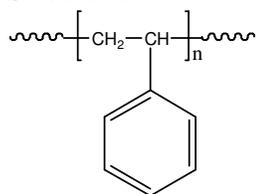


**Sample Name: Polystyrene**

**Sample #: P1495-S**

**Structure:**

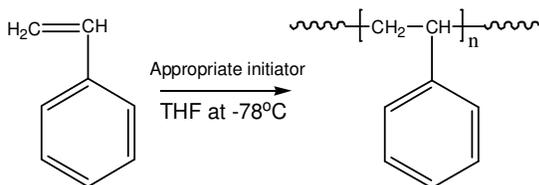


**Composition:**

$M_n \times 10^3$	PDI
562.0	1.07

**Synthesis Procedure:**

Polystyrene is obtained by living anionic polymerization of styrene as illustrated below:



**Characterization:**

The molecular weight and polydispersity index (PDI) were 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.

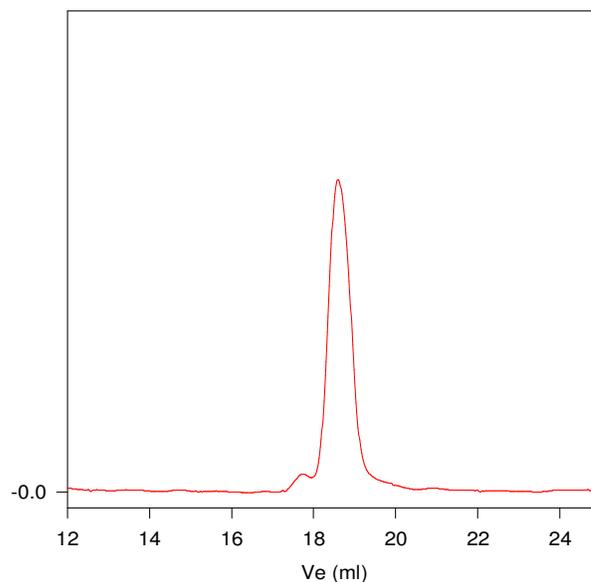
Thermal analysis of the sample was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of  $10^\circ C/min$ . The inflection glass transition temperature ( $T_g$ ) has been considered.

**Solubility:**

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

**SEC of Homopolymer:**

**P1495-S**



Size exclusion chromatograph of polystyrene:  
 $M_n=562,000$ ,  $M_w=601,000$ ,  $M_z=644,000$ ,  $PI=1.07$

