

## Membrane transport of dicarboxylic and $\alpha$ -hydroxy carboxylic acids induced by $\alpha$ -amino phosphonates

Stoikov I., Fitseva N., Akhmetzyanova L., Gafioullina L., Antipin I., Zheltukhin V., Devyaterikova A., Al'fonsov V., Konovalov A.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

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### Abstract

New  $\alpha$ -amino phosphonates containing different alkyl and aryl substituents at the  $\alpha$ -carbon atom were synthesized in high yields by the Kabachnik - Fields and Pudovik reactions. These compounds were studied as carriers of several  $\alpha$ -hydroxy carboxylic and dicarboxylic acids through liquid impregnated membranes. These  $\alpha$ -amino phosphonates studied are capable of molecular recognition of oxalic acid among structurally similar  $\alpha$ -hydroxy carboxylic and dicarboxylic acids. The efficiency and selectivity of mass transfer of oxalic acid increase with an increase in the lipophilicity of the  $\alpha$ -amino phosphonate.

<http://dx.doi.org/10.1023/B:RUCB.0000046257.44290.84>

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### Keywords

$\alpha$ -amino phosphonates,  $\alpha$ -hydroxy carboxylic acids, dicarboxylic acids, membrane transport, synthetic receptors