GPC/SEC WITH CONVENTIONAL CALIBRATION: DOS AND DON´TS

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Gel Permeation Chromatography (GPC), also known as Size Exclusion Chromatography (SEC) is a very common technique for polymer molecular weight characterization. Often is necessary to determinate approximately the molecular weight of unknown samples with no information about concentration, exact polymer and matrix composition and refractive index increment (dn/dc). The use of different detectors, such as viscosity-, UV- and multi angle light scattering offers additional information about composition, branching and structure. Very often results are needed very quickly and short sample preparation are wished. SEC analysis with conventional calibration result the best method to choose in this situation. In this poster some example of Mw determination of water soluble polymers, polyelectrolyte and Protein are shown. Recommendation about eluent composition, sample concentration and filtration methods are explored and the effect of conformation in solution of standard and samples is discussed.