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Thematic course: Aggregate stability of disperse systems. Part 1.

Investigation of surface electrical properties and coagulation kinetic of monodisperse polystyrene latexe particles with surface carboxyl groups

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Abstract

In this work the electrokinetic behavior of monodisperse polystyrene particles with diameter 0.55 μm and 1.02 μm in the presence of indifferent electrolyte NaCl (10^{-3}, 10^{-2} and 10^{-1} mol/l) and varying pH (3-9) was observed. Using the direct method of flow ultramicroscopy the kinetics of latex coagulation in the solutions of NaCl in the range of pH 3-9 have been studied. Coagulation rate depends on the dispersion medium (pH and electrolyte concentration) and the size of polystyrene particles. Experimental coagulation rate was compared with theoretical rate (calculated in according with Smoluchowsky theory).