

# Tausonite

# SrTiO<sub>3</sub>

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**Crystal Data:** Cubic. *Point Group:* 4/m  $\overline{3}$  2/m. Cubes and cubo-octahedra, to 2 mm, and granular, massive.

**Physical Properties:** *Fracture:* Conchoidal. *Tenacity:* Brittle. *Hardness* = 6–6.5  
D(meas.) = 4.88 D(calc.) = 4.83–4.86

**Optical Properties:** Semitransparent. *Color:* Ruby-red, brownish red, dark reddish brown, gray; white in reflected light. *Luster:* Adamantine.

*Optical Class:* Isotropic; may be weakly anisotropic. *n* = 2.40

**Cell Data:** *Space Group:* Pm3m. *a* = 3.905–3.913 *Z* = 1

**X-ray Powder Pattern:** Murun massif, Russia.

2.761 (100), 1.952 (50), 1.5941 (30), 2.254 (18), 1.3805 (15), 1.2346 (10), 1.0436 (10)

Chemistry:	(1)	(2)	(3)	(1)	(2)	(3)
Nb <sub>2</sub> O <sub>5</sub>	trace	0.13		Fe <sub>2</sub> O <sub>3</sub>	1.80	1.22
SiO <sub>2</sub>	5.00	2.20		MnO	0.04	trace
TiO <sub>2</sub>	44.60	43.40	43.53	MgO	0.10	0.11
ZrO <sub>2</sub>	0.00	0.07		CaO	2.36	2.76
Al <sub>2</sub> O <sub>3</sub>	0.70	trace		SrO	42.00	39.26
La <sub>2</sub> O <sub>3</sub>	trace	2.23		BaO	1.60	0.40
Ce <sub>2</sub> O <sub>3</sub>	trace	4.10		Na <sub>2</sub> O	1.22	2.16
Nd <sub>2</sub> O <sub>3</sub>	trace	0.91		K <sub>2</sub> O	0.82	0.22
				Total	100.24	[99.17]
						100.00

(1) Murun massif, Russia; after deducting impurities corresponds to (Sr<sub>0.85</sub>Ca<sub>0.02</sub>Ba<sub>0.02</sub>Na<sub>0.02</sub>K<sub>0.02</sub>)<sub>Σ=0.93</sub>TiO<sub>3</sub>. (2) Do.; original total given as 99.18%; corresponds to (Sr<sub>0.70</sub>Na<sub>0.10</sub>Ce<sub>0.05</sub>Ca<sub>0.03</sub>La<sub>0.02</sub>Nd<sub>0.01</sub>K<sub>0.01</sub>)<sub>Σ=0.92</sub>Ti<sub>1.00</sub>O<sub>3</sub>. (3) SrTiO<sub>3</sub>.

**Mineral Group:** Perovskite group.

**Occurrence:** In aegirine-kalsilite rock in an alkalic massif (Murun massif, Russia); in a rheomorphic fenite dike in a carbonatite complex (Sarambi, Paraguay).

**Association:** Aegirine, kalsilite, potassic feldspar, titanite, magnetite, lamprophyllite, barium lamprophyllite, wadeite, batisite, anatase (Murun massif, Russia).

**Distribution:** From the Murun massif, southwest of Olekminsk, Sakha, Russia. In the Sarambi carbonatite complex, about 27 km northeast of Sarambi, Paraguay.

**Name:** To honor Academician Lev Vladimirovich Tauson (1917–1989), Russian geochemist, Director of the Geochemical Institute, Irkutsk, Russia.

**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

**References:** (1) Vorob'ev, E.I., A.A. Konev, Y.V. Malyshonok, G.F. Afonina, and A.N. Sapozhnikov (1984) Tausonite, SrTiO<sub>3</sub>, a new mineral of the perovskite group. Zap. Vses. Mineral. Obshch., 113, 86–89 (in Russian). (2) (1985) Amer. Mineral., 70, 218 (abs. ref. 1). (3) (1985) Mineral. Abs., 36, 94 (abs. ref. 1).