International Journal of ChemTech Research
CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.11 No.08, pp108-114,2018

Oxidation of n-Valeric acid hydrazide to the Corresponding Acid by Thallium (III) in 1, 4-Dioxane Medium - A Kinetic and Mechanistic Approach

AmitShrikantVarale*

[1]Department of Chemistry, A.S.P. College, Devrukh-415804 Dist-Ratnagiri Maharashtra State, India

Abstract: The reaction between Thallium (III) and n-Valeric acid hydrazide is carried out in a mixture of perchloric and hydrochloric acid medium. The reaction proceeds through formation of complex with reactant, which decomposes in subsequent steps to give product. Effect of acrylonitrile shows, that there is no formation of free radicals. The increase in $[H^+]$ and $[Cl^-]$ decreases the rate of the reaction. The increase in ionic strength does not affect the rate of reaction. The effect of temperature was studied at four different temperatures ranging from 15^0C to 30^0C. The activation parameters were also determined and a mechanism is predicted.

Key words : kinetics, Thallium(III), Oxidation, n-VAH.

AmitShrikantVarale /International Journal of ChemTech Research, 2018,11(08): 108-114.

DOI= http://dx.doi.org/10.20902/IJCTR.2018.110812

*****