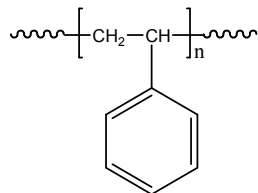


## Sample Name: Polystyrene-Broad Distribution

Sample #: P8930B-S

### Structure:



### Composition:

Mn x 10 <sup>3</sup>	PDI
575.0	1.2

### Synthesis Procedure:

Polystyrene is obtained by free radical polymerization of styrene.

### Characterization:

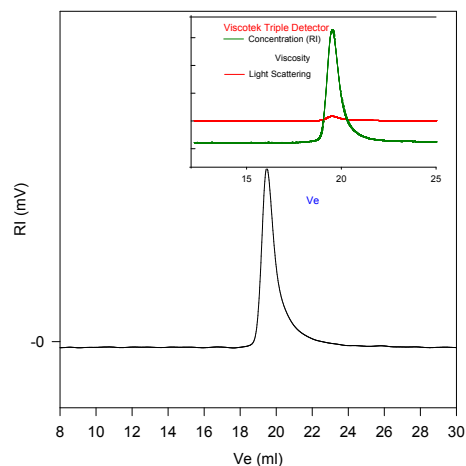
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

### Solubility:

Polystyrene is soluble in DMF, THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

## SEC of Homopolymer

### P8930B-S



Size Exclusion Chromatography of polystyrene:

—  $M_n = 575,000$ ,  $M_w = 690,000$ ,  $M_w/M_n = 1.2$

In box Light Scattering data from Triple detectors:

$dn/dc$  in THF 0.185 ml/g solution Viscosity in THF at 35 °C: 2.093 dl/g

RgW: 37.60 nm

### T<sub>g</sub> of polystyrene as function of molecular weight

