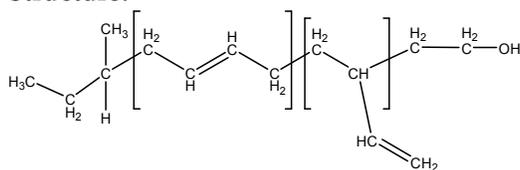


Sample Name: Hydroxy Terminated
Polybutadiene, 1, 4-microstructure
Sample #: P19270-BdOH

Structure:

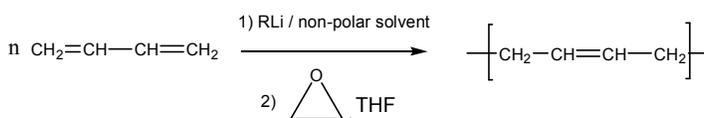


Composition:

Mn x 10 ³	PDI
1.9	1.09
1,4 microstructure	94%

Synthesis Procedure:

1, 4-addition hydroxy terminated polybutadiene was prepared by anionic living polymerization of butadiene in non-polar solvent followed by termination with ethylene oxide. The scheme of the reaction is illustrated below:



Characterization:

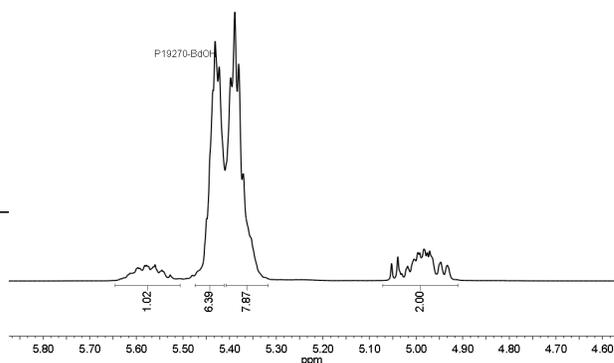
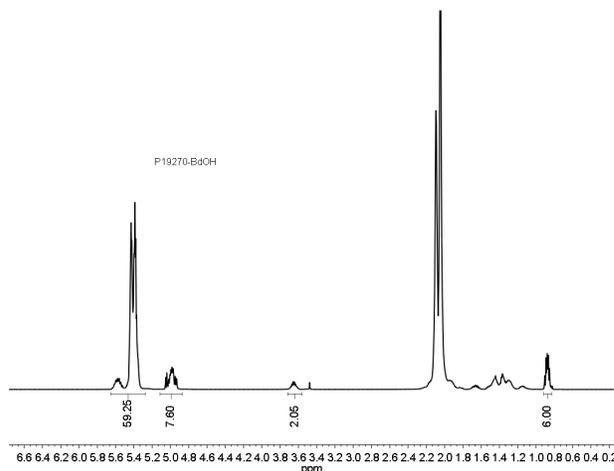
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

Functionality: functionality of the obtained polymer was determined by reacting polymer in dried non quantity of acetic anhydride in the presence of pyridine as a catalyst and the liberated COOH was titrated by acid-base titration.

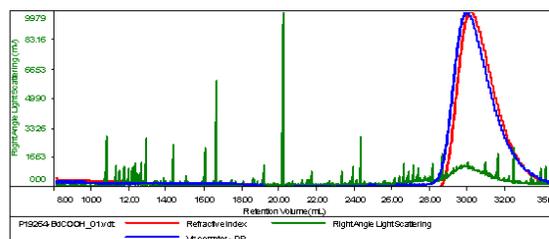
Solubility:

Hydroxy terminated polybutadiene is soluble in DMF, THF, toluene, hexane, cyclohexane and CHCl₃. It precipitates from methanol, ethanol, and water.

SEC of Sample:



Concentration (mg/mL)	6.6739
Sample chvd: (mL/g)	0.1670
Method File	PS80K-April 29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
BdCOOH_01.vct	1,974	2,020	1,985	1.023	0.4351