

Tvedalite

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Crystal Data: Orthorhombic. *Point Group:* n.d. As spherulites of platy crystals, up to 3 mm, always incrustated with chiavennite.

Physical Properties: *Cleavage:* Perfect on {010}. *Hardness* = 4.5 *D*(meas.) = 2.541(6)
D(calc.) = 2.554

Optical Properties: Semitransparent. *Color:* Cream-white to pale beige, zoned.
Streak: White. *Luster:* Vitreous.
Optical Class: Biaxial. *n* = 1.604

Cell Data: *Space Group:* C-centered. *a* = 8.724(6) *b* = 23.14(1) *c* = 4.923(4) *Z* = 2

X-ray Powder Pattern: Vevja quarry, Norway.
2.837 (100), 11.6 (93), 3.87 (75), 2.889 (75), 3.16 (74), 5.80 (68), 2.494 (58)

Chemistry:	(1)
SiO ₂	45.00
Al ₂ O ₃	0.68
FeO	1.11
MnO	11.56
BeO	10.69
CaO	18.44
H ₂ O	11.8
Total	99.28

(1) Vevja quarry, Norway; by AA, H₂O by elemental analyzer; corresponding to (Ca_{2.52}Mn_{1.25}Fe_{0.12})_{Σ=3.89}Be_{3.00}(Si_{5.74}Be_{0.27}Al_{0.10})_{Σ=6.11}O₁₇(OH)₄•3.06H₂O.

Occurrence: In nepheline syenite pegmatite.

Association: Chiavennite, analcime, natrolite, parisite-(Ce), bastnäsitate-(Ce), leucophanite, epididymite, albite, calcite, chlorite, todorokite, fluorite, magnetite, molybdenite.

Distribution: In the Vevja quarry, Tvedalen, Norway.

Name: For the Tvedalen area in Norway, which has produced many interesting minerals from the nepheline syenites.

Type Material: University of Oslo, Oslo, Norway, 14770.

References: (1) Larsen, A.O., A. Åsheim, G. Raade, and J. Taftø (1992) Tvedalite, (Ca, Mn)₄Be₃Si₆O₁₇(OH)₄•3H₂O, a new mineral from syenite pegmatite in the Oslo Region, Norway. *Amer. Mineral.*, 77, 438–443.