.7-1.4} ; described originally as "eudialyte" but subsequently more detailed work has shown that it differs from eudialyte in having Zr in both M3 & M4 sites
UM1972-01-AsO:BaCaU	Aufschluss 23, 279	Am. Mineral. 58, 561	Mineral "F"
UM1972-02-AsO:Ca	Aufschluss 23, 279	Am. Mineral. 58, 561	X-ray powder diffraction pattern and composition suggest this could be an As-analogue of rapidcreekite (and hence may contain CO ₂ & H ₂ O)
UM1972-03-AsOSO:Cu	Aufschluss 23, 279	Am. Mineral. 58, 561	Distinctive X-ray powder data; microchemical tests +ve for Cu, arsenate and sulphate

UM1972-04-Bi:PtTe	*Yushko-Zakharova <i>et al.</i> (1972), 58	Zap. Vses. Mineral. Ob. 103, 614	Pt _{0.8} BiTe
UM1972-05-BiO:AlCaP	*Ann. Rept. Univ. Leeds Res. Inst. African Geol. 16, 53	Am. Mineral. 59, 1139	The X-ray powder diffraction pattern has some similarities to that of preisingerite and the mineral is assumed to contain oxygen
UM1972-06-CO:CaK	Schweiz. Mineral. Petrog. Mitt. 52, 93	Am. Mineral. 58, 139	Possible formula: K ₂ Ca(CO ₃) ₂ ·4H ₂ O, by analogy with associated mineral K ₂ Mg(CO ₃) ₂ ·4H ₂ O (baylissite)
UM1972-07-MoO:BiW	*Ann. Rept. Univ. Leeds Res. Inst. African Geol. 16, 53	Mineral. Abst. 24, 73-1946	Isostructural with uraninite; X-ray diffraction pattern also very similar to koechlinite; perhaps BiWMoO ₈
UM1972-08-O:CaFeNdTiYZr	Nature 236, 215	Am. Mineral. 58, 141	(Fe,Ca,YREE)(Ti,Zr)O ₈ ; mineral "Y"; similarities to zirconolite and to tranquillityite
UM1972-09-S:AgBiPbSb	*Mater. Genet. Eksp. Mineral. 7, 49	Am. Mineral. 60, 163	Diffraction pattern has similarities to that of franckeite; compositional similarities to vikingite and cosalite
UM1972-10-S:BiCuNi	*Dokl. Akad. Nauk SSSR 203, 1382	Am. Mineral. 58, 348.	Mineral "B"; Ni present but not determined - perhaps (Cu,Ni) ₂ BiS ₃ or Cu(Ni,Cu)BiS ₃ ; there are distinct similarities to muckeite
UM1972-11-S:BiPbTe	Can. J. Earth Sci. 9, 1596	Am. Mineral. 58, 967	PbBiTeS
UM1972-12-S:FeMnZn	Meteoritics 7, 429	Am. Mineral. 58, 806	(Fe _{0.54} Zn _{0.25} Mn _{0.16})S; the Fe-dominant end-member later described as rudashevskite; transferred to Invalid list
UM1972-13-SCO:CaFeH	Am. Mineral. 57, 1037		(FeS) ₂ (CaCO ₃ ·H ₂ O) _{0.84} ; Designated "Type I"
UM1972-14-SiO:CaHREE	*Lunts (1972), 98	Zap. Vses. Mineral. Ob. 102, 457	(REE,Ca)Si(O,OH,F) ₄ ·0.3H ₂ O; metamict, X-ray amorphous; perhaps related to cerite
UM1972-15-SiO:FeHNaZr	*Semenov (1972)	Zap. Vses. Mineral. Ob. 102, 456	Composition close to Na ₂ FeZr ₂ Si ₆ O ₂₀
UM1972-16-Te:AgPbPd	*Izv. Akad. Nauk SSSR, Ser. Geol. #11, 85	CIM Sp. Vol. 23, 177	Possible formula: (Pd,Ag) ₃ (Ag,Pb)(Te,Se); (CIM Sp. Vol. 23, 184)
UM1972-17-Te:BiPbPd	*Izv. Akad. Nauk SSSR, Ser. Geol. #11, 85	CIM Sp. Vol. 23, 177	Pd(Pb,Te,Bi); (CIM Sp. Vol. 23, 184)
UM1972-18-SiO:AlCaFeMgTi	Tscherm. Mineral. Petrog. Mitt. 18, 17	Mineral. Mag. 72, 839	Ca ₄ (Fe ²⁺ ·10Ti ₂)O ₄ [Si ₈ Al ₄ O ₃₆]; substantial solid solution towards rhönite of which it is the Fe ²⁺ analogue
UM1973-01-As:NiPd	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	~(Ni,Pd) ₇ As ₃
UM1973-02-As:PbPdPtSn	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	(Pd,Pt) ₅ (As,Sn,Pb) ₂ ; compositionally, appears to be the As-dominant analogue of palarstanite, but latter is trigonal
UM1973-03-As:PdSbSn	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	Pd ₈ (As,Sn,Sb) ₃ ; compositionally similar to arsenopalladinite but orthorhombic
UM1973-04-AsS:IrPt	*Geochimica 2, 76	Am. Mineral. 65, 813	(Pt,Ir) ₂ As ₅ S ₃
UM1973-05-Bi:AgPd	*Sci. Rept. Tohoku Univ., ser.3, 12, 69	Zap. Vses. Mineral. Ob. 104, 617	(Ag,Pd) ₂ Bi
UM1973-06-CO:MgH	*J. Japan. Assoc. Mineral. Petrol. Econ. Geol. 68, 353	Am. Mineral. 62, 596	Mg ₅ (CO ₃) ₄ (OH) ₂ ·8H ₂ O
UM1973-07-E:AgAuCu	*Geol. Rudn. Mest. 15 (6), 32	Zap. Vses. Mineral. Ob. 104, 617	Au ₃ AgCu
UM1973-08-E:AsPdPtSn	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	~(Pd,Pt) ₃ (Sn,As); tetragonal, therefore not atokite; see also UM1970-06-E:CuPdPtSn
UM1973-09-E:FeIrPt	*Geochimica 2, 76	Am. Mineral. 65, 813	Possible formula: Pt ₂ IrFe; perhaps the Ir-analogue of tulameenite
UM1973-10-E:FeIrRh	Am. Mineral. 58, 189	CIM Sp. Vol. 23, 177	(Rh,Ir)Fe; isotropic (CIM Sp. Vol. 23, 181)
UM1973-11-E:FeIrRh	Am. Mineral. 58, 189	CIM Sp. Vol. 23, 177	Similar to UM1973-10-E:FeIrRh but anisotropic (CIM Sp. Vol. 23, 181)
UM1973-12-E:NiPdPtSbSn	*Geochimica 1, 23	Am. Mineral. 60, 738	~(Pt,Pd,Ni) ₅ (Sn,Sb) ₂ ; perhaps related to rustenburgite and/or UM1971-/-E:PtPdSn
UM1973-13-E:PbPdPtSn	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	(Pd,Pt) _{4.5-5.5} (Sn,Pb,As) ₂ ; perhaps a Pb-bearing atokite
UM1973-14-E:PbPdPtSn	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	Pd ₂₀ Pt ₃ Pb ₂ Sn ₇ ; similarities to atokite
UM1973-15-E:PbPdSn	*Trudy TsNIGRI 108, 96	Am. Mineral. 61, 179	Pd ₂₂ Pb ₄ Sn ₅ ; similarities to atokite
UM1973-16-S:AgCuFeTe	*Vest. Mosk. Univ. Geol. Ser. (3) 58	Zap. Vses. Mineral. Ob. 103, 619	(Ag,Fe,Cu) ₅ Te ₂ S
UM1973-17-S:FeNi	Am. Mineral. 58, 195	Mineral. Abst. 24, 73-4083	(Fe,Ni) ₉ S ₁₁ ; appears to be a dimorph of smyhtite
UM1973-18-S:FeNi	Am. Mineral. 58, 195	Mineral. Abst. 24, 73-4083	(Fe,Ni) ₉ S ₁₁ ; said to be violarite-like
UM1973-19-S:FePb	*Issled. Oblast Rudn. Mineral. (1973), 156.	Am. Mineral. 59, 1140	Compositional data are qualitative but appear distinctive
UM1973-20-S:IrOs	*Geochimica 4, 254	Am. Mineral. 65, 812	(Ir,Os) ₂ S ₂
UM1973-21-Sb:NiPdPtSn	*Geochimica 1, 23	Am. Mineral. 60, 739	(Pd,Pt,Ni) ₂ (Sb,Sn); perhaps a Sb-analogue of paolovite
UM1973-22-Te:AgHgPd	Can. Mineral. 12, 193	Am. Mineral. 60, 947	AgHgPdTe
UM1973-23-Te:AgPd	Internat. Geol. Rev. 15, 1284		(Pd,Ag) ₄ Te
UM1973-24-Te:AgSb	Can. Mineral. 12, 55	Am. Mineral. 59, 384	~AgSbTe ₂
UM1974-01-As:PdSb	*Geochimica 3, 169	Am. Mineral. 61, 182	Pd ₂ (As,Sb)
UM1974-02-Bi:AsPdPtSb	Neues Jb. Mineral. Mh. (1974), 514	Am. Mineral. 60, 739	(Pt,Pd)(Bi,Sb,As); probably the Pt-analogue of sobolevskite
UM1974-03-CO:BaCaMg	Geol. Fören. Förh. 96, 375	Am. Mineral. 60, 738	(Ba,Ca,Mg) ₃ CO ₃
UM1974-04-CO:HNa	Aufschluss 25, 613	Zap. Vses. Mineral. Ob. 106, 86	Na ₄ H ₂ (CO ₃) ₃ ·1.5H ₂ O; inferred from X-ray powder diffraction pattern matching that of the K-analogue
UM1974-05-E:AsPdSn	*Zap. Vses. Mineral. Ob. 103, 582	Am. Mineral. 64, 1333	Compositional similarities to palarstanite
UM1974-06-O:CuH	*Karinthin 80, 99	Am. Mineral. 66, 439	X-ray powder diffraction data are distinct
UM1974-07-S:AgBiCu	*Minerogenezis (Bulg. Acad. Sci.), 419	Am. Mineral. 63, 427	Ag ₃ Cu ₃ Bi ₂ S ₆
UM1974-08-S:AgCuTe	Mineralium Deposita 9, 325	Am. Mineral. 61, 178	Ag ₅ CuTeS ₂
UM1974-09-S:BiCuPb	Minerogenezis (Bulg. Acad. Sci.), 419	Am. Mineral. 63, 427	Compositionally similar to gladite but different reflectance values
UM1974-10-S:CrFeMn	Am. Mineral. 59, 465		(Mn,Fe)Cr ₂ S ₄ ; the Mn-analogue of daubréelite
UM1974-11-S:CuFeIrNi	*Acta Geol. Sinica 2, 202	Am. Mineral. 61, 184	(Ir,Ni,Fe,Cu)S or perhaps Ir(Ni,Fe,Cu) ₂ S ₃
UM1974-12-S:IrNiRh	*Acta Geol. Sinica 2, 202	Am. Mineral. 61, 184	(Ir,Rh,Ni)S
UM1974-13-S:IrRh	*Acta Geol. Sinica 2, 202	Am. Mineral. 61, 184	(Ir,Rh) ₂ S ₂

UM1974-14-S:NiOs	*Acta Geol. Sinica 2, 202	Am. Mineral. 61, 184	(Os,Ni)S ₂ ; the mineral could be Ni-bearing erlichmanite
UM1974-15-Sb:Pd	*Geochimica 3, 169	Am. Mineral. 61, 182	PdSb; similar to subburyite but reflected light characteristics differ
UM1974-16-Se:CoFe	*Ingeniero Geol. Univ. Nacl. Mayor de San Marcos, 16, 65	Am. Mineral. 60, 738	(Co,Fe)S ₂ ; not a Fe²⁺-bearing hastite, the latter mineral having been discredited: Can. Mineral. 47 (2009), 969
UM1974-17-Te:AsPd	*Geochimica 3, 169	Am. Mineral. 61, 182	Pd ₂ (Te,As); Te & As present in nearly equal atomic proportions
UM1974-18-Te:BiNiPd	*Geochimica 3, 169	Am. Mineral. 61, 182	(Pd,Ni)(Te,Bi)
UM1974-19-Te:BiNiPdSb	*Geochimica 3, 169	Am. Mineral. 61, 182	(Pd,Ni)(Te,Sb,Bi)
UM1974-20-Te:BiPdSb	*Geochimica 3, 169	Am. Mineral. 61, 182	Pd(Te,Sb,Bi) ₂ ; may be related to merenskyite
UM1974-21-Te:BiPdSb	*Geochimica 3, 169	Am. Mineral. 61, 182	Pd ₂ Sb ₂ (Te,Bi)
UM1974-22-Te:NiSb	*Geochimica 3, 169	Am. Mineral. 61, 182	Ni ₂ SbTe ₂ ; transferred to Invalid list
UM1974-23-Te:Pd	*Geochimica 3, 169	Am. Mineral. 61, 182	PdTe ₃
UM1974-24-Te:Pd	*Geochimica 3, 169	Am. Mineral. 61, 182	Pd ₃ Te; compositionally similar to keithconnite but reflected light characteristics differ
UM1974-25-Te:PdPt	Econ. Geol. 69, 257	Am. Mineral. 61, 179	(Pd,Pt) _{3-x} Te _s
UM1974-26-Te:PdPt	Econ. Geol. 69, 257	Am. Mineral. 61, 179	~(Pt,Pd)Te ₂ ; possibly related to moncheite-merenskyite series
UM1974-27-Te:PdPt	*Geochimica 3, 169	Am. Mineral. 61, 182	(Pd,Pt) ₃ Te; compositional and other similarities to keithconnite but also to synthetic Pd ₂₀ Te ₃
UM1974-28-S:BiPbTe	Neues Jb. Mineral. Monat. (1974), 316		(Bi,Pb) ₅ Te ₃ (S,Se) ₄
UM1974-29-S:BiPbTe	Neues Jb. Mineral. Monat. (1974), 316		(Bi,Pb) ₅ TeS ₅
UM1975-01-As:AgCoNiPdS	*Mineral. Polonica 6, 87	CIM Sp. Vol. 23, 177	~(Pd,Ag) ₄ (Co,Ni,Cu) ₃ (As,S) ₄ ; but might be the Co-analogue of majakite (CIM Sp. Vol. 23, 190)
UM1975-02-As:AgCuNiPdS	*Mineral. Polonica 6, 87	CIM Sp. Vol. 23, 177	~Pd ₃ (Ag,Cu,Ni)As ₂ S (CIM Sp. Vol. 23, 190)
UM1975-03-As:AgCuPdS	*Mineral. Polonica 6, 87	CIM Sp. Vol. 23, 177	~(Pd,Ag,Cu) ₃ (As,S) ₂ (CIM Sp. Vol. 23, 190)
UM1975-04-As:NiPdS	*Mineral. Polonica 6, 87	CIM Sp. Vol. 23, 177	~(Pd,Ni)(As,S); (CIM Sp. Vol. 23, 190)
UM1975-05-As:Pd	Can. Mineral. 13, 321	Am. Mineral. 62, 1061	Pd ₅ As ₂
UM1975-06-As:Pd	*Mineral. Polonica 6, 87-91	CIM Sp. Vol. 23, 177	PdAs ₂ (CIM Sp. Vol. 23, 184)
UM1975-07-As:PdSn	Nat. Inst. Metall. Rept. No. 1726, 1	Am. Mineral. 64, 1333	(Pd,Pt) ₂ (As,Sn)
UM1975-08-AsOSO:FeHPb	Aufschluss 26, 369	Am. Mineral. 62, 175	Pb ₂ Fe(AsO ₄)(SO ₄)(OH); diffraction pattern is similar to that of heyite
UM1975-09-O:BaCrFeMgTiV	Phys. Chem. Earth 9, 295	Am. Mineral. 61, 1055	Possibly related to a mineral described under the unapproved name mongshanite (see Am. Mineral. 73, 441)
UM1975-10-O:CaFeMgTi	Phys. Chem. Earth 9, 295	Am. Mineral. 61, 1055	~Ca ₂ Ti ₂ (Fe,Mg) ₂ O ₉
UM1975-11-S:AgSbTe	*Parilov <i>et al.</i> (1975), 66	Zap. Vses. Mineral. Ob. 106, 85	Ag ₁₂ Sb ₂ Te ₃ S ₆ ; compositional similarities to benleonardite
UM1975-12-S:BiCu	*Dokl. Akad. Nauk SSSR 222, 183	Am. Mineral. 61, 1055	Cu ₄ BiS ₄
UM1975-13-S:BiPb	*Geol. Rudn. Mest. 17, 30	Zap. Vses. Mineral. Ob. 106, 86	Pb ₄ Bi ₆ S ₁₃ ; with different d-values from cannizzarite; and previously referred to as "cannizzarite-B" (Schweiz. Mineral. Petrog. Mitt. 49, 97)
UM1975-14-S:CuFeNi	Contr. Mineral. Petrol. 52, 57		(Fe _{0.73} Ni _{0.19} Cu _{0.07})S
UM1975-15-S:CuIrRh	Dokl. Akad. Nauk SSSR 225, 1408	Am. Mineral. 62, 175	Ir _{0.91} Cu _{0.74} Rh _{0.39} S ₃ ; might, perhaps, be a Cu-bearing kashinite
UM1975-16-SO:HKZn	*Repub. Rwandaise, Bull. Serv. Géol. (1975) #8, 1	Am. Mineral. 62, 175	KzZn(SO ₄) ₂ ·2H ₂ O; known synthetically
UM1975-17-Sb:PdPt	Mineralium Deposita 10, 71	CIM Sp. Vol. 23, 177	(Pt,Pd) ₃ Sb ₂ (CIM Sp. Vol. 23, 192)
UM1975-18-SiO:Mn	*Mineral. Polonica 6, 75	Am. Mineral. 66, 220	X-ray pattern of synthetic alpha-MnSiO ₃
UM1975-19-Te:HgPd	*Dokl. Earth Sci. 224, 97	CIM Sp. Vol. 23, 177	(Pd,Hg)Te; could be Hg-bearing kotulskite (CIM Sp. Vol. 23, 182); some similarities to UM1966-/-Te:HgPd
UM1975-20-Te:Pd	*Dokl. Earth Sci. 224, 97	CIM Sp. Vol. 23, 177	Significantly low analytical total makes formula uncertain; perhaps Pd ₃ Te ₄ ; (CIM Sp. Vol. 23, 183)
UM1975-21-Te:BiPbSSe	Econ. Geol. 70, 1092		PbBi ₂ (Te,Se) ₂ (S,Se) ₂
UM1975-22-SiO:HNazr	*Trudy Mineral. Muz. Akad. Nauk SSSR 24, 120	Khomyakov (1995)	(Na,Ca) ₂ Zr ₂ Si ₄ O ₁₂ (OH,O)·3H ₂ O; mineral "M34"; similarities to keldyshite
UM1976-01-As:BiPd	Can. Mineral. 14, 410		Pd ₂ (As,Bi); hexagonal and distinct from palladobismutharsenide
UM1976-02-As:IrPtRhRuS	Econ. Geol. 71, 1399	Am. Mineral. 62, 598	~(Ru,Rh,Pt,Ir) ₂ (As,S) ₃
UM1976-03-As:NiPd	*Trudy TsNIGRI 122, 96	Zap. Vses. Mineral. Ob. 107, 340	Pd _{1.19} Ni _{0.71} As
UM1976-04-AsOSO:CuFeHPb	Aufschluss 27, 369	Am. Mineral. 62, 1061	Pb(Fe,Cu) ₂ (AsO ₄)(SO ₄)(OH)
UM1976-05-BO:HMgNaSU	*Mitteilungsbl. Landesmuseums "Joanneum", Abt. Mineral. 44, 35	Am. Mineral. 62, 1261	(Na,Mg) ₂ (UO ₂) ₂ BO ₃ (OH) ₃₋₄ ·nH ₂ O; Mineral "B"; may be a variety or different hydrate of UM1976-06-BO:HMgNaMgSU; later report does not include S (Aufschluss 59, 47)
UM1976-06-BO:HMgNaSU	*Mitteilungsbl. Landesmuseums "Joanneum", Abt. Mineral. 44, 35	Am. Mineral. 62, 1261	Mineral "A"; may be a variety or different hydrate of UM1976-05-BO:HMgNaMgSU
UM1976-07-BO:HMgNaSU	*Mitteilungsbl. Landesmuseums "Joanneum", Abt. Mineral. 44, 35	Am. Mineral. 62, 1261	Mineral "C"; distinctive X-ray powder pattern and qualitative composition
UM1976-08-Bi:PdSbTe	Econ. Geol. 71, 1451	Am. Mineral. 62, 598	Pd ₃ (Bi,Sb) ₂ Te; probably Te- and/or Sb rich varieties of sobolevskite Pd(Bi,Te,Sb); transferred to Invalid list
UM1976-09-BiOTeO:HPd	Econ. Geol. 71, 1429	CIM Sp. Vol. 23, p.177	Perhaps (Pd,Pt,Bi)BiTeO ₄ ·2H ₂ O; (CIM Sp. v.23, 182)
UM1976-10-E:AgAuHg	Dokl. Earth Sci. 227, 121		Ag ₁₀ Au ₅ Hg
UM1976-11-O:NbU	*Rev. Asoc. Geol. Argentina 31, 232	Am. Mineral. 63, 1284	Distinctive X-ray powder pattern and qualitative composition; not distinct from carlosbarbosaite: Mineral. Mag. 76 (2012), 75; transferred to Invalid list
UM1976-12-S:AgTe	Lithos 9, 253	Am. Mineral. 63, 424	(Ag ₄ TeS); mineral "B"; formula is identical to that of cervelleite but, unlike cervelleite, it is distinctly anisotropic
UM1976-13-S:AsCoCuFeNi	Geol. Surv. Canada, Pap. 76-1, 311	Zap. Vses. Mineral. Ob. 107, 341	(Cu,Co,Fe,Ni) ₃₃ As ₈ S ₂₆

UM1976-14-S:BiCuPbSe	Geol. Surv. Canada, Pap. 76-1, 311	Zap. Vses. Mineral. Ob. 107, 342	(Bi,Pb,Cu) ₄ (S,Se) ₅ ; distinct compositional similarities to nordströmite
UM1976-15-S:CuSe	Geol. Surv. Canada, Pap. 76-1, 311	Zap. Vses. Mineral. Ob. 107, 342	Cu ₄ (S,Se) ₃ ; perhaps a Se-bearing spionkopite or Se-bearing geerite
UM1976-16-S:IrRhSb	CIM Bull. 69, 111-119	CIM Sp. Vol. 23, p.177	(Rh,Ir)SbS; see CIM Sp. Vol. 23, 180
UM1976-17-S:IrRhSb	CIM Bull. 69, 111-119	CIM Sp. Vol. 23, p.177	(Ir,Rh)SbS; (CIM Sp. Vol. 23, 190); possibly a Rh-bearing tolovkite
UM1976-18-S:RhRu	Econ. Geol. 71, 1399	Am. Mineral. 62, 598	(Rh,Ru)S; perhaps (Rh,Ru) ₁₇ S ₁₅ which is known synthetically and as the mineral miassite; Zap. Vser. Mineral. Ob. 130 (2001) (2), 41
UM1976-19-S:Ru	Econ. Geol. 71, 1399	CIM Sp. Vol. 23, p.177	Reported as close to RuS ₂ but empirical formula is closer to (Ru,Ir,Os,Rh,Pt) ₃ (S,As) ₄ ; see CIM Sp. Vol. 30, 180
UM1976-20-S:SbTI	Schweiz. Mineral. Petrog. Mitt. 56, 69	Nowacki <i>et al.</i> (1982), 689	TISb ₁₁ S ₁₇ ; amorphous
UM1976-21-SO:AlCuHNI	Am. Mineral. 61, 366		X-ray powder diffraction data are distinct from those of woodwardite & carboydite
UM1976-22-SO:AlFeH	*Dokl. Akad. Nauk SSSR 228, 185	Am. Mineral. 69, 1194	(Al,Fe) ₂ (SO ₄) ₃ •1.2H ₂ O
UM1976-23-Sb:BiPdTe	Econ. Geol. 71, 1159		Pd(Sb,Te,Bi); could be a Te- & Bi-rich variety of sudburyite
UM1976-24-Se:BiPbS	Geol. Surv. Canada, Pap. 76-1, 311	Zap. Vses. Mineral. Ob. 107, 342	(Bi,Pb) ₁₉ (Se,S) ₁₆
UM1976-25-SiO:AlKNa	Mineral. Mag. 40, 721		(K,Na)AlSi ₅ O ₁₂ ; observed in a meteorite; might possibly be a glass
UM1976-26-SiOSO:AlCaCIHNa	*Soveshch. Molodykh Uchen. Mineral. Geokhim., Primorsk Otdel, Vses. Mineral. Ob., NaI'nevost. Geol. Inst. Vladivostok, (1970), 81	Am. Mineral. 62, 596	Triclinic and pseudo-orthorhombic; the code is based on the reported dimorphic relationship with lazurite
UM1976-27-Sn:PdSb	*Trudy TsNIGRI 122, 107	Zap. Vses. Mineral. Ob. 107, 340	Pd₂(Sn,Sb) ; probably Sb-bearing paolovite; transferred to Invalid list
UM1976-28-Te:AgBiPb	*Geol. Rudn. Mest. (1976), 111	Am. Mineral. 62, 597	Mineral "B"; Ag _{0.15} Pb _{1.18} Bi _{1.88} Te ₄ ; might be Pb-rich rucklidgeite but stoichiometry is rather different
UM1976-29-Te:BiNi	Econ. Geol. 71, 1206	Am. Mineral. 62, 597	Ni ₅ (Te,Bi) ₈
UM1976-30-Te:BiPbS	*Geol. Rudn. Mest. (1976), 111	Am. Mineral. 62, 597	PbBi ₄ Te ₄ (S,Se) ₃ ; mineral "C"; described again later from several other localities
UM1976-31-Te:BiPdSb	Econ. Geol. 71, 1429	Am. Mineral. 62, 597	Pd ₅ (Bi,Sb) ₂ Te ₄ ; "Phase A"; little data but formula is distinctive
UM1976-32-Te:BiPdSb	Econ. Geol. 71, 1429	Am. Mineral. 62, 597	Pd ₅ (Te,Bi,Sb) ₂ ; "Phase B"
UM1976-33-Te:Pd	Econ. Geol. 71, 1429	CIM Sp. Vol. 23, p.177	PdTe ₂ ; "Phase C"; intergrown with Bi-bearing merenskyite (CIM Sp. Vol. 23, p.183)
UM1977-01-AsO:U	Aufschluss 28, 177		Mineral "D"; a U-arsenite; d-values reported but no quantitative compositional data
UM1977-02-CO:AlCaH	*Geol. Surv. Israel Bull. 70, 1	Am. Mineral. 63, 425	Ca ₃ Al ₂ O ₆ •3CaCO ₃ •32H ₂ O
UM1977-03-COSiO:CaCIH	*C. R. Soc. Phys. Hist. Nat. Genève 12, 30	Am. Mineral. 64, 658	Ca ₁₀₋₁₁ (CO ₃) ₇ (SiO ₄)Cl ₁₋₂ (OH) ₁₋₂
UM1977-04-E:CuFeNiPtSb	Can. Mineral. 15, 380	CIM Sp. Vol. 23, 177	Pt₁₀Fe₃Ni₃Cu₃Sb "Alloy 2"; X-ray powder diffraction pattern is said to be unique
UM1977-05-E:HgPb	*Z. Angew. Geol. 23, 535	Am. Mineral. 64, 652	Hg _{0.8} Pb _{0.2} ; deposited from natural gas and could be considered anthropogenic
UM1977-06-E:IrOsPtRu	Can. Mineral. 15, 59	CIM Sp. Vol. 23, 177	(Ir,Os,Ru,Pt,Rh); No X-ray powder diffraction pattern; (CIM Sp. Vol. 23, p.191)
UM1977-07-O:AlCaFeH	*Geol. Surv. Israel Bull. 70, 1	Am. Mineral. 63, 425	Ca(Al,Fe) ₂ O ₄ •nH ₂ O
UM1977-08-O:AlCaH	*Geol. Surv. Israel Bull. 70, 1	Am. Mineral. 63, 425	Ca ₂ Al ₂ O ₅ •nH ₂ O
UM1977-09-O:AlCaH	*Geol. Surv. Israel Bull. 70, 1	Am. Mineral. 63, 425	Ca ₄ Al ₂ O ₇ •nH ₂ O
UM1977-10-PO:CaCIKMg	Mineral. Mag. 41, 33		A phosphate with distinctive X-ray powder diffraction pattern
UM1977-11-S:CuFeKNI	Earth Planet. Sci. Lett. 35, 421		K ₆₋₉ CuFe ₁₉ Ni ₀₋₆ S ₂₈ ; perhaps related to djerfisherite
UM1977-12-S:PbPdSe	*Kovalenker (1977), 39	Zap. Vses. Mineral. Ob. 107, 342	PdPb(S,Se)
UM1977-13-SiO:AlBaCaH	*Dokl. Akad. Nauk SSSR 234, 1445	Am. Mineral. 70, 878	(Ca,Ba)Al ₂ Si ₃ O ₁₀ (OH) ₂ .6; described as the Ca-analogue of edingtonite
UM1977-14-SiO:CaH	*Geol. Surv. Israel Bull. 70, 1	Am. Mineral. 63, 425	Ca ₂ SiO ₄ •H ₂ O
UM1978-01-E:AgAuIrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ir,Au,Pt,Os,Ru,Ag); (CIM Sp. Vol. 23, 191); apparent Au-content possibly derived from surrounding envelope
UM1978-02-E:CuPbSn	*Grønlands Geol. Undersøgelse Bull. 127, 1	Am. Mineral. 66, 439	Close to Cu ₃ (Sn,Pb) ₂
UM1978-03-E:IrOsPt	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ir,Pt,Os); (CIM Sp. Vol. 23, 190); possibly related to UM1977-06-E:IrOsPtRu and/or UM1978-07-E:IrOsPtRu
UM1978-04-E:IrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ru,Pt,Ir,Os) alloy; (CIM Sp. Vol. 23, 180)
UM1978-05-E:IrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ru,Pt,Os,Ir) alloy; (CIM Sp. Vol. 23, 180)
UM1978-06-E:IrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ru,Os,Ir,Pt); (CIM Sp. Vol. 23, 190)
UM1978-07-E:IrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ir,Pt,Os,Ru); (CIM Sp. Vol. 23, 190); possibly related to UM1977-06-E:IrOsPtRu and/or UM1978-03-E:IrOsPt
UM1978-08-O:AlCaCrFeMgTI	Proc. 9th Lunar Planetary Sci. Conf. 1, 1331	Am. Mineral. 65, 812	(Ti ³⁺ ,Cr,Al,Ca,Mg,Fe)(Ti) ₂ -3O ₇
UM1978-09-O:CuHPbSbSi	Grønlands Geol. Undersøgelse Bull. 126, 1		(Sb,Cu) ₂ (Pb,Fe,Ca)(Si) _{0.4} (O,OH,H ₂ O) _{0.6} ; similarities to bindheimite and monimolite
UM1978-10-O:U	*Erzmetall 31, 13	Am. Mineral. 63, 1284	U ₃ O ₇ , equivalent to synthetic alpha-U ₃ O ₇
UM1978-11-S:AgBiCuTe	*Przeglad Geol. 26, 337	Am. Mineral. 64, 1332	Ag ₃ CuBiTe ₂ S ₂
UM1978-12-S:AgBiCuTe	*Przeglad Geol. 26, 337	Am. Mineral. 64, 1332	(Ag,Cu,Bi) ₆ Te ₂ S ₂
UM1978-13-S:BiTe	*Przeglad Geol. 26, 337	Am. Mineral. 64, 1332	Bi ₃ Te ₂ S ₂
UM1978-14-S:CuFePtRh	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Rh,Cu,Pt,Fe) ₂ S ₂ ; (CIM Sp. Vol. 23, 181)
UM1978-15-S:IrOsPtRhRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ru,Ir,Rh,Os,Pt) ₃ S ₂ ; (CIM Sp. Vol. 23, 180)
UM1978-16-S:IrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ir,Pt,Os,Ru) ₂ S ₂ ; (CIM Sp. Vol. 23, 191); possibly related to UM1973-20-S:IrOs
UM1978-17-S:IrOsPtRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Pt,Os,Ru,Ir) ₂ S ₃ ; (CIM Sp. Vol. 23, 193)
UM1978-18-S:IrOsRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ru,Ir,Os) ₅ S ₈ ; (CIM Sp. Vol. 23, 180)
UM1978-19-S:IrOsRu	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Ir,Os,Ru) ₃ S ₂ ; (CIM Sp. Vol. 23, 191)
UM1978-20-S:PtRh	Can. Mineral. 16, 641	CIM Sp. Vol. 30, 175	(Rh,Pt,Fe,Ir) _{14.83} S _{17.17} ; (CIM Sp. Vol. 23, 180); possibly related to UM1976-18-S:RhRu

