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The mass spectrometric study on aminohydroxamic acids-based metallacrowns.

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Streszczenie

Electrospray ionization mass spectrometry (MS) has been widely used to detect noncovalent interactions in supramolecular compounds, especially in biological systems. In our work, we present the application of the electrospray ionization MS technique to characterize the metallamacrocycles, known as metallacrowns. This project involves investigations of the aminohydroxamic acids structure and chirality influence on formation of ternary 12-metallacrown-4 complexes. For our experiments, we used a series of β-aminohydroxamic acids and derivatives of histidinehydroxamic acid. A high stability of the studied supramolecular systems in the gas phase was confirmed by MS/MS experiments. We also proposed the fragmentation pathways for the studied compounds. Obtained results reveal that the ternary 12-metallacrown-4 formation process is not selective, and ligands of various structures and chiralities can be incorporated into these systems.

Słowa kluczowe

Metallacrowns, supramolecular, hydroxamic, ESI, Complexes

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