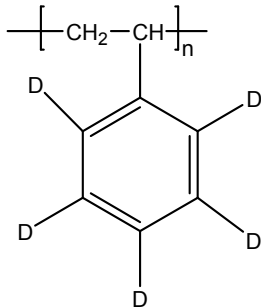


Sample Name: Deuterated Polystyrene (d₅)

Sample #: P40553-d5PS

Structure:



Composition:

Mn x 10 ³	PDI
120.0	1.45

Synthesis Procedure:

Deuterated polystyrene-d₅ is obtained by living anionic polymerization of high purity styrene-d₅ monomer.

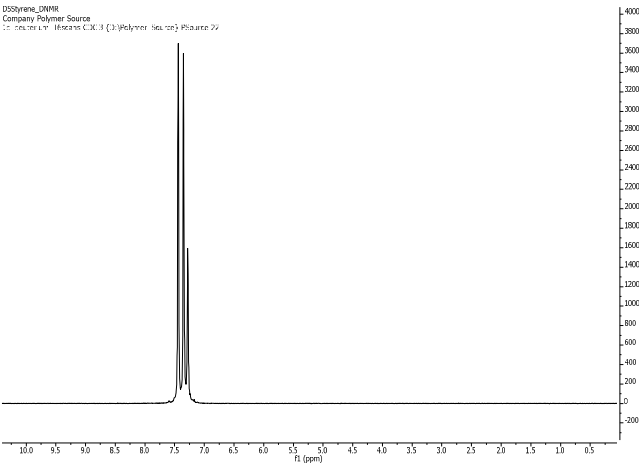
Characterization:

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.

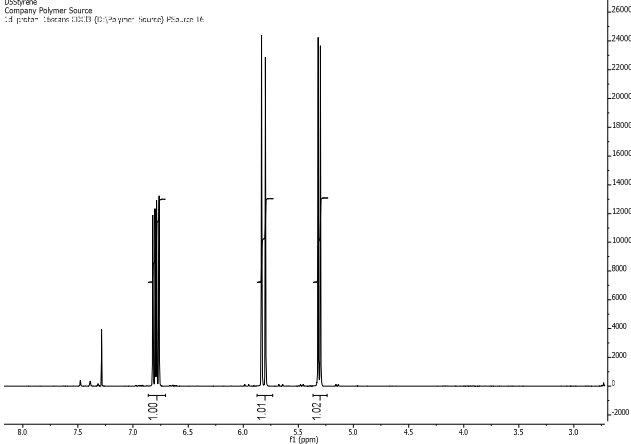
Solubility:

Deuterated polystyrene-d₅ is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

D² NMR of d₅-Styrene Monomer:



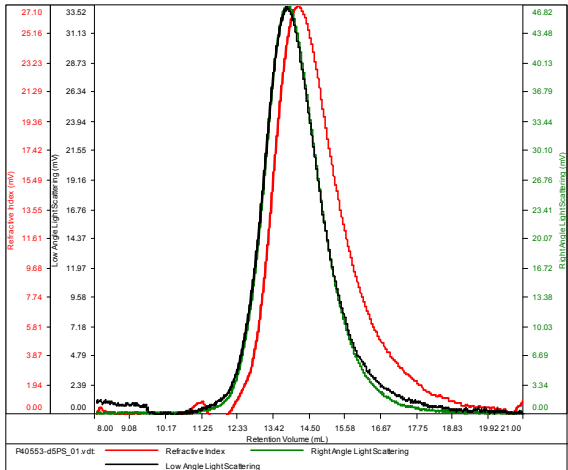
¹H NMR of d₅-Styrene Monomer:



SEC of d₅-Styrene Homopolymer:

P40553-d5PS

Conc	2.4597
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
P40553-d5PS_01.vdt	120,103	176,311	188,676	1.468	0.3441