

# Synthesis and Keto-Enol Tautomerism of 6-Alkyl-1-Alkoxy-2,4-pyridinediones

D. B. Rubinov, I. L. Rubinova, and F. A. Lakhvich

*Institute of Bioorganic Chemistry, National Academy of Sciences of Belarus, Minsk, 220141 Belarus  
e-mail: rub\_in@mail.ru*

Received May 25, 2010

**Abstract**—Reactions of 2,2-dimethyl-5-(3-oxoalkanoyl)-1,3-dioxane-4,6-diones with alkoxyamines proceed regioselectively at the  $\beta'$ -keto group of the side acyl chain affording the corresponding tricarbonyl imines whose boiling in toluene leads to the formation of products of intramolecular cyclization, *N*-alkoxy-2,4-dioxypyridine-3-carboxylic acids. The decarboxylation of the obtained pyridine-3-carboxylic acids in mesitylene at 160–165°C gives in the preparative yield *N*-alkoxy-2,4-pyridinediones. Proceeding from the IR and NMR spectra the problems of the keto-enol and imine-enamine tautomerism were discussed for the series of 5-acyl derivatives of the Meldrum acid and the obtained *N*-alkoxy-2,4-pyridinediones.

**DOI:** 10.1134/S1070428011020199