

Crystal Data: Monoclinic. *Point Group:* n.d. Crystals platy, to 0.003 mm, form {100} observed; as microcrystalline aggregates or crusts.

Physical Properties: *Cleavage:* None observed. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = n.d. $D(\text{meas.}) = 2.60(5)$ $D(\text{calc.}) = 4.768$

Optical Properties: Transparent to translucent. *Color:* Blue; gray with blue internal reflections in reflected light. *Streak:* Pale blue. *Luster:* Vitreous.

Optical Class: n.d. $n = \sim 1.79$ *Pleochroism:* Observed.

R: (470) 10.2, (546) 8.9, (589) 8.3, (650) 8.3

Cell Data: *Space Group:* $P2_1/m$ or $P2_1$. $a = 8.629(2)$ $b = 5.805(2)$ $c = 7.654(2)$
 $\beta = 103.17^\circ$ $Z = 2$

X-ray Powder Pattern: Pedra Preta mine, Serra das Éguas, Brumado, Bahia, Brazil. 8.432 (100), 3.162 (66), 2.385 (27), 1.666 (14), 2.291 (12), 1.916 (11), 1.452 (10)

Chemistry:	(1)	(2)
TeO ₃	30.58	32.50
CaO	0.07	
CuO	43.05	44.16
PbO	1.70	
SiO ₂	0.55	
H ₂ O	24.05	23.34
Total	100.00	100.00

(1) Pedra Preta mine, Serra das Éguas, Brumado, Bahia, Brazil; average of 16 electron microprobe analyses, H₂O by difference, IR confirms OH, and H₂O, Te⁶⁺ confirmed by microchemical test, corresponding to $(\text{Cu}_{2.90}\text{Pb}_{0.04}\text{Ca}_{0.01})_{\Sigma=2.95}(\text{Te}^{6+}_{0.93}\text{Si}_{0.05})_{\Sigma=0.98}\text{O}_{3.92}(\text{OH})_{3.84} \cdot 5.24\text{H}_2\text{O}$.

(2) $\text{Cu}_3\text{Te}^{6+}\text{O}_4(\text{OH})_4 \cdot 5\text{H}_2\text{O}$.

Occurrence: A late fracture-filling mineral in coarse-grained magnesite.

Association: Magnesite, mottramite, quartz.

Distribution: Pedra Preta mine, Serra das Éguas, Brumado, Bahia, Brazil.

Name: For Brumado, Bahia, Brazil, near the first described locality.

Type Material: Museu de Geociências, Instituto de Geociências, Universidade de São Paulo, São Paulo, SP, Brazil; Museu José Bonifácio de Andrada e Silva, Santos, SP, Brazil (no. M5528); National Mineral Collection, Geological Survey of Canada, Ottawa, Ontario (no. NMC 068161); Natural History Museum, London, England (no. BM 2008,32).

References: (1) Atencio, D., A.C. Roberts, P.A. Matioli, J.A.R. Stirling, K.E. Venance, W. Doherty, C.J. Stanley, R. Rowe, G.J.C. Carpenter, and J.M.V. Coutinho (2008) Brumadoite, a new copper tellurate hydrate, from Brumado, Bahia, Brazil. *Mineral. Mag.*, 72, 1201–1205.

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