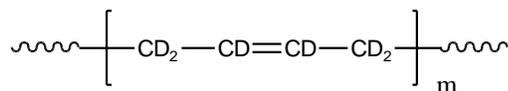


**Sample Name:** Deuterated Polybutadiene- $d_6$  (predominantly 1,4-addition), protonated end-groups.

**Sample #:** P42213D-R-dBd

**Structure:**

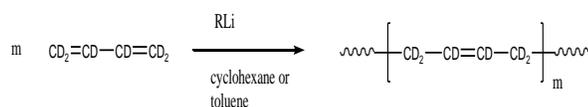


**Composition:**

$M_n \times 10^3$	$M_w/M_n$
567.0	1.28

**Synthesis Procedure:**

Deuterated polybutadiene- $d_6$  was obtained by living anionic polymerization of butadiene- $d_6$  monomer:



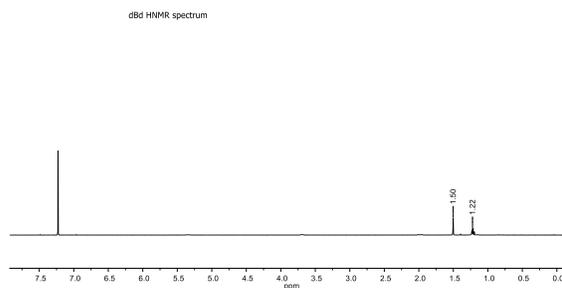
**Characterization:**

The molecular weight and polydispersity index ( $M_w/M_n$ ) of the deuterated poly butadiene 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.

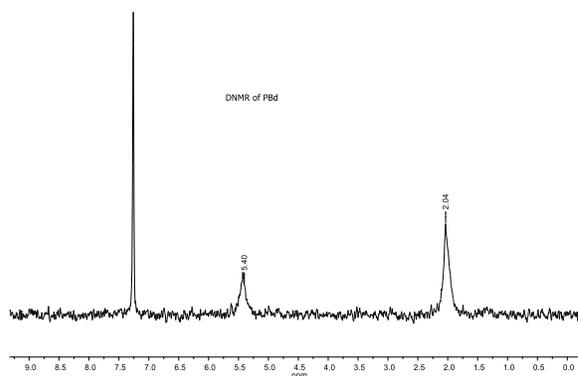
**Solubility:**

Polymer is soluble in toluene, THF and  $\text{CHCl}_3$ .

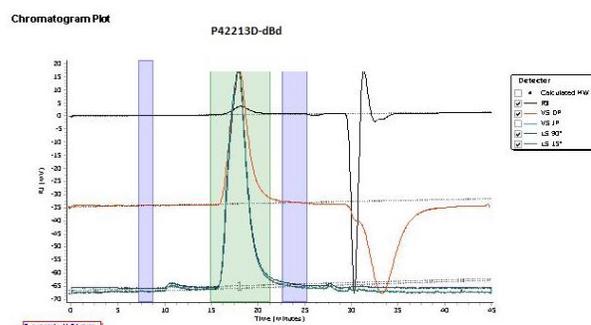
**H NMR spectrum of the Sample:**



**D NMR spectrum of the Sample:**



**SEC elugram of the polymer:**



Molecular Weight Averages							
Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz-1 (g/mol)	Mv (g/mol)	PD
Peak 1	752356	567447	729071	886707	1034647	855686	1.285