

Cassedanneite**Pb₅(VO₄)₂(CrO₄)₂•H₂O**

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Crystal Data: Monoclinic. *Point Group:* $2/m$, 2, or m . As minute pseudo-hexagonal crystals, flattened on {010}, in rounded aggregates. *Twinning:* Sectorlike twinning observed.

Physical Properties: Hardness = ~ 3.5 D(meas.) = 6.37 D(calc.) = 6.52

Optical Properties: Semitransparent. *Color:* Red-orange. *Streak:* Yellow-orange. *Luster:* Resinous.

Optical Class: Biaxial. $\alpha = 2.395$ $\beta = \text{n.d.}$ $\gamma = 2.26$ $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* $A2/m$, $A2$, or Am . $a = 7.693(8)$ $b = 5.763(6)$ $c = 9.795(8)$
 $\beta = 115.93(5)^\circ$ $Z = 1$

X-ray Powder Pattern: Beresovsk, Russia.

3.15 (10), 4.83 (6), 3.22 (6), 2.873 (5), 2.825 (3), 2.123 (3), 1.908 (3)

Chemistry:

	(1)	(2)
P ₂ O ₅	1.56	
V ₂ O ₅	9.90	12.00
CrO ₃	12.39	13.19
CuO	0.61	
ZnO	0.65	
PbO	73.24	73.62
H ₂ O	[1.65]	1.19
Total	[100.00]	100.00

(1) Beresovsk, Russia; by electron microprobe, H₂O by difference; corresponds to (Pb_{4.92}Zn_{0.12}Cu_{0.11}) $_{\Sigma=5.15}$ [(VO₄)_{1.63}(PO₄)_{0.33}] $_{\Sigma=1.96}$ (CrO₄)_{1.86}•1.37H₂O. (2) Pb₅(VO₄)₂(CrO₄)₂•H₂O.

Occurrence: On museum samples from the oxidized zone of gold-bearing quartz veins (Beresovsk, Russia).

Association: Crocoite, embreyite, vauquelinite.

Distribution: From Beresovsk, near Yekaterinburg (Sverdlovsk), Middle Ural Mountains, Russia.

Name: To honor Prof. Jacques P. Cassedanne (1923–), mineralogist, Institute of Geoscience, University of Rio de Janeiro, Rio de Janeiro, Brazil.

Type Material: National School of Mines, Paris, France, 16569.

References: (1) Cesbron, F., R. Giraud, F. Pillard, and J.-F. Poullen (1988) La casedannéite, nouveau chromo-vanadate de plomb de Beresovsk (Oural). *Compt. Rendus Acad. Sci. Paris*, 306, 125–127 (in French with English abs.). (2) (1988) *Amer. Mineral.*, 73, 1493 (abs. ref. 1).