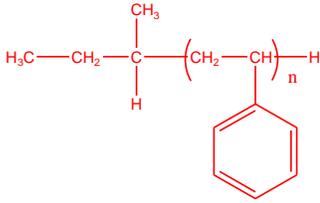


Sample Name: Polystyrene

Sample #: P41416-S

Structure:

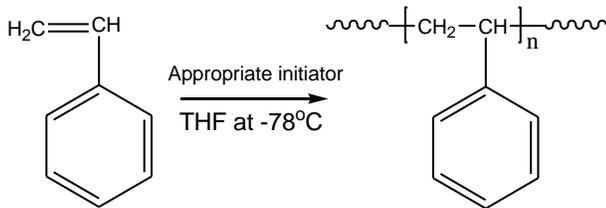


Composition:

$\text{Mn} \times 10^3$	PDI
646.0	1.12
Tg	84 °C

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 chromatography 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:

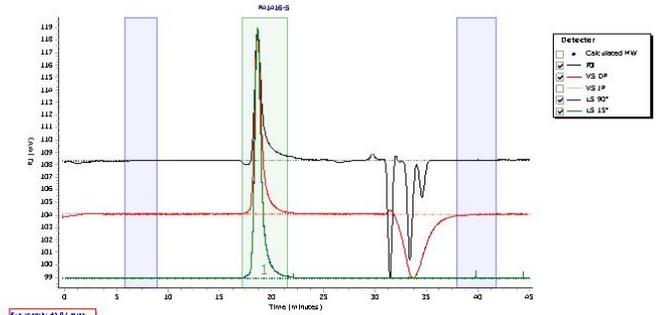
Polystyrene is soluble in DMF, THF, toluene and  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water and hexanes.

SEC elugram of the polymer in THF:

Agilent GPC/SEC Software

P41416-S

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	822824	646491	724109	774285	807578	789913	1.12

DSC thermogram of the polymer:

Size: 15.3000 mg

