

What does it take to accurately measure the concentration of particles in colloids?

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We will discuss the influence of various experimental parameters that are determined by different methods to measure concentration of particles in colloids, especially in poly-disperse and poly-material ones. We will compare principles of measurements for established technologies like transmission electron microscopy (TEM), flow cytometry (FC), resistive pulse sensing (Coulter) and nanoparticle tracking analysis (NTA) as well as improvements introduced to the latter by multispectral advanced nanoparticle tracking analysis (MANTA). We will present experimental results obtained for standardized samples and for a wide variety of colloids encountered in research studies in diverse fields of interest. We will also discuss details of calibrating instruments that use MANTA.