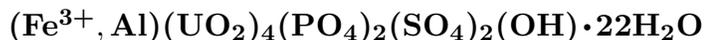


# Xiangjiangite



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**Crystal Data:** Monoclinic or orthorhombic (?); pseudotetragonal. *Point Group:* n.d. Platy crystals, with squarish to octagonal outlines; microcrystalline, in earthy or powdery aggregates.

**Physical Properties:** Hardness = 1–2 D(meas.) = 2.9–3.1 D(calc.) = 2.78 Radioactive.

**Optical Properties:** Semitransparent. *Color:* Yellow to bright yellow; pale yellow in transmitted light. *Streak:* Pale yellow. *Luster:* Silky. *Optical Class:* Biaxial (-). *Pleochroism:* Weak. *Orientation:* Parallel or symmetrical extinction.  $\alpha = 1.558$   $\beta = 1.576$   $\gamma = 1.593$   $2V(\text{meas.}) = \text{n.d.}$

**Cell Data:** *Space Group:* n.d.  $a = 7.17$   $b = 7.17$   $c = 22.22$   $Z = 1$

**X-ray Powder Pattern:** “Hunan, China”.  
11.11 (10), 3.74 (8), 3.294 (8), 2.938 (7), 4.621 (6), 5.58 (5), 2.175 (5)

Chemistry:	(1)
UO <sub>3</sub>	59.96
SO <sub>3</sub>	6.02
P <sub>2</sub> O <sub>5</sub>	8.69
Al <sub>2</sub> O <sub>3</sub>	0.96
Fe <sub>2</sub> O <sub>3</sub>	2.17
CaO	0.28
H <sub>2</sub> O <sup>+</sup>	10.51
H <sub>2</sub> O <sup>-</sup>	11.41
Total	[100.00]

(1) “Hunan, China”; recalculated to 100% after deduction of quartz, pyrite, and insoluble 5.36%, from an original total of 99.16%; corresponds to  $(\text{Fe}_{0.52}\text{Al}_{0.36})_{\Sigma=0.88}\text{Ca}_{0.10}(\text{UO}_2)_{4.00}(\text{PO}_4)_{2.34}(\text{SO}_4)_{1.44}(\text{OH})_{0.95} \cdot 22.79\text{H}_2\text{O}$ .

**Occurrence:** In the oxidized zone of a uranium deposit.

**Association:** Sabugalite, variscite, pyrite, quartz.

**Distribution:** In an unspecified uranium deposit in “Hunan [Province], China”.

**Name:** For the Xiang Jiang (Hsiang Chiang) River, China.

**Type Material:** n.d.

**References:** (1) Hunan 230 Institute and X-ray Laboratory, Wuhan Geologic College (1978) Xiangjiangite – a new uranium mineral discovered in China. *Sci. Geol. Sinica*, 2, 183–188 (in Chinese with English abs.). (2) (1979) *Amer. Mineral.*, 64, 466 (abs. and discussion of ref. 1). (3) (1978) *Mineral. Abs.*, 29, 483 (abs. ref. 1).