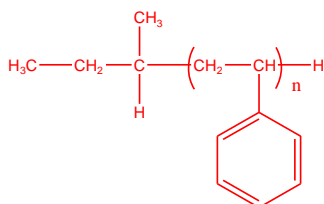


Sample Name: Polystyrene

Sample #: P40751-S

Structure:

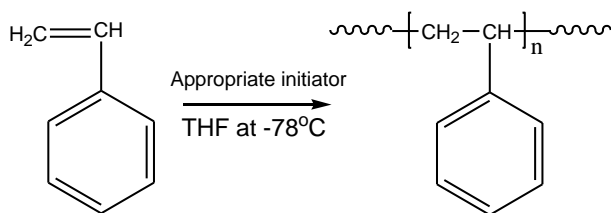


Composition:

Mn x 10 ³	PDI
435.5	1.26

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.

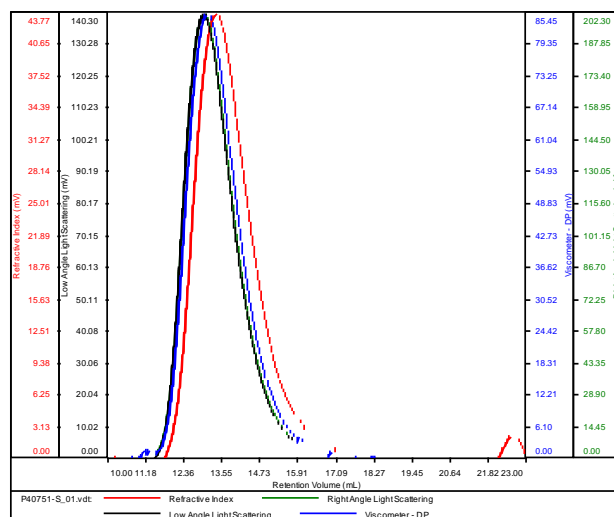
Solubility:

Polystyrene is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC elugram of the polymer in THF:

P40751-S

Conc	4.0938
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS-80k_2017-September-22-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40751-S_01.vdt	435,503	549,434	544,746	1.262	0.4643

DSC thermogram of the polymer:

T_g of polystyrene as function of molecular weight

