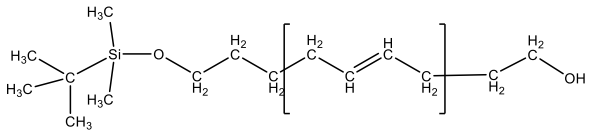
Sample Name:
Poly(1,4-butadiene), (α-tert-butyldimethylsiloxy, ω-hydroxy)-terminated

Sample #: **P43872A-Bd-tBuDMSOH**

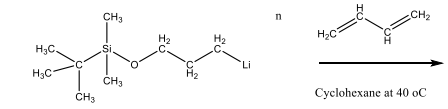
Structure:

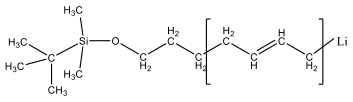


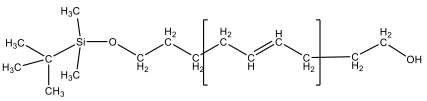
Composition:

Mn x 10^3	PDI
2.0	1.08
1,4 Contents 90%	

Synthesis Procedure:
1,4-rich microstructure addition dihydroxy terminated polybutadiene was prepared by anionic living polymerization of butadiene in apolar solvent such as cyclohexane.



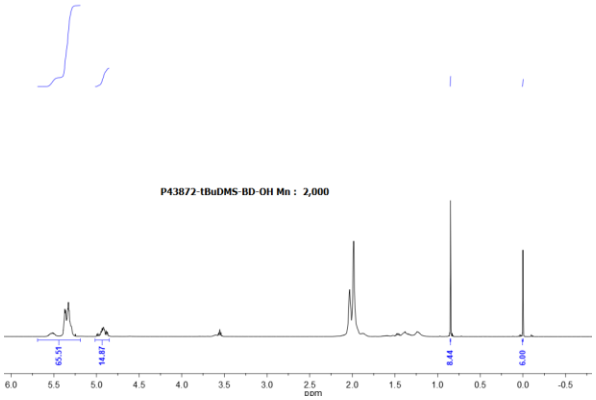




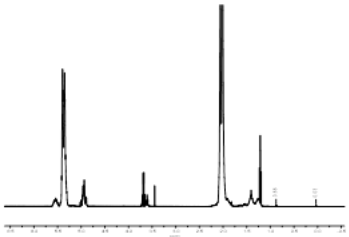
Characterization:
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR data analysis.

Solubility:
Hydroxy terminated polybutadiene is soluble in THF, toluene, hexane, cyclohexane and $CHCl_3$. It is also soluble in methanol and ethanol.

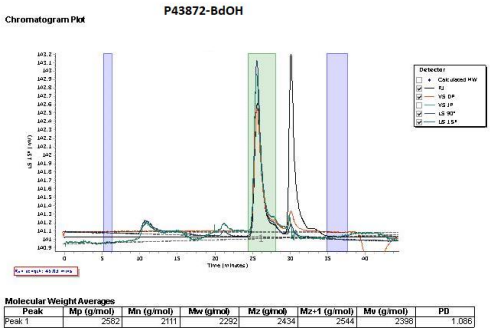
^{1}H-NMR spectrum of the Product: Tert Butyldimethylsiloxy OH termainated:



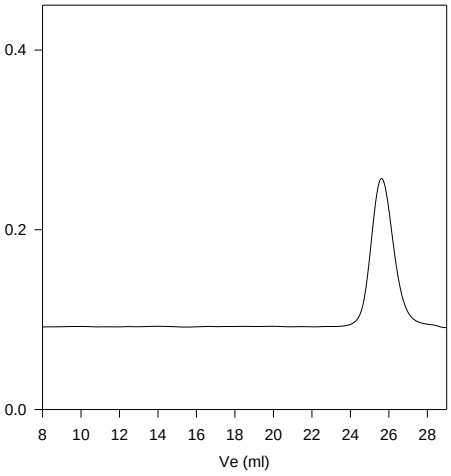
Clevage of tert.Butyl Dimethylsiloxy end group using (Bu)4NF in THF:



SEC profile of the Sample:



P43852-BdOH (1,2 addition)



Size exclusion chromatography of poly(butadiene-b-ethylene oxide):

—— 1,4 rich polybutadiene M_n=2,900, M_w=3,000, PI=1.02