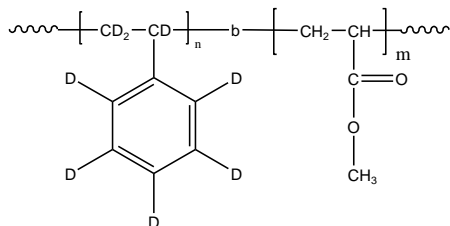


Sample Name:

Deuterated polystyrene (d₈)- poly methylacrylate(protonated)

Sample #: P18274A-dPSMA**Structure:****Composition:**

Mn x 10 ³	PDI
11.0-b-7.5	1.05
T _g for dPS block	80 °C
T _g for MA block	12 °C

Synthesis Procedure:

Deuterated poly(styrene (D₈)-b-methylacrylate) is prepared by living anionic polymerization. For further details please see our published articles.¹⁻³

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

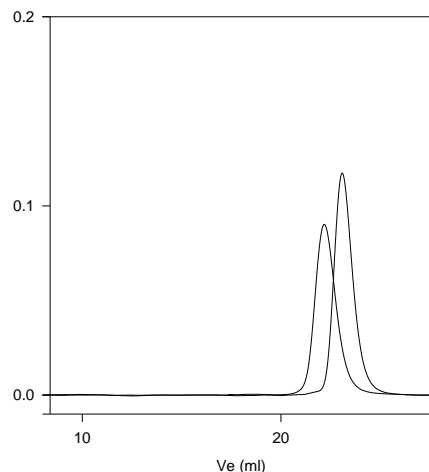
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Deuterated polystyrene-b-MA is soluble in THF, dioxane, Toluene, benzene and CHCl₃. It precipitates out from methanol/water.

SEC of the product:

P18274A-dPS MA



Size exclusion chromatography of deuterated (d₈) polystyrene-poly(Methyl acrylate)

— Deuterated Polystyrene, M_n=11,000, M_w=11,500, PI=1.05

— Block Copolymer PdSt(11,000)-b-PMA(7500), PI=1.05

DSC thermogram for dPS block: