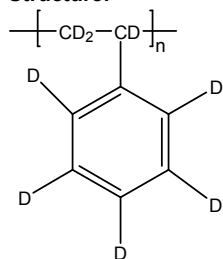


**Sample Name: Deuterated Polystyrene (d<sub>8</sub>)**

**Sample #: P4992-dPS**

**Structure:**

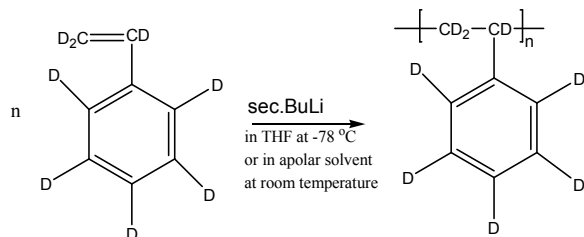


**Composition:**

$M_n \times 10^3$	PDI
7.0	1.06

**Synthesis Procedure:**

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



**Characterization:**

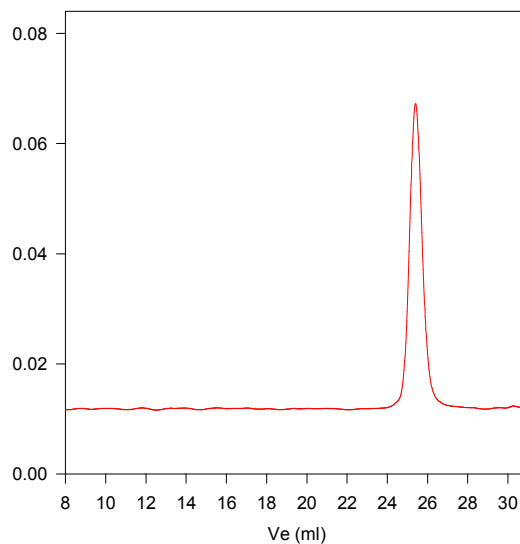
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL)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

**Solubility:**

Deuterated polystyrene-d<sub>8</sub> is soluble in DMF, THF, toluene and  $CHCl_3$ . It precipitates from methanol, ethanol, water and hexanes.

**SEC of Homopolymer:**

**P4992-dPS**



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

$M_n=7000$ ,  $M_w=7400$ ,  $PI=1.06$