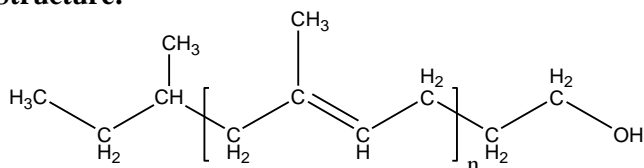


Sample Name:
Poly(1,4-isoprene), ω -hydroxy-terminated

Sample #: P42016-IPOH

Structure:

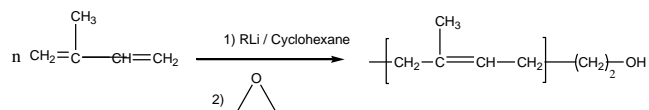


Composition:

| Mn x 10 ³ | PDI |
|----------------------|------|
| 48.0 | 1.02 |

Synthesis Procedure:

1, 4-addition hydroxy terminated polyisoprene was prepared by anionic living polymerization in a non-polar solvent 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 CHCl₃. It precipitates from methanol, ethanol, water.

SEC elugram of the Sample:

Agilent GPC/SEC Software

