Uranmicrolite $(U, Ca)_2(Ta, Nb)_2O_6(OH, F)$

Crystal Data: Cubic; typically metamict. *Point Group:* $4/m\ \bar{3}\ 2/m$. As octahedra modified by {113}.

Physical Properties: *Fracture:* Irregular. *Tenacity:* [Brittle] (by analogy to the pyrochlore group). Hardness = 5.5 D(meas.) = 5.75–5.88 D(calc.) = [5.97] Radioactive.

Optical Properties: Opaque, transparent in thin fragments. *Color:* Yellowish brown, greenish brown, brownish black; yellowish brown in transmitted light. *Streak:* Pale yellow. *Luster:* Greasy.
Optical Class: Isotropic. $n = 1.97$

Cell Data: *Space Group:* $Fd3m$. a = 10.40 Z = 8

X-ray Powder Pattern: n.d.

Chemistry:

	(1)	(2)		(1)	(2)
UO_3	9.38		FeO	0.56	
WO_3	0.18		MnO		0.59
Nb_2O_5	1.41	13.18	PbO	1.10	1.03
Ta_2O_5	72.27	56.12	MgO	0.24	
TiO_2	2.54		CaO	3.40	6.87
ZrO_2	0.80		SrO		0.54
SnO_2	trace		Na_2O		0.86
UO_2	2.17	14.35	F		0.47
Fe_2O_3		0.58	H_2O	4.62	
Bi_2O_3	0.98		$-O = F_2$		0.19
			Total	99.65	94.40

(1) Posse Farm, Brazil. (2) Okangava Ost, Namibia; by electron microprobe, average of eight analyses; corresponding to $(Ca_{0.68}U_{0.30}Na_{0.15}Mn_{0.05}Sr_{0.03}Pb_{0.03})_{\Sigma=1.24}(Ta_{1.41}Nb_{0.55}Fe_{0.04})_{\Sigma=2.00}O_6(OH, F)$.

Mineral Group: Pyrochlore group, microlite subgroup; $U_A > 20\%$; $(Nb + Ta)_B > 2Ti_B$; $Ta_B \geq Nb_B$.

Occurrence: In a granite pegmatite (Posse Farm, Brazil).

Association: Columbite, magnetite, samarskite, garnet, beryl, tourmaline, bismuth minerals, kaolinite, microcline, quartz (Posse Farm, Brazil); lepidolite (Okangava Ost, Namibia).

Distribution: In Brazil, on the Posse Farm, Brejaúba district, Minas Gerais. From Jooste's pegmatite, Okangava Ost, near Karibib, Namibia. At San Piero in Campo, Elba, Italy.

Name: As a member of the *microlite* subgroup with significant *uranium* content.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 805 [djalmaite]. (2) Guimarães, C.P. (1941) Djalmaite, a new radioactive mineral. Amer. Mineral., 26, 343–346. (3) Strunz, H. (1957) Mineralogische Tabellen, Akademische Verlagsgesellschaft, 147 (in German) [Djalmaite = Uran-Microlith]. (4) Hogarth, D.D. (1977) Classification and nomenclature of the pyrochlore group. Amer. Mineral., 62, 403–410 [djalmaite = uranmicrolite]. (5) Baldwin, J.R. (1989) Replacement phenomena in tantalum minerals from rare-metal pegmatites in South Africa and Namibia. Mineral. Mag., 53, 571–581.