

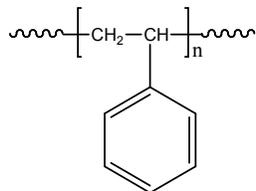
**Sample Name: Polystyrene-Broad Distribution**

**SEC of Homopolymer**

**P9253-S**

**Sample #: P9253-S**

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
360.0	1.4

**Synthesis Procedure:**

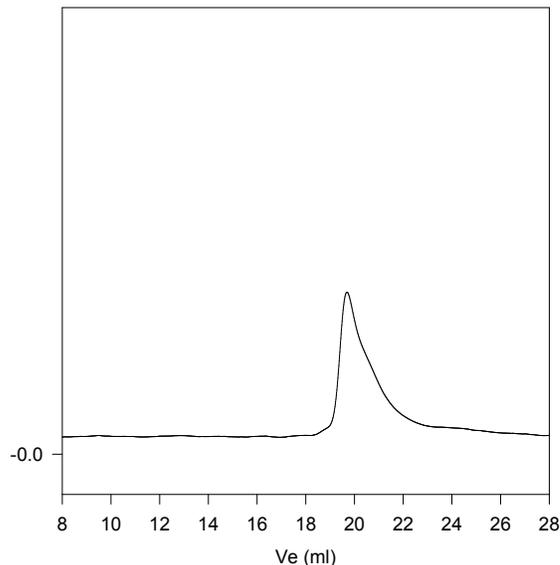
Polystyrene is obtained by free radical polymerization of styrene.

**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  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water and hexanes.



Size exclusion chromatograph of polystyrene:

$M_n=360,000$ ,  $M_w=504,000$ ,  $PI=1.4$

$T_g$  of polystyrene as function of molecular weight

