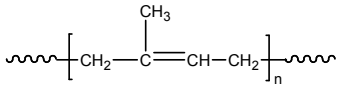
Sample Name: **Polyisoprene**

1,4-rich addition

Sample #: P10602-IP

1,4-microstructure:



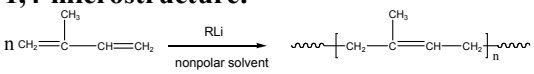
Composition:

Mn x 10^3	PDI (M_w/M_n)
31.0	1.05

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:



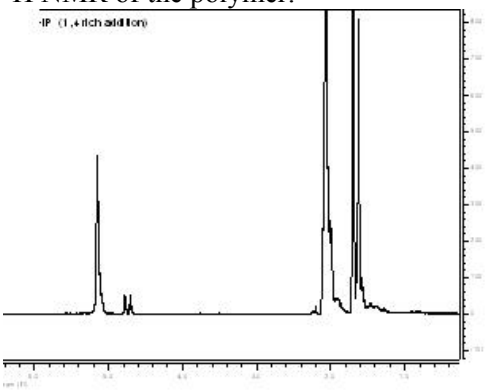
Characterization:

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.

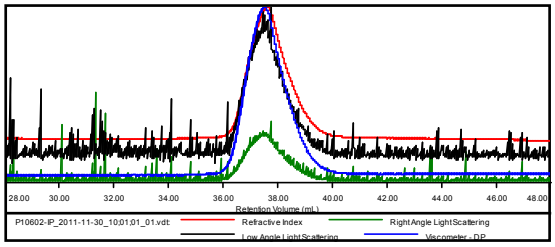
^{1}H NMR of the polymer:



SEC of Homopolymer:

Sample ID: P10602-IP

Concentration (mg/mL)	6.9657
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-Oct-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P10602-IP_2011-11-30_10;01;01_01.vd	31,023	32,701	31,652	1.054	0.5937