

Crystal Data: Hexagonal. *Point Group:* 6/m 2/m 2/m. As a crystal fragment 5.8 × 5.7 × 5.5 mm.

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Conchoidal. Hardness = ~7.5
D(meas.) = 3.01(10) D(calc.) = 3.157 Nonfluorescent.

Optical Properties: Translucent. *Color:* Grayish violet. *Streak:* White. *Luster:* Vitreous.
Optical Class: Uniaxial (-). $\omega = 1.607(1)$ $\epsilon = 1.605(1)$ *Pleochroism:* Strong, colorless with $E \perp c$, dark bluish violet with $E \parallel c$.

Cell Data: *Space Group:* P6/mmc. $a = 9.469(2)$ $c = 9.033(2)$ $Z = 2$

X-ray Powder Pattern: Pein Pyit area of the Mogok region, Myanmar.
3.272 (100), 2.940 (85), 3.064 (82), 1.744 (40), 1.5444 (30), 1.7939 (29), 2.274 (27)

Chemistry:	(1)
BeO	[7.25]
B ₂ O ₃	5.99
Na ₂ O	0.04
MgO	10.34
Al ₂ O ₃	0.38
SiO ₂	55.36
K ₂ O	0.71
MnO	0.10
FeO	2.98
<u>Cs₂O</u>	<u>18.36</u>
Total	101.51

(1) Pein Pyit area of the Mogok region, Myanmar; average electron microprobe analysis, BeO calculated from stoichiometry and confirmed by LA-ICP-MS measurements; corresponding to (Cs_{0.85}K_{0.10}Na_{0.01})(Be_{1.88}B_{1.12})(Mg_{1.66}Fe_{0.27}Mn_{0.01}Al_{0.05})(Si_{5.98})O₁₈.

Mineral Group: Beryl group.

Occurrence: In an alluvial gravel deposit mined for gemstones.

Association: Unknown.

Distribution: From the Pein Pyit area of the Mogok region, Myanmar.

Name: Honors gemologist *John Koivula* for his contributions to mineralogy and gemology.

Type Material: Gemological Institute of America Museum, Carlsbad (41653) and the Natural History Museum of Los Angeles County, Los Angeles, California, USA (75133).

References: (1) Palke, A.C., L.M. Henling, C. Ma, G.R. Rossman, Z. Sun, N. Renfro, A.R. Kampf, K. Thu, N. Myo, P. Wongrawang, and V. Weeramonkhonlert (2021) Johnkoivulaite, Cs(Be₂B)Mg₂Si₆O₁₈, a new mineral of the beryl group from the gem deposits of Mogok, Myanmar. *Amer. Mineral.*, 106, 1844-1851.