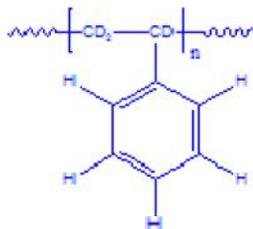


**Sample Name:** Deuterated Polystyrene (d<sub>3</sub>)

**Sample #:** P3696-d3PS

**Structure:**

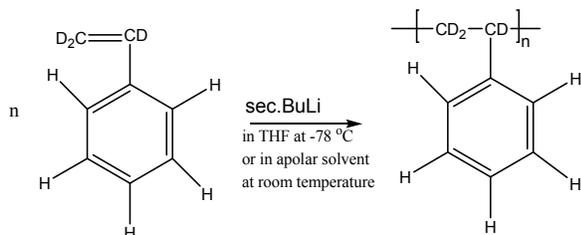


**Composition:**

Mn x 10 <sup>3</sup>	PDI
8.0	1.4

**Synthesis Procedure:**

Deuterated polystyrene-d<sub>3</sub> is obtained by living anionic polymerization of styrene-d<sub>3</sub> as illustrated below:



**Characterization:**

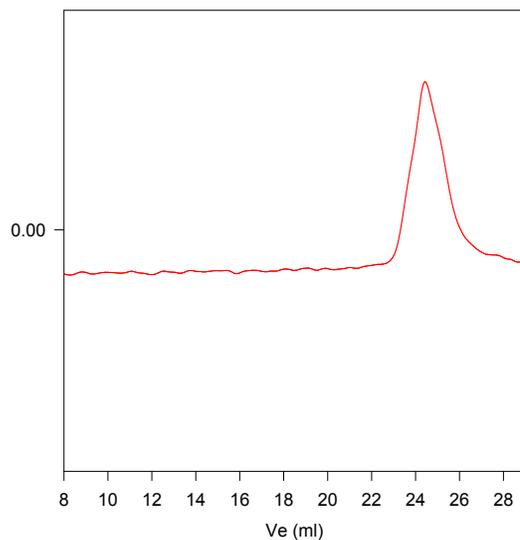
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL)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

**Solubility:**

Deuterated polystyrene-d<sub>3</sub> is soluble in DMF, THF, toluene and  $CHCl_3$ . It precipitates from methanol, ethanol, water and hexanes.

**SEC profile of the product:**

**P3696-d<sub>3</sub>PS**



Size exclusion chromatograph of deuterated polystyrene(d<sub>3</sub>):

$M_n=8000$   $M_w=11200$ ,  $PI=1.4$