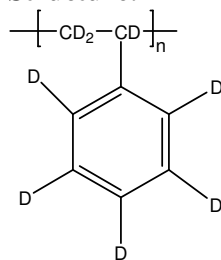


Sample Name: Deuterated Polystyrene-d₈

Sample #: P19833-dPS

Structure:

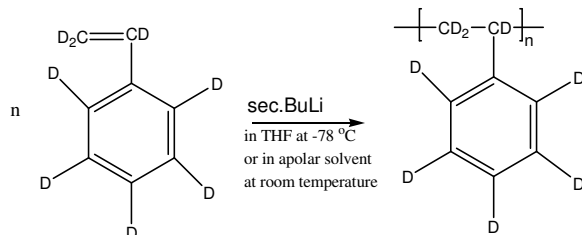


Composition:

Mn x 10 ³	282.0
Mw x 10 ³	305.0
PDI	1.08
D atom %	>97%

Synthesis Procedure:

Deuterated polystyrene-d₈ is obtained by anionic living polymerization of styrene-d₈ 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.

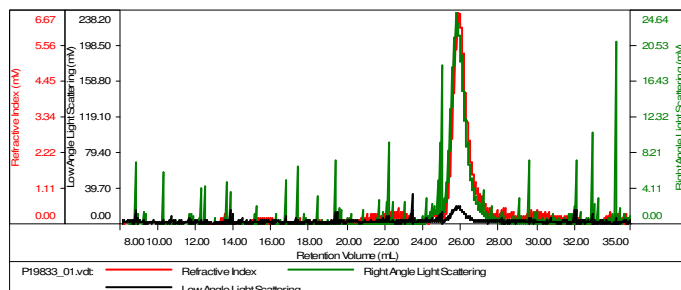
Solubility:

Deuterated polystyrene-d₈ is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC elugram of deuterated polystyrene:

Sample ID-P19833-dPS

Concentration (mg/mL)	0.0211
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-March2016-0001.vom
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mh(Da)	Mw(Da)	Mw/Mh	IV (dL/g)	Flh (nm)	Ret Vol (mL)
P19833_01.vdt	282,150	305,370	1.082	16.9090	52.81	25.910

D(2H)-NMR spectrum (500MHz, CHCl₃):

