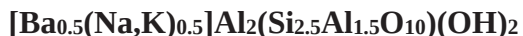


Ganterite

Crystal Data: Monoclinic. *Point Group:* 2/m. As tabular lamellae to 0.5 mm.

Physical Properties: *Cleavage:* Perfect on {001}. *Fracture:* Laminated. *Tenacity:* Flexible. Hardness = 4-4.5 VHN = 260 (100 g load). D(meas.) = n.d. D(calc.) = 3.11

Optical Properties: Translucent to transparent. *Color:* Light gray to silvery, colorless in transmitted light. *Streak:* White. *Luster:* Vitreous.

Optical Class: Biaxial (-). $\alpha(\text{calc.}) = 1.600$ $\beta = 1.619$ $\gamma = 1.622$ $2V(\text{meas.}) = 42^\circ - 45^\circ$

Dispersion: Weak.

Cell Data: *Space Group:* C2/c. $a = 5.212(1)$ $b = 9.046(2)$ $c = 19.978(4)$ $\beta = 95^\circ 48'$ $Z = 4$

X-ray Powder Pattern: Berisal complex, Wasenhorn, Simplon region, Switzerland.

2.571 (100), 2.602 (95), 1.5054 (91), 3.737 (77), 3.887 (76), 4.481 (71), 3.495 (71)

Chemistry:	(1)
BaO	15.54
CaO	0.03
Na ₂ O	1.91
K ₂ O	3.02
MgO	0.86
FeO	0.69
MnO	0.03
Al ₂ O ₃	36.5
SiO ₂	37.47
TiO ₂	0.73
H ₂ O	3.90
Total	100.68

(1) Berisal complex, Wasenhorn, Simplon region, Switzerland; average of 32 electron microprobe analyses supplemented by IR spectroscopy, H₂O by TGA; corresponding to $(\text{Ba}_{0.44}\text{K}_{0.28}\text{Na}_{0.27})_{\Sigma=0.99}(\text{Al}_{1.84}\text{Mg}_{0.09}\text{Fe}_{0.04}\text{Ti}_{0.04})_{\Sigma=2.01}[\text{Si}_{2.72}\text{Al}_{1.28}\text{O}_{10}](\text{OH})_{1.89}$.

Mineral Group: Mica group.

Polymorphism & Series: 2M₁ polytype, dioctahedral; forms a series with muscovite.

Occurrence: A rock forming mineral in bands and lenses of white-mica schists and in zoisite-celsian gneiss.

Association: Muscovite, zoisite, quartz, plagioclase, apatite, zircon, amphibole (schist); zoisite, celsian, quartz, margarite ± armenite (gneiss); dumortierite, barite, muscovite (Nevada).

Distribution: From the Berisal complex, Wasenhorn, Simplon region, Switzerland. In the USA, from Lincoln Hill, near Oreana, Nevada.

Name: For *Gantert*, a valley in the Simplon region that produced the first specimens.

Type Material: At the Natural History Museum and the Mineralogical Institute, University of Basel, Switzerland.

References: (1) Graeser, S., C.J. Hetherington, and R. Gieré (2003) Ganterite, a new barium-dominant analogue of muscovite from the Berisal complex, Simplon region, Switzerland. *Can. Mineral.*, 41, 1271-1280. (2) (2004) *Amer. Mineral.*, 89, 1827 (abs. ref. 1). (3) Chi Ma and G.R. Rossman (2006) Ganterite, the barium mica $\text{Ba}_{0.5}\text{K}_{0.5}\text{Al}_2(\text{Al}_{1.5}\text{Si}_{2.5})\text{O}_{10}(\text{OH})_2$, from Oreana, Nevada. *Amer. Mineral.*, 91, 702-705.