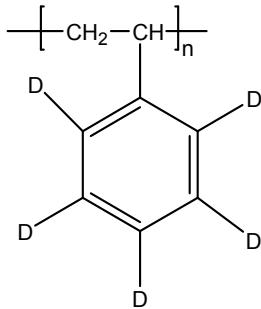


Sample Name: Deuterated Polystyrene (d<sub>5</sub>)

Sample #: P40555-d5PS

Structure:



Composition:

Mn x 10 <sup>3</sup>	PDI
18.5	1.05

Synthesis Procedure:

Deuterated polystyrene-d<sub>5</sub> is obtained by living anionic polymerization of high purity styrene-d<sub>5</sub> monomer.

Characterization:

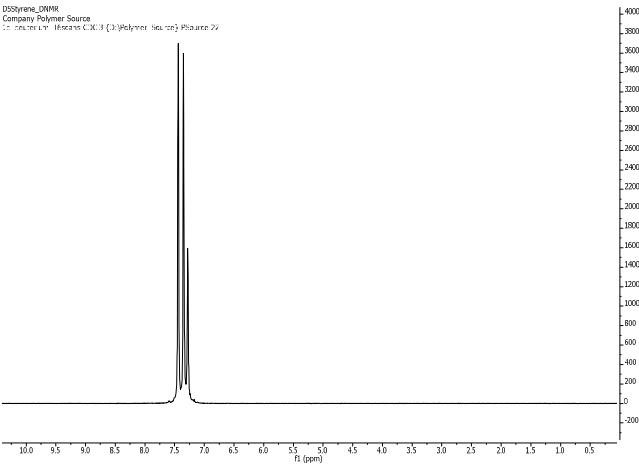
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in DMF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL) were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

Solubility:

Deuterated polystyrene-d<sub>5</sub> is soluble in DMF, THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexanes.

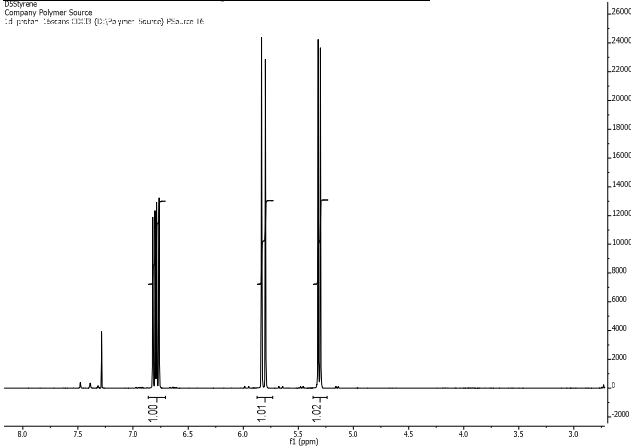
D<sup>2</sup> NMR of d<sub>5</sub>-Styrene Monomer:

D5styrene\_DMR  
Company Polymer Source  
-d<sub>5</sub> styrene - Source: C10-11 (2:1) (styrene - source) P40555-29



<sup>1</sup>H NMR of d<sub>5</sub>-Styrene Monomer:

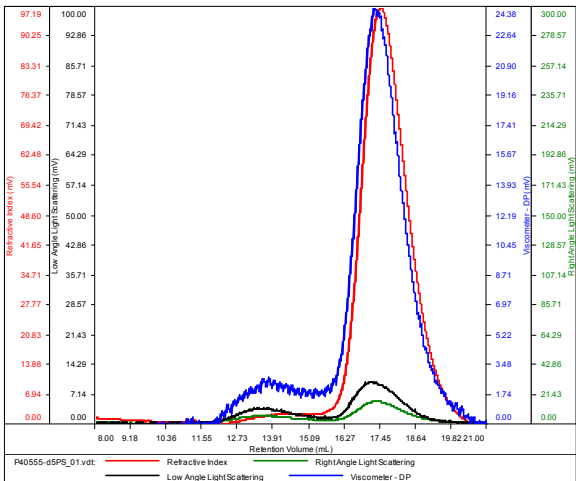
D5styrene  
Company Polymer Source  
-d<sub>5</sub> styrene - Source: C10-11 (2:1) (styrene - source) P40555-16



SEC of d<sub>5</sub>-Styrene Homopolymer:

P40555-d5PS

Conc	6.4772
dn/dc	0.1650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40555-d5PS_01.vdt	18,302	19,225	18,131	1.050	0.0762