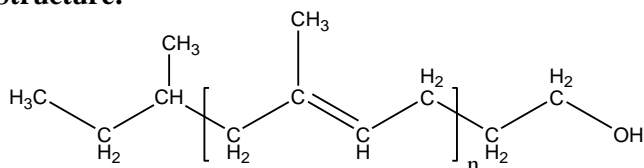


### Poly(1,4-isoprene), $\omega$ -hydroxy-terminated

### Structure:



Mn x 10 <sup>3</sup>	PDI
1.2	1.02
OH functionality	>95%

1, 4-addition hydroxy terminated polyisoprene was prepared by anionic living polymerization in a non-polar solvent using sec.BuLi initiator followed by termination with ethylene oxide.

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 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.

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

Hexane

0.95 0.90 0.85 0.80 0.75 ppm

5.18 4.77

3.8 3.7 3.6 3.5 3.4 ppm

2.82 2.82 2.82

P44140-IP-OH Mn 1400

5.4 5.2 5.0 4.8 4.6 4.4 4.2 4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 2.0 1.8 1.6 1.4 1.2 1.0 0.8 ppm

21.56 6.44 6.09

[illegible]