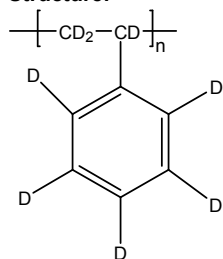


Sample Name: Deuterated Polystyrene (d_8)

Sample #: P3677-dPS

Structure:

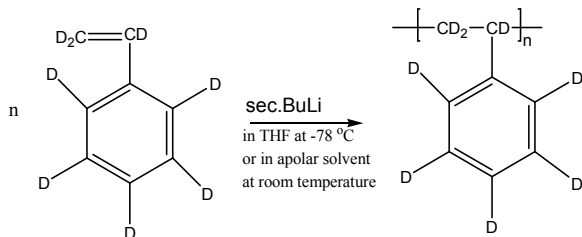


Composition:

$M_n \times 10^3$	PDI
104.0	1.06

Synthesis Procedure:

Deuterated polystyrene- d_8 is obtained by living anionic polymerization of styrene- d_8 as illustrated below:



Characterization:

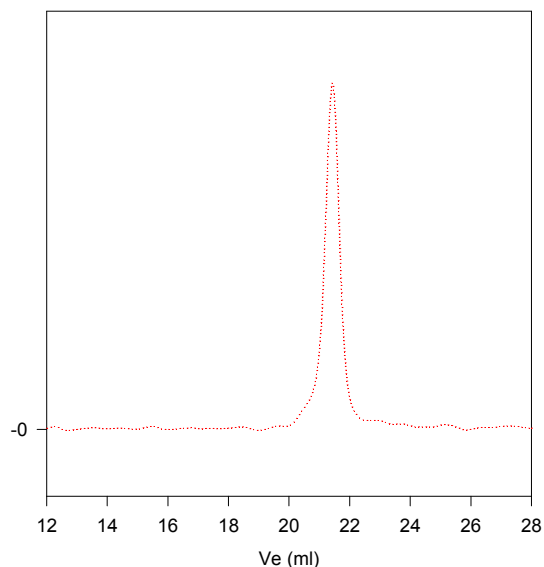
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL)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

Solubility:

Deuterated polystyrene- d_8 is soluble in DMF, THF, toluene and $CHCl_3$. It precipitates from methanol, ethanol, water and hexanes.

SEC of Homopolymer:

P3677-dPS



Size exclusion chromatograph of deuterated polystyrene(d_8):

$M_n=104,000$ $M_w=110,000$, $PI=1.06$

radius of gyration: 13.56 nm

Solution viscosity: 0.594 dl/g in THF at 30 °C.