UM1978-21-Sb:Pd	Am. Mineral. 63, 1166	CIM Sp. Vol. 30, 175	PdSb ₂ ; (CIM Sp. Vol. 23, 183)
UM1978-22-SiO:FeHMg	Am. Mineral. 63, 1000		(Mg,Fe) ₁₇ Si ₂₀ O ₅₄ (OH) ₆ ; a polymorph of chesterite
UM1978-23-Te:Ag	*Przeglad Geol. 26, 337	Am. Mineral. 64, 1332	Ag ₁₀ Te ₃ ; formula given in secondary reference is in error
UM1978-24-Te:Bi	*Przeglad Geol. 26, 337	Am. Mineral. 64, 1332	Bi ₃ Te ₄
UM1978-25-Te:Bi	*Przeglad Geol. 26, 337	Am. Mineral. 64, 1332	Bi ₃ Te ₅
UM1979-01-AsO:CaCu	Aufschluss 30, 213	Am. Mineral. 65, 209	Cu,Ca-arsenate with minor Fe, Sb & Zn and distinctive d-values
UM1979-02-AsO:CuFe	Aufschluss 30, 213	Am. Mineral. 65, 209	Cu,Fe-arsenate with minor Ca & Sb and distinctive d-values
UM1979-03-AsO:Fe	Aufschluss 30, 213	Am. Mineral. 65, 209	Orthorhombic Fe-arsenate with minor Cu and distinctive d-values
UM1979-04-AsO:Fe	Aufschluss 30, 213	Am. Mineral. 65, 209	Monoclinic Fe-arsenate with minor Cu & Al and distinctive d-values
UM1979-05-CO:AlCaHY	Mineral. Record 10, 99	Mineral. Record 21, 363	"UK32"; hydrous carbonate of Ca-Y-Al; transferred to Invalid list
UM1979-06-O:CaHMn	Nature 280, 137	Am. Mineral. 65, 812	Described as the Ca-analogue of birnessite and hence Ca ₂ Mn ₁₄ O ₂₇ :9H ₂ O
UM1979-07-PO:CaFeHREESiTh	*Mineral. Polonica 10, 1	Am. Mineral. 67, 417	(Th,Fe ²⁺ ,Ca,Fe ³⁺ ,REE)(PO ₄ ,SiO ₄)(OH); mineral "U-1"; appears to be related to cheralite but with Th > Ca
UM1979-08-PO:CCaFeHREESiTh	*Mineral. Polonica 10, 1	Am. Mineral. 67, 417	(Th,Fe,Ca,REE)(PO ₄ ,SiO ₄ ,CO ₃)•0.5H ₂ O; mineral "U-2"; appears to be related to brockite but with Th > Ca
UM1979-09-PO:FeH	*Mineral. Polonica 10, 1	Am. Mineral. 67, 417	Mineral "U-4"; X-ray diffraction pattern similar to that of synthetic Fe ²⁺ ₃ (H ₂ O)(PO ₄) ₂ : Am. Mineral. 60, 454
UM1979-10-PO:FeHREETH	*Mineral. Polonica 10, 1	Am. Mineral. 67, 417	(Fe ²⁺ -x,Th _{1-x} ,REE,Fe ³⁺) _{2x} (PO ₄) ₂ •1-3H ₂ O; mineral "U-3"; perhaps related to ningyoite with Fe replacing Ca and Th replacing U
UM1979-11-S:AgAsAuSe	*New Zealand J. Geol. Geophys. 22, 339	Am. Mineral. 67, 416	Empirical formula: ~(Ag,Au) ₇ (S,Se,As) ₅
UM1979-12-S:AgAsAuSe	*New Zealand J. Geol. Geophys. 22, 339	Am. Mineral. 67, 416	Empirical formula: ~(Ag,Au) ₇ (S,Se,As) ₆
UM1979-13-S:AgAsAuSe	*New Zealand J. Geol. Geophys. 22, 339	Am. Mineral. 67, 416	Empirical formula close to (Ag,Au) ₇ (S,Se,As) ₆
UM1979-14-S:AgPbSb	Am. Mineral. 64, 432		Ag ₂ Pb ₁₈ Sb ₁₂ S ₃₇
UM1979-15-S:AgSbTe	*Medd. Grönland, Greenland Geoscience 2, 1	Am. Mineral. 66, 1280	Ag ₈ Sb(S,Te); mineral "C"; perhaps Te-bearing polybasite or benleonardite
UM1979-16-S:AsPbSb	*Dokl. Akad. Nauk SSSR 248, 447	Dokl. Earth Sci. 248, 131	Pb ₈ Sb ₆ As ₈ S ₂₉ ; mineral "X"
UM1979-17-S:BiCuFe	*Godishnik. Vissh. Minno-Geol. Inst. Sofia 26, 143	Am. Mineral. 70, 879	Empirical formula: ~Cu ₁₈ Fe ₄ BiS ₁₆
UM1979-19-Sb:Rh	Am. Mineral. 64, 446-448	Am. Mineral. 69, 411	(Zn,Cu) ₅ (SO ₄) ₂ (OH) ₆ •6H ₂ O; the Zn-analogue of ktenasite
UM1979-20-SiO:AlCaFeHKMgMnNaTi	CIM Sp. Vol.30, 175	Am. Mineral. 69, 411	RhSb
UM1979-21-SiO:AlHNaV	Mineral. Record 10, 99	Mineral. Record 21, 363	(Na,Ca,K) _{0.35-0.45} (Fe ²⁺ ,Mg,Al,Mn,Ti) _{3.10-3.23} (Si,Al) ₄ O _{10-n} H ₂ O;"UK29"; transferred to Invalid list
UM1979-22-SiO:CeLaNd	Clay Minerals 14, 241	Am. Mineral. 65, 1070	Described as a vanadium mineral of the montmorillonite group
	Neues Jb. Mineral. Abh. 137, 42	Zap. Vses. Mineral. Ob. 111, 243	(Ce,La,Nd) ₂ Si ₆ O ₁₅
UM1980-01-E:CuZn	*Soobshch. Akad. Nauk Gruz. SSR 97, 133	Am. Mineral. 66, 639	Cu ₃ Zn
UM1980-02-E:CuZn	*Soobshch. Akad. Nauk Gruz. SSR 97, 133	Am. Mineral. 66, 639	Cu _{4.45} Zn
UM1980-03-F:AlHO	Am. Mineral. 65, 1057		Al ₁₆ (F,OH) ₄₈ •12-15H ₂ O
UM1980-04-PO:CaHREETH	Mineral. Polonica 11, 123	Am. Mineral. 68, 850	Ca _{1-x} ,Th _{1-x} ,REE _{2x} (PO ₄) ₂ •2H ₂ O; Perhaps related to ningyoite and UM1979-10-PO:FeHREETH
UM1980-05-S:BiCuPb	11th IMA Sulfosalt Volume, 109	Am. Mineral. 70, 880	~Pb ₅ (Cu,Fe) ₁₅ Bi ₉ Sb ₃ S ₃₄ ; mineral "2"
UM1980-06-S:BiPb	11th IMA Sulfosalt Volume, 109	Am. Mineral. 70, 880	~Pb ₃ Bi ₄ S ₉ ; mineral "1"
UM1980-07-S:BiTe	11th IMA Sulfosalt Volume, 127	Am. Mineral. 70, 881	Bi ₃ Te _{2.27} S _{0.73} ; mineral "F"
UM1980-08-S:ClPbSb	11th IMA Sulfosalt Volume, 83	Am. Mineral. 70, 1333	Pb ₃ Sb ₈ S ₁₄ Cl _{4.5} ; "Phase A"
UM1980-09-S:ClPbSb	11th IMA Sulfosalt Volume, 83	Am. Mineral. 70, 1333	Pb ₇ Sb ₈ S ₁₆ Cl _{3.4} ; "Phase B"
UM1980-10-S:ClPbSb	11th IMA Sulfosalt Volume, 83	Am. Mineral. 70, 1333	Pb ₂ Sb ₂ S _{4.76} Cl _{0.31} ; "Phase C"
UM1980-11-S:CuIrPtRh	*Dokl. Akad. Nauk SSSR 252, 1452	Am. Mineral. 66, 1279	(Cu,Ir,Rh,Pt) ₃ S ₄ ; possibly related to cuproiridsite
UM1980-12-S:CuZn	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. 1980 (2), 38	Zap. Vses. Mineral. Ob. 112, 704	(Zn _{0.75} Cu _{0.34} Fe _{0.02})S
UM1980-13-S:IrRh	*Dokl. Akad. Nauk SSSR 252, 1452	Am. Mineral. 66, 1279	Near Ir ₃ Rh ₃ S ₈ ; authors' proposed formula ((Ir _{1.54} Pt _{0.93} Rh _{1.41})S ₄) is at variance with their compositional data
UM1980-14-Sb:AsSn	*SoOb. Akad. Nauk Gruz. SSR 97, 133	Am. Mineral. 66, 639	Sn(Sb,As) ₄
UM1980-15-SiO:REETi	Earth Planet Sci. Lett. 48, 97	Am. Mineral. 70, 879	(REE,Ca)(Ti,Fe)SiO ₅ ; a REE-analogue of titanite
UM1980-16-Te:Bi	*Zap. Vses. Mineral. Ob. 109, 230	Am. Mineral. 66, 439	Significant deviations from proposed formula Bi ₂ Te; many similarities to hedleyite
UM1980-17-TeO:CuPb	*Dokl. Akad. Nauk SSSR 253, 1448	Am. Mineral. 66, 436	PbCu(TeO ₃) ₂
UM1980-18-VO:Cu	Am. Mineral. 65, 1146		Cu ₄ V ₂ O ₉ ; known synthetically
UM1980-19-SiO:FeHNaTi	Khomyakov (1980)	Khomyakov (1995)	H ₃ Na ₃ (Fe,Ti)Si ₆ O ₁₈ ; probably the Fe-analogue of tisinallite
UM1980-20-SiO:CaFeHMnNaTi	Khomyakov (1980)	Khomyakov (1995)	Na ₆ (Ca,Mn)(Ti,Fe)Si ₆ O ₁₈ •H ₂ O; Mineral "M42"; perhaps a trigonal polymorph of koashvite
UM1981-01-AsTe:Ru	*Izv. Akad. Nauk SSSR, Ser. Geol. 1981, (2), 103	Zap. Vses. Mineral. Ob. 112, 704	RuAsTe
UM1981-02-Bi:AsPbPd	CIM Sp. Vol. 23, 175	Am. Mineral. 69, 409	~(Pd,Pb,Pt) ₃ (Bi,As,Te); listed in CIM Sp. Vol. 23, 187 as un1979-3 but unpublished at that time
UM1981-03-Cl:BiPd	*Zap. Vses. Mineral. Ob. 110, 86	Am. Mineral. 66, 1279	Pd ₄ Bi ₅ Cl ₃
UM1981-04-E:AgAuHg	Neues Jb. Mineral. Abh. 141, 217	Am. Mineral. 68, 473	~Ag ₆₁ Au ₂₅ Hg ₁₄
UM1981-05-E:CrFe	*Dokl. Akad. Nauk SSSR 256, 958	Zap. Vses. Mineral. Ob. 112, 704	Cr ₂ Fe

UM1981-06-E:CrFeNiSi	*Dokl. Akad. Nauk SSSR 256, 958	Zap. Vses. Mineral. Ob. 112, 704	Fe ₃ (Cr,Ni,Si)
UM1981-07-E:FeIrNiOsRu	Mineral. Mag. 44, 225	Mineral. Petrol. 60, 185	(Ni,Ru,Fe,Os,Ir)
UM1981-08-E:FeIrPtRhRu	Bull. Minéral. 104, 508	Am. Mineral. 67, 1079	Low analytical totals (~70%) suggest oxygen is probably present
UM1981-09-S:AsPbSb	*Zap. Vses. Mineral. Ob. 110, 480	Bull. Geol. Soc. Finland 55, 3	Pb ₂ Sb ₂₀ As ₈ S ₁₉ ; mineral "Y"
UM1981-10-S:AsPbSb	*Zap. Vses. Mineral. Ob. 110, 480	Bull. Geol. Soc. Finland 55, 3	PbSb ₆ As ₂ S ₆ ; mineral "Z"
UM1981-11-S:BiPb	*Akad. Nauk SSSR, Inst. Geol. Yakut Filial, Sibirsk Otdel (1981) 5	Am. Mineral. 68, 1041	Compositionally indistinguishable from UM1980-08-S:BiPb but there are discrepancies in powder diffraction data
UM1981-12-S:CoFe	*Ann. Geol. des Pays Héliéniques 32, 534	Am. Mineral. 70, 218	Close to (Co,Fe) ₄ S ₃ but empirical formula reported is incorrect
UM1981-13-S:CoFeNiRh	Bull. Minéral. 104, 508	Am. Mineral. 67, 1080	(Fe,Ni,Rh,Co) ₉ S ₈ ; perhaps simply Ni- and Rh-rich pentlandite
UM1981-14-S:CuFeIrNiRh	Bull. Minéral. 104, 508	Am. Mineral. 67, 1081	(Fe,Ni,Ir,Rh,Cu,Pt,Co) _{1.06} S _{0.94} ; cf. UM1981-13-S:CuFeIrNiRh
UM1981-15-S:CuFeIrNiRh	Bull. Minéral. 104, 508	Am. Mineral. 67, 1080	(Rh,Fe,Ni,Cu,Ir) ₅ ; cf. UM1976-18-S:RhRu and miassite
UM1981-16-S:CuFeIrNiRh	Bull. Minéral. 104, 508	Am. Mineral. 67, 1080	(Fe,Rh,Ni,Cu,Ir) ₅
UM1981-17-S:CuIrPtRh	Bull. Minéral. 104, 508	Am. Mineral. 67, 1080	Pt(Rh,Ir)CuS ₄
UM1981-18-S:CuSn	Mineral. Zhurn. 3 (5), 79	Zap. Vses. Mineral. Ob. 112, 704	Cu ₆ CuSn ₂ S ₈ ; Cu-analogue of chatkalite
UM1981-19-S:CuSnZn	Mineral. Zhurn. 3 (5), 79	Zap. Vses. Mineral. Ob. 112, 704	Cu ₆ ZnSn ₂ S ₈ ; Zn-analogue of chatkalite
UM1981-20-S:NiSbSnTe	Econ. Geol. 76, 1686	Am. Mineral. 67, 1079	Approximately (Ni,Cu) ₄ (Sn,Te,Sb) ₅
UM1981-21-Se:BiCuPb	Can. Mineral. 19, 341	Am. Mineral. 71, 847	Bi ₉ Cu ₄ Pb ₂ Se ₁₈ ; mineral "A"
UM1981-22-Se:BiTe	Can. Mineral. 19, 341	Am. Mineral. 71, 847	Bi ₂ Se ₂ Te; mineral "B"; not distinct from skippenite on basis of available data; transferred to Invalid list
UM1981-23-Si:Mg	*Zap. Vses. Mineral. Ob. 110, 186	Am. Mineral. 67, 416	Mg ₂ Si; some concern about the possibility of sample contamination
UM1981-24-SiO:CaU	*Bulgarski Akad. Nauk, Sofia, Dokl. 34, 1693	Am. Mineral. 68, 1040	~(Ca,K,Ba)U ₈ Si ₂ O ₂₁ ; "Group #1"
UM1981-25-SiO:CaU	*Bulgarski Akad. Nauk, Sofia, Dokl. 34, 1693	Am. Mineral. 68, 1040	~(Ca,Mg,K,Ba)U ₇ Si ₄ O ₂₁ ; "Group #2"
UM1981-26-SiO:CaU	*Bulgarski Akad. Nauk, Sofia, Dokl. 34, 1693	Am. Mineral. 68, 1040	~(Ca,K,Mg)U ₃ Si ₁₁ O ₂₉ ; "Group #5"
UM1981-27-SiO:HU	Am. Mineral. 66, 610		Qualitative chemistry, X-ray powder diffraction pattern.
UM1981-28-SiO:CaU	*Bulgarski Akad. Nauk, Sofia, Dokl. 34, 1693	Am. Mineral. 68, 1040	~(Ca,K,Ba)U ₅ Si ₁₁ O ₃₃ ; "Group #4"
UM1981-29-Te:BiRh	Bull. Minéral. 104, 508	Am. Mineral. 67, 1079	Rh(Te,Bi) ₂ ; may be related to synthetic alpha-RhTe ₂ or synthetic RhTeBi
UM1981-30-Te:BiSe	Can. Mineral. 19, 341	Am. Mineral. 71, 847	Bi ₄ Se ₃ Te ₃ ; mineral "C"
UM1981-31-Te:Pd	CIM Sp. Vol. 23, 175	Am. Mineral. 69, 410	Pd ₈ Te ₃ ; (CIM Sp. Vol. 23, 188)
UM1981-32-PO:FeH	Chem. Erde 40, 217	Mineral. Mag. 62, 93	Fe ²⁺ Fe ³⁺ ₆ (PO ₄) _{4-x} (PO ₃ OH) _x (OH) _{8-4H₂O} ; a member of turquoise group approved by the IMA but left unnamed
UM1982-01-As:CuPd	Econ. Geol. 77, 1511	Am. Mineral. 69, 409	(Pd,Cu) ₇ As ₂ ; similarities to UM1974-01-As:PdSb
UM1982-02-AsO:CuNiPd	Econ. Geol. 77, 1511	Am. Mineral. 69, 409	Possible formula: (Pd,Cu,Ni) ₁₈ AsO ₄ ·4H ₂ O
UM1982-03-AsO:HMnZn	Am. Mineral. 67, 1043		(Mn,Zn) ₅ AsO ₄ (OH) ₇ ·2H ₂ O
UM1982-04-AsO:HMnZn	Am. Mineral. 67, 1043		(Mn,Zn) ₃ Zn ₂ AsO ₄ (OH, ₂ O) ₆ ; duplicate entry; transferred to Invalid list
UM1982-05-Bi:PtTe	Econ. Geol. 77, 1511	Am. Mineral. 69, 1195	Pd ₇ (Bi,Te) ₈ ; suggested stoichiometry not reported in phase equilibrium studies of Pd-Bi-Te system
UM1982-06-C:Si	Dokl. Akad. Nauk SSSR 262, 204	Dokl. Earth Sci. 262, 163	Reported with powder data as β-SiC but composition ~ Si ₃ C ₄ ; may be same mineral reported in Geol. Soc. Am. Bull. 69, 1633 (Conf. Abst.)
UM1982-07-OH:FeSn	*Marshukova, 1982, 189	Zap. Vses. Mineral. Ob. 114, 485	FeSnO(OH) ₃ ; closely related to natanite
UM1982-08-PO:FeHMn	Schweiz. Mineral. Petrog. Mitt. 62, 343	Am. Mineral. 69, 213	Approximate formula assuming water by difference: FeMnPO ₅ ·2H ₂ O; similarities to UM1949-01-PO:Fe
UM1982-09-S:AsCoFeNi	*Vokes & Strand (1982), 118	Am. Mineral. 69, 213	(Co,Ni,Fe,Cu) ₂ As ₂
UM1982-10-S:AsSbTi	Nowacki <i>et al.</i> (1982), 689		Ti(Sb,As) ₇ S ₁₁ ; compositionally very similar to chabournéite
UM1982-11-S:CuFeSb	Neues Jb. Mineral. Mh. (1982), 201	Am. Mineral. 68, 850	Cu ₆ FeSb ₄ S ₁₃ ; possible a tetrahedrite-like mineral with Cu & Fe ordered 1:1
UM1982-12-S:CuFeSn	*Dokl. Akad. Nauk SSSR 264, 182	Am. Mineral. 69, 814	Cu ₃ FeSn ₅
UM1982-13-S:MoPb	Can. Mineral. 20, 281	Am. Mineral. 68, 473	~(Pb,Bi,W,Fe) ₂ MoS ₂
UM1982-14-Si:CrFeTi	*Izv. Akad. Nauk Kirgiz SSR 5, 25	Am. Mineral. 69, 214	(Cr,Fe,Ti) ₃ Si
UM1982-15-SiO:AlBaH	Mineral. Mag. 46, 365	Am. Mineral. 68, 642	Probably related to known synthetic zeolite (Am. Mineral. 49, 656)
UM1982-16-SiO:AlCaFeTi	Bull. Minéral. 105, 364	Am. Mineral. 68, 1040	Compositional similarities to schorlomite
UM1982-17-SiO:CaTiU	*Bulgarski Akad. Nauk, Sofia, Dokl. 35, 203	Am. Mineral. 68, 1041	~CaU ₁₀ Si ₁₀ Ti ₅ O ₅₁
UM1982-18-SiO:ThTiU	*Bulgarski Akad. Nauk, Sofia, Dokl. 35, 203	Am. Mineral. 68, 1041	Empirical formula: ~(U,Th) ₄ Ti ₇ Si ₄ O ₃₀ ;
UM1982-19-SiO:TiU	*Bulgarski Akad. Nauk, Sofia, Dokl. 35, 203	Am. Mineral. 68, 1041	Empirical formula: ~U ₂ Ti ₄ SiO ₁₄ ; compositional similarities to orthobrannerite
UM1982-20-Te:AgAuFePb	*Novye Dannye Mineral. 30, 140	Am. Mineral. 70, 879	(Au,Ag)Fe ₂ (Te,Pb) ₄ ; mineral "1"
UM1982-21-Te:AgCuFePb	*Novye Dannye Mineral. 30, 140	Am. Mineral. 70, 879	Au(Fe,Cu)(Te,Pb); mineral "12"
UM1982-22-Te:AgCuFePb	*Novye Dannye Mineral. 30, 140	Am. Mineral. 70, 879	Au ₃ (Fe,Cu)(Te,Pb); mineral "2"
UM1982-23-Te:AgCuPb	*Novye Dannye Mineral. 30, 140	Am. Mineral. 70, 879	Au ₅ Cu ₃ (Te,Pb); mineral "8"
UM1982-24-Te:AgCuPb	*Novye Dannye Mineral. 30, 140	Am. Mineral. 70, 879	Au ₅ Cu(Te,Pb) ₂ ; mineral "5"
UM1982-25-Te:BiPd	Econ. Geol. 77, 1511	Am. Mineral. 69, 1195	Pd ₇ (Te,Bi) ₈ ; suggested stoichiometry not reported in phase equilibrium studies of the Pd-Bi-Te system
UM1982-26-Te:BiSse	*Tikho-okeaniskaya Geol. 5, 113	Am. Mineral. 70, 878	Bi ₁₃ (Te,S,Se) ₈

UM1983-01-As:AgCu	*Z. Angew. Geol. 29, 86	Am. Mineral. 72, 227	(Cu,Ag) ₂ As
UM1983-02-As:Cu	Tscherm. Mineral. Petrog. Mitt. 32, 111	Am. Mineral. 70, 219	Cu ₂ As; mineral "x"
UM1983-03-As:NiRh	*Zap. Vses. Mineral. Ob. 112, 554	Am. Mineral. 69, 1195	RhNiAs; later named zaccariniite; Mineral. Mag. 76 (2012), 154; transferred to Invalid list
UM1983-04-BO:FeMgMnSb	Geol. Fören. Förh. 105, 335	Am. Mineral. 71, 231	(Mg,Mn) ₂ (Mn ³⁺ ,Sb ³⁺ ,Fe ³⁺)(BO ₃)O ₂ ; possibly Sb-bearing orthopinakiolite
UM1983-05-E:CoFe	*J. Japan. Assoc. Mineral. Petrol. Econ. Geol. 78, 467	Am. Mineral. 70, 879	Fe ₂ Co; distinct from wairauite
UM1983-06-GeO:AlCIFeHKS	Tscherm. Mineral. Petrog. Mitt. 31, 97	Am. Mineral. 69, 568	K(Fe,Al) ₃ Al(Ge,Si,Al) ₃ O ₁₀ (Cl,OH) ₂ ; Ge-analogue of biotite
UM1983-07-O:FeNaTi	Neues Jb. Mineral. Mh. (1983), 375	Am. Mineral. 69, 1194	Na ₂ FeTi ₇ O ₁₆ ; probably the Fe-analogue of freudenbergitte
UM1983-08-PO:BaCCaHREETH	J. Less Common Metals 93, 433	Am. Mineral. 70, 439	(Ca,Ba,Th,REE)(PO ₄ ,CO ₃)·H ₂ O
UM1983-09-S:BiPbTe	*Istanbul Earth Sci. Rev. 3, 53	Am. Mineral. 70, 219	Pb _{1.22} Bi _{3.22} S _{2.22} Te _{1.00}
UM1983-10-S:BiSe	*Uzbek Geol. Zhurn. #6, 82	Am. Mineral. 70, 878	Bi ₂ SeS; "Phase III"
UM1983-11-S:BiSeTe	*Uzbek Geol. Zhurn. #6, 82	Am. Mineral. 70, 878	~Bi ₄ Te ₃ (S,Se) ₂ ; "Phase I"
UM1983-12-S:CuFe	*Mineral. Rudn. Mest. (1983), 109	Am. Mineral. 75, 435	Close to Cu ₂ FeS ₃ (not the reported Cu ₂ Fe ₃ S ₃)
UM1983-13-S:CuPd	Zap. Vses. Mineral. Ob. 112, 3	Zap. Vses. Mineral. Ob. 114, 485	Pd ₄ CuS ₂
UM1983-14-S:IrNi	Zap. Vses. Mineral. Ob. 112, 3		Ir ₂ Ni ₄ S ₇
UM1983-15-S:MoPb	*Dokl. Akad. Nauk Uzbek SSSR #12, 30	Am. Mineral. 70, 879	Mo _{0.791} Pb _{0.132} Fe _{0.073} Sb _{0.02} S _{2.000}
UM1983-16-SO:CaHNa	*Kali u. Steinsalz, 8, 374	Am. Mineral. 70, 439	Na ₂ Ca ₂ (SO ₄) ₃ ·3H ₂ O; perhaps related structurally to eugsterite & hydroglauberite
UM1983-17-Se:CuPb	*Novye Dannye Mineral. 31, 140	Am. Mineral. 70, 219	PbCuSe
UM1983-18-SiO:AlFeHMg	Mineral. Mag. 47, 238	Am. Mineral. 69, 1195	~(Mg,Fe)Al ₄ Si ₄ O ₁₂ (OH) ₈ ; compositional similarities to magnesioiccarpholite
UM1983-19-SiO:AlH	Econ. Geol. 78, 422	Am. Mineral. 69, 213	(Al ₂ O ₃) _{2-4.5} (SiO ₂) ₃₋₅ (H ₂ O) _{0-1.5} ; mineral "2"; composition very variable
UM1983-20-SiO:AlH	Econ. Geol. 78, 422	Am. Mineral. 69, 213	Al ₂ Si ₂ O ₇ ·4H ₂ O; mineral "1"; composition very similar to kaolinite, endellite, etc.
UM1983-21-SiO:AlH	Econ. Geol. 78, 422	Am. Mineral. 69, 213	(Al) _{1.25-2} (Si) _{1-1.205-0-0.3} (H ₂ O); mineral "3"; composition very variable
UM1983-22-SiO:BaCIFeGaGe	Tscherm. Mineral. Petrog. Mitt. 31, 97	Am. Mineral. 69, 568	BaFe ₃ Ga(Si,Ge)O ₄ (Si ₂ O ₇)Cl
UM1983-23-SiO:BaFeHMnTi	Southeastern Geol. 24, 13	Am. Mineral. 69, 409	(Ba,Ca,K,Na) ₃ (Fe ²⁺ ,Mn) ₇ Ti ₂ Si ₈ O ₂₄ (O,OH) ₇
UM1983-24-SiO:CaNa	Neues Jb. Mineral. Mh. (1983), 49	Am. Mineral. 69, 214	Na ₂ Ca ₂ Si ₃ O ₉ ; a dimorph of combeite
UM1983-25-SiO:U	Geol. Balcanica 13 (4), 63	Zap. Vses. Mineral. Ob. 114, 486	U ₄ SiO ₁₀
UM1983-26-SiO:U	Geol. Balcanica 13 (4), 63	Zap. Vses. Mineral. Ob. 114, 486	U ₂ SiO ₆
UM1983-27-SiO:U	Geol. Balcanica 13 (4), 63	Zap. Vses. Mineral. Ob. 114, 486	USi ₂ O ₆
UM1983-28-SiO:U	Geol. Balcanica 13 (4), 63	Zap. Vses. Mineral. Ob. 114, 486	USi ₄ O ₁₀
UM1983-29-Te:BiSSe	*Uzbek Geol. Zhurnal #6, 82	Am. Mineral. 70, 878	Bi ₃ (Te,Se,S) ₂ ; "Phase II"
UM1983-30-AsO:FeHMgMnZn	Mineral. Mag. 47, 381	Am. Mineral. 69, 814	(Mn,Mg,Fe ³⁺ Al) ₁₅ (AsO ₃)(AsO ₄) ₂ (OH) ₂₃ ; said to be distinct from arakiite (Mineral. Record, 31 (2000), 253)
UM1984-01-As:AgAuCuNiPdS	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Ideally Pd ₅ (As,S) ₂ or Pd ₃ (As,S); similarities to UM1975-05-As:Pd
UM1984-02-As:AgNiPd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	(Ni,Ag,Pd) ₂ As ₃
UM1984-03-As:Ni	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Ni ₃ As ₅
UM1984-04-As:NiPd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	(Ni,Pd) ₃ As ₄
UM1984-05-As:Pd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₃ As ₅
UM1984-06-As:Pd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₂ As ₃
UM1984-07-As:Pd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₄ As ₃
UM1984-08-As:PdS	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₈ As ₂ S; possibly a sulphur-substituted stillwaterite
UM1984-09-AsO:CIHMn	Am. Mineral. 69, 800		Mn ₁₀ As ₆ O ₁₈ (OH)Cl; probably related to magnussonite
UM1984-10-AsS:CuPd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₂ Cu ₂ As ₅ S ₇
UM1984-11-AsS:CuPd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₂ Cu ₂ As ₆ S ₅
UM1984-12-AsS:Pd	Chem. Erde 43, 27	Am. Mineral. 74, 1218	Pd ₈ As ₆ S ₃
UM1984-13-C:Cr	*Geol. Geofiz. (1984) (4), 38	Am. Mineral. 73, 442	Cr ₂ C
UM1984-14-CH:CI NOV	*Austral. J. Chem. 37, 761	Am. Mineral. 70, 881	C ₃₃ H ₃₅ Cl ₃ N ₄ O _V
UM1984-15-E:CrFeIrOsRu	Econ. Geol. 79, 491	Am. Mineral. 74, 1217	(Ru,Os,Ir) ₅ (Fe,Cr,Ni) ₆
UM1984-16-E:CrFeMnNi	*Geol. Geofiz. (1984) (4), 38	Am. Mineral. 73, 442	(Fe,Cr,Ni,Mn)
UM1984-17-E:FeIrOsPtRu	Econ. Geol. 79, 491	Am. Mineral. 74, 1217	(Os,Ir,Ru,Pt) ₂ Fe ₃
UM1984-18-E:FeNiPt	Econ. Geol. 79, 491	Am. Mineral. 74, 1217	(Fe,Ni) ₃ Pt; some Cr, Cu, Ir & Os may also be present; described again later from several other localities
UM1984-19-E:FeOs	Econ. Geol. 79, 491	Am. Mineral. 74, 1217	Os ₂ Fe ₃ ; an inadvertent duplication of UM1984-17-E:FeIrOsPtRu; transferred to Invalid list
UM1984-20-O:CrFeHTiV	Am. Mineral. 69, 388		(Fe ³⁺ ,Cr ³⁺ ,V ³⁺)Ti ₂ O ₆ ·nH ₂ O; perhaps related to pseudobrookite or crichtonite group
UM1984-21-PO:AsCu	*Dokl. Akad. Nauk SSSR 279, 197	Am. Mineral. 71, 847	Cu ₃ (PO ₄ ,AsO ₄) ₂ ; probably the phosphate-analogue of lammerite
UM1984-22-S:AsCuSbSn	*Izv. Akad. Nauk SSSR Ser. Geol. 5, 91	Am. Mineral. 70, 880	Cu(Sn,As,Sb) ₅
UM1984-23-S:BiCuPb	*Trudy Inst. Geol. Komi Filial, Akad. Nauk SSSR #45, 60	Am. Mineral. 70, 880	Pb ₃ Cu ₃ Bi ₈ S ₁₇
UM1984-24-S:BiCuPbSe	*Izv. Akad. Nauk SSSR Ser. Geol. 5, 91	Am. Mineral. 70, 880	PbCu ₇ Bi ₁₁ (S,Se) ₂₁
UM1984-25-S:BiCuSe	*Izv. Akad. Nauk SSSR Ser. Geol. 5, 91	Am. Mineral. 70, 880	Cu _{3+x} Bi _{5-x} (S,Se) ₉
UM1984-26-S:BiPb	*Trudy Inst. Geol. Komi Filial, Akad. Nauk SSSR #45, 60	Am. Mineral. 70, 880	Pb ₂ Bi ₃ S ₇
UM1984-27-S:CIPbSb	*Dokl. Akad. Nauk SSSR 277, 1464	Am. Mineral. 71, 1281	Pb ₂ SbS ₃ Cl
UM1984-28-S:Cr	*Geol. Geofiz. (1984) (4), 38	Am. Mineral. 73, 442	CrS; transferred to Invalid list

UM1984-29-S:CuFePbSb	*Rend. Soc. Ital. Mineral. Petrol. 39, 657	Am. Mineral. 71, 231	Pb ₂ (Cu,Fe) ₄ (Sb,As) ₂ S ₉
UM1984-30-S:CuFeSn	*Zap. Vses. Mineral. Ob. 113, 443	Am. Mineral. 72, 227	Cu ₂ Fe ₂ Sn ₃ S ₇ ; stannite group
UM1984-31-S:CuFeSn	*Izv. Akad. Nauk SSSR Ser. Geol. 5, 91	Zap. Vses. Mineral. Ob. 115, 616	Cu ₈ Fe ₂ Sn ₃ S ₁₂
UM1984-32-S:CuPbSb	Can. Mineral. 22, 219		Pb ₂ CuSb ₃ S ₇ ; mineral "JC"
UM1984-33-S:PbSbTe	*Proc. Australasian Inst. Min. Metall. #289, 309	Am. Mineral. 71, 1281	~Pb ₅ (Sb,Te,As) ₃ S ₉
UM1984-34-Sb:AsCoNi	Neues Jb. Mineral. Mh. (1984), 145	Am. Mineral. 70, 439	(Co,Ni)(Sb,As) ₂ ; Co-analogue of nisbite and seinajokite
UM1984-35-SiO:AlCaFeKMg	*Dokl. Akad. Nauk SSSR 276, 1208	Am. Mineral. 71, 846	~(K,Na) ₂ Ca ₂ Mg ₂ (Fe,Mg) ₃ (Si,Al) ₁₂ O ₃₀ ; perhaps a member of the osumilite group
UM1984-36-SiO:CaNaZr	Geochim. Cosmochim. Acta 47, 1833	Am. Mineral. 70, 439	Empirical formula: ~(Zr,Na,Ca) ₃ Si ₆ O ₁₇
UM1984-37-SiO:CrMn	*Geol. Geofiz. (1984) (4), 38	Am. Mineral. 73, 445	Mn ²⁺ ₃ (Cr ³⁺ , Mn ³⁺) ₂ Si ₃ O ₁₂ ; a garnet
UM1984-38-SiO:TiU	*Geokhim. Mineral. Petrol. (Bulgarian Acad. Sci.) 18, 43	Am. Mineral. 71, 1281	Possibly U ₃ Ti ₃ SiO ₁₄
UM1984-39-SiO:U	*Dokl. Bolg. Akad. Nauk 37, 1359	Am. Mineral. 71, 1281	U ₃ SiO ₈
UM1984-40-Te:AgBi	Can. Mineral. 22, 13	Am. Mineral. 70, 439	Ag ₃ BiTe ₂
UM1984-41-Te:AuSb	Geol. Fören. Förh. 106, 245		AuSbTe
UM1985-01-Bi:PdSb	*Dokl. Akad. Nauk SSSR 284, 438	Am. Mineral. 72, 228	Pd ₂ SbBi; intermediate between sudburyite and sobolevskite
UM1985-02-E:AlZn	*Zap. Vses. Mineral. Ob. 114, 90	Am. Mineral. 71, 1278	(Zn,Cu) ₂ Al ₂
UM1985-03-E:AlZn	*Zap. Vses. Mineral. Ob. 114, 90	Am. Mineral. 71, 1278	(Cu,Zn) ₂ Al
UM1985-04-E:CuNiSn	*Dokl. Akad. Nauk SSSR 285, 203	Am. Mineral. 72, 227	~Cu ₂ Ni ₂ Sn ₃
UM1985-05-E:CuSn	*Dokl. Akad. Nauk SSSR 285, 203	Am. Mineral. 72, 227	(Cu,Pb) ₅ Sn ₂
UM1985-06-O:CrFeMgTi	*Contr. Mineral. Petrol. 91, 245	Am. Mineral. 73, 444	(Fe ²⁺ ,Mg,Ti,Cr) ₆ O ₇ ; mineral "H"; perhaps a wüstite-type compound
UM1985-07-OH:AlCuS ₂ Zn	Mineral. Mag. 49, 583		Specimen "H858"; composition close to zincwoodwardite, but unit cell different
UM1985-08-OH:Fe	Mineral. Mag. 49, 139		Epsilon-FeOOH
UM1985-09-PO:CaFeHMn	Can. Mineral. 23, 247		(Mn,Fe ³⁺ ,Fe ²⁺ ,Mg,Ca,Na) ₇ Ca ₂ (PO ₄) ₆
UM1985-10-S:AgBiPb	*Izv. Akad. Nauk SSSR, Ser. Geol. (1985), 65	Am. Mineral. 73, 443	PbAg ₄ Bi ₄ S ₉
UM1985-11-S:AgBiPb	*Izv. Akad. Nauk SSSR, Ser. Geol. (1985), 65	Am. Mineral. 73, 443	PbAg ₄ Bi ₆ S ₁₂
UM1985-12-S:AgBiPb	*Izv. Akad. Nauk SSSR, Ser. Geol. (1985), 65	Am. Mineral. 73, 443	PbAg ₁₂ Bi ₁₂ S ₂₅ ; compositionally very similar to matildite
UM1985-13-S:AgCu	Austral. J. Earth Sci. 32, 311		Ag ₆ Cu ₃ S ₄ ; no data
UM1985-14-S:AgCuFe	*Ann. Soc. Geolog. Pol. 53, 143	Am. Mineral. 73, 443	Cu(Fe,Ag) ₂ S ₂
UM1985-15-S:AgCuFe	*Ann. Soc. Geolog. Pol. 53, 143	Am. Mineral. 73, 443	(Fe,Cu) ₂ Cu ₂ (Ag,Cu) ₃ S ₄
UM1985-16-S:AgCuFe	*Ann. Soc. Geolog. Pol. 53, 143	Am. Mineral. 73, 443	FeCu ₃ Ag ₆ S ₇
UM1985-17-S:AgCuFe	*Ann. Soc. Geolog. Pol. 53, 143	Am. Mineral. 73, 443	Cu _{5.28} Fe _{0.55} Ag _{1.17} S ₄
UM1985-18-S:AgCuFe	*Ann. Soc. Geolog. Pol. 53, 143	Am. Mineral. 73, 443	FeCu ₂ (Ag,Cu) ₂ S ₅
UM1985-19-S:AgHg	Austral. J. Earth Sci. 32, 311		Ag ₄ HgS ₂ ; no data
UM1985-20-S:AsCuSbSeTe	*Dokl. Akad. Nauk SSSR 280, 476	Am. Mineral. 71, 847	Cu ¹⁺ ₁₀ Cu ²⁺ ₂ (Te,As,Sb) ₄ (S,Se) ₁₃ ; possibly Se-bearing goldfieldite
UM1985-21-S:ClCuPb	Austral. J. Earth Sci. 32, 311		(Cu,Pb) ₂ S ₂ Cl ₂ ; no data
UM1985-22-S:ClCuPb	Austral. J. Earth Sci. 32, 311		(Pb,Cu) ₂ S ₂ Cl ₂ ; no data
UM1985-23-S:CuFeInZn	Bull. Minéral. 108, 245	Am. Mineral. 71, 846	(Zn,Fe) ₂ Cu ₃ In ₃ S ₈
UM1985-24-SO:HU	*Thermochimica Acta 86, 383	Am. Mineral. 73, 1498	U ₁₀ (SO ₃)O ₃₀ ·25H ₂ O
UM1985-25-SiO:AlCaMgPb	Mineral. Mag. 49, 579		Perhaps Pb ₇ (Ca,Mg)Al ₃ Si ₅ O ₂₂ (OH)
UM1985-26-SiO:CaMgPbZn	Mineral. Mag. 49, 721		Pb ₂ Zn ₆ Ca ₄ Mg ₂ Si ₇ O ₂₇
UM1985-27-SiO:FeU	*Dokl. Bolg. Akad. Nauk 38, 1171	Am. Mineral. 73, 933	Possible formula: U ₄ FeSi ₃ O ₁₅
UM1985-28-SiO:FeU	*Dokl. Bolg. Akad. Nauk 38, 1171	Am. Mineral. 73, 933	Possible formula: U ₅ Fe ₂ Si ₅ O ₂₂
UM1985-29-SiO:FeU	*Dokl. Bolg. Akad. Nauk 38, 1171	Am. Mineral. 73, 933	Possible formula: U ₄ Fe ₅ Si ₄ O ₂₁
UM1985-30-SiO:FeU	*Dokl. Bolg. Akad. Nauk 38, 1171	Am. Mineral. 73, 933	Possible formula: UFe ₆ Si ₂ O ₁₂ ·5H ₂ O (assuming H ₂ O present)
UM1985-31-TiO:AlCaFeMnSi	*Zap. Vses. Mineral. Ob. 114, 34	Am. Mineral. 71, 846	(Fe,Mn,Ca) ₃ (Fe,Ti,Al) ₂ (Ti,Si) ₃ O ₁₂ ; interpreted as a titanate garnet
UM1986-01-As:AuPdTe	Neues Jb. Mineral. Mh. 1986, 423	Am. Mineral. 75, 711	~(Pd,Au) ₄ (As,Te)
UM1986-02-As:PdSbSn	Proc. 13th Gen. Mtg. IMA, Varna, Bulgaria (1982), 165	Am. Mineral. 74, 1218	Pd ₁₁ As ₂ (Sb,Sn) ₂
UM1986-03-As:PdSn	Proc. 13th Gen. Mtg. IMA, Varna, Bulgaria (1982), 165	Am. Mineral. 74, 1218	Pd ₆ SnAs
UM1986-04-As:PdTe	Neues Jb. Mineral. Mh. 1986, 423	Am. Mineral. 75, 711	Pd₃As; may be the same as "guanginit"
UM1986-05-AsO:HMn	Am. Mineral. 71, 1515		Mn ₃ As ₂ O ₄ (OH) ₄ ; a polymorph or manganarsite
UM1986-06-AsO:HMn	Am. Mineral. 71, 1515		Mn ₃ As ₂ O ₄ (OH) ₄ ; a polymorph or manganarsite
UM1986-07-Bi:PbPdPtRhTe	Lithos 19, 87	Am. Mineral. 72, 1027	Some compositional similarities to polarite
UM1986-08-C:W	*Kuangwu Xuebao 6, 349	Am. Mineral. 74, 948	WC
UM1986-09-CO:CaHNaSrY	Rocks & Minerals 61, 182	Mineral. Record 21, 363	Sr ₃ NaCaY(CO ₃) ₆ ·3H ₂ O; "UK37A"; dimorphous with donnayite-(Y)
UM1986-10-CO:CHMgMnZn	Mineral. Record 17, 126	Am. Mineral. 72, 228	Mg ₅ (Zn,Mn) ₃ (CO ₃) ₂ (OH,Cl) ₁₂ ·H ₂ O
UM1986-11-CO:Zn	Mineral. Record 17, 126	Am. Mineral. 72, 228	X-ray powder diffraction pattern appears to be distinctive; probably a carbonate, possibly hydrated
UM1986-12-E:CuFeNiPt	*Geol. Rudn. Mest. (1985) (5), 16	Am. Mineral. 74, 1217	(Ni,Cu,Fe) ₃ Pt
UM1986-13-E:CuFeNiPt	*Geol. Rudn. Mest. (1985) (5), 16	Am. Mineral. 74, 1217	(Cu,Fe,Ni) ₃ Pt
UM1986-14-E:CuFePt	*Geol. Rudn. Mest. (1985) (5), 16	Am. Mineral. 74, 1217	PtCu ₂ Fe
UM1986-15-E:CuFePt	*Geol. Rudn. Mest. (1985) (5), 16	Am. Mineral. 74, 1217	Pt ₂ CuFe
UM1986-16-E:CuFePt	*Geol. Rudn. Mest. (1985) (5), 16	Am. Mineral. 74, 1217	Cu ₂ Pt ₃ Fe

