

Synthesis and characterization of a nickel complex of enalapril and solubility study.

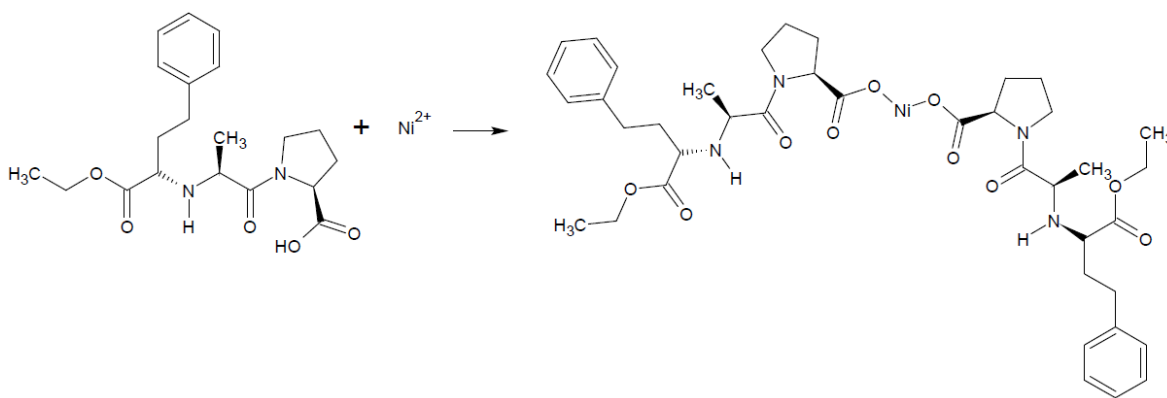
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Hypertension is a sickness which causes an increase in blood vessel pressure. The drugs commonly used to control this disease are angiotensin-converting enzyme inhibitors (ACE). The most prominent ACE in recent years are captopril, benazepril, lisinopril and enalapril. The enalapril prodrug is a potent long-acting oral ACE inhibitor, which reduces the plasma concentrations of angiotensin II and aldosterone, which cause high blood pressure. An alternative to improve the action of antihypertensive drugs is through the formation of coordination complexes obtained by union of an organic molecule (active pharmaceutical ingredient) and a metal. The Cambridge Structural Database contained a report of a study of enalapril complex coordinated with Zn^{+2} , but there are no reports of complexation studies with nickel. In this contribution, the study of nickel complex using UV-Vis and infrared IR spectroscopic, thermal analyzes, X-ray diffraction techniques and solubility study will be shown.

Figure 1. Scheme of the reaction of the Ni-(enalapril)₂ complex.



Key words: Metal complexes, enalapril, X-ray diffraction, solubility.

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