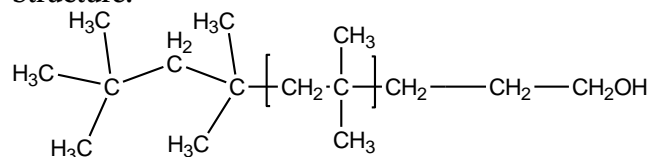


Sample Name:

## Hydroxy Terminated Polyisobutylene

Sample #: P18895A-IBOH

**Structure:**

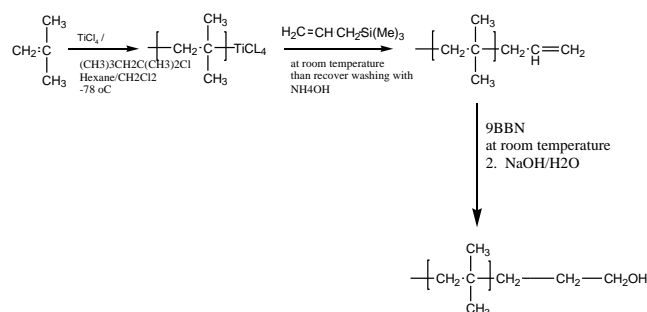


**Composition:**

Mn x 10 <sup>3</sup>	PDI
8.5	1.18
OH functionality > 95%	

### Synthesis Procedure:

Vinyl (olefinic) terminated polyisobutylene was prepared by cationic living polymerization of isobutylene. The polymerization reaction was terminated with allyltrimethylsilane followed by epoxidation with 9BBN. The scheme of the reaction is illustrated below:



### Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

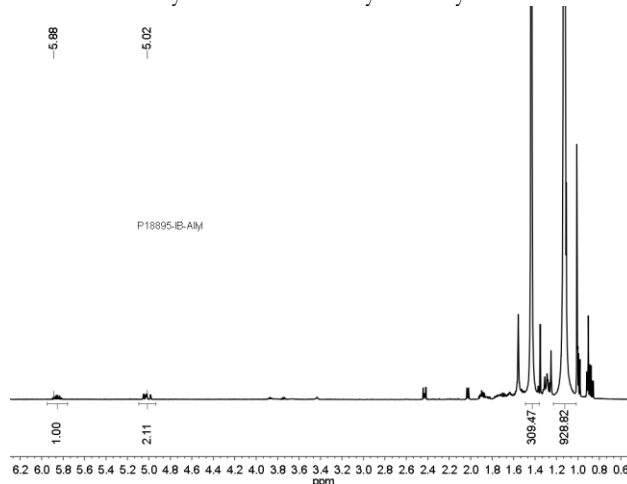
**Functionality:** The polymer's functionality was determined by <sup>1</sup>H-NMR spectroscopy.

In order to check OH functionality it was titrated with a known concentration of K naphthalene and found the functionality higher than 95%

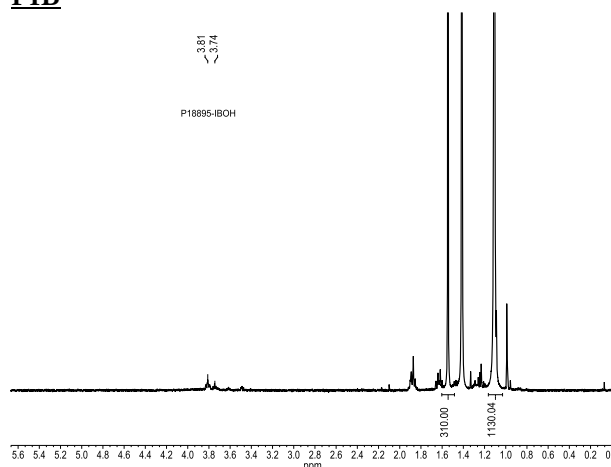
### Solubility:

The polymer is soluble in THF, CHCl<sub>3</sub>, toluene, hexane, acetone and can be precipitated from methanol, ethanol, water.

HNMR of Allyl terminated Poly isobutylene:

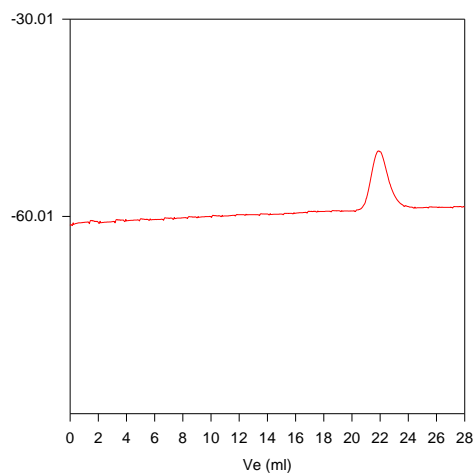


### HNMR spectrum of the sample of OH terminated PIB



### SEC of precursor:

P18895-IB-allyl



Size exclusion chromatography of allyl terminated polyisobutylene:

M<sub>n</sub>=8,500, M<sub>w</sub>=10,000, M<sub>w</sub>/M<sub>n</sub>=1.18