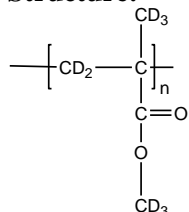


**Sample Name: Poly (methyl methacrylate)-d<sub>8</sub>**  
*Atactic rich*

**Sample #: P42133D-dPMMA**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
173.0	1.7

T <sub>g</sub>	109 °C
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**Synthesis Procedure:**

Deuterated poly (methyl methacrylate)-d<sub>8</sub> is obtained by conventional free radical polymerization process.

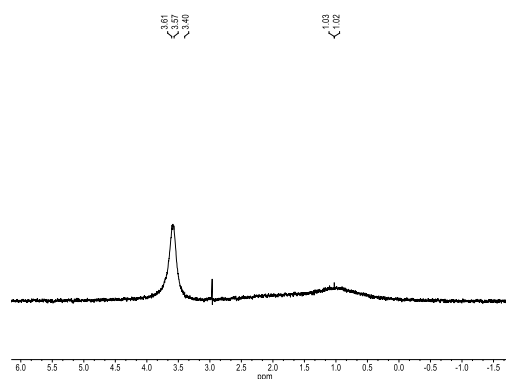
**Characterization:**

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. <sup>1</sup>H NMR analysis was carried out on Varian instrument at 500MHz.

**Solubility:**

Deuterated poly (methyl methacrylate)-d<sub>8</sub> is soluble in THF, CHCl<sub>3</sub>, toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

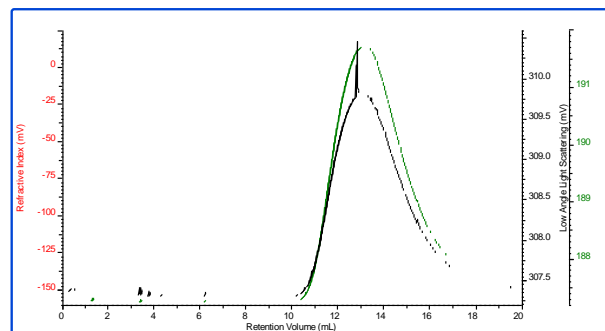
**D NMR spectrum of the polymer:**



**SEC elugram of Homopolymer:**

**P421332d-d8MMA atactic**

dn/dc	0.0650
Flow Rate	0.7000
Solvent	DMF with LiBr
Method	PSS column-PMMA60K-Jan3-2019-0007.vcm



Sample	Mn	Mw	Mp	Mw/Mn
P42133D-d8MMA_1_2	173,263	297,272	282,225	1.716

**DSC thermogram of the Sample:**

