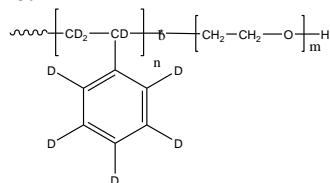


Sample Name: Deuterated Polystyrene (d₈)- ethylene oxide (protonated)

Sample #: P19197-dPSEO

Structure:



Composition:

Mn x 10 ³ dPS-b-EO	PDI
125.5-b-68.0	1.16

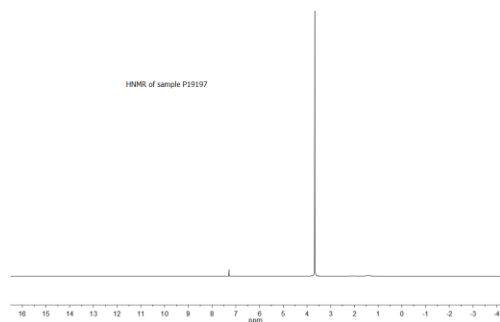
Synthesis Procedure:

Deuterated Poly(styrene-b-ethylene oxide) diblock copolymer is prepared by living anionic polymerization.

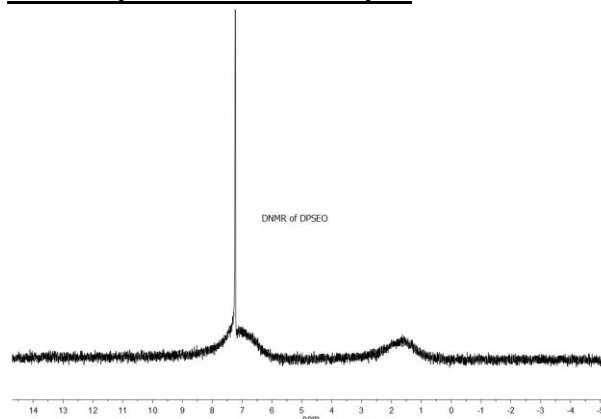
Characterization:

The molecular weight and polydispersity index (PDI) of the block copolymer are characterized by size exclusion chromatography (SEC). The composition of the block copolymer was calculated from ¹H-NMR by comparing the peak area of the phenyl polystyrene protons between 6.4 to 7.2 ppm (indicating about 1% protonated fraction) and the ethylene oxide protons at 3.65 ppm. This is given an approximate analysis. The yield of the polymer from the theoretical amount of deuterated styrene and protonated ethylene oxide monomer calculate also the compositions required.

HNMR spectrum of the Sample:

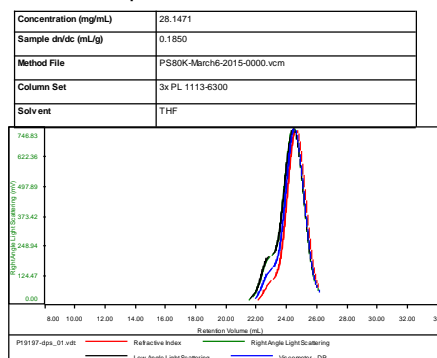


DNMR spectrum of the Sample:



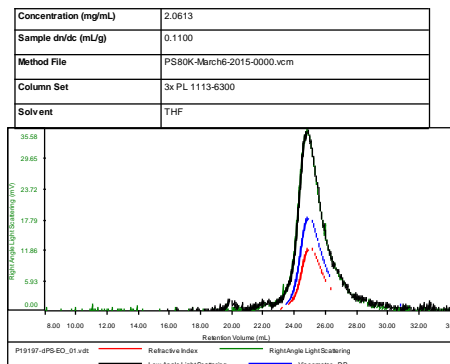
SEC profile of the product:

Sample ID: P19197-dPS



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19197-dps_01.vdt	125,426	133,218	121,887	1.062	0.4133

Sample ID: P19197-dPS-EO



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19197-dPS-EO_01.vdt	193,686	223,856	237,342	1.156	0.5805