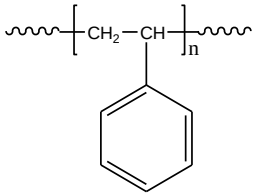
Sample Name: **Polystyrene**

Sample #: **P629-S**

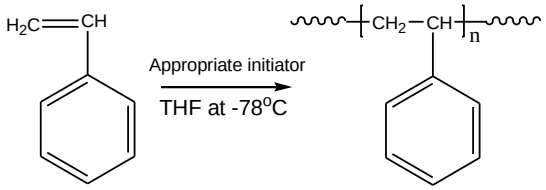
Structure:



Composition:

Mn x 10^3	PDI
776.0	1.20

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



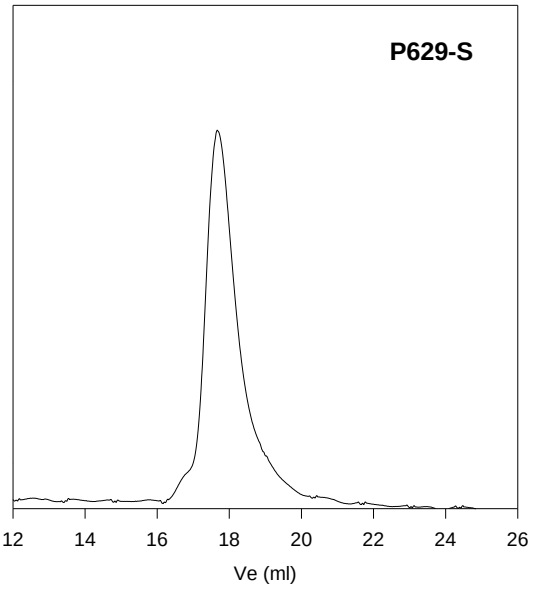
Characterization:

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.

Thermal analysis:
Thermal analysis of the samples 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.

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

SEC of Homopolymer



Size exclusion chromatography of polystyrene
M_n=776000, M_w=942800, M_z=1114300, PI=1.20

T_g of polystyrene as function of molecular weight

