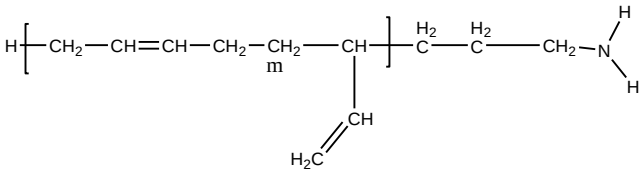
Sample Name: **Amino terminated polybutadiene, 1, 2- rich microstructure**

Sample #: **P19594-BdNH$_2$**

Structure:



Composition:

Mn x 10^3	PDI
37.0	1.22

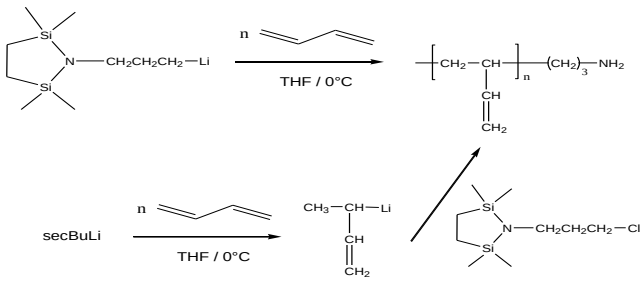
Functionality	>99%

T_g	-45^{o}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 NH2 functional group. The scheme of the reaction is illustrated below:



Characterization:

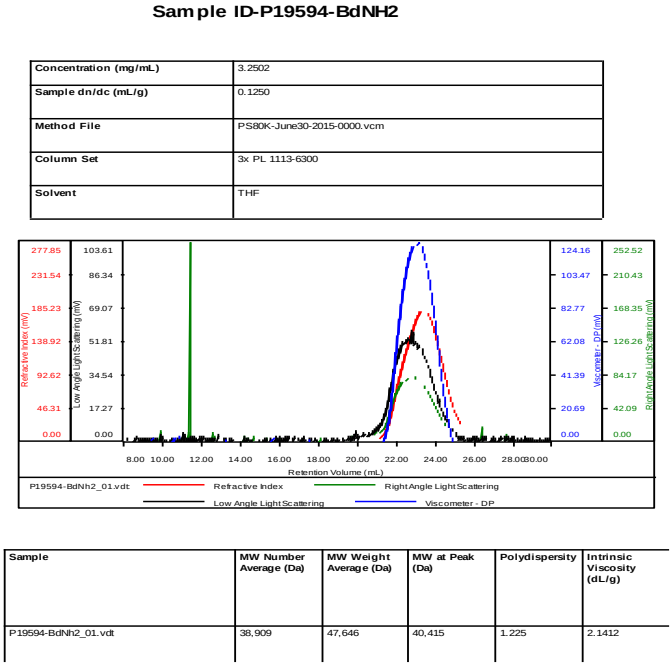
The polymer was characterized by SEC and ^{1}H NMR.

Functionality: The functionality of polymer was determined by the titration with $HClO_4$ 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^{o}C/min. The inflection glass transition temperature (T_g) of the sample has been considered.

SEC of Sample:



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19594-BdNh2_01.vdt	38,909	47,646	40,415	1.225	2.1412

^{1}H NMR of sample: