

Strontio-orthojoaquinite $\text{Sr}_2\text{Ba}_2(\text{Na}, \text{Fe}^{2+})_2\text{Ti}_2\text{Si}_8\text{O}_{24}(\text{O}, \text{OH})_2 \cdot \text{H}_2\text{O}$

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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$ or $mm2$. Angular anhedral crystals, up to 2 mm, in spotty aggregates and lenses.

Physical Properties: *Cleavage:* {001} perfect. *Hardness* = 5.5 *D*(meas.) = 3.62
D(calc.) = 3.87

Optical Properties: Semitransparent. *Color:* Yellow.
Optical Class: Biaxial (-). *Pleochroism:* Weak; $X = Y =$ colorless; $Z =$ light yellow.
 $\alpha = 1.707(3)$ $\beta =$ n.d. $\gamma = 1.778(3)$ $2V(\text{meas.}) = 42^\circ\text{--}48^\circ$

Cell Data: *Space Group:* $Pcam$ or $Pca2_1$. $a = 10.517(6)$ $b = 9.777(5)$ $c = 22.392(12)$
 $Z = [4]$

X-ray Powder Pattern: Ohmi, Japan.
2.799 (100), 2.611 (41), 2.966 (36), 4.47 (33), 2.441 (32), 2.239 (31), 5.60 (30)

Chemistry:	(1)		(1)	
	SiO ₂	35.12	MgO	0.03
	TiO ₂	12.48	CaO	trace
	ZrO[sic]	0.19	SrO	5.85
	Al ₂ O ₃	0.27	BaO	31.31
	RE ₂ O ₃	1.12	Na ₂ O	2.74
	Nb ₂ O ₅	1.42	K ₂ O	0.94
	FeO	4.75	H ₂ O ⁺	2.59
	MnO	trace	H ₂ O ⁻	0.47
			Total	[99.28]

(1) Ohmi, Japan; method of analysis not given, original total given as 99.36%; corresponds to $(\text{Ba}_{2.76}\text{Sr}_{0.76}\text{RE}_{0.12}\text{Mg}_{0.01})_{\Sigma=3.65}(\text{Na}_{1.20}\text{Fe}_{0.91}^{3+}\text{Nb}_{0.13}\text{K}_{0.03}\text{Zr}_{0.02})_{\Sigma=2.29}\text{Ti}_{2.13}(\text{Si}_{7.98}\text{Al}_{0.06})_{\Sigma=8.04}\text{O}_{24.66}(\text{OH})_{3.02}$.

Polymorphism & Series: Dimorphous with strontiojoaquinite.

Mineral Group: Joaquinite group.

Occurrence: In an amphibolite-quartz-albitite dike cutting serpentinite.

Association: Benitoite, leucosphenite.

Distribution: At Ohmi, Niigata Prefecture, Japan.

Name: For its *strontium* content, ORTHOgonal crystal system, and relation to *joaquinite*.

Type Material: n.d.

References: (1) Chihara, K., M. Komatsu, and T. Mizota (1974) A joaquinite-like mineral from Ohmi, Niigata Prefecture, Central Japan. *Mineral. J. (Japan)*, 7, 395–399. (2) Wise, W.S. (1982) Strontiojoaquinite and bario-orthojoaquinite: two new members of the joaquinite group. *Amer. Mineral.*, 67, 809–816.