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Thematic direction: Kinetics and mechanism of acyl transfer reactions. Part 11.

L-Lysine and *L*-ornitine reactivity in reactions with 4-nitrophenyl acetate and picryl benzoate in aqueous 1,4-dioxane solutions

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Abstract

The kinetics of acylation of diamino acids – *L*-lysine and *L*-ornitine by carboxylic aids esters – picryl benzoate and 4-nitrophenyl acetate in the binary solvent water – 1,4-dioxane is investigated. It is shown that acylation rate constants of α-amine groups are significantly lower than acylation rate constants of *L*-lysine ε-amine group and *L*-ornitine δ-amine group. The kinetic data are compared with results of quantum chemical simulation of the diamino acids anions. It is established that the diamino acids reactivity in acylation is connected both with amine groups charges and HOMO energies of their anionic forms.

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