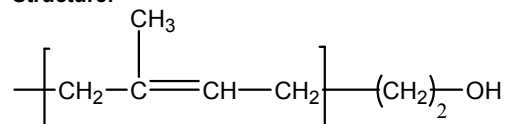


Sample Name: Hydroxy Terminated Polyisoprene, 1,4-microstructure

Sample #: P13279-IPOH

Structure:

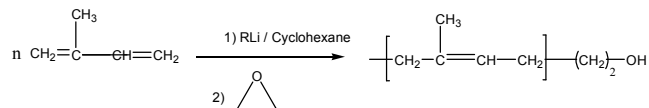


Composition:

Mn x 10 ³	PDI
2.0	1.08

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:

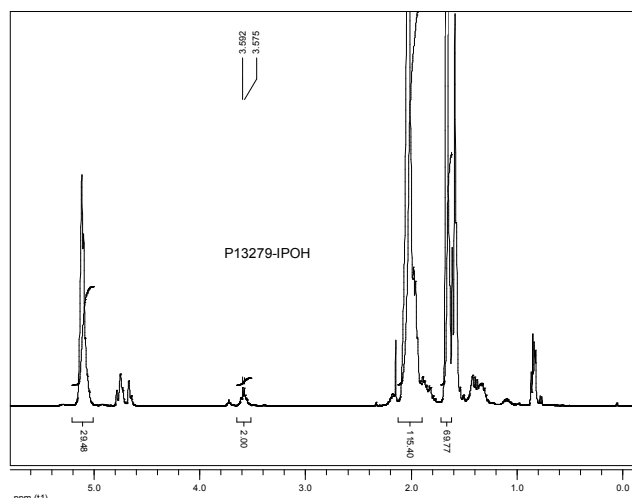
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple 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:

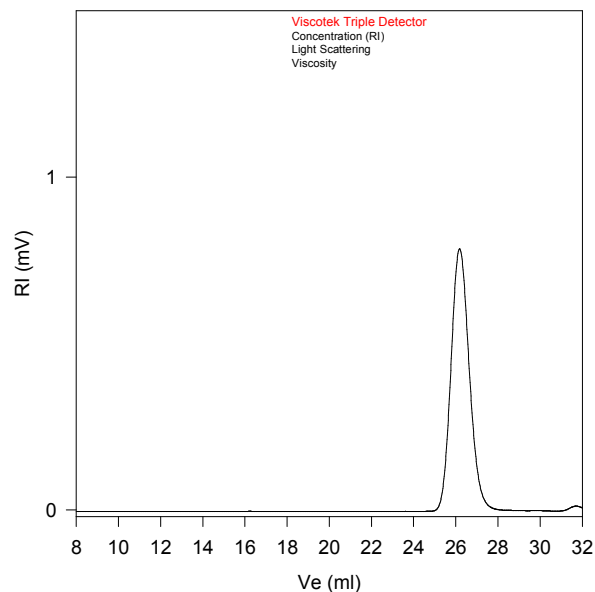
Hydroxy terminated polyisoprene is soluble in DMF, THF, toluene, hexane, cyclohexane and CHCl₃. It precipitates from methanol, ethanol, water.

HNMR of the Poymer:



SEC of Sample:

P13279-IPOH



Size Exclusion Chromatography of Poly isoprene OH terminated

— M_n = 2000, M_w = 2200, M_w/M_n = 1.08