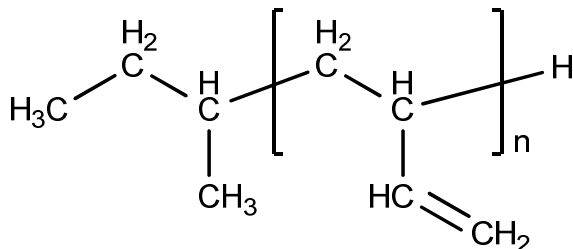


Sample Name: **Polybutadiene (1,2-addition)**

Sample #: **P19855-Bd**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup>	PDI
3.6	1.06
PBd 1,4-addition	<1 %
PBd 1,2-addition:	>99 %
Glass transition temperature (T <sub>g</sub> ):	-27°C

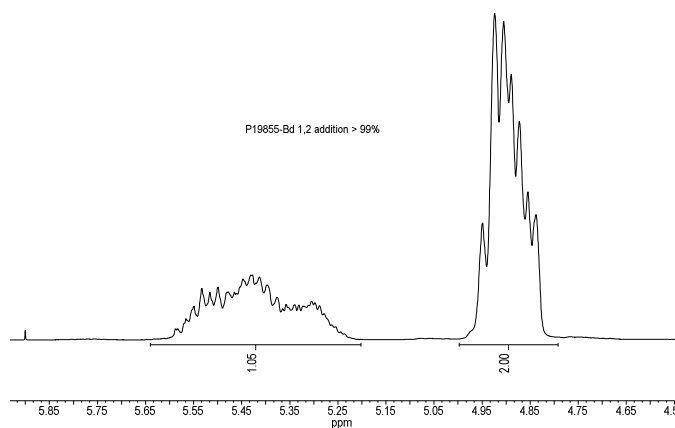
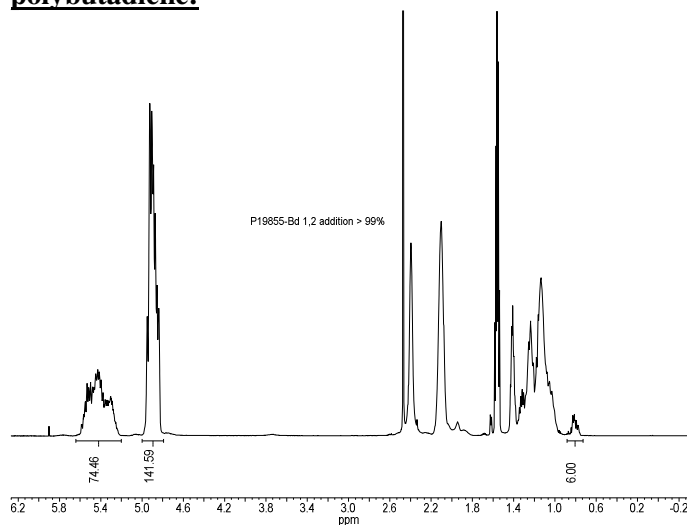
**Synthesis procedure:**

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

**Characterization:**

The polymer was characterized by <sup>1</sup>H NMR and SEC.

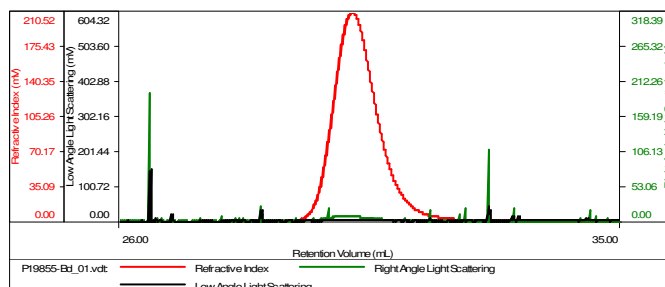
**<sup>1</sup>H NMR spectrum (500 MHz, CDCl<sub>3</sub>) of polybutadiene:**



**SEC elugram:**

**Sample ID: P19855-Bd**

Concentration (mg/mL)	3.6785
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-April-18-2016-0001.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Monomer	MW Molwt	Polydisper	Intrinsic Viscosity (dL/g)	Hydrodynam Radius (nm)	Peak Retention Volume (mL)
P19855-Bd_01.vcl	3,609	3,853	1.067	0.3553	3.40	30.167

**DSC thermogram of P19855-Bd:**

Reference: Thermal transition of PBd.

Polybutadiene (Mn=2.2–2.4 x10 <sup>3</sup> )	T <sub>g</sub>
1,2-addition: <b>78 %</b>	-35°C
1,2-addition: <b>89 %</b>	-29°C
1,2-addition: <b>99 %</b>	-27°C