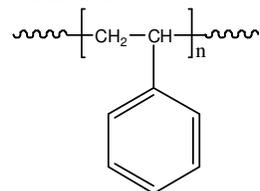


**Sample Name: Polystyrene-Broad distribution****Sample #: P5633-S****Structure:****Composition:**

$M_n \times 10^3$	PDI
1200.0	1.3

**Synthesis Procedure:**

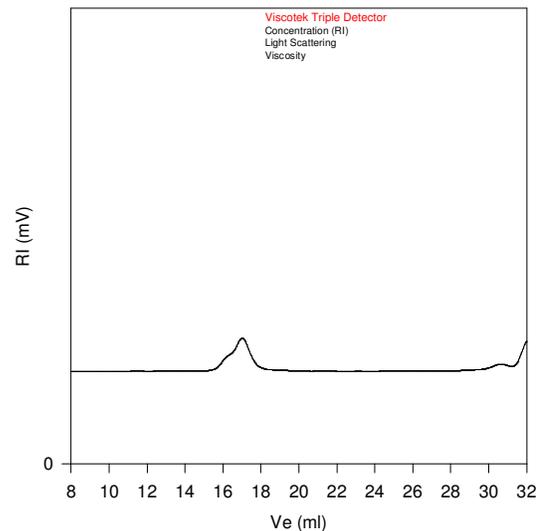
Polystyrene is obtained by living anionic polymerization using Sec. Butyllithium initiator.

**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  $\text{CHCl}_3$ . 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 oC: 2.79dl/g  
 $dn/dc$  in THF at 35 oC: 0.185 ml/g  
 $R_{gw}$ : 42.23nm

$T_g$  of polystyrene as function of molecular weight

