



## N-Methyl-2,6-diphenylpiperidin-4-one oxime Oxidized by Quinaldinium Fluorochromate in Aqueous Acetic Acid Medium

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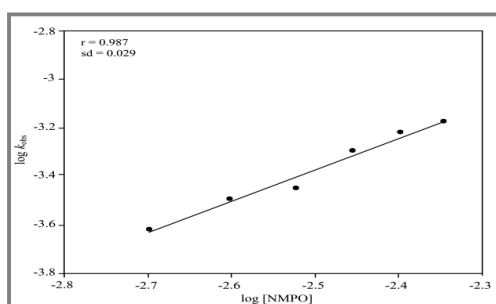
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### ABSTRACT

Kinetics of oxidation of [NMPO] by [QNFC] in protic solvent system has been studied at 308 K. The product has been identified as corresponding ketonic group. A first order dependence of the reaction with respect to [QNFC] and [NMPO] has been observed. The reaction has been found to be catalyzed by  $H^+$  ions. The rate constant increased with increase in the concentration of perchloric acid. Increasing the percentage of the acetic acid medium increases the rate. Addition of sodium perchlorate decreases the rate of reaction appreciably. No polymerization with acrylonitrile. The reaction has been conducted at four different temperature and the activation parameters were calculated. From the observed kinetic results a suitable mechanism was proposed.

### Graphical Abstract



Plot of  $\log k_{obs}$  versus  $\log [NMPO]$ .

**Keywords:** NMPO, QNFC, Oxime, Acetic acid.