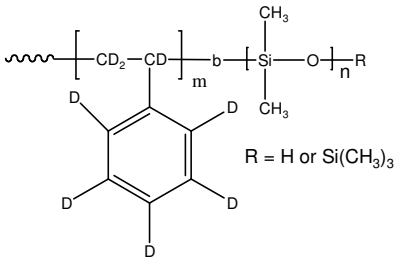
Sample Name: **Deuterated (d8)Poly(styrene-b-Protonated- dimethyl siloxane)**

Sample #: **P6193-dPS DMS**

Structure:



Composition:

Mn x 10^3 dPS-b-DMS	Mw/Mn (PDI)
79.0-b-18.6	1.08

Synthesis Procedure:

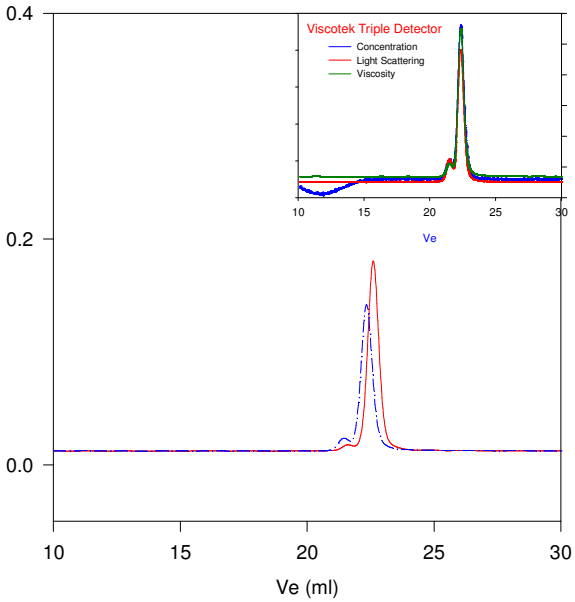
Deuterated Poly(styrene (d8)-b- protonated dimethyl siloxane) was prepared by living anionic polymerization in non-polar solvent with sequence addition of deuterated styrene followed by hexamethyl cyclotrisiloxane

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 elugram of the block copolymer:

P6193-dSDMS



Size Exclusion Chromatography of poly(styrene$_{d8}$-b-dimethylsiloxane):

Polystyrene-d8, M_n=79000, M_w=81000, M_w/M_n=1.03, R_g = 10.54nm

Diblock Copolymer PdS(79000)-b-PDMS(18600), M_w/M_n=1.08
R_g = 11.69nm, [η] = 0.458 (dL/g) (in THF at 30°C)
(from Viscotek Triple detector)