

Optimization of the Synthesis Conditions of Products Formed in Arenesulfonylation of *N*-Alkylated Anilines

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Abstract—Fundamental kinetic aspects of the arenesulfonylation of *N*-alkylated anilines in aqueous-organic media, the nonaqueous component of which are alcohols, ethers, and acetonitrile were studied. It was shown that, with increasing fraction of water in the solvent, the reaction rate constant grows and the reactivity of *N*-alkyl anilines depends not only on the structure of the alkyl radical, but also on the content of water in the solvent. It was found that dimethyl sulfoxide has a catalytic effect on these processes. The strategy of choosing the medium in syntheses of biologically active sulfonyl derivatives of fatty-aromatic amines is discussed. A conclusion about the applicability of aqueous-organic media in the production technology of *N*-alkylated anilines is based on a calculation of the yield of their arenesulfonylation products.

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