



## **Kinetics and Mechanism of Lanthanum (III) Catalysed Oxidation of D-galactose by Cerium (IV) in Aqueous Acidic Medium**

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### **ABSTRACT**

*A kinetics investigation of catalysed oxidation of D-(+)galactose by cerium(IV) have been studied in acidic medium in the temperature range 308-333 K. The reaction has been found to be first order with respect to D-(+)galactose in the presence of lanthanum(III) catalysed. The rate follow first order kinetics in lanthanum(III) catalysed oxidation reaction. The effect of  $[HSO_4^-]$  has also been observed. The 1:2 stoichiometry is observed in the oxidation. From the effect of temperature on the rate of reaction, the Arrhenius equation and various activation parameters have been computed. A suitable mechanism has been proposed. The reaction constants involved in the different steps of the mechanism have been calculated.*

**Keywords:** Kinetics, Catalysed, D-(+)galactose, Cerium(IV) and Lanthanum(III).

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