Cavoite CaV_3O_7

Crystal Data: Orthorhombic. *Point Group*: 2/*m* 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)
CaO	17.76
MnO	0.70
K_2O	0.35
VO_2	76.80
SiO_2	4.31
Total	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, *CA*lcium, *V*anadium, *O*xygen.

Type Material: University of Genoa, Italy.

References: (1) Basso, R., G. Lucchetti, A. Martinelli, and A. Palenzona (2003) Cavoite, CaV_3O_7, 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).