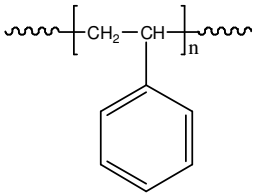
Sample Name: **Polystyrene**

Sample #: **P1404-S**

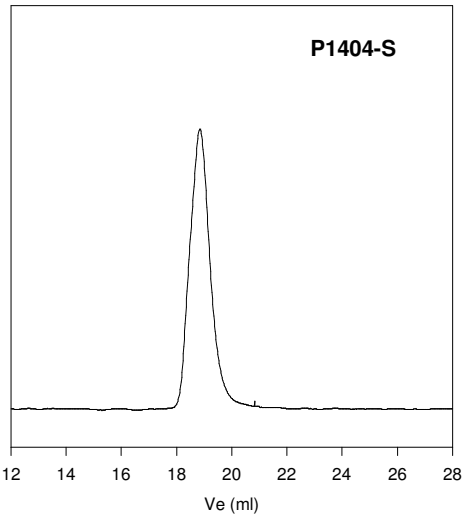
Structure:



Composition:

Mn × 10^3	PDI
404.0	1.12

SEC of Homopolymer:

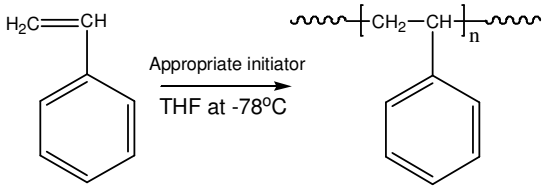


Size exclusion chromatograph of polystyrene:

M_n=404000 M_w=450500, PI=1.12

Synthesis Procedure:

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

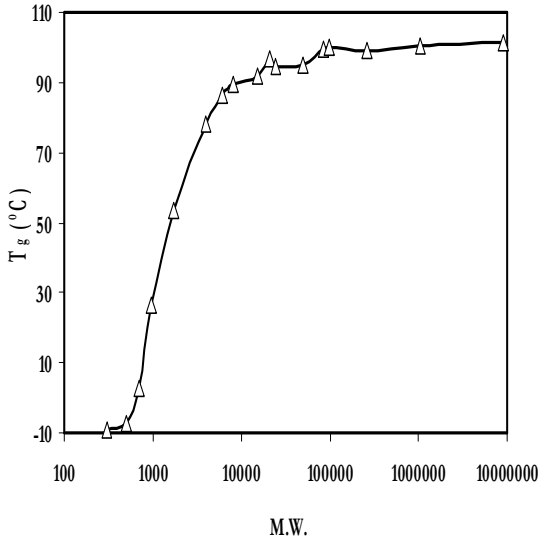


Characterization:

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°C/min.The inflection glass transition temperature (T_g) has been considered.

T_g of polystyrene as function of molecular weight



Solubility:

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