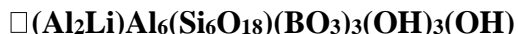


Rossmanite

Crystal Data: Hexagonal. *Point Group:* 3m. As columnar crystals to 25 mm, elongated along [0001] with striations parallel to [0001] on prism faces.

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* n.d. Hardness = ~7
D(meas.) = 3.00 D(calc.) = 3.06 Nonfluorescent.

Optical Properties: Transparent. *Color:* Pale pink, colorless in thin section. *Streak:* White.
Luster: Vitreous.
Optical Class: Uniaxial (-). $\omega = 1.645(1)$ $\varepsilon = 1.624(1)$

Cell Data: *Space Group:* R3m. $a = 15.770(2)$ $c = 7.085(1)$ $Z = 3$

X-ray Powder Pattern: Hradisko quarry, near Rožná, western Moravia, Czech Republic.
3.950 (100), 2.552 (93), 1.898 (72), 4.181 (58), 2.924 (56), 3.434 (52), 2.019 (34)

Chemistry:	(1)
SiO ₂	38.10
Al ₂ O ₃	44.60
Na ₂ O	1.43
Li ₂ O	1.13
B ₂ O ₃	10.88
H ₂ O	3.70
F	0.20
-O = F	0.08
Total	99.96

(1) Hradisko quarry, near Rožná, western Moravia, Czech Republic; average electron microprobe analysis supplemented by SIMS for Li and B, H₂O by hydrogen-line extraction; corresponding to $X(\square_{0.57}\text{Na}_{0.43})^Y(\text{Li}_{0.71}\text{Al}_{2.17})^Z\text{Al}_6(\text{Si}_{5.92}\text{O}_{18})(\text{B}_{2.92}\text{O}_9)(\text{OH})_{3.83}\text{F}_{0.10}\text{O}_{0.07}$.

Mineral Group: Tourmaline supergroup, X-site vacant subgroup.

Occurrence: In lepidolite-subtype zoned pegmatite.

Association: Lepidolite, albite, elbaite, apatite, topaz, beryl, amblygonite-montebrazite, manganocolumbite, cassiterite.

Distribution: From the Hradisko quarry, near Rožná, western Moravia, Czech Republic.

Name: Honors George R. *Rossmann* (b. 1945), California Institute of Technology, Pasadena, California, USA for his work on the spectroscopy of the tourmaline minerals and his wide-ranging contributions to mineralogy in general.

References: (1) Selway, J.B., M. Novák, F.C. Hawthorne, P. Černý, L. Ottolini, and T.K. Kyser (1998) Rossmanite, $\square(\text{LiAl}_2)\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_4$, a new alkali-deficient tourmaline: description and crystal structure. *Amer. Mineral.*, 83, 896-900. (2) Henry, D.J., M. Novák, F.C. Hawthorne, A. Ertl, B.L. Dutrow, P. Uher, and F. Pezzotta (2011) Nomenclature of the tourmaline-supergroup minerals. *Amer. Mineral.*, 96, 895-913. (3) Kutzschbach, M., B. Wunder, M. Krstulovic, A. Ertl, R. Trumbull, A. Rocholl, and G. Giester (2017) First high-pressure synthesis of rossmanitic tourmaline and evidence for the incorporation of Li at the X site. *Phys. Chem. Minerals*, 44, 353-363.