UM1986-17-E:CuPt	*Geol. Rudn. Mest. (1985) (5), 16	Am. Mineral. 74, 1217	PtCu3
UM1986-18-GaO:FeGeSnZn	*C. R. Acad. Sci. Paris, Ser. II, 303, 811	Am. Mineral. 73, 933	Fe4(Ga,Sn,Fe)4(Ga,Ge)eO20; sapphirine structure
UM1986-19-GeO:AlCaSi	*C. R. Acad. Sci. Paris, Ser. II, 303, 811	Am. Mineral. 73, 933	Ca3Al2(Ge,Si)3O12; garnet structure
UM1986-20-GeO:CaGa	*C. R. Acad. Sci. Paris, Ser. II, 303, 811	Am. Mineral. 73, 933	Ca3Ga2Ge3O12; garnet structure
UM1986-21-NbO:CaH	Rocks & Minerals 61, 182	Mineral. Record. 21, 363	CaNb4O11·12H2O; Mont St. Hilaire "UK56"
UM1986-22-O:BaCeFeKTiV	Neues Jb. Mineral. Mh. 1986, 376	Am. Mineral. 73, 932	(K,Ba)3(Fe,V,Ce)3Ti14O32; compositional similarities to priderite
UM1986-23-O:BaMnU	Mineral. Record 17, 126	Am. Mineral. 72, 228	X-ray powder diffraction pattern appears distinctive; probably an oxide or carbonate, possibly hydrated
UM1986-24-O:Cu	Mineral. Record 17, 126	Am. Mineral. 72, 228	X-ray powder pattern appears to be distinctive; Cu only detected cation; possibly hydroxide, oxalate or nitrate
UM1986-25-P:Ti	Science 234, 189	Am. Mineral. 73, 197	TiP
UM1986-26-PO:HMg	Neues Jb. Mineral. Mh. 1986, 343	Am. Mineral. 73, 444	The very low analytical total suggests H2O and/or CO2 are present
UM1986-27-S:AgBiCu	*Geol. Geofiz. (1986) (10), 60	Zap. Vses. Mineral. Ob. 117, 727	Ag1.3Cu1.7Bi10S16.8; some similarities to UM1971-05-S:AgBiCu
UM1986-28-S:AgBiCuPb	*Geol. Geofiz. (1986) (10), 60	Zap. Vses. Mineral. Ob. 117, 727	Ag1.7CuPb0.7Bi10S15.6; some similarities UM1971-05-S:AgBiCu
UM1986-29-S:AgBiCuPb	*Geol. Geofiz. (1986) (10), 60	Soviet Geol. Geophys. 27, 53	(Ag,Cu)2.07Pb2.1Bi10S18.2; some similarities to makovickyite
UM1986-30-S:AgBiCuPb	*Acta Mineral. Sinica 6, 338	Am. Mineral. 75, 712	(Cu,Ag)Pb6Bi7S17
UM1986-31-S:AgBiCuPb	*Geol. Geofiz. (1986) (10), 60	Soviet Geol. Geophys. 27 (10), 53	Ag0.34Cu0.2Pb0.14Bi2S3.1; some similarities to UM1971-05-S:AgBiCu
UM1986-32-S:AgBiCuPb	*Geol. Geofiz. (1986) (10), 60	Soviet Geol. Geophys. 27 (10), 53	Ag1.5Cu1.7Pb0.3Bi10S16.1; some similarities to UM1971-08-S:AgBiCuPb
UM1986-33-S:AgBiCuPbSe	*Kovalenker (1986), 111	Am. Mineral. 74, 949	Approximate formula: (Cu,Ag)3(Bi,Pb)7(S,Se)12; perhaps the Cu-analogue of benjaminite; see also UM1969-06-S:AgBiCu
UM1986-34-S:AgCuPbSb	*Novye Dannye Mineral. 33, 140	Am. Mineral. 74, 950	"Mineral MK"; might be Ag- or Cu-bearing robinsonite
UM1986-35-S:AsBiPbSb	Bull. Minéral. 109, 649	Am. Mineral. 73, 932	(Pb,Ag)8BiAs11Sb11S41
UM1986-36-S:AsCuFeGe	*Kovalenker <i>et al.</i> (1986), 91	Am. Mineral. 73, 444	Cu11Fe4GeAsS16; apparently distinct from renierite
UM1986-37-S:AsCuFePdRh	Lithos 19, 87	Am. Mineral. 72, 1027	Some compositional similarities to cuprorhodsite
UM1986-38-S:AsPdPtRh	Lithos 19, 87	Am. Mineral. 72, 1027	Possibly Pd-bearing platarsite. No X-ray data
UM1986-39-S:AuBiPbTe	*Vest. Ústred. Ústavu Geol. 61, 217	Am. Mineral. 73, 932	~Au(Pb,Cu)2(Bi,Sb,As,Se)Te2S3; compositional similarities to buckhornite
UM1986-40-S:BiCuPb	*Geol. Geofiz. (1986) (10), 60	Soviet Geol. Geophys. 27 (10), 53	Close to Cu3Pb4Bi33S36
UM1986-41-S:BiPbTe	*Geol. Geofiz. (1986) (10), 60	Soviet Geol. Geophys. 27 (10), 53	Close to (Pb,Cu,Fe)10Bi8(Te,Se)4S11
UM1986-42-S:CuFe	Meteoritics 21, 23	Am. Mineral. 73, 932	Cu2Fe3S5; compositionally close to haycockite and isocubanite
UM1986-43-S:CuFeSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu11Fe2Sn4S16; mineral "III"
UM1986-44-S:CuFeSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu5FeSn2S8; mineral "IV"
UM1986-45-S:CuFeSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu10Fe3Sn3S16; mineral "V"; similar composition to stannoidite and UM1982-12-S:CuFeSn but tetragonal (pseudocubic)
UM1986-46-S:CuFeSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu13Fe4Sn3S18; mineral "VII"; compositional similarities to mawsonite
UM1986-47-S:CuFeSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu9Fe2Sn2S12; compositional similarities to mawsonite
UM1986-48-S:CuFeSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu12Fe3Sn3S16
UM1986-49-S:CuSn	*Geol. Rudn. Mest. 1986 (2) 67	Am. Mineral. 73, 443	Cu11Sn5S16; mineral "VI"
UM1986-50-S:PbTe	Zap. Vses. Mineral. Ob. 115, 459	Am. Mineral. 74, 949	Pb2Te3
UM1986-51-S:Re	Can. Mineral. 24, 329		Re2S8
UM1986-52-Sb:AsPd	Neues Jb. Mineral. Mh. 1986, 423	Am. Mineral. 75, 711	~Pd3(Sb,As); close to isomertieite in composition and optics
UM1986-53-Sb:AsPdSn	Proc. 13th Gen. Mtg. IMA, Varna, Bulgaria (1982), 165	Am. Mineral. 74, 1218	Pd3(Sb,Sn,As)
UM1986-54-Sb:PdSn	Proc. 13th Gen. Mtg. IMA, Varna, Bulgaria (1982), 165	Am. Mineral. 74, 1218	Pd6SnSb2
UM1986-55-Sb:PdSn	Proc. 13th Gen. Mtg. IMA, Varna, Bulgaria (1982), 165	Am. Mineral. 74, 1218	Pd5(Sb,Sn)2
UM1986-56-SbO:CuFeHSiSn	Mineral. Record 17, 383	Am. Mineral. 72, 1027	CuFeSn3(Sb,Si)O7(OH)7
UM1986-57-Si:Fe	Acta Mineral. Sinica 6, 63		FeSi5
UM1986-58-Si:Fe	Acta Mineral. Sinica 6, 63		Fe2Si5; essentially the same as luobusaite; transferred to Invalid list
UM1986-59-Si:FePTi	Science 234, 189	Am. Mineral. 73, 197	FeTi(Si,P)2; composition is close to zangboite, described later: Can. Mineral. 47, (2009) 1265
UM1986-60-SiO:AlCaFeHKMnNaTi	Rocks & Minerals 61, 182	Mineral. Record. 21, 363	(Na,K)2(Mn,Fe,Ca,Ti,Al)3(Si,Al)8O20·8H2O; Mont St. Hilaire "UK38" Transferred to Invalid list
UM1986-61-SiO:BBBeCaHY	Rocks & Minerals 61, 182	Mineral. Record. 21, 363	Ca(Y)1-2(Si,Be,B)4(O,OH)10·2H2O; Mont St. Hilaire "UK48"
UM1986-62-SiO:CaHNaNbTiZn	Neues Jb. Mineral. Abh. 155, 289	Am. Mineral. 73, 933	~(Na,K,Ca,Zn,Fe)3(Nb,Ti)6Si2O20·6H2O
UM1986-63-SiO:FeHKMnNa	Rocks & Minerals 61, 182	Mineral. Record. 21, 363	(K,Na)2.5-4(Mn,Fe)3.5-4Si8O20·4H2O; Mont St. Hilaire "UK52"
UM1986-64-SiO:NbREETI	Zhang & Tao (1986)	Am. Mineral. 73, 1498	~(Nd,Ce,REE)6Ti24Nb4Si12O91
UM1986-65-Te:AgBi	Zap. Vses. Mineral. Ob. 115, 459	Am. Mineral. 74, 949	AgBi2Te4
UM1986-66-Te:AsAuPd	Neues Jb. Mineral. Mh. 1986, 423	Am. Mineral. 75, 711	~(Pd,Au)8(Te,As)
UM1986-67-Te:Pb	Zap. Vses. Mineral. Ob. 115, 459	Am. Mineral. 74, 949	Pb2Te3
UM1986-68-Te:Pb	Zap. Vses. Mineral. Ob. 115, 459	Am. Mineral. 74, 949	PbTe2
UM1987-01-CO:HMgS	Mineral. Mag. 51, 459	Am. Mineral. 73, 1498	Mg4(CO3)2(OH)4·6H2O
UM1987-02-O:AlPTiZr	*Dokl. Akad. Nauk SSSR 296, 1458	Am. Mineral. 74, 950	(Al,Ti ³⁺ Zr,P)2TiO5

UM1987-03-O:FePbTiU	Schweiz. Mineral. Petrog. Mitt. 67, 93	Am. Mineral. 74, 1401	Crichtonite group - "REE-free davidite"
UM1987-04-O:Ti	Contr. Mineral. Petrol. 96, 35	Am. Mineral. 75, 1434	TiO _{1.71-1.83} ; perhaps related to Magnéli phases
UM1987-05-OH:AlCMg	Clays Clay Minerals 35, 401		Mg ₄ Al ₂ (OH) ₁₂ (CO ₃ ,SO ₄)•3H ₂ O
UM1987-06-S:AgBiPb	*Dokl. Akad. Nauk SSSR 292, 1235	Am. Mineral. 73, 444	AgPbBiS ₃ ; similarities to matildite
UM1987-07-S:AgBiPb	*Dokl. Akad. Nauk SSSR 292, 1235	Am. Mineral. 73, 444	Ag ₂ Pb ₃ Bi ₂ S ₇
UM1987-08-S:AgBiPb	*Dokl. Akad. Nauk SSSR 292, 1235	Am. Mineral. 73, 444	Ag ₃ Pb ₇ Bi ₃ S ₁₃
UM1987-09-S:AgCu	Mineral. Zhurn. 9 (6), 5	Am. Mineral. 75, 435	~Cu ₉ Ag ₂ S ₁₀
UM1987-10-S:AgFe	Proc. Yorks. Geol. Soc. 46/1, 133	Am. Mineral. 73, 1497	Ag ₂ Fe ₁₅ S ₂₀
UM1987-11-S:BiCuPbSb	*Izv. Akad. Nauk SSSR Ser. Geol. 1, 86	Am. Mineral. 73, 444	Pb ₅ Cu ₂ (Sb,Bi) ₁₅ S ₂₃ ; similarities to zinkenite
UM1987-12-SO:AlH	Neues Jb. Mineral. Mh. (1986), 171	Am. Mineral. 73, 932	Al ₃ (SO ₄) ₂ (OH) ₅ •9H ₂ O; compositionally similar to jurbanite & khademite but d-values distinctive
UM1987-13-SO:AlH	*Izv. Akad. Nauk Azerb. SSR Ser. Nauk Zemle (1987) 112	Am. Mineral. 75, 436	Identical powder diffraction pattern to that of Al ₂ (SO ₄) ₃ •12H ₂ O (ICDD 18-0061)
UM1987-14-SO:ClHZn	J. Geophys. Res. B, 92, 11373		Zn ₁₂ (SO ₄) ₃ Cl ₃ (OH) ₁₅ •5H ₂ O
UM1987-15-Se:AgSSb	Mineral. Zhurn. 9 (1), 25	Am. Mineral. 74, 950	AgSb(Se,S) ₂ ; the Se-analogue of miargyrite
UM1987-16-Se:BiPbTe	Can. Mineral. 25, 625	Am. Mineral. 74, 948	(Bi,Pb) ₂ (Se,Te,S) ₃
UM1987-17-Se:BiTe	Can. Mineral. 25, 625		Bi(Se,Te)
UM1987-18-SiO:AlCaHKNa	Mineral. Mag. 51, 231	Am. Mineral. 73, 1498	Perhaps a partially dehydrated K-analogue of laumontite
UM1987-19-SiO:FeHMgMnTi	Mineral. Mag. 51, 247	Am. Mineral. 73, 1498	(Mn ²⁺ ,Fe ³⁺ ,Fe ²⁺ ,Ti,Mg) ₈ Si ₆ O ₂₀ (OH) ₅
UM1987-20-Te:AgAsS	*J. Miner. Slov. 19, 457	Zap. Vses. Mineral. Ob. 119 (5), 70	Ag(As,S)Te; only chemical formula given
UM1988-01-CO:BaMn	J. Mineral. Soc. Japan 18, 347	Am. Mineral. 76, 301	BaMn(CO ₃) ₂
UM1988-02-F:AlHO	Am. Mineral. 73, 855		AlF ₃ •H ₂ O
UM1988-03-POSiO:AlFeHPbREESr	Ann. Acad. Bras. Cienc. 60 (1988), 223	Zap. Vses. Mineral. Ob. 119 (5), 71	(REE,Pb,Sr)(Al,Fe ³⁺) ₃ (P,Si) ₂ O ₇ (O,OH)(OH) ₅ ; appears to be related to florencite-(La) & plumbogummite
UM1988-04-SiOPO:CaFeHNaNbTi	*Zap. Vses. Mineral. Ob. 117, 696	Am. Mineral. 75, 936	(Na,Ca) ₅ (Ti,Fe ³⁺ ,Nb) ₄ Si ₄ P ₂ O ₂₂ (OH) ₄
UM1988-05-S:AgBiCuHgPb	Can. Mineral. 26, 355		(Hg,Ag,Cu) ₅ Pb ₈ Bi ₁₁ S ₂₇ ; mineral "X"
UM1988-06-S:AgBiCuHgPb	Can. Mineral. 26, 355		(Hg,Ag,Cu) ₅ Pb ₂ Bi ₂ S ₅ ; mineral "Y"; close compositional similarities to UM1988-05-S:AgBiCuHgPb
UM1988-07-S:AgBiPbTe	*Rev. Roum. Geol. Geophys. Geogr., Ser. Geol. 32 (3), 8	Zap. Vses. Mineral. Ob. 119 (5), 71	PbBi ₃ .14Ag _{0.09} Te _{3.89} S _{2.81}
UM1988-08-S:AgCu	Mineral. Zhurn. 10 (1), 3	Am. Mineral. 75, 711	Ag _{1.42} Sn _{0.03} Cu _{3.54} S ₅ ; similarities to UM1987-09-S:AgCu
UM1988-09-S:AgCu	Mineral. Zhurn. 10 (1), 3	Am. Mineral. 75, 711	Ag _{2.03} Cu _{2.10} S _{2.99} As _{0.01}
UM1988-10-S:AgCu	Mineral. Zhurn. 10 (1), 3	Am. Mineral. 75, 711	Ag _{2.01} Cu _{4.24} S ₅
UM1988-11-S:AgPbTe	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1982), (2), 13	Am. Mineral. 75, 1212	Ag ₄ PbTe ₂ S
UM1988-12-S:AgSn	Mineral. Zhurn. 10 (1), 3	Am. Mineral. 75, 711	Ag _{1.95} Sn _{0.90} S ₃
UM1988-13-S:Bi	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1982), (2), 13	Am. Mineral. 75, 1212	Bi ₃ S ₅
UM1988-14-S:Bi	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1982), (2), 13	Am. Mineral. 75, 1212	Bi ₃ S ₄
UM1988-15-S:BiPb	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1982), (2), 13	Am. Mineral. 75, 1212	BiPb ₂ S ₂
UM1988-16-S:BiSeTe	*Novye Dannye Mineral. 35, 128	Am. Mineral. 77, 209	Bi ₃ Se ₂ TeS
UM1988-17-S:CuFe	*Dokl. Akad. Nauk SSSR 301, 1186	Am. Mineral. 75, 711	Cu _{6.78} Fe _{7.78} S _{15.72} As _{0.28} ; close to chalcocopyrite composition
UM1988-18-S:CuFe	*Dokl. Akad. Nauk SSSR 301, 1186	Am. Mineral. 75, 711	Cu _{4.76} Fe _{9.00} S _{13.67} As _{0.33}
UM1988-19-S:CuFeNiPdRu	Can. Mineral. 26, 177	Am. Mineral. 74, 1216	Cu ₂ (Fe,Ru) ₂ (Ni,Pd) ₄ S ₇
UM1988-20-SO:FeH	Kexue Tongbao 33, 1783	Am. Mineral. 76, 670	Fe _{2.67} (SO ₄) ₂ •14H ₂ O
UM1988-21-Se:AgBiHg	Mineral. Mag. 52, 719	Am. Mineral. 75, 710	(Ag,Bi,Hg) ₂ Se
UM1988-22-SiO:AlCaFFeHKLIMg	*Dokl. Akad. Nauk SSSR 303, 199	Am. Mineral. 76, 1730	Ideally KLiMgAl ₂ Si ₃ O ₁₀ F ₂ ; probably the Mg-analogue of zinnwaldite
UM1988-23-SiO:HKNbTi	*Izv. Vyssh. Uchebn. Zaved., Geologia i Razvedka (1988), 38	Am. Mineral. 75, 1213	K(Nb,Ti) ₃ Si ₃ (O,OH) ₁₀ •1.5H ₂ O
UM1988-24-Te:AgBi	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1982), (2), 13	Am. Mineral. 75, 1212	Ag ₈ Bi ₃ Te ₇
UM1988-25-Te:Bi	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1982), (2), 13	Am. Mineral. 75, 1212	Bi ₉ Te ₄
UM1988-26-SiO:AlMg	Phys. Chem. Mineral. 15, 548	Mineral. Mag. 72, 839	Mg ₄ Al ₂ O[Si ₃ Al ₂ O ₁₅]; unnamed Be-free analogue of surinamite
UM1989-01-AsS:CoFeNi	*Zap. Vses. Mineral. Ob. 118 (4), 64	Am. Mineral. 76, 670	(Ni,Fe,Co)AsS; apparently the Ni member of the arsenopyrite group
UM1989-02-AsTe:AgAuPb	Austral. Mineral. 4, 133	Am. Mineral. 76, 1436	Au ₃ (Ag,Pb)As ₂ Te ₃
UM1989-03-C:FeMnSi	*Dokl. Akad. Nauk SSSR 308, 699	Am. Mineral. 76, 669	(Mn,Fe) ₃ (C,Si)
UM1989-04-C:TiV	Can. Mineral. 27, 617	Am. Mineral. 75, 1434	(V,Ti)C; probably the V-analogue of khamrabaevite
UM1989-05-CIOH:FeMn	Can. Mineral. 27, 311		Possibly (Fe,Mn)(OH)Cl
UM1989-06-CO:AlHNa	Clay Minerals 24, 531		Na ₂ Al ₂ O ₂ (CO ₃) ₂ •2.9H ₂ O; compositionally very similar to dawsonite
UM1989-07-CO:CaSr	*Dokl. Akad. Nauk SSSR 304, 1449	*Mineral. Zhurn. 13 (3), 70	(Sr _{0.5} Ca _{0.5})CO ₃ ; known experimentally
UM1989-08-E:CaSi	*Bol. Geol. Miner. 100 (3), 158	Zap. Vses. Mineral. Ob. 120 (4), 111	Approximately SiCa
UM1989-09-E:FeMnSi	*Dokl. Akad. Nauk SSSR 308, 699	Am. Mineral. 76, 669	alpha or beta Mn

UM1989-10-E:FeSiTi	*Bol. Geol. Miner. 100 (3), 158	Zap. Vses. Mineral. Ob. 120 (4), 111	Approximately $\text{Si}_5\text{Fe}_5\text{Ti}_4$
UM1989-11-E:FeSiTi	*Bol. Geol. Miner. 100 (3), 158	Zap. Vses. Mineral. Ob. 120 (4), 111	$\sim\text{Si}_2(\text{Fe},\text{Ti})_3$
UM1989-12-E:NiSn	Neues Jb. Mineral. Abh. 160, 193	Am. Mineral. 75, 434	(Ni,Cu,Fe) sSn_5 ; Cu & Fe are minor constituents
UM1989-13-O:HMn	ICDD 42-1316		$\text{MnO}_2 \cdot n\text{H}_2\text{O}$; isostructural and intergrown with ramsdellite
UM1989-14-OC:HMg	Mineral. Mag. 53, 505		$\text{Mg}(\text{C}_2\text{O}_4) \cdot 2\text{H}_2\text{O}$; the alpha modification of glushinskite
UM1989-15-S:AgBiCuFePbSe	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1989) (3), 45	Am. Mineral. 76, 1733	$\text{Fe}_3\text{CuBi}(\text{Ag},\text{Pb})(\text{S},\text{Se})$; mineral "B"; very poor analytical total
UM1989-16-S:AgClPbSb	Eur. J. Mineral. 1, 381	Am. Mineral. 75, 1435	$\text{Pb}_8\text{AgSb}_8\text{S}_{20}\text{Cl}$; mineral "C1"
UM1989-17-S:AgCuPd	*Dokl. Akad. Nauk SSSR 306, 430	Am. Mineral. 76, 1438	$\text{Pd}_2(\text{Cu},\text{Ag})_2\text{S}_3$
UM1989-18-S:AgFeTe	Neues Jb. Mineral. Abh. 160, 299	Am. Mineral. 76, 670	$\text{Ag}_{10}\text{FeTe}_2\text{S}_4$
UM1989-19-S:AsCuHgSbTiZn	*Geol. Surv. Canada Econ. Geol. Rept. 38	Am. Mineral. 75, 935	$\text{CuTiHg}_2(\text{Sb},\text{As})_2\text{S}_6$; the Sb-analogue of routhierite
UM1989-20-S:AsPt	*Dokl. Akad. Nauk SSSR 306, 430	Am. Mineral. 76, 1438	PtAs_2S_4
UM1989-21-S:BiCuFePbSe	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (1989) (3), 45	Am. Mineral. 76, 1733	$(\text{Cu},\text{Fe},\text{Pb},\text{Bi})(\text{S},\text{Se})$; mineral "A"
UM1989-22-S:BiPb	*Dizhi Kexue, Yichang Dizhi Kuang. Yanj. Sokan, 161	ICDD 42-1403	$\text{Pb}_2\text{Bi}_3\text{Se}$; compositionally very similar to cannizzarite but with different d-values
UM1989-23-S:ClPbSb	Eur. J. Mineral. 1, 381	Am. Mineral. 75, 1435	$\text{Pb}_{17}\text{Sb}_{18}\text{S}_{43}\text{Cl}_2$; mineral "C"
UM1989-24-S:CuFeZn	*Mining Geol. 39, 355	Am. Mineral. 80, 406.	$(\text{Zn},\text{Fe},\text{Cu})\text{S}$; anisotropic; not sphalerite
UM1989-25-S:FeNi	Neues Jb. Mineral. Abh. 160, 46	Am. Mineral. 75, 434	$\text{Fe}(\text{Ni},\text{Co})\text{S}_2$
UM1989-26-Sb:Pd	Mineral. Petrol. 40, 289	Am. Mineral. 76, 1438	Pd_4Sb
UM1989-27-Se:AgAsFeS	*Mineral. Zhurn. 11 (6), 3	Am. Mineral. 77, 210	$\text{Ag}_{11}\text{FeAs}_4(\text{Se},\text{S})_{12.5}$
UM1989-28-Se:AgBiCuS	*Mineral. Zhurn. 11 (6), 3	Am. Mineral. 77, 210	$(\text{Ag},\text{Cu})\text{Bi}_3(\text{Se},\text{S})_5$
UM1989-29-Se:Te	*Mineral. Zhurn. 11 (6), 3	Am. Mineral. 77, 210	Te_3Se_4
UM1989-30-SiO:AlBaCaFeHKMgMn	Mineral. Mag. 53, 85		$(\text{Ba},\text{Ca})(\text{Mn},\text{Fe},\text{Mg})_{22}(\text{Si},\text{Al})_3\text{O}_{76}(\text{OH})_{16} \cdot 12\text{H}_2\text{O}$; the Ba-analogue of bannisterite
UM1989-31-SiO:AlCaCeHLaV	Can. Mineral 27, 565	Can. Mineral 40, 1411	$\text{Ca}(\text{La},\text{Ce})\text{Y}^{3+}\text{Al}_2(\text{Si}_2\text{O}_7)(\text{SiO}_4)\text{O}(\text{OH})$; later recognised as an unnamed end-member of the allanite subgroup; clearly related to mukhinite and dissakisite-(La)
UM1989-32-SiO:AlCaFeHREE	Am. Mineral. 74, 750	Can. Mineral. 40, 1411	$(\text{Ca}_0.5\text{Ti}_0.5)(\text{Ce},\text{La},\text{Nd})\text{Fe}^{3+}\text{Al}_2(\text{Si}_2\text{O}_7)(\text{SiO}_4)\text{O}(\text{OH})$; later recognised as an unnamed end-member of the allanite subgroup
UM1989-33-SiO:BaHMnTi	*Zap. Vses. Mineral. Ob. 118 (4), 81	Am. Mineral. 76, 1439	$\text{BaMn}_2\text{TiOSi}_2\text{O}_7(\text{OH})_2$; within the compositional range of hejzmanite but with different symmetry
UM1989-34-SiO:FeKMgMnNa	Bull. Geol. Surv. S. Africa 93, 1	ICDD 47-1841	$(\text{K},\text{Na},\text{Sr})(\text{Na},\text{Ca})_{1.3}(\text{Mg},\text{Na},\text{Mn})_2(\text{Mg},\text{Fe},\text{Al})_3(\text{Si},\text{Al})_{12}\text{O}_{30}$; mineral "X"; similarities to roedderite
UM1989-35-SiO:KTI	Dokl. Earth Sci. 309, 155	Am. Mineral. 77, 451	$\text{K}_2\text{TiSi}_3\text{O}_9$
UM1990-01-As:CuPdPt	Mineral. Petrol. 42, 287	Am. Mineral. 76, 1439	$(\text{Pt},\text{Pd})_{17}\text{Cu}_8\text{As}_3$
UM1990-02-As:FeIrNiOsRhRu	Can. Mineral. 28, 579	Am. Mineral. 76, 1437	$(\text{Ru},\text{Os},\text{Fe},\text{Rh},\text{Ir},\text{Ni})_3\text{As}$
UM1990-03-As:NiPdSb	Can. Mineral. 28, 489		$(\text{Pd}_{1.35}\text{Ni}_{0.65})(\text{As}_{0.87}\text{Sb}_{0.13})$; perhaps Ni-bearing palladoarsenide or Pd-bearing majakite
UM1990-04-As:PtPdSb	Mineral. Petrol. 42, 287		$(\text{Pd}_2.37\text{Pt}_{0.61})(\text{As}_{0.89}\text{Sb}_{0.10})$; perhaps Pt-bearing vincentite or guanglinite
UM1990-05-Bi:PbPdPt	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	$(\text{Pd},\text{Pt})_6\text{PbBi}_7$
UM1990-06-Bi:PbPt	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	$\text{Pt}(\text{Bi},\text{Pb})_3$
UM1990-07-Bi:Pt	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	PtBi_4
UM1990-08-Bi:Pt	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pt_3Bi_7
UM1990-09-C:Si	Nature 346, 352	Am. Mineral. 77, 208	$\beta\text{-SiC}$; a cubic polymorph of moissanite
UM1990-10-CO:BaCaHREESr	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK60"
UM1990-11-CO:BaCaHREESr	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK60A"
UM1990-12-CO:HNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK73"
UM1990-13-CO:HNaREESrY	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK33A"; $\text{Sr}_2\text{Na}_2(\text{Ce},\text{La})\text{Y}(\text{CO}_3)_6 \cdot 3\text{H}_2\text{O}$
UM1990-14-E:AuCuPt	Mineral. Petrol. 42, 287	Am. Mineral. 76, 1439	$\text{Cu}_5(\text{Pt},\text{Au})_6$; perhaps Au-bearing hongshiite
UM1990-15-E:CuPdPt	Mineral. Petrol. 42, 287	Am. Mineral. 76, 1439	$(\text{Pt},\text{Pd})_2\text{Cu}_3$
UM1990-16-E:CuRhSn	Can. Mineral. 28, 579	Am. Mineral. 76, 1437	Rh_2SnCu
UM1990-17-E:FeIrOsPt	Mineral. Petrol. 42, 249	Am. Mineral. 76, 1439	$\text{Pt}_2(\text{Ir},\text{Os})\text{Fe}_{0.65}$; similarities to UM1973-09-E:FeIrPt
UM1990-18-E:FeIrOsRu	Mineral. Petrol. 42, 211	Am. Mineral. 76, 1437	$(\text{Ru},\text{Os},\text{Ir})_2\text{Fe}_3$; some similarities to both UM1984-15-E:CrFeIrOsRu & hexaferrum
UM1990-19-E:FeIrOsRu	Mineral. Petrol. 42, 211	Am. Mineral. 76, 1437	$(\text{Ru},\text{Os},\text{Ir})\text{Fe}_3$
UM1990-20-E:NiPtSn	Mineral. Petrol. 42, 287	Am. Mineral. 76, 1439	$(\text{Ni},\text{Pt})\text{Sn}$
UM1990-21-F:AlCaHMgNa	Mineral. Mag. 54, 599	Am. Mineral. 77, 211	$(\text{Na},\text{Ca})_2(\text{Mg},\text{Al})_2\text{F}_6(\text{OH},\text{O},\text{F})$; a Ca-bearing ralsstonite-like mineral
UM1990-22-MoO:CaHP	*Dokl. Akad. Nauk SSSR 312, 1437	Am. Mineral. 77, 450	$[\text{Ca}_2\text{O}_2(\text{OH})_3]_x\text{P}(\text{Mo}_9\text{O}_{28}(\text{OH})_3(\text{PO})_x)$
UM1990-23-O:Al	*Dokl. Akad. Nauk SSSR 313, 689	Am. Mineral. 77, 210	Theta- Al_2O_3
UM1990-24-O:Al	*Dokl. Akad. Nauk SSSR 313, 689	Am. Mineral. 77, 210	Delta- Al_2O_3 later re-designated sigma- Al_2O_3
UM1990-25-O:CIPbS	Neues Jb. Mineral. Mh. (1990), 337	Am. Mineral. 76, 1733	$\text{Pb}_4\text{O}_3(\text{Cl},\text{SO}_4)_2$
UM1990-26-O:HMnNaNb	Mineral. Record 21, 363	Am. Mineral. 76, 302	Mineral "UK68"
UM1990-27-O:Pt	Can. Mineral. 28, 503	Am. Mineral. 76, 1436	PTO
UM1990-28-OHF:Al	Can. Mineral. 28, 147	Am. Mineral. 76, 2025	$\text{Al}(\text{OH},\text{F})_3$; polymorph of gibbsite, nordstrandite, doyleite & bayerite
UM1990-29-OHS:CrFe	Neues Jb. Mineral. Mh. (1990), 269		$\text{Fe}_2\text{S}_2(\text{Fe},\text{Cr})_7.5(\text{OH})_{15}$

