Aërinite \( \text{Ca}_4(\text{Al}, \text{Fe}^{3+}, \text{Mg}, \text{Fe}^{2+})_{10}\text{Si}_{12}\text{O}_{35}(\text{CO}_3)(\text{OH})_{12} \cdot 12\text{H}_2\text{O} \)

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Crystal Data: Monoclinic. Point Group: n.d. As masses of cryptocrystalline fibers; earthy, compact.

Physical Properties: Hardness = ~3 D(meas.) = 2.48(2) D(calc.) = [2.46]

Optical Properties: Semitransparent. Color: Blue to blue-green. Optical Class: Biaxial (−). Pleochroism: Intense; X = bright blue; Y = Z = pale beige. \( \alpha = 1.510(5) \) \( \beta = 1.560(5) \) \( \gamma = 1.580(5) \) 2V(meas.) = n.d. 2V(calc.) = 63°

Cell Data: Space Group: n.d. \( a = 14.690(15) \) \( b = 16.872(15) \) \( c = 5.170(15) \) \( \beta = 94°45' \) \( Z = 2 \)

X-ray Powder Pattern: Saint-Pandelon, France. 14.65 (100), 4.050 (80), 2.721 (75), 2.812 (50), 3.798 (35), 3.651 (35), 2.135 (35)

Chemistry:

\[
\begin{array}{lcc}
\text{Chem.} & (1) & (2) \\
\text{SiO}_2 & 36.91 & 37.87 \\
\text{TiO}_2 & \text{trace} & \\
\text{Al}_2\text{O}_3 & 17.20 & 18.64 \\
\text{Fe}_2\text{O}_3 & 7.31 & \\
\text{FeO} & 3.47 & 7.00 \\
\text{MnO} & 0.10 & \\
\text{MgO} & 3.15 & 6. \\
\text{CaO} & 12.03 & 11.93 \\
\text{Na}_2\text{O} & 0.27 & 2.70 \\
\text{K}_2\text{O} & 0.04 & 0.12 \\
\text{H}_2\text{O} & 17.79 & 15.45 \\
\text{CO}_2 & 2.30 & \\
\text{P}_2\text{O}_5 & 0.71 & \\
\text{Total} & 101.28 & 99.71 \\
\end{array}
\]

(1) Saint-Pandelon, France; \( \text{H}_2\text{O} \) by TGA, \( \text{CO}_2 \) by chromatography; corresponds to \( (\text{Ca}_{4.04}^2\text{Na}_{0.16}^1\text{K}_{0.02}^1)^{\Sigma=4.22}(\text{Al}_6\text{Fe}^{3+}_{3.66}\text{Fe}^{2+}_{1.72}\text{Mg}_{1.47}\text{Fe}^{2+}_{0.90}\text{Mn}_{0.03}^{0.03})^{\Sigma=10.49}(\text{Si}_{35.21}\text{P}_{0.19})^{\Sigma=11.78}\text{O}_{35.21}(\text{OH})_{12.11}(\text{CO}_3)_{0.99} \cdot 12.54\text{H}_2\text{O}. \) (2) Morocco.

Occurrence: A hydrothermal mineral of the zeolite facies, formed at relatively low temperature, in fractures cutting mafic igneous rocks (Saint-Pandelon, France).

Association: Prehnite, scolecite, mesolite (Saint-Pandelon, France).

Distribution: At Caserras, Juseu, and Estopiñan, Huesca Province; Tartaren, Lerida Province; and other less-well-defined localities in Spain. From Saint-Pandelon, Landes, France. In Morocco, at Ourika. From the Gunsight Mountains, Pima Co., Arizona, USA.

Name: From the Greek for sky blue for its distinctive color.

Type Material: Wroclaw University, Wroclaw, Poland, II–8890; National School of Mines, Paris, France.


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