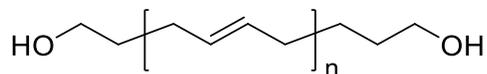


Product Name:

α,ω -Bis(hydroxy)-terminated Poly(1,4-butadiene)

Product # P42563-Bd2OH

Structure:

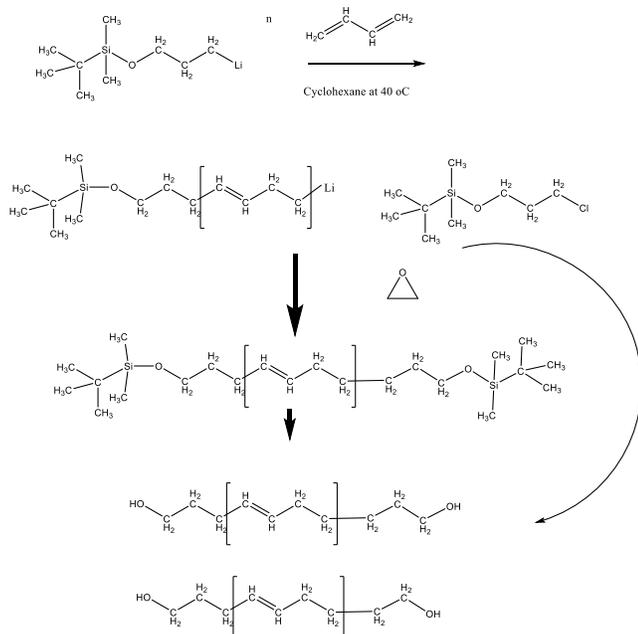


Composition:

Mn $\times 10^3$ (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:



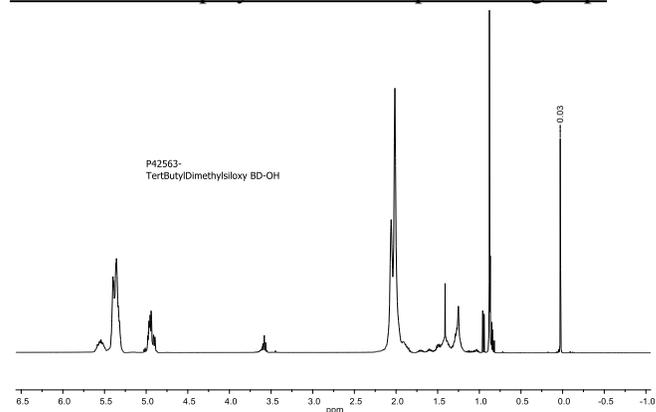
Characterization:

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.

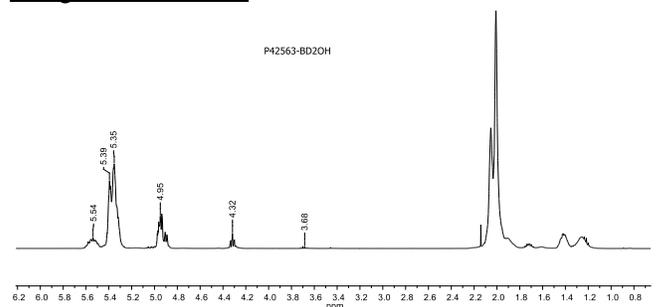
Solubility:

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

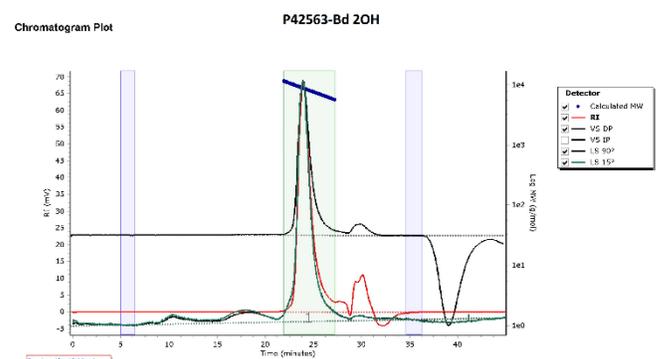
¹H-NMR of the polymer with end-protected group:



After cleavage of (tert-butyl dimethylsiloxy)-end group using TFA in DCM:



SEC chromatogram of the product:



Molecular Weight Averages							
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