UM1990-30-PO:AlFeHZn	Austral. Mineral. 5, 125		"UK1a"; (Fe,Zn)(Fe,Al) ₃ (PO ₄) ₃ (OH) ₂
UM1990-31-S:AgCuFe	*Dokl. Bolg. Akad. Nauk 43, 87	Am. Mineral. 78, 674	(Cu,Ag,Fe) ₆ S ₄
UM1990-32-S:AgPbSb	*Sb. Nar. Muz. Praze, Rada B, 46, 87	ICDD 45-1333	AgPb ₄ Sb ₃ S ₁₀ ; compositionally similar to rayite, but different symmetry
UM1990-33-S:AsCuHg	*Mineral. Zhurn. 12 (2), 84.	ICDD 42-1433	Cu ₁₁ Hg ₅ As ₉ S ₂₅ ; compositionally similar to aktashite but with different d-values
UM1990-34-S:AsIrOsPtRhRu	Contr. Mineral. Petrol. 105, 66	Mineral. Petrol. 60, 185	(Os, Ir, Pt, Ru, Rh, Pd) ₇ (As, S) ₁₂ ; two similarities to erlichmanite
UM1990-35-S:BiCuPbPdSe	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pd ₃ (Bi,Pb) ₄ Cu ₃ (S,Se) ₈
UM1990-36-S:BiPd	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pd ₅ Bi ₆ (S,Se) ₆
UM1990-37-S:CuFeHO	Mineral. Record 21, 363	Am. Mineral. 76, 302	Cu ₃ FeS ₄ •4H ₂ O; mineral "UK82"
UM1990-38-S:CuFeIrNiPtRh	Mineral. Petrol. 42, 211	Am. Mineral. 76, 1437	(Ni,Fe,Rh,Cu,Ir,Pt) ₅ ; appears to be the Ni-analogue of UM1981-16-S:CuFeIrNiRh
UM1990-39-S:CuFeIrNiPtRh	Mineral. Petrol. 42, 265	Am. Mineral. 76, 1437	(Rh,Ir,Pt) ₄ (Ni,Fe,Cu) ₅ S ₆
UM1990-40-S:CuFePdPtRh	Mineral. Petrol. 42, 287	Am. Mineral. 76, 1439	(Pd,Cu,Rh,Pt,Fe) ₃ S ₂
UM1990-41-S:CuPd	Mineral. Petrol. 42, 265	Am. Mineral. 76, 1438	Pd ₇ Cu ₂ S ₄
UM1990-42-S:IrOsPbPt	Mineral. Petrol. 42, 249	Am. Mineral. 76, 1439	(Ir,Pt,Pb,Os) ₂ S ₃ or perhaps (Ir,Pt,Pb,Os) ₃ S ₇
UM1990-43-S:PbPd	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pd ₄ Pb ₂ S ₃
UM1990-44-S:PbPd	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pd ₂ PbS ₂
UM1990-45-SO:AICHMn	Mineral. Record 21, 363	Am. Mineral. 76, 302	Mn ₆ Al ₃ (SO ₄) ₂ (CO ₃) _x (OH) _{17-2x} •yH ₂ O; mineral "UK76"; transferred to Invalid list
UM1990-46-SO:CuHPb	Austral. Mineral. 5, 125		Cu ₂ Pb ₂ SO ₄ (OH) ₆ •2H ₂ O; mineral "UK7"
UM1990-47-Sb:CuNi	Can. Mineral. 28, 503	Am. Mineral. 76, 1436	(Ni,Cu) ₂ Sb
UM1990-48-Sb:CuPd	Mineral. Petrol. 42, 265	Am. Mineral. 76, 1438	Pd ₂ CuSb; compositionally similar to UM1961-09-Sb:CuPd but optically distinct
UM1990-49-Sb:Ni	Can. Mineral. 28, 503	Am. Mineral. 76, 1436	Ni ₃ Sb
UM1990-50-Sb:PbPdPt	Mineral. Petrol. 42, 265	Am. Mineral. 76, 1438	(Pd,Pt) ₂ PbSb; close to PdPtPbSb
UM1990-51-Sb:Pd	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pd ₅ Sb ₃
UM1990-52-Se:BiCu	Mineral. Record 21, 133		Cu ₁₁ (Ni,Co) _{0.4} Bi ₂ Se ₁₃ ; later described under the name eldragónite (Cu ₈ BiSe ₆); Can. Min. 50 (2012), 281; transferred to Invalid list
UM1990-53-Se:BiCuHgPb	Mineral. Record 21, 133		Cu ₂ Pb _{0.4} HgBi ₂ Se ₈
UM1990-54-Se:BiCuPb	Mineral. Record 21, 133		CuPb(Ni,Co) _{0.3} Bi ₃ Se ₆ ; strong similarities to UM1981-21-Se:BiCuPb
UM1990-55-Se:BiCuPbPdS	*Dokl. Akad. Nauk SSSR 315, 700	Dokl. Earth Sci. 315, 217	Pd ₆ (Bi,Cu,Pb) ₆ (Se,S) ₉
UM1990-56-Si:FeMn	Mineral. Zhurn. 12, (6), 35	Am. Mineral. 77, 1118	(Mn,Fe) ₇ Si ₂
UM1990-57-Si:FeMn	Mineral. Zhurn. 12, (6), 35	Am. Mineral. 77, 1118	(Mn,Fe) ₅ Si ₃ ; described later under the name mavlyanovite: Mineral. Mag. 73 (2009), 43; transferred to the Invalid list
UM1990-58-SiO:AlBaH	Mineral. Mag. 54, 81	Am. Mineral. 75, 1435	BaAl ₂ Si ₂ O ₈ •4H ₂ O
UM1990-59-SiO:AlBCHMg	Mineral. Mag. 54, 105	Am. Mineral. 75, 1436	Ca ₂ 4Mg ₈ (BO ₃) ₁₃ Al _{0.75} Si ₃ (O,OH) ₁₂ (CO ₃) ₈ •8H ₂ O
UM1990-60-SiO:AlCaFe	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK72"; X-ray powder diffraction data
UM1990-61-SiO:AlCaHKMnNa	*Rend. Fisiche Accad. Lincei, Ser. 9, 1 159	Am. Mineral. 77, 673	(Ca,Na,K) ₃ Mn ₂₄ (Si,Al) ₄₀ O ₁₀₀ •30H ₂ O; distinct similarities to tamaite
UM1990-62-SiO:AlCaKMnNb	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK70"; X-ray powder diffraction data
UM1990-63-SiO:AlMnNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK80"; X-ray powder diffraction data
UM1990-64-SiO:BNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	NaBSiO ₄ ; mineral "UK53"; a monoclinic polymorph of malinkoite
UM1990-65-SiO:CaFFeMnNaNbTiZr	Mineral. Record 21, 363	Am. Mineral. 76, 302	NaCa(Mn,Fe)(Ti,Nb,Zr)Si ₂ O ₇ (O,F) ₂ ; mineral "UK59"; transferred to Invalid list
UM1990-66-SiO:CaFHNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	NaCaSi ₃ O ₇ (F,OH) ₂ •3H ₂ O; "UK77"
UM1990-67-SiO:CaFeKMnNaZr	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK67"; X-ray powder diffraction data
UM1990-68-SiO:CaFeNaNbTi	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK74"; transferred to Invalid list
UM1990-69-SiO:CaHKNaTi	Mineral. Record 21, 363	Am. Mineral. 76, 302	(Na,K)CaTi ₂ Si ₁₀ O ₂₅ (OH) ₆ •6H ₂ O; "UK75"
UM1990-70-SiO:CaMnNaThTi	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK83"; X-ray powder diffraction data
UM1990-71-SiO:FeHKMnNaTi	Mineral. Record 21, 363	Am. Mineral. 76, 302	(Na,K) ₃ Ti ₂ (Fe,Mn) ₂ •3Si ₈ O ₂₀ •4H ₂ O; "UK52A"
UM1990-72-SiO:FeMnNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK79"; X-ray powder diffraction data
UM1990-73-SiO:KMnNaZn	Dokl. Akad. Nauk SSSR 313, 865	Am. Mineral. 77, 451	(K,Na) ₂ Zn ₃ Mn _{1.5} Si ₁₂ O ₃₀ ; may be the K-analogue of shibkovite
UM1990-74-SiO:MnNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	"UK78"; X-ray powder diffraction data
UM1990-75-Te:Ag	Can. Mineral. 28, 489		Ag ₃ Te ₂ ; compare with UM1969-15-Te:Ag
UM1990-76-Te:BiIrPbPtRh	Mineral. Petrol. 42, 265	Am. Mineral. 76, 1437	(Rh _{1.52} Pb _{0.22} Ir _{0.19} Pt _{0.09})(Te _{2.83} Bi _{0.15})
UM1990-77-Te:BiPb	*Garcia de Orta, Sér. Geol. 13, 35	Am. Mineral. 79, 390	(Bi,Pb,Pd)Te
UM1990-78-SiO:CaCFeHKNaZr	Soviet Phys. Cryst. 35, 814	Cryst. Reports 52, 47	(Ca,Sr,Mn) ₆ Zr ₃ [Si ₃ O ₇ (O,OH) ₂] ₂ [Si ₉ O ₂₃ (O,OH) ₄] ₂ [Si ₃ NaFe(Zr,Ti,Al,Nb)] ₂ [(H ₃ O) ₇ (Na,K) ₅ Cl _{1.5} (O,OH)]; described as a potassium oxonium eudialyte group mineral
UM1990-79-SiO:CaCFeHMnNaNbREEZr	Mineral. Zhurnal 12 (4), 81	Cryst. Reports 52, 47	Na ₁₄ Ca ₅ (Mg,Ca,Mn)Zr ₃ (Si ₃ O ₉) ₂ (Si ₉ O ₂₇) ₂ (Si,Nb,Al,Zr) ₃ (Fe,Zr) ₃ (Mn,Na,Ce,La,Y)(Na,H ₂ O,K,Sr)(OH) ₄₋₅ (OH,Cl); described originally as "(TR,Fe) eucolite"; subsequent work showed that it differs from eudialyte in the M & N site occupancy
UM1990-80-SiO:CaFeHMnNaNbREEZr	Mineral. Zhurnal 12 (4), 81	Cryst. Reports 52, 47	Na ₁₄ Ca ₄ (Mn,Ca) ₂ Zr ₃ (Si ₃ O ₉) ₂ (Si ₉ O ₂₇) ₂ (Si,Nb,Al,Zr) ₃ (Fe,Mn,Al,Ti) ₃ (Na,Ce,La,Y,Mn)(Na,H ₂ O,K,Sr)(OH) ₇₋₈ ; described originally as "(TR,Mn) eucolite"; subsequent work has showed that it differs from eudialyte in the occupancy of the M & N sites
UM1990-81-O:CaCeHNbTi	*Khomyakov (1990)	Khomyakov (1995)	CaCe(Ti,Nb) ₁₀ O ₂₃ •17•18H ₂ O; mineral "M1"; compositional similarities to belyankinite
UM1990-82-SiO:AlBaCaHKNaSr	*Khomyakov (1990)	Khomyakov (1995)	(K,Na,Ba,Sr,Ca)Al ₃ Si ₅ O ₁₆ •4.5H ₂ O; mineral "M14"; compositionally very similar to merlinoite but with a distinct X-ray powder pattern
UM1990-83-SiO:AlBaCaHKNaSr	*Khomyakov (1990)	Khomyakov (1995)	(Ba,K,Sr,Na,Ca)Al ₄ Si ₄ O ₁₆ •7H ₂ O; minerals "M15 & M17"; compositionally somewhat similar to merlinoite but with a distinct X-ray powder pattern

UM1990-84-SiO:AlBaCaHKNaSr	*Khomyakov (1990)	Khomyakov (1995)	(Na,Ba,K,Sr,Ca)Al ₄ Si ₄ O ₁₆ ·4H ₂ O; mineral "M16"; compositionally somewhat similar to merlinoite but with a distinct X-ray powder pattern
UM1990-85-SiO:AlCaFeHMnNa	*Khomyakov (1990)	Khomyakov (1995)	NaCaMn ₅ Fe ³⁺ 2Al ₃ Si ₄ O ₂₂ ·6H ₂ O; mineral "M23"; cryptocrystalline with appearance similar to shafranovskite/zakharovite
UM1990-86-SiO:AlFeHKMnNa	*Khomyakov (1990)	Khomyakov (1995)	(K,Na) ₃ (Fe ³⁺ ,Al,Mn) ₃ Si ₈ O ₂₂ ·7H ₂ O; mineral "M27"; may be equivalent to kalifersite
UM1990-87-SiO:AlHNa	*Khomyakov (1990)	Khomyakov (1995)	Na ₂ AlSi ₄ O ₁₀ (OH)·4H ₂ O; mineral "M28"
UM1990-88-SiO:BNa	Mineral. Record 21, 363	Am. Mineral. 76, 302	Mont St. Hilaire mineral "UK53A"; previously thought to be equivalent to malinkoite and entered as UM1990-//SiO:BNa; later shown to be a polymorph of malinkoite: Dokl. Akad. Nauk. SSSR 319, 879
UM1990-89-SiO:CaFFeHKNa	*Khomyakov (1990)	Khomyakov (1995)	NaKCaFe ³⁺ 2Si ₄ O ₁₂ (OH,F) ₂ ·4H ₂ O; mineral "M25"; cryptocrystalline with appearance similar to shafranovskite/zakharovite
UM1990-90-SiO:CaFNazr	*Khomyakov (1990)	Khomyakov (1995)	Perhaps (Ca,Na) ₁₃ Zr ₂ Si ₈ O ₂₈ (F,OH) ₆ ; mineral "M18"
UM1990-91-SiO:CaHTi	*Khomyakov (1990)	Khomyakov (1995)	Ca ₄ TiSi ₄ O ₁₄ ·2H ₂ O; mineral "M50"
UM1990-92-SiO:FeHMnNaTi	*Khomyakov (1990)	Khomyakov (1995)	Na ₄ (Mn ²⁺ ,Ti,Fe) ₃ Si ₈ (O,OH) ₂₄ ·9H ₂ O; mineral "M19"; appears to be a polymorph of raite
UM1990-93-SiO:FeHNa	*Khomyakov (1990)	Khomyakov (1995)	NaFe ²⁺ 2Fe ³⁺ 3Si ₄ O ₁₂ (OH) ₅ ; mineral "M22"; cryptocrystalline with appearance similar to shafranovskite/zakharovite
UM1990-94-SiO:FFeHNATi	*Khomyakov (1990)	Khomyakov (1995)	Na ₄ Fe ²⁺ Fe ³⁺ 6TiSi ₆ O ₂₄ (OH,F) ₄ ·3H ₂ O; mineral "M24"; cryptocrystalline with appearance similar to shafranovskite/zakharovite
UM1990-95-SiO:HNazr	*Khomyakov (1990)	Khomyakov (1995)	Na ₅ Zr ₃ (Si ₆ O ₁₅ OH) ₃ ; mineral "M41"
UM1990-96-SiO:NaTh	*Khomyakov (1990)	Khomyakov (1995)	Na ₄ Th ₃ Si ₈ O ₂₄ ; mineral "M33"; X-ray amorphous
UM1990-97-SiO:NaZr	*Khomyakov (1990)	Khomyakov (1995)	Na ₈ ZrSi ₈ O ₁₈ ; mineral "M39"; later described under the name townendite: Am. Mineral. 95 (2010), 646; transferred to the Invalid list
UM1990-98-CO:BaCaNaREESr	*Khomyakov (1990)	Khomyakov (1995)	(Na,Ca) ₃ (Sr,Ba,Ce) ₃ [CO ₃] ₅ ; similar to burbankite but distinctly biaxial
UM1990-99-SiO:BaCaFFeHMnNaSrTi	*Khomyakov (1990)	Khomyakov (1995)	Na ₂ (Ba,Sr,Ca) ₂ (Fe,Mn)TiSi ₂ O ₉ (F,OH) ₂ ·2H ₂ O; compositional similarities to busseinite but the symmetry and X-ray powder pattern are distinct. Mineral "M74"
UM1990-100-SiO:BaCeFeHKNaNbTi	*Khomyakov (1990)	Khomyakov (1995)	Ba ₂ (K,Na) ₄ Ce(Ti,Nb,Fe ³⁺) ₂ Si ₈ O ₂₈ ·5H ₂ O; mineral "M30"; later described under the name diversilite-(Ce): Zap. Vseross. Mineral. Ob. 132 (5) (2003), 34; transferred to the Invalid list
UM1990-101-S:CuFeK	*Khomyakov (1990)	Khomyakov (1995)	KCu ¹⁺ 19Cu ²⁺ 18Fe ²⁺ 10S ₃₈
UM1991-04-AsS:CoFeNi	*C. R. Acad. Sci. Paris, Ser. II, 312, 55	Am. Mineral. 79, 1213	(Co,Ni,Fe,Cu)AsS; probably Co-dominant equivalent of UM1989-01-AsS:CoFeNi
UM1991-05-CO:BiCaCl	*Izv. Akad. Nauk SSSR, Ser. Geol. (4), 102	Am. Mineral. 78, 234	Ca(BiO)Cl(CO ₃); apparently a Cl-dominant analogue of kettnerite
UM1991-06-E:AuCu	Eur. J. Mineral. 3, 451		CuAu ₃ ; may be same as cuproauride; transferred to Invalid list
UM1991-07-E:FePt	*Dokl. Akad. Nauk. SSSR 317, 1458	Zap. Vser. Mineral. Ob. 122 (5), 64	Fe ₃ Pt; only plots of analytical data shown; transferred to Invalid list
UM1991-08-O:Ti	Am. Mineral. 76, 343		A monoclinic polymorph of TiO ₂
UM1991-09-OH:AlCr	*Dokl. Akad. Nauk. SSSR 320, 1455	Am. Mineral. 78, 234	Gamma-(Cr,Al)O(OH)
UM1991-10-PO:BaCaHMgSr	Can. Mineral 29, 87	Am. Mineral. 76, 2025	~(Ca,Mg,Ba)Sr ₂ P ₂ O ₇ (OH) ₂ ·1.7H ₂ O
UM1991-11-S:AgBiCu	Mineral. Petrol. 44, 89		(Cu,Ag) ₁₁ Bi ₁₃ S ₂₅ ; compositional similarities to UM1971-06-S:AgBiCu and cuprobismutite
UM1991-12-S:AuBi	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (3), 63	Am. Mineral. 79, 1212	(Bi,Au) ₄ S ₅
UM1991-13-S:AuBiPb	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (3), 63	Am. Mineral. 79, 1212	(Bi,Pb) ₅ Au ₃
UM1991-14-S:AuBiPb	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (3), 63	Am. Mineral. 79, 1212	(Bi,Pb) ₆ Au ₃
UM1991-15-S:AuBiPb	*Izv. Akad. Nauk Kaz. SSR, Ser. Geol. (3), 63	Am. Mineral. 79, 1212	(Bi,Pb) ₆ Au ₄
UM1991-16-S:CuFeTi	Neues Jb. Mineral. Abh. 163, 197	Am. Mineral. 77, 1118	(Cu,Ti,Ag)FeS ₂
UM1991-17-S:IrPtRh	*Dokl. Akad. Nauk SSSR 320, 705	Am. Mineral. 78, 673	(Ir,Pt,Rh) ₂ S ₂
UM1991-18-Sb:BiIrOsPt	Mineral. Zhurn. 13 (1), 31	Am. Mineral. 78, 233	(Pt,Ir,Os) ₂ (Sb,Bi) ₃
UM1991-19-Se:AsCo	Can. Mineral 29, 411		CoAsSe
UM1991-20-Si:Fe	Acta Mineral. Sinica 11, 285	Am. Mineral. 79, 188	Fe ₅ Si ₂
UM1991-21-SiO:AlFeHMg	Eur. J. Mineral. 3, 27		(Fe,Al,Mg) ₆ (Si,Al) ₄ O ₁₀ (OH) ₄ ·H ₂ O; a chloritic mineral with interstratified water layers
UM1991-22-SiO:CaFHK	Yamaguchi Univ. College of Arts Bull. Nat. Sci. Rept. 25, 15	Am. Mineral. 77, 1119	An orthorhombic polymorph of apophyllite-(KF)
UM1991-23-SiO:CaFeHHfZr	*Mineral. Zhurn. 13 (1), 7	Am. Mineral. 77, 1118	(Ca,Fe)(Zr,Hf) ₅ Si ₄ O ₁₉ ·10H ₂ O
UM1991-24-SiO:CaKNaZr	*Dokl. Akad. Nauk SSSR 320, 1220	Am. Mineral. 79, 1010	(Ca,Na,K) ₂ ·xZrSi ₃ O ₉ ·5H ₂ O; perhaps the Ca-analogue of gaidonnayite; but hydration state is higher; also could be related to calciohilairite or calcioatapleite
UM1991-25-Te:AgPd	Mineral. Petrol. 43, 181		Pd ₆ AgTe ₄
UM1991-26-Te:AsPd	*C. R. Acad. Sci. Paris, Ser. II, 312, 55	Am. Mineral. 76, 1733	Pd ₃ (Te,As)
UM1991-27-Te:BiNiPdPt	Mineral. Petrol. 43, 181		(Pt,Pd,Ni) ₃ (Te,Bi) ₄
UM1991-28-Se:BiTe	Geol. Surv. Finland Sp. Paper 12, 81	Mineral. Mag. 72, 953	Bi ₆ Te ₂ Se
UM1991-29-SiO:FeMgNa	Mineral. Mag. 55, 529	Mineral. Mag. 72, 839	Na ₄ (Mg ₅ Fe ³⁺ 7)O ₄ [Si ₉ Fe ³⁺ 3O ₃₆]; perhaps an Mg-analogue of wilkinsonite
UM1992-02-BOCO:CaHMgNa	*Revista Museo de la Plata 11, 57	Am. Mineral. 80, 187	Probably hydrated borate-carbonate of Na or Na-Mg-Ca
UM1992-03-Bi:CuPdPtSb	*Mineral. Zhurnal 14 (2), 12	Am. Mineral. 80, 406	(Pd,Pt) ₃ (Bi,Sb)
UM1992-04-Bi:Pt	Mineral. Petrol. 47, 37	Am. Mineral. 78, 1111	(Pt,Fe)(Bi,Sb)
UM1992-05-CO:CaCeLaNaSr	*Moscow Univ. Geol. Bull. 47, 60	Am. Mineral. 80, 1332	(Sr,Na,Y,REE,Ca,Ba) ₂ (CO ₃) ₂ ; trigonal dimorph of donnayite-(Y)
UM1992-06-E:AgPd	Mineral. Mag. 56, 47	Am. Mineral. 77, 1307	AgPd

UM1992-07-E: AuCuPdPt	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	(Pd,Pt,Au) ₂ Cu
UM1992-08-E: AuHg	Can. Mineral. 30, 1033	Am. Mineral. 78, 1110	Au ₈₈₋₉₄ Hg ₆₋₁₂ ; monoclinic
UM1992-09-E: CuFePt	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	Pt ₃ (Cu,Fe)
UM1992-10-E: CuPt	*Dokl. Akad. Nauk. SSSR 323, 539	Am. Mineral. 79, 390	PtCu ₅
UM1992-11-E: CuPtSb	*Mineral. Zhurnal 14 (2), 12	Am. Mineral. 80, 406	Pd(Cu,Sb) ₃
UM1992-12-E: IrPtSb	Mineral. Petrol. 47, 37	Am. Mineral. 78, 1111	(Pt,Ir,Fe) ₃ Sb
UM1992-13-O: IrPt	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	(Ir,Pt) ₂ O ₂
UM1992-14-PO: CaFeHMn	Mineral. Record 23 (4), 39		~Ca(Fe,Mn,Mg) ₄ P ₄ O ₁₄ (OH) ₂ ·7H ₂ O; unknown No. 2a; compositionally similar to jahnsite
UM1992-15-PO: FeHMg	Mineral. Record 23 (4), 39		~(Fe,Mg) ₅ (PO ₄) ₃ (OH)·2H ₂ O; unknown No. 5a
UM1992-16-PO: FeHMg	Mineral. Record 23 (4), 39		~(Mg,Fe) ₅ (PO ₄) ₃ (OH)·2H ₂ O; unknown No. 5b
UM1992-17-PO: FeHMn	Mineral. Record 23 (4), 39		~(Fe,Mn,Ca) ₄ P ₃ O ₁₀ (OH) ₃ ·15H ₂ O; unknown No. 2b; compositional similarities to laueite
UM1992-18-PO: FeHMnNa	Mineral. Record 23 (4), 39		~NaFe ₄ Mn ₃ O ₁₈ ·10H ₂ O; unknown No. 4
UM1992-19-PO: FeHNa	Mineral. Record 23 (4), 39		NaFePO ₄ ·2H ₂ O; unknown No. 1
UM1992-20-PO: FeMn	Mineral. Record 23 (4), 39		Unknown No. 6; X-ray powder diffraction and qualitative compositional data
UM1992-21-S: AgFeSb	*Dokl. Akad. Nauk. SSSR 326, 337	Am. Mineral. 79, 390	(Ag,Fe,Zn,Hg) ₁₂ (Sb,As) ₄ S ₁₃ ; tetrahedrite group
UM1992-22-S: AgPd	Can. Mineral. 30, 109	Am. Mineral. 77, 1307	Pd ₂ AgS ₂
UM1992-23-S: BiCuFePbSb	*Vest. Mosk. Univ. Geol. Ser. 4, 47	ICDD 46-1414	Pb _{22.4} Cu _{3.45} (Bi _{15.5} Sb _{15.5}) ₅ S ₆₉ ; X-ray pattern different from that of kobellite
UM1992-24-S: CuFeIrNiPtRh	*Mineral. Zhurn. 14, (1), 29	Am. Mineral. 79, 1211	(Rh,Pt,Ir) ₃ (Fe,Ni,Cu) ₃ S ₈
UM1992-25-S: CuOsPdPtRh	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	(Pt,Cu,Pd,Rh,Os) ₃ S ₂
UM1992-26-S: CuPdPt	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	(Pd,Pt) ₃ (Cu,Ni) ₂ S ₂
UM1992-27-S: CuPdPtRh	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	(Pd,Pt) ₂ RhCuS ₄
UM1992-28-S: Pd	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	Pd ₄ S
UM1992-29-S: PdPt	Can. Mineral. 30, 983	Am. Mineral. 78, 1110	(Pd,Pt) ₂ S
UM1992-30-SO: CCuHZn	Mineral. Mag. 56, 215	Am. Mineral. 78, 235	(Zn,Cu) ₇ (SO ₄ ,CO ₃) ₂ (OH) ₁₀ ·3H ₂ O; apparently the Zn-analogue of schulenbergite
UM1992-31-Sb: AsPdRh	*Mineral. Zhurn. 14, (1), 29	Am. Mineral. 79, 1211	(Pd,Rh) ₂ (Sb,As)
UM1992-32-Sb: PdSn	*Geol. Rudn. Mest. (1992) (2), 32	Am. Mineral. 78, 673	Pd ₄ SnSb
UM1992-33-SiO: AlCaFeHMg	Zap. Vser. Mineral. Ob. 121 (5), 81	Am. Mineral. 79, 391	(Ca,Mg,Na) _{0.3} Mg ₃ (Si,Al,Fe ³⁺) ₄ O ₁₀ (OH,F) ₂ ·2H ₂ O; similarities to UM1979-20-SiO: AlCaFeHKMgMnNaTi
UM1992-34-SiO: AlCaFeMgV	Can. Mineral. 30, 153	Am. Mineral. 77, 1307	Ca ₈ (V,Mg,Fe) ₄ (V,Al) ₈ Si ₁₂ O ₄₆₋₅₆ (OH) ₀₋₁₀ ; closely related to pumpellyite
UM1992-35-SiO: CaHKMg	*Dokl. Akad. Nauk. SSSR 320, 561	Am. Mineral. 79, 573	K(Ca,Mg) ₆ [Si ₁₁ O ₂₈](OH,F)·10H ₂ O; similarities to apophyllite-(KF)
UM1992-36-SiO: FeHKMgMnNa	*Dokl. Akad. Nauk. SSSR 322, 589	Am. Mineral. 78, 675	(K,Na)(Mn,Fe,Mg) ₂ Si ₄ O ₁₀ (OH) ₂ ·3H ₂ O; probably mica family
UM1992-37-SiO: KTi	Can. Mineral. 30, 1153	Am. Mineral. 78, 1112	K ₂ TiSi ₃ O ₉ ; transferred to Invalid list
UM1992-38-Sn: CuPdPt	Mineral. Petrol. 47, 37	Am. Mineral. 78, 1111	(Pd,Pt) ₄ (Cu,Fe) ₂ (Sn,Sb) ₃
UM1992-39-Te: AgNiPd	Dokl. Bolg. Akad. Nauk 45 (4), 37	Am. Mineral. 79, 1212	(Pd,Ag,Ni) ₃ Te ₄
UM1992-40-Te: CuPd	Dokl. Bolg. Akad. Nauk 45 (4), 37	Am. Mineral. 79, 1212	(Pd,Cu) ₂ Te ₃
UM1992-41-Te: PtRh	Internal Tech. Rept. Medellin, (INGEOMINAS), Hannover (BGR) 216	Explor. Mining Geol. 5, 73	(Pt,Rh,Ir) ₂ Te ₃
UM1992-42-Te: PtRh	Internal Tech. Rept. Medellin, (INGEOMINAS), Hannover (BGR) 216	Explor. Mining Geol. 5, 73	(Pt,Rh) ₄ Te ₅
UM1992-43-Te: Sb	*Rom. J. Mineral. 75, 65	Mineral. Abst. 46, 95M/0900	SbTe ₂
UM1993-01-AsO: CaH	Mineral. Record 24, 11		A hydrous calcium arsenate; the X-ray powder diffraction pattern appears unique
UM1993-02-AsTe: Pd	Can. Mineral. 31, 61	Explor. Mining. Geol. 5, 73	Pd ₈ (As,Te) ₃ ; possible similarities to vincentite and UM1972-//As: PdTe
UM1993-03-Cl: BiHOPd	Can. Mineral. 31, 31	Am. Mineral. 78, 1317	~Pd ₅ Bi ₄ (Cl,OH) ₅ ·7H ₂ O
UM1993-04-E: BiCuHgPdRh	Mineral. Petrol. 47, 263	Am. Mineral. 79, 390	(Pd,Rh) ₄ CuHg
UM1993-05-E: CuFeHgPd	Mineral. Petrol. 47, 263	Am. Mineral. 79, 390	(Pd,Cu,Fe) ₃ Hg ₂
UM1993-06-F: CaNaREEY	*Dokl. Akad. Nauk. SSSR 330, 713	Am. Mineral. 79, 1213	(Na,Ca) ₃ (Y,REE) ₃ F ₁₂
UM1993-07-PO: CaCeHLA	*Zap. Vser. Mineral. Ob. 122 (3), 79	Am. Mineral. 80, 632	(Ca,REE)PO ₄ ·nH ₂ O
UM1993-08-S: AgAuSb	*Geol. Surv. Finland, Sp. Pap. 18, 37	Mineral. Abst. 45, 94M/3531	Ag ₃ Au ₃ Sb ₁₀ S ₁₀ ; perhaps an Ag-analogue of criddleite
UM1993-09-S: AgHgSb	*Geol. Ore Deposits 35, 297	Am. Mineral. 80, 1331	AgHgSbS ₃
UM1993-10-S: AgSb	*Geol. Ore Deposits 35, 297	Am. Mineral. 80, 1331	Ag ₄ Sb ₂ S ₅
UM1993-11-S: BiClHOPd	Can. Mineral. 31, 31	Am. Mineral. 78, 1317	~(Pd,Pt,Pb) ₈ Biz(Fe,Ni,Zn) ₅ (H ₂ O,OH,Cl,O) ₁₂
UM1993-12-S: BiCu	Mineral. Petrol. 47, 183	Am. Mineral. 78, 1317	Cu ₃ BiS ₃ ; dimorph of wittichenite
UM1993-13-S: BiCuTi	*Mineral. Zhurnal 15 (1), 75	Am. Mineral. 79, 1211	(Cu,Fe,Tl) ₂ Bi ₂ S ₅
UM1993-14-S: CdIn	*Geol. Rudn. Mest. 35, 547	Am. Mineral. 80, 1330	CdIn ₂ S ₄ ; later described under the name cadmoinde: Zap. Vser. Mineral. Ob. 133 (4) (2004), 21; transferred to Invalid list
UM1993-15-S: CdInZn	*Geol. Rudn. Mest. 35, 547	Am. Mineral. 80, 1330	ZnCdIn ₂ S ₅
UM1993-16-S: CdInZn	*Geol. Rudn. Mest. 35, 547	Am. Mineral. 80, 1330	Zn ₃ CdIn ₂ S ₇
UM1993-17-S: CuFePb	Mineral. Petrol. 47, 183	Am. Mineral. 78, 1317	~Cu ₉ (Pb,Fe) ₆ or perhaps (Cu,Pb,Fe) ₅ S ₃
UM1993-18-S: CuPd	Can. Mineral. 31, 61	Explor. Mining. Geol. 5, 73	Pd ₃ CuS ₂
UM1993-19-S: CuPt	Can. Mineral. 31, 61	Explor. Mining. Geol. 5, 73	Pt ₁₂ Cu ₈ S ₅
UM1993-20-S: CuPt	Can. Mineral. 31, 61	Explor. Mining. Geol. 5, 73	Pt ₁₂ Cu ₁₀ S ₄
UM1993-21-S: IrOsRu	Mineral. Petrol. 47, 263	Am. Mineral. 79, 390	(Os,Ir,Ru) ₂ S ₃
UM1993-22-Se: Mo	Can. Mineral. 31, 745	Am. Mineral. 79, 573	Mo ₃ Se ₄
UM1993-23-SiO: AlFeK	Mineral. Mag. 57, 289		K(Fe,Al)Si ₃ O ₈ ; referred to as "ferrian high sanidine" but represents a distinct species

UM1993-24-SiO:CaHMg	*J. Geol. Soc. Japan 99, 679	Am. Mineral. 80, 633	Ca ₂ (Mg,Fe) ₈ SiO ₃₂ (OH) ₄ ; the Ca-analogue of clinojimthompsonite
UM1993-25-Te:AgAu	*Acta Mineral. Sinica 13, 65	Am. Mineral. 79, 572	AuAgTe ₃ ; mineral "C"
UM1993-26-Te:AgPdSn	Dokl. Akad. Nauk 329, 497		(Pd,Ag) ₂ (Te,Sn)
UM1993-27-Te:AuTi	*Mineral. Zhurnal 15 (1), 75	Am. Mineral. 79, 1211	Au ₃ TiTe ₂
UM1993-28-Te:Mo	Internal Tech. Rept. Medellín, (INGEOMINAS), Hannover (BGR) 216.	Am. Mineral. 79, 573	Mo ₃ Te ₄
UM1993-29-TeO:AuPb	*Acta Mineral. Sinica 13, 65	Am. Mineral. 79, 572	Mineral "A"; (Au,Pb) ₃ TeO ₂
UM1993-30-TeO:AuPb	*Acta Mineral. Sinica 13, 65	Am. Mineral. 79, 572	Mineral "B"; Au ₄ Pb ₃ Te ₂ O ₁₁
UM1993-31-VO:KU	Aufschluss 44, 291	Am. Mineral. 79, 1214	Qualitative compositional information plus d-values, etc.
UM1993-32-CH:NO	Rivista Mineralogica Italiana 17, 261		CSH ₄ N ₄ O ₃ ·2H ₂ O; as a weathering product, the mineral passes IMA tests for validity.
UM1994-01-AsO:FeHSTI	Neues Jb. Mineral. Abh. 167, 359	Am. Mineral. 80, 1076	Fe ₂ TiAs ₃ O ₁₂ ·4H ₂ O; see also UM1993-/-AsO:FeHSTI
UM1994-02-CO:HNI	Mineral. Record 25, 283	Am. Mineral. 80, 187	(Ni,Mg) ₅ (HCO ₃) ₂ (CO ₃) ₄ ·8.4H ₂ O
UM1994-03-CO:HNI	Mineral. Record 25, 283	Am. Mineral. 80, 187	Ni ₄ (CO ₃) ₃ (OH) ₂ ·2.5H ₂ O
UM1994-04-F:OREE	C. R. Acad. Sci. Paris, Ser. II, 318, 1333	Am. Mineral. 80, 187	Ce ₄ O ₅ F ₂
UM1994-05-F:OREE	C. R. Acad. Sci. Paris, Ser. II, 318, 1333	Am. Mineral. 80, 187	(Ce,La)OF
UM1994-06-O:AlCo	Mineral. Mag. 58, 247	Am. Mineral. 80, 187	CoAl ₂ O ₄
UM1994-07-O:BaCrFeMgTi	Acta Mineral. Sinica 14, 228	Am. Mineral. 81, 769	BaTi ₅ Fe ₄ Mg ₂ CrO ₁₉
UM1994-08-O:CaFeKMgTi	Acta Mineral. Sinica 14, 228	Am. Mineral. 81, 769	KTi ₅ Fe ₃ Ca ₂ Mg ₂ O ₁₉
UM1994-09-O:CrKTi	Acta Mineral. Sinica 14, 234	Am. Mineral. 81, 766	K ₂ Cr ₂ Ti ₆ O ₁₆ - referred to as a K-Cr priderite
UM1994-10-O:FeIrPtRh	Econ. Geol. 89, 1454	Am. Mineral. 80, 847	(Pt,Fe,Rh,Ir) ₃ O
UM1994-11-O:FeIrRh	Econ. Geol. 89, 1454	Am. Mineral. 80, 847	(Rh,Fe,Ir) ₃ O
UM1994-12-O:FePtRh	Econ. Geol. 89, 1454	Am. Mineral. 80, 847	(Fe,Rh,Pt) ₃ O
UM1994-13-O:FeMnRu	Econ. Geol. 89, 1454	Am. Mineral. 80, 847	(Ru,Mn,Fe)(O,OH) ₃
UM1994-14-O:FeIrPtRh	Econ. Geol. 89, 1454	Am. Mineral. 80, 847	(Fe,Pt,Rh,Ir) ₃ O
UM1994-15-O:FePt	Econ. Geol. 89, 1454		(Pt,Fe) ₂ O
UM1994-16-O:FePt	Econ. Geol. 89, 1454		(Pt,Fe) ₃ O ₂
UM1994-17-O:FePt	Econ. Geol. 89, 1454		(Pt,Fe) ₄ O
UM1994-18-O:FePtRh	Econ. Geol. 89, 1454	Am. Mineral. 80, 847	(Rh,Fe,Pt) ₃ O
UM1994-19-PO:CuHMOPb	Mineral. Record 25, 203	Am. Mineral. 79, 1214	Pb ₂ Cu(Mo,As,Cr) ₄ (PO ₄)(OH); Pb-analogue of molybdoformacite
UM1994-20-S:AgSn	Resource Geol. 44, 369	Am. Mineral. 80, 1075	(Ag,Pb) ₁₂ Sn ₂ S ₁₁
UM1994-21-S:AgTe	Mineral. Polonica 25, 21	Am. Mineral. 81, 1016	Ag ₃ TeS ₄ ; compositional similarities to UM1969-09-S:AgTe
UM1994-22-S:CuFe	*J. Magnetism Magnetic Mater. 132, 31	Am. Mineral. 80, 186	CuFe ₃ S ₄
UM1994-23-S:Re	Nature 369, 51	Am. Mineral. 80, 406	ReS ₂ ; later described under the name rhenite: Zap. Ross. Mineral. Ob. 134 (5), (2005), 32; transferred to Invalid list
UM1994-24-S:Rh	*Zap. Vser. Mineral. Ob. 123 (2), 41	Am. Mineral. 80, 1330	Rh ₁₁ S ₉
UM1994-25-SiO:AlCaFeHREEV	Bull. Nat. Mus. Tokyo, ser. C, 20, 1	Eur. J. Mineral. 18, 569	CaREEV ³⁺ AlFe ²⁺ SiO ₄ Si ₂ O ₇ O(OH); unnamed member of allanite subgroup of the epidote group corresponding to the hypothetical name 'vanadoallanite'
UM1994-26-SiO:AlCaTi	Meteoritics 29, 673	Am. Mineral. 80, 633	Ca ₃ Ti(Al,Ti) ₂ (Si,Al) ₃ O ₁₄
UM1994-27-SiO:AlK	*J. Mineral. Soc. Japan 23, 171	Earth Planet. Sci. Lett. 176, 259	KAlSi ₃ O ₈ ; K-feldspar composition with hollandite structure
UM1994-28-SiO:MgHPb	Mineral Wealth 91, 33	Am. Mineral. 81, 520	~Mg ₂ Pb ₃ Si ₂ O ₈ (OH) ₂ ·3.5H ₂ O; later described under the name britvinite: Zap. Ross. Mineral. Ob. 136 (6) (2006), 18; transferred to Invalid list
UM1995-01-Bi:AgPdTe	*Dokl. Akad. Nauk 341, 666	Am. Mineral. 83, 188	(Pd,Ag) ₃ (Bi,Te)
UM1995-02-CO:BaCaClFKMgNaSr	Dawson <i>et al.</i> 1995	Mineral. Mag. 61, 779	(Na ₂ ,Ba,Ca,Sr,Mg,K ₂)CO ₃ ; "phase X"
UM1995-03-CO:Pb	Mineral. Mag. 59, 305		Pb ₃ O ₂ CO ₃ ; X-ray powder diffraction data reported in Am. Mineral. 49 (1964), 1184
UM1995-04-E:CuSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	Cu ₆ Sn ₅ ; transferred to Invalid list
UM1995-05-E:FeMn	*Dokl. Akad. Nauk. 341, 511	Am. Mineral. 81, 1015	Fe ₆ Mn
UM1995-06-E:FeSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	Fe ₁₀ Sn
UM1995-07-E:PbSbSn	Moscow Univ. Geol. Bull. 50 (6), 65		Sb(Sn,Pb)
UM1995-08-E:PbSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	PbSn
UM1995-09-E:PbSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	PbSn ₇
UM1995-10-E:PtRhRu	Can. Mineral. 33, 1023	Am. Mineral. 81, 768	Pt ₂ Ru ₂ Rh
UM1995-11-E:SbSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	SbSn ₂
UM1995-12-E:SbSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	Sb ₂ Sn ₃
UM1995-13-E:SbSn	Moscow Univ. Geol. Bull. 50 (6), 65	Am. Mineral. 82, 821	Sb ₃ Sn ₄
UM1995-14-N:Si	Meteoritics 30, 387	Am. Mineral. 81, 253	Si ₃ N ₄ ; the beta dimorph of nierite
UM1995-15-O:Al	Clay Minerals 30, 39	Am. Mineral. 80, 1331	Al ₂ O ₃ ; the chi alumina polymorph
UM1995-16-O:AuClH	*Geol. Ore Deposits 37, 32	Am. Mineral. 81, 768	Au(O,Cl) _n H ₂ O
UM1995-17-O:CaHTiUY	Mineral. Record 26, 123		Semi-quantitative analysis with distinct X-ray powder pattern
UM1995-18-O:CuPd	Mineral. Mag. 59, 455	Am. Mineral. 81, 1016	(Pd,Cu) ₃ O
UM1995-19-O:Y	*Dokl. Akad. Nauk 340, 681	Am. Mineral. 81, 1284	Y ₂ O ₃
UM1995-20-OH:AlMgMnNi	*Dokl. Akad. Nauk 342, 781	Am. Mineral. 81, 766	Mn ⁴⁺ (O,OH) ₂ (Mg,Ni,Al,OH) ₂ nH ₂ O
UM1995-21-PO:AlCaHMgNa	Mineral. Record 26, 449	Am. Mineral. 81, 519	(Na,Ca) ₂ Mg ₂ Al ₁₀ (PO ₄) ₈ (OH,O) ₁₂ ·4H ₂ O; appears to be an Mg-analogue of burangaitite
UM1995-22-PO:AlCuFFeHV	Mineral. Record 26, 449	Am. Mineral. 81, 519	Cu(Al,V,Fe) ₅ (PO ₄) ₄ (F,OH) ₅ ·7H ₂ O; designated "unknown #1"; later described under the name nevadaite: Can. Mineral. 42 (2004), 741; transferred to Invalid list
UM1995-23-PO:BaHMgSr	Zap. Vser. Mineral. Ob. 124 (1), 90	Am. Mineral. 81, 517	(Mg,Mn) ₅ (Ba,Sr,Ca)(PO ₄) ₄ ·8H ₂ O; the hexagonal dimorph of rimkorolgitite
UM1995-24-S:AsNiSe	*Acta Mineral. Sinica 15, 425	Am. Mineral. 81, 1515	Ni ₃ As ₃ (S,Se) ₄
UM1995-25-S:BiPbTe	*Zap. Vser. Mineral. Ob. 124 (6), 24	Am. Mineral. 81, 1285	Pb ₂ Bi ₂ TeS ₃
UM1995-26-S:BiPbTe	*Zap. Vser. Mineral. Ob. 124 (6), 24	Am. Mineral. 81, 1285	Pb ₂ Bi ₃ Te ₂ S ₃
UM1995-27-S:BiPbTe	*Zap. Vser. Mineral. Ob. 124 (6), 24	Am. Mineral. 81, 1285	Pb ₂ Bi ₅ TeS ₂

