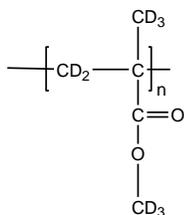


Sample Name: Poly(methyl methacrylate)-d8

Sample #: P10161-dPMMA

Structure:

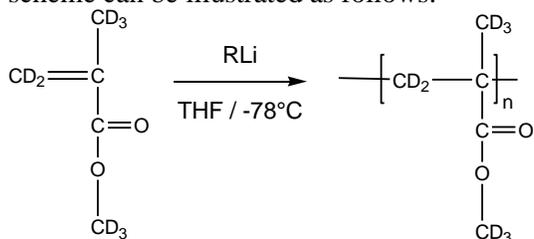


Composition:

$M_n \times 10^3$	PDI
70.0	1.09

Synthesis Procedure:

Deuterated poly(methyl methacrylate)-d₈ is obtained by living anionic polymerization using sec.BuLi as initiator end capped with a unit of diphenyl ethylene or few units of α -methylstyrene. The polymerization of MMA monomer is carried out in THF at -78°C in the presence of LiCl as additive. The polymerization scheme can be illustrated as follows:



Characterization:

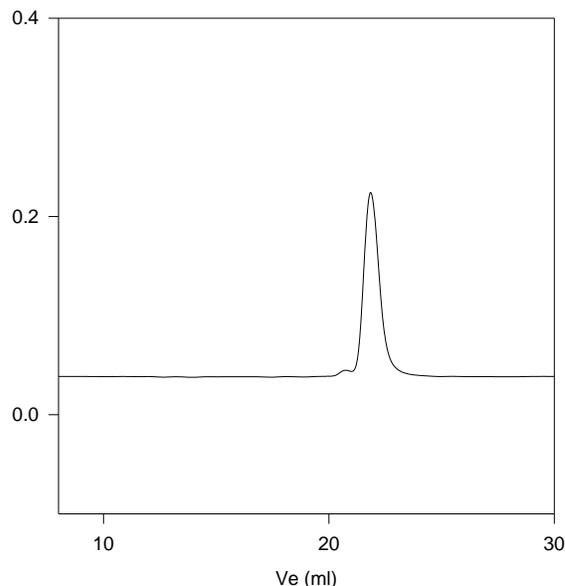
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co. ^1H NMR analysis was carried out on Varian instrument at 500MHz.

Solubility:

Deuterated poly(methyl methacrylate)-d₈ is soluble in THF, CHCl_3 , toluene and dioxane. The polymer precipitates from hexanes, methanol, and ethanol.

SEC profile of Homopolymer:

P10161-d8PMMA



SEC profile of the Product: $M_n=70,000$, $M_w=76,300$, $PI=1.09$