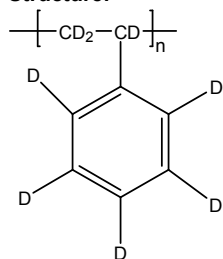


**Sample Name:** Deuterated Polystyrene (d<sub>8</sub>)

**Sample #:** P4336-dPS

**Structure:**

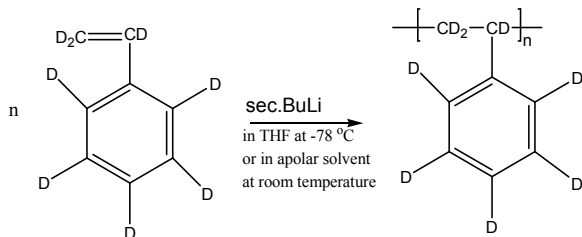


**Composition:**

Mn x 10 <sup>3</sup>	PDI
85.0	1.09

**Synthesis Procedure:**

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



**Characterization:**

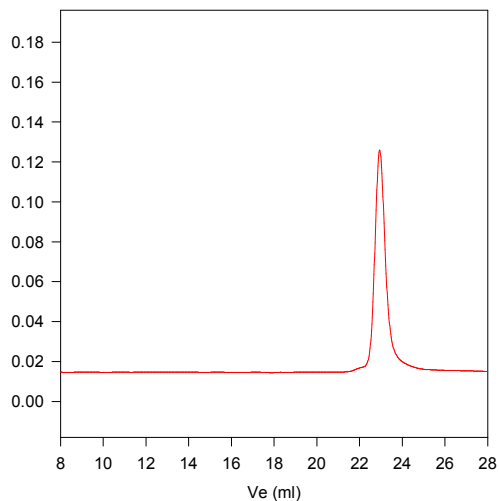
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL)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

**P4336-dPS**



Size exclusion chromatograph of deuterated polystyrene (d<sub>8</sub>):

M<sub>n</sub>=85000, M<sub>w</sub>=92500, PI=1.09

Solution viscosity in THF at 30 °C: 0.533 dl/g Radius of Gyration: 11.74nm