

Crystal Data: Monoclinic. *Point Group:* m , 2 or 2/ m . As spheroidal aggregates of radiating fibers, to 7 mm, elongated on [100].

Physical Properties: *Cleavage:* None. *Fracture:* n.d. *Tenacity:* Flexible. Hardness = 1.5 (for aggregates). $D(\text{meas.}) = 3.17(1)$ $D(\text{calc.}) = 3.18$

Optical Properties: Translucent. *Color:* White. *Luster:* n.d.
Optical Class: Biaxial (+). $\alpha = 1.639(2)$ $\beta = 1.648(2)$ $\gamma = 1.665(2)$ $2V(\text{meas.}) = 75(10)^\circ$
 $2V(\text{calc.}) = 72.71^\circ$ *Dispersion:* Average, $r > v$. *Orientation:* $X = a$. *Pleochroism:* None.

Cell Data: *Space Group:* $P2/m$, $P2$, or Pm . $a = 5.893(5)$ $b = 7.262(5)$ $c = 10.288(8)$
 $\beta = 97.23(3)^\circ$ $Z = 1$

X-ray Powder Pattern: Emel'dzhaksky deposit, Aldan province, southern Yakutsk, Russia. 10.13 (100), 2.96 (100), 2.90 (100), 2.505 (100), 3.23 (80), 2.182 (80), 1.855 (70)

Chemistry:	(1)
CaO	0.86
SrO	34.61
BaO	0.54
Al ₂ O ₃	21.01
SiO ₂	24.73
Cl	9.06
H ₂ O	10.10
-O = Cl	2.04
Total	98.87

(1) Emel'dzhaksky deposit, Aldan province, southern Yakutsk, Russia; electron microprobe analysis, H₂O by Penfield method, OH⁻ and H₂O confirmed by IR; corresponding to $(\text{Sr}_{2.83}\text{Ba}_{0.33}\text{Ca}_{0.13})_{\Sigma=2.99}(\text{Al}_{3.49}\text{Si}_{3.48})_{\Sigma=6.97}\text{O}_{10.16}(\text{OH})_{7.88}\text{Cl}_{2.16}\cdot 0.8\text{H}_2\text{O}$.

Occurrence: Formed in the last stages of (metasomatic) prehnitization, in garnet-wollastonite metamorphic rock (skarn) at the contact between pegmatite and calcite marble.

Association: Prehnite, calcite, spinel, diopside, fluorapatite.

Distribution: At the Emel'dzhaksky phlogopite deposit, Aldan province, Aldan Shield, southern Yakutsk, Russia.

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Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Science, Moscow, Russia; 3121/1.

References: (1) Chukanov, N.V., V.T. Dubinchuk, M.N. Murashko, A.E. Zadov, and V.Yu. Karpenko, (2004) Rudenkoite, $\text{Sr}_3\text{Al}_{3.5}\text{Si}_{3.5}\text{O}_{10}(\text{OH}_{7.5},\text{O}_{0.5})\text{Cl}_2\cdot\text{H}_2\text{O}$, a new mineral from phlogopite deposits of southern Yakutsk. *Zapiski Vseross. Mineral. Obshch.* 133(3), 37-41 (in Russian, English abstract). (2) (2005) *Amer. Mineral.*, 90, 770-771 (abs. ref. 1).