Nabesite

\[ \text{Na}_2\text{BeSi}_4\text{O}_{10} \cdot 4\text{H}_2\text{O} \]

**Crystal Data:** Orthorhombic. *Point Group:* 222. As aggregates to 10 mm of aligned, thin crystals, to 5 mm, platy on \{001\}, modified by \{100\}, \{010\}, and \{111\}.

**Physical Properties:** *Cleavage:* Good on \{110\} and \{001\}. *Tenacity:* Brittle. *Fracture:* Uneven. *Hardness:* 5-6 \(D(\text{meas.}) = 2.16(2)\) \(D(\text{calc.}) = 2.21\) Nonfluorescent.

**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (-). \(\alpha = 1.499(1)\), \(\beta = 1.507(1)\), \(\gamma = 1.511(1)\) \(2V(\text{meas.}) = 65(5)^\circ\) \(2V(\text{calc.}) = 70^\circ\) *Orientation:* \(X = a, Y = c, Z = b\).

**Cell Data:** *Space Group:* \(\text{P2}_1\text{2}_1\text{2}_1\). \(a = 9.722(1)\), \(b = 10.142(1)\), \(c = 12.030(1)\) \(Z = 4\).

**X-ray Powder Pattern:** Kvanefjeld Plateau, Ilímaussaq complex, South Greenland. 5.97 (100), 6.11 (80b), 3.09 doublet (70), 2.988 doublet (60), 3.06 (50), 3.46 (45), 5.07 (35)

**Chemistry:**

\[
\begin{array}{ll}
\text{Na}_2\text{O} & 13.8 \\
\text{K}_2\text{O} & 0.34 \\
\text{BeO} & [6.26] \\
\text{CaO} & 0.13 \\
\text{SiO}_2 & 62.4 \\
\text{H}_2\text{O} & [18.05] \\
\text{Total} & 100.98
\end{array}
\]

(1) Kvanefjeld Plateau, Ilímaussaq complex, South Greenland; average electron microprobe and SEM EDS analyses, \(\text{H}_2\text{O}\) and \(\text{BeO}\) calculated; corresponds to \((\text{Na}_{1.78}\text{K}_{0.03}\text{Ca}_{0.01})_2\cdot 1.78\text{BeO}_{0.96}\text{Si}_{1.06}\text{O}_{10}\cdot 3.92\text{H}_2\text{O}\).

**Mineral Group:** Zeolite group.

**Occurrence:** In albite-lined cavities within tugtupite-bearing albitites.

**Association:** Gmelinite, neptunite, analcime, gonnardite, lovdarite.

**Distribution:** On the Kvanefjeld Plateau, northwestern extremity of the Ilímaussaq complex, South Greenland.

**Name:** Comprised of the chemical symbols of the mineral’s three essential cations - Na, Be, Si.

**Type Material:** Geological Museum, Copenhagen, Denmark, and the Natural History Museum, Vienna, Austria.