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Interaction of the VO^{2+} Cation with Suprofen

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SUMMARY. The interaction of the oxovanadium (IV) cation with the anti inflammatory drug *Suprofen* has been investigated by means of electronic absorption spectroscopy in solution. The drug binds to the oxocation through its carboxylate group generating a 2:1 ligand-to-metal complex. Some comparisons with related compounds are made.

RESUMEN. "Interacción del Catión VO^{2+} con Suprofen". La interacción del catión oxovanadio (IV) con la droga antiinflamatoria *Suprofen* fue investigada por espectroscopía electrónica de absorción en solución. La droga se liga al oxocatión a través de su grupo carboxilato, generando un complejo de estequiometría ligando-metal 2:1. Se realizan comparaciones con algunos compuestos relacionados.

INTRODUCTION

As a part of a research project devoted to the study of the interaction of anti inflammatory drugs with some relevant biometals [1,2], we have initiated some investigations with Suprofen. Recently, we could thoroughly characterized [3] a previously reported dimeric Cu (II) complex [4], and isolate a solid mononuclear Co (II) complex [5] containing this ligand.

Considerable interest in *Suprofen* (α-methyl-4-(2-thienyl-carbonyl)phenylacetic acid, Fig. 1a, abbreviation HSup) was shown since it was found to exhibit analgesic, antipyretic and anti inflammatory activity [6], properties which are common among a number of non-steroidal arylalkanoic acid derivatives [7]. The antiinflammatory activity of this drug can be described as SOD mimetic [3,4], because it is apparently related to its ability to catalyze disproportionation of the superoxide radical anion (SOD), one crucial metabolic species contributing to tissue damage in inflammatory joint diseases.

KEY WORDS: VO^{2+}, Suprofen, Ibuprofen, Electronic Spectra.
PALABRAS CLAVE: VO^{2+}, Suprofen, Ibuprofen, Espectros Electrónicos.

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