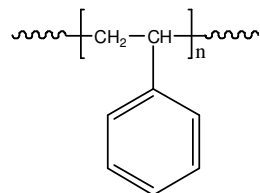


Sample Name: Polystyrene-Broad distribution**Sample #: P5633-S****Structure:****Composition:**

$M_n \times 10^3$	PDI
1200.0	1.3

Synthesis Procedure:

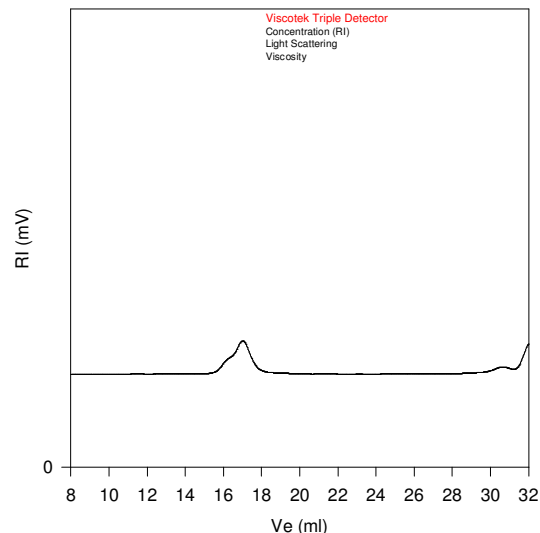
Polystyrene is obtained by living anionic polymerization using Sec. Butyllithium initiator.

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 CHCl_3 . It precipitates from methanol, ethanol, water and hexanes.



Size Exclusion Chromatography of Poly styrene:

— $M_n = 1200,000$, $M_w = 1560,000$, $M_w/M_n = 1.3$
 Solution Viscosity in THF at 35 °C: 2.79dl/g
 dn/dc in THF at 35 °C: 0.185 ml/g
 R_{gw} : 42.23nm

T_g of polystyrene as function of molecular weight

