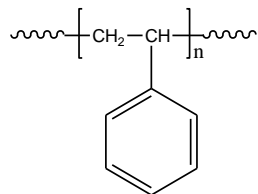


**Sample Name: Polystyrene-Broad Distribution**

**Sample #: P8806-S**

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
40.0	2.0

**Synthesis Procedure:**

Polystyrene is obtained by free radical polymerization of styrene.

**Characterization:**

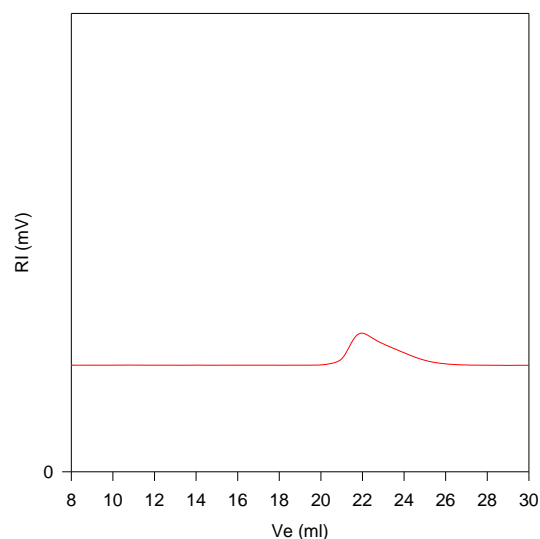
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

**Solubility:**

Polystyrene is soluble in DMF, THF, toluene and  $CHCl_3$ . It precipitates from methanol, ethanol, water and hexanes.

**SEC of Homopolymer**

**P8806-S (broad distribution)**



Size Exclusion Chromatography of polystyrene;

—  $M_n = 40,000$ ,  $M_w = 80,000$ ,  $M_w/M_n = 2.0$

**$T_g$  of polystyrene as function of molecular weight**

