

Sample Name:

**Deuterated Polybutadiene,**

1,2-addition: 20.5% by FT-IR; 25% by  $^1\text{H}$  NMR.

Sample #: P1450-dBd

**Composition:**

$M_n \times 10^3$	PDI
400.0	1.10

**Synthesis Procedure:**

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

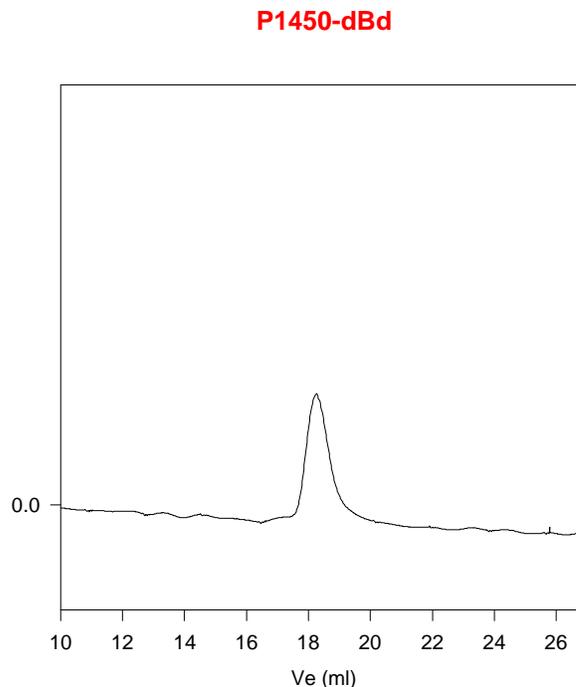
**Characterization:**

The molecular weight and polydispersity index (PDI) 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:**

The polymer is soluble in toluene, THF,  $\text{CHCl}_3$ .

**SEC elugram of the polymer:**



Size exclusion chromatography of deuterated polybutadiene( $d_6$ ):  
 $M_n=400,000$ ,  $M_w=440,000$ ,  $M_w/M_n=1.10$