

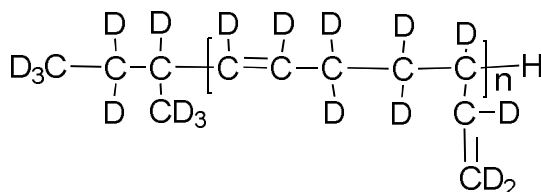
Sample Name:

Deuterated Polybutadiene:

- completely deuterated (including d7-Initiator);
- rich in 1,2-addition (over 70%).

Sample #: **P18559-dBd**

Structure:



Composition:

Mn x 10 ³ (g/mol)	PDI
2.2	1.09

Synthesis:

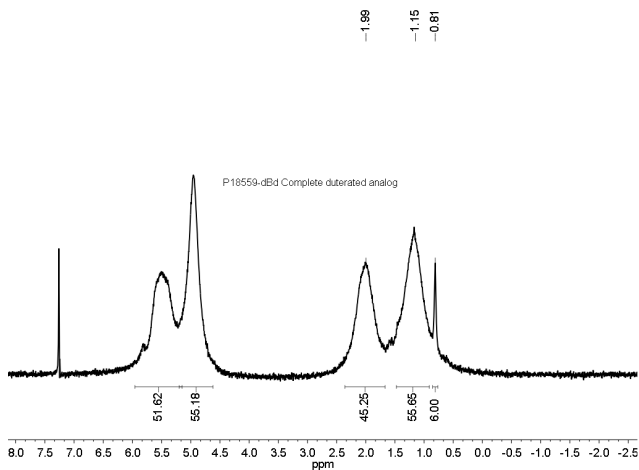
Deuterated polybutadiene -d₆ was obtained by living anionic polymerization of d₆-butadiene monomer using deuterated initiator.

Characterization:

The structure of deuterated polybutadiene was verified by deuterium NMR spectroscopy.

The molecular weight and polydispersity index (PDI) of the deuterated polybutadiene were obtained by size exclusion chromatography (SEC) using THF as an eluent. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co, and three SEC columns from Supelco (G6000-4000-2000 HXL).

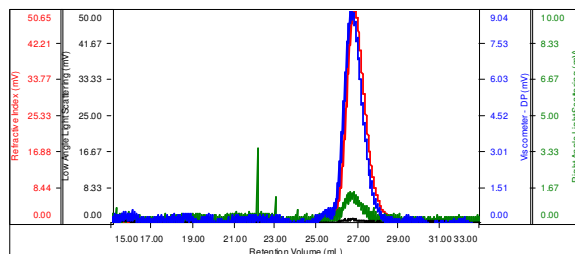
²H NMR spectrum (500 MHz, CHCl₃):



SEC elugram:

Sample ID: P18559-dBd

Concentration (mg/mL)	1.0739
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-Feb25-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18559-dBd_01.vdt	2,228	2,445	2,035	1.097	0.1793