Queitite  \( \text{Pb}_4\text{Zn}_2(\text{SiO}_4)(\text{Si}_2\text{O}_7)(\text{SO}_4) \)

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Crystal Data: Monoclinic. Point Group: 2. Crystals tabular on \{001\} and elongated along [010], dominant forms \{012\}, \{110\}, \{101\}, to 1.5 cm. Twinning: On \{100\} and \{001\}.

Physical Properties: Cleavage: \{010\} and \{001\}, observed in traces. Hardness \( \sim 4 \).

D(meas.) = n.d. D(calc.) = 6.07


Optical Class: Biaxial (+) (probable). Orientation: \( X = b; Z \approx a \).

Dispersion: \( r < v \), strong. 
\[ \alpha = 1.899(4) \quad \beta = 1.901 \quad \gamma = 1.903(4) \quad 2V(\text{meas.}) = \sim 90^\circ \]

Cell Data: Space Group: \text{P}2_1. \( a = 11.362(2) \quad b = 5.266(1) \quad c = 12.655(3) \)

\[ \beta = 108.16(2)^\circ \quad Z = 2 \]

X-ray Powder Pattern: Tsumeb, Namibia.
3.18 (100), 1.635 (80), 1.490 (60), 1.486 (60), 3.77 (50), 3.59 (50), 2.99 (50)

Chemistry:

\[
\begin{array}{ccc}
\text{SiO}_2 & 14.33 & 14.52 \\
\text{ZnO} & 12.37 & 12.97 \\
\text{PbO} & 67.10 & 66.71 \\
\text{SO}_3 & 6.06 & 6.04 \\
\text{Total} & 99.86 & 100.24 \\
\end{array}
\]

(1–2) Tsumeb, Namibia; by electron microprobe, with traces of Fe, Ca, Mg; the average corresponds to \( \text{Pb}_{3.87}\text{Zn}_{2.01}\text{Si}_{3.10}\text{O}_{11}(\text{S}_{0.98}\text{O}_4) \).

Occurrence: On corroded sulfides in a partially oxidized lead ore from a dolostone-hosted hydrothermal polymetallic ore deposit (Tsumeb, Namibia); with other oxidized Pb-Cu minerals in a vug in quartz from a hydrothermal Pb-Zn-Cu ore deposit (Red Gill mine, England).

Association: Galena, sphalerite, tennantite, willemite, melanotekite, leadhillite, alamosite, larsenite, quartz (Tsumeb, Namibia); cerussite, leadhillite, susannite, caledonite, quartz (Red Gill mine, England).


Name: For Clive Sedric Queit, mineral dealer of Tsumeb, Namibia.

Type Material: University of Stuttgart, Stuttgart, Germany, NM03; Harvard University, Cambridge, Massachusetts, 117115; National Museum of Natural History, Washington, D.C., USA, 143780, 147463.


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