Olekminskite \((\text{Sr, Ca, Ba})_2(\text{CO}_3)_2\)

Crystal Data: Hexagonal. Point Group: 32. As needlelike crystals, to 0.15 mm, hexagonal to rounded in cross section; in spherulites.

Physical Properties: Tenacity: Brittle. Hardness = 3 D(meas.) = 3.70(2) D(calc.) = 3.65–3.68


Optical Class: Uniaxial (−). \(\omega = 1.670(2)\) \(\epsilon = 1.527(2)\)

Cell Data: Space Group: \([P321]\) (by analogy to paralstonite). \(a = 8.66(2)\) \(c = 6.08(2)\) \(Z = 3\)

X-ray Powder Pattern: Kedrovyi massif, Russia. 3.50 (100), 2.49 (90), 2.03 (90), 1.305 (70b), 1.928 (60), 1.837 (60), 1.581 (60b)

Chemistry:

\[
\begin{array}{ll}
\text{CO}_2 & [29.94] \\
\text{La}_2\text{O}_3 & 0.21 \\
\text{Ce}_2\text{O}_3 & 0.56 \\
\text{CaO} & 6.68 \\
\text{SrO} & 49.86 \\
\text{BaO} & 11.23 \\
\hline
\text{Total} & [98.48]
\end{array}
\]

(1) Kedrovyi massif, Russia; by electron microprobe, CO\(_2\) calculated for stoichiometry; corresponds to \(\text{Sr}_{1.00}(\text{Sr}_{0.41}\text{Ca}_{0.35}\text{Ba}_{0.22}\text{Ce}_{0.01})\Sigma=0.99(\text{CO}_3)_{2.00}\).

Polymorphism & Series: Forms a series with paralstonite.

Occurrence: In barytocalcite–quartz veins in intrusive breccia in an alkaline massif.

Association: Paralstonite, calcite, barite, ankerite, ancylite-(Ce), narsarsukite, sphalerite, galena.

Distribution: From the Kedrovyi massif, five km southeast of the Murun massif, Aldan Shield, Sakha, Russia.

Name: For Olekminsk, Russia, administrative center for the district in which the Kedrovyi massif is located.

Type Material: Mining Institute, St. Petersburg, 2071/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, p461/1.