Scolecite  \( \text{CaAl}_2\text{Si}_3\text{O}_{10} \cdot 3\text{H}_2\text{O} \)  

Crystal Data: Monoclinic, pseudotetragonal. Point Group: \( m \). Crystals are slender prismatic, may be square in cross section, elongated and striated \( \parallel [001] \), to 30 cm. Characteristically in radiating sprays, fibrous masses; nodular, massive. Twinning: On \{100\}, twin axis \{001\}, common, as contact or penetration twins.

Physical Properties: Cleavage: \{110\} and \{110\}, perfect. Fracture: Uneven. Tenacity: Brittle. Hardness = 5–5.5  \( D(\text{meas.}) = 2.25–2.29 \)  \( D(\text{calc.}) = 2.275 \)  Pyroelectric; piezoelectric; may fluoresce yellow to brown under SW and LW UV.

Optical Properties: Transparent to translucent. Color: Colorless to white; colorless in thin section. Luster: Vitreous, silky when fibrous. Optical Class: Biaxial (−). Orientation: \( Z = b \); \( X \wedge c = 15^\circ–18^\circ \); \( Y \wedge a = -14^\circ \) to \(-17^\circ \). Dispersion: \( r < v \), strong. \( \alpha = 1.507–1.513 \)  \( \beta = 1.516–1.520 \)  \( \gamma = 1.517–1.521 \)  \( 2V(\text{meas.}) = 36^\circ–56^\circ \)

Cell Data: Space Group: \( Cc \). \( a = 18.508(5) \)  \( b = 18.981(5) \)  \( c = 6.527(2) \)  \( \beta = 90.64(1)^\circ \)  \( Z = 8 \)

X-ray Powder Pattern: Near Surat Thani, Thailand. 5.848 (100), 2.882 (100), 6.590 (90), 4.387 (90), 2.851 (70), 4.722 (60), 2.929 (60)

Chemistry:

\[
\begin{array}{ll}
\text{SiO}_2 & 45.16 \\
\text{Al}_2\text{O}_3 & 25.90 \\
\text{CaO} & 14.86 \\
\text{Na}_2\text{O} & 0.16 \\
\text{K}_2\text{O} & 0.06 \\
\text{H}_2\text{O} & 13.66 \\
\hline
\text{Total} & 99.80 \\
\end{array}
\]

(1) Syhadree Mountains, Bombay, India; corresponds to \( (\text{Ca}_{1.05}\text{Na}_{0.02})\Sigma=1.07 \) \( \text{Al}_{2.00}\text{Si}_{2.97}\text{O}_{10} \cdot 2.99\text{H}_2\text{O} \).

Mineral Group: Zeolite group.

Occurrence: Primarily in cavities in basalts; in gneisses and amphibolites, and in laccoliths and dikes derived from syenitic and gabbroic magmas.

Association: Zeolites, prehnite, calcite.

Distribution: Many localities for good crystals are known; exceptional crystals from the Teigarhorn, Berufjord, Iceland. At Ben More, Isle of Mull, and Talisker Bay, Isle of Skye, Scotland. From Pfüglhof, Malta Valley, Carinthia, Austria. In Switzerland, from the Shattig Wichel, Fallital-Giuv area, Graubünden. Exceptional crystals in the Poona, Nasik, and Bombay districts, Maharashtra, India. In the USA, on the south fork of the Toutle River, Cowlitz Co., in the Pioneer quarry, Bremerton, Kitsap Co., and other localities in Washington. At Charcas, San Luis Potosí, Mexico. Large crystals from near Bento Gonçalves, Rio Grande do Sul, Brazil.

Name: From the Greek for worm, alluding to its curling action when heated.

References:  

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of Mineral Data Publishing.