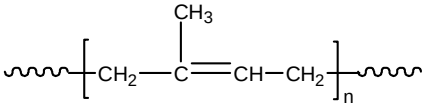
Sample Name: Polyisoprene, *rich in 1,4-addition*

Sample #: P18959-Ip



Composition:

Mn x 10^3	Mw/Mn
150.0	1.06

Microstructure:

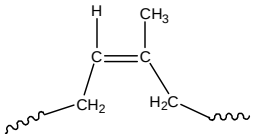
1,4-addition		1,2- & 3,4-addition
Cis-isomer	Trans-isomer	
88 %	12 %	–

Synthesis Procedure:
Polyisoprene was obtained by living anionic polymerization.

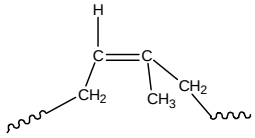
Characterization:

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).

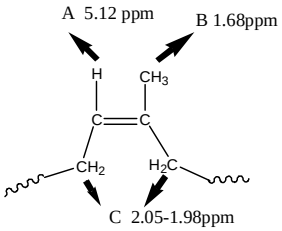
Proton shifts in ^{1}H NMR:

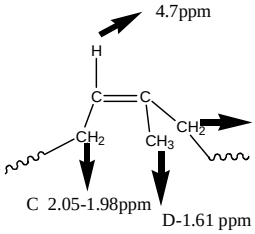


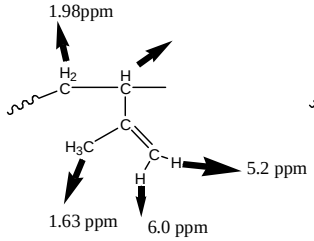
Cis 1,4 addition

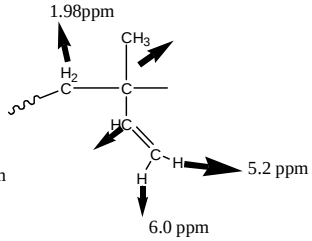


Trans 1,4 addition

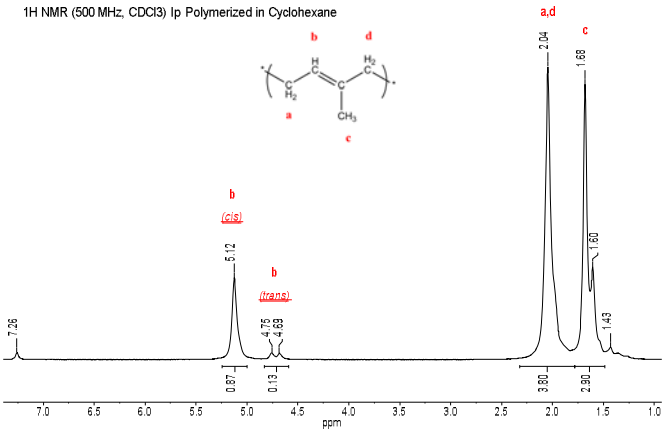








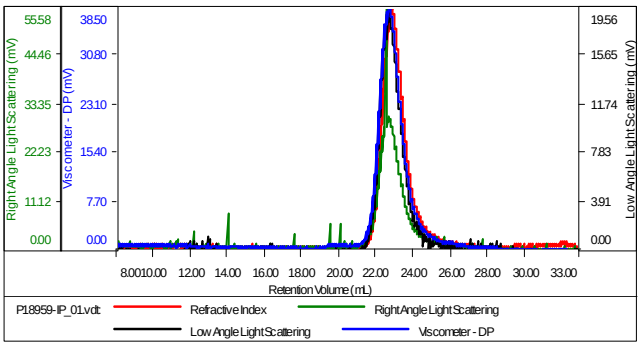
1H NMR (500 MHz; $CDCl_3$) of polyisoprene:



SEC elugram of polyisoprene:

Sample ID: P18959-IP

Concentration (mg/mL)	1.9379
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-NOV-2014-0003.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersit	Intrinsic Viscosity (dL/g)
P18959-IP_01.vdt	149,136	156,789	150,175	1.051	0.7353