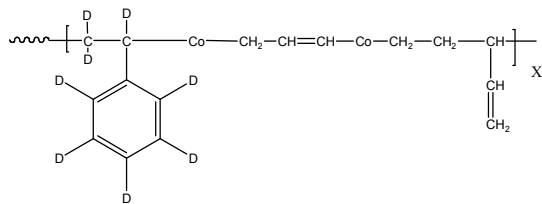


Sample Name: Random Copolymer
Deuterated Poly (Styrene (d8)-co-Butadiene)
 (Note: Polybutadiene block is protonated.)
Sample # P19274-dPSBdran

Structure:



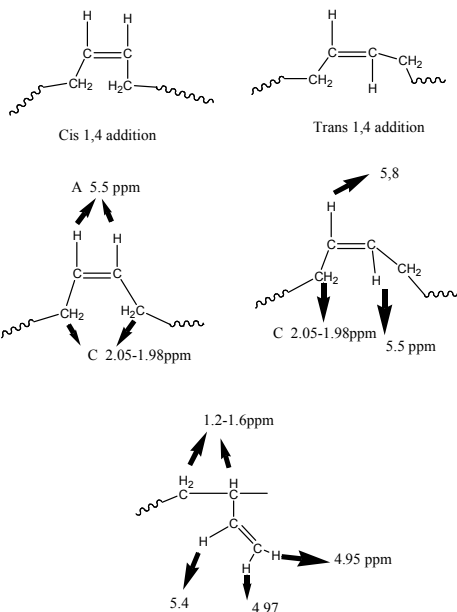
Composition: dPs : 25 wt%

Mn x 10 ³ dPSdPBdran	PDI
33.0	1.08
Glass Transition Temperature	T _g = -29°C

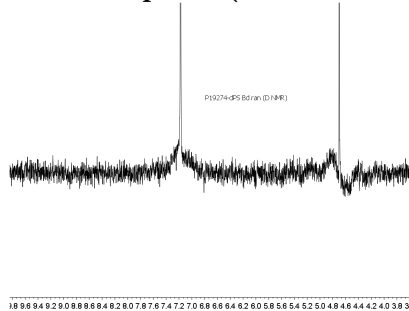
Synthesis: By anionic polymerization in the presence of t-BuOLi and TEMEDA at 60°C.

Characterization:

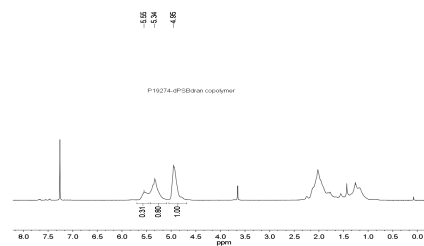
Size exclusion chromatography (SEC): Varian liquid chromatograph equipped with light scattering detector and refractive detector (Viscotek model 270)



²H NMR spectra (500 MHz, CDCl₃):



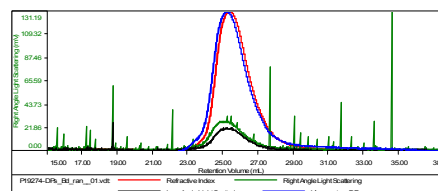
²H NMR (500 MHz, CHCl₃)



SEC elugram of d₈PS-Bd random copolymer:

Sample ID P19274-dPSBdran

Concentration (mg/mL)	1.7310
Sample conc'd (mg/g)	0.1300
Method File	PS80K-April29-2015-0000.vcm
Column Set	3xPL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19274-dPS ₂₅ -Bd ₇₅ -ran_01.vcl	33,097	35,730	33,375	1.080	1.5578

DSC curve of the polymer:

