



## Overview

### Determination of particle size and distribution

The Malvern Nanosizer ZSP instrument can measure Zeta Potential as well as Dynamic Light Scattering. Dynamic light scattering (DLS), sometimes referred to as Quasi Elastic Light Scattering (QELS), is a non-invasive, well-established technique for measuring the size and size distribution of molecules and particles typically in the submicron region down to 10 nm. The obtained data include the average size and the polydispersity index PDI of the particle sample.

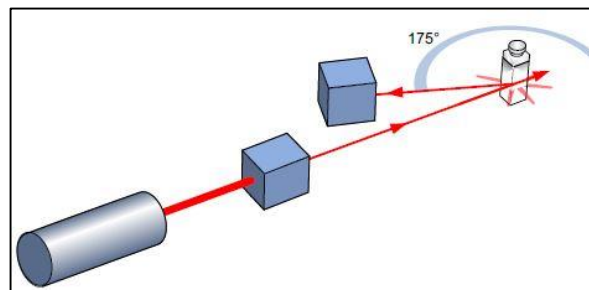
Typical applications of dynamic light scattering are the characterization of particles, emulsions, protein aggregates or liposomes which have been dispersed in a liquid. The Brownian motion of particles or molecules in suspension causes laser light to be scattered at different intensities. Analysis of these intensity fluctuations yields the velocity of the Brownian motion and hence the particle size using the Stokes-Einstein relationship.

#### Key Features:

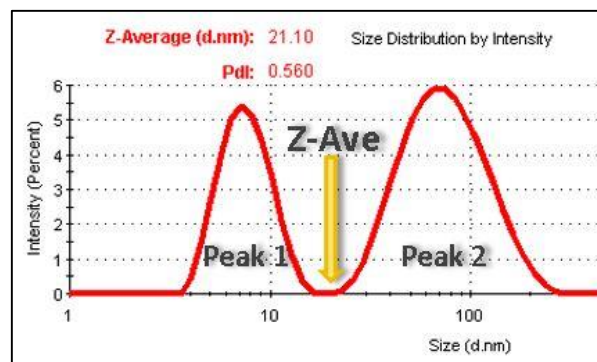
- 10 nm – 5 µm (density dependent)
- Calculation of PDI
- Broad concentration range
- High Power Laser – extremely sensitive detection
- Measurements in different solvents possible
- Minimum amount 1 mg



Zetasizer Nano ZSP (Malvern Panalytical Ltd.)



Typical setup of Dynamic Light Scattering (DLS)  
(Source: Malvern Panalytical Inc)



Size separation only possible for two distinct different sizes (Source: Malvern Panalytical Inc)

#### Prices:

1 sample:	100 €
2 samples:	150 €
4 samples:	300 €
10 samples:	750 €

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