Sveite  \( \text{KA}_7(\text{NO}_3)_4\text{Cl}_2(\text{OH})_{16} \cdot 8\text{H}_2\text{O} \)

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**Crystal Data:** Monoclinic (probable).  **Point Group:** n.d.  As lumpy aggregates of contorted submicroscopic flakes.

**Physical Properties:**  
**Cleavage:** Probably on \( \{001\} \), perfect.  **Hardness:** \( \sim 1 \) 
\( \text{D(meas.)} = 2.0 \quad \text{D(calc.)} = 2.185 \)  Gelatinous when moist; highly hygroscopic, forming a residue of \( \text{Al(OH)}_3 \).

**Optical Properties:**  
**Translucent.  Color:** White; colorless in transmitted light.  **Optical Class:** Biaxial (+).  
\( \alpha = 1.503(2) \quad \beta = \text{n.d.} \quad \gamma = 1.535(2) \quad 2V(\text{meas.}) = \text{Small.} \)

**Cell Data:**  
**Space Group:** n.d.  
\( a = 10.89 \)  \( b = 13.04 \)  \( c = 30.71 \)  \( \beta = 92.10^\circ \)  \( Z = 6 \)

**X-ray Powder Pattern:**  
Autana Cave, Venezuela.  
10.20 (100), 2.443 (55), 3.692 (40), 5.995 (35), 6.174 (20), 4.209 (20), 2.752 (20)

**Chemistry:**
\[
\begin{array}{llll}
\text{SO}_3 & 2.65 & (1) & (2) \\
\text{P}_2\text{O}_5 & 0.17 & & \\
\text{N}_2\text{O}_5 & 18.26 & 22.43 & \\
\text{Al}_2\text{O}_3 & 37.12 & 37.05 & \\
\text{K}_2\text{O} & 5.18 & 4.89 & \\
(\text{NH}_4)_2\text{O} & < 0.02 & & \\
\text{Cl} & 8.50 & 7.36 & \\
\text{H}_2\text{O} & 29.25 & 29.93 & \\
\text{sol} & 1.92 & 1.66 & \\
\text{C} & < 0.30 & & \\
\text{insol} & 0.10 & & \\
\hline
\text{Total} & 99.31 & 100.00 & \\
\end{array}
\]

(1) Autana Cave, Venezuela; \( \text{K}_2\text{O} \) by flame photometry, \( (\text{NH}_4)_2\text{O} \) by distillation, and \( \text{C}, \text{H}, \text{N}, \text{S} \) by gas chromatography; insoluble is quartz; corresponds to \( \text{K}_{1.07}\text{Al}_{7.07}(\text{NO}_3)_{3.28}(\text{SO}_4)_{0.32}(\text{PO}_4)_{0.02}\text{Cl}_{2.32}(\text{OH})_{15.96} \cdot 7.77\text{H}_2\text{O} \).  
(2) \( \text{KA}_7(\text{NO}_3)_4\text{Cl}_2(\text{OH})_{16} \cdot 8\text{H}_2\text{O} \).

**Occurrence:**  
As crusts and efflorescences precipitated from solutions trickling onto cave roofs and walls.

**Association:**  
Quartz.

**Distribution:**  
From the Autana Cave, Amazonas Territory, Venezuela.  On a rock overhang at an unspecified locality in the northeastern San Joaquin Valley, California, USA.

**Name:**  
From the first letters of the Sociedad Venezolana de Espeleología, whose members collected the original material studied.

**Type Material:**  

**References:**  

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