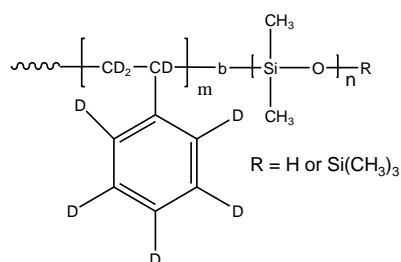


Sample Name: Deuterated (d8)Poly(styrene-b-Protonated- dimethyl siloxane)

Sample #: P6192-dPS DMS



Composition:

$M_n \times 10^3$ dPS-b-DMS	M_w/M_n (PDI)
40.4-b-15.8	1.10

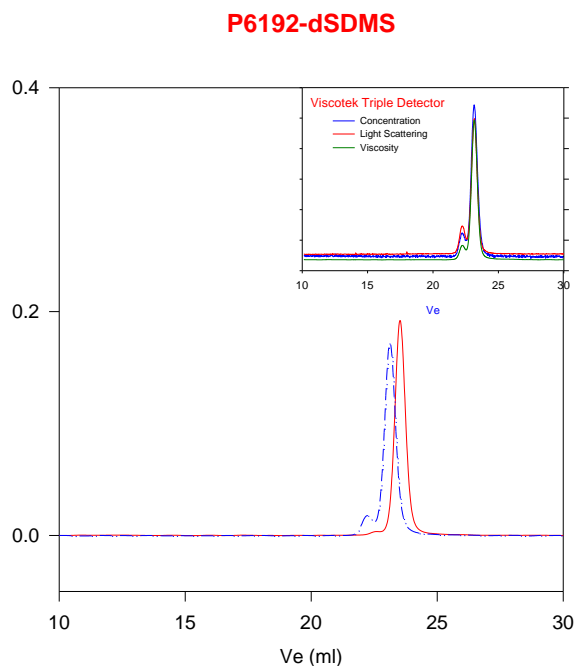
Synthesis Procedure:

Deuterated Poly(styrene (d8)-b- protonated dimethyl siloxane) is prepared by living anionic polymerization in non-polar solvent with sequence addition of deuterated styrene followed by hexamethyl cyclotrisiloxane

Characterization:

An aliquot of the anionic polystyrene block was terminated before addition of isoprene and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The block copolymer composition was then calculated from

SEC of Sample of the block copolymer:



Size Exclusion Chromatography of poly(styrene_{d8}-b-dimethylsiloxane):

- Polystyrene-d8, $M_n=40400$, $M_w=42000$, $M_w/M_n=1.04$, $R_g = 7.15\text{nm}$
- - - Diblock Copolymer PdS(40400)-b-PDMS(15800), $M_w/M_n=1.10$
 $R_g = 8.65\text{nm}$, $[\eta] = 0.313$ (dL/g) (in THF at 30°C)
(from Viscotek Triple detector)