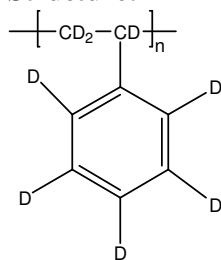


Sample Name: Deuterated Polystyrene-d<sub>8</sub>

Sample #: P19603A-dPS

**Structure:**



**Composition:**

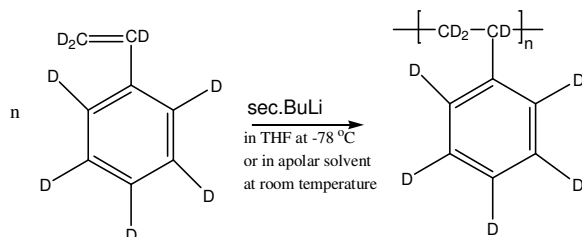
Mn x 10 <sup>3</sup>	32.5
Mw x 10 <sup>3</sup>	38.0

PDI	1.15
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D atom %	>97%
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**Synthesis Procedure:**

Deuterated polystyrene-d<sub>8</sub> is obtained by anionic living 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 light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

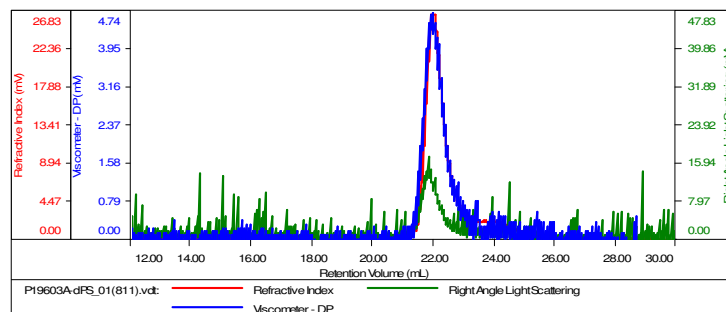
**Solubility:**

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 deuterated polystyrene:**

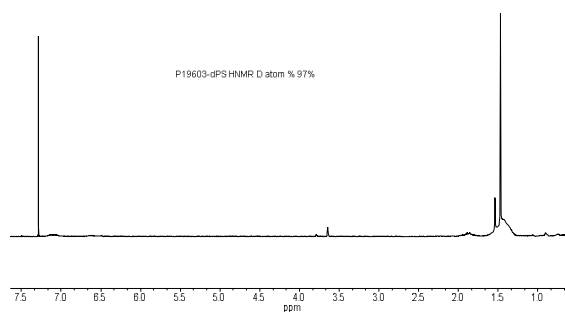
**Sample ID-P19603A-dPS**

Concentration (mg/mL)	0.0466
Sample dn/dc (mL/g)	0.1860
Method File	PS80K-Nov-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19603A-dPS_01(811).vcl	32,482	37,816	35,037	1.164	2.6381

**<sup>1</sup>H NMR in CDCl<sub>3</sub>:**



**<sup>2</sup>H (D) NMR in CHCl<sub>3</sub>:**

