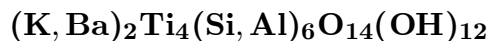


Lourenswalsite

©2001 Mineral Data Publishing, version 1.2

Crystal Data: Pseudo-hexagonal. *Point Group:* n.d. As very thin hexagonal flakes, forming tiny rosettelike clusters, to 1 mm.

Physical Properties: *Cleavage:* {001}, good. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = n.d. $D(\text{meas.}) = 3.17(2)$ $D(\text{calc.}) = 3.199(5)$

Optical Properties: Translucent. *Color:* Light brownish to silver-gray. *Luster:* Pearly to dull.

Optical Class: Biaxial (-). $\alpha = 1.815(2)$ $\beta = \sim 1.840$ $\gamma = 1.840(2)$ $2V(\text{meas.}) = \sim 0^\circ$

Cell Data: *Space Group:* n.d. $a = 5.244(2)$ $c = 20.49(3)$ $Z = 1$

X-ray Powder Pattern: Diamond Jo quarry, Arkansas, USA.

2.608 (100), 1.515 (80), 1.3111 (25), 10.22 (20), 3.93 (20), 2.249 (16), 4.08 (15)

Chemistry:

	(1)
SiO ₂	28.20
TiO ₂	28.73
Al ₂ O ₃	5.37
Fe ₂ O ₃	6.18
MgO	1.57
CaO	0.81
BaO	11.69
Na ₂ O	0.00
K ₂ O	5.82
H ₂ O	[11.63]
Total	[100.00]

(1) Diamond Jo quarry, Arkansas, USA; by electron microprobe, total Fe as Fe₂O₃, H₂O by difference; corresponds to $(\text{K}_{1.16}\text{Ba}_{0.72})_{\Sigma=1.88}(\text{Ti}_{3.38}\text{Mg}_{0.37}\text{Ca}_{0.14}\text{Fe}_{0.13})_{\Sigma=4.02}(\text{Si}_{4.41}\text{Al}_{0.99}\text{Fe}_{0.60})_{\Sigma=6.00}[\text{O}_{19.94}(\text{H}_2\text{O})_{6.06}]_{\Sigma=26.00}$.

Occurrence: A secondary mineral formed during weathering, in vugs and miarolitic cavities in a titaniferous nepheline syenite.

Association: Labuntsovite, delindeite, pectolite, barite, pyroxene, titanite, sphalerite, potassic feldspar.

Distribution: In the Diamond Jo quarry, Magnet Cove, Hot Spring Co., Arkansas, USA.

Name: In honor of Dr. Lourens Wals, mineral collector of Turnhout, Belgium.

Type Material: n.d.

References: (1) Appleman, D.E., H.T. Evans, Jr., G.L. Nord, E.J. Dwornik, and C. Milton (1987) Delindeite and lourenswalsite, two new titanosilicates from the Magnet Cove region, Arkansas. *Mineral. Mag.*, 51, 417–425. (2) (1988) *Amer. Mineral.*, 73, 1493–1494 (abs. ref. 1).