Physicochemical Characterization of $\text{La}_2(\text{CO}_3)_3.4\text{H}_3\text{O}$, a New and Promising Agent for the Treatment of Hyperphosphatemia

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SUMMARY. The synthesis of $\text{La}_2(\text{CO}_3)_3.4\text{H}_3\text{O}$ was carefully investigated, on the basis of the thermal behavior (TG and DTA measurements) of the corresponding octahydrate, used as the precursor. The analysis of the X-ray powder diagrams of $\text{La}_2(\text{CO}_3)_3.4\text{H}_3\text{O}$ showed that this hydrate crystallizes in the tetragonal crystal system with $Z = 8$. The FTIR and FT-Raman spectra of $\text{La}_2(\text{CO}_3)_3.4\text{H}_3\text{O}$ and of $\text{La}_2(\text{CO}_3)_3.8\text{H}_2\text{O}$ were recorded and assigned. The usefulness of the tetrahydrate for the treatment of hyperphosphatemia is briefly discussed.

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