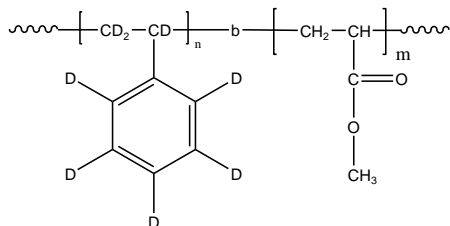


**Sample Name:****Deuterated polystyrene (d<sub>8</sub>)- poly methylacrylate(protonated)****Sample #: P18275-dPSMA****Structure:****Composition:**

Mn x 10 <sup>3</sup>	PDI
19.5-13.0 19.5-b-13.0	1.05
T <sub>g</sub> for dPS block	80 °C
T <sub>g</sub> for MA block	12 °C

**Synthesis Procedure:**

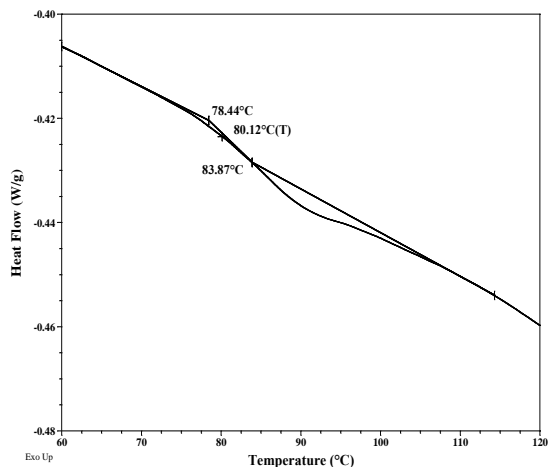
Deuterated poly(styrene (D<sub>8</sub>)-b-methylacrylate) is prepared by living anionic polymerization. For further details please see our published articles.<sup>1-3</sup>

**Characterization:** The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co.

Three SEC columns from Supelco (G6000-4000-2000 HXL) were used. **Thermal analysis**

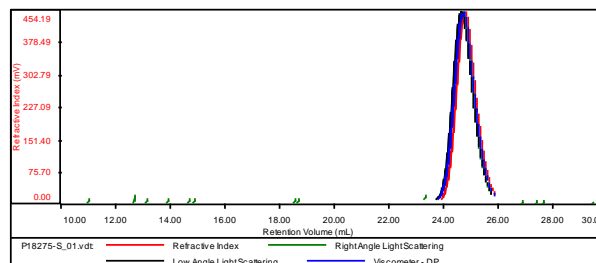
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>). **Solubility:**

Deuterated polystyrene-b-MA is soluble in THF, dioxane. Toluene, benzene and CHCl<sub>3</sub>. It precipitates out from methanol/water.

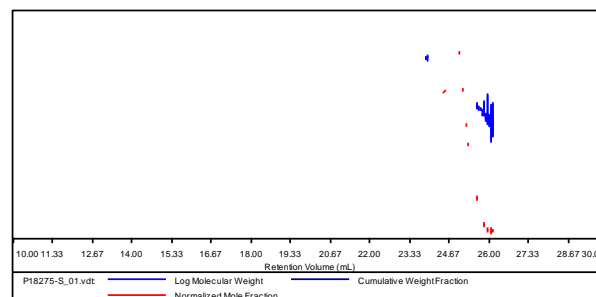
**DSC thermogram for dPS block:****SEC of the product:**

Sample ID: P18275-dPS

Concentration (mg/mL)	8.0714
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-NOV-2013-0001.vcm
Column Set	3x PL 1113-6300
System	System 1

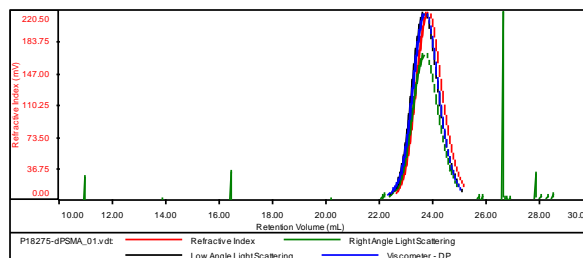


Sample	Mn	Mw	Mp	Mw/Mn	IV
P18275-S_01.vdt	19,750	20,806	20,454	1.053	0.2374



Sample ID: P18275dPSMA

Concentration (mg/mL)	7.2845
Sample dn/dc (mL/g)	0.1390
Method File	PS80K-NOV-2013-0001.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18275-dPSMA_01.vdt	32,760	34,298	34,085	1.047	0.3845

