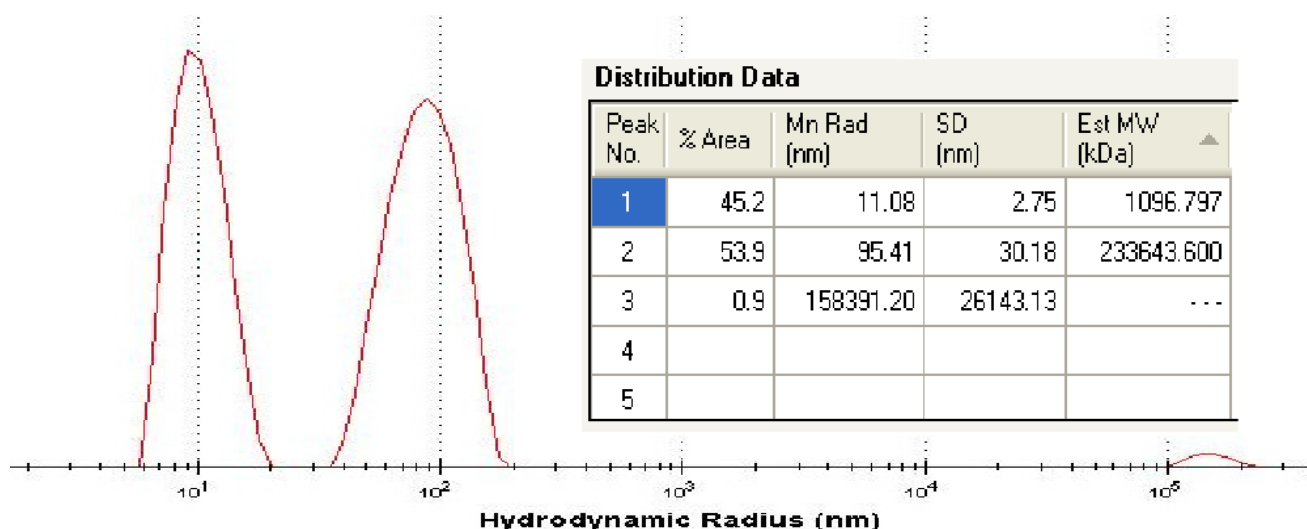


pUNk Resolution: i-Size™ Distribution Resolution

The Unchained Labs pUNk dynamic light scattering system and i-Size software provide a quick, convenient and accurate measurement of hydrodynamic size of sub-micron particles and molecules. Using the unique 5µl BladeCell disposable cuvette, this technical note illustrates the capability of discriminating a polydisperse suspension of latex particles.

Sample Preparation & Measurement

A mixture of approximately 100 parts 22nm to 1 part 200nm diameter latex particle size standards was dispersed in a phosphate buffer. 5µl of the prepared suspension was pipetted into a BladeCell cuvette and measured by the pUNk for a total of 50 seconds.



Results

The resulting size distribution reported by i-Size indicates two clearly separated peaks of 11nm (22nm diameter) and 95nm (190nm diameter). Each peak scatters roughly half the measured light intensity while a tiny third peak is an artifact of the distribution calculation and can safely be ignored.

Summary

i-Size software can easily discriminate a polydisperse sample where there is sufficient size differential, however the size groups must be unequally proportioned in favor of the smaller size by mass (number) to produce equal amounts of scattered light.