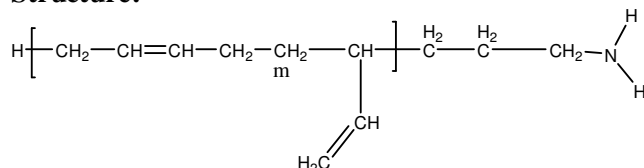


Sample Name: Amino terminated polybutadiene,
1, 2- rich microstructure

Sample #: P19592-BdNH₂

Structure:

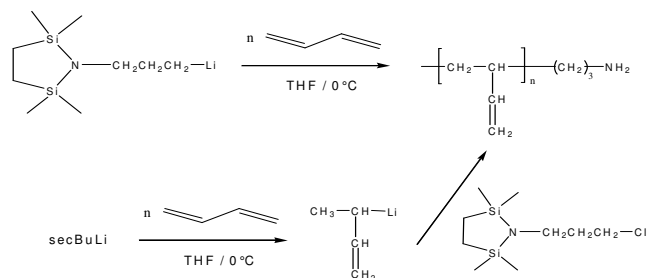


Composition:

Mn x 10 ³	PDI
62.0	1.14
Functionality	>98%
T _g	-45°C
1,2 addition	80%

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 ¹H NMR.

Functionality: The functionality of polymer was determined by the titration with HClO₄ using crystal violet as the indicator

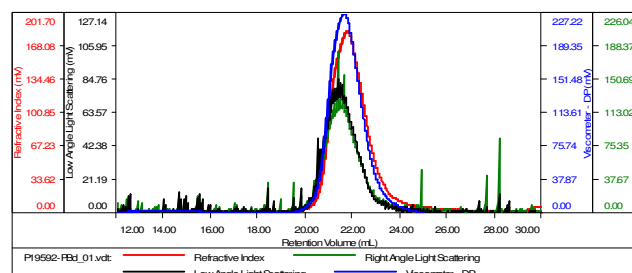
Thermal Analysis:

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_g) of the sample has been considered.

SEC of Sample:

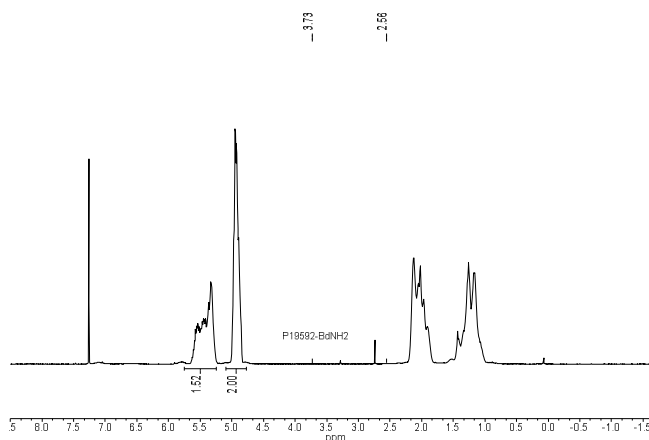
Sample ID-P19592-BdNH₂

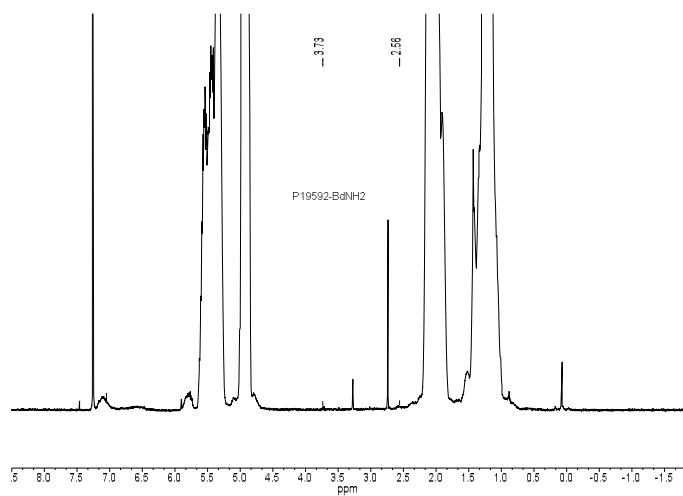
Concentration (mg/mL)	0