

**Oxycalciumicrolite****(Ca, Na)<sub>2</sub>(Ta, Nb, Ti)<sub>2</sub>O<sub>6</sub>(O, F)**

**Crystal Data:** Cubic. *Point Group:*  $4/m\bar{3}2/m$ . As octahedra or cube-rhombohedra to 0.5 mm.

**Physical Properties:** *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Conchoidal. Hardness = 5-5.5  
D(meas.) = n.d. D(calc.) = 6.333

**Optical Properties:** Translucent to transparent. *Color:* Brownish yellow to brownish red.  
*Streak:* White. *Luster:* Vitreous to resinous.  
*Optical Class:* Isotropic.  $n(\text{calc.}) = 2.037$

**Cell Data:** *Space Group:*  $Fd\bar{3}m$ .  $a = 10.4325(4)$   $Z = 8$

**X-Ray Diffraction Pattern:** Fumal pegmatite, near Nazareno, Minas Gerais, Brazil.  
3.011 (100), 6.023 (89), 1.844 (48), 3.145 (44), 1.573 (33), 2.608 (25), 2.008 (14)

Chemistry:	(1)		(1)
Nb <sub>2</sub> O <sub>5</sub>	4.12	FeO	0.09
Ta <sub>2</sub> O <sub>5</sub>	75.77	CaO	15.89
TiO <sub>2</sub>	0.38	MnO	0.17
UO <sub>2</sub>	0.83	SrO	0.51
ZrO <sub>2</sub>	0.03	BaO	0.02
La <sub>2</sub> O <sub>3</sub>	0.05	Na <sub>2</sub> O	0.36
Ce <sub>2</sub> O <sub>3</sub>	0.18	F	0.75
Yb <sub>2</sub> O <sub>3</sub>	0.11	<u>-O = F<sub>2</sub></u>	<u>0.31</u>
Sm <sub>2</sub> O <sub>3</sub>	0.02	Total	99.91
SnO	0.94		

(1) Fumal pegmatite, near Nazareno, Minas Gerais, Brazil; average electron microprobe analysis supplemented by IR spectroscopy; corresponds to  $A(\text{Ca}_{1.57}\square_{0.26}\text{Na}_{0.06}\text{Sn}_{0.03}\text{Sr}_{0.03}\text{U}_{0.02}\text{Mn}_{0.02}\text{Fe}_{0.01}\text{Ce}_{0.01})_{\Sigma=2.00}B(\text{Ta}_{1.79}\text{Nb}_{0.18}\text{Ti}_{0.03})_{\Sigma=2.00}X\text{O}_6^Y[\text{O}_{0.64}\text{F}_{0.19}\square_{0.17}]_{\Sigma=1.00}$ .

**Mineral Group:** Pyrochlore supergroup, microlite group.

**Occurrence:** In the saprolite of a weathered granitic pegmatite.

**Association:** Columbite subgroup minerals, cassiterite, hematite, ilmenite, monazite-(Ce), epidote-group minerals, xenotime-(Y), zircon, beryl, spinel, garnet-group minerals.

**Distribution:** From the Fumal pegmatite, 18 km north of Nazareno, Minas Gerais, Brazil [TL]; in the Varuträsk pegmatite, northeastern Sweden; in pegmatites of the Vigizzo Valley, western Alps, Italy.

**Name:** The first prefix, *oxy*, indicates dominant oxygen at the Y site, the second prefix, *calcio*, indicates the dominant calcium in the A site of a member of the *microlite* subgroup.

**Type Material:** Geological Museum, University of Rio de Janeiro, Brazil (MN 7601-M).

**References:** (1) Menezes da Silva, V.H.R., C.A. Ávila, R. Neumann, F.R.L. Faulstich, F.E.A. Alves, F.B. de Almeida, T. Proença Cidade, and S. Siqueira da Cruz Guimarães Sousa (2020) Oxycalciumicrolite, (Ca,Na)<sub>2</sub>(Ta,Nb,Ti)<sub>2</sub>O<sub>6</sub>(O,F), a new member of the microlite group (pyrochlore supergroup) from the Paleoproterozoic São João del Rei Pegmatite Province, Minas Gerais state, Brazil. *Mineral. Mag.*, 84(6), 854-858. (2) (2021) *Amer. Mineral.*, 106, 1187-1191 (abs. ref. 1).