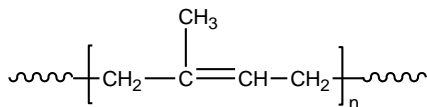


Sample Name: Polyisoprene, *rich in 1,4-addition*

Sample #: P18988-IP



Composition:

Mn x 10 ³	Mw/Mn
32.5	1.04

Microstructure:

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

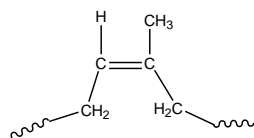
Synthesis Procedure:

Polyisoprene was obtained by living anionic polymerization.

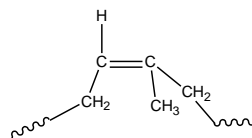
Characterization:

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

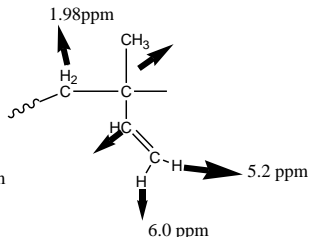
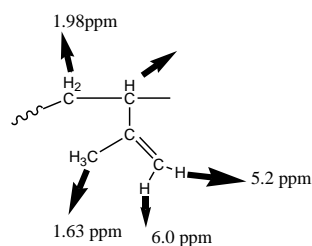
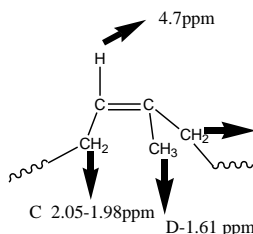
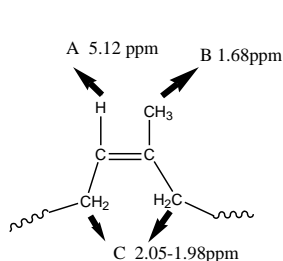
I
Proton shifts in ¹H NMR:



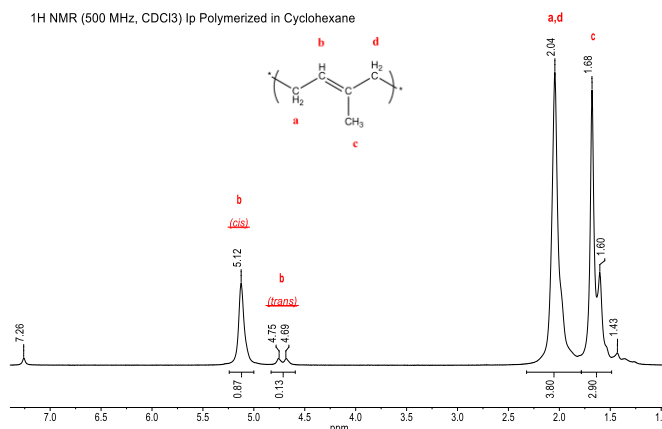
Cis 1,4 addition



Trans 1,4 addition



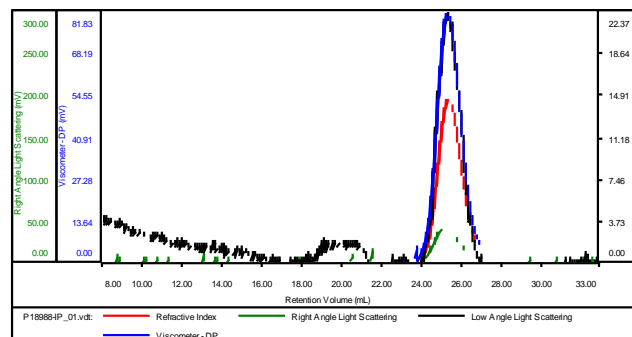
¹H NMR (500 MHz; CDCl₃) of polyisoprene:



SEC elugram of polyisoprene:

Sample ID: P18988-IP

Concentration (mg/mL)	1.3005
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-NOV27-2014-0000.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)
P18988-IP_01.vdt	32,780	33,842	32,641	1.032	2.2709