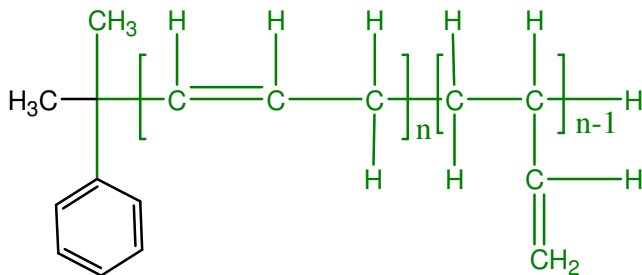


Sample Name: Polybutadiene (1,2-addition)

Sample #: P40033-Bd

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
539.0	1.10

PBd 1,4-addition	12.0%
PBd 1,2-addition:	88.0%

Glass transition temperature ( $T_g$ ):	-29°C
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**Synthesis procedure:**

1,2-addition polybutadiene was prepared by anionic living polymerization of butadiene in non-polar/polar media.

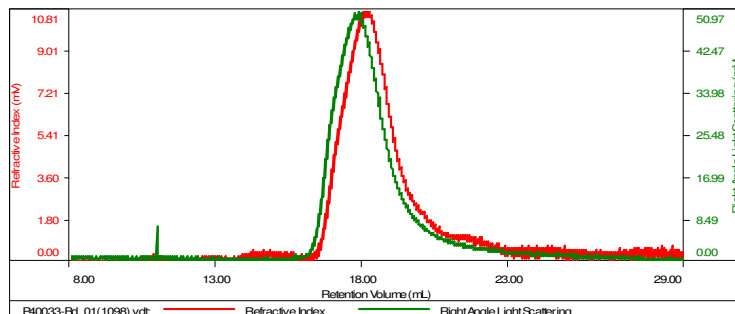
**Characterization:**

The polymer was characterized by  $^1\text{H}$  NMR and SEC.

**SEC elugram:**

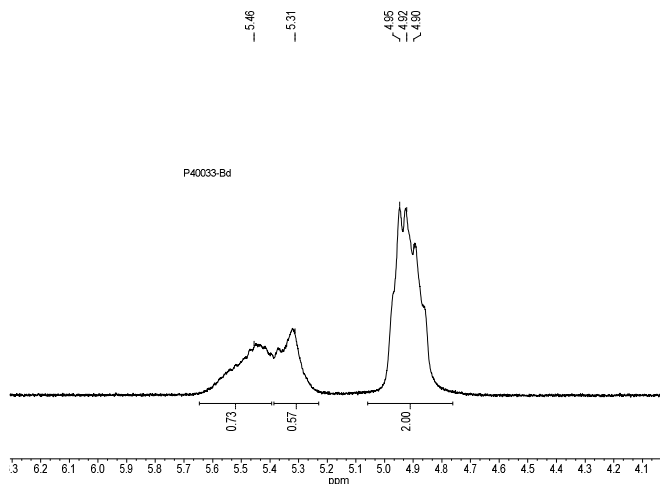
**Sample ID:** P40033-Bd

Concentration (mg/mL)	0.5678
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-30JUNE2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	M <sub>n</sub> (Da)	M <sub>w</sub> (Da)	M <sub>w</sub> /M <sub>n</sub>	IV (dL/g)	M <sub>p</sub> (Da)
P40033-Bd_01(1098).v	539,210	592,206	1.098	7.4103	498,623

**$^1\text{H}$  NMR spectrum (500 MHz,  $\text{CDCl}_3$ ) of polybutadiene:**



Reference: Thermal transition of PBd.

Polybutadiene ( $M_n=2.2-2.4 \times 10^3$ )	$T_g$
1,2-addition: <b>78 %</b>	-35°C
1,2-addition: <b>89 %</b>	-29°C
1,2-addition: <b>99 %</b>	-27°C