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# Infrared Spectra of the Copper(II) Complexes of Amino Acids with Hydrophobic Residues

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**SUMMARY. The infrared spectra of the bis-chelated Cu(II) complexes of the amino acids glycine, alanine, leucine, isoleuceine, valine and phenylalanine, which posses different kind of pharmacologic activity, were recorded and analyzed in relation to its structural peculiarities. Some comparisons between the recorded spectra are also presented and the characteristics of the carboxylate motions as well as those of the metal-to-ligand vibrations are discussed in detail.**

*RESUMEN.* "Espectros de Infrarrojo de los Complejos de Cobre(II) de Aminoácidos con Residuos Hidrofóbicos". Los espectros de infrarrojo de los complejos de Cu(II), bisquelados con los aminoácidos glicina, alanina, leucina, isoleucina, valina y fenilalanina, conocidos por presentar diferentes tipos de actividad farmacológica, fueron registrados y analizados en base a sus peculiaridades estructurales. Asimismo, se presentan algunas comparaciones entre los espectros obtenidos y las características de las vibraciones asociadas a los grupos carboxilato y a las uniones metal-ligando se discuten en detalle.

## INTRODUCTION

As a part of a research project devoted to the synthesis and characterization of copper complexes with pharmacologic activity, we are investigating some general physicochemical properties of Cu(II) complexes of different amino acids. As it is known, many of these complexes posses an effective anti rheumatic and or anti-inflammatory activity [1-5]. Within this project, we have now initiated the study of the vibrational spectra of complexes of this type. In this paper we present the first results of this investigation belonging to complexes of general stoichiometry $Cu(aa)_2$ or $Cu(aa)_2.nH_2O$, where *aa* is an amino acid containing a hydrophobic residue: glycine (gly), alanine (ala), valine (val), leucine (leu), isoleucine (ile) and phenylalanine (phe), which formulas are depicted in Figure 1.

KEY WORDS: Cu(II), Amino Acid Complexes, Infrared Spectra.
*PALABRAS CLAVE:* Cu(II), Complejos con Aminoácidos, Espectros de Infrarrojo.

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