UM1995-28-S:BiPbTe	*Zap. Vser. Mineral. Ob. 124 (6), 24	Am. Mineral. 81, 1285	PbBi ₄ Te ₂ S ₂
UM1995-29-S:BiPbTe	*Zap. Vser. Mineral. Ob. 124 (6), 24	Am. Mineral. 81, 1285	PbBi ₄ Te ₃ S
UM1995-30-S:CuFeIrNiRh	Can. Mineral. 33, 509		(Ir,Rh)(Fe,Ni,Cu) ₂ S ₃ ; appears to be the Fe-dominant analogue of UM1974-11-S:CuFeIrNi
UM1995-31-S:CuIrPdRhRu	Can. Mineral. 33, 509	Am. Mineral. 81, 518	(Rh,Cu,Pd,Ru,Ir) ₃ S ₂ ; "unknown #2"
UM1995-32-S:FeRu	Mineral. Petrol. 54, 249	Am. Mineral. 81, 768	(Fe,Ru) ₂ S ₂ ; might be a Ru-bearing pyrite
UM1995-33-S:Rh	Can. Mineral. 33, 1023	Am. Mineral. 81, 768	Rh ₅ S ₄ ; similarities to UM1976-18-S:RhRu
UM1995-34-SO:Fe	Mineralium Deposita 30, 78	Am. Mineral. 80, 1331	FeS ₂ O ₃
UM1995-35-SO:FePb	Mineralium Deposita 30, 78	Am. Mineral. 80, 1331	Fe ₃ PbS ₆ O ₁₄
UM1995-36-SOSiO:AlHPb	*Periodico Mineral. 64, 309	Am. Mineral. 82, 821	Pb ₂ (Al,Mn)(Si ₆ O ₁₅) ₂ (SO ₄) ₂ O ₁₀ (OH) ₂₄
UM1995-37-Se:CuHgSb	*Acta Mineral. Sinica 15, 418	Am. Mineral. 81, 1515	(Cu,Hg) _{1-0.7} (Sb) _{0-0.3} (Se,S)
UM1995-38-Se:CuSb	*Acta Mineral. Sinica 15, 418	Am. Mineral. 81, 1515	CuSbSe ₂
UM1995-39-Se:Pd	*Dokl. Akad. Nauk 344, 91	Am. Mineral. 82, 1040	Pd ₃ Se ₂
UM1995-40-SiO:AlHMg	Lithology & Mineral Resources 30 (3), 221	Zap. Vser. Mineral. Ob. 125 (6), 88	Regularly interstratified chrysotile and hydrotalcite layers
UM1995-41-SiO:AlSr	Z. Krist. 210, 741	Am. Mineral. 81, 767	SrAl ₂ Si ₂ O ₈ ; a triclinic polymorph of slawsonite
UM1995-42-SiO:BaCaFeKMnNaSrTi	*Kristallografiya 40, 217	Am. Mineral. 81, 766	(K,Ba,Sr) ₂ Na(Na,Fe,Mn,Ca) ₂ Ti ₃ Si ₄ O ₁₈ ; K-analogue of barytolamprophyllite
UM1995-43-SiO:BTb	*Dokl. Akad. Nauk 342, 361	Am. Mineral. 81, 769	Th ₆ Ba ₈ Sr ₇ O ₃₈
UM1995-44-Sn:Pd	*Dokl. Akad. Nauk 344, 91	Am. Mineral. 82, 1040	PdSn ₂
UM1995-45-Te:BiSSe	Neues Jb. Mineral. Abh. 169, 305	Am. Mineral. 81, 519	Bi ₃ Te ₂ (Se,S) ₂ ; previously equated erroneously with UM1976-30-Te:BiPbS
UM1995-46-E:AuPdPt	S. Afr. J. Geol. 98 (2), 168	Am. Mineral. 81, 1016	(Pt,Au) _{0.66} Pd _{0.34} ; transferred from Invalid list
UM1996-01-As:PdSbTe	Mineral. Mag. 60, 672	Am. Mineral. 82, 209	Pd ₆ (As,Sb)Te ₃
UM1996-02-As:PdTe	Geol. Surv. Finland Sp. Paper 26, 63	Can. Mineral. 42, 563	Pd ₁₁ Te ₂ As ₂ ; later described under the name tömroosite: Can. Mineral. 49 (2011), 1643; transferred to Invalid list.
UM1996-03-AsO:AlFeGaHPbS	Can. Mineral. 34, 1305		PbGa ₃ (AsO ₄ ,SO ₄) ₂ (OH) ₆ ; the Ga-analogue of segnitite
UM1996-04-AsO:CaGaGeH	Can. Mineral. 34, 1305		Ca(Ga,Fe,Al)(AsO ₄) ₂ (OH) ₆ ; the Ga-analogue of arsenocrandallite
UM1996-05-E:AgAuPd	Geol. Surv. Finland Sp. Paper 26, 63		Au ₆ AgPd
UM1996-06-E:AuCuPd	Geol. Surv. Finland Sp. Paper 26, 63		Au ₄ (Pd,Cu)
UM1996-07-E:AuCuPd	Geol. Surv. Finland Sp. Paper 26, 63		Au ₇ CuPd
UM1996-08-E:CuFePt	Geol. Surv. Finland Sp. Paper 26, 63		Pt ₆ FeCu; intermediate between UM1992-09-E:CuFePt & isoferroplatinum
UM1996-09-E:CuPt	Geol. Surv. Finland Sp. Paper 26, 63		Pt ₂ Cu
UM1996-10-E:CuPt	Geol. Surv. Finland Sp. Paper 26, 63		Pt ₅ Cu ₂
UM1996-11-E:CuPt	Geol. Surv. Finland Sp. Paper 26, 63		Pt ₇ Cu
UM1996-12-E:FePt	Mineral. Petrol. 56, 25	Am. Mineral. 81, 1515	Very close to Pt ₄ Fe ₃
UM1996-13-E:FePt	Mineral. Petrol. 56, 25	Am. Mineral. 81, 1515	Very close to Pt ₂ Fe
UM1996-14-E:HgPbPdPt	Explor. Mining Geol. 5, 73		(Pd,Pt) ₂ (Pb,Hg)
UM1996-15-E:PdPt	Geol. Surv. Finland Sp. Paper 26, 63		Pt ₄ Pd
UM1996-16-O:Al	Clays Clay Minerals 44, 658	Am. Mineral. 82, 623	Eta-Al ₂ O ₃ ; polymorph of corundum
UM1996-17-O:CrFeNbTiV	Mineral. Mag. 60, 403	Am. Mineral. 82, 209	(V,Cr,Ti) ₂ (Ti,V ⁴⁺ ,Nb) ₂ O ₈ ; perhaps related to berdesinskiite
UM1996-18-O:FeIrPtRh	Explor. Mining Geol. 5, 73		(Ir,Fe,Rh,Pt) ₂ O ₃
UM1996-19-O:FeIrPtRh	Explor. Mining Geol. 5, 73		(Ir,Fe,Rh,Pt) ₂ O
UM1996-20-O:FeIrPtRh	Explor. Mining Geol. 5, 73		(Ir,Fe,Rh,Pt) ₃ O ₇
UM1996-21-O:FeMnZn	Materials Res. Bull. 31, 1587	Am. Mineral. 82, 1041	(Zn,Mn)Fe ₂ O ₄ ; tetragonal dimorph of franklinite
UM1996-22-O:FePt	Explor. Mining Geol. 5, 73		~(Pt,Fe) ₂ O ₃
UM1996-23-O:FePt	Explor. Mining Geol. 5, 73		~(Pt,Fe) ₂ O ₂
UM1996-24-O:FePt	Explor. Mining Geol. 5, 73		~(Pt,Fe) ₃ O ₄
UM1996-25-OH:AICMg	*Kristallografiya 41, 1024	Am. Mineral. 82, 1041	Mg ₄ Al ₂ (OH) ₁₂ (CO ₃) ₃ H ₂ O; similar composition to UM1987-05-OH:AICMg but different cell dimensions
UM1996-26-PO:FeGaHPb	Can. Mineral. 34, 1305		PbGa(Fe,Al)(PO ₄ ,SO ₄) ₂ (OH) ₆ ; P-analogue of gallobeudantite
UM1996-27-S:AgBiPbSb	Neues Jb. Mineral. Mh. (1996), 377	Am. Mineral. 82, 1264	~(Pb,Ag) ₃ (Sb,Bi) ₅ S ₈
UM1996-28-S:AgPbTe	*Acta Petrol. Mineral. 15, 80	Am. Mineral. 82, 209	(Ag,Pb) ₃ (S,Te) ₄ ; mineral designated "M3"
UM1996-29-S:AgTe	*Acta Petrol. Mineral. 15, 80	Am. Mineral. 82, 209	Ag(S,Te) ₂ ; mineral designated "M1"
UM1996-30-S:BiCuPb	Mineralium Deposita 31, 1	Am. Mineral. 81, 1016	Cu ₂ Pb ₆ Bi ₈ S ₁₉
UM1996-31-S:CuFeGe	Can. Mineral. 34, 1305		Cu ₇ (Ge,Fe,As) ₅ S ₁₂ ; transferred to Invalid list
UM1996-32-S:CuPb	Acta Mineral. Sinica 16, 304	Am. Mineral. 83, 402	CuPbS ₂
UM1996-33-S:CuPdPt	Explor. Mining Geol. 5, 73		(Pd,Pt) ₂ Cu ₂ S ₂
UM1996-34-S:PbTe	*Acta Petrol. Mineral. 15, 80	Am. Mineral. 82, 209	Pb(S,Te) ₂ ; mineral designated "M4"
UM1996-35-S:Sb	J. Mater. Sci. 31, 6507	Am. Mineral. 84, 1687	Sb ₂ S ₃ ; possibly a new polymorph of stibnite
UM1996-36-Sb:Au	Econ. Geol. 91, 1239		Au ₂ Sb ₃ ; distinct from aurostibite
UM1996-37-SbO:CaFHNi	Mineral. J. 18, 155	Am. Mineral. 82, 1264	(Na _{1.00} Ca _{0.80} Mn _{0.01})Sb ₂ O ₆ [O _{5.69} F _{0.89} (OH) _{0.36}]; subsequently named fluomatromoméite: Can. Mineral. 48 (2010), 673; transferred to Invalid list
UM1996-38-SiO:AlCaHNa	Austral. J. Mineral. 2 (1), 11-20	Am. Mineral. 82, 210	A Na-Ca zeolite
UM1996-39-SiO:BaClFeNbTi	Mineral. Mag. 60, 473	Am. Mineral. 82, 433	Ba ₄ (Nb,Ti,Fe) ₆ Si ₄ O ₂₈ Cl; a Nb-dominant analogue of baolite
UM1996-40-SiO:BaFFeHKNaTi	Can. Mineral. 34, 779	Am. Mineral. 82, 430	(Ba,K,Na)Fe ₂ Si ₂ O ₉ (F,O,OH) ₂ ; similarities to bafertisite
UM1996-41-SiO:CCaCeFeNbPbThTiU	Can. Mineral. 34, 779	Am. Mineral. 82, 433	~(Ce,Ca,K,Na,Ba)Pb ₂ (Fe,Al,Mn,Zn)(Nb,Ti,Zr,Th,U) ₅ (SiO ₂) ₆ (CO ₂) ₉ (F,OH,O); possibly a silicocarbonate
UM1996-42-Te:Pt	Geol. Surv. Finland Sp. Paper 26, 63		PTTe
UM1997-01-As:FeIrNiS	J. Petrol. 38, 1419		~(Ir,Fe,Ni,Rh) ₃ (As,S) ₂
UM1997-02-As:IrOs	J. Petrol. 38, 1419		~(Ir,Os) ₂ As

UM1997-03-As:IrOsTe	Eur. J. Mineral. 9, 457	Am. Mineral. 82, 1263	(Ir,Os)(As,Te)
UM1997-04-As:IrSSe	Zap. Vser. Mineral. Ob. 126 (6), 23	Am. Mineral. 83, 1349	Ir(As,Se,S) ₂
UM1997-05-As:NiOs	J. Petrol. 38, 1419		~(Ni,Os) ₂ As
UM1997-06-AsO:CaCuH	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern; later described under the name <i>ondrušite</i> , CaCu ₄ (AsO ₄) ₂ (AsO ₃ OH) ₂ •10H ₂ O: <i>Can. Mineral.</i> 49, 885; transferred to Invalid list
UM1997-07-AsO:CaH	J. Czech Geol. Soc. 42 (4), 77	Am. Mineral. 84, 687	Ca(H ₂ AsO ₄) ₂ ; later named <i>svenekite</i> : <i>J. Czech Geol. Soc.</i> 48, 149
UM1997-08-AsO:CaHMg	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern; it dehydrates to <i>picropharmacolite</i>
UM1997-09-AsO:CaHMgZn	J. Czech Geol. Soc. 42 (4), 77		(Mg,Ca,Zn) ₅ (AsO ₄) ₂ (AsO ₃) ₂ (OH) ₂ •4H ₂ O; X-ray diffraction pattern distinctive
UM1997-10-AsO:CaV	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern
UM1997-11-AsO:CuH	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern
UM1997-12-AsO:CuH	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern
UM1997-13-AsO:CuH	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern; later named <i>slavkovite</i> : <i>Can. Mineral.</i> 48 (2010), 1157; transferred to Invalid list
UM1997-14-AsO:FeH	J. Czech Geol. Soc. 42 (4), 77		An arsenate with a distinct X-ray powder diffraction pattern
UM1997-15-AsO:FeH	J. Czech Geol. Soc. 42 (4), 77		A secondary Fe-arsenate with a distinct X-ray powder diffraction pattern
UM1997-16-AsO:HMg	J. Czech Geol. Soc. 42 (4), 77		A secondary Mg-arsenate with a distinct X-ray powder diffraction pattern
UM1997-17-AsO:HMg	J. Czech Geol. Soc. 42 (4), 77	Am. Mineral. 84, 687	MoAs ₂ O ₉ •3H ₂ O; transferred to Invalid list
UM1997-18-AsO:HNiU	J. Czech Geol. Soc. 42 (4), 77		Ni(UO ₂) ₂ (AsO ₄) ₂ •6•8H ₂ O; X-ray powder diffraction pattern distinctive; later described under the name <i>metarauchite</i> : <i>Can. Mineral.</i> 48 (2010), 335; transferred to Invalid list
UM1997-19-AsO:HU	J. Czech Geol. Soc. 42 (4), 77		(H ₃ O) ₂ (UO ₂) ₂ (AsO ₄) ₂ •8H ₂ O; X-ray powder diffraction pattern distinctive
UM1997-20-AsO:HU	J. Czech Geol. Soc. 42 (4), 77		U ⁴⁺ (HAsO ₄) ₂ •4H ₂ O; X-ray powder diffraction pattern distinctive
UM1997-21-AsO:HZn	J. Czech Geol. Soc. 42 (4), 77		A hydrated zinc arsenate with a distinct X-ray powder diffraction pattern
UM1997-22-Cl:KNa	*Zap. Vser. Mineral. Ob. 126 (5), 78	Am. Mineral. 83, 1349	Assumed to be a chloride; d-values appear to be distinctive
UM1997-23-CO:CaCuHU	J. Czech Geol. Soc. 42 (4), 77	Am. Mineral. 84, 687	Ca ₅ Cu(UO ₂) ₄ (CO ₃) ₆ (OH) ₈ •4H ₂ O
UM1997-24-CO:CaCuHU	J. Czech Geol. Soc. 42 (4), 77	Am. Mineral. 84, 687	Ca ₂ Cu(UO ₂) ₂ (CO ₃) ₂ O ₃ •3H ₂ O
UM1997-25-CO:CaCuHU	J. Czech Geol. Soc. 42 (4), 77		A uranyl carbonate with a distinct X-ray powder diffraction pattern
UM1997-26-CO:CaFREE	*Acta Mineral. Sinica 17, 239	Am. Mineral. 83, 910	(Ce,La)Ca[CO ₃] ₂ F; a trigonal polymorph of <i>synchysite</i> -(Ce)
UM1997-27-CO:CaHKSU	J. Czech Geol. Soc. 42 (4), 77		KCa ₃ [UO ₂][CO ₃] ₃ [SO ₄]F•10H ₂ O; X-ray powder diffraction pattern distinctive
UM1997-28-CO:CaHMg	Am. Mineral. 82, 812		(Mg,Ca)CO ₃ •3H ₂ O
UM1997-29-E:CuFeOsRu	J. Petrol. 38, 1419		(Os,Ru)(Cu,Fe)
UM1997-30-E:CuPtSb	Can. Mineral. 35, 1		(Pt,Cu,Sb)
UM1997-31-O:AlCrFeMg	Neues Jb. Mineral. Mh. (1997), 163	Am. Mineral. 83, 189	Tetragonal Mg(Al,Cr,Fe) ₂ O ₄ ; a component of the discredited mineral <i>donathite</i>
UM1997-32-O:CaNbREETi	*Acta Mineral. Sinica 17 (3), 270	Am. Mineral. 83, 910	(REE,Nb,Ca) ₂ Ti ₃ O ₉
UM1997-33-O:FeHglrOsRu	Can. Mineral. 35, 1	Am. Mineral. 82, 1263	(Ru,Fe,Hg,Os,Ir)O ₂ ; perhaps related to UM1999-12-O:FeIrOsPtRu
UM1997-34-O:FeIrOsRu	Can. Mineral. 35, 611	Am. Mineral. 84, 197	(Ru,Os,Ir,Fe) ₂ (O) ₂ -3; of dubious validity because of very poor totals
UM1997-35-O:HPbU	J. Czech Geol. Soc. 42 (4), 77		Probably a hydrated oxide; X-ray powder diffraction pattern distinctive
UM1997-36-O:HU	J. Czech Geol. Soc. 42 (4), 77		Probably a hydrated oxide; X-ray powder diffraction pattern distinctive; identified later under the name <i>heisenbergite</i> : <i>Neues Jb. Mineral. Abh.</i> 189 (2) (2012), 117
UM1997-37-PO:BiHU	J. Czech Geol. Soc. 42 (4), 77		Bi ₄ (UO ₂)(PO ₄) ₂ O ₄ •2H ₂ O; given 'working name' "phosphate-waipurgite"; transferred to Invalid list
UM1997-38-S:AsIrOs	J. Petrol. 38, 1419		~(Ir,Os) ₂ (S,As) ₃
UM1997-39-S:BiPbTe	Austral. J. Mineral. 3, 119	Am. Mineral. 83, 1119	PbBi ₄ Te ₄ S ₃ ; transferred to Invalid list
UM1997-40-S:CuFeIrNiOsRh	Can. Mineral. 35, 611	Am. Mineral. 83, 402	(Fe,Cu,Ni)(Os,Ir,Rh) ₂ S ₄ ; very poor analytical total
UM1997-41-S:CuFeKNiPbTi	Can. Mineral. 35, 1421	Am. Mineral. 84, 193	(K,Ti,Pb) ₆ (Fe,Cu,Ni) ₂₅ S ₂₇
UM1997-42-S:CuFeKNiPbTi	Can. Mineral. 35, 1421	Am. Mineral. 84, 193	(Ti,K,Pb) ₆ (Fe,Ni,Cu) ₂₅ S ₂₇
UM1997-43-S:Fe	*J. Trace and Microprobe Techniques 15, 515	Am. Mineral. 83, 910	FeS ₃
UM1997-44-S:FeK	Mineral. Mag. 61, 779		(K)1-2(Fe) ₂ -3(S) ₃ -4; substantial grain to grain compositional variations
UM1997-45-SO:CuHU	J. Czech Geol. Soc. 42 (4), 77		A uranyl sulphate later equated with <i>pseudojohannite</i> ; transferred to Invalid list
UM1997-46-SO:FeHKMgU	J. Czech Geol. Soc. 42 (4), 77		(Mg,Fe,K ₂) ₂ -3(UO ₂) ₆ (SO ₄) ₃ (OH) ₁₂ •9-16H ₂ O; X-ray powder pattern distinctive
UM1997-47-SO:FeHMgU	J. Czech Geol. Soc. 42 (4), 77		(Mg,Fe) ₂ -3(UO ₂) ₆ (SO ₄) ₃ (OH) ₁₂ •4-16H ₂ O; X-ray powder diffraction pattern distinctive
UM1997-48-SO:HPbU	J. Czech Geol. Soc. 42 (4), 77		A hydrated uranyl lead sulphate with distinct X-ray powder diffraction pattern
UM1997-49-SiO:AlFeMg	Nature 387, 486	Am. Mineral. 83, 188	(Mg,Fe ³⁺)(Al,Cr,Mn) ₂ (Mg,Fe ²⁺) ₂ Si ₃ O ₁₂ ; acronym "TAPP" (tetragonal almandine-pyrope phase) used
UM1997-50-SiO:CaHU	J. Czech Geol. Soc. 42 (4), 77		Ca ₂ (UO ₂) ₂ (Si ₂ O ₅) ₃ •10H ₂ O; X-ray powder diffraction pattern distinctive
UM1997-51-SiO:CeCrLaNdTi	*Russian Geol. Geophys. 38, 405	Am. Mineral. 83, 403	(Ce,La,Nd) ₄ (Mg,Fe,Ca)Cr ₂ (Ti,Al,Nb) ₂ Si ₄ O ₂₂ ; perhaps a Cr-analogue of <i>chevkinite</i> -(Ce)
UM1997-52-SiO:FeMg	Science 277, 1084	Am. Mineral. 83, 402	(Mg,Fe)SiO ₃ ; a high-pressure ilmenite-type mineral
UM1997-53-SiO:FeMg	Science 277, 1084	Am. Mineral. 83, 402	(Mg,Fe)SiO ₃ ; a high-pressure perovskite-type mineral
UM1997-54-Te:AsIrOs	Eur. J. Mineral. 9, 457	Am. Mineral. 82, 1263	(Ir,Os)(Te,As)
UM1997-55-Te:BiPd	Econ. Geol. 92, 490	Am. Mineral. 83, 655	Approximately Pd ₃ (Te,Bi) ₂
UM1997-56-Te:IrOsRu	Eur. J. Mineral. 9, 457	Am. Mineral. 82, 1263	(Ru,Ir,Os)Te
UM1997-57-Te:RhRuSb	Can. Mineral. 35, 1	Am. Mineral. 82, 1263	(Ru,Rh)(Te,Sb) ₂
UM1998-01-AsSb:CoFeNi	Can. Mineral. 36, 855		(Fe,Co,Ni)SbAs
UM1998-02-BO:SiO:AlFeMg	Can. Mineral. 36, 399	Am. Mineral. 84, 993	(Mg,Fe) ₂ Al ₁₂ (Al,Fe) ₂ Si ₄ B ₂ (B,Al) ₂ O ₃₇ ; originally thought to be the Fe-analogue of <i>werdingite</i> but further research showed that Fe is distributed between sites and not dominant at any; <i>Eur. J. Mineral.</i> 23, 577; transferred to Invalid list
UM1998-03-Cl:Ti	Lithology & Mineral Resources 33, 525	Am. Mineral. 84, 993	TiCl; later described under the name <i>lafossaite</i> : <i>Mineral. Record</i> 37 (2006), 165; transferred to Invalid list

UM1998-04-CO:CaCeF	Mineral. Mag. 62, 55	Am. Mineral. 83, 1119	Ca ₆ Ce ₁₄ (CO ₃) ₂₀ F ₁₄ ; regularly interstratified bastnasite-(Ce)/synchysite-(Ce), designated "B ₈ S ₆ -I"
UM1998-05-CO:CaCeF	Mineral. Mag. 62, 55	Am. Mineral. 83, 1119	Ca ₆ Ce ₁₄ (CO ₃) ₂₀ F ₁₄ ; regularly interstratified bastnasite-(Ce)/synchysite-(Ce), designated "B ₈ S ₆ -II"
UM1998-06-CO:CaCeF	Mineral. Mag. 62, 55	Am. Mineral. 83, 1119	Ca ₆ Ce ₁₆ (CO ₃) ₂₂ F ₁₆ ; regularly interstratified bastnasite-(Ce)/synchysite-(Ce), designated "B ₁₀ Se-I"
UM1998-07-CO:CaCeF	Mineral. Mag. 62, 55	Am. Mineral. 83, 1119	Ca ₆ Ce ₁₆ (CO ₃) ₂₂ F ₁₆ ; regularly interstratified bastnasite-(Ce)/synchysite-(Ce), designated "B ₁₀ Se-II"
UM1998-08-CO:CaCeF	Mineral. Mag. 62, 55	Am. Mineral. 83, 1119	Ca ₄ Ce ₁₁ (CO ₃) ₁₅ F ₁₁ ; regularly interstratified bastnasite-(Ce)/synchysite-(Ce), designated "B ₇ S ₄ -I"
UM1998-09-CO:CaCeF	Mineral. Mag. 62, 55	Am. Mineral. 83, 1119	Ca ₄ Ce ₁₁ (CO ₃) ₁₅ F ₁₁ ; regularly interstratified bastnasite-(Ce)/synchysite-(Ce), designated "B ₇ S ₄ -II"
UM1998-10-CO:CoHNI	Clay Minerals, 33, 285	Am. Mineral. 84, 687	Ni ₆ Co ₂ (CO ₃)(OH) ₁₆ •4H ₂ O; some similarities to combainite
UM1998-11-O:AuHSb	C.R. Acad. Sci. Paris, Ser. D, 326, 533	Am. Mineral. 84, 197	Au ₂ SbO ₂ (OH)
UM1998-12-S:AgBiCuPb	Mineral. Zhurn. 20 (4), 14	Am. Mineral. 86, 378	Ag ₅ CuBi ₄ Pb(S,Se) ₁₁
UM1998-13-S:CuFeNi	J. Petrol. Mineral. Econ. Geol. 93, 369	Mineral. Abst. 52, 01M/0724	Cu ₂ Fe ₆ Ni ₂ S ₈ ; designated mineral "Y"; later described under the name sugakiite: Can. Mineral. 46, 233; transferred to Invalid list
UM1998-14-S:CuFeNi	J. Petrol. Mineral. Econ. Geol. 93, 369	Mineral. Abst. 52, 01M/0724	Cu ₂ Fe ₅ Ni ₂ S ₈ ; designated mineral "Z"; similarities to UM1975-14-S:CuFeNi
UM1998-15-S:CuFeZn	*Geol. Ore Deposits 40, 228	Am. Mineral. 84, 197	Cu ₂ Fe ₃ Zn ₅ S ₁₀
UM1998-16-S:FeNi	J. Petrol. Mineral. Econ. Geol. 93, 369	Mineral. Abst. 52, 01M/0724	Fe ₆ Ni ₃ S ₈ ; designated mineral "X"; similarities to UM1975-14-S:CuFeNi & UM2002-25-S:FeNi
UM1998-17-SO:AlHNaPSr	*Dokl. Akad. Nauk 359, 223	Am. Mineral. 84, 1687	Alunite group
UM1998-18-Se:AgBi	Neues Jb. Mineral. Mh. (1998), 36	Am. Mineral. 83, 1349	Ag ₃ BiSe ₃
UM1998-19-SiO:BBaBeCaFPb	Mineral. Mag. 62, 77	Am. Mineral. 83, 1119	(Pb,Ba,K) ₄ Ca ₂ Si ₈ (B,Be) ₂ (Si,B) ₂ O ₂₈ F; Pb-analogue of hyalotekite
UM1998-20-SiO:BeCaHREEY	Can. Mineral. 36, 793		Ca(Y,Ce,Nd,Tb,Er)Be ₂ Si ₂ (O,OH) ₁₀
UM1998-21-SiO:CaCeClHMnNaZr	*Dokl. Akad. Nauk 362, 784	Am. Mineral. 84, 1198	Na ₁₆ Ca ₆ (Mn,Ce) ₃ Zr ₃ (Si ₃ O ₉) ₂ (Si ₉ O ₂₇) ₂ (OH,Cl) ₄ ; probably a eudialyte group mineral
UM1998-22-Te:BiFeNiPd	*Vest. Českého Geol. Ústavu 73, 117	Am. Mineral. 84, 1197	Pd ₂ (Ni,Fe)BiTe ₆
UM1998-23-Te:BiNiPdSb	*Vest. Českého Geol. Ústavu 73, 117	Am. Mineral. 84, 1197	PdNi(Sb,Bi)Te ₂
UM1999-01-As:CuIrPdPtRh	Can. Mineral. 37, 1117	Am. Mineral. 85, 1325	(Pt,Rh,Cu,Pd,Ir) ₄ As
UM1999-02-As:NiRh	Can. Mineral. 37, 1131	Am. Mineral. 85, 1325	(Rh,Ni) ₂ As ₄ ; data do not allow distinction from Ni,Pt-bearing polkanovite; transferred to Invalid list
UM1999-03-As:NiRh	Can. Mineral. 37, 1131		(Rh,Ni) ₂ As ₄ ; data do not allow distinction from Ni,Pt-bearing polkanovite; transferred to Invalid list
UM1999-04-AsO:CaYREE	Can. Mineral. 37, 961		(Nd,Pr,La,Ca,Y)AsO ₄
UM1999-05-AsO:REE	Can. Mineral. 37, 961		(La,Ce,Pr,Nd)(As,V)O ₄
UM1999-06-AsO:REE	Can. Mineral. 37, 961		(Y,Ce,Nd,Th,Ca)(As,P)O ₄ ; same as chernovite-(Y); transferred to Invalid list
UM1999-07-E:AuCuPt	Eur. J. Mineral. 11, 363		Pd _{0.3} Au _{0.1}
UM1999-08-E:AuHgPd	Eur. J. Mineral. 11, 363		Pd _{0.7} Au _{0.3} Hg _{0.1}
UM1999-09-E:AuPd	Dokl. Earth Sci. 369, 1161	Am. Mineral. 85, 1845	Pd ₃ Au ₂
UM1999-10-E:CuPtSb	*Zap. Vser. Mineral. Ob. 128 (5), 79	Am. Mineral. 86, 377	Pt(Cu,Sb)
UM1999-11-I:CuS	*Dokl. Earth Sci. 369, 1166	Am. Mineral. 85, 1845	Cu(I,S)
UM1999-12-O:FeREETI	Can. Mineral. 37, 177		(Ce,Nd,Pr,La) _{1.4} Ti ₂ O ₆
UM1999-13-O:HiRh	Can. Mineral. 37, 1117	Am. Mineral. 85, 1325	(Ir,Rh)O(OH)•H ₂ O
UM1999-14-O:HPd	Mineral. Mag. 63, 345	Am. Mineral. 85, 265.	Probably PdO•3H ₂ O
UM1999-15-O:IrOsRu	Can. Mineral. 37, 1131		(Ru,Ir,Os,Fe)O; perhaps related to UM1997-34-O:FeIrOsRu
UM1999-16-O:PbPd	Can. Mineral. 37, 1507	Am. Mineral. 85, 1564	Pd ₉ PbO ₁₀ ; properties differ from those of "palladinite"; cf UM1995-18-O:CuPd
UM1999-17-O:PbV	Can. Mineral. 37, 1507	Am. Mineral. 85, 1564	Pb ₄ V ₂ O ₉ ; composition different from that of chervetite
UM1999-18-OH:Pd	Mineral. Mag. 63, 345	Am. Mineral. 85, 265	Probably Pd(OH) ₂ ; may be hydrated
UM1999-19-PO:FeKMnNa	Meteor. Planet. Sci. 34, 285	Am. Mineral. 84, 1688	(K,Na)(Fe,Mn) ₄ (PO ₄) ₃ ; perhaps the K-dominant analogue of galileite
UM1999-20-S:AgAsPbSbTI	*Resource Geol. Spec. Issue 20, 31	Am. Mineral. 86, 378	(Ti,Ag) ₂ Pb ₆ (As,Sb) ₁₆ S ₃₁
UM1999-21-S:AgCu	Natura Carpatica 40, 9	Mineral. Abst. 53, 02/1959	AgCu ₄ S ₄
UM1999-22-S:CuFeInSnZn	*Resource Geol. 49, 89	Am. Mineral. 85, 628	(Zn,Cu,Fe) ₁₃ (In,Sn) ₃ S ₁₆ ; similarities to sakuraite
UM1999-23-S:CuFeSnZn	*Resource Geol. 49, 75	Am. Mineral. 85, 628	Cu ₆ (Fe,Cu,Zn) ₃ Sn ₃ S ₁₀ ; distinctly similar to kuramite
UM1999-24-S:CuMn	Dokl. Earth Sci. 369, 1166	Am. Mineral. 85, 1845	(Cu,Mn) ₃ (S,I) ₂
UM1999-25-S:CuIrNiRh	Can. Mineral. 37, 1099		(Ir,Rh)(Ni,Cu) ₂ S ₄
UM1999-26-S:CuPtRh	Can. Mineral. 37, 1117	Am. Mineral. 85, 1325	(Cu,Rh,Pt)S
UM1999-27-S:FeIrNiOsRu	Eur. J. Mineral. 11, 363		(Ni,Fe,Os,Ru,Ir) ₇ S ₅ ; PGE content very variable
UM1999-28-SO:HMg	*Zap. Vser. Mineral. Ob. 128 (4), 99	Am. Mineral. 85, 1564	MgSO ₄ •4H ₂ O; later named cranswickite: Am. Mineral. 96 (2011), 869; transferred to Invalid list
UM1999-29-SeO:ClCuHPb	Can. Mineral. 37, 1493	Am. Mineral. 85, 1563	Pb ₄ (Cu,Zn)Cl ₃ [SeO ₃](OH,Cl); later described under the name sarrabusite: Acta Cryst. B68 (2012), 15; transferred to Invalid list
UM1999-30-Si:AlFe	*Zap. Vser. Mineral. Ob. 128 (2), 80	Am. Mineral. 85, 876	(Al,Fe)Si
UM1999-31-Si:REE	*Zap. Vser. Mineral. Ob. 128 (2), 80	Am. Mineral. 85, 876	(Ce,La,Nd,Gd,Pr)Si
UM1999-32-SiO:	Science 284, 1511	Am. Mineral. 85, 265.	SiO ₂ polymorph; later named seifertite: Eur. J. Min. 20 (2009), 523; transferred to Invalid list
UM1999-33-SiO:AlHKNa	Cryst. Reports 44, 776		K ₇ Na ₅ Al ₂ Si ₂₀ O ₆₄ •24H ₂ O; a zeolite - the Na-K analogue of merlinoite
UM1999-34-SiO:Ca	Earth Planet. Sci. Lett. 173, 1	Am. Mineral. 85, 876	CaSiO ₃
UM1999-35-SiO:Ca	Earth Planet. Sci. Lett. 173, 1	Am. Mineral. 85, 876	CaSi ₂ O ₅
UM1999-36-SiO:CaCeHMnNaNbSrZr	*Cryst. Reports 44, 765	Am. Mineral. 85, 1846	Na ₁₇ Mn ₃ Ca ₂ Zr ₃ Si ₂₆ O ₇₂ (OH,F,Cl) ₄ ; an Mn-rich eudialyte group mineral

