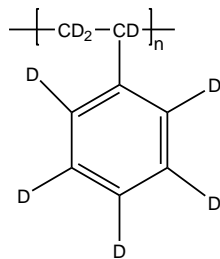


## Sample Name: Deuterated Polystyrene (d<sub>8</sub>)

Sample #: **P5995-dPS**

### Structure:

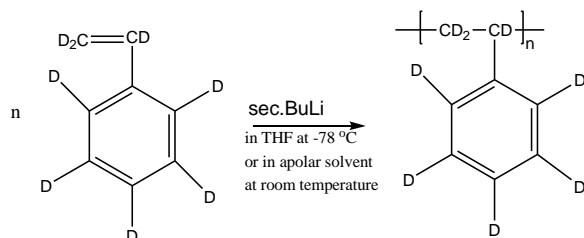


### Composition:

| Mn x 10 <sup>3</sup> | PDI |
|----------------------|-----|
| 8.0                  | 1.3 |

### Synthesis Procedure:

Deuterated polystyrene-d<sub>8</sub> is obtained by living anionic polymerization of styrene-d<sub>8</sub> as illustrated below:



### Characterization:

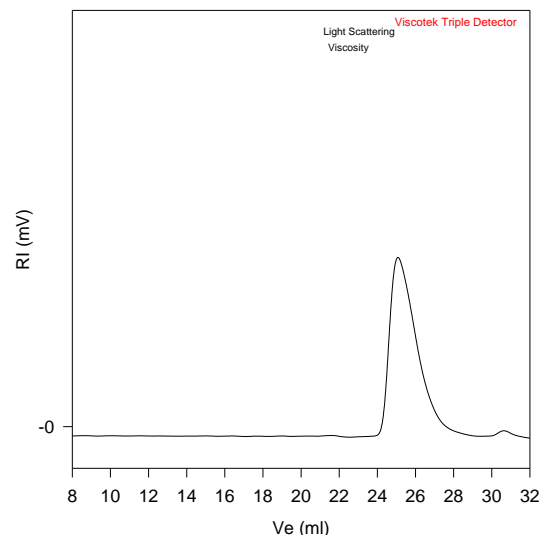
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used.

### Solubility:

Deuterated polystyrene-d<sub>8</sub> is soluble in DMF, THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

### SEC of Homopolymer:

#### P5995-dPS



Size Exclusion Chromatography of deuterated polystyrene (d8)

— M<sub>n</sub> = 8,000, M<sub>w</sub> = 10,500, M<sub>w</sub>/M<sub>n</sub> = 1.3