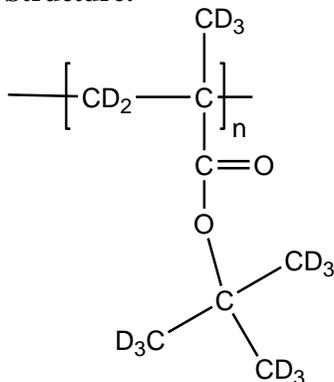


Sample Name:

Deuterated Poly(tert-butyl methacrylate-d14)

Sample #: **P41322-d14tBuMA**

Structure:



Composition:

$M_n \times 10^3$	PDI
10.0	1.08

Synthesis Procedure:

Deuterated poly(tert-butyl methacrylate)-d14 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 d14-tBuMA monomer is carried out in THF at -78°C in the presence of LiCl as additive.

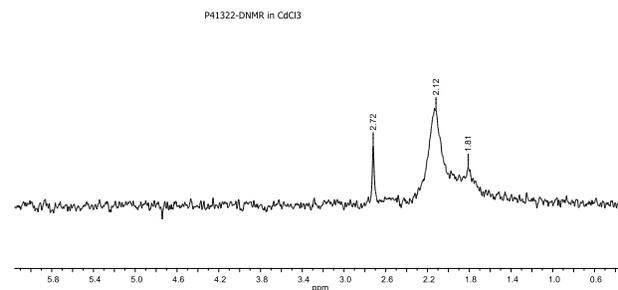
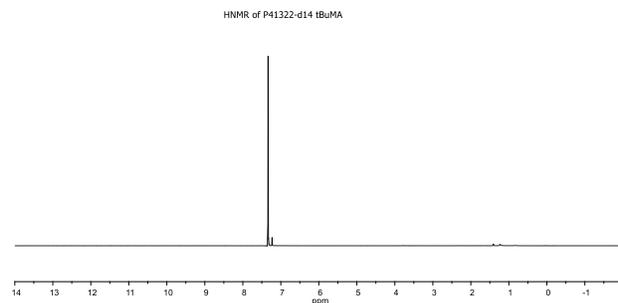
Characterization:

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:

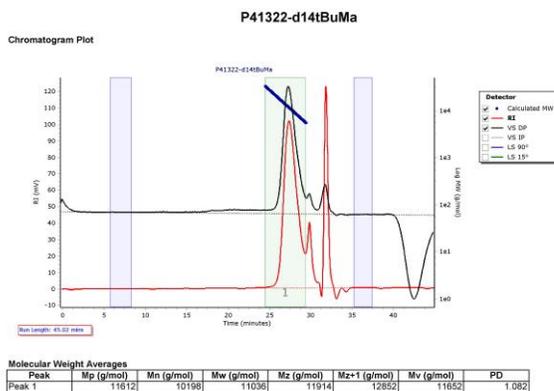
Deuterated poly (tert-butyl methacrylate)-d14 is soluble in THF, CHCl_3 , toluene and dioxane. The polymer precipitates from hexanes, methanol and ethanol.

HNMR spectrum of the Polymer:



SEC elugram of Homopolymer:

Agilent GPC/SEC Software



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	11612	10198	11056	11914	12652	11652	1.082