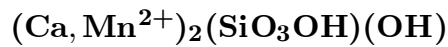


**Poldervaartite**

©2001 Mineral Data Publishing, version 1.2

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . Crystals are prismatic, with {110}, {100}, {010}, and {001}, to 7 mm; aggregates in sheaves.

**Physical Properties:** *Tenacity:* Very brittle. Hardness = 5 D(meas.) = 2.91(2)  
D(calc.) = 2.90 Fluoresces deep red under SW UV.

**Optical Properties:** Transparent to translucent. *Color:* Colorless to white. *Streak:* [White.]  
*Luster:* Vitreous on fractures to subvitreous on crystal faces.  
*Optical Class:* Biaxial (+). *Pleochroism:* Weak; X = colorless; Y = light gray; Z = bluish gray.  
*Orientation:* X = b; Y = a; Z = c. *Dispersion:*  $r < v$ , weak.  $\alpha = 1.634(2)$   $\beta = 1.640(4)$   
 $\gamma = 1.656(2)$   $2V(\text{meas.}) = 65(5)^\circ$   $2V(\text{calc.}) = 63^\circ$

**Cell Data:** *Space Group:*  $Pbca$ .  $a = 9.398(1)$   $b = 9.139(2)$   $c = 10.535(2)$   $Z = 8$

**X-ray Powder Pattern:** Wessels mine, South Africa.  
3.231 (100), 4.18 (45), 2.846 (42), 2.391 (42), 2.789 (35), 2.042 (28), 3.27 (26)

<b>Chemistry:</b>	(1)
	SiO <sub>2</sub> 29.8
	FeO 0.1
	MnO 18.7
	MgO 0.0
	CaO 41.5
	H <sub>2</sub> O <sup>+</sup> 9.4
	<hr/>
	Total 99.5

(1) Wessels mine, South Africa; by electron microprobe, H<sub>2</sub>O by TGA; corresponds to  $(\text{Ca}_{1.47}\text{Mn}_{0.53})_{\Sigma=2.00}\text{Si}_{0.99}\text{O}_{3.96} \cdot 1.04\text{H}_2\text{O}$ .

**Occurrence:** In a pocket in massive manganese ores in a bedded manganese ore deposit.

**Association:** Braunite, hausmannite, henritermierite, bultfonteinite, hematite, calcite.

**Distribution:** In the Wessels mine, near Kuruman, Cape Province, South Africa.

**Name:** To honor Arie Poldervaart (1918–1964), Professor of Petrology, Columbia University, New York City, New York, USA.

**Type Material:** American Museum of Natural History, New York, New York, USA, T100728.

**References:** (1) Dai, Y., G.E. Harlow, and A.R. McGhie (1993) Poldervaartite,  $\text{Ca}(\text{Ca}_{0.5}\text{Mn}_{0.5})(\text{SiO}_3\text{OH})(\text{OH})$ , a new acid nesosilicate from the Kalahari manganese field, South Africa: crystal structure and description. *Amer. Mineral.*, 78, 1082–1087.