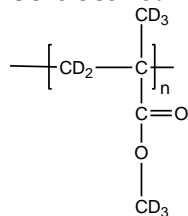


Sample Name: **Poly(methyl methacrylate)-d₈**

Sample #: **P9776-dPMMA**

Structure:



Composition:

Mn x 10 ³	PDI
3.8	1.13
T _g (°C)	72

Synthesis Procedure:

Deuterated poly(methyl methacrylate)-d₈ is obtained by living polymerization process.

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. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. ¹H NMR analysis was carried out on Varian instrument at 500MHz.

Thermal analysis:

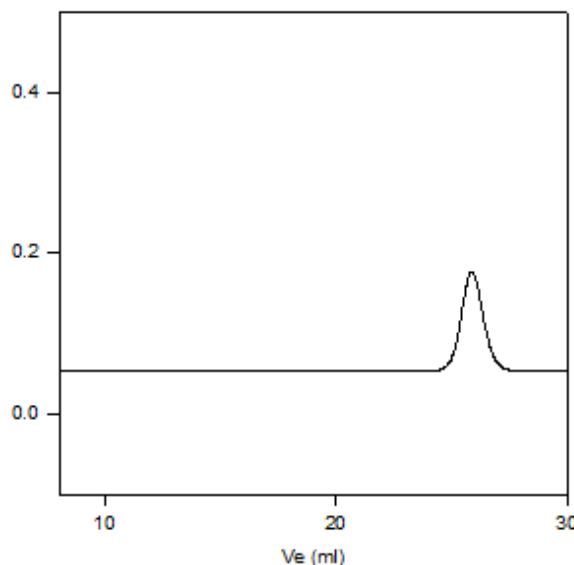
Thermal analysis of the samples was carried out on a TA Q100 DSC at a heating rate of 10 °C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Deuterated poly(methyl methacrylate)-d₈ is soluble in THF, CHCl₃, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

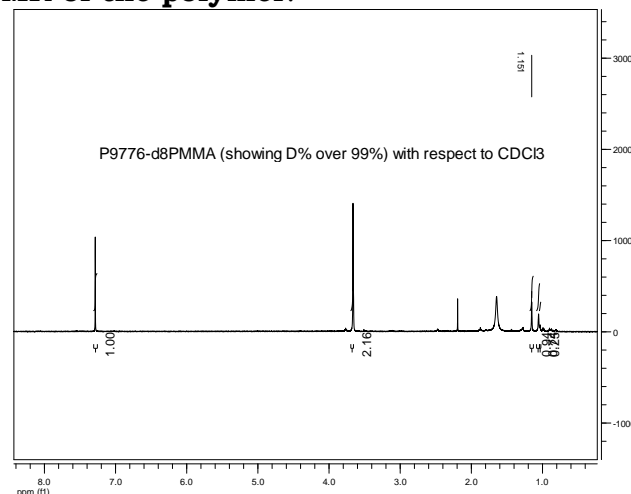
SEC of Homopolymer:

P9776-dPMMA



SEC profile of the Product: M_n=3,800, M_w=4,300, PI=1.13

¹H NMR of the polymer:



DSC thermograph for the polymer:

