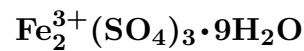


## Paracoquimbite



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**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3}$ . Small rhombohedral crystals  $\{01\bar{1}2\}$ , equant pseudocubic or prismatic, with complex form development, may be sceptered on coquimbite; also granular, massive. *Twining:* On  $\{0001\}$ , common.

**Physical Properties:** *Cleavage:* On  $\{01\bar{1}2\}$  and  $\{10\bar{1}4\}$ , imperfect. Hardness = 2.5  
D(meas.) = 2.11(1) D(calc.) = 2.115 Soluble in  $\text{H}_2\text{O}$ , taste astringent.

**Optical Properties:** Transparent. *Color:* Pale violet. *Luster:* Vitreous.  
*Optical Class:* Uniaxial (+).  $\omega = 1.550(2)$   $\epsilon = 1.555(2)$

**Cell Data:** *Space Group:*  $R\bar{3}$ .  $a = 10.926(9)$   $c = 51.300(21)$   $Z = 12$

**X-ray Powder Pattern:** Calculated from the crystal structure. (ICDD 27-254).  
8.88 (100), 7.62 (39), 3.367 (33), 5.465 (29), 4.605 (29), 8.55 (20), 4.713 (16)

Chemistry:	(1)	(2)
$\text{SO}_3$	41.38	42.74
$\text{Al}_2\text{O}_3$	trace	
$\text{Fe}_2\text{O}_3$	29.79	28.41
$\text{H}_2\text{O}$	28.69	28.85
Total	99.86	100.00

(1) Tierra Amarilla, Chile. (2)  $\text{Fe}_2(\text{SO}_4)_3 \cdot 9\text{H}_2\text{O}$ .

**Polymorphism & Series:** Dimorphous with coquimbite.

**Occurrence:** A rare mineral formed in the oxidized zone of pyritic hydrothermal orebodies, especially in arid regions.

**Association:** Coquimbite, römerite, szomolnokite, quenstedtite, ferricopiapite, rozenite, voltaite.

**Distribution:** In Chile, from Tierra Amarilla, southeast of Copiapó, Atacama; at Chuquicamata, Alcaparrosa, near Cerritos Bayos, southwest of Calama, and Quetena, west of Calama, Antofagasta. At Myoban Spa, Oita Prefecture, Japan. From the Kamariza mine, Laurium, Greece. At Steamboat Springs, Washoe Co., Nevada, USA.

**Name:** From the Greek for *near* and its relation to *coquimbite*.

**Type Material:** n.d.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 534–535. (2) Robinson, P.D. and J.H. Fang (1971) Crystal structures and mineral chemistry of hydrated ferric sulphates: II. The crystal structure of paracoquimbite. Amer. Mineral., 56, 1567–1572. (3) Fang, J.H. and P.D. Robinson (1974) Polyttypism in coquimbite and paracoquimbite. Neues Jahrb. Mineral., Monatsh., 89–91.