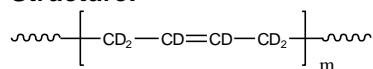


Sample Name: Deuterated poly butadiene – deuterated rich in 1,4 addition

Sample #: P18307-dPBd1

Structure:

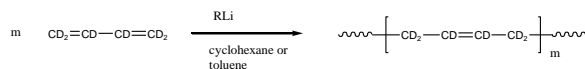


Composition:

Mn x 10 ³	PDI
1.4	1.09

Synthesis Procedure:

Deuterated polybutadiene -d₆ is obtained by living anionic polymerization of d₆ butadiene monomer:



Characterization:

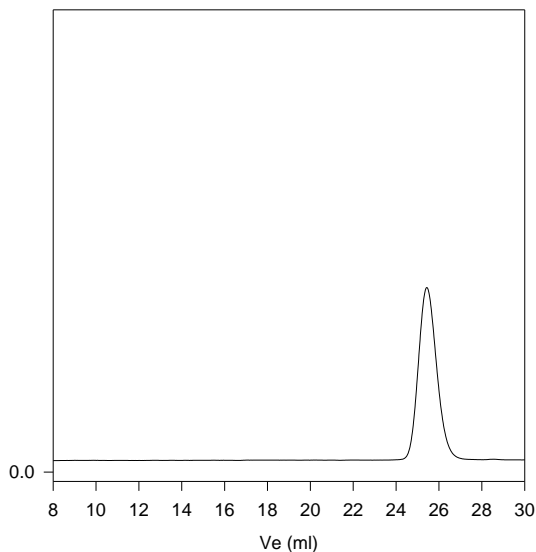
The molecular weight and polydispersity index (PDI) of the deuterated poly butadiene are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors from Viscotek Co. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used.

Deuteration:

Solubility Polymer is soluble in toluene, THF and CHCl₃.

SEC profile of the product:

P18307-dPBd



Size exclusion chromatography of deuterated polybutadiene(d₆) (rich in 1,4 microstructure):
M_n=1,400, M_w=1,500 M_w/M_n=1.09