

“Synthesis of Calcium-Glycine (Ca-Gly) complex by using Chicken Egg Shell”

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Abstract

The complex $\text{Ca}(\text{Gly})_2$ was synthesized and the chemical composition and structure were studied. We successfully extracted calcium from calcium carbonate from egg shell and synthesis it with glycine. The colorless, crystalline hydrates $\text{Ca}(\text{gly})_2 \cdot \text{H}_2\text{O}$ has been isolated. The compound is readily soluble in water.

Structural diversity is also observed with the binding modes of the two aminocarboxylate ligands and the one calcium environment. The $\text{Ca}(\text{Gly})_2 \cdot \text{H}_2\text{O}$ structure is proposed by 3D structure, ^1H NMR and ^{13}C NMR by using Chemdraw 12.0 software as per data available in literature.