CaV₃O₇

Crystal Data: Orthorhombic. *Point Group*: $2/m \ 2/m$. As radial aggregates of acicular to elongate prismatic crystals to 0.28 mm.

Physical Properties: Cleavage: None. Fracture: n.d. Tenacity: Brittle. Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.51

Optical Properties: Transparent. *Color*: Colorless to olive green-brown (due to inclusions). *Streak*: Near white. *Luster*: Vitreous. *Optical Class*: n.d.

Cell Data: *Space Group*: *Pnam*. a = 10.42(2) b = 5.28(2) c = 10.34(2) Z = 4

X-ray Powder Pattern: Gambatesa mine, near Reppia, Liguria, northern Italy. 3.00 (S), 5.16 (M), 1.85 (M), 3.45 (W), 2.88 (W), 1.56 (W), 2.63 (VW)

Chemistry:

(1)
17.76
0.70
0.35
76.80
4.31
99.92

(1) Gambatesa mine, near Reppia, Liguria, northern Italy; average electron microprobe analysis; corresponding to $(Ca_{0.95}Mn_{0.03}K_{0.02})_{\Sigma=1.00}(V_{2.79}Si_{0.22})_{\Sigma=3.01}O_7$.

Occurrence: Developed by tectono-metamorphic re-equilibration under prehnite-pumpellyite facies conditions in manganese deposits (braunite-bearing layers within hematite-rich cherts) near the bottom of chert sequences overlaying ophiolites.

Association: Caryopilite, calcian rhodochrosite, quartz.

Distribution: At the Gambatesa mine, near Reppia, Liguria, northern Italy.

Name: Alludes to the essential chemical elements in the composition, CAlcium, Vanadium, Oxygen.

Type Material: University of Genoa, Italy.

References: (1) Basso, R., G. Lucchetti, A. Martinelli, and A. Palenzona (2003) Cavoite, CaV₃O₇, a new mineral from the Gambatesa mine, northern Apennines, Italy. Eur. J. Mineral., 15, 181-184. (2) (2003) Amer. Mineral., 88, 1626 (abs. ref. 1).