

Giorgiosite



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Crystal Data: n.d. *Point Group:* n.d. Fibrous, spherulitic, admixed with other species in powdery crusts.

Physical Properties: Hardness = n.d. $D(\text{meas.}) = 2.155\text{--}2.185$ (synthetic). $D(\text{calc.}) = \text{n.d.}$

Optical Properties: Semitransparent. *Color:* White. *Luster:* Silky.

Optical Class: Biaxial. *Orientation:* Positive elongation, parallel extinction. $n = 1.48\text{--}1.51$

$\alpha = 1.498$ (synthetic). $\beta = \text{n.d.}$ $\gamma = 1.513$ $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* n.d. $Z = \text{n.d.}$

X-ray Powder Pattern: Thíra Island, Greece.

3.40 (100), 3.29 (70), 2.92 (60), 4.44 (40), 3.97 (40), 2.46 (40), 5.80 (30)

Chemistry: (1) Identification is by near correspondence between the X-ray patterns of natural and synthetic material.

Occurrence: A rare incrustation on recent lava (Thíra Island, Greece); a weathering product in fractures in sideritic iron formation (Big Fish River-Rapid Creek area, Canada).

Association: Sodium chloride, sodium sulfate, magnesium carbonate (Thíra Island, Greece); aragonite, kulanite (Big Fish River-Rapid Creek area, Canada).

Distribution: From Alphroëssa, Thíra (Santorini) Island, Cyclades, Greece. In the Big Fish River-Rapid Creek area, Yukon Territory, Canada.

Name: For Giorgios, a cone formed during the volcanic eruption of 1866 on Thíra Island.

Type Material: Natural History Museum, Paris, France.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 274. (2) Raade, G. (1970) Dypingite, a new hydrous basic carbonate of magnesium, from Norway. *Amer. Mineral.*, 55, 1457–1465 [comments on giorgiosite]. (3) Friedel, B. (1975) Synthetischer Giorgiosit. *Neues Jahrb. Mineral., Monatsh.*, 196–208 (in German with English abs.). (4) Canterford, J.H., G. Tsambourakis, and B. Lambert (1984) Some observations on the properties of dypingite, $\text{Mg}_5(\text{CO}_3)_4(\text{OH})_2 \cdot 5\text{H}_2\text{O}$ and related minerals. *Mineral. Mag.*, 48, 437–442. (5) Robinson, G.W., J. Van Velthuizen, H.G. Ansell, and B.D. Sturman (1992) Mineralogy of the Rapid Creek and Big Fish River area, Yukon Territory. *Mineral. Record*, 23(4), 1–47, esp. 37.