

Crystal Data: Orthorhombic. *Point Group:* *mm2*. As rounded crystals to 7 μm in fluid and melt inclusions.

Physical Properties: *Cleavage:* n.d. *Tenacity:* n.d. *Fracture:* n.d. *Hardness:* = n.d. *D(meas.)* = n.d. *D(calc.)* = 1.949 Highly soluble in water.

Optical Properties: [Transparent]. *Color:* Colorless. *Streak:* n.d. *Luster:* n.d. *Optical Class:* [Biaxial]. *n(meas.)* = ~1.498 *n(calc.)* = n.d.

Cell Data: *Space Group:* *Aba2*. *a* = 11.304(1) *b* = 10.963(1) *c* = 9.337(1)

X-ray Powder Pattern: Il Prado vein, Island of Elba, Italy.
3.554 (100), 5.481 (84), 3.391 (64), 2.826 (45), 3.329 (37), 3.329 (37), 2.212 (31)

Chemistry: Identity confirmed by concurrence of Raman spectra with synthetic rubidium pentaborate tetrahydrate (RbB₅O₈·4H₂O).

Occurrence: As daughter minerals in melt and fluid inclusions.

Association: Sassolite, ramanite-(Cs), santite, topaz, boron-rich silicate glass, boric acid-saturated liquid.

Distribution: From the Il Prado vein (also known as Prato alla Valle), 400 m south of the cemetery of the village of San Pietro, Campo, Island of Elba, Italy [TL]. In hambergite from the Mika pegmatite, Rangkul pegmatite field, eastern Pamirs, Tajikistan. Likely more common in boron-rich pegmatites.

Name: Honors Indian physicist, Sir Chandrasekhara Venkata Raman (1888-1970) recipient of a Nobel Prize in Physics in 1930 for discovering the effect that bears his name and is the basis for Raman spectroscopy, an important method for the identification of minerals. A suffix indicates the dominant rare earth element.

Type Material: Museum, Mining Academy Freiberg, Germany (81616).

References: (1) Thomas, R., P. Davidson, and A. Hahn (2008) Ramanite-(Cs) and ramanite-(Rb): New cesium and rubidium pentaborate tetrahydrate minerals identified with Raman spectroscopy. *Amer. Mineral.*, 93, 1034-1042.