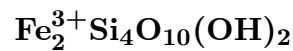


Ferripyrophyllite



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Crystal Data: [Monoclinic] (by analogy to pyrophyllite). *Point Group:* [2/m.] Fine-scaly, granular, compact.

Physical Properties: *Tenacity:* Waxy. *Hardness* = 1.5–2 *D(meas.)* = 2.97–3.01 *D(calc.)* = [3.05]

Optical Properties: Semitransparent. *Color:* Brownish yellow. *Optical Class:* Biaxial. *Pleochroism:* *X* = *Y* = greenish; *Z* = bright yellow. $\alpha = 1.650\text{--}1.660$ $\beta = 1.676\text{--}1.678$ $\gamma = 1.686\text{--}1.688$ *2V(meas.)* = Small.

Cell Data: *Space Group:* n.d. *a* = 5.26 *b* = 9.10 *c* = 19.1 $\beta = 95^\circ 30'$ *Z* = [4]

X-ray Powder Pattern: The Strassenschacht, Germany. 4.54 (10), 9.6 (8), 1.518 (8), 3.17 (7), 2.62 (4), 2.47 (4), 1.725 (3)

Chemistry: (1) The Strassenschacht, Germany; by electron microprobe, analysis not given, stated to correspond to $\text{Fe}_{1.96}^{3+}\text{Mg}_{0.11}\text{Ca}_{0.05}(\text{Si}_{3.80}\text{Al}_{0.13}\text{Fe}_{0.07}^{3+})_{\Sigma=4.00}\text{O}_{10}(\text{OH})_2 \cdot \text{H}_2\text{O}$. (2) Mt. Tologay, Kazakhstan; by electron microprobe, analysis not given, stated to correspond to $\text{Fe}_{1.97}^{3+}\text{Ca}_{0.18}(\text{Na}, \text{K})_{0.03}\text{Mg}_{0.02}(\text{Si}_{3.74}\text{Al}_{0.23})_{\Sigma=3.97}\text{O}_{10}(\text{OH})_2 \cdot 1.5\text{H}_2\text{O}$.

Polymorphism & Series: [Isostructural with the 2M modification of pyrophyllite.]

Occurrence: Found on museum specimens.

Association: n.d.

Distribution: From the Strassenschacht hematite deposit, south of Eibenstock, Saxony, Germany. At the Tulagai Pb–Cu deposit, near Akchatau, Kazakhstan.

Name: Presumably for its FERRIc iron content and relation to *pyrophyllite*.

Type Material: Moscow University, Moscow; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 79071, vis5430, 5431.

References: (1) Chukhrov, F.V., B.B. Svyagin, V.A. Drits, A.I. Gorshkov, L.P. Ermilova, E.A. Goilo, and E.S. Rudnitskaya (1979) On ferripyrophyllite and related phases. *Izv. Akad. Nauk SSSR, Ser. Geol.* 2, 5–20 (in Russian). (2) (1979) *Chem. Abs.*, 91, 24056 (abs. ref. 1). (3) Tschuchrow [Chukhrov], F.W., B.B. Swjagin [Svyagin], W.A. Driz [Drits], A.I. Gorschkow [Gorshkov], L.P. Jermilowa [Ermilova], E.A. Goilo, and E.S. Rudnizkaja [Rudnitskaya] (1979) Über Ferripyrophyllit. *Chem. Erde*, 38, 324–330 (in German). (4) (1980) *Mineral. Abs.*, 31, 355–356 (abs. ref. 3).