

Mineralogy of calcium oxalate hydrates in plants of the *Araceae* family

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Plants in the *Araceae* family are known for their high content of calcium oxalate (CaOx) hydrates, which occur in three mineral forms: whewellite (monohydrate), weddellite (dihydrate), and caoxite (trihydrate). This research focuses on 10 species of the *Araceae* family, using Raman spectroscopy to identify and analyze CaOx hydrate crystals in microscopic cross-sections of plant tissues. The analysis helps distinguish the different crystal forms of CaOx and provides insights into their distribution across various plant parts. This research enhances the understanding of the speciation, morphology, and potential functional roles of calcium oxalate hydrates in *Araceae* plants, contributing to broader knowledge of plant mineralogy and physiology.