

Crystal Data: Monoclinic. *Point Group:* 2/m. As acicular crystals elongated on [001], to 60 μm, as hollow masses and botryoidal crusts to several millimeters; rarely as globular aggregates composed of tufts and spherulites.

Physical Properties: *Cleavage:* None. *Fracture:* Uneven. *Tenacity:* Brittle.
Hardness = 2-3 D(meas.) = n.d. D(calc.) = 4.80(3)

Optical Properties: Transparent. *Color:* Whitish-beige to light gray. *Streak:* White to light gray.
Luster: Vitreous.
Optical Class: n.d.

Cell Data: *Space Group:* P2₁/n. *a* = 6.0118(3) *b* = 13.3355(6) *c* = 6.4854(4) *Z* = 4
(for synthetic Bi(OH)SO₄·H₂O)

X-ray Powder Pattern: Falcacci stope, Rio Marina iron mine, Elba, Tuscany, Italy.
4.2598 (100), 5.4530 (42), 3.3350 (42), 5.1152 (37), 3.1127 (36), 5.1926 (32), 2.9151 (22)

Chemistry:	(1)
Bi ₂ O ₃	68.86
SO ₃	24.28
H ₂ O	6.86
Total	100.00

(1) Falcacci stope, Rio Marina iron mine, Elba, Tuscany, Italy; wet chemical analysis, H₂O by difference; corresponding to Bi_{1.02}H_{2.64}S_{1.05}O₆.

Occurrence: A weathering product from the decomposition of bismuthinite and cosalite.

Association: Bismoclite, bismutite, cannonite, anglesite, hydroniumjarosite, plumbojarosite.

Distribution: Falcacci stope, Rio Marina iron mine, east coast of Elba Island, Tuscany, Italy.

Name: For the mine that produced the first specimens.

Type Material: Bavarian State Collection for Mineralogy, Munich, Germany (MSM 27074).

References: (1) Rögner, P. (2005) Riomarinaite, a new bismuth mineral from Falcacci stope, Rio Marina, Elba (Italy). *Der Aufschluss*, 56, 53-60 (in German with English abstract).
(2) (2005) *Amer. Mineral.*, 90, 1948 (abs. ref. 1).