

**Crystal Data:** Triclinic. *Point Group:*  $\bar{1}$ . As densely packed, radiating, platy micaceous aggregates to 1 cm.

**Physical Properties:** *Cleavage:* Perfect on {001}. *Fracture:* n.d. *Tenacity:* Sectile, brittle. Hardness = 3 D(meas.) = 2.50(3) D(calc.) = 2.489

**Optical Properties:** Transparent to translucent. *Color:* Colorless to white. *Streak:* White. *Luster:* Vitreous to pearly. *Optical Class:* Biaxial (+).  $\alpha = 1.518(2)$   $\beta = 1.522(2)$   $\gamma = 1.546(2)$   $2V(\text{meas.}) = 33.9(6)^\circ$   $2V(\text{calc.}) = 45^\circ$  *Dispersion:*  $r < v$ , weak. *Orientation:*  $Z \wedge c^* = 10^\circ$ . Intense light blue fluorescence under SW UV.

**Cell Data:** *Space Group:*  $P\bar{1}$ .  $a = 9.6265(5)$   $b = 9.6391(5)$   $c = 15.6534(10)$   $\alpha = 100.89(1)^\circ$   $\beta = 91.27(1)^\circ$   $\gamma = 119.73(1)^\circ$   $Z = 1$

**X-ray Powder Pattern:** Wessels Mine (Block 17), Kalahari Manganese Field, South Africa. 15.230 (100), 3.807 (30), 5.080 (25), 3.045 (20), 8.290 (15), 7.000 (10), 3.146 (10)

Chemistry:	(1)	(2)
Na <sub>2</sub> O	3.06	3.373
K <sub>2</sub> O	0.11	
CaO	18.61	18.314
SiO <sub>2</sub>	54.91	52.325
SrO	11.75	11.280
H <sub>2</sub> O	n.d.	14.708
Total	88.44	100.000

(1) Wessels Mine (Block 17), Kalahari Manganese Field, South Africa; average of 14 electron microprobe analyses supplemented by Raman spectroscopy and TGA; corresponds to Sr<sub>1.99</sub>K<sub>0.02</sub>Ca<sub>5.81</sub>Na<sub>1.73</sub>Si<sub>16</sub>O<sub>55.84</sub>H<sub>30.33</sub>. (2) SrCa<sub>3</sub>Na(Si<sub>4</sub>O<sub>10</sub>)<sub>2</sub>(OH)(H<sub>2</sub>O)<sub>7</sub>.

**Occurrence:** Formed by metasomatic alteration of a carbonate-rich manganese deposit.

**Association:** Manganoan richterite, manganoan sugilite, lizardite, pectolite.

**Distribution:** At the Wessels Mine (Block 17), Kalahari Manganese Field, North Cape Province, South Africa.

**Name:** Honors Bruce Cairncross, Professor and Head of the Department of Geology, University of Johannesburg, South Africa for his contributions to the mineralogy of the southern African region, particularly the Kalahari Manganese Field.

**Type Material:** Institute for Mineralogy and Crystallography, University of Vienna (13079) and the Museum of Natural History, Vienna, Austria (N 9858).

**References:** (1) Giester, G., C.L. Lengauer, H. Pristacz, B. Rieck, D. Topa, and K.-L. Von Bezing (2016) Cairncrossite, a new Ca-Sr (-Na) phyllosilicate from the Wessels Mine, Kalahari Manganese Field, South Africa. *Eur. J. Mineral.*, 28(2), 495-505. (2) (2016) *Amer. Mineral.*, 101, 2778-2779 (abs. ref. 1).