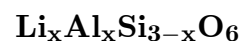


Virgilite



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Crystal Data: Hexagonal. *Point Group:* 622. Rarely as euhedral crystals, to 50 μm , displaying a hexagonal dipyrmaid and prism. As irregular rosette-shaped fibrous overgrowths on other minerals.

Physical Properties: Hardness = n.d. VHN = 681–722 D(meas.) = n.d. D(calc.) = 2.46

Optical Properties: Transparent. *Color:* Colorless.

Optical Class: Uniaxial (-). $n = 1.520$

Cell Data: *Space Group:* $P6_222$ or $P6_422$. $a = 5.132(1)$ $c = 5.454(1)$ $Z = [1]$

X-ray Powder Pattern: Macusani, Peru.

3.441 (100), 1.870 (25), 4.442 (13), 1.605 (9), 1.408 (9), 2.567 (6), 2.224 (6)

Chemistry:

	(1)
SiO ₂	77.29
Al ₂ O ₃	16.57
FeO	0.64
Li ₂ O	4.93
Cl	0.0
P ₂ O ₅	0.57
Total	100.0

(1) Macusani, Peru; by electron microprobe and laser spectrograph; traces of TiO₂, MnO, MgO, CaO, Na₂O, K₂O, F; corresponds to $\text{Li}_{0.61}(\text{Si}_{1.37}\text{Al}_{0.60}\text{Fe}_{0.02}\text{P}_{0.01})_{\Sigma=2.00}\text{SiO}_6$.

Occurrence: As inclusions in stream cobbles of peraluminous volcanic glass.

Association: Quartz, andalusite, sillimanite, potassic feldspar, biotite, spinel.

Distribution: From near Macusani, Puno Department, Peru.

Name: In honor of Professor Virgil Everett Barnes (1903–), University of Texas, Austin, Texas, USA, prominent worker on tektites, impactites, and other natural glasses.

Type Material: National Museum of Natural History, Washington, D.C., USA, Meteorite Collection, 2143-17.

References: (1) French, B.M., P.A. Jezek, and D.E. Appleman (1978) Virgilite: a new lithium aluminum silicate mineral from the Macusani glass, Peru. *Amer. Mineral.*, 63, 461–465.