



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

Enrique J. BARAN *

*Centro de Química Inorgánica (CEQUINOR, CONICET/UNLP), Facultad de Ciencias Exactas,
Universidad Nacional de La Plata, C. Correo 962, 1900-La Plata, Argentina.*

SUMMARY. The synthesis of $\text{La}_2(\text{CO}_3)_3 \cdot 4\text{H}_2\text{O}$ 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 $\text{La}_2(\text{CO}_3)_3 \cdot 4\text{H}_2\text{O}$ showed that this hydrate crystallizes in the tetragonal crystal system with $Z = 8$. The FTIR and FT-Raman spectra of $\text{La}_2(\text{CO}_3)_3 \cdot 4\text{H}_2\text{O}$ and of $\text{La}_2(\text{CO}_3)_3 \cdot 8\text{H}_2\text{O}$ were recorded and assigned. The usefulness of the tetrahydrate for the treatment of hyperphosphatemia is briefly discussed.

KEY WORDS: Crystallographic data, Hyperphosphatemia, Lanthanum carbonate tetrahydrate, Thermal behavior, Vibrational spectra.

* Author to whom correspondence should be addressed. *E-mail:* baran@quimica.unlp.edu.ar