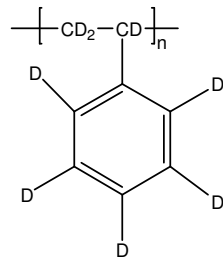


Sample Name: Deuterated Polystyrene-d₈

Sample #: P19614-dPS

Structure:

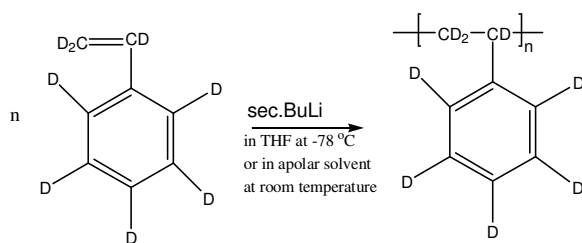


Composition:

Mn x 10 ³	16.5
Mw x 10 ³	18.5
PDI	1.11
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.

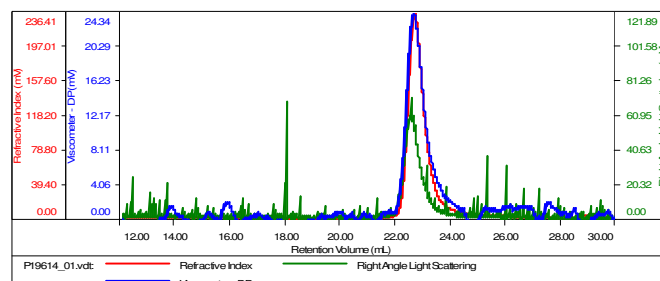
Solubility:

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

SEC of deuterated polystyrene:

Sample ID-P19614-dPS

Concentration (mg/mL)	0.3623
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)
P19614_01.vct	16,606	18,441	16,550	1.111	1.6214

D(2H)-NMR (500MHz, CHCl₃):

