Johnkoivulaite

\[
\text{Cs(Be}_2\text{B)Mg}_2\text{Si}_6\text{O}_{18}
\]

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

D(meas.) = 3.01(10) D(calc.) = 3.157 Nonfluorescent.

Optical Class: Uniaxial (-). \(\alpha = 1.607(1)\) \(\varepsilon = 1.605(1)\) Pleochroism: Strong, colorless with \(E \perp c\), dark bluish violet with \(E \parallel c\).

Cell Data: Space Group: \(P6_3/mmc\). \(a = 9.469(2)\) \(c = 9.033(2)\) \(Z = 2\)

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:

\[
\begin{array}{ll}
\text{BeO} & [7.25] \\
\text{B}_2\text{O}_3 & 5.99 \\
\text{Na}_2\text{O} & 0.04 \\
\text{MgO} & 10.34 \\
\text{Al}_2\text{O}_3 & 0.38 \\
\text{SiO}_2 & 55.36 \\
\text{K}_2\text{O} & 0.71 \\
\text{MnO} & 0.10 \\
\text{FeO} & 2.98 \\
\text{Cs}_2\text{O} & 18.36 \\
\hline
\text{Total} & 101.51 \\
\end{array}
\]

(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 \((\text{Cs}_{0.85}\text{K}_{0.0}\text{Na}_{0.01})(\text{Be}_{1.88}\text{B}_{1.12})(\text{Mg}_{1.66}\text{Fe}_{0.27}\text{Mn}_{0.01}\text{Al}_{0.03})(\text{Si}_{5.98})\text{O}_{18}\).

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).