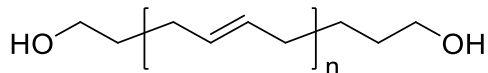
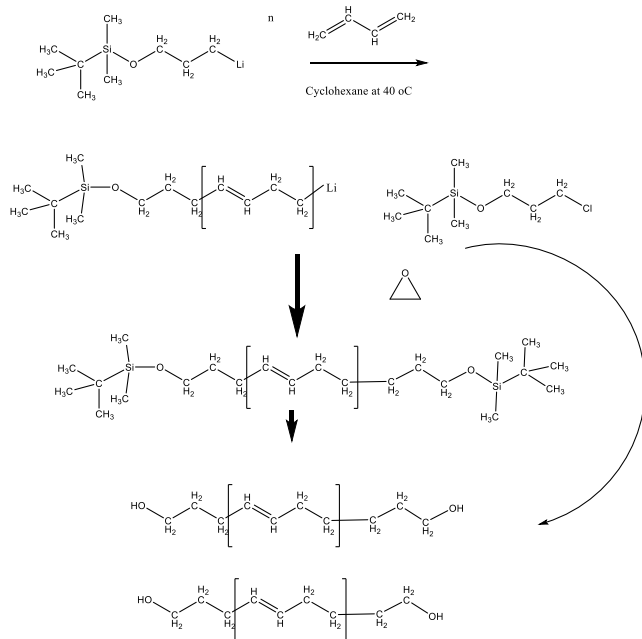


Product Name: **α,ω -Bis(hydroxy)-terminated Poly(1,4-butadiene)****Product # P42563-Bd2OH****Structure:****Composition:**

$M_n \times 10^3$ (g/mol)	M_w/M_n	Content of 1,4-rich Bd
8.0	1.01	88%

Synthesis procedure:

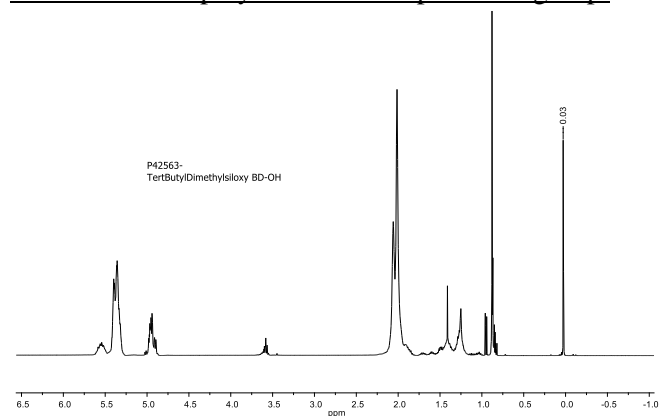
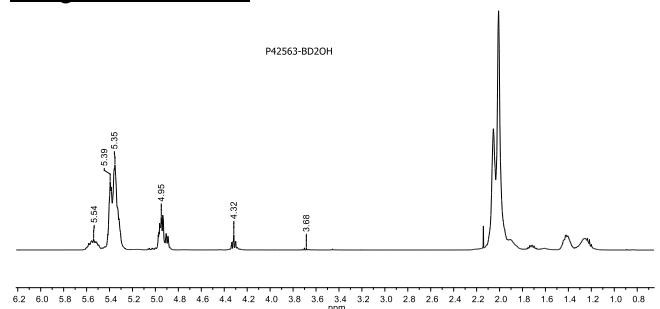
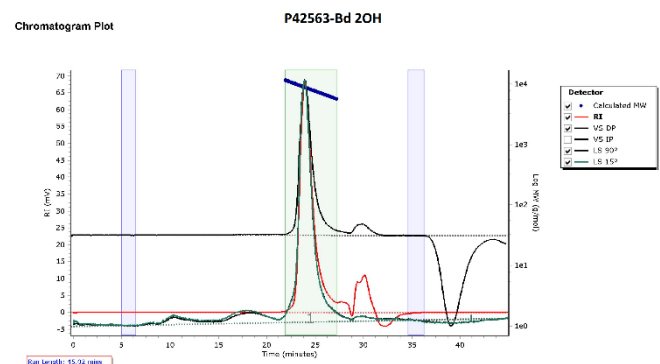
Dihydroxy-terminated polybutadiene, rich in 1,4-addition, was prepared by anionic living polymerization of butadiene in a polar solvent (cyclohexane). The scheme of reaction is presented below:

**Characterization:**

The molecular weight and polydispersity index were determined by size exclusion chromatography (SEC) using triple detection method. The microstructure of the product was calculated from proton NMR spectroscopy.

Solubility:

Dihydroxy-terminated polybutadiene is soluble in tetrahydrofuran (THF), toluene, hexane, cyclohexane, chloroform, methanol and ethanol.

 ^1H -NMR of the polymer with end-protected group:**After cleavage of (tert-butyl dimethylsiloxy)-end group using TFA in DCM:****SEC chromatogram of the product:**

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	8772	8297	8403	8499	8587	8476	1.013