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Synthesis of lipophilic N-phosphorylmethylated amino acids and their membrane-transport properties towards some organic acids

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Abstract

© 2016 Taylor & Francis Group, LLC. One-pot procedures were developed for the synthesis of lipophilic N-(dialkylphosphorylmethyl) derivatives of natural amino acids with high yields from dioctyl oxide, formaldehyde, and an amino acid in the presence of amino acid hydrochloride. Membrane transport properties of the new phosphorylated amino acids towards polyfunctional carboxylic acids were studied. It was found that N,N-bis[(dioctylphosphoryl)methyl]- β -alanine is a selective extractant for glutaric acid.

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Keywords

Amino acids, membrane transport, synthesis