

## New Investigations on Copper(II) Sebacate, A Potentially Useful Drug for Copper Supplementation

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**SUMMARY.** We have recently improved the synthesis of copper(II) sebacate, a promising drug for copper-supplementation, and investigated some of its general physicochemical properties. In this paper we present a through analysis of its infrared spectrum, complemented by a comparison with those of free sebacic acid and disodium sebacate. Some solubility tests as well as a lipophilicity assay, which may be useful in the design of an adequate delivery system for the drug, are also reported.

**RESUMEN.** "Nuevas Investigaciones Sobre Sebacato de Cobre(II), una Droga Potencialmente Util para la Suplementación de Cobre". Recientemente hemos mejorado la técnica de síntesis del sebacato de cobre(II), una droga muy promisoría para la suplementación de cobre, e investigado sus propiedades fisicoquímicas generales. En este trabajo presentamos un análisis pormenorizado de su espectro de infrarrojo, complementado con una comparación de los correspondientes al ácido sebácico libre y al sebacato disódico. Asimismo, se reportan algunos ensayos de solubilidad y un estudio de lipofiliidad, los que pueden ser útiles para diseñar un sistema adecuado para dispensar la droga.

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Menkes disease is an inherited disorder associated with anomalies in the copper metabolism, and is probably related with an insufficient absorption of this element<sup>1-3</sup>.

Different attempts have been made to correct the abnormalities related to this disease with copper administration, in the form of different chemical compounds and complexes<sup>4-6</sup>. On the other hand, supplementation of copper has also become an important problem in veterinary medicine (cf. for example Smart *et al.*<sup>7</sup> and references therein).

Some not well defined copper compounds; in the presence of sebacic acid (decanedioic acid), has claimed to be useful in this context<sup>5,8</sup>. As sebacic acid appears as a very interesting ligand for the supplementation of essential trace metals, due to its general chemical properties which probably facilitate the mobiliza-

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**PALABRAS CLAVE:** Sebacato de Cobre(II); Espectro de Infrarrojo; Solubilidad; Lipofiliidad.