

Stability Studies of Dilute Suspensions of Sterically Stabilised Polystyrene Latex

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ABSTRACT

The stability of dilute suspensions of polystyrene latex stabilized by polyvinylpyrrolidone was investigated. Particle size and distribution were characterized using a Malvern Mastersizer and a Coulter Multisizer. The effect of suspension preparation on the size distribution was studied by controlling the salt concentration and the time of ultrasonication. It was noticed that when the latex suspension was placed in the ultrasonic bath prior to Coulter Counting, instead of aiding dispersion by breaking up any aggregates it appeared to be causing slight flocculation. This resulted in a reduction of the volume of the particles in the main peak of the particle size distribution curve. This effect can be enhanced when the ultrasonic time increases, indicating that ultrasound energy aids the formation of flocs in dilute latex suspensions.