

Zimm plot

A diagrammatic representation of data on scattering from large particles, corresponding to the equation:

$$\frac{Kc}{\Delta R(\theta)} = \frac{1}{\bar{M}_w P(\theta)} + 2A_2c + \dots$$

and used for the simultaneous evaluation of the mass average molar mass, \bar{M}_w , the second *virial coefficient* of the chemical potential, A_2 , and (usually) the z-average *radius of gyration*, $\langle s^2 \rangle_z^{1/2}$; c is the mass concentration of the solute, $\Delta R(\theta)$ the excess *Rayleigh ratio*, and $P(\theta)$ the particle scattering function that comprises (usually) the z-average radius of gyration. K depends on the solute, the temperature and the type of radiation employed.

Several modifications of the Zimm plot are in frequent use; the most common one uses the excess scattering instead of the excess Rayleigh ratio.

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