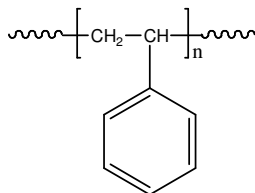


Sample Name: **Polystyrene**

Sample #: **P19031-S**

Structure:

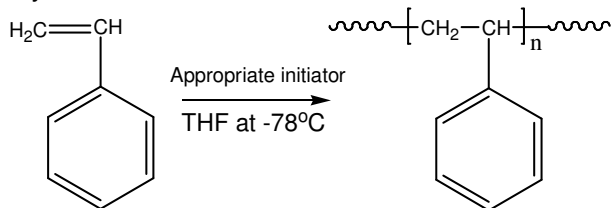


Composition:

| Mn x 10 ³ | PDI |
|----------------------|------|
| 142.0 | 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 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.

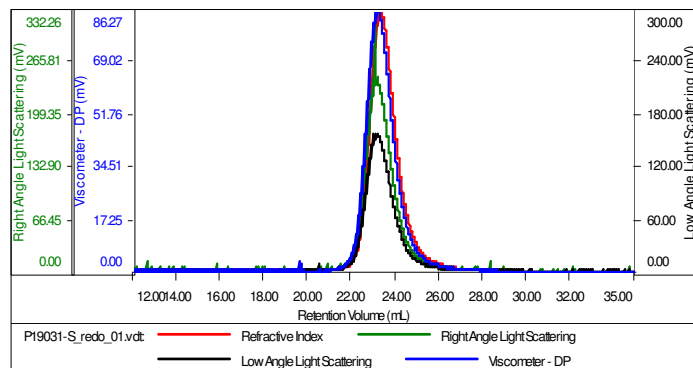
Solubility:

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

SEC elugram of the polymer:

Sample ID: P19031-S

| | |
|-----------------------|---------------------------|
| Concentration (mg/mL) | 1.6042 |
| Sample dn/dc (mL/g) | 0.1850 |
| Method File | PS80K-Dec17-2014-0000.vom |
| Column Set | 3x PL 1113-6300 |
| Solvent | THF |



| Sample | MW Number Average (Da) | MW Weight Average (Da) | MW at Peak (Da) | Polydispersity | Intrinsic Viscosity (dL/g) |
|--------------------|------------------------|------------------------|-----------------|----------------|----------------------------|
| P19031-S_red01.vdt | 141,835 | 148,415 | 143,702 | 1.046 | 1.8617 |