



**Kinetics and Mechanistic Study of Oxidation of 1-Phenylethanols  
by N-Bromophthalimide in Aqueous Acetic acid**

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**ABSTRACT**

*Kinetic investigations of oxidation of 1-Phenylethanol and substituted 1-Phenylethanols by N-bromophthalimide (NBP) in aqueous acetic acid medium in presence of mercuric (II) acetate as a scavenger have been studied spectrophotometrically. Oxidation kinetics of 1-Phenylethanols by NBP shows a first order dependence on NBP and fractional order on 1-Phenylethanol. The variation of ionic strength,  $Hg(OAc)_2$ ,  $H^+$  and phthalimide (reaction product) have insignificant effect on reaction rate. Activation parameters for the reaction have been evaluated from Arrhenius plot by studying the reaction at different temperatures. A mechanism involving transfer of hydride ion in rate determining step is suggested.*

**Keywords:** Kinetics, Oxidation, 1-Phenylethanol, N-bromophthalimide.

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