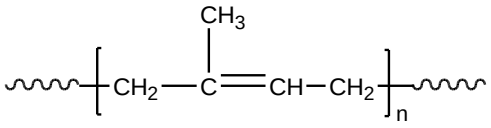
Sample Name: Poly(1,4-isoprene)

Sample #: P5471R-Ip
(cis 1,4: 80%; trans 1,4:15% and 3,4:5%)

Structure:



Composition:

Mn x 10^3	PDI
26.0	1.19
T_g (°C): -77	

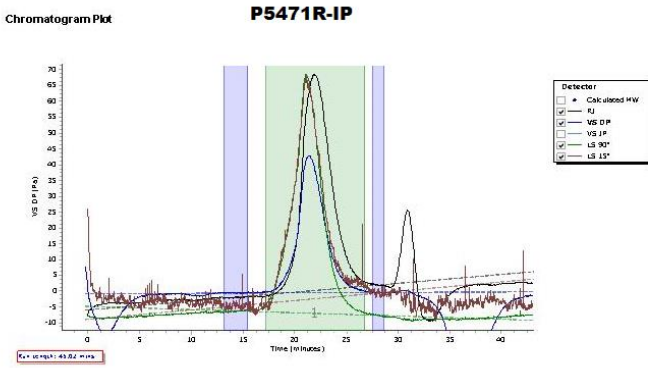
Synthesis Procedure:
Polyisoprene is obtained by living anionic polymerization of isoprene in a-polar media such as cyclohexane, toluene or hexane.

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.

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min.The inflection glass transition temperature (T_g) has been considered.

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

SEC of Homopolymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	31889	25813	30752	35839	41187	34846	1.191

Thermogram for the polymer: