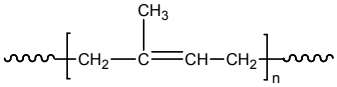
Sample Name: **Polyisoprene**

1,4-rich addition

Sample #: P9392-IP

1,4-microstructure:



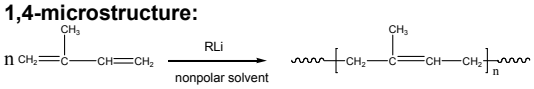
Composition:

Mn x 10^3	PDI (M_w/M_n)
109.3	1.11

Synthesis Procedure:

Polyisoprene (1,4 addition) is obtained by living anionic polymerization of isoprene in non-polar media and Polyisoprene (1,2- and 3,4- addition) is obtained by living anionic polymerization of isoprene in polar media. The reactions schemes are shown below:

1,4-microstructure:



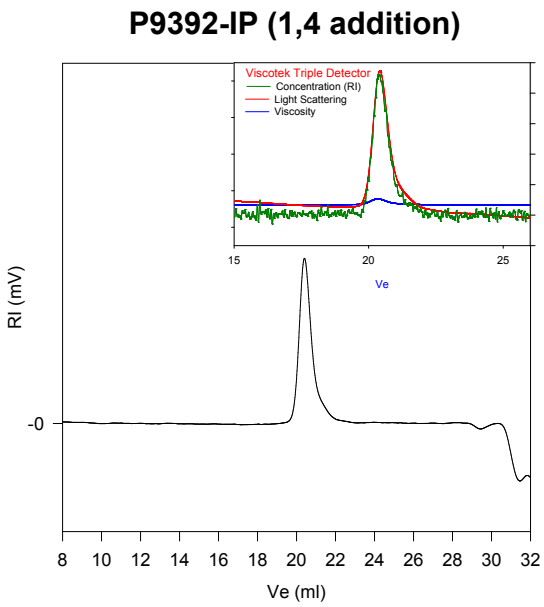
Characterization:

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.

Solubility:

Polyisoprene is soluble in THF, toluene, hexane, pentane and cyclohexane and precipitates from methanol and ethanol.

SEC of Homopolymer:



Size Exclusion Chromatography of Poly isoprene OH terminated

—— M_n = 109,300, M_w = 121,300, M_w/M_n = 1.11

data fromlight scattering detector:
Solution Viscosity in THF at 35 ºC: 1.271dl/g
Radius of Gyration: 17.59nm dn/dc in THF at 35 ºC: 0.125 ml/g