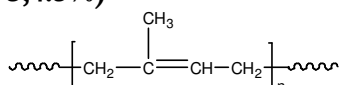


**Sample Name:** Polyisoprene  
**1,4- rich addition**

**Sample #:** P5473-IP  
 (cis 1,4: 80%; trans 1,4:15% and  
 3,4:5%)



Mn x 10 <sup>3</sup>	PDI
210.0	1.06
T <sub>g</sub> (°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.

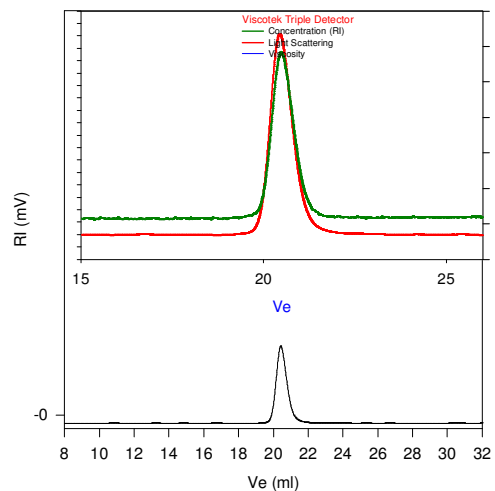
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T<sub>g</sub>) has been considered.

### Solubility:

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

### SEC of Homopolymer:

#### P5473-IP (1,4 addition)



Size Exclusion Chromatography of Poly isoprene OH terminatedL  
 — M<sub>n</sub> = 210,000, M<sub>w</sub> = 231,000, M<sub>w</sub>/M<sub>n</sub> = 1.06  
 Solution Viscosity in THF at 35 °C: 2.072dl/g: Rgw:25.50 nmm  
 dn/dc in THF at 35 °C: 0.125ml/g

### Thermogram for the polymer:

