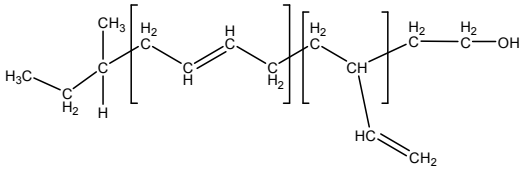
Sample Name: **Hydroxy Terminated Polybutadiene, 1, 4-microstructure**
Sample #: **P19277-BdOH**

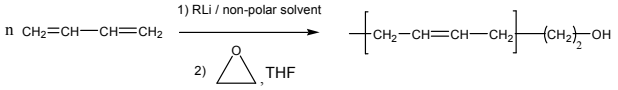
Structure:



Composition:

Mn x 10^3	PDI
0.9	1.10
1,4 microstructure	64%

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:

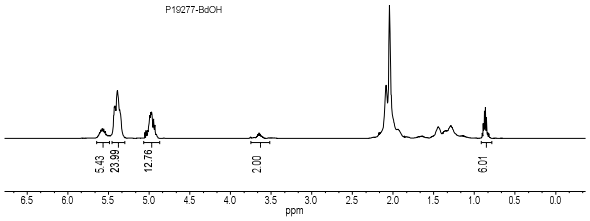


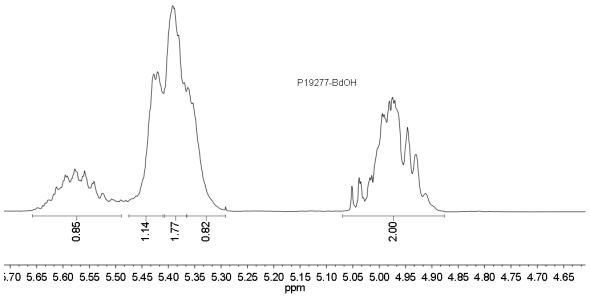
Characterization:
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) 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 $CHCl_3$. It precipitates from methanol, ethanol, water.

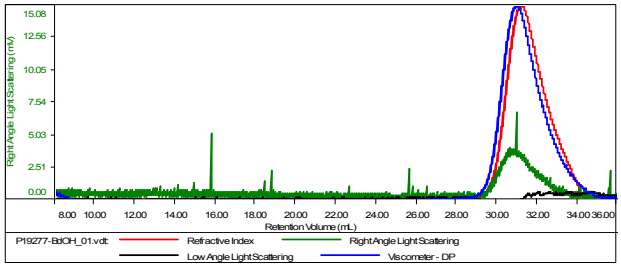
SEC of Sample:





Sample ID:P19277-BdOH

Concentration (mg/mL)	8.0073
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-April29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersi	Intrinsic Viscosity (dL/g)
P19277-BdOH_01.vdt	883	977	1,009	1.107	0.2128