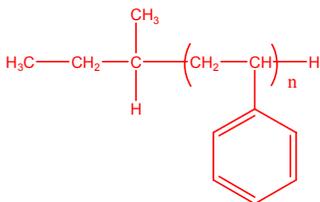


Sample Name: Polystyrene

Sample #: P40397-S

Structure:

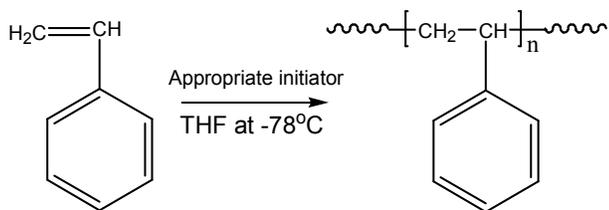


Composition:

| | |
|-------------------|------|
| $M_n \times 10^3$ | PDI |
| 248.0 | 1.05 |

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 DMF. 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.

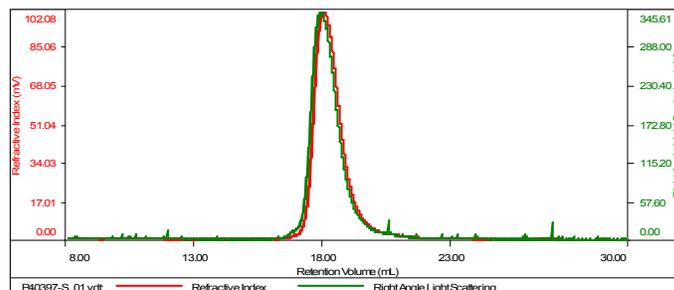
Solubility:

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

SEC elugram of the polymer in DMF:

P40397-S

| | |
|-----------------------|--------------------------|
| Concentration (mg/mL) | 1.8106 |
| Sample dn/dc (mL/g) | 0.1850 |
| Method File | PS80K-Nb/2016-6-0000.vcm |
| Column Set | 3x PL 1113-6300 |
| Solvent | THF |



| Sample | M _n (Da) | M _w (Da) | M _w /M _n | IV (dL/g) | M _p (Da) |
|-----------------|---------------------|---------------------|--------------------------------|-----------|---------------------|
| P40397-S_01.vdt | 248,051 | 261,499 | 1.054 | 1.4625 | 251,576 |