

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals typically short to long prismatic, may be acicular, elongated along [001], pseudo-hexagonal, to 8 cm; columnar, fibrous, rounded, granular, powdery, massive. *Twinning:* On {110}, contact or less commonly penetration twins, repeated to give trillings, furlings; may be polysynthetic.

Physical Properties: *Cleavage:* On {110}, nearly perfect; on {021}, poor; on {010}, interrupted. *Fracture:* Uneven to subconchoidal. *Tenacity:* Brittle. Hardness = 3.5 D(meas.) = 3.76(2) D(calc.) = 3.780 May be thermoluminescent; fluorescent under UV, cathodoluminescent under X-rays and electron beams.

Optical Properties: Transparent to translucent. *Color:* Colorless, gray, pale yellow, pale green, yellowish brown, pale red, may be longitudinally zoned; colorless in transmitted light. *Luster:* Vitreous, resinous on breaks.

Optical Class: Biaxial (-). *Orientation:* $X = c$; $Y = b$; $Z = a$. *Dispersion:* $r < v$, weak. $\alpha = 1.517$ $\beta = 1.663$ $\gamma = 1.667$ 2V(meas.) = n.d. 2V(calc.) = $7^\circ 07'$

Cell Data: *Space Group:* $Pmcn$. $a = 5.1059(7)$ $b = 8.4207(13)$ $c = 6.0319(11)$ $Z = 4$

X-ray Powder Pattern: Synthetic.

3.535 (100), 3.450 (70), 2.0526 (50), 2.458 (40), 1.9053 (35), 2.481 (34), 2.4511 (33)

Chemistry:

	(1)	(2)
CO ₂	30.35	29.81
CaO	2.70	
SrO	66.31	70.19
BaO	0.17	
Total	99.53	100.00

(1) Strontian, Scotland. (2) SrCO₃.

Mineral Group: Aragonite group.

Occurrence: An uncommon low-temperature hydrothermal mineral formed in veins in limestone, marl, and chalk; in geodes and concretions; rarely occurs in hydrothermal metallic veins; common in carbonatites.

Association: Barite, calcite, celestine, harmotome, sulfur.

Distribution: Dozens of known localities, nearly all in minor amounts. From Strontian, Argyll, Scotland. In Germany, from Clausthal and Bad Grund, Harz Mountains; at Bräunsdorf, near Freiberg, Saxony; in the Lützwitz mine, Könnitz, Thuringia; commercial deposits at Drensteinfurt, near Hamm, Westphalia; in the Dreislar mine, near Medebach, with fine crystals from Aschberg, Beckum, North Rhine-Westphalia. In Austria, large crystals from Oberdorf, Styria, and at Leogang, Salzburg; from Brixlegg, Tirol. From Nepean Township, Ontario, Canada. In the USA, from the Strontium Hills, 16 km north of Barstow, San Bernardino Co., California; in the Homestake mine, Lead, Lawrence Co., South Dakota; in Illinois, at a number of mines around Rosiclare, as the Minerva #1 mine, Cave-in-Rock, Hardin Co., Illinois; in the Winfield quarry, Union Co., Pennsylvania. From the Sierra Mojada district, Coahuila, Mexico. In the Kovdor, Sallanlatvi, and Vouriyärvi carbonatites, and the Khibiny and Lovozero massifs, Kola Peninsula, Russia.

Name: For Strontian, Scotland, source of the first specimens.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 196–200. (2) Speer, J.A. and M.L. Hensley-Dunn (1976) Strontianite composition and physical properties. Amer. Mineral., 61, 1001–1004. (3) Jarosch, D. and G. Heger (1988) Neutron diffraction investigation of strontianite, SrCO₃. Bull. Minéral., 111, 139–142. (4) (1953) NBS Circ. 539, v. 3.

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