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Kinetics and mechanism of the Pudovik reaction in the azomethine series: I. Addition of dimethyl hydrogen phosphite to N-isopropylbenzalimines

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Abstract

For a series of phenyl-substituted N-isopropylbenzalimines, the effect of substituent on their capability to add dimethyl hydrogen phosphite was studied qualitatively in the condensed phase (DTA) and quantitatively (with determination of the kinetic and activation parameters) in 2-propanol solutions with spectrophotometric monitoring of the reaction. A reaction mechanism was proposed, involving formation of a highly organized four-membered transition state.

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