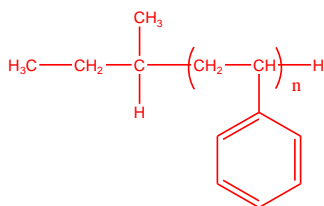


Sample Name: Polystyrene

Sample #: P41910-S

Structure:

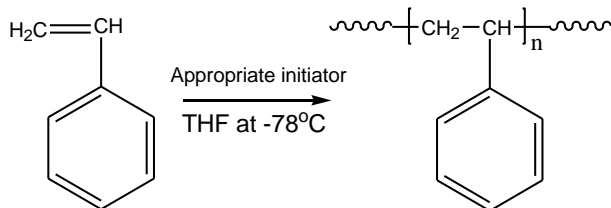


Composition:

| | |
|-------------------------|-------|
| $\text{Mn} \times 10^3$ | PDI |
| 700.0 | 1.05 |
| T_g | 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:

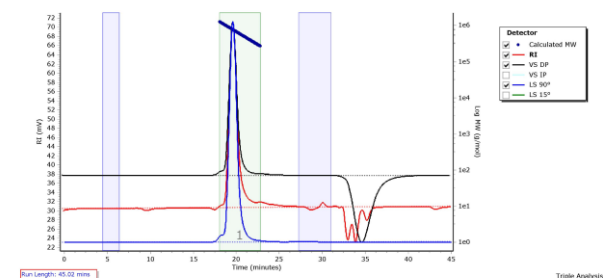
Polystyrene is soluble in DMF, THF, toluene and CHCl_3 . It precipitates from methanol, ethanol, water and hexanes.

SEC elugram of the polymer in THF:

Agilent GPC/SEC Software

P41910-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 | 774299 | 700056 | 736326 | 763886 | 786424 | 761934 | 1.052 |

DSC thermogram of the polymer:

Size: 15.3000 mg

