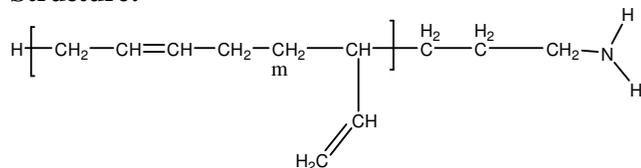


**Sample Name:** Amino terminated polybutadiene, 1, 2- rich microstructure

**Sample #:** P19595-BdNH<sub>2</sub>

**Structure:**

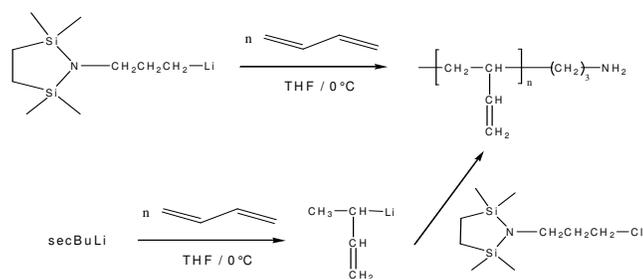


**Composition:**

Mn x 10 <sup>3</sup>	PDI
61.0	1.10
Functionality	>98%
T <sub>g</sub>	-45°C
1,2 addition	75%

**Synthesis Procedure:**

Amino terminated polybutadiene (1,2 addition) was prepared by anionic living polymerization of butadiene in polar solvent such as THF with initiation by an amino protected organo-lithium compound such as 2, 2,5,5-tetramethyl-1-(3-lithiopropyl)-1-aza-2,5-disilacyclopentane or termination of polymerization reaction (initiated by Sec. BuLi initiator) by 2,2,5,5-tetramethyl-1-(3-chloropropyl)-1-aza-2,5-disilacyclopentane, followed by deprotection of NH<sub>2</sub> functional group. The scheme of the reaction is illustrated below:



**Characterization:**

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

**Functionality:** The functionality of polymer was determined by the titration with HClO<sub>4</sub> using crystal violet as the indicator

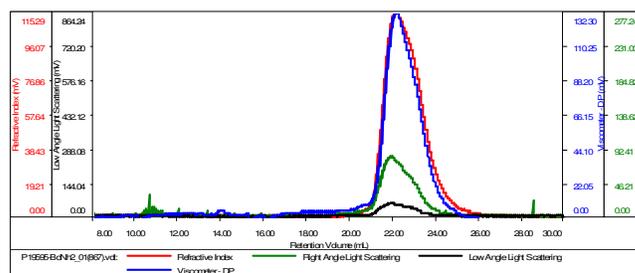
**Thermal Analysis:**

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T<sub>g</sub>) of the sample has been considered.

**SEC of Sample:**

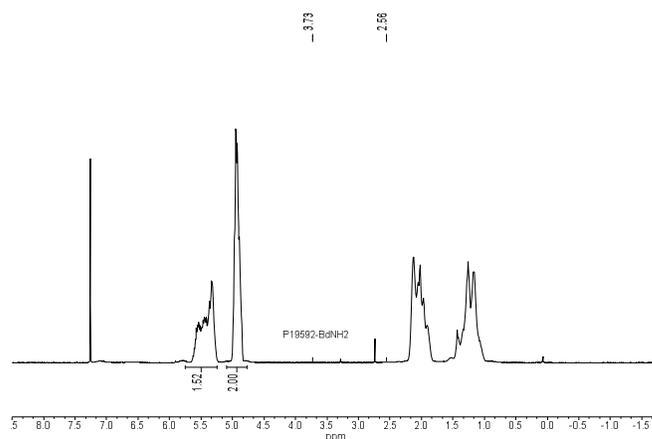
Sample ID-P19595-BdNH<sub>2</sub>

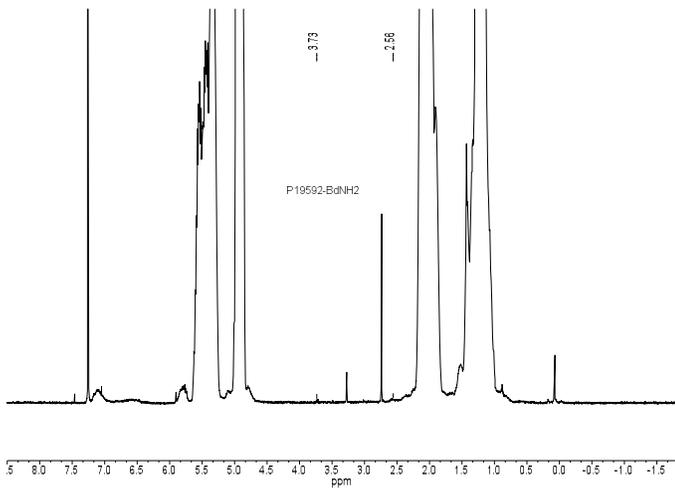
Concentration (mg/mL)	1.7776
Sample dn/dc (mL/g)	0.1250
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19595-BdNH <sub>2</sub> _01(667).vcl	60,851	67,067	71,499	1.102	4.0544

**<sup>1</sup>H NMR of sample:**





**DSC thermogram for the sample:**

