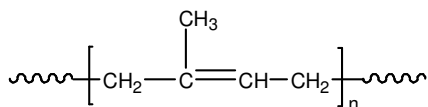


## Sample Name: Polyisoprene, rich in 1,4-addition

### Sample #: P19434-IP



### Composition:

Mn x 10 <sup>3</sup>	Mw/Mn
341.0	1.2

### Microstructure:

1,4-addition		1,2- & 3,4-addition
Cis-isomer	Trans-isomer	
89 %	11 %	—

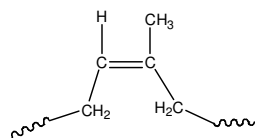
### Synthesis Procedure:

Polyisoprene was obtained by living anionic polymerization.

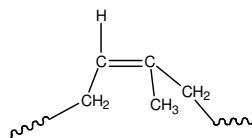
### Characterization:

The microstructure of polymer was calculated from <sup>1</sup>H NMR data. Molecular weight and polydispersity index (M<sub>w</sub>/M<sub>n</sub>) of the polymer were determined by size exclusion chromatography (SEC).

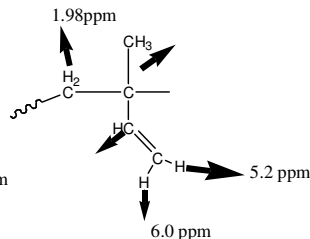
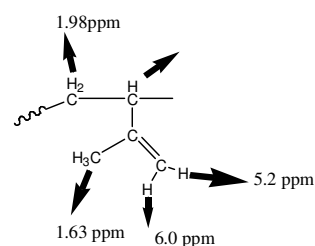
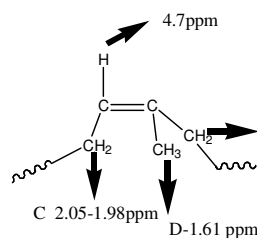
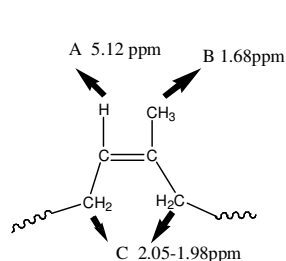
### Proton shifts in <sup>1</sup>H NMR:



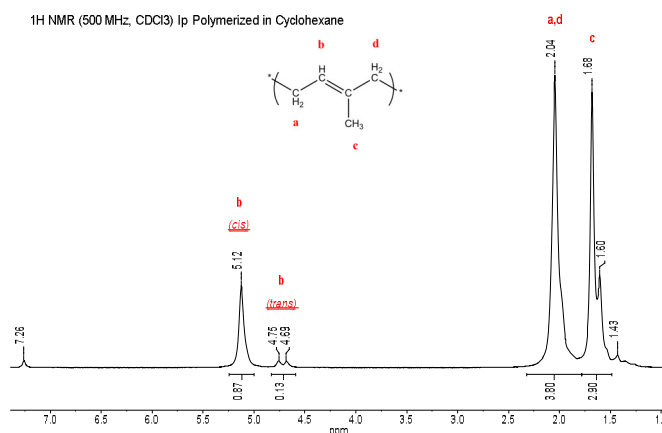
Cis 1,4 addition



Trans 1,4 addition



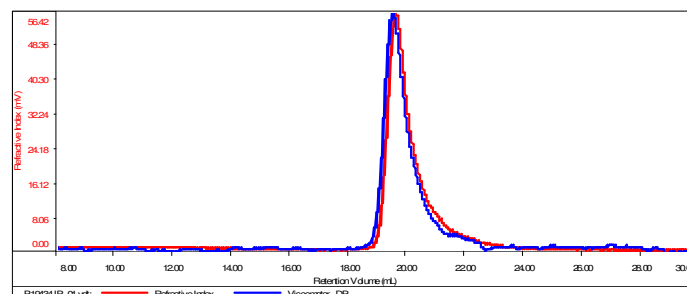
## <sup>1</sup>H NMR (500 MHz; CDCl<sub>3</sub>) of polyisoprene:



## SEC elugram of polyisoprene:

### Sample ID:P19434-IP

Concentration (mg/mL)	0.4028
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19434-IP_01.vt	341,127	423,446	374,419	1.241	6.3277