

Lewisite**(Ca, Fe²⁺, Na)₂(Sb, Ti)₂O₇**

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Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. As minute octahedra, to 1 mm, and earthy masses. *Twinning:* On {111}, rare.

Physical Properties: *Cleavage:* {111}, nearly perfect. Hardness = 5.5 D(meas.) = 4.950 D(calc.) = 5.31

Optical Properties: Translucent. *Color:* Honey-yellow, amber-yellow, yellowish brown. *Streak:* Pale yellowish brown. *Luster:* Vitreous to resinous. *Optical Class:* Isotropic. $n = \text{n.d.}$

Cell Data: *Space Group:* $Fd\bar{3}m$ (ICDD 7-66). $a = 10.264\text{--}10.306$ $Z = 8$

X-ray Powder Pattern: Tripuhy, Brazil. (ICDD 7-66).
2.94 (100), 1.813 (100), 1.548 (100), 1.179 (50), 1.150 (50), 1.050 (50), 0.989 (50)

Chemistry:	(1)	(2)
Sb ₂ O ₅	67.52	65.52
TiO ₂	11.35	11.70
FeO	4.55	6.79
MnO	0.38	
CaO	15.93	15.47
Na ₂ O	0.99	1.06
Total	100.72	100.54

(1–2) Tripuhy, Brazil.

Mineral Group: Stibiconite group.

Occurrence: In eluvial sands (Tripuhy, Brazil); an alteration of large tetrahedrite crystals (Johnny Lyon Hills, Arizona, USA).

Association: Mica, cinnabar, tripuhyite (Tripuhy, Brazil); tetrahedrite (Johnny Lyon Hills, Arizona, USA).

Distribution: At the Tripuhy cinnabar mine, Ouro Preto, Minas Gerais, Brazil. Abundant from Tres Alamos Wash, in the Johnny Lyon Hills, Cochise Co., Arizona, USA. In the Miniera del Tafone, Grosseto, Tuscany, Italy.

Name: For William James Lewis (1847–1926), Professor of Mineralogy, Cambridge University, Cambridge, England.

Type Material: The Natural History Museum, London, England, 80141; National Museum of Natural History, Washington, D.C., USA, R5741.

References: (1) Dana, E.S. (1899) Dana's system of mineralogy, (6th edition), app. I, 42–43. (2) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 1020–1022 [romeite, part]. (3) Hussak, E. and G.T. Prior (1895) Lewisite and zirkelite, two new Brazilian minerals. *Mineral. Mag.*, 11, 80–83. (4) Machatschki, F. and O. Zedlitz (1932) Die Kristallstruktur des Lewisit. *Zeits. Krist.*, 82, 72–76 (in German). (5) Baptista, A. (1981) Contribution to the study of lewisite and tripuhyite. *Anais Acad. Brasileira Cienc.*, 53(2), 283–287 (in Portuguese). (6) (1981) *Chem. Abs.*, 95, 207 (abs. ref. 5).