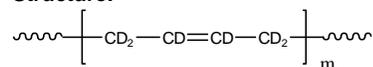


**Sample Name: Deuterated poly butadiene  
-deuterated rich in 1,4 addition**

**Sample #: P5912-dPBd**

**Structure:**

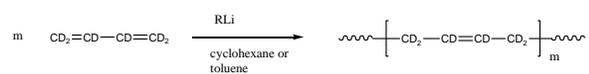


**Composition:**

Mn x 10 <sup>3</sup>	PDI
1,500.0	1.3

**Synthesis Procedure:**

Deuterated polybutadiene -d<sub>6</sub> is obtained by living anionic polymerization of d<sub>6</sub> butadiene monomer:



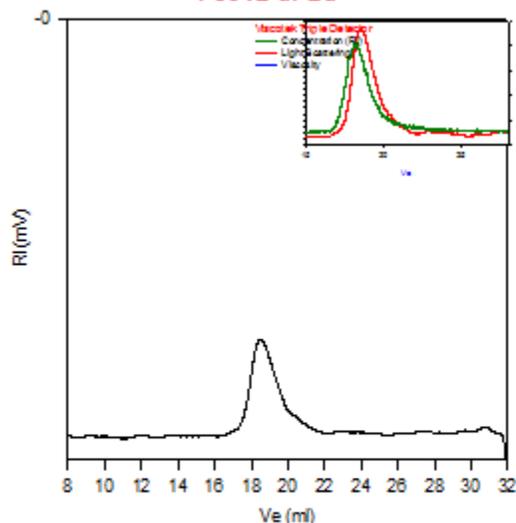
**Characterization:**

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:** Polymer is soluble in toluene, THF, CHCl<sub>3</sub>.

**SEC profile of the product:**

**P5912-dPBd**



Size exclusion chromatography of deuterated polybutadiene(d<sub>6</sub>)

(rich in 1,4 microstructure):

M<sub>n</sub>=1,500,000, M<sub>w</sub>=2,089,000, M<sub>w</sub>/M<sub>n</sub>=1.3

Solution viscosity in THF at 35 °C: 7.993 dl/g

dn/dc in THF at 35 °C: 0.127 ml/g Rgw: 86.50 nm