

Jixianite**Pb(W, Fe³⁺)₂(O, OH)₇**

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Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. Very rarely as octahedra, to 160 μm ; commonly microcrystalline or granular, in honeycomb and crustlike aggregates.

Physical Properties: Hardness = ~ 3 D(meas.) = 6.04 D(calc.) = 7.89 Weakly magnetic.

Optical Properties: Transparent. *Color:* Red to brownish red; in reflected light, yellowish brown or greenish yellow. *Streak:* Yellow. *Luster:* Resinous, strong. *Optical Class:* Isotropic; may show weak anisotropism. $n = 2.262\text{--}2.315$

Cell Data: *Space Group:* $Fd\bar{3}m$. $a = 10.3594(6)$ $Z = 8$

X-ray Powder Pattern: Jixian, China.

2.982 (10), 1.833 (8), 1.562 (7), 2.585 (6), 5.97 (5), 1.189 (5), 1.159 (5)

Chemistry:

	(1)	(2)
WO ₃	50.39	50.13
MoO ₃	0.01	
Fe ₂ O ₃	6.53	
FeO	0.71	8.86
CuO	0.27	trace
PbO	38.72	40.15
MgO	0.20	
H ₂ O ⁺	3.68	
Total	100.51	99.14

(1) Jixian, China; after deduction of wulfenite, corresponds to $(\text{Pb}_{1.14}\text{Fe}_{0.07}^{2+}\text{Cu}_{0.02})_{\Sigma=1.23}(\text{W}_{1.43}\text{Fe}_{0.54}^{3+}\text{Mg}_{0.03})_{\Sigma=2.00}[\text{O}_{6.00}(\text{OH})_{0.72}]_{\Sigma=6.72} \cdot 0.98\text{H}_2\text{O}$. (2) Do.; by electron microprobe, total Fe as FeO.

Occurrence: In the oxidized zone of hypothermal to mesothermal tungsten-bearing quartz veins peripheral to a quartz monzonite stock.

Association: Bismuthinite, quartz, wolframite, cassiterite, pyrite, chalcopyrite, scheelite, wulfenite, stolzite, silver, copper.

Distribution: In the Pan-shan stock, Jixian, Hebei Province, China.

Name: For the locality at Jixian, China.

Type Material: The Geological Museum, State Bureau of Geology, [Beijing], China.

References: (1) Liu Jianchang (1979) Jixianite $\text{Pb}(\text{W}, \text{Fe}^{3+})_2(\text{O}, \text{OH})_7$ – a new tungsten mineral. *Acta Geol. Sinica*, 53, 45–49 (in Chinese with English abs.). (2) (1979) *Amer. Mineral.*, 64, 1330 (abs. ref. 1).