Otjisumeite $PbGe_4O_9$

Crystal Data: Triclinic, pseudohexagonal. *Point Group:* 1 or $\overline{1}$. In sprays of subparallel pseudohexagonal crystals, elongated along [001], to 1 mm; may be fibrous.

Physical Properties: *Cleavage:* {001}, interrupted. Hardness = ∼3 D(meas.) = n.d. D(calc.) = 5.77

Optical Properties: Transparent to translucent. *Color:* Colorless to white. *Streak:* White. *Luster:* Greasy to subadamantine.
Optical Class: Biaxial (+). *Orientation:* $X \wedge c = 3°–5°$. $\alpha = 1.920(5)$ $\beta = [1.922]$ $\gamma = 1.943(5)$ 2V(meas.) = 20(5)°

Cell Data: *Space Group:* $P1$ or $P\overline{1}$. $a = 6.945(12)$ $b = 6.958(11)$ $c = 9.279(6)$ $\alpha = 102.94(10)°$ $\beta = 103.05(11)°$ $\gamma = 114.77(12)°$ Z = 2

X-ray Powder Pattern: Tsumeb, Namibia.
2.95 (10), 3.41 (5), 2.22 (5), 4.20 (4), 1.847 (4), 1.782 (4), 5.87 (3)

Chemistry:

	(1)
GeO_2	64.7
PbO	35.5
Total	100.2

(1) Tsumeb, Namibia; by electron microprobe, corresponding to $Pb_{1.03}Ge_{3.99}O_9$.

Occurrence: In cavities in oxidized germanium-bearing sulfides in a dolostone-hosted hydrothermal polymetallic ore deposit.

Association: Tennantite, germanite, reniérite, chalcocite, schaurteite, siderite, calcite, quartz, gypsum.

Distribution: From Tsumeb, Namibia.

Name: From *Otjisume*, the Herero name for Tsumeb, Namibia.

Type Material: University of Stuttgart, Stuttgart, Germany, NM06; National Museum of Natural History, Washington, D.C., USA, 149053.

References: (1) Keller, P., H. Hess, and P.J. Dunn (1981) Otjisumeit, $PbGe_4O_9$, ein neues Mineral aus Tsumeb, Namibia. Neues Jahrb. Mineral., Monatsh., 49–55 (in German with English abs.). (2) (1987) Amer. Mineral., 72, 1026–1027 (abs. ref. 1).