Organotin mefenamic complexes - preparations, spectroscopic studies and crystal structure of a triphenyltin ester of mefenamic acid: novel antituberculosis agents.

Autorzy

Dimitra Kovala-Demertzi

V. Dokorou

Zbigniew Ciunik

N. Kourkoumelis

Mavroudis A. Demertzis

Rok wydania

2002

Czasopismo

Applied Organometallic Chemistry

Numer woluminu

16

Strony

360-368

DOI

10.1002/aoc.308

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The triphenyltin adduct of mefenamic acid, [$SnPh_3L$] (**1**), the monophenyltin complex [$PhSnOL]_n$ (**2**), and the dibutyltin complex [$SnBu_2L_2$] (3), where HL is 2-[bis(2,3-dimethylphenyl)amino]benzoic acid (mefenamic acid), have been prepared and structurally characterized by means of vibrational, ^1H and ^{13}C NMR spectroscopies. The crystal structure of 1 has been determined by X-ray crystallography. X-ray analysis revealed a pseudo-pentacoordinated structure containing Ph_3Sn coordinated to the carboxylato group. The structural distortion is a displacement from the tetrahedron toward the trigonal bipyramid. Significant C□H–π interactions and intramolecular hydrogen bonds stabilize the structure 1. The polar imino hydrogen atom participates in intramolecular hydrogen bonds. Complex 1 is self-assembled *via* C□H–π and stacking interactions. Vibrational and NMR data are discussed in terms of the crystal structure and the proposed structures for 1–3. Compounds 1 and 3 were tested for antimycobacterial activity against *Mycobacterium tuberculosis H37Rv*.

Adres publiczny

https://doi.org/10.1002/aoc.308

Strona internetowa wydawcy

onlinelibrary.wiley.com