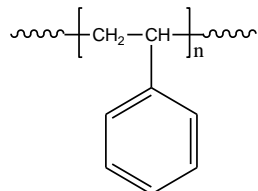


## Sample Name: Polystyrene-Broad Distribution

Sample #: P8707-S

### Structure:



### Composition:

| Mn x 10 <sup>3</sup> | PDI  |
|----------------------|------|
| 48.0                 | 1.45 |

### Synthesis Procedure:

Polystyrene is obtained by living anionic polymerization of styrene using n Butyl lithium initiator.

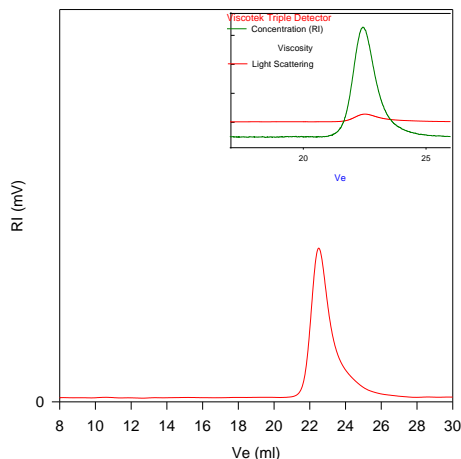
### Characterization:

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<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

## SEC of Homopolymer P8707-S (broad distribution)



Size Exclusion Chromatography of polystyrene;

—  $M_n = 48,000$ ,  $M_w = 69,600$ ,  $M_w/M_n = 1.45$

In box Light Scattering data from Triple detectors:

$dn/dc$  in THF 0.185ml/g Solution Viscosity in THF at 35 oC: 0.496dl/g  
Rgw:10.28nm