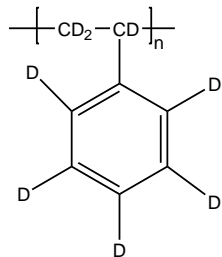


## Sample Name: Deuterated Polystyrene (d<sub>8</sub>)

Sample #: **P9428-dPS**

### **Structure:**

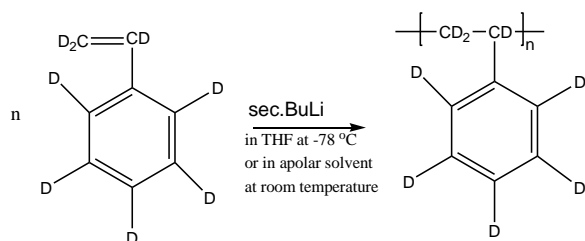


### **Composition:**

$M_n \times 10^3$	PDI
75.0	1.18

### **Synthesis Procedure:**

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



### **Characterization:**

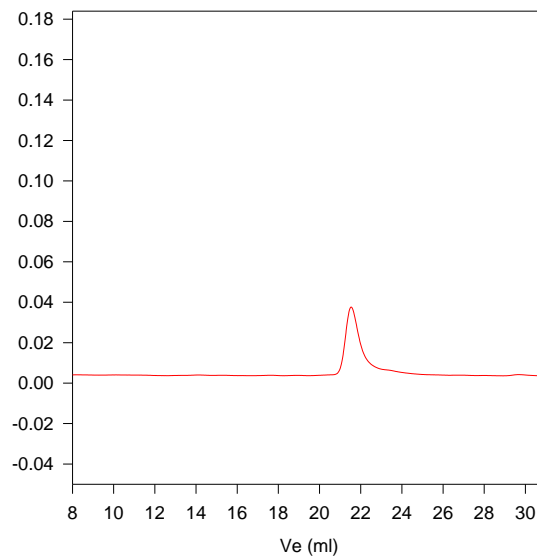
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL)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

### **Solubility:**

Deuterated polystyrene-d<sub>8</sub> is soluble in DMF, THF, toluene and  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water and hexanes.

### SEC of Homopolymer:

**P9428-dPS**



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

$M_n=75000$ ,  $M_w=88500$ ,  $PI=1.18$