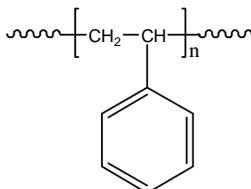


**Sample Name:** Polystyrene (electronic grade)

**Sample #:** P2446-S

**Structure:**

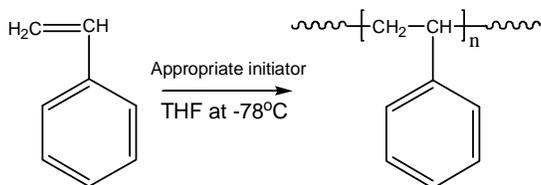


**Composition:**

$M_n \times 10^3$	PDI
102.5	1.06

**Synthesis Procedure:**

Polystyrene was 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.

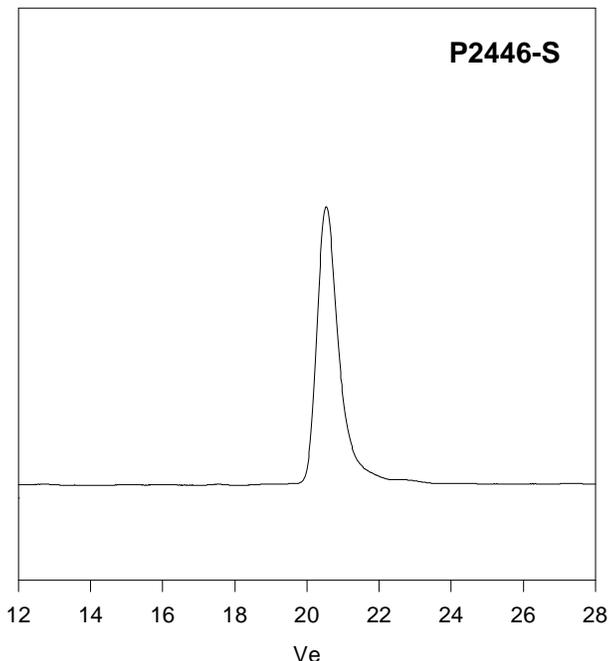
**Solubility:**

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

**Purification:**

The obtained polymer was dissolved in benzene and filter through a membrane  $0.5 \mu$  nylon filter. The obtained solution was freeze-dried under reduced pressure.

**SEC elugram of the product:**



Size Exclusion Chromatography of Polystyrene:

$M_n = 102500$ ,  $M_w = 108700$ ,  $PI = 1.06$

**DSC results for polystyrene:**

