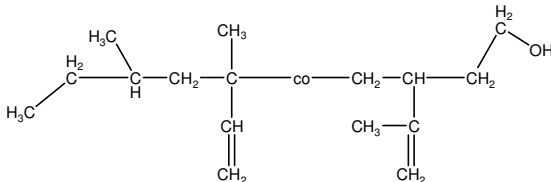


Sample Name:

**Hydroxy-terminated Polyisoprene,  
1,2 and 3,4 -microstructure rich**

Sample #: **P18844-IPOH**

**Structure:**

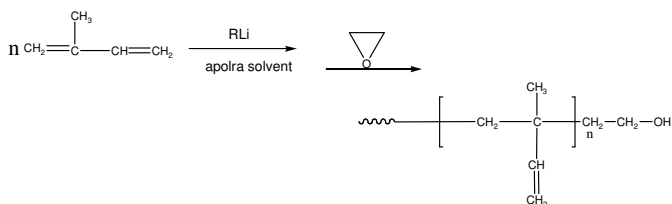


**Composition:**

$\text{Mn} \times 10^3$	PDI
15.0	1.05

**Synthesis Procedure:**

1,2 and 3,4 -addition hydroxy terminated polyisoprene was prepared by anionic living polymerization in a apolar solvent (THF) 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.

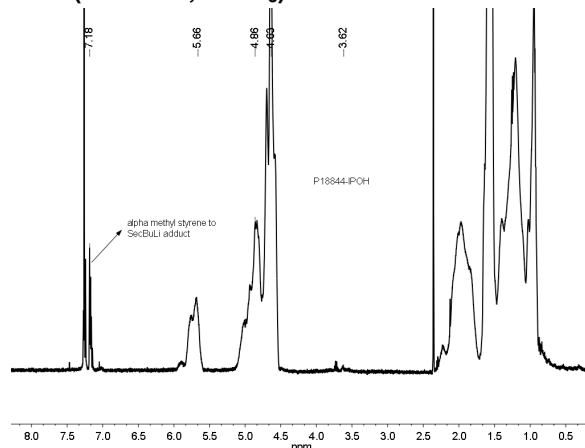
**Functionality:**

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 polyisoprene is soluble in DMF, THF, toluene, hexane, cyclohexane, and  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water.

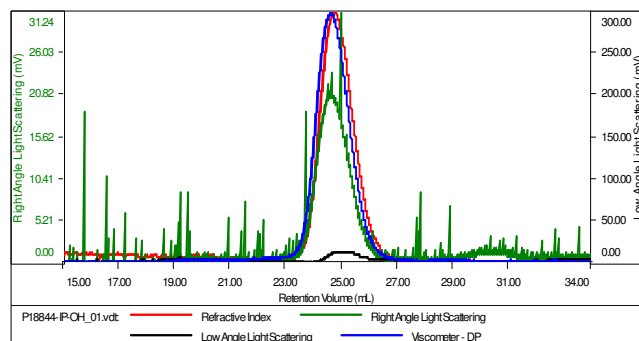
**$^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ):**



**SEC elugram:**

**Sample ID: P18844-IP-OH**

Concentration (mg/mL)	8.5311
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-august 12-2014-0000.vom
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18844-IP-OH_01.vdt	15,079	15,744	15,784	1.044	0.1738

