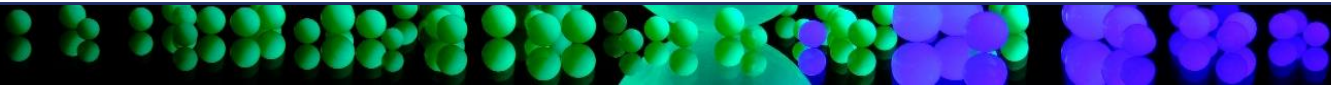




CPS Size Distribution Analysis

Measurement Services – Disc Centrifuge, DC24000, CPS Instruments Inc.



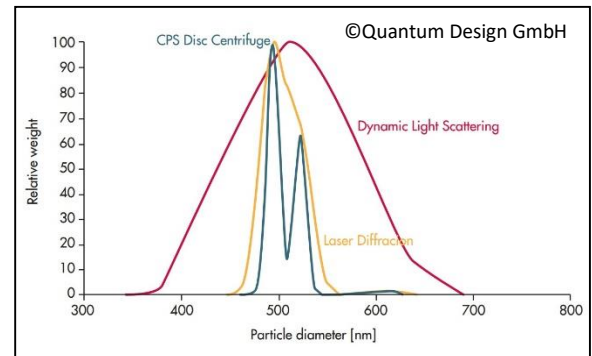
Overview

Detect, measure and quantify multiple particle peaks

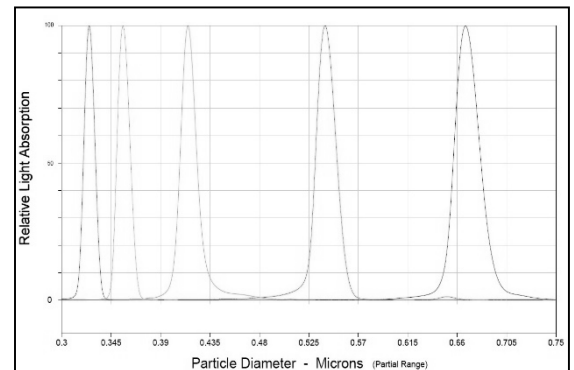
The CPS Disc Centrifuge is a particle size analyzer for measuring particles within the range of 0.01 micron to 20 microns. The particle size distribution is measured using centrifugal sedimentation through a density gradient. The high centrifugal forces at 24 000 rpm allow a very reliable and highly resolved separation of different particle sizes or densities. The detection of the particles takes place by light forward scattering-

The time the particles need to sediment is converted to the particle size according to Stokes' Law and Mie Theory of Diffraction of Light. The accuracy of measured sizes is insured using known size calibration standards.

In contrast to the Dynamic Light Scattering (DLS) this method is able to analyze also multimodal particle samples of high polydispersity index in an exact way for which DLS calculate only an average size, yielding wrong values of the real particle size as shown in the image on the right hand. The possibility to adapt the density gradient and to control the centrifugation speed allow the measurement of quite different samples, as e.g. 10 nm TiO₂ nanoparticles up to 20 µm polystyrene beads.



Same sample – Different results



Size distribution of different PMMA Particles Produced by Surflay Nanotec GmbH

Key Features:

- Exact size determination of multimodal samples
- Independent of refractive index
- Absolute size determination requires known gravimetric density
- Wide size range from 5 nm to 20 µm
- Samples has to be dispersed in water



Image of analytical gradient centrifuge (CPS)

Visit surflay.com for more information on all product services

Surflay Nanotec GmbH

Max-Planck-Straße 3
12489 Berlin
Germany

+49-30-639-21764
s.office@surflay.com

Prices

1 sample	250 €
2 samples	350 €
4 samples	500 €
10 samples	750 €

