Strontioruizite $Sr_2Mn^{3+}{}_2Si_4O_{11}(OH)_4 \cdot 2H_2O$

Crystal Data: Monoclinic. *Point Group*: 2. As radiating groups or aggregates of acicular or prismatic crystals, with individual crystals to 1.3 mm.

Physical Properties: *Cleavage*: Good on {010}. *Tenacity*: Brittle. *Fracture*: n.d.
Hardness = 5-5.5 D(meas.) = 3.20(2) D(calc.) = 3.16

Optical Properties: Transparent. *Color*: Brown in transmitted light. *Streak*: Very light brown. *Luster*: Vitreous.
Optical Class: Biaxial (-). α = 1.692(2) β = 1.734(2) γ = 1.747(2) 2V(meas.) = 59.1(5)° 2V(calc.) = 56.6° *Dispersion*: *r* > *v*, strong.

Cell Data: *Space Group*: *C*2. *a* = 9.1575(4) *b* = 6.2857(4) *c* = 12.0431(6) β = 91.744(4)° Z = 2

X-ray Powder Pattern: N'Chwaning III mine, Kalahari manganese field, South Africa.
3.143 (100), 2.785 (61), 4.219 (46), 4.762 (42), 4.459 (41), 2.62 (41), 2.972 (39)

Chemistry:

	(1)
SiO_2	36.06
Mn_2O_3	23.15
Fe_2O_3	0.65
SrO	25.17
CaO	3.54
H_2O	[10.85]
Total	99.42

(1) N'Chwaning III mine, Kalahari manganese field, South Africa; average electron microprobe analysis supplemented by Raman spectroscopy, H_2O from structure; corresponds to $(Sr_{1.61}Ca_{0.42})_{\Sigma=2.03}(Mn^{3+}{}_{1.95}Fe^{3+}{}_{0.05})_{\Sigma=2.00}Si_{3.98}O_{11}(OH)_4 \cdot 2H_2O$.

Occurrence: On chemically weathered metamorphosed manganese ore.

Association: Sugilite, potassic-magnesio-arfvedsonite, lipuite.

Distribution: From the N'Chwaning III mine, Kalahari manganese field, Northern Cape province, South Africa.

Name: Prefix, *strontio*, indicates the Sr-dominant analog of *ruizite*.

Type Material: Mineral Museum, University of Arizona, Tucson, USA (21486) and the RRUFF Project (R160085).

References: (1) Yang, H., X. Gu, B. Cairncross, R.T. Downs, and S.H. Evans (2021) Taniajacoite and strontioruizite, two new minerals isostructural with ruizite from the N'Chwaning III mine, Kalahari manganese field, South Africa. Can. Mineral., 59, 431-444.