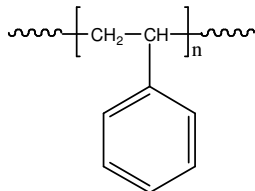


Sample Name: **Polystyrene**

Sample #: **P8610-S**

**Structure:**

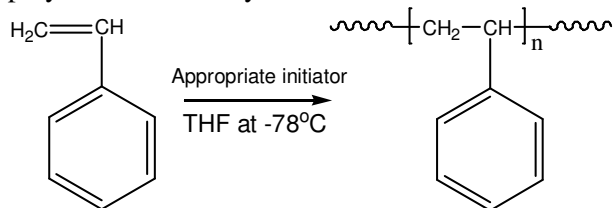


**Composition:**

Mn x 10 <sup>3</sup>	PDI
260.0	1.07

**Synthesis Procedure:**

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



**Characterization:**

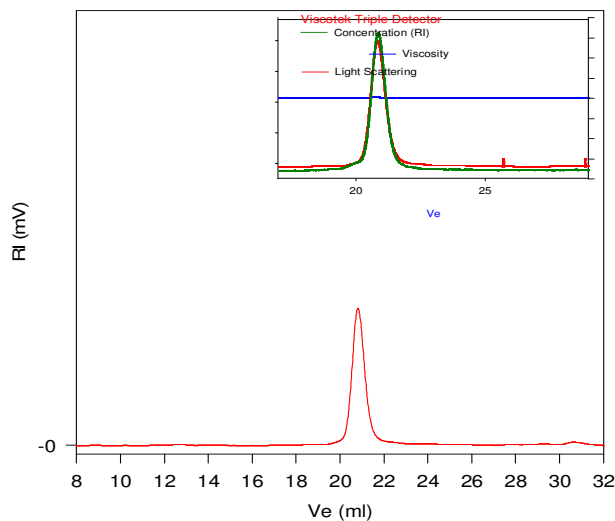
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

**P8610-S**



Size Exclusion Chromatography of polystyrene;

— M<sub>n</sub> = 260,000, M<sub>w</sub> = 278,000, M<sub>w</sub>/M<sub>n</sub> = 1.07

In box Light Scattering data from Triple detectors:

dn/dc in THF 0.185ml/g Solution Viscosity in THF at 35 oC: 1.099dl/g  
Rgw:21.06nm

Thermal analysis of the sample was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T<sub>g</sub>) has been considered.

