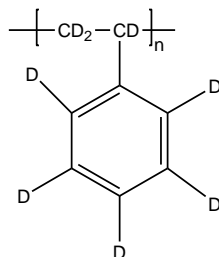


**Sample Name: Deuterated Polystyrene (d<sub>8</sub>)**

**Sample #: P8519-dPS**

**Structure:**

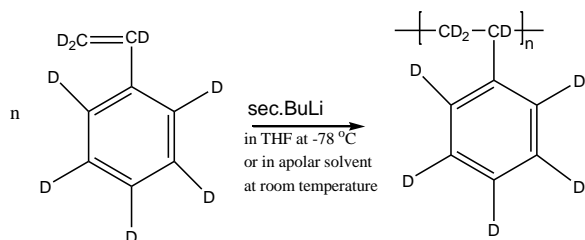


**Composition:**

Mn x 10 <sup>3</sup>	PDI
800	1.15

**Synthesis Procedure:**

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



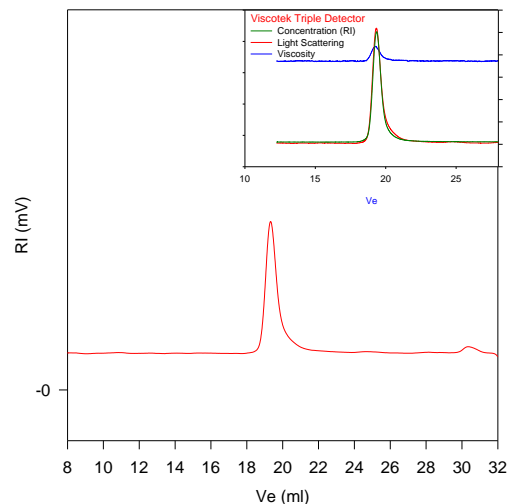
**Characterization:**

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 profile of Homopolymer:  
P8519-dPS**



Size Exclusion Chromatography of Deuterated Polystyrene:

— M<sub>n</sub> = 800,000, M<sub>w</sub> = 920,000, M<sub>w</sub>/M<sub>n</sub> = 1.15  
Solution Viscosity in THF at 35 °C: 2.395dl/g  
dn/dc in THF at 35 °C: 0.185ml/g  
RGw: 39.19nm