

Crystal Data: Cubic. *Point group:* 432. As octahedral crystals or a combination of octahedral and rhombic dodecahedral crystals, to 1.5 mm.

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Conchoidal. Hardness = 5-6 D(meas.) = n.d. D(calc.) = 6.176

Optical Properties: Translucent. *Color:* Yellow; colorless in transmitted light. *Streak:* White. *Luster:* Vitreous to resinous. *Optical Class:* Isotropic. $n(\text{calc.}) = 2.010$

Cell Data: *Space Group:* P4₃32. $a = 10.4205(1)$ $Z = 8$

X-ray Powder Pattern: Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil. 6.025 (100), 3.010 (73), 3.145 (15), 1.843 (8), 2.606 (7), 2.006 (7), 1.527 (5)

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|--------------------------------|-------------|
| Chemistry: | (1) |
| Na ₂ O | 0.36 |
| CaO | 15.64 |
| SnO ₂ | 0.26 |
| Nb ₂ O ₅ | 2.82 |
| Ta ₂ O ₅ | 78.39 |
| MnO | 0.12 |
| F | 0.72 |
| H ₂ O | [1.30] |
| <u>-O = F₂</u> | <u>0.30</u> |
| Total | 99.31 |

(1) Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil; average of 2 electron microprobe analyses supplemented by IR and Raman spectroscopy, H₂O calculated from structure; corresponds to (Ca_{1.48}□_{0.45}Na_{0.06}Mn_{0.01})_{Σ=2.00}(Ta_{1.88}Nb_{0.11}Sn_{0.01})_{Σ=2.00}O_{6.00}[(OH)_{0.76}F_{0.20}O_{0.04}]_{Σ=1.00}.

Mineral Group: Pyrochlore supergroup (general formula - A₂B₂X₆Y); microlite group (B = Ta⁵⁺).

Occurrence: In heavy mineral concentrates from a complex granitic pegmatite.

Association: Hydrokenomicrolite, fluorcalciumicrolite (in the same concentrate sample).

Distribution: From the Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil.

Name: For a member of the *microlite* group with prefixes to indicate dominant OH⁻ (*hydroxy*) in the Y site and dominant Ca (*calcio*) in the A site.

Type Material: Geosciences Museum, University of São Paulo, Brazil (DR917) and the Mineral Museum, University of Arizona, Tucson, Arizona, USA (RRUFF Project R130269).

References: (1) Andrade, M.B., H. Yang, D. Atencio, R.T. Downs, N.V. Chukanov, M.H. Lemée-Cailleau, A.I.C. Persiano, A.E. Goeta, and J. Ellena (2017) Hydroxycalciumicrolite, Ca_{1.5}Ta₂O₆(OH), a new member of the microlite group from Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil. *Mineral. Mag.*, 81(3), 555-564. (2) (2018) *Amer. Mineral.*, 103, 2046 (abs. ref. 1). (3) Atencio, D., M.B. Andrade, A.G. Christy, R. Gieré, and P.M. Kartashov (2010) The pyrochlore supergroup of minerals: nomenclature. *Can. Mineral.*, 48, 673-698.