**Ferripyrophyllite**

\[ \text{Fe}_2^{3+}\text{Si}_4\text{O}_{10}(\text{OH})_2 \]

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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  
\[ \text{D(meas.)} = 2.97–3.01 \]
\[ \text{D(calc.)} = [3.05] \]

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

**Cell Data:**  
Space Group: n.d.  
\[ a = 5.26 \quad b = 9.10 \quad c = 19.1 \quad \beta = 95°30' \quad \text{Z} = [4] \]

**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 \[\text{Fe}^{3+}_{1.96}\text{Mg}_{0.11}\text{Ca}_{0.05}(\text{Si}_{3.80}\text{Al}_{0.13}\text{Fe}^{3+}_{0.07})\Sigma=4.00\text{O}_{10}(\text{OH})_2\cdot\text{H}_2\text{O}. \]
(2) Mt. Tologay, Kazakhstan; by electron microprobe, analysis not given, stated to correspond to \[\text{Fe}^{3+}_{1.97}\text{Ca}_{0.18}(\text{Na},\text{K})_{0.03}\text{Mg}_{0.02}(\text{Si}_{3.74}\text{Al}_{0.23})\Sigma=3.97\text{O}_{10}(\text{OH})_2\cdot1.5\text{H}_2\text{O}. \]

**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:**  

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