

**Crystal Data:** Tetragonal. *Point Group:* 4/m 2/m 2/m. Crystals, prismatic and striated || [001], showing {100}, {110}, {111}, {132}, {012}, and several other forms, to 1 mm.

**Physical Properties:** *Cleavage:* {110}, perfect; {100}, very good; {001}, trace. Hardness = 3.5 D(meas.) = 4.3 D(calc.) = [5.24]

**Optical Properties:** Opaque, translucent in thin fragments. *Color:* Red to red-brown; yellow in transmitted light. *Streak:* Brown. *Luster:* Metallic.

*Optical Class:* Uniaxial (+); weak birefringence. *Pleochroism:* E = brownish yellow; O = straw-yellow.  $\omega = > 1.74$   $\epsilon = \text{n.d.}$

**Cell Data:** *Space Group:* P4<sub>2</sub>/mbc. *a* = 8.590(5) *c* = 5.913(5) *Z* = 4

**X-ray Powder Pattern:** Pernek, Slovakia.

1.050 (125), 1.014 (125), 1.670 (100), 1.309 (60), 1.158 (60), 3.22 (50), 3.04 (50)

**Chemistry:**

	(1)	(2)
As <sub>2</sub> O <sub>3</sub>	9.72	
Sb <sub>2</sub> O <sub>3</sub>	67.95	80.23
FeO	17.58	19.77
ZnO	1.10	
Total	96.35	100.00

(1) Buca della Vena mine, Italy; by electron microprobe, total Fe as FeO, Sb as Sb<sub>2</sub>O<sub>3</sub>, As as As<sub>2</sub>O<sub>3</sub>; corresponds to (Fe<sub>0.88</sub>Zn<sub>0.05</sub>)<sub>Σ=0.93</sub>(Sb<sub>1.69</sub>As<sub>0.36</sub>)<sub>Σ=2.05</sub>O<sub>4</sub>. (2) FeSb<sub>2</sub>O<sub>4</sub>.

**Occurrence:** In oxidized antimony-bearing hydrothermal mineral deposits.

**Association:** Kermesite, valentinite, sénarmontite, stibnite, calcite (Pernek, Slovakia); apuanite, versiliaite, derbylite, bournonite, pyrite, sphalerite (Buca della Vena mine, Italy).

**Distribution:** From Pernek, near Pezinok, Slovakia. In the Buca della Vena iron mine, north of Stazzema, Apuan Alps, Tuscany, Italy. From Canada, in the Lac Nicolet mine, South Ham, Quebec.

**Name:** To honor Professor Ferenc Schafarzik (1854–1927), Hungarian mineralogist, of the Polytechnic, Budapest, Hungary.

**Type Material:** University of Vienna, Vienna, Austria.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 1035–1036. (2) Zemann, J. (1951) Formel und Kristallstruktur des Schafarzikits. *Tschermaks Mineral. Petrog. Mitt.*, 2, 166–175 (in German). (3) Fischer, R. and F. Pertlik (1975) Verfeinerung der Kristallstruktur des Schafarzikits, FeSb<sub>2</sub>O<sub>4</sub>. *Tschermaks Mineral. Petrog. Mitt.*, 22, 236–241 (in German with English abs.). (4) Mellini, M., M. Amouric, A. Baronnet, and G. Mercuriot (1981) Microstructures and nonstoichiometry in schafarzikite-like minerals. *Amer. Mineral.*, 66, 1073–1079.