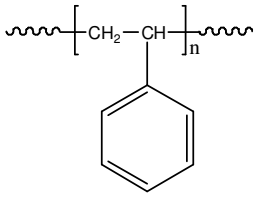
Sample Name: **Polystyrene**

Sample #: **P5654-S**

Structure:



Composition:

Mn x 10^3	PDI
1050.0	1.09

Synthesis Procedure:
Polystyrene is obtained by living anionic polymerization using Sec. Butyllitium initiator.

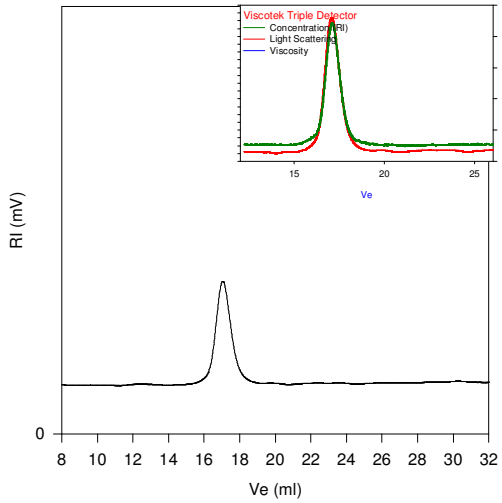
Characterization:

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.

SEC of Homopolymer

P5654-S



Size Exclusion Chromatography of Poly styrene:

—— M_n = 1050,000, M_w = 1144,000, M_w/M_n = 1.09
Solution Viscosity in THF at 35 oC: 2.79dl/g
dn/dcin THF at 35 oC: 0.185 ml/g
Rgw: 42.23nm

T_g of polystyrene as function of molecular weight