Strontio-orthojoaquinite $Sr_2Ba_2(Na,Fe^{2+})_2Ti_2Si_8O_{24}(O,OH)_2 \cdot H_2O$

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.
$\alpha = 1.707(3)$ β = n.d. $\gamma = 1.778(3)$ 2V(meas.) = 42°–48°

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_2O_3	0.27	BaO	31.31
RE_2O_3	1.12	Na_2O	2.74
Nb_2O_5	1.42	K_2O	0.94
FeO	4.75	H_2O^+	2.59
MnO	trace	H_2O^-	0.47
		Total	[99.28]

(1) Ohmi, Japan; method of analysis not given, original total given as 99.36%; corresponds to $(Ba_{2.76}Sr_{0.76}RE_{0.12}Mg_{0.01})_{\Sigma=3.65}(Na_{1.20}Fe^{3+}_{0.91}Nb_{0.13}K_{0.03}Zr_{0.02})_{\Sigma=2.29}Ti_{2.13}(Si_{7.98}Al_{0.06})_{\Sigma=8.04}O_{24.66}(OH)_{3.02}$.

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.