UM1999-37- SiO:CaClFeHMnNaREESrTiZr	*Z. Krist. 47, 246	Am. Mineral. 85, 265	A Ti-rich member of the eudialyte family; later described under the name dualite: Zap. Ross. Mineral. Ob. 136 (2007) (4), 31; transferred to Invalid list
UM1999-38-WO:CrV	*Aufschluss 50, 23	Am. Mineral. 84, 1687	Possible formula: (V,Cr)WO ₄ (?); distinctive X-ray powder diffraction pattern; could alternatively be an oxide
UM2000-01-E:AuCuFePd	Mineralium Deposita 35, 762		Au ₂ (Cu,Pd,Fe) ₃
UM2000-02-E:AuCuHgSn	*Zap. Vser. Mineral. Ob. 129 (2), 54	Am. Mineral. 88, 933	Cu ₃ AuHg _{0.4} Sn _{0.7}
UM2000-03-E:AuCuHgSn	*Zap. Vser. Mineral. Ob. 129 (2), 54	Am. Mineral. 88, 933	Cu ₃ Au _{1.8} HgSn
UM2000-04-E:AuCuPd	Can. Mineral. 38, 1251		Au _{0.69} Pd _{0.23} Cu _{0.08} , or approximately Au ₂ (Pd,Cu)
UM2000-05-E:AuSn	Schweiz. Mineral. Petrog. Mitt. 80, 291	Am. Mineral. 86, 1537	AuSn ₂
UM2000-06-E:BiNb	Zap. Vser. Mineral. Ob. 129 (5), 1		Bi _{0.45} -0.52Nb _{0.40} -0.45Cu _{0.02} -0.03Zn _{0.01} -0.02
UM2000-07-E:CrFeNi	Can. Mineral. 38, 585		(Ni,Fe,Cr)
UM2000-08-E:CrFeNi	Can. Mineral. 38, 585		(Fe,Ni,Cr)
UM2000-09-E:CuFeNiPtRh	Can. Mineral. 38, 585		(Pt,Rh) _{0.55} (Fe,Cu,Ni) _{0.45} ; similarities to tetraferroplatinum
UM2000-10-E:CuNiZn	Zap. Vser. Mineral. Ob. 129 (5), 1		Cu _{0.65} Zn _{0.21} Ni _{0.14}
UM2000-11-E:CuPbSn	Zap. Vser. Mineral. Ob. 129 (5), 1		Sn _{0.61} -1.00Pb _{0.38} Cu _{0.018} ; a wide range of Sn-Pb-(Cu) compositions
UM2000-12-E:CuPbSn	Zap. Vser. Mineral. Ob. 129 (5), 1		Pb _{0.64} Sn _{0.23} Cu _{0.13}
UM2000-13-E:CuPbSn	Zap. Vser. Mineral. Ob. 129 (5), 1		Sn _{0.51} -0.60Cu _{0.40} -0.49Pb _{0.05}
UM2000-14-E:FeIrNi	Can. Mineral. 38, 585		~ Ir(Ni,Fe) ₂
UM2000-15-E:FeIrNi	Can. Mineral. 38, 585		~ Ir(Ni,Fe) ₄
UM2000-16-E:FeIrNi	Can. Mineral. 38, 585		~ Ir ₂ (Fe,Ni)
UM2000-17-E:FeIrNi	Can. Mineral. 38, 585		~ Ir ₃ (Ni,Fe) ₂
UM2000-18-E:FeIrNiOs	Can. Mineral. 38, 585		~ (Ir,Os)(Ni,Fe)
UM2000-19-E:FeNiPtRh	Can. Mineral. 38, 585		(Pt,Rh) _{0.64} (Fe,Ni) _{0.36}
UM2000-20-E:PbPdTe	Mineralium Deposita 35, 762		Pd ₂ (Pb,Te)
UM2000-21-E:Ti	Earth Planet Sci. Lett. 177, 237		A tetragonal polymorph of Ti-metal
UM2000-22-O:AgFeH	Zap. Vser. Mineral. Ob. 129 (5), 60		~Ag ₄ Fe ₉ O ₁₆ ·8H ₂ O, assuming monovalent state of Ag shown by authors; anal. #8
UM2000-23-O:BiFeHPbSb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Pb(Fe,Cu) ₂ (Sb,Bi) ₆ O ₁₃ ·3H ₂ O, assuming Sb & Bi are trivalent as shown by authors; anal. #9
UM2000-24-O:BiFeHSSb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Fe ₄ (Sb,Bi) ₁₅ O ₂₇ (SO ₄)(OH), assuming Sb & Bi are trivalent as shown by authors; anal. #10
UM2000-25-O:BiFeHSSb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Fe ₂ Sb ₉ Bi ₉ O ₃₀ (SO ₃) ₂ ·26H ₂ O, assuming Sb & Bi are trivalent as shown by authors; anal. #11
UM2000-26-O:BiFeHSSb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Fe ₁₀ Sb ₈ Bi ₅ O ₃₄ (SO ₃) ₂ (OH) ₄ ·42H ₂ O, assuming Sb & Bi are trivalent as shown by authors; anal. #12
UM2000-27-O:BiPd	Eur. J. Mineral. 12, 431	Am. Mineral. 86, 199	A solid solution series from Pd ₅ Bi ₄ O ₅₅ to Pd ₂₉ Bi ₃₁ O ₄₀
UM2000-28-O:BiPdSb	Eur. J. Mineral. 12, 431	Am. Mineral. 86, 199	A solid solution series from Pd(Sb,Bi)O ₂ to Pd ₂ (Sb,Bi)O
UM2000-29-O:FeHMnPb	Zap. Vser. Mineral. Ob. 129 (5), 60		Pb(Fe,Mn) ₁₅ O ₂₆ ·14H ₂ O, approximately, assuming tetravalent state of Mn shown by authors; anal. #5
UM2000-30-O:FeHMnPb	Zap. Vser. Mineral. Ob. 129 (5), 60		Pb(Mn,Fe) ₅ O ₁₀ ·3H ₂ O, approximately, assuming tetravalent state of Mn shown by authors; anal. #6
UM2000-31-O:FeHMnPb	Zap. Vser. Mineral. Ob. 129 (5), 60		Pb ₃ (Mn,Fe) ₁₈ O ₃₆ (OH) ₇ ·7H ₂ O, approximately, assuming tetravalent state of Mn shown by authors; anal. #7
UM2000-32-O:FeHPbSbSiSn	Zap. Vser. Mineral. Ob. 129 (5), 60		PbSn ₃ (Si,Fe,Sb) ₈ (OH) ₁₁ ·11H ₂ O, approximately, assuming trivalent state of Sb shown by authors; anal. #13
UM2000-33-O:FeHPbSbSiSn	Zap. Vser. Mineral. Ob. 129 (5), 60		PbSn ₃ (Sb,Fe,Si) ₅ O ₁₅ ·17H ₂ O, approximately, assuming trivalent state of Sb shown by authors; anal. #14
UM2000-34-O:FeHSbSn	Zap. Vser. Mineral. Ob. 129 (5), 60		Sn ₄ Sb ₅ Fe ₅ O ₂₂ (OH) ₂ ·15H ₂ O, approximately, assuming trivalent state of Sb shown by authors; anal. #15
UM2000-35-O:FeNbScTaTi	Can. Mineral. 38, 907		(Sc,Fe ²⁺ ,Fe ³⁺ ,Mn)(Ti,Sn,Zr) _{1.5} (Nb,Ta,W) _{1.33} O ₈ ; a rutile-group mineral
UM2000-36-O:HFePb	Zap. Vser. Mineral. Ob. 129 (5), 60		PbFe ₄ O ₇ ·5H ₂ O; anal. #1
UM2000-37-O:HmNpB	Zap. Vser. Mineral. Ob. 129 (5), 60		PbMn ₅ O ₁₁ ·7H ₂ O, approximately, assuming tetravalent state of Mn shown by authors; anal. #2
UM2000-38-O:MnPb	Zap. Vser. Mineral. Ob. 129 (5), 60		PbMn ₆ O ₇ ; anal. #3
UM2000-39-O:MnPb	Zap. Vser. Mineral. Ob. 129 (5), 60		PbMn ₇ O ₈ ; anal. #4
UM2000-40-O:PdSb	Eur. J. Mineral. 12, 431	Am. Mineral. 86, 199	Pd ₅ Sb ₂ O ₄
UM2000-41-O:Ti	Science 288, 321	Am. Mineral. 85, 1846	A TiO ₂ polymorph; might be considered a zirconium-free srilankite
UM2000-42-P:CrFeNi	Am. Mineral. 85, 1082		(Fe,Ni) ₅ CrP ₃
UM2000-43-P:CrFeNi	Am. Mineral. 85, 1082		(Fe,Ni) ₄ Cr ₂ P ₃ ; evidently the same as andreyivanovite (Am. Mineral 93, 1295); transferred to Invalid list
UM2000-44-S:AgAsPbSb	*J. Czech Geol. Soc. 45, 63	Am. Mineral. 86, 941	Pb ₉ Ag(Sb,As) ₁₃ S ₂₉
UM2000-45-S:AgAsSb	*J. Czech Geol. Soc. 45, 63	Am. Mineral. 86, 942	Ag ₂ SbAsS ₄
UM2000-46-S:BiCuPb	Eur. J. Mineral. 12, 899	Am. Mineral. 86, 199	Cu _{0.3} Pb _{0.3} Bi _{0.7} S ₁₂ ; "phase 88.6"; a bismuthinite derivative
UM2000-47-S:CuFePdPt	Can. Mineral. 38, 1251		PTPd(Fe,Cu)S
UM2000-48-S:CuPdPt	Can. Mineral. 38, 1251	Am. Mineral. 86, 941	(Pd,Cu,Pt) ₈ S ₃ ; (Table 7, anal. #3)
UM2000-49-S:FePdPt	Can. Mineral. 38, 1251	Am. Mineral. 86, 941	(Pt,Pd,Fe) ₃ S ₂ ; (Table 7, anal. #1 & #2); close to UM2000-51-S:PdPt
UM2000-50-S:FeRh	Can. Mineral. 38, 1251		(Fe _{0.79} Rh _{0.11} Cu _{0.04} Pt _{0.01})S
UM2000-51-S:PdPt	Can. Mineral. 38, 1251	Am. Mineral. 86, 941	(Pt,Pd) ₃ S ₂ ; possibly related to UM1992-26-S:CuOsPdPtRh
UM2000-52-SO:Ag	Zap. Vser. Mineral. Ob. 129 (5), 60		~Ag ₂ SO ₄ , assuming the valence state of Ag shown by the authors; anal. #21
UM2000-53-SO:Ag	Zap. Vser. Mineral. Ob. 129 (5), 60		~Ag ₆ (SO ₃) ₄ O ₃ , assuming the valence state of Ag shown by the authors; anal. #22
UM2000-54-SO:AgBiFeSb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Ag ₄ Fe ₈ (Sb,Bi) ₂ O ₁₅ (SO ₄) ₂ , assuming trivalent Sb & Bi and monovalent Ag as shown by authors; anal. #18

UM2000-55-SO:AgBiFeSb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Ag ₁₂ Fe ₁₈ (Sb,Bi)O ₃₀ (SO ₄) ₅ , assuming trivalent Sb & Bi and monovalent Ag as shown by authors; anal. #19
UM2000-56-SO:AgCu	Zap. Vser. Mineral. Ob. 129 (5), 60		~Ag ₂₆ Cu ₄ (SO ₃) ₂₀ O ₁₇ ·3H ₂ O or perhaps (Ag,Cu) ₃ [S(O,OH) ₄] ₂ ; anal. #20
UM2000-57-SO:AgHPb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Pb ₇ Ag ₄ O ₅ (SO ₄) ₅ ·7H ₂ O, assuming the valence state of Ag shown by the authors; anal. #23
UM2000-58-SO:FeHPb	Zap. Vser. Mineral. Ob. 129 (5), 60		~Pb ₄ Fe ₂ O ₅ (SO ₄) ₂ ·10H ₂ O; anal. #17
UM2000-59-SO:FeHPbSbSn	Zap. Vser. Mineral. Ob. 129 (5), 60		~Pb ₄ Fe ₄ Sn ₅ Sb ₂ (SO ₃) ₄ O ₂₁ (OH) ₂ ·36H ₂ O, assuming trivalent state of Sb shown by authors; anal. #16
UM2000-60-Si:Fe	Can. Mineral. 38, 585	Am. Mineral. 86, 199	Fe ₃ Si ₇
UM2000-61-SiO:	Science 288, 1632	Am. Mineral. 86, 378	A monoclinic SiO ₂ polymorph
UM2000-62-SiO:AlNa	Science 287, 1633	Am. Mineral. 85, 1564	NaAlSi ₃ O ₈ ; a shock-induced albite polymorph; later described under the name <i>lingunite</i> : <i>Earth Planet Sci. Lett.</i> 246 (2006), 317; transferred to the Invalid list
UM2000-63-SiO:BaHKNaNbSrTi	*Dokl. Akad. Nauk 371, 336	Am. Mineral. 86, 379	(H ₃ O) ₄ Na ₂ K(Sr) _{0.4} (Ba) _{0.3} (H ₂ O) _{0.8} (Ti) _{4.5} (Nb) _{3.5} (OH) _{4.5} (O) _{3.5} Si ₁₆ O ₄₈ ·4.2H ₂ O; nenadkevichite-labuntsovite group
UM2000-64-SiO:BFHKMg	J. Czech Geol. Soc. 45, 3	Am. Mineral. 86, 940	(K,Na)Fe ³⁺ ₃ (Mg ₂ Fe ³⁺ ₄)Si ₆ O ₁₈ (BO ₃) ₃ (OH) ₃ O; a K-dominant analogue of tourmaline
UM2000-65-SiO:CaCe	*Zap. Vser. Mineral. Ob. 129 (1), 99	Am. Mineral. 86, 378	CaCe ₂ (SiO ₄) ₂
UM2000-66-SiO:CaClFeHMnNaNbSrZr	*Cryst. Reports 45, 930	Am. Mineral. 86, 940	Zr ₃ (Ca,Mn) ₆ (Fe,Mn,Ti) ₃ (Na,Sr) ₁₅ Si ₂₄ O ₆₆ (Nb,Si) ₂ Cl(OH) ₁₀ ·H ₂ O; a eudialyte-group mineral; later described under the name <i>teseqite</i> : <i>Neues Jb. Mineral.</i> (2004), 83; transferred to Invalid list
UM2000-67-SiO:CaClFeHMnNaNbZr	*Cryst. Reports 45, 219	Am. Mineral. 86, 940	Zr ₄ (Ca,Na,Mn,Fe) ₆ (Fe,Mn,Ti) ₃ Na ₁₇ Si ₂₅ O ₇₅ (Al,Nb,Ti)Cl(OH) ₄ ·H ₂ O; a eudialyte-group mineral
UM2000-68-SiO:CaHKNaNbTi	*Dokl. Chem. 375, 263	Am. Mineral. 86, 1114	□ ₄ KNa(Ca,Na) ₂ (Nb,Ti) ₈ Si ₆ O ₄₈ (OH,O) ₈ ·11H ₂ O; appears to be related to labuntsovite
UM2000-69-SiO:FeHPb	Zap. Vser. Mineral. Ob. 129 (5), 60		PbFe ₁₈ Si ₃ O ₃₄ ·9H ₂ O; anal. #27
UM2000-70-SiO:FeHPb	Zap. Vser. Mineral. Ob. 129 (5), 60		Approximately (Fe,Pb) ₁₀ Si ₂ O ₁₉ ·6H ₂ O; anal. #24
UM2000-71-SiO:FeMg	*Joannea Mineral. 1, 53	Am. Mineral. 86, 1114	(Fe,Mg,Mn,Al,Zn) ₅ Si ₁₂ O ₃₀ ; later described under the name <i>trattnerite</i> : <i>Eur. J. Mineral.</i> 16 (2004), 375; transferred to Invalid list
UM2000-72-SiO:KLIZr	*Zap. Vser. Mineral. Ob. 129 (3), 66	Am. Mineral. 86, 378	KLi ₃ Zr ₂ Si ₁₂ O ₃₀ ; an osumulite-group mineral
UM2000-73-SiO:Pb	Zap. Vser. Mineral. Ob. 129 (5), 60		PbSi ₆ O ₁₃ ; anal. #25
UM2000-74-SiO:Pb	Zap. Vser. Mineral. Ob. 129 (5), 60		PbSi ₉ O ₁₉ ; anal. #26
UM2000-75-Te:AsFePd	Mineralium Deposita 35, 762		(Pd,Fe,Pt,Cu,Ni) ₄ (Te,As)
UM2000-76-Te:CuFePdPt	Mineralium Deposita 35, 762		(Pd,Pt,Fe,Cu) ₅ Te
UM2000-77-Te:FePbPd	Mineralium Deposita 35, 762		(Pd,Pb,Fe,Cu,Ni) ₇ Te ₄
UM2000-78-Te:Pd	Can. Mineral. 38, 1251	Am. Mineral. 86, 941	Pd ₂ Te
UM2000-79-O:CaFeMnNbREETHiZr	Can. Mineral. 38, 961		(Ca,Ce,La,Th,Y)Zr(Ti,Nb,Mn,Fe) ₂ O ₇ ; a REE-dominant analogue of zirconolite
UM2000-80-SiO:CaCeFFeHMnNaNbTiZr	Cryst. Reports 45, 591	Cryst. Reports 52, 47	Zr ₃ (Mn,Ca,Ce)(Na,Ca,Ce)[Si ₃ O ₉] ₂ [Si ₉ O ₂₇] ₂ [Fe _{1.55} (Zr,Na)(□,Ti,Nb)]Si ₁ Al ₁₁ Na ₁₄ (OH,O) ₄ (F,Ci)·H ₂ O; Mn,Na-ordered analogue of eudialyte
UM2001-01-As:HgPbPd	*Zap. Vser. Mineral. Ob. 130 (5), 21	Am. Mineral. 87, 1512	Pd ₁₁ (Pb,Hg)As ₂
UM2001-02-As:IrNiPdRhS	Can. Mineral. 39, 591		~(Ni,Fe,Cu) ₄ (Rh,Pd,Ir,Pt,Ru) ₉ S ₇ As ₁₀
UM2001-03-C:MoS	Am. Mineral. 86, 852		(Mo,Fe,Ni) ₃ (S,As) ₂ C ₈
UM2001-04-E:AgAuCu	Can. Mineral. 39, 889.		Au ₃ Ag _{0.71} Cu _{0.23} ; composition "Z"
UM2001-05-E:AuCu	Can. Mineral. 39, 889.		Au ₂ Cu _{0.96} Ag _{0.04} or Au ₂ (Cu,Ag)
UM2001-06-E:CrFeNi	Dokl. Earth Sci. 378, 491		Fe ₇₃ Cr ₁₆ Ni ₁₁
UM2001-07-E:FeSn	*Geochem. Internat. 39, 604	Am. Mineral. 87, 182	Fe ₃ Sn
UM2001-08-O:CaNbREESiTaTiY	Mineral. Mag. 65, 509	Am. Mineral. 87, 998	(Y,REE,Ca,Th)(Nb,Ti,Si,Ta) ₂ (O,OH) ₆ ; the Y-analogue of niobo-aeschynite-(Ce)
UM2001-09-O:CaNbREESiTiY	Mineral. Mag. 65, 509	Am. Mineral. 87, 998	(Ca,Y,REE)(Ti,Nb,Si) ₂ (O,OH) ₆ ; the Ti-dominant analogue of vigezzite
UM2001-10-O:Ti	Science 293, 1467	Am. Mineral. 87, 357	TiO ₂ ; a monoclinic polymorph of rutile; later given the name <i>akaogiite</i> : <i>Am. Mineral.</i> 95 (2010), 892; transferred to the Invalid list
UM2001-11-O:Ti	Earth Planet. Sci. Lett. 192, 485		Not distinct from UM2000-41-O:Ti; transferred to Invalid list
UM2001-12-S:AgBiCuPb	Can. Mineral. 39, 1641	Am. Mineral. 87, 1735	Cu ₂ Ag _x Pb _{10-2x} Bi _{12+x} S ₂₉ (x=1.23 - 1.49)
UM2001-13-S:AsCuSbZn	*Geol. Kazakhstana (5-6), 75	Am. Mineral. 88, 934	(Cu,Zn,Fe) _{3.23} (As,Sb) _{0.82} S ₃ ; compositionally near tennantite but anisotropic
UM2001-14-S:AsCuSbZn	*Geol. Kazakhstana (5-6), 75	Am. Mineral. 88, 934	(Cu,Zn) ₃ (Sb,As) ₃
UM2001-15-S:CuFePtRh	Dokl. Earth Sci. 378, 491	Am. Mineral. 87, 183	(Rh,Pt,Fe,Cu) ₉ S ₁₀
UM2001-16-S:CuSnZn	Mineral. Mag. 65, 351		(Zn,Fe) ₆ Cu ₆ Sn ₅ S ₁₂
UM2001-17-S:PtSn	Can. Mineral. 39, 1397	Am. Mineral. 87, 998	PTSnS
UM2001-18-S:CuFePt	*Dokl. Earth Sci. 378, 464	Am. Mineral. 87, 182	(Cu,Pt,Fe) ₄ Si
UM2001-19-SiO:AlCaMgNa	Contr. Mineral. Petrol. 142, 119	Am. Mineral. 87, 767	(Na,Mg,Ca)(Mg,Al)Si ₂ O ₆ ; Na-analogue of omphacite
UM2001-20-SiO:CaClFeHKNaZr	Cryst. Reports 46, 647	Am. Mineral. 87, 357	Na ₂₇ K ₈ Ca ₁₂ Fe ₃ Zr ₆ Si ₅₂ O ₁₄₄ (O,OH,H ₂ O) ₆ Cl ₂ ; later described under the name <i>rastrsvetsaevite</i> : <i>Zap. Ross. Mineral. Ob.</i> 135 (2006) (1), 49; transferred to Invalid list
UM2001-21-SiO:CaFeHKNaSrTiZr	*Cryst. Reports 46, 752	Am. Mineral. 87, 767	(Na,Sr,K) ₃₅ Ca ₁₂ Fe ₃ Zr ₆ Ti ₅ O ₁₄₄ (O,OH,H ₂ O) ₉ Cl ₃ ; later named <i>labyrinthite</i> : <i>Zap. Ross. Mineral. Ob.</i> 135 (2) (2006), 38. Transferred to Invalid list
UM2001-22-SiO:CaHKMnTi	*Cryst. Reports 46, 415	Am. Mineral. 87, 183	K ₃ Ca(K,Ca,Ba,□)MnTi ₈ Si ₁₆ O ₄₈ (O,OH) ₈ ·10H ₂ O; appears to be the same as <i>gutkovaite-Mn</i> ; transferred to Invalid list
UM2001-23-SiO:CaHU	*Dokl. Akad. Nauk 378, 201	Am. Mineral. 87, 767	Ca(UO ₂) ₂ (SiO ₃ OH) ₂ ·5H ₂ O
UM2001-24-Te:BiSe	Neues Jb. Mineral. Mh. (2001), 289	Am. Mineral. 87, 182	Bi ₄ Te ₂ Se
UM2002-01-BiSb:Pd	Can. Mineral. 40, 277		Pd ₂ BiSb; "Un7"; (Table 7, anal. 17 & 18); apparently the same as UM1985-01-Bi:PdSb. Transferred to Invalid list
UM2002-02-COH:FeNi	*Acta Geol. Hungarica 45, 373	Am. Mineral. 88, 1628	(Fe ²⁺ ,Ni) ₆ Fe ³⁺ ₂ CO ₃ (OH) ₁₆ ; Fe ²⁺ -analogue of reevesite
UM2002-03-O:AuHgPd	Can. Mineral. 40, 1451		~(Pd,Au,Hg) ₉ O ₅ ; (Table 9, anal. 4)

UM2002-04-O:CaNaNbREETaTiTh	Can. Mineral. 40, 1609		(Na,Ca,REE,Th) ₂ (Nb,Ti,Ta) ₂ (O,OH) ₇ ; the Na-analogue of pyrochlore; later named "natropyrochlore": Can. Mineral. 48 (2010), 673; transferred to Invalid list
UM2002-05-O:CrTiV	Neues Jb. Mineral. Mh. (2002), 541	Am. Mineral. 88, 1628	(Cr,V) ₂ Ti ₂ O ₇
UM2002-06-O:CrTiV	Neues Jb. Mineral. Mh. (2002), 541	Am. Mineral. 88, 1628	(Cr,V) ₂ Ti ₄ O ₁₁
UM2002-07-O:CrTiV	Neues Jb. Mineral. Mh. (2002), 541		(Cr,V) ₂ TiO ₅ ; Cr-analogue of berdesinskiite with which it apparently forms a series
UM2002-08-O:CuPd	Can. Mineral. 40, 1451		~Pd ₄ Cu ₅ O ₉ ; (Table 9, anal. 7 & 8)
UM2002-09-O:HW	Austral. J. Mineral. 8 (2), 55	Am. Mineral. 89, 470	WO ₃ ·0.5H ₂ O; later described under the name elsmoreite: Can. Mineral. 43 (2005), 1061; transferred to Invalid list
UM2002-11-O:PtPtSe	Can. Mineral. 40, 1451		~(Pd,Pt,Se) ₇ O ₃ ; (Table 9, anal. 1, 2 & 3)
UM2002-12-OS:CuFe	*Geol. Ore Deposits 44, 385	Am. Mineral. 88, 934	A Cu-Fe oxysulphide? ~{(Cu,Fe)SO ₇ }
UM2002-13-S:AgAuSe	Zap. Vser. Mineral. Ob. 136 (6), 61		(Ag,Au) ₅ (S,Se) ₂ or perhaps Ag ₃ Au ₂ (S,Se) ₂
UM2002-14-S:AgCuSbTeZn	Annual Univ. Mining Geol. "St'Rilski", Sofia, 45 (1), 39	Zap. Vser. Mineral. Ob. 133 (6), 45	(Cu _{1.75} Ag _{1.29} Zn _{0.26})(Sb _{0.44} Te _{0.33})S _{2.93} ; some similarities to tetrahedrite-group
UM2002-15-S:BiCuFePb	*Vest. Mosk. Univ. Ser. 4, Geol. (3), 37	Am. Mineral. 88, 1628	Cu ₅ Fe ₆ Pb ₆ Bi ₂ S ₂₁ ; compositional and other similarities to UM1971-13-S:BiCuFePb
UM2002-16-S:CrFeHO	Meteor. Planet. Sci. 37, 577	Am. Mineral. 88, 254	~FeCr ₂ S ₄ but with some oxygen and/or water present
UM2002-17-S:CrHO	Meteor. Planet. Sci. 37, 577	Am. Mineral. 88, 254	~CrS ₂ ·(O,H ₂ O); "phase A"
UM2002-18-S:CrHO	Meteor. Planet. Sci. 37, 577	Am. Mineral. 88, 254	~CrS ₂ ·2(O,H ₂ O); "phase B"
UM2002-19-S:CuFeIrNiPtRh	Can. Mineral. 40, 277		~(Ni,Cu,Fe) ₁₀ (Rh,Pt,Ir) ₅ S ₁₆
UM2002-20-S:CuFeIrNiPtRh	Can. Mineral. 40, 357		(Fe,Ni,Cu) _{1.67} (Rh,Ir,Pt,Os) _{1.09} S ₃
UM2002-21-S:CuFeK	*Geol. Ore Deposits 44, 385	Am. Mineral. 88, 934	KCu ¹⁺ ₁₉ Cu ²⁺ ₁₈ Fe ²⁺ ₁₀ S ₃₈ ; same as UKI-1990-(S:CuFek); transferred to Invalid list
UM2002-22-S:CuFeNa	Meteor. Planet. Sci. 37, 577		Na _{4.5} (Fe,Cu) ₂₅ S ₂₆ ; misidentified as chalcocopyrite and perhaps related to djerfisherite
UM2002-23-S:CuFeZn	*Resource Geol. 52, 67	Am. Mineral. 88, 254	Zn ₂ (Fe,Cu) ₃ S ₃
UM2002-24-S:CuNiRh	Can. Mineral. 40, 357		(Rh,Cu,Ni) ₄ S ₃
UM2002-25-S:FeGaMnZn	Meteor. Planet. Sci. 37, 577		(Fe,Zn,Mn,Ga) ₅ ; misidentified as sphalerite
UM2002-26-S:FeNi	*Dizhi Keiji Qingbao 21 (2), 51	Am. Mineral. 88, 1627	(Ni,Fe) _{8.86} S ₈ ; hexagonal dimorph of pentlandite; similarities to UM1998-16-S:FeNi
UM2002-27-S:Rh	Can. Mineral. 40, 435		RhS; perhaps same as UM1981-/-S:Rh[1] reported with inadequate data
UM2002-28-Se:AsCoCuNi	Can. Mineral. 40, 225		~(Co,Ni,Cu) ₂ (Se,As) ₂ ; some similarities to UM1991-19-Se:AsCo
UM2002-29-Se:AsCoCuNi	Can. Mineral. 40, 225		~(Co,Ni,Cu) ₇ (Se,As) ₉
UM2002-30-Se:BiPd	Can. Mineral. 40, 1451		~Pd ₃ (Se,Bi); (Table 7, anal. 5)
UM2002-31-Se:CdHg	Can. Mineral. 40, 989		Cd ₂ Hg ₃ Se ₅ ; possibly a member of a ss series between CdSe & HgSe
UM2002-32-Se:CdHg	Can. Mineral. 40, 989		CdHgSe ₂ ; possibly a member of a ss series between CdSe & HgSe
UM2002-33-Se:CdHg	Can. Mineral. 40, 989		Cd ₂ HgSe ₃ ; possibly a member of a ss series between CdSe & HgSe
UM2002-34-Se:CdHg	Can. Mineral. 40, 989		Cd ₄ HgSe ₅ ; possibly a member of a ss series between CdSe & HgSe
UM2002-35-Se:CdHg	Can. Mineral. 40, 989		Cd ₉ HgSe ₁₀ ; possibly a member of a ss series between CdSe & HgSe
UM2002-36-Se:CuHgPd	Can. Mineral. 40, 419	Am. Mineral. 88, 254	~Cu ₂ (Hg,Ag) ₂ (Pd,Pt) ₃ Se ₆
UM2002-37-Se:HgPd	Can. Mineral. 40, 1451		~(Pd,Hg) ₃ Se ₅ ; (Table 7, anal. 6)
UM2002-38-Se:Pd	Can. Mineral. 40, 1451		Pd ₉ Se ₂
UM2002-39-SiO:AlCaFeHMg	*Dokl. Akad. Nauk 382, 374	Am. Mineral. 88, 1179	Lizardite-saponite regular interstratification
UM2002-40-SiO:AlCaHKMGNa	J. Phys. Chem. B106, 10277	Am. Mineral. 88, 1180	(Mg,Ca,Na,K) _{7.5} (Al _{12.8} Si _{51.2})O ₁₂₈ ·65H ₂ O; the Mg-analogue of the tetragonal polytype of tschernichite?
UM2002-41-SiO:AlFeHMgMnTiZn	Geochem. Internat. 40, 1225	Am. Mineral. 88, 1629	Ca _{0.02} (Fe _{2.23} Mn _{1.06} Mg _{0.52} Zn _{0.17} Ti _{0.08})(Si _{5.94} Al _{0.06})O ₁₅ (OH) _{1.74} O _{0.26} ·nH ₂ O; later approved as the Fe-dominant analogue of sepiolite (IMA 2010-061); transferred to the Invalid list
UM2002-42-SiO:CaFeTi	Mineral. Petrol. 76, 1	Am. Mineral. 88, 934	(Ca,Fe) ₃ TiSi ₂ O ₉ ; the Ti-dominant analogue of baghdadite
UM2002-43-SiO:CaHNaZr	Cryst. Reports 47, 748		(Ca,Na) _{0.67} ZrSi ₃ O ₉ ·[H ₂ O,H ₃ O] ₃ ; related to calchilairite by cation deficiency and a halved c dimension
UM2002-44-SiO:FeMg	Am. Mineral. 87, 1257		(Fe,Mg) ₂ SiO ₄ ; a silicate with the spinel structure
UM2002-45-Te:AgBiPdSb	Can. Mineral. 40, 277		~(Pd,Ag)(Te,Sb,Bi); "Un3"
UM2002-46-Te:BiNiPdSb	Can. Mineral. 40, 651		(Pd,Ni) ₄ (Sb,Te) ₅
UM2002-47-Te:NiPdSb	Can. Mineral. 40, 651		(Pd,Ni) ₃ (Te,Sb) ₄
UM2002-48-Te:NiPdSb	Can. Mineral. 40, 651		(Ni,Pd) ₂ (Te,Sb) ₃
UM2002-49-Te:NiPdSb	Can. Mineral. 40, 651		(Ni,Pd) ₃ (Te,Sb) ₄
UM2002-50-Te:PtRhS	Can. Mineral. 40, 435		(Rh,Pd,Pt) ₃ (Te,S) ₂
UM2002-51-Se:PtPd	Econ. Geol. 97, 1127		Pd ₉ PtSe ₂ or perhaps (Pd,Pt) ₅ Se
UM2002-52-SiO:AlFeMg	Internat. Geol. Rev. 44, 859	Mineral. Mag. 72, 839	M _{0.44} (M _{1.5} Fe ²⁺ _{0.3} Fe ³⁺ _{1.6} Al _{8.5})O ₄ (Si _{1.7} Al _{1.0}) ₃ O ₃₆ ; unnamed Al-analogue of saophirine
UM2002-53-PO:CaHPb	Mineral. Mag. 66, 915	Eur. J. Mineral. 22, 163	Pb ₅ (PO ₄) ₃ (O,OH,Cl); perhaps the (OH)-dominant analogue phosphohedyphane
UM2003-01-AsO:AlCuFeMg	Mineral. Record 34 (4), 315		~(Cu,Al,Fe,Mg) _{3.6} (As,S,Si,P) ₄ O ₄ ; inferior data; similarities to clinoclase, gilmarite, cornubite and cornwallite
UM2003-02-AsSNiRu	Can. Mineral. 41, 331		~(Ru,Ni) ₂ (S,As) ₃
UM2003-03-E:AgAuCuZn	Proc. 15th Internat. Conf. X-ray Diff. & Cryst. Chem. Minerals (St. Petersburg), 368	Dokl. Earth Sci. 395A, 448	(Cu,Au,Ag) ₄ Zn; a Lunar mineral
UM2003-04-E:C	*C. R. Geosci. 335, 889	Am. Mineral. 89, 896	A cubic carbon polymorph; distinct from diamond
UM2003-05-E:CuFeIrPtRh	Can. Mineral. 41, 597		~Cu ₄₅ Fe ₁₉ Pt ₁₆ Rh ₁₂ Ir ₈
UM2003-06-E:FeIrNiOsRu	Can. Mineral. 41, 597		~Ni ₆₀ Ru ₂₁ Os ₉ Ir ₄ Fe ₄ Rh ₁ Cu ₁
UM2003-07-E:FeIrOsPtRu	Neues Jb. Mineral. Abh. 179, 143		~Oss ⁺ Pt ₃ Ir ₂ Ru ₆ Fe
UM2003-08-O:AlCaFeREEScTiV	Can. Mineral. 41, 561	Am. Mineral. 89, 251	(Ca,Ce)Sc(Ti,V,Fe,Al) ₂₀ O ₃₈ ; crichtonite-group
UM2003-09-O:BaFePbTi	Mineral. Mag. 67, 957		(Ba,Pb,K)Ti ₆ Fe ²⁺ ₂ O ₁₆ ; a hollandite-type structure
UM2003-10-O:CrFe	Geochim. Cosmochim. Acta 67, 3937	Am. Mineral. 89, 897	FeCr ₂ O ₄ ; later described under the name xieite: Chinese Science Bulletin 53 (2008), 3341; transferred to Invalid list
UM2003-11-O:CrFe	Proc. Nat. Acad. Sci. (USA) 100 (25) 14651	Am. Mineral. 89, 1578	FeCr ₂ O ₄ ; another high-pressure orthorhombic polymorph of chromite
UM2003-12-O:Pd	Mineral. Mag. 67, 453		Pd-oxide of variable composition clustering near Pd ₂ O

