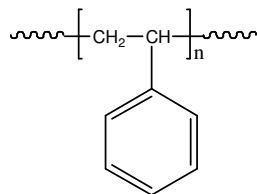


Sample Name: Polystyrene

Sample #: P8068-S

Structure:

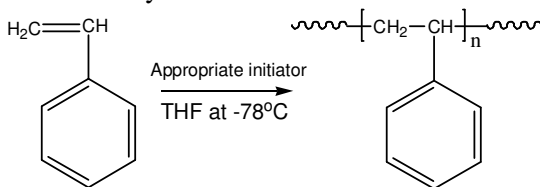


Composition:

Mn x 10 ³	PDI
88.0	1.06

Synthesis Procedure:

Polystyrene was synthesized by living anionic polymerization of styrene as illustrated below:



Characterization:

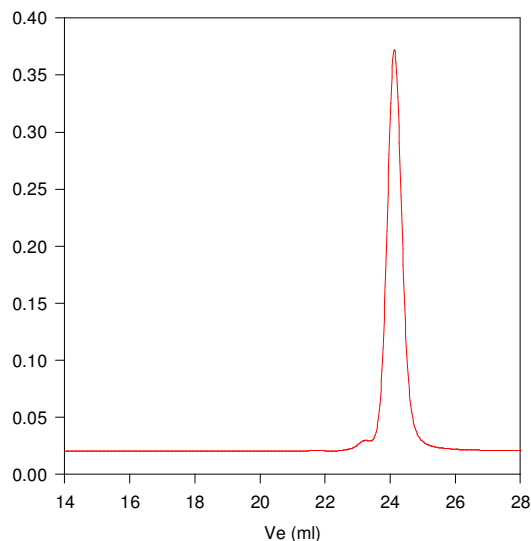
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

Solubility:

Polystyrene is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC of Homopolymer:

P8068-S



Size exclusion chromatograph for polystyrene

$M_n=88000$, $M_w=95000$, $PI=1.08$

Solution Viscosity in THF at 35 °C: 0.575dl/g Radius of Gyration: 12.09 nm

These values were obtained from the Viscotek triple detectors

Thermal analysis of the sample was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) has been considered.

