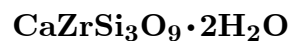


Calcium catapleiite



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Crystal Data: Hexagonal. *Point Group:* $[6/m\ 2/m\ 2/m]$ (by analogy to catapleiite).
Lamellar crystals and grains, to a few cm.

Physical Properties: *Cleavage:* Present. Hardness = 4.5–5 $D(\text{meas.}) = 2.77$
 $D(\text{calc.}) = [2.75]$

Optical Properties: Opaque, translucent on thin edges. *Color:* Pale yellow to cream.
Luster: Vitreous to dull.
Optical Class: Uniaxial (+). $\omega = 1.603$ $\epsilon = 1.639$

Cell Data: *Space Group:* $[P6_3/mmc.]$ $a = 7.40$ $c = 10.07$ $Z = [2]$

X-ray Powder Pattern: Burpala massif, Russia; very close to catapleiite.
2.96 (100), 3.96 (80), 3.06 (80), 1.975 (80), 1.835 (80), 6.45 (70), 1.740 (70)

Chemistry:

	(1)
SiO ₂	44.49
TiO ₂	0.06
ZrO ₂	31.00
Al ₂ O ₃	0.60
RE ₂ O ₃	0.28
Fe ₂ O ₃	0.36
CaO	13.82
Na ₂ O	0.32
K ₂ O	0.10
H ₂ O ⁺	9.15
H ₂ O [−]	0.18
Total	100.36

(1) Burpala massif, Russia; leading to $(\text{Ca}_{0.98}\text{Na}_{0.04})_{\Sigma=1.02}\text{Zr}_{1.00}(\text{Si}_{2.94}\text{Al}_{0.04})_{\Sigma=2.98}\text{O}_9 \cdot 2.01\text{H}_2\text{O}$.

Occurrence: In cavities between crystals of microcline, in syenite pegmatites of a differentiated alkalic massif.

Association: Pyrophanite, pyrochlore, titanian lāvenite, loparite-(Ce), kupletskite, RE-apatite, hiortdahlite, calcian seidozerite, leucophane, microcline.

Distribution: In the Burpala massif, about 120 km north of Lake Baikal, eastern Siberia, Russia.

Name: For its *calcium* content and close relation to *catapleiite*.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 72035.

References: (1) Portnov, A.M. (1964) Calcium catapleiite, a new variety of catapleiite. Doklady Acad. Nauk SSSR, 154, 607–609 (in Russian). (2) (1964) Amer. Mineral., 49, 1153 (abs. ref. 1). (3) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union. Ocean Pictures, Moscow, 52.