

Particle size analysis of polymer dispersions

Particle size distributions of polymer dispersions (latex, vesicles, micells etc.) can be obtained by measuring their sedimentation velocity in the analytical ultracentrifuge.

Figure 1 shows the sedimentation diagrams for a bimodal distributed polymer dispersion.

From those sedimentation curves initially the distribution of sedimentation coefficients $g(s)$ and subsequently by means of Stoke's law the particle size distribution $g(D)$ is calculated (Figure 2).

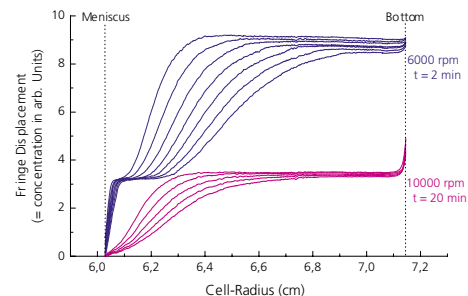


Figure 1
sedimentation curves for a bimodal polymer dispersion

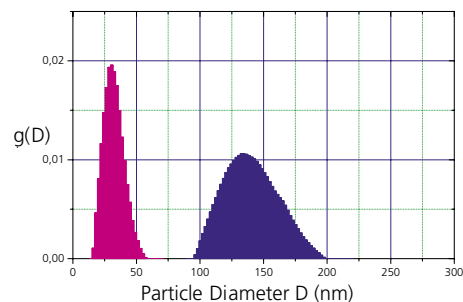


Figure 2
Particle size distribution $g(D)$ of a bimodal polymer dispersion