

OXIDATION OF SUGARS BY CE (IV) IN AQUEOUS SULPHURIC ACID: KINETIC AND VISCOMETRIC APPROACH

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ABSTRACT

The kinetics of oxidation of sugars by cerium (IV) has been studied in aqueous sulfuric acid medium. The reaction is first order with respect to the accident. The plot of jobs against sugar concentration is linear for all the substrates. The kinetic data have been analyzed to correlate the viscosity and rate of oxidation of sugars in sulfuric acid.

The probable mechanism has been suggested with dependence of rate on the viscosity. The influence of viscosity on rate of reaction was observed. The linear relation was found between viscosity and reaction rate. The linearity coefficients were greater than 0.93 for all the sugars.