Steklite \( \text{KAl(SO}_4\text{)}_2 \)

**Crystal Data:** Hexagonal. \textit{Point Group}: 32. As hexagonal or irregularly shaped crystals, platy on (001), to 1 mm. Crystals often split and combined in open aggregates or thin crusts.

**Physical Properties:** \textit{Cleavage}: Perfect on {001}. \textit{Tenacity}: Brittle. \textit{Fracture}: n.d. \textit{Hardness} = 2.5 \textit{D(meas.)} = n.d. \textit{D(calc.)} = 2.797

**Optical Properties:** Transparent. \textit{Color}: Colorless, white to grayish-white in aggregates. \textit{Streak}: White. \textit{Luster}: Vitreous. \textit{Optical Class}: Uniaxial (-). \( \omega = 1.546(2) \quad \epsilon = 1.533(3) \) \textit{Pleochroism}: None.

**Cell Data:** Space Group: \( P321 \). \( a = 4.7281(3) \quad c = 7.9936(5) \quad Z = 1 \)

**X-ray Powder Pattern:** Tolbachik volcano, Kamchatka, Russia.
3.649 (100), 2.861 (51), 8.02 (34), 2.364 (25), 2.660 (19), 2.267 (14), 1.822 (12), 4.085 (11)

**Chemistry:**

\[
\begin{aligned}
\text{Na}_2\text{O} & \quad 0.09 \\
\text{K}_2\text{O} & \quad 18.12 \\
\text{CaO} & \quad 0.08 \\
\text{MnO} & \quad 0.03 \\
\text{Fe}_2\text{O}_3 & \quad 2.02 \\
\text{Al}_2\text{O}_3 & \quad 18.18 \\
\text{SO}_4 & \quad 61.80 \\
\text{Total} & \quad 100.37
\end{aligned}
\]

(1) Tolbachik volcano, Kamchatka, Russia; average of 5 electron microprobe analyses, corresponds to \( (\text{K}_0.997\text{Na}_0.003\text{Ca}_0.004)_{2-1.009}(\text{Al}_0.925\text{Fe}^{3+}_{0.066}\text{Mg}_{0.003}\text{Mn}_{0.001})_{2-0.975}\text{SO}_4_{2.001}\text{O}_8 \).

**Occurrence:** A volcanic sublimate formed at 150-170 °C as part of sulfate crusts around an active fumarole. Also described as a sublimate near burning coal deposits.

**Association:** Alumoklyuchevskite, langbeinite, euchlorine, fedotovite, chalcocyanite, hematite, kamchatkite, atlasovite, melanothallite, tenorite, avdoninite, belloite, ziesite, Cu-lyonsite (Tolbackhik, Russia).

**Distribution:** From the Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption (1975–1976), Tolbachik volcano, Kamchatka, and the dumps of coal mine N 47 near Kopeisk, South Urals, Russia. At Showashinzan volcano, Hokkaido, Japan. From Izalco volcano, El Salvador and Santiaguit volcano, Guatemala. From burning anthracite coal deposits Eastern Pennsylvania, USA.

**Name:** From the Russian word \textit{стекло (steklo)} for glass as an allusion to the visual appearance of aggregates of the mineral formed around vents of a burning coal heap (coal mine N 47 near Kopeisk, South Urals, Russia).

**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia; 4109/1.