

Low power high-frequency electromagnetic field affecting the speed of chemical reactions and equilibrium constant

© Boris P. Shipunov,^{*+} Alexander V. Timiryazev, and Elena V. Kondratova

*Physical and Colloid Chemistry Chair. Altai State University. Dept. of Chemistry. Lenina St., 61. Barnaul,
656049. Altai Region. Russia. Phone: +7 (3852) 36-75-88. E-mail: sbp@mc.asu.ru*

^{*}Supervising author; ⁺Corresponding author

Keywords: *non-thermal impact, speed of homogenous chemical reaction, shift in the chemical
balance, equilibrium constant, electromagnetic high-frequency field.*

Abstract

The affect of low power high-frequency field of 30-150 MHz has been studied in relation to the equilibrium of mutorotation of saccharose and hydrolysis of acetacetic ether. It has been stated that under mutorotation the equilibrium shifts towards a larger amount of *D*-glucose. The equilibrium of saponification reaction is shifted towards producing the resultants. Both depth and speed of changes for the equilibrium in both reactions depend on the frequency of the field applied.