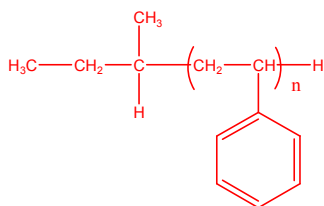


Sample Name: Polystyrene –Broad distribution

Sample #: P40085-S

**Structure:**

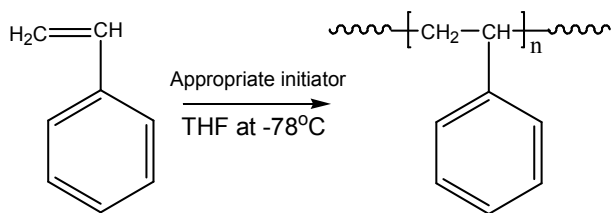


**Composition:**

| Mn x 10 <sup>3</sup> | PDI |
|----------------------|-----|
| 555.0                | 1.3 |

**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 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.

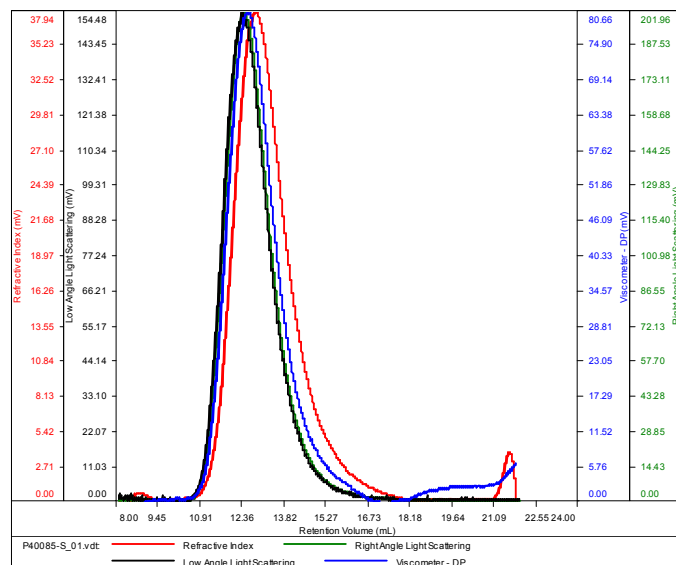
**Solubility:**

Polystyrene is soluble in DMF, THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

SEC elugram of the polymer in DMF

**P40085-S**

|              |                              |
|--------------|------------------------------|
| Conc (mg/mL) | 3.1158                       |
| dn/dc (mL/g) | 0.1650                       |
| Method       | PS80k_December-2016-0004.vcm |
| Solvent      | DMF w 0.023M LiBr            |
| Column       | PSS                          |



| Sample          | Mn      | Mw      | Mp      | Mw/Mn | IV     |
|-----------------|---------|---------|---------|-------|--------|
| P40085-S_01.vdt | 555,066 | 734,964 | 751,420 | 1.324 | 0.5832 |