UM2003-13-S:AgAuCu	Eur. J. Mineral. 15, 147		Ag ₆ AuCu ₂ S ₅
UM2003-14-S:AgBiFeTe	Eur. J. Mineral. 15, 147		Ag ₁₆ FeBiTe ₃ S ₈
UM2003-15-S:AgCuTe	Neues Jb. Mineral. Mh. (2003), 321	Am. Mineral. 89, 897	Ag ₂ Cu ₂ TeS
UM2003-16-S:AgFeTe	Eur. J. Mineral. 15, 147		Ag ₉ FeTe ₂ S ₄
UM2003-17-S:AgTe	Eur. J. Mineral. 15, 147		Ag ₆ TeS ₂
UM2003-18-S:CuFeHNaO	*Dokl. Earth Sci. 389, 219	Am. Mineral. 88, 1628	Cu(Fe _{0.75} Cu _{0.25})(S _{1.99} As _{0.01})(NaOH) _{0.23} (KOH) _{0.02} nH ₂ O
UM2003-19-S:CuFe	*Dokl. Earth Sci. 389, 219	Am. Mineral. 88, 1628	(Cu _{0.96} K _{0.04})(Fe _{0.6} Cu _{0.4})(S _{1.98} O _{0.02})
UM2003-20-SO:CuHZn	*Erzgräber 17 (1), 1	Am. Mineral. 89, 470	(Cu,Zn) ₄ (SO ₄)(OH) ₆ ·4H ₂ O; probably the Cu-dominant analogue of namuweite
UM2003-21-Se:AsPdPt	Mineral. Mag. 67, 453		Empirical formula: ~(Pd,Pt) ₈ (Se,As)
UM2003-22-Si:AlCaFe	Am. Mineral. 88, 1817		(Al,Fe,Ca) ₁₁ Si ₉
UM2003-23-Si:AlCaFe	Am. Mineral. 88, 1817		(Al,Fe,Ca) ₃ Si ₂
UM2003-24-Si:AlFe	Am. Mineral. 88, 1817		(Fe,Al) ₂ Si ₃
UM2003-25-Si:Ca	Am. Mineral. 88, 1817		CaSi ₂
UM2003-26-Si:FeTi	Am. Mineral. 88, 1817		TiFe ₂ Si ₄
UM2003-27-SiO:AlCsFFeHLi	Am. Mineral. 88, 1832		CsFe ²⁺ ₃ (Si ₃ Al)O ₁₀ (F,OH) ₂ ; the Cs-analogue of fluorannite
UM2003-28-SiO:AlCsFFeHMg	Am. Mineral. 88, 1832		Cs(Mg,Fe) ₃ (Si ₃ Al)O ₁₀ (F,OH) ₂ ; the Cs-analogue of fluorphlogopite
UM2003-29-SiO:AlCsFLi	Am. Mineral. 88, 1832		CsLi ₂ AlSi ₄ O ₁₀ (F,OH) ₂ ; the Cs-analogue of polyolithionite; Later described under the name sokolovaite: New Data on Minerals 41, 5
UM2003-30-SiO:AlFLiRb	Am. Mineral. 88, 1832		RbLi ₂ AlSi ₄ O ₁₀ (F,OH) ₂ ; perhaps the Rb-analogue of polyolithionite or lepidolite (voloshinite)
UM2003-31-SiO:AlHLiRb	Am. Mineral. 88, 1832		RbFe ²⁺ ₃ (Si ₃ Al)O ₁₀ (OH,F) ₂ ; the Rb-analogue of annite
UM2003-32-SiO:Ca	Z. Krist. 218, 811		CaSiO ₃ ; A naturally-occurring high-pressure polymorph of the synthetic compound "wollastonite-II"
UM2003-33-SiO:CaFFeHKMnNaNbZr	Can. Mineral. 41, 1	Am. Mineral. 89, 252	K ₂ (Na,Ca)(Fe ²⁺ ,Mn) ₇ (Zr,Nb) ₂ Si ₈ O ₂₆ (OH) ₄ F; the Fe-dominant analogue of zircophyllite
UM2003-34-SiO:CaFFeMnNaNbTiZr	Mineral. Mag. 67, 749		(Na,Ca) ₂ (Fe ²⁺ ,Mn)(Zr,Ti)Si ₂ O ₇ (O,OH,F); appears to be the Fe ²⁺ -dominant analogue of lävenite
UM2003-35-SiO:CaFHKMnNa	*Dokl. Chem. 391, 177	Am. Mineral. 89, 470	Ca _{4.5} Mn _{0.45} Fe _{0.05} Na ₃ K ₃ Si ₁₂ O ₃₀ F _{2.8} (OH)·1.2H ₂ O; later described under the name fluorcanasite: Zap. Ross. Mineral. Ob. 138 (2) (2009), 52; transferred to Invalid list
UM2003-36-SiO:CaNa	Am. Mineral. 88, 1605		Incommensurate interlayering of kosmochlor- and diopside-rich slabs
UM2003-37-SiO:HMnSbZn	Can. Mineral. 41, 201		~(Mn,Zn) ₁₀ Sb ₂ Si ₃ O ₃₀ ·9H ₂ O
UM2003-38-SiO:AlFeHMgMnTi	Mitt. Öster. Mineral. Ges. 148, 194		(Mg,Fe,Ti,Mn) ₆ (Si,Al) ₃ O ₈ (OH) ₈ ; probably related to carlosturanite
UM2003-39-SiO:CaClFeHHfNaNbSrTaTiZr	Cryst. Reports 48, 216	Cryst. Reports 52, 47	Na ₁₂ (Na,K,Mn,Sr) ₂ Cas(Ca,Mn)(Zr,Hf) ₃ (Fe,□,Ta) ₃ (Si,Nb,W)(Si,Al,Ti)Si ₂₄ O ₇₂ (OH,O) _{3.5} Cl·1.2H ₂ O; a eudialyte group mineral with Ta dominant in one of the M sites
UM2003-40-As:NiPd	Geol. Ore Deposits 45, 329		Ni ₆ Pd ₂ As ₃ ; Table 5, No. 3
UM2003-41-As:PdSb	Geol. Ore Deposits 45, 329		Pd ₃ (As,Sb) ₂ ; Table 5, No. 9
UM2003-42-S:AgBiCu	Can. Mineral. 41, 441	Can. Mineral. 50, 313	Cu _{7.94} (Ag _{1.91} Pb _{0.21} Bi _{13.76})S _{26.17} ; an unnamed member of the the cuprobismutite homologous series
UM2003-43-S:CuFePdPt	Geol. Ore Deposits 45, 329		(Cu,Pt,Fe,Pd) ₂ S; Table 3, Nos.11-13
UM2003-44-S:CuPdPt	Geol. Ore Deposits 45, 329		(Cu,Pt,Pd) ₃ S; Table 3, Nos. 14-15
UM2004-01-As:FeIrPtSSb	Geol. Geofiz. 45, 1128		(Pt,Ir,Fe)(As,Sb,S); perhaps a compositional variant of UM2004-02-As:FePtSb
UM2004-02-As:FePtSb	Geol. Geofiz. 45, 1128		(Pt,Fe)(As,Sb)
UM2004-03-AsO:HU	Erzgräber 18, 24	Am. Mineral. 90, 1232	(UO ₂)H(AsO ₃)·H ₂ O. Same as UM2003-03-E:AgAuCuZn; transferred to Invalid list
UM2004-04-AsTe:Pd	Mineral. Petrol. 82, 137		Pd ₅ AsTe; "Un.4"
UM2004-05-Bi:Pd	Can. Mineral. 42, 499		Pd ₃ Bi; similarities to UM1981-02-Bi:AsPbPd
UM2004-06-E:AgCuHgPdTe	Can. Mineral. 42, 563		Pd _{1.06} (Cu _{0.40} Hg _{0.34} Te _{0.11} Ag _{0.09}) _{20.94} ; some similarities to polarite
UM2004-07-E:AgHg	Can. Mineral. 42, 1745		Ag ₂ Hg; anal. #8
UM2004-08-E:AuCuPd	Can. Mineral. 42, 563		Cu ₂ PdAu
UM2004-09-E:CuFeNiPt	Dokl. Earth Sci. 396 (4), 508		(Cu,Ni,Fe) ₃ Pt; Table 1, anal. 22; appears to be the Cu-analogue of UM1986-12-E:CuFeNiPt
UM2004-10-E:CuNiPt	Dokl. Earth Sci. 396 (4), 508		Pt(Cu,Ni) ₄ ; Table 1, anal. 19
UM2004-11-E:CuPdPt	Dokl. Earth Sci. 396 (4), 508		(Pd,Pt)Cu ₃ ; Table 1, anal. 17. Apparently equivalent to nielsenite (Can. Mineral. 46, 709); transferred to Invalid list
UM2004-12-E:CuPdPt	Dokl. Earth Sci. 396 (4), 508		(Pd,Pt)Cu ₄ ; Table 1, anal. 15 & 16
UM2004-13-E:CuPdPt	Dokl. Earth Sci. 396 (4), 508		(Pt,Pd)Cu ₆ ; Table 1, anal. 20
UM2004-14-E:CuPdPt	Dokl. Earth Sci. 396 (4), 508		(Pt,Pd) ₂ Cu ₉ ; Table 1, anal. 21 & 23
UM2004-15-E:CuPdTe	Can. Mineral. 42, 563		Pd(Cu,Te); possibly the same mineral as UM1975-//E:CuFePdPt
UM2004-16-E:FePd	Can. Mineral. 42, 563		Pd ₃ Fe
UM2004-17-I:Rh	Dokl. Earth Sci. 395A, 448	Am. Mineral. 90, 521	RhI ₃ ; a Lunar mineral
UM2004-18-O:AlCaGdThTiZr	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	CaGd ₃ ThAlTi ₃ Zr ₃ O ₂₁ ; a Lunar mineral
UM2004-19-O:AlCeGdZr	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	(Gd,Ce) ₄ Zr ₄ Al ₂ O ₁₇ ; a Lunar mineral
UM2004-20-O:AlGdLaThTiZr	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	(Gd,Th,La) ₃ ThAl ₃ Ti ₃ Zr ₂ O ₂₅ ; a Lunar mineral
UM2004-21-O:CaFeGdZr	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	Ca ₂ GdFe ₅ ZrO ₁₅ ; a Lunar mineral
UM2004-22-O:CuFePdPt	Can. Mineral. 42, 325		~(Pd,Pt) ₃ CuFe ₄ O ₁₁
UM2004-23-O:CuFePdPt	Can. Mineral. 42, 325		~(Pd,Pt) ₄ Cu ₂ Fe ₂ O ₉
UM2004-24-O:CuPd	Can. Mineral. 42, 325		~PdCu ₂ O ₃
UM2004-25-O:FeHPt	Can. Mineral. 42, 325		~PtFe ₃ O ₅ (OH)·7H ₂ O
UM2004-26-O:FeMnTi	Neues Jb. Mineral. Mh. (2004), 97		(Mn ³⁺ ,Fe ³⁺) ₂ Ti ₃ O ₉ ; alteration product of pyrophanite and Mn-analogue of pseudourilite
UM2004-27-O:GdTl	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	Gd ₂ Tl ₄ O ₁₁ ; a Lunar mineral
UM2004-28-O:GdTiZr	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	Gd ₂ ZrTiO ₇

UM2004-29-OH:FePt	Can. Mineral. 42, 325		~PtFe ₄ O(OH) ₁₂
UM2004-30-PO:BeCaFeHMg	Dokl. Chem. 398, 191		Ca ₂ Be ₄ (Fe,Mg) ₅ (PO ₄) ₆ (OH) ₄ •6H ₂ O; a Mg-rich triclinic polymorph of greifensteinite
UM2004-31-S:AgAuCuTe	Neues Jb. Mineral. Abh. 179, 295	Am. Mineral. 89, 1578	(Ag,AuCu) ₅ Te ₂ S ₃
UM2004-32-S:AgCuFePdPtSnTe	Can. Mineral. 42, 439		(Pd,Pt) ₅ (Ag,Cu,Fe) ₄ SnTe ₂ S ₂ ; the Ag-analogue of oulankaite
UM2004-33-S:AgCuHgSe	Can. Mineral. 42, 1745		~(Ag,Cu) ₈ Hg ₃ (S,Se) ₇ ; anal. #9
UM2004-34-S:AgCuTe	Neues Jb. Mineral. Abh. 179, 295	Am. Mineral. 89, 1578	(Ag,Cu) ₁₂ Te ₃ S ₂
UM2004-35-S:AsCuFePdPtSb	Geol. Geofiz. 45, 1128		Fe(Pd,Pt) ₃ (S,Sb,As) ₃
UM2004-36-S:AsFeOsPtRh	Geol. Geofiz. 45, 1128		(Rh,Pt,Os,Fe) ₂ (S,As) ₃ ; conceivably a boweite compositional variant
UM2004-37-S:Au	Dokl. Earth Sci. 395A, 448	Am. Mineral. 90, 521	AuS; a Lunar mineral, known synthetically
UM2004-38-S:CoCuFeNiPtRh	Can. Mineral. 42, 423		~(Pt _{1.00} Cu _{0.90} Rh _{0.46} Co _{0.28} Fe _{0.19} Ni _{0.15} Ir _{0.02}) _{22.96} S ₄
UM2004-39-S:CoCuFePtRh	Can. Mineral. 42, 423		~(Fe _{0.55} Pt _{0.11} Cu _{0.09} Co _{0.05} Rh _{0.04} Ni _{0.02}) ₅
UM2004-40-S:CuFeIrPbPdRh	Can. Mineral. 42, 499	Am. Mineral. 90, 274	(Cu,Fe,Pb)(Rh,Ir,Pd) ₂ S ₄
UM2004-41-S:CuFeIrPbPt	Geol. Geofiz. 45, 1128		Pb(Cu,Fe) ₃ (Pt,Ir) ₃ S ₁₆ ; the Pt-dominant analogue of inaglyite
UM2004-42-S:CuFePdPtRh	Geol. Geofiz. 45, 1128		(Cu,Fe,Pt,Rh,Pd) _{1+x} S ₃ ; Cu-dominant with very variable metal proportions
UM2004-43-S:CuIrOs	Ann. Naturhist. Mus. Wien 105A, 1		(Os,Ir) ₂ CuS
UM2004-44-SO:AlHNiZn	New Data on Minerals 39, 32		(Zn,Ni)Al ₄ (SO ₄)(OH) ₁₂ •3H ₂ O; the Zn-analogue of nickelalumite
UM2004-45-Se:AgHgPd	Can. Mineral. 42, 1745		~(Ag,Cu) ₆ Hg ₂ Pd ₂ Se ₃ ; anal. #10
UM2004-46-Se:PdS	Dokl. Earth Sci. 396 (4), 546		(Pd _{0.96} Pt _{0.01} Cu _{0.07})(Se _{0.51} So _{0.45}); perhaps related to palladseite
UM2004-47-SiO:AlCaNa	Earth Planet Sci. Lett. 219, 1	Am. Mineral. 89, 1833	(Na,Ca)(Si,Al) ₆ O ₁₁ ; a Martian mineral
UM2004-48-SiO:AlCaNaS	Cryst. Reports 49, 635	Am. Mineral. 90, 1468	(Na,Ca) ₃ (Si ₆ Al ₆)O ₂₄ (SO ₄) _{1.7} Cl _{1.3} ; a 12-layer polymorph of tounkite (cancrinite group)
UM2004-49-SiO:AlCSFHKL	Can. Mineral. 42, 883	Am. Mineral. 90, 274	(Cs,K)(Al,Li) _{2.6} (Si,Al) ₄ O ₁₀ (F,OH) ₂ ; a Cs-dominant analogue of polyolithionite
UM2004-50-SiO:AlFeGd	Dokl. Earth Sci. 394, 39	Am. Mineral. 89, 1578	GdFe ²⁺ AlSiO ₆ ; a Lunar mineral
UM2004-51-SiO:CaClFFeHNbTi	Dokl. Akad. Nauk 399, 791	Am. Mineral. 90, 1466	Na ₁₆ Ca ₆ (Fe,Mn) ₃ Zr ₃ (Ti,Nb) ₅ Si ₂₆ O ₇₂ FClo ₅ •nH ₂ O
UM2004-52-Te:AsPd	Mineral. Petrol. 82, 137		Pd ₇ (As,Te) ₂ or perhaps Pd ₁₀ (As,Te) ₃ ; "Un.1 & Un.2"
UM2004-53-Te:AsPd	Mineral. Petrol. 82, 137		Pd ₉ (Te,As) ₄ or perhaps Pd ₇ (Te,As) ₃ ; "Un.3"
UM2004-54-Te:NiPdSb	Can. Mineral. 42, 667		(Pd,Ni) ₂ (Te,Sb) ₃
UM2004-55-Te:PdRh	Can. Mineral. 42, 563		(Pd,Rh) ₃ Te ₂
UM2004-56-OS:BiCuPb	Aufschluss 55, 332		PbCu ₄ Bi ₄ S ₂ (O,OH,H ₂ O) ₁₆
UM2005-01-As:PbPdSnTe	Can. Mineral. 43, 1663		Pd ₅ (As,Te,Sn,Tb) ₂ ; similarities to UM1996-02-As:PtTe & UM1975-05-As:Pd
UM2005-02-AsO:AlHMgPScSi	Micro (2005), 81		(Sc,Al,Mg)(As,P,Si) ₄ O ₄ •2H ₂ O; a Sc-analogue of metavariscite
UM2005-03-AsSiO:CaCoHNI	*Erzgräber 19, 51	Am. Mineral. 91, 1202	(Co,Ni,Ca,Mg) ₂ SiAs ₂ O ₉ •2.5H ₂ O
UM2005-04-Bi:Bi:Pd	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	Close to Pd ₅ Bi ₃ ; given the working name "bismuthpalladinite"
UM2005-05-Ge:Pd	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	Close to Pd ₂ Ge
UM2005-06-O:AsHPdPtSbTe	Mineral. Mag. 69, 981		~(Pd,Sb,Pt,As,Bi,Te,Fe) ₄ O•nH ₂ O; variable composition; probably inhomogeneous
UM2005-07-O:AsHHgPdSbTe	Mineral. Mag. 69, 981		~(Pd,Sb,Hg,As,Te,Fe) ₂ O•nH ₂ O; variable composition; probably inhomogeneous
UM2005-08-O:AsHHgPdSbTe	Mineral. Mag. 69, 981		~(Pd,Hg,Sb,As,Bi,Te) ₃ O•nH ₂ O; variable composition; probably inhomogeneous
UM2005-09-O:AsHgPdSbTe	Mineral. Mag. 69, 981		~(Pd,Sb,As,Te,Hg) ₃ O; variable composition; probably inhomogeneous
UM2005-10-O:AsPdSbTe	Mineral. Mag. 69, 981		~(Pd,Sb,As,Te) ₆ O; variable composition; probably inhomogeneous
UM2005-11-O:AsPdSbTe	Mineral. Mag. 69, 981		~(Pd,Sb,As,Te) ₅ O; variable composition; probably inhomogeneous
UM2005-12-O:AsPdSbTe	Mineral. Mag. 69, 981		~(Pd,Sb,As,Te) ₄ O; variable composition; probably inhomogeneous
UM2005-13-O:BiHPdTe	Mineral. Mag. 69, 981		~(Pd,Te,Bi) ₆ O•nH ₂ O; variable composition; probably inhomogeneous
UM2005-14-O:BiHPdTe	Mineral. Mag. 69, 981		~(Pd,Te,Bi) ₅ O•nH ₂ O; variable composition; probably inhomogeneous
UM2005-15-O:BaFe	Eur. J. Mineral. 17, 623		BaFe ³⁺ ₁₂ O ₁₉ ; later described under the name barioferrite: Zapiski Ross. Mineral. Obshch. 139 (2010) No. 3, 22; transferred to Invalid list
UM2005-16-O:CaFe	Eur. J. Mineral. 17, 623		CaFe ³⁺ ₄ O ₇
UM2005-17-O:CuFePdPt	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	~(Pd,Pt) ₂ (Cu,Fe) ₂ O ₃ ; (Table 11, anal. #1)
UM2005-18-O:FeIrRh	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	(Rh,Ir,Fe) ₄ O ₅ – an approximate formula; (Table 11, anal. #10)
UM2005-19-O:IrOs	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	(Os,Ir,Fe)(OH,O) ₃ ; (Table 11, anal. #9)
UM2005-20-OH:CuIrOsRh	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	(Rh,Cu,Ir,Os)(OH) ₂ ; (Table 12, anal. #5)
UM2005-21-OH:FeIrPtRh	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	(Ir,Fe,Rh,Pt)(OH,O) ₃ ; (Table 12, anal. #1 & #2)
UM2005-22-OH:IrPtRh	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	(Rh,Ir,Pt)(OH) ₃ ; (Table 12, anal. #3)
UM2005-23-S:AsPt	Can. Mineral. 43, 1687		Pt ₃ As ₂ S ₃ or Pt(S,As) _{2-x} ; some similarities to platarsite
UM2005-24-S:FeIrNi	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	(Fe,Ni,Ir) ₃ ; isotropic; cf: UM1981-16-S:CuFeIrNiRh
UM2005-25-Sb:BiPd	Can. Mineral. 43, 637	Am. Mineral. 90, 1947	Close to Pd ₉ (Sb,Bi) ₂ ; (Table 8, anal. #8 & #9)
UM2005-26-Se:AgBiCu	Can. Mineral. 43, 899	Am. Mineral. 91, 224	(Cu,Ag) ₂ Bi ₂ Se ₄ ; perhaps the Cu-analogue of bohndanowiczite or Se-analogue of emplectite
UM2005-27-SiO:AlCa	Can. Mineral. 43, 857	Am. Mineral. 91, 220	Ca(Al,Fe,Mg)[AlSi]O ₆ ; clinopyroxene with Ca-tschermak's molecule dominant
UM2005-28-SiO:AlCaFeHMn	Contr. Mineral. Petrol. 150, 212		~Ca(Mn,Fe)Si ₂ O ₆ •2H ₂ O
UM2005-29-SiO:CCaClFeHKNaNbZr	Dokl. Akad. Nauk 400, 640	Am. Mineral. 90, 1467	(Na,Ce) ₉ (Ca,Na,K) ₁₂ Zr ₃ Fe ₂ (Nb,Si) ₂ Si ₂₄ O ₇₂ (CO ₃)Cl _{0.5} •0.5H ₂ O. Later named mogodivite; transferred to Invalid list
UM2005-30-SiO:GClCaHKMnNaNbZr	Dokl. Akad. Nauk 403, 636	Dokl. Chem. 403, 148	Na ₁₂ (K,Sr,Ce) ₃ Ca ₆ Mn ₃ Zr ₃ NbSi(Si ₃ O ₉) ₂ (Si ₉ O ₂₇)(2(O,OH) ₄ (H ₂ O,CO ₃ ,Cl) ₂); a K-analogue of kentbrooksite; later named andrianovite: Zap. Ross. Mineral. Ob. 137 (2) (2008), 43-52. Transferred to Invalid list.
UM2005-31-SiO:CuH	*Erzgräber 19, 1	Am. Mineral. 91, 710	Cu ₁₁ SiO ₄ (OH) ₁₈ •9H ₂ O
UM2005-32-SiO:CaH	Dokl. Akad. Nauk 405A, 1347		Ca ₄ (Si ₂ O ₆)(CO ₃)(OH) ₂ ; a dimorph of fukalite. Coding changed from the original entry
UM2005-33-Te:AgBiPd	Can. Mineral. 43, 1355		AgPd ₂ (Te,Bi) ₅ ; designated "Un1". Coding changed from the original entry
UM2005-34-Te:PdPt	Mineral. Mag. 69, 981		(Pd,Pt) ₉ Te. Coding changed from the original entry
UM2005-35-VO:CaFePSiTh	Can. Mineral. 43, 1663		(Th,Ca,Fe)(V,Si,P)O ₄ ; perhaps related to huttonite and monazite group. Coding changed from the original entry

UM2005-36-SiO:AIBaCaCIFeHKMnNaREESrTiZr	Eur. J. Mineral. 17, 875	Cryst. Reports 52, 47	[(H ₃ O) _{9.32} Na _{5.88} K _{0.53} Ba _{0.36} Sr _{0.15}][Ca _{5.22} Sr _{0.49} Ce _{0.16} Mn _{0.13}][Zr _{2.42} Ti _{0.54} Hf _{0.02} Nb _{0.02}][Na _{1.48} (Fe _{0.10} (H ₂ O) _{0.1})] [Si _{1.0} (OH) _{1.0}][Si _{0.44} Al _{0.06} (OH) _{0.50}][Si ₃ O ₉] ₂ [Si ₉ O _{26.25} (OH) _{0.75}] ₂ Cl _{1.0} •1 H ₂ O; described as a decationized and hydrated eudialyte group mineral—"Hydrated eudialyte-1" (sample no. 31 in secondary reference)
UM2005-37-SiO:AIBaCaCIFeHKMnNaREESrTiZr	Eur. J. Mineral. 17, 875	Cryst. Reports 52, 47	[(H ₃ O) _{9.26} Na _{2.12} K _{1.20} Ba _{0.46} Sr _{0.48}][Ca _{5.76} Ce _{0.24}][Zr _{2.92} Ti _{0.08}][Na _{0.62} (Fe _{0.23} Mn _{0.11} (H ₂ O) _{0.34})] [(Si _{0.57} (Si _{0.21} Al _{0.19} Nb _{0.03})(OH) _{1.44})] [(Si _{0.45} (Ti _{0.21})(Si _{0.34})(O,OH) _{0.34} (OH) _{1.08}][Si _{0.19} (OH) _{0.57}][Si ₃ O ₉] ₂ [Si ₉ O ₂₇] ₂ Cl _{1.05} •0.8H ₂ O; described as a decationized and hydrated eudialyte group mineral—"Hydrated eudialyte-2" (sample no. 32 in secondary reference)
UM2005-38-SiO:AIBaCaCIFeHKMnNaNbREESrTiYZr	Eur. J. Mineral. 17, 875	Cryst. Reports 52, 47	[(H ₃ O) _{10.85} Na _{3.3} Sr _{0.48} K _{0.21} Ce _{0.2} Y _{0.1} Ba _{0.04}][Ca _{2.1} Na _{0.9}][Ca _{2.4} Na _{0.3} Mn _{0.3}][Zr _{2.97} Hf _{0.03}][Fe _{1.32} Mn _{0.6} O _{1.44} (H ₂ O) _{1.80}][Ti _{0.22} Nb _{0.02}](Si _{0.23})(Si _{0.19})(OH) _{0.42}][(Si _{0.44} (Nb _{0.1} Al _{0.1} (Nb _{0.04})(OH) _{0.44})] [Si ₃ O ₉] ₂ [Si ₉ O _{26.01} (OH) _{0.99}] ₂ Cl _{1.0} •1.19H ₂ O; described as a decationized and hydrated eudialyte group mineral—"Hydrated eudialyte-3" (sample no. 33 in secondary reference)
UM2005-39-SiO:AIBaCaCIFeHKMnNaNbREESrTiYZr	Eur. J. Mineral. 17, 875	Cryst. Reports 52, 47	[(H ₃ O) _{11.61} Na _{3.0} Sr _{0.63} Ce _{0.22} K _{0.2} Y _{0.05} Ba _{0.03}][Ca _{2.25} Na _{0.75}][Ca _{2.4} Mn _{0.6}][Zr _{2.98} Hf _{0.02}][Fe ³⁺ _{0.66} Mn _{0.3} Mn _{0.3} (H ₂ O) _{1.43} (OH) _{0.79}][Ti _{0.16} Al _{0.07} Mg _{0.03}](Si _{0.17})(OH) _{0.17} [(Si _{0.50} (Si _{0.31})(Nb _{0.18} Ta _{0.01})(OH) _{0.81})] [Si ₃ O ₉] ₂ [Si ₉ O _{26.14} (OH) _{0.86}] ₂ Cl _{1.1} •0.63H ₂ O; described as a decationized and hydrated eudialyte group mineral—"Hydrated eudialyte-4" (sample no. 34 in secondary reference)
UM2005-40-SiO:AICaCIFeHKMnNaNbREESrTiYZr	Eur. J. Mineral. 17, 875	Cryst. Reports 52, 47	[(H ₃ O) _{5.58} Na _{5.25} Ce _{0.63} K _{0.3} Y _{0.19} Sr _{0.05}][Ca ₃][Ca _{1.71} Mn _{1.29}][Zr _{2.96} Hf _{0.04}][(Fe ³⁺ _{1.0} Fe ²⁺ _{0.35})(Fe ³⁺ _{0.57} Zr _{0.32} Mn _{0.22})(O,OH) _{1.77} (H ₂ O) _{1.34}][Zr _{0.18}](Si _{0.5})(OH) _{0.5}][(Nb _{0.41})(Al _{0.2} Ti _{0.05})(Si _{0.18})(OH) _{0.93}][Si ₃ O ₉] ₂ [Si ₉ O _{26.28} (OH) _{0.72}] ₂ Cl _{0.2} •1.45H ₂ O; described as a decationized and hydrated eudialyte group mineral—"Hydrated eudialyte-5" (sample no. 35 in secondary reference)
UM2005-41-SiO:BaCaFeHKMgMnNaNbREESrTiYZr	Eur. J. Mineral. 17, 875	Cryst. Reports 52, 47	[(H ₃ O) _{8.53} Na _{3.51} Sr _{0.55} Ce _{0.45} Y _{0.3} Ba _{0.15} K _{0.06}][Ca _{2.25} Sr _{0.45} Na _{0.3}][Ca _{2.4} Mn _{0.6}][Zr _{2.97} Hf _{0.03}][(Mn _{0.64} Fe _{0.38} O _{0.3} (H ₂ O) _{0.72}][(Si _{0.49} (Si _{0.41})(Nb _{0.1})(OH) _{0.9})] [(Si _{0.29} (Si _{0.2})(Ti _{0.1} Mg _{0.07} Nb _{0.02})(OH) _{1.06}][Si ₃ O ₉] ₂ [Si ₉ O _{26.52} (OH) _{0.48}] ₂ •2.12H ₂ O; described as a decationized and hydrated eudialyte group mineral—"Hydrated eudialyte-6" (sample no. 36 in secondary reference)
UM2006-01-COPO:FNa	Mineral. Mag. 70, 211		(Na, _□) ₅ PO ₄ (CO ₃ ,F,Cl); an ephemeral mineral
UM2006-02-E:HgPdPt	Can. Mineral 44, 385		(Pt,Hg) ₂ Pd
UM2006-03-O:BeTiV	Can. Mineral 44, 1147		(Be, _□)(V,Ti) ₃ O ₆ ; distinct similarities to kyzylkumite
UM2006-04-O:CrHMnPb	Australian J. Mineral. 12, 59		Pb ₂ CrMn ₂ (O,OH,H ₂ O) ₈ ; later described under the name reynoldsite: Am. Mineral 97 (2012), 1187; transferred to Invalid list
UM2006-05-O:CaFeKMnNaREESrTiZr	Eur. J. Mineral. 18, 493	Am. Mineral. 92, 705	(Sr,Na,K,REE)(Ca,Zr,Mn)(Ti,Fe) ₁₈ Fe ₂ O ₃₈ ; a member of the crichtonite-group
UM2006-06-O:CaFeKMnNaREESrTiZr	Eur. J. Mineral. 18, 493	Am. Mineral. 92, 705	(Sr,Na,K,REE)(Zr,Ca,Mn)(Ti,Fe) ₁₈ Fe ₂ O ₃₈ ; a member of the crichtonite-group
UM2006-07-O:CaFeKMnNaREESrTiZr	Eur. J. Mineral. 18, 493	Am. Mineral. 92, 705	(Na,Sr,K,REE)(Ca,Zr,Mn)(Ti,Fe) ₁₈ Fe ₂ O ₃₈ ; a member of the crichtonite-group
UM2006-08-O:CaFeKMnNaREESrTiZr	Eur. J. Mineral. 18, 493	Am. Mineral. 92, 705	(Na,Sr,K,REE)(Zr,Ca,Mn)(Ti,Fe) ₁₈ Fe ₂ O ₃₈ ; a member of the crichtonite-group
UM2006-09-O:CaFeMnREESrTiZr	Eur. J. Mineral. 18, 493	Am. Mineral. 92, 705	(REE,Sr)(Ca,Mn,Zr)(Ti,Fe) ₁₈ Fe ₂ O ₃₈ ; a member of the crichtonite-group
UM2006-10-S:AsrOs	Mineral. Petrol.87, 1		(Ir,Os) ₃ As _{0.85} S; Table 3, anal. 5-6
UM2006-11-S:CuFeGeZn	Can. Mineral. 44, 1481		Cu ₈ Fe ₂ ZnGe ₂ S ₁₂ ; appears to be the germanium analogue of stannoidite
UM2006-12-Sb:Pd	Mineral. Petrol.87, 1		Pd ₂₀ Sb ₇ ; compositionally similar to stibiopalladinite but with distinctly different optical characteristics
UM2006-13-SiO:AIBFFeHNa	Eur. J. Mineral. 18, 583		NaFe ²⁺ ₃ Al ₆ Si ₆ O ₁₈ (BO ₃) ₃ (OH) ₃ F; although not yet formally IMA-approved, the name fluor-schorl has been used; transferred to Invalid list
UM2006-14-SiO:AICaHMnREE	Eur. J. Mineral. 18, 569		CaREEAlMn ²⁺ Si ₄ Si ₂ O ₇ (OH); unnamed member of allanite subgroup of the epidote group
UM2006-15-SiO:AIFHMgMnREE	Eur. J. Mineral. 18, 569		Mn ²⁺ REE MgAlMn ²⁺ Si ₄ Si ₂ O ₇ F(OH); unnamed member of dollaseite subgroup of the epidote group
UM2006-16-SiO:BaFeHKMgMnNaNbTi	Dokl. Earth Sci. 410, 1062		K _{3.58} Na _{2.06} Ba _{1.65} (H ₂ O) _{1.58} (Mn _{0.42} Mg _{0.20} Fe _{0.16})[Ti _{6.75} Nb _{0.65} ((OH) _{0.9} O _{0.1}) ₈ (Si ₄ O ₁₂) ₄ •11.5H ₂ O; labuntsovite group
UM2006-17-SiO:CaClFFeHMnNaZr	Cryst. Reports 51 (2), 205		Na ₁₅ (Ca ₃ Mn ₃)Zr ₃ (Fe,Zr) ₃ Si ₃ [Si ₃ O ₉] ₂ [Si ₉ O ₂₇] ₂ O ₂ (OH,F,Cl) ₃ •2H ₂ O; a eudialyte group mineral
UM2006-18-SiO:CaClFFeHMnNaZr	Dokl. Akad. Nauk 409, 807	Am. Mineral. 92, 1540	Na ₁₅ Ca ₃ (Mn,Fe) ₃ Zr ₃ (Zr,Na) ₃ (Si,Nb)(S,Ti,Si)(Si ₃ O ₉) ₂ (Si ₉ O ₂₇) ₂ (O,OH) ₅ (Cl,F,H ₂ O); a eudialyte group mineral with Zr dominant in two sites
UM2006-19-VO:AsHMn	Can. Mineral. 44, 229		Mn ₇ (VO ₄ ,AsO ₄) ₂ (OH) ₈ ; later described under the name argandite: Am. Mineral. 96, 1894; transferred to Invalid list
UM2006-20-VO:AsHMnSi	Can. Mineral. 44, 229		(V,As,Si) ₄ Si ₂ (Mn,Mg) ₂₄ O ₁₉ (OH) ₃₈
UM2006-21-VO:AsHMnSi	Can. Mineral. 44, 229		(V,As,Si) ₄ Si ₂ (Mn,Mg) ₂₂ O ₂₅ (OH) ₂₂
UM2006-22-SiO:V	Mineral. Petrol. 87, 171		(V ³⁺ SiO ₃ (OH)); the presence of hydroxyl is based only on consistently low analytical totals
UM2006-23-PO:AIBiCaFeH	J. Czech Geol. Soc. 51 (1-2), 159		(Ca,Bi)(Fe,Al) ₃ (PO ₄)(PO ₃ OH)(OH) ₆ ; "UNK11"; the Ca-analogue of zairite or the Fe-analogue crandallite.
UM2006-24-PO:AICuFeH	J. Czech Geol. Soc. 51 (1-2), 159		(Fe,Cu, _□) ₃ (Al,Fe) ₃ (PO ₄) ₃ (OH) ₅ •4H ₂ O; "UNK8"; compositional similarities to turquoise or perhaps a Cu-rich variety of childrenite

