Janchevite \( \text{Pb}_7\text{V}^{5+}(\text{O}_{8.5}\square_{0.5})\text{Cl}_2 \)

Crystal Data: Tetragonal. \emph{Point group:} 4/m 2/m 2/m. As tabular crystals to 0.8 mm and in aggregates.

Physical Properties: \emph{Cleavage:} Distinct on [001]. \emph{Tenacity:} Brittle. \emph{Fracture:} n.d. \emph{Hardness = -2.5} \emph{VHN = 73.4-100.8, 85.8 average (20 g load).} \emph{D(meas.) = n.d.} \emph{D(calc.) = 8.160}


Cell Data: \emph{Space Group:} I4/mmm. \( a = 3.9591(5) \) \( c = 22.6897(3) \) \( Z = 1 \)

X-ray Powder Pattern: Kombat mine, Grootfontein district, Otjozondjupa region, Namibia. 2.794 (100), 2.979 (86), 1.988 (49), 1.649 (46), 3.501 (31), 1.992 (26), 2.833 (25)

Chemistry: \( \begin{array}{ccc} \text{SiO}_2 & 0.45 & \text{V}_2\text{O}_5 & 1.95 & \text{MoO}_3 & 2.41 \\ \text{PbO} & 91.64 & \text{Cl} & 4.16 & \text{-O} = \text{Cl} & 0.94 \\ \text{Total} & 99.67 & \text{Cl} & 4.11 & \text{O} & 0.93 \\ \end{array} \) \( \begin{array}{ccc} \end{array} \) \( \begin{array}{ccc} \end{array} \)

(1) Kombat mine, Grootfontein district, Otjozondjupa region, northern Namibia; average of 7 electron microprobe analyses, supplemented by IR spectroscopy; corresponds to \( \text{Pb}_{7.20}\text{V}^{5+0.30}\text{Mo}^{4+0.28}\text{Si}_{0.13}\text{Cl}_{2.06}\text{O}_{8.25} \). (2) \( \text{Pb}_7\text{V}^{5+}(\text{O}_{8.5}\square_{0.5})\text{Cl}_2 \).

Occurrence: A product of the regional metamorphism of a Pb-Mn-(As-Ba)-rich, chemically heterogeneous, volcanic-hydrothermal assemblage.

Association: Barite, hausmannite, calcite, magnesite, kombatite.

Distribution: From the Kombat mine, Grootfontein district, Otjozondjupa region, northern Namibia.

Name: Honors Macedonian mineralogist Simeon Janchev (b. 1942), a specialist in the mineralogy and petrology of igneous rocks and metasomatic ore deposits.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (5105/1).