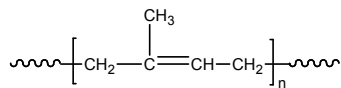


Sample Name: Polyisoprene

1,4-rich addition

Sample #: P9400-IP

1,4-microstructure:



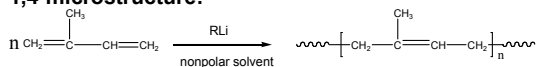
Composition:

$M_n \times 10^3$	PDI (M_w/M_n)
315.9	1.27

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:

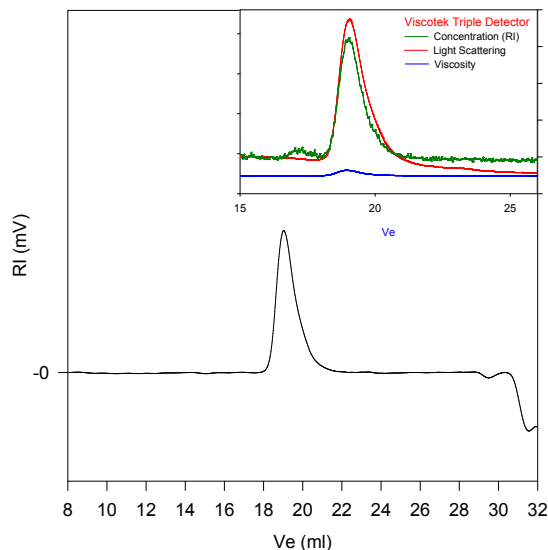
The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple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

Solubility:

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

SEC of Homopolymer:

P9400-IP (1,4 addition)



Size Exclusion Chromatography of Poly isoprene OH terminated

— $M_n = 315,900$, $M_w = 401,200$, $M_w/M_n = 1.27$

data from light scattering detector:

Solution Viscosity in THF at 35 °C: 2.878 dl/g

dn/dc in THF at 35 °C: 0.125 ml/g

Radius of Gyration: 34.28 nm