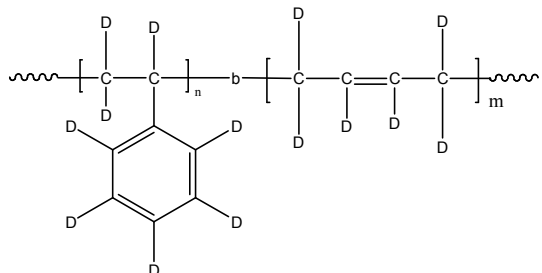


Sample Name: Random Copolymer Poly (deuterated Styrene (d8)-co-deuterated Butadiene (d6))

(Note: PS block and PBd block are deuterated.)

Sample # P40303-dPSdBdran

Structure:



Composition: PdPs: 88% wt

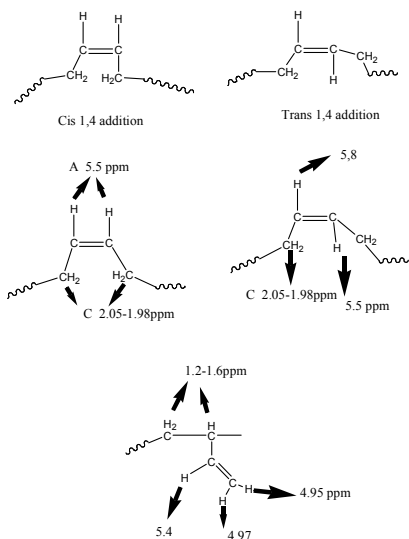
| $M_n \times 10^3$ SdBdran | PDI |
|------------------------------|-------|
| 8.0 | 1.3 |
| T _g | 13 °C |

Synthesis:

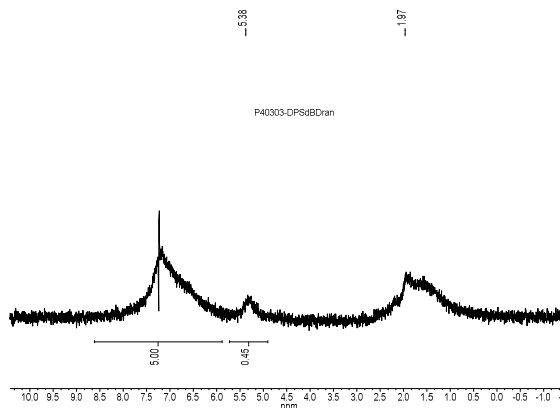
The polymer was synthesized by anionic polymerization in the presence of t-BuOLi and TEMEDA at 60°C.

Characterization:

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

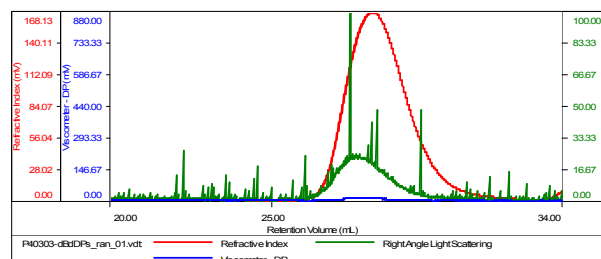


^2H NMR (500 MHz, CHCl_3):



SEC elugram of PS-d₆Bd random copolymer: P40303-dPSdBdran

| | |
|-----------------------|--------------------------|
| Concentration (mg/mL) | 6.2525 |
| Sample dn/dc (mL/g) | 0.1560 |
| Method File | PS80K-Nov2016-6-0000.vcm |
| Column Set | 3x PL 1113-6000 |
| Solvent | THF |



| Sample | M _n (Da) | M _w (Da) | M _w /M _n | IV (dL/g) | M _p (Da) |
|---------------------|---------------------|---------------------|--------------------------------|-----------|---------------------|
| P40303-dBdDPs_ran_1 | 8,068 | 10,439 | 1.294 | 0.1118 | 9,601 |

DSC of the sample:

