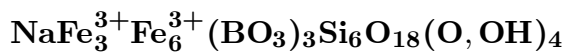


Povondraite

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Crystal Data: Hexagonal. *Point Group:* $3m$. Equant but distorted prisms, terminated by trigonal pyramids, in subparallel aggregates, to several mm.

Physical Properties: *Fracture:* Uneven to conchoidal. *Tenacity:* Brittle. Hardness = ~ 7
D(meas.) = 3.26(3) D(calc.) = 3.33

Optical Properties: Nearly opaque. *Color:* Black. *Streak:* Brown. *Luster:* Resinous, more or less splendent.

Optical Class: Uniaxial (-). *Pleochroism:* Strong; O = yellow-brown, dark brown, brown-black; E = dark red-brown, light brown. $\omega = 1.800\text{--}1.820$ $\epsilon = 1.743\text{--}1.751$

Cell Data: *Space Group:* $R3m$. $a = 16.186(2)$ $c = 7.444(1)$ $Z = 3$

X-ray Powder Pattern: San Francisco mine, Bolivia.
2.63 (10), 6.63 (9), 4.05 (9), 3.05 (9), 3.61 (8), 5.13 (7), 4.71 (7)

Chemistry:

	(1)
SiO ₂	30.7
TiO ₂	0.0
B ₂ O ₃	[9.0]
Al ₂ O ₃	1.4
Fe ₂ O ₃	45.0
V ₂ O ₃	trace
FeO	1.7
MgO	6.5
K ₂ O	1.0
Na ₂ O	2.1
H ₂ O	[2.4]
Total	[99.8]

(1) San Francisco mine, Bolivia; by electron microprobe, $\text{Fe}^{2+}:\text{Fe}^{3+}$ and B_2O_3 calculated from stoichiometry, H_2O from charge balance; corresponds to $(\text{Na}_{0.80}\text{K}_{0.26})_{\Sigma=1.06}(\text{Fe}_{2.28}^{3+}\text{Mg}_{0.53}\text{Fe}_{0.27}^{2+})_{\Sigma=3.08}(\text{Fe}_{4.29}^{3+}\text{Mg}_{1.36}\text{Al}_{0.32})_{\Sigma=5.97}(\text{BO}_3)_3\text{Si}_{5.96}\text{O}_{18}[(\text{OH})_{3.12}\text{O}_{0.99}]_{\Sigma=4.00}$.

Mineral Group: Tourmaline group.

Occurrence: Very rare, in fractures and lining cavities in schist metamorphosed from sedimentary rocks.

Association: Quartz, potassic feldspar, muscovite, schorl, riebeckite, magnesite.

Distribution: In the San Francisco mine, near Villa Tunari, Alto Chapare, Cochabamba, Bolivia.

Name: For Dr. Pavel Povondra, Charles University, Prague, Czech Republic, in recognition of work on the chemistry of the tourmaline group.

Type Material: Royal Ontario Museum, Toronto, Canada, M35899; National Museum of Natural History, Washington, D.C., USA, 144478.

References: (1) Grice, J.D., T.S. Ercit, and F.C. Hawthorne (1993) Povondraite, a redefinition of the tourmaline ferridravite. *Amer. Mineral.*, 78, 433–436. (2) Walenta, K. and P.J. Dunn (1979) Ferridravite, a new mineral of the tourmaline group from Bolivia. *Amer. Mineral.*, 64, 945–948.