Ericaite $(Fe^{2+}, Mg)_3B_7O_{13}Cl$

Crystal Data: Orthorhombic, pseudocubic. *Point Group:* $mm2$. As pseudocubic crystals, dominated by {100} and modified by {111}, to 2.2 cm.

Physical Properties: Hardness = [7–7.5] (by analogy to boracite). D(meas.) = 3.17–3.22 D(calc.) = 3.58

Optical Properties: Semitransparent. *Color:* Pale green to raspberry-red, red-violet, brownish violet, brown, black, may be zoned.
Optical Class: Biaxial (–). $\alpha = 1.731$ $\beta = 1.755$ $\gamma = 1.755$ 2V(meas.) = Small.

Cell Data: *Space Group:* $Pca2_1$. $a = 8.58$ $b = 8.65$ $c = 12.17$ Z = 4

X-ray Powder Pattern: Thuringia, Germany. (ICDD 29–697, may be congolite).
3.043 (100), 2.056 (70), 2.720 (60), 2.152 (45), 3.51 (40), 1.834 (40), 1.2411 (30)

Chemistry:

	(1)	(2)	(3)
B_2O_3	50.56		55.46
FeO	35.26	31.64	24.53
MnO	1.79	2.53	
MgO		4.53	13.76
Cl			8.07
$-O = Cl_2$			1.82
Total			100.00

(1) Bischofferode, Germany; partial analysis. (2) Thuringia, Germany; partial analysis, corresponds to $(Fe_{2.25}Mg_{0.57}Mn_{0.14})_{\Sigma=2.96}B_7O_{13}Cl$. (3) $(Fe, Mg)_3B_7O_{13}Cl$ with Fe:Mg = 1:1. (4) Boulby mine, England; by AA, analysis not given, stated to correspond to $(Fe_{2.18}Mg_{0.71}Mn_{0.11})_{\Sigma=3.00}B_7O_{13}Cl$.

Polymorphism & Series: Dimorphous with congolite; forms a series with boracite.

Occurrence: An uncommon constituent of marine evaporite deposits.

Association: Halite, sylvite, anhydrite, kieserite (Germany); danburite, boracite (Alto Chapare, Bolivia).

Distribution: In Germany, from Wathlingen-Hänigsen, Lower Saxony; at Bischofferode and Sondershausen, Thuringia. Large crystals in the Boulby potash mine, northwest of Whitby, Yorkshire, England. From Alto Chapare, Cochabamba, Bolivia. In the Louann Salt Formation, Clarke Co., Alabama, USA.

Name: For the typical purple color, characteristic of the heather genus *Erica*.

Type Material: n.d.

References: (1) Werner, H. (1950) Das Borazitvorkommen im Salzstock von Wathlingen-Hänigsen. Aufschluss, 1, 24–26 (in German). (2) Heide, F. (1955) Über bemerkenswerte Borazitvorkommen in den Kalilagern des Südharzbezirkes. Chem. Erde, 17, 211–216 (in German). (3) Kühn, R. and I. Schaacke (1955) Vorkommen und Analyse der Boracit- und Ericaitkristalle aus dem Salzhorst von Wathlingen-Hänigsen. Kali und Steinsalz, 11, 33–42 (in German). (4) (1956) Amer. Mineral., 41, 372 (abs. refs. 2 and 3). (5) Burns, P.C. (1995) X-ray powder diffraction data for the identification of boracite-group minerals. Powder Diffraction, 10, 250–260. (6) Green, D.I. and M.D. Freier (1996) The Boulby mine, Cleveland, England. Mineral. Record, 27, 163–170.