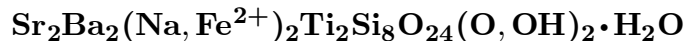


**Strontiojoaquinite**

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**Crystal Data:** Monoclinic, pseudo-orthorhombic. *Point Group:* 2, *m*, or 2/*m*. Crystals pseudotetragonal, steeply dipyrimal, to 0.5 mm, overgrown on joaquinite-(Ce) cores.**Physical Properties:** *Cleavage:* Good on {001}. *Hardness* = 5.5 *D*(meas.) = n.d. *D*(calc.) = 3.68**Optical Properties:** Semitransparent. *Color:* Green, yellow-green, yellow-brown. *Optical Class:* Biaxial (+). *Pleochroism:* Weak; *X* = *Y* = colorless; *Z* = yellow. *Orientation:* *Y* = *b*; *Z* = *c*; *X*  $\wedge$  *a* = 19°. *Dispersion:* *r* > *v*, strong. *Absorption:* *Z* > *X* = *Y*.  $\alpha$  = 1.710(2)  $\beta$  = 1.718(2)  $\gamma$  = 1.780(3) *2V*(meas.) = 35°–45°**Cell Data:** *Space Group:* *P*2, *Pm*, or *P*2/*m*. *a* = 10.516(6) *b* = 9.764(5) *c* = 11.87(1)  $\beta$  = 109° 17(4)' *Z* = 2**X-ray Powder Pattern:** San Benito Co., California, USA. 2.801 (100), 2.967 (72), 3.011 (48), 2.923 (45), 2.611 (42), 4.47 (40), 2.432 (40)

Chemistry:	(1)
SiO <sub>2</sub>	37.54
TiO <sub>2</sub>	12.48
Al <sub>2</sub> O <sub>3</sub>	0.00
RE <sub>2</sub> O <sub>3</sub>	0.20
FeO	4.03
MnO	0.00
CaO	0.00
SrO	16.23
BaO	24.52
Li <sub>2</sub> O	0.03
Na <sub>2</sub> O	2.76
H <sub>2</sub> O	2.1
Total	[99.89]

(1) Mina Numero Uno, California, USA; by electron microprobe, Li, RE, and H<sub>2</sub>O determined using ion microprobe; RE<sub>2</sub>O<sub>3</sub> = Y<sub>2</sub>O<sub>3</sub> 0.00%, La<sub>2</sub>O<sub>3</sub> 0.14%, Ce<sub>2</sub>O<sub>3</sub> 0.003%, Pr<sub>2</sub>O<sub>3</sub> 0.003%, Nd<sub>2</sub>O<sub>3</sub> 0.05%, Sm<sub>2</sub>O<sub>3</sub> 0.00%, Gd<sub>2</sub>O<sub>3</sub> 0.00%, Dy<sub>2</sub>O<sub>3</sub> 0.00%, original total given as 99.85%; corresponds to (Sr<sub>2.00</sub>Ba<sub>0.04</sub>)<sub>Σ=2.04</sub>Ba<sub>2.00</sub>(Na<sub>1.14</sub>Fe<sub>0.72</sub>Li<sub>0.06</sub>)<sub>Σ=1.92</sub>Ti<sub>2.00</sub>Si<sub>8</sub>O<sub>24</sub> [(OH)<sub>1.36</sub>O<sub>0.64</sub>]<sub>Σ=2.00</sub> • 0.81H<sub>2</sub>O.

**Polymorphism & Series:** Dimorphous with strontio-orthojoaquinite.**Mineral Group:** Joaquinite group.**Occurrence:** In a metamorphosed and metasomatized basalt lens in serpentinite (Mina Numero Uno, California, USA); in veins cutting metagraywacke (prospect, San Benito Co., California, USA).**Association:** Joaquinite-(Ce), neptunite, natrolite, albite, actinolite, crossite, benitoite, analcime.**Distribution:** From Mina Numero Uno, south side of Clear Creek; at the Gem mine; and at a prospect about three km southwest of San Benito Mountain, San Benito Co., California, USA.**Name:** For its *strontium* content and its relation to *joaquinite* in contrast to strontio-orthojoaquinite.**Type Material:** University of California, Santa Barbara, California; Harvard University, Cambridge, Massachusetts, 119526; National Museum of Natural History, Washington, D.C., USA, 149429.**References:** (1) Wise, W.S. (1982) Strontiojoaquinite and bario-orthojoaquinite: two new members of the joaquinite group. *Amer. Mineral.*, 67, 809–816.

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