

**Crystal Data:** Tetragonal. *Point Group:*  $4/m\ 2/m\ 2/m$ . In massive crusts.

**Physical Properties:** Hardness = n.d.  $D(\text{meas.}) = \text{n.d.}$   $D(\text{calc.}) = [6.40]$

**Optical Properties:** Semitransparent. *Color:* Black.

*Optical Class:* Uniaxial.  $\omega = \text{n.d.}$   $\epsilon = \text{n.d.}$

**Cell Data:** *Space Group:*  $P4/mmm$  (synthetic).  $a = 3.802$   $c = 4.836$   $Z = 2$

**X-ray Powder Pattern:** Boundary Falls, Canada.

2.98 (10), 1.601 (9), 1.799 (7), 2.679 (6), 1.491 (6b)

**Chemistry:** (1) Boundary Falls, Canada; X-ray spectrographic analysis detected only tin and a trace of iron.

**Occurrence:** As an alteration product on tin pannikins immersed in a river (Boundary Falls, Canada); replacing herzenbergite replacing cassiterite (Maria-Teresa mine, Bolivia); on tin ingots from the cargo of a ship wrecked in a Red Sea cove (Sharm Abhur, Saudi Arabia).

**Association:** Hydroromarchite (Boundary Falls, Canada); abhurite, kutnohorite, aragonite (Sharm Abhur, Saudi Arabia).

**Distribution:** At Boundary Falls, Winnipeg River, Ontario, Canada, where tin pannikins had been dropped by a voyageur between 1801 and 1821. From the Maria-Teresa mine, near Huari, between Oruro and Uyuni, Bolivia. In a cove of the Red Sea known as Sharm Abhur, about 30 km north of Jiddah, Saudi Arabia.

**Name:** For the Royal Ontario Museum ARChEology Department.

**Type Material:** Royal Ontario Museum, Toronto, Canada, M28744.

**References:** (1) Organ, R.M. and J.A. Mandarino (1971) Romarchite and hydroromarchite, two new stannous minerals. *Can. Mineral.*, 10, 916 (abs.). (2) (1972) *Amer. Mineral.*, 57, 1555–1556 (abs. ref. 1).