

Determination of rate constants for the hydrolysis of acetic acid esters in acid medium

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Abstract: The object of our work is the study of acid hydrolysis reactions of some esters of acetic acid, in order to establish the influence of alkyl radical nature on reaction rate for the acid hydrolysis. The experimental study realized by using classic methods is aiming at establishing the structure effects of R alkyl linear and C₁ – C₅ ramified radicals from the ester of acetic acid. The following esters were studied: methyl acetate, ethyl, n-propyl, i - propyl, i - butyl, n - amyl, and i - amyl. The kinetic study was realized in watery acid solutions. Experimental data obtained within the temperature range of 20 -30 °C allow the determination of the rate constant. The results obtained were compared with data from specialized literature.

Keywords: acetic acid, esters, hydrolysis, acid medium, rate constant, alkyl-radical.
