

**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)

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

(1) Vevja quarry, Norway; by AA, H<sub>2</sub>O by elemental analyzer; corresponding to (Ca<sub>2.52</sub>Mn<sub>1.25</sub>Fe<sub>0.12</sub>)<sub>Σ=3.89</sub>Be<sub>3.00</sub>(Si<sub>5.74</sub>Be<sub>0.27</sub>Al<sub>0.10</sub>)<sub>Σ=6.11</sub>O<sub>17</sub>(OH)<sub>4</sub>•3.06H<sub>2</sub>O.

**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)<sub>4</sub>Be<sub>3</sub>Si<sub>6</sub>O<sub>17</sub>(OH)<sub>4</sub>•3H<sub>2</sub>O, a new mineral from syenite pegmatite in the Oslo Region, Norway. *Amer. Mineral.*, 77, 438–443.