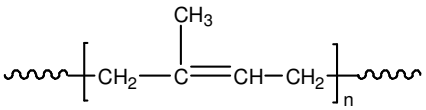
Sample Name: **Polyisoprene, rich *in 1,4-addition***

Sample #: **P19695-Ip**

Structure:



Composition:

Mn x 10^3	Mw/Mn
110.5	1.08

Microstructure:

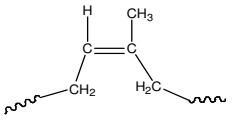
1,4-addition		1,2- & 3,4-addition
Cis-isomer	Trans-isomer	
89 %	11 %	–

Synthesis Procedure:
Polyisoprene was synthesized by living anionic polymerizatiion.

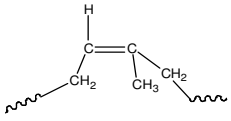
Characterization:

The microstructure of polymer was calculated from ^{1}H NMR data. Molecular weight and polydispersity index (M_w/M_n) of the polymer were determined by size exchlusion chromatography (SEC).

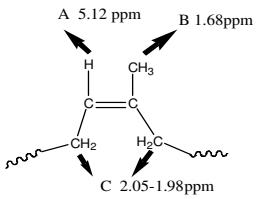
Proton shifts in ^{1}H NMR:

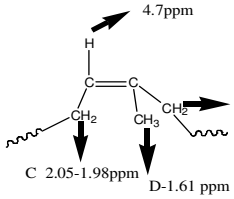


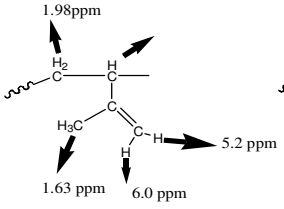
Cis 1,4 addition

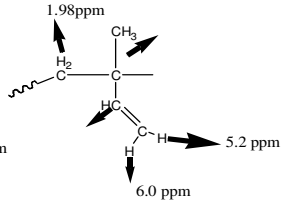


Trans 1,4 addition





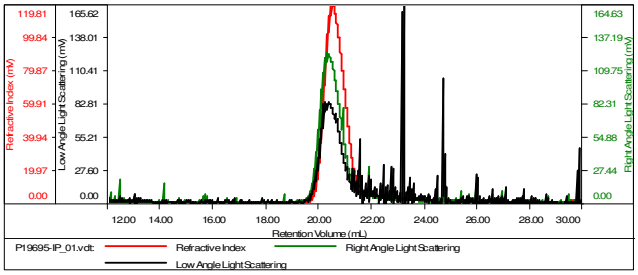




SEC elugram of polyisoprene:

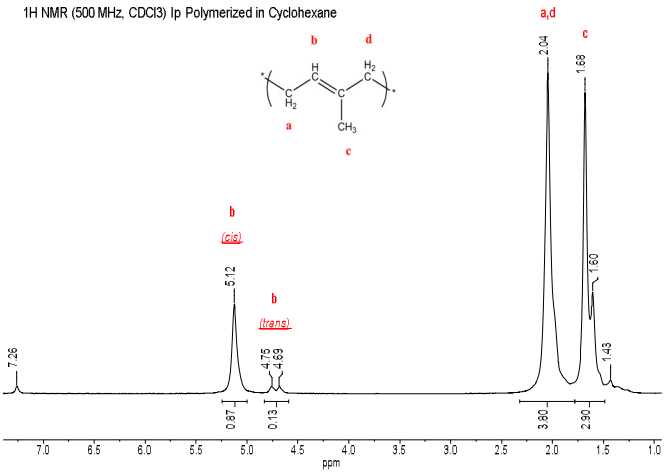
Sample ID-P19695-IP

Concentration (mg/mL)	0.9707
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-Jan-2016-0000.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)
P19695-IP_01.vdt	110,408	119,847	108,681	1.085	3.9057

^{1}H NMR (500 MHz; $CDCl_3$) of polyisoprene:



(v.K-01)