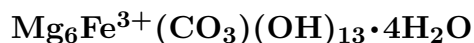


Brugnatellite



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Crystal Data: Hexagonal. *Point Group:* $\bar{3}$ (probable). Tiny hexagonal or trigonal flakes, may be striated at 60°, flattened on {0001}; in lamellar or foliated masses, forming nodules, crusts, and coatings.

Physical Properties: *Cleavage:* {0001}, perfect. *Hardness* = ~2 *D*(meas.) = 2.14
D(calc.) = 2.21

Optical Properties: Transparent. *Color:* Flesh-pink to yellowish or brownish white; colorless to pink in transmitted light. *Streak:* White. *Luster:* Pearly.

Optical Class: Uniaxial (-). *Pleochroism:* *O* = yellowish red; *E* = colorless. $\omega = 1.533\text{--}1.540$
 $\epsilon = 1.505\text{--}1.515$

Cell Data: *Space Group:* n.d. *a* = 5.47 *c* = 15.97 *Z* = 1

X-ray Powder Pattern: Torre di Santa Maria, Italy. (ICDD 14-365).
7.93 (100), 3.96 (90), 2.00 (70), 2.35 (60), 2.63 (50), 1.56 (40), 1.53 (40)

Chemistry:

	(1)	(2)	(3)
Fe ₂ O ₃	13.20	14.65	14.39
MnO	1.80	1.98	
MgO	42.79	40.36	43.59
H ₂ O	33.77	33.50	34.09
CO ₂	7.78	8.04	7.93
insol.	1.03	1.15	
Total	100.37	99.68	100.00

(1) Torre di Santa Maria, Italy. (2) Viu, Italy. (3) Mg₆Fe(CO₃)(OH)₁₃·4H₂O.

Occurrence: A hydrothermal alteration product in serpentinite, lining cracks with other magnesium-rich species.

Association: Chrysotile, artinite, hydromagnesite, pyroaurite, magnesite, brucite, aragonite.

Distribution: In Italy, from Torre di Santa Maria, near Ciappanico, Val Malenco, and Monte Motta, Val Lanterna, Lombardy; on Monte Ramazzo, Borzoli, Liguria; at Viu, Val di Lanzo, Piedmont; and elsewhere. From Bou-Offrouh, Morocco. At Swinna Ness, Unst, Shetland Islands, Scotland. From Sannidal, Norway. In Canada, near Bancroft, Ontario, and near Notre-Dame-du-Laus, Quebec. In the Iron Hill carbonatite, Powderhorn-Cebolla district, Gunnison Co., Colorado, USA. From Higashi Kurodaguchi, Inasa, Shizuoka Prefecture; Naradani, Kiyomimura, Gifu Prefecture; Irazuyama, Ehime Prefecture; Sasaguri, Fukuoka Prefecture; Mashiki, Kumamoto Prefecture; and elsewhere in Japan.

Name: For Luigi Vincenzo Brugnatelli (1859–1928), Professor of Mineralogy, University of Pavia, Pavia, Italy.

Type Material: Municipal Museum of Natural History, Milan, Italy.

References: (1) Palache, C., H. Berman, and C. Frondel (1944) Dana's system of mineralogy, (7th edition), v. I, 660–661.