UM2006-25-PO:AlFeHZn	J. Czech Geol. Soc. 51 (1-2), 159	Zn(Fe,Zn,Al) ₄ (PO ₄) ₃ (OH) ₄ ; "UNK3"; compositionally similar to UM1990-30-PO:AlFeHZn; it may be an orthorhombic polymorph of zinclipscornite
UM2006-26-PO:CuFeH	J. Czech Geol. Soc. 51 (1-2), 159	(\square ,Cu)Fe ³⁺ ₆ (PO ₄) ₂ (PO ₃ OH) ₂ (OH) ₈ ·4H ₂ O; "UNK10"
UM2006-27-PO:FeHZn	J. Czech Geol. Soc. 51 (1-2), 159	ZnFe ³⁺ ₂ (PO ₄) ₂ (OH) ₂ ·4H ₂ O; "UNK7"
UM2006-28-SiO:CaHMnNaZr	Dokl. Earth Sci. 410, 1075	Na ₃ Ca ₁₂ Zr ₆ Mn ₃ (Mn,Nb,Ti) ₂ Si ₅₀ O ₁₃₂ (O,OH) ₁₂ (OH,H ₂ O,Cl) ₁₀ ; a eudialyte-group mineral with doubled c cell dimension
UM2006-29-SiOPO:AlCaFHSr	J. Czech Geol. Soc. 51 (1-2), 159	(Ca,Sr) ₃ Al ₇ (SiO ₄) ₃ (PO ₄) ₄ (F,OH) ₃ ·16.5H ₂ O; "UNK1"; later described under the name krásnoite; IMA No. 2011-040; transferred to Invalid list
UM2006-30-S:AgBiCuPbSe	Axis 2 (4), 1	Cu _{0.44} Ag _{0.78} Pb _{1.37} Bi _{2.70} (S _{5.73} Se _{0.26} Te _{0.01}); "UN1"
UM2006-31-S:AgBiCuPbSe	Axis 2 (4), 1	Cu _{0.20} Ag _{0.88} Pb _{1.06} Bi _{2.94} (S _{5.55} Se _{0.44} Te _{0.01}); "UN2"
UM2006-32-SiO:CaClFeHMnNaSTiZr	Dokl. Earth Sci. 409A, 985	Na ₁₅ [Ca ₃ (Mn,Fe)]Zr ₃ (Zr,Na) ₃ (Si,Nb) ₃ (S,Ti,Si) ₃ (Si ₃ O ₉) ₂ (Si ₉ O ₂₇) ₂ (O,OH) ₅ (Cl,F,H ₂ O); described as a hyperzirconium sulphate analogue of eudialyte
UM2006-33-Te:AgBiNiPdPt	Mineral. Petrol. 86, 109	Ag _{0.40} Pd _{0.37} Ni _{0.11} Cu _{0.05} Pt _{0.04} Fe _{0.03} (Te _{0.87} Bi _{0.13})
UM2006-34-N:Ga	Chinese Sci. Bull. 57, 1101	GaN; cell and qualitative compositional data
UM2006-35-PO:HPbREEY	J. Geosci. 54, 15	Pb(REE) ₃ (PO ₄) ₃ (OH) ₂ ·1-2H ₂ O; Ce is the dominant REE
UM2007-01-As:CuPd	Acta Petrol. Mineral. 26, 418	(Pd,Cu) ₇ As ₃ ; Table 5, sample 70-11-8
UM2007-02-As:NiPd	Acta Petrol. Mineral. 26, 418	(Pd,Ni) ₇ As ₄ ; Table 5, sample 23-181; cf. UM1990-03-As:NiPdSb
UM2007-03-As:NiRh	Acta Petrol. Mineral. 26, 418	Rh ₃ Ni _{5.57} As ₃ ; Table 7, sample 89-35-1; similarities to UM1983-03-As:NiRh (RhNiAs)
UM2007-04-As:Pd	Acta Petrol. Mineral. 26, 418	Pd ₄ As; Table 5, sample 70-2-8
UM2007-05-As:PtTe	Acta Petrol. Mineral. 26, 418	Pd ₇ (As,Te) ₂ ; similarities to UM2004-52-Te:AsPd; Table 6, sample 70-2-9
UM2007-06-As:Rh	Acta Petrol. Mineral. 26, 418	Rh ₇ As ₃ ; a typographical error of Ru for Rh appears in the source reference (Table 5, sample 69-7)
UM2007-07-AsO:BaFeHK	Can. Mineral. 45, 485	(Ba,K)Fe ³⁺ ₆ (AsO ₄) ₅ (O,OH) ₃ ·3H ₂ O; published formula is incorrect
UM2007-08-AsO:FeHSn	Can. Mineral. 45, 485	Sn ₉ Fe ₈ (AsO ₄) ₄ O ₂₄ ·9H ₂ O; published formula is incorrect
UM2007-09-Bi:PdPtSb	Neues. Jb. Mineral. Abh. 183 (2), 173	(Pd,Pt)(Bi,Sb); analytical formula reported was incorrect; Table 4, anal. 96
UM2007-10-E:CuPtSn	Neues. Jb. Mineral. Abh. 183 (2), 173	Pt ₅ Cu ₃ Sn ₂ ; Table 2, anal. 58; compositionally distinct from tatyanaite
UM2007-11-E:FeIrNiOsRu	Can. Mineral. 45, 631	(Ru,Ir,Os) ₃ (Fe,Ni) ₂ ; Table 4, no. 0325137
UM2007-12-E:FeIrNiOsRu	Can. Mineral. 45, 631	(Ru,Ir,Os)(Fe,Ni); Table 4, no. 0325135 & 0325138
UM2007-13-E:FeIrNiOsRu	Can. Mineral. 45, 631	(Ru,Ir,Os) ₃ (Fe,Ni); Table 4, no. 0325131
UM2007-14-E:FeIrNiOsRu	Can. Mineral. 45, 355	(Os,Ir,Ru) ₄ (Ni,Fe) ₇ or perhaps (Os,Ir,Ru) ₃ (Ni,Fe) ₂ ; "UN#3"
UM2007-15-E:FeIrNiPt	Can. Mineral. 45, 631	(Fe,Ni) ₂ (Pt,Ir); Table 4, no. 98c-121
UM2007-16-N:Ti	Acta Petrol. Mineral. 26, 418	Ti ₇ N ₃ ; Table 9, sample 57-7-1-2
UM2007-17-PO:CaClCuHNa	Eur. J. Mineral. 19, 75	NaCaCu ₅ (PO ₄) ₄ Cl·nH ₂ O (n~4.5); a slightly different hydrate or polymorph/polytype closely related to sampleite
UM2007-18-PO:CaClMn	Can. Mineral. 45, 901	Mn ₃ Ca ₂ (PO ₄) ₃ (Cl,F,OH); the Mn-dominant analogue of apatite
UM2007-19-PO:CaFeHMg	Can. Mineral. 45, 293	Ca(Fe ²⁺ ,Mn ²⁺)Mg ₂ Fe ³⁺ ₂ [PO ₄] ₄ [OH] ₂ ·8H ₂ O
UM2007-20-S:AgBiCu	Izv. Akad. Nauk Kaz., Ser. Geol. (2007) (1),	(Cu,Ag) ₄ BiS ₃
UM2007-21-S:AsIrRh	Acta Petrol. Mineral. 26, 418	(Rh,Ir) ₃ (S,As) ₇ ; Table 8, sample 76-12-2-22
UM2007-22-S:AsRu	Acta Petrol. Mineral. 26, 418	Ru ₃ (S,As) ₇ ; Table 10, sample 71-2-14
UM2007-23-S:BiPbTe	Can. Mineral. 45, 417	Pb ₃ Bi ₄ Te ₄ S ₇ ; Table 4, sample 99/89B
UM2007-24-S:BiPbTe	Can. Mineral. 45, 417	Pb ₅ Bi ₄ Te ₄ S ₇ ; Table 4, sample LA 12/B
UM2007-25-S:BiPbTe	Can. Mineral. 45, 417	Pb ₃ Bi ₂ Te ₂ S ₄ ; Table 4, sample LA 12/C
UM2007-26-S:CuFeIrNiPtRh	Acta Petrol. Mineral. 26, 418	(Ir,Cu,Ni,Pt,Rh,Fe) ₉ S ₁₁ ; Table 1, sample 70-1-2-5
UM2007-27-S:CuFeIrNiRh	Acta Petrol. Mineral. 26, 418	(Ni,Fe,Cu,Rh,Ir) ₁₁ S ₉ ; Table 1, sample 70-16-7; similarities to UM2002-26-S:FeNi
UM2007-28-S:CuFeIrNi	Acta Petrol. Mineral. 26, 418	(Ni,Ir,Fe,Cu) ₉ S ₉ ; Table 1, samples 96-6-2-3 & 76-3-6; similarities to UM1974-11-S:CuFeIrNi
UM2007-29-S:CuFeIrNi	Acta Petrol. Mineral. 26, 418	(Ir,Ni,Fe,Cu) ₉ S ₉ ; Table 1, sample 71-14-3-4; similarities to UM1974-11-S:CuFeIrNi
UM2007-30-S:Fe	Acta Petrol. Mineral. 26, 418	Fe ₃ S ₂ ; Table 2, sample 32-22; perhaps the Fe-analogue of heazlewoodite
UM2007-31-S:Ti	Acta Petrol. Mineral. 26, 418	Ti ₇ S ₃ ; Table 9, sample 57-6-1-3
UM2007-32-Sb:BiCuPtSn	Neues. Jb. Mineral. Abh. 183 (2), 173	(Pt,Cu) ₃ (Sb,Bi,Sn) ₄ ; Table 4, anal. 29
UM2007-33-Se:CuRhS	Acta Petrol. Mineral. 26, 418	(Rh,Cu) ₉ (Se,S) ₁₁ ; Table 9, sample 76-12-20; note Rh value omitted from table assumed by difference
UM2007-34-SeOTeO:BiH	Eur. J. Mineral. 19, 255	Bi ₃ (TeO ₆)(SeO ₃)(OH)·3H ₂ O
UM2007-35-SiO:AlCaFFeMgREE	Can. Mineral. 45, 1073	(Ce,La) ₃ CaAl ₂ (Fe ³⁺ ,Al)(Fe ²⁺ ,Mg)[Si ₂ O ₇][SiO ₄] ₃ O(OH) ₂ ; an Fe ³⁺ -Fe ²⁺ -analogue of västmanlandite-(Ce)
UM2007-36-SiO:AlCaFFeMgREE	Can. Mineral. 45, 1073	(Ce,La) ₃ CaAl ₂ (Fe ³⁺ ,Al)(Mg,Fe ²⁺)[Si ₂ O ₇][SiO ₄] ₃ O(OH) ₂ ; an Fe ³⁺ -analogue of västmanlandite-(Ce)
UM2007-37-SiO:CaFREEY	Can. Mineral. 45, 1073	(Ca,Ce) ₂ (Y,Nd,Ce) ₃ (SiO ₄ ,PO ₄) ₃ (F,OH); the fluorine analogue of britholite-(Y)
UM2007-38-SiO:ClFeHMgREE	Can. Mineral. 45, 1073	(Ce,La,Ca) ₉ (Fe,Mg)(SiO ₄) ₃ (SiO ₃ OH) ₄ (F,Cl,OH) ₃ ·nH ₂ O(?); very close to a somewhat hydrated, F-dominant cerite-(Ce) with also abnormal Cl content; designated unnamed mineral "E sample A37"
UM2007-39-SiO:ClFeHMgREE	Can. Mineral. 45, 1073	(Ce,La,Ca) ₉ Mg(SiO ₄) ₃ (SiO ₃ OH) ₄ (Cl,F,OH) ₃ ·nH ₂ O(?); very close to a somewhat hydrated, Cl-dominant cerite-(Ce) with substantial F and Mg replacing Fe; designated unnamed mineral "E sample UU318/77 M"
UM2007-40-SiO:FMgREEY	Can. Mineral. 45, 1073	(Y,Ce,Nd) ₄ MgSi ₄ O ₁₄ F ₂ ; perhaps the Mg-analogue of rowlandite-(Y); designated unnamed mineral "D"
UM2007-41-SiO:FeMgREEW	Can. Mineral. 45, 1073	(Ce,La,Nd,Ca) ₅ Mg(Fe ³⁺ ,Al) ₃ WSi ₅ O ₂₆ ; a rare W-bearing silicate designated unnamed mineral "C"
UM2007-42-Te:AsPd	Acta Petrol. Mineral. 26, 418	Pd ₇ (Te,As) ₂ ; Table 6, sample 76-12-2; similarities to UM1991-26-Te:AsPd
UM2007-43-Te:Pd	Acta Petrol. Mineral. 26, 418	Pd ₅ Te ₂ ; Table 6, sample 16-2-5; typographic error in reported Pd content

UM2007-44-SiO:CaFREEY	Can. Mineral. 45, 1073		(Ca,Ce) ₂ (Nd,Y,Ce) ₃ (SiO ₄ ,PO ₄) ₃ (F,OH); Table 5, #430644; the Nd analogue of fluorbritholite-(Ce)
UM2007-45-PO:AlHCaKNaSiTh	Zap. Ross. Mineral. Ob. 136 (1), 3	Geol. Ore Deposits 49, 758	~[X,Na,K,Ca,Mg]Th ₂ (P,Si,Al)O ₄ •3H ₂ O; metamict; only one analysis--Table 6, anal. 3
UM2007-46-SiO:CaHREETHi	Zap. Ross. Mineral. Ob. 136 (1), 3	Geol. Ore Deposits 49, 758	~(Ti,Th,REE,Ca)Si ₂ O ₄ (O,OH) ₂ •4-6H ₂ O; metamict and rather variable in composition; Table 4, anal. 4, 7, 8 & 9
UM2007-47-SiO:HKNaTh	Zap. Ross. Mineral. Ob. 136 (1), 3	Geol. Ore Deposits 49, 758	~(Na,K,□) ₄ Th ₃ [Si ₈ (O,OH) ₂₄] ₉ H ₂ O; metamict and rather variable in composition; Table 5, analyses 1-6
UM2007-48-SiO:HNaSrThTi	Zap. Ross. Mineral. Ob. 136 (1), 3	Geol. Ore Deposits 49, 758	~(Na,Sr,□) ₇ TiThSi ₈ O ₂₂ (O,OH) ₁₋₂ •6H ₂ O; metamict and rather variable in composition; Table 4, anal. 1, 5 & 6
UM2007-49-SiO:HNaSrThTi	Zap. Ross. Mineral. Ob. 136 (1), 3	Geol. Ore Deposits 49, 758	~(Na,Sr,Ba,Ca,□) ₄ TiThSi ₈ O ₂₂ (OH)•5H ₂ O; metamict and rather variable in composition; Table 4, anal. 2 and 3
UM2008-01-As:IrNi	Mineral. Petrol. 92, 31		(Ni,Ir) ₃ As; Table 8, #6 & p.44 (Ni _{2.45} Ir _{0.40} Fe _{0.11} Cu _{0.02} Os _{0.01} Ru _{0.01})As _{1.01}
UM2008-02-As:IrNi	Mineral. Petrol. 92, 31		(Ni,Ir) ₂ As; p.44, para. 2
UM2008-03-AsS:IrOs	Mineral. Petrol. 92, 31		(Ir,Os) ₅ As ₄ S ₃ ; Table 8, #17
UM2008-04-AsS:IrOsRu	Mineral. Petrol. 92, 31		(Os,Ir,Ru) ₇ AsS ₃ ; Table 8, #13
UM2008-05-BO:FHMgSi	Eur. J. Mineral. 20, 951		Mg ₂ (BO ₃) _{1-x} (SiO ₄)(OH,F) _{1-x} ; later named pertsevite-(OH); Am. Mineral. 95 (2010), 953; transferred to Invalid list
UM2008-06-Bi:AgAuTe	Dokl. Earth Sci. 421A, 919		(Au,Ag)(Bi,Te)
UM2008-07-CO:AIBCaHSSI	J. Mineral. Petrol. Sci. 103, 47		Ca ₆ (Al,Si) ₂ (CO ₃ ,SO ₄) ₂ [B(OH) ₄](OH,O) ₁₂ •26H ₂ O; the CO ₃ -dominant analogue of charlesite
UM2008-08-CO:BaCaNaREESr	Can. Mineral. 46, 753		(Na,Ca) ₃ (Ba,Ce,La,Sr,Nd) ₁₀ (CO ₃) ₁₅
UM2008-09-E:AgAuCu	Dokl. Earth Sci. 421A, 919		CuAu ₃ Ag ₂
UM2008-10-E:AuNi	Dokl. Earth Sci. 421A, 919		Ni ₃ Au
UM2008-11-E:AuPd	Neues Jh. Mineral. Abh. 184 (3), 329		Au ₃ Pd; synthetic alloy is known
UM2008-12-E:CuFeIr	Mineral. Petrol. 92, 31		Ir ₂ (Cu,Fe) ₃ ; Table 4, #9
UM2008-13-E:CuFeIrNiOsRu	Mineral. Petrol. 92, 31		(Os,Ru,Ir)(Ni,Cu,Fe); Table 4, #5
UM2008-14-E:CuFeIrNiOsRu	Mineral. Petrol. 92, 31		(Os,Ir,Ru)(Cu,Fe,Ni); Table 4, #6
UM2008-15-E:CuFeIrNiOsRu	Mineral. Petrol. 92, 31		(Os,Ir,Ru)(Cu,Ni,Fe) ₂ ; Table 4, #11
UM2008-16-E:CuFeIrOsRu	Mineral. Petrol. 92, 31		(Ru,Os,Ir) ₃ (Cu,Fe) ₂ ; Table 4, #7
UM2008-17-E:CuFeOsRu	Mineral. Petrol. 92, 31		(Os,Ru) ₃ (Cu,Fe) ₄ ; Table 4, #10
UM2008-18-E:CuIrNi	Mineral. Petrol. 92, 31		Ir(Ni,Cu) ₅ ; Table 4, #4
UM2008-19-E:CuPdPt	Dokl. Earth Sci. 421A, 919		(Pd,Pt) ₄ Cu
UM2008-20-E:FeIrNi	Mineral. Petrol. 92, 31		Ir(Ni,Fe) ₃ ; Table 4, #2; later described under the name garutiite; Eur. J. Mineral. 22 (2010), 293; transferred to Invalid list
UM2008-21-E:FeIrNiRu	Mineral. Petrol. 92, 31		(Ir,Ru) ₂ (Ni,Fe) ₃ ; Table 4, #3
UM2008-22-E:FePt	Can. Mineral. 46, 343		Pt ₄ Fe; analyses show a range around this formula and include minor Cu, Ni and other PGE (Table 1 & Fig. 6)
UM2008-23-E:FePt	Can. Mineral. 46, 343		Pt ₅ Fe; analyses show a range around this formula and include minor amounts of other PGE (Table 1 & Fig. 6)
UM2008-24-E:IrNiOsRu	Mineral. Petrol. 92, 31		(Os,Ir,Ru) ₂ Ni; Table 4, #1
UM2008-25-E:PdPt	Dokl. Earth Sci. 421A, 919		Pt ₃ Pd
UM2008-26-F:AlCaNa	Fjölrít náttúrufræðistofnunar Nr. 52, 1		Na ₂ Ca ₃ Al ₂ F ₁₄ ; "mineral HG"; X-ray powder data and formula only
UM2008-28-F:AlHMgO	Fjölrít náttúrufræðistofnunar Nr. 52, 1		MgAlF ₅ •2H ₂ O; "mineral HR"; later described under the name leonardsenite; Mineral. Mag. 75 (2011), 2889; transferred to Invalid list
UM2008-27-F:AlHO	Fjölrít náttúrufræðistofnunar Nr. 52, 1		AlF ₃ •3H ₂ O; "mineral HU"; X-ray powder data and formula only
UM2008-29-F:CoFeHN	Fjölrít náttúrufræðistofnunar Nr. 52, 1		NH ₄ (Fe,Co) ₂ F ₆ ; "mineral HD"; X-ray powder data and formula only
UM2008-30-F:FeHO	Fjölrít náttúrufræðistofnunar Nr. 52, 1		Fe ³⁺ F ₃ •3H ₂ O; "mineral HI"; X-ray powder data and formula only
UM2008-31-F:FeHOSi	Fjölrít náttúrufræðistofnunar Nr. 52, 1		FeSiF ₆ •6H ₂ O; "mineral HT"; X-ray powder data and formula only
UM2008-32-GeO:AlFSi	Acta Mineral. Sinica 28, 15	Am. Mineral. v.94, 1078	Al ₃ (Ge,Si) ₄ O ₂₀ F ₃ ; low total suggests presence of (OH) or H ₂ O
UM2008-33-O:BaSiTi	Am. Mineral. 93, 154		Ba(Si,Ti) ₃ O ₇
UM2008-34-O:BaSiTi	Am. Mineral. 93, 154		Ba(Ti,Si) ₂ O ₅
UM2008-35-O:BaTi	Am. Mineral. 93, 154		BaTi ₃ O ₇
UM2008-36-O:CuFeNiPdPtSi	Can. Mineral. 46, 329		(Pd,Pt,Cu,Fe,Si)O; analyses "A" & "B"; Table 4.
UM2008-37-PO:BaKScZr	Can. Mineral. 46, 1131		(K,Ba) ₂ (Sc,Zr) ₅ (PO ₄) ₆ ; Table 3, #3
UM2008-38-POSiO:HScZr	Can. Mineral. 46, 1131		ZrSc(SiO ₄)(PO ₄)•H ₂ O; Table 3, #4
UM2008-39-S:AgBiPb	N. Jb. Miner. Abh. 185, 199		PbAg ₂ Bi ₂ S ₅ ; exsolution product of galena-matildite ss
UM2008-40-S:AgBiPb	N. Jb. Miner. Abh. 185, 199		Pb ₈ Ag ₁₁ Bi ₁₁ S ₃₀ ; exsolution product of galena-matildite ss
UM2008-41-S:AsIrOsRu	Mineral. Petrol. 92, 31		(Ru,Ir,Os) ₃ AsS ₂ ; Table 8, #12
UM2008-42-S:AsPbSb	Mineralium Deposita 43, 383		Pb(As,Sb) ₂ S ₄ ; Table 4; a new sulphosalt? perhaps the As-analogue of twinnite
UM2008-43-S:BiTe	Mineral. Mag. 72, 953		Bi ₂ Te ₂ S; close compositional similarities to UM1982-26-Te:BiSSe
UM2008-44-S:CuFeIrNiOs	Mineral. Petrol. 92, 31		(Ni,Ir,Cu,Os,Fe) ₃ S ₄ ; Table 6, #10
UM2008-45-S:CuFeIrNiOsRhRu	Mineral. Petrol. 92, 31		(Ir,Ni,Cu,Os,Fe,Ru,Rh) ₅ or perhaps (Ir,Os,RuRh) ₃ (Ni,Cu,Fe) ₄ S ₇ ; Table 6, #7
UM2008-46-S:CuIrNiOs	Mineral. Petrol. 92, 31		(Ni,Ir,Os,Cu) ₅ ; Table 6, #9, 11 & 12
UM2008-47-S:CuIrNiRh	Mineral. Petrol. 92, 31		(Ir,Rh)(Ni,Cu) ₅ S ₃ ; Table 6, #4
UM2008-48-S:CuIrOsRu	Mineral. Petrol. 92, 31		(Os,Ir,Ru) ₂ CuS ₅ ; Table 6, #13
UM2008-49-SO:FeNa	Fjölrít náttúrufræðistofnunar Nr. 52, 1		Na ₃ Fe(SO ₄) ₃ ; mineral "EN"; X-ray powder data and formula only
UM2008-50-SO:HMgNa	Fjölrít náttúrufræðistofnunar Nr. 52, 1		Na ₂ Mg ₃ (SO ₄) ₂ (OH) ₂ •4H ₂ O; "mineral SH"; X-ray powder data and formula only
UM2008-51-Se:AlHgPdPt	Terra Nova 20, 32		(Pt,Pd) ₂ HgSe ₃ ; later named jacutingaite; Mineral. Mag. 75 (2011), 289; transferred to Invalid list

UM2008-52-SiO:AIBCaFFeHLiMgNa	Crystal. Repts. 53, 223	(Ca,Na, \square)(Al,Li,Fe,Mg) ₃ Al ₆ [Si ₆ O ₁₈](BO ₃) ₃ (OH,O) ₃ (F,O); compositionally close to, but distinct from, liddicoatite
UM2008-53-SiO:SrTiZr	Am. Mineral. 93, 1153	Sr ₄ ZrTi ₄ (Si ₂ O ₇) ₂ O ₈ ; an orthorhombic polymorph of rengoite
UM2008-54-Te:AgAsAu	Mineral. Petrol. 93, 273	(Ag,Au) ₂ AsTe ₂
UM2008-55-Te:BiPdSb	Mineral. Petrol. 92, 129	Pd ₈ Te ₄ (Bi,Sb) ₅ ; some similarities to kotulskite
UM2009-01-As:IrNiRhRuS	Can. Mineral. 47, 1057	(Ru,Ni,Rh,Ir) ₈ (As,S) ₉ ; table 6 #54
UM2009-02-As:NiPd	Geol. Ore Deposits 51, 467	Ni ₆ Pd ₂ As ₃ ; Table 2 #5; same as UM2003-40-AsNiPd
UM2009-03-As:PtTe	Can. Mineral. 47, 1057	Pd ₃ (As,Te); table 6 #45 & 46; perhaps the As-analogue of UM1991-26-Te:AsPd and compositionally very similar to UM1996-02-As:PtTe
UM2009-04-AsS:IrOsRu	Can. Mineral. 47, 1057	(Ir,Os,Ru) ₂ AsS; table 6 #40
UM2009-05-E:CuPdSnTe	Geol. Ore Deposits 51, 467	(Pd,Cu) ₈ (Sn,Te) ₅ ; Table 2 #8
UM2009-06-E:FeIrNi	Neues. Jb. Mineral. Abh. 185 (3), 335	Ir(Fe,Ni) ₂ or perhaps Ir ₃ (Fe,Ni) ₇ ; Table 3, anal. 7-10
UM2009-07-E:FeIrNi	Neues. Jb. Mineral. Abh. 185 (3), 335	Ir ₃ (Ni,Fe) ₈ ; Table 3, anal. 28 & 31,
UM2009-08-E:FeIrNi	Neues. Jb. Mineral. Abh. 185 (3), 335	Ir ₃ (Fe,Ni) ₄ ; Table 3, anal. 26
UM2009-09-E:FeIrNi	Neues. Jb. Mineral. Abh. 185 (3), 335	Ir ₂ (Fe,Ni) ₃ ; Table 3, anal. 27
UM2009-10-E:FeIrNiPt	Can. Mineral. 47, 1057	(Pt,Ir) ₅ (Fe,Ni) ₈
UM2009-11-PO:CaHZr	Mineral. Mag. 73, 415	CaZr(PO ₄) ₂ (H ₂ O) ₄
UM2009-12-S:AsIrOsPtRu	Can. Mineral. 47, 1057	(Os,Ru,Ir,Pt) ₂ (S,As); Table 6, #39
UM2009-13-S:AsIrOsRu	Can. Mineral. 47, 1057	(Os,Ir,Cu) ₃ (S,As); Table 6, #38
UM2009-14-S:CuFePdPt	Geol. Ore Deposits 51, 467	(Cu,Pt,Fe,Pd) ₂ S; Table 4 #2-5; same as UM2003-43-S:CuFePdPt
UM2009-15-S:CuFeRhRu	Can. Mineral. 47, 1057	(Rh,Fe,Ru,Cu) ₃ S; Table 6 #52
UM2009-16-S:CuIrOs	Can. Mineral. 47, 1057	(Os,Ir,Cu) ₃ S; Table 6 #53
UM2009-17-S:CuPdPt	Geol. Ore Deposits 51, 467	(Cu,Pt,Pd) ₃ S; Table 4 #1 & 6; same as UM2003-44-S:CuPdPt
UM2009-18-S:CuPdPtTe	Can. Mineral. 47, 1057	(Pd,Cu,Pt) ₃ (S,Te); Table 6 #43
UM2009-19-S:FeIrNiOsRu	Neues. Jb. Mineral. Abh. 185 (3), 335	(Fe,Ru,Ni,Os,Ir) ₂ S; Table 4
UM2009-20-S:FeIrNiOsRu	Neues. Jb. Mineral. Abh. 185 (3), 335	(Ru,Fe,Ni,Os,Ir) ₂ S; Table 4
UM2009-21-S:OPbSb	Can Mineral. 47, 3	Pb _{15-2x} Sb _{14+2x} S ₃₆ O _x ; later described under the name chovanite: Eur. J. Mineral. 24 (2012), 727; transferred to Invalid list
UM2009-22-Se:Pb	Proc. Nat. Acad. Sci. Kazakhstan Geol. Ser. 4 (420), (2009), 28	Pb ₂ Se ₃
UM2009-23-SiO:AICCaCIHKNaS	Crystal. Repts. 54, 195	(Na,Ca) ₂₄ K ₁₀ [(Si,Al) ₆₀ O ₁₂₀](SO ₄) ₅ .6Cl _{1.5} (CO ₃) _{0.4} -11H ₂ O; a10-layer cancrinite group feldspathoid
UM2009-24-SiO:AICaFeHMnREE	Am. Mineral. 94, 121	CaCeFe ³⁺ AlMn ²⁺ (Si ₂ O ₇)(SiO ₄)O(OH); Mn analogue of ferriallanite in which Mn ²⁺ takes the place of Fe ²⁺
UM2009-25-SiO:AICaFeNbSnTaTi	Mineral. Mag. 73, 709	Ca(Ti,Al,Ta,Sn,Fe,Nb)SiO ₅ ; a triclinic polymorph of titanite
UM2009-26-SiO:CaClFeHKNaZr	Dokl. Chem. 424 (1), 11	Na ₁₂ K ₃ Ca ₈ Fe ₃ Zr ₃ Si ₂₆ O ₇₂ (O,OH) ₂ Cl ₂ ; later described under the name davinciite: Mineral. Mag. 75, 2552 (IMA No. 2011-019)
UM2009-27-SiO:CaFH	Am. Mineral. 94, 1361	Ca ₇ (SiO ₄) ₃ F ₂ ; given working name "Ca-humite" but later described under the name fluorchegemite: Mineral. Mag. 76 (2012), 812; transferred to Invalid list
UM2009-28-Te:AsNiPd	Geol. Ore Deposits 51, 467	Pd ₂ Ni(Te,As) ₂ ; Table 2, #7-9
UM2009-29-Te:Bi	Proc. Nat. Acad. Sci. Kazakhstan Geol. Ser. 4 (420), (2009), 28	BiTe ₃ ; formula erroneously shown as BiTe ₄
UM2009-30-Te:CuFePbPdS	Geol. Ore Deposits 51, 467	(Pd,Pb,Ag) ₅ (Cu,Fe,Ni) ₅ (Te,S) ₄ ; Table 2 #21-23; proposed formula (Pd,Cu) ₉ Pb(Te,S) ₄ does not fit analytical data well; perhaps related to oulankaite
UM2009-31-Te:Pd	Geol. Ore Deposits 51, 467	Pd ₅ Te ₃ ; Table 2, #14; The proposed formula "Pd ₉ Te ₄ ", appears to be grossly in error
UM2009-32-N:B	Proc. Nat. Acad. Sci. (U.S.A.) 106 (46), 19233	BN (boron nitride); known commercially as "cBN" or "beta-BN"
UM2009-33-SiO:AIKMgTi	Proc. Nat. Acad. Sci. (U.S.A.) 106 (46), 19233	Approximately (Al,K,Mg,Ca)(Si,Ti) ₂ O ₅ or perhaps KAl ₂ MgTi(Si,Al) ₁₁ O ₂₈ ; low analytical total; amorphous
UM2010-01-F:AlCa	IMA 2010, CD of Abstracts, p.496.	CaAlF ₅ ; apparently same as the compound α CaAlF ₅ (known synthetically); later named jakobssonite: Mineral. Mag. 46 (2012), 751; transferred to Invalid list
UM2010-02-O:AsMnSbTaTiU	Am. Mineral. 95, 1478	Mn ₃ UAs ₂ Sb ₂ Ta ₂ Ti ₂ O ₂₀ ; Table 6
UM2010-03-PO:BaMgNa	Zap. Ross. Mineral. Ob. 139 (2) (2010), 101	Na ₂ MgBa(PO ₄) ₂ (?); possible affinities with the arrojadite group
UM2010-04-S:PdTe	Can. Mineral 48, 583	Pd ₁₁ Te ₂ S ₂ ; perhaps the Te analogue of isomertieite or the S analogue of miessite and UM1996-02-As:PtTe
UM2010-05-SiO:AICaHK	Cent. Eur. J. Geosci. 2 (2), 175	Ca ₅ K ₂ Al ₁₁ Si ₂₁ O ₆₄ -18.4H ₂ O; "Mineral X2a"; distinct similarities to merlinoite, UM1990-82-SiO:AlBaCaHKNaSr and UM1987-18-SiO:AlCaHKNa
UM2010-06-SiO:CaFeHMnNaNbREETIZr	*Dokl. Akad. Nauk, 431 (2), 201	[Na,(H ₃ O)] ₁₅ (Ca ₃ Mn ₃)Na ₃ Zr ₃ (Si,Ti)[Si ₂₅ O ₇₂ (OH)](OH) ₂ :2H ₂ O; the Mn-analogue of raslakite
UM2010-07-S:AgCuSe	Geol. Ore Deposits 52, 811	(Ag,Cu) ₁₄ Se ₃ S ₆ ; replaces polybasite
UM2010-08-S:AgPd	Geol. Ore Deposits 52, 624	~(Pd,Ag) ₄ S; perhaps a Ag-rich variety of UM1992-28-S:Pd
UM2010-09-Te:Pd	Geol. Ore Deposits 52, 624	Pd ₁₁ Te ₇ ; analytical total is ~5% low
UM2011-01-CrO:CaH	Am. Mineral. 96, 659	CaCrO ₄ :2H ₂ O; appears to be calcium chromate dihydrate
UM2011-02-O:CaCeGdLaTiUZr	Dokl. Earth Sci. 437 (2), 479	(Gd,Ce,CaLa,U) ₄ ZrTi ₂ O ₁₂ ; a Lunar mineral
UM2011-03-O:CaKUV	Dokl. Earth Sci. 437 (2), 479	K ₂ (U ⁴⁺ ,Ca) ₅ V ₃ +5O ₁₈ ; a Lunar mineral
UM2011-04-O:LaMnSrTi	Dokl. Earth Sci. 437 (2), 479	(La,Sr) ₂ (Mn,Ti) ₂ O ₅ ; a Lunar mineral
UM2011-05-OH:FOSn	Eur. J. Mineral. 23, 695	Sn ₄ O(OH,F) ₆ ; only formula and X-ray powder data
UM2011-06-PO:AlFeHMn	Can. Mineral. 49, 521	(Fe,Mn,Al) ₃ Al(PO ₄)(OH) ₇
UM2011-07-POSO:AlBaH	Mineral. Petrol. 101, 81	BaAl ₃ [PO ₄][SO ₄][OH] ₆ ; the Ba-analogue of svanbergite

UM2011-08-S:AgBiCuPbSe	Mineral. Petrol. 103, 79	Close to (Ag,Cu,Fe,Zn) ₃ Pb ₃ Bi ₅ (S,Se) ₁₁ ; considered to be a lillianite homologue
UM2011-09-S:AgBiPbSe	Mineral. Petrol. 103, 79	Close to Ag ₂ (Cu,Zn,Fe) _{0.4} Pb ₆ Bi ₈ S ₁₉ ; considered to be a lillianite homologue
UM2011-10-S:AgCuTe[1]	Mineral. Petrol. 101, 169	Ag ₂ CuTeS
UM2011-11-S:AgCuTe[2]	Mineral. Petrol. 101, 169	(Ag,Cu) ₂ TeS
UM2011-12-S:CuFeHgNiPd	Can. Mineral. 49, 1413	~(Pd,Fe,Cu,Ni,Hg) ₉ S ₈ ; some similarities to vysotskite
UM2011-13-S:CuTi	Bull. Geol. Soc. Denmark 59, 13	Ti ₂ (Cu,Fe) ₆ S ₅ ; designated mineral "X"; considered a new member of the thalcosite homologous series
UM2011-14-SO:AIHN	Camprostrini <i>et al.</i> (2011)	(NH ₄) ₃ Al(SO ₄) ₃ ; designated: UKI-fo16-(SO:NH ₄ Al)
UM2011-15-SO:FeHKNa	Camprostrini <i>et al.</i> (2011)	(K,Na,NH ₄)Fe-sulphate; designated: UKI-fo17-(SO:FeKNaNH ₄); cell dimensions determined
UM2011-16-SOCI:FeHKNa	Camprostrini <i>et al.</i> (2011)	(Na,K,Li?)Fe(OH)-chlorosulphate; designated: UKI-fo26-(SOCl:Fe,Na,K); cell dimensions determined
UM2011-17-SOCI:FeHNa	Camprostrini <i>et al.</i> (2011)	(NH ₄ ,K) ₄ Na(Fe,Al) ₂ (SO ₄) ₄ Cl(OH) ₂ ; designated: UKI-fo30-(SOCl:NH ₄ NaFe)
UM2011-18-SOCI:Na	Camprostrini <i>et al.</i> (2011)	A Na-chlorosulphate; designated "UKI-fo29-(SOCl:Na)"; cell dimensions determined
UM2011-19-SiO:AlAsBHSb	Mineral. Mag. 75, 303	A dumortierite-like phase with composition close to Al ₅ (□,Al) ₂ B(Sb,As) ₃ O ₁₂ (O,OH) ₃
UM2011-20-SiO:AlFeMg	Am. Mineral. 96, 430	Na _{0.06} Ca _{0.02} Mg _{0.71} Fe _{0.20} Al _{0.11} Si _{0.94} O ₃ ; olivine structure with enstatite composition
UM2011-21-SiO:CH	Nature Commun., 2, 196	SiO ₂ - <i>n</i> (CH ₄ ,C ₂ H ₆ ,C ₃ H ₈ ,C ₄ H ₁₀); isostructural with the sH natural gas hydrate
UM2011-22-SiO:ClFeHNi	Eur. J. Mineral. 23, 717	(Ni,Fe) ₄ Si ₁₆ O ₅₄ (OH,Cl) ₄₀ ; the Ni,Fe-analogue of balangeroite?
UM2011-23-SiO:FeHNi	Eur. J. Mineral. 23, 717	(Fe,Ni) ₄ Si ₁₆ O ₅₄ (OH) ₄₀
UM2011-24-Te:FeHgNiPdPtRh	Can. Mineral. 49, 1413	~(Rh,Pt,Pd,Fe,Ni)(Te,Hg)

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