Crystal Data: Monoclinic. \textit{Point Group}: \textit{m}. Platy crystals, to about 2 mm, slightly elongated.


\[ \alpha > 2.03 \quad \beta > 2.03 \quad \gamma > 2.03 \quad 2V(\text{meas.}) = \text{n.d.} \]

\[ R_{1} - R_{2}: (434) \quad 24.5–19.0, \quad (460) \quad 22.5–17.6, \quad (486) \quad 21.5–16.4, \quad (500) \quad 21.5–16.2, \quad (546) \quad 20.2–15.8, \quad (590) \quad 20.3–15.6, \quad (656) \quad 18.2–13.4 \]

Cell Data: \textit{Space Group}: \textit{Im}. \[ a = 4.871(1) \quad b = 15.098(3) \quad c = 5.433(1) \quad \beta = 98.86(2)^{\circ} \quad Z = 2 \]

X-ray Powder Pattern: Kelyana mine, Russia. 3.88 (10), 3.33 (8), 2.69 (6), 2.63 (5), 2.552 (5), 1.931 (3.5), 3.47 (3b)

Chemistry:

\[ \begin{array}{cccc}
\text{Hg} & 77.25 & 77.57 & 77.3 \\
\text{Sb} & 11.53 & 11.93 & 12.1 \\
\text{O} & 9.88 & 9.67 & 9.38 \\
\text{H} & 0.30 & & \\
\hline
\text{Total} & 98.66 & 99.17 & 100.00 \\
\end{array} \]

(1) Kelyana mine, Russia; by electron microprobe, Hg average of 24 analyses, Sb average of 13 analyses, O average of five analyses; Cu, As, Cl, S absent; corresponding to Hg\textsubscript{4.03}Sb\textsubscript{1.00}O\textsubscript{6.47}.

(2) Khaydarkan, Kyrgyzstan; by electron microprobe, Hg average of 15 analyses, Sb average of 10 analyses, O average of seven analyses; corresponding to Hg\textsubscript{4.09}Sb\textsubscript{1.04}O\textsubscript{6.38}.

(3) Landsberg, Germany; by electron microprobe, presence of (OH)\textsuperscript{−} confirmed by IR. (4) Hg\textsubscript{4}SbO\textsubscript{3}(OH)\textsubscript{3}.

Occurrence: A late-stage secondary mineral in the oxidation zone of cinnabar-stibnite ore (Kelyana mine, Russia); in the oxidation zone of cinnabar-livingstonite ore (Khaydarkan, Kyrgyzstan); in oxidized Hg–Sb-bearing tetrahedrite ore (Landsberg, Germany).

Association: Calomel, eglestonite, mercury, montroydite, terlinguaite, corderoite, kelyanite, kuznetsovite, antimony oxides (Kelyana mine, Russia); calomel, cinnabar, mercury, malachite, goethite (Landsberg, Germany).

Distribution: In the Kelyana Sb–Hg mine, North Muya Mountains, Buryatia, Transbaikal, Siberia, Russia. From the Khaydarkan deposit, Fergana Valley, Alai Range, south Kyrgyzstan. At Landsberg, near Obermoschel, and Stahlberg, Rhineland-Palatinate, Germany.

Name: To honor Feliks Nikolaevich Shakhov (1894–1971), Head of the Division of Geochemistry of the Russian Academy of Sciences, Novosibirsk, Russia.

Type Material: Central Siberian Geological Museum, Siberian Division, Academy of Sciences, Novosibirsk, BII-30/1; Mining Institute, St. Petersburg, 1212/1–2; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 81603.

References: (1) Vasil’ev, V.I., Y.G. Lavrent’ev, and N.A. Pal’chik (1980) Shakhovite – Hg\textsubscript{4}Sb\textsubscript{2}O\textsubscript{13} – a new supergene mineral. Geol. i Geofiz., 128–132 (in Russian with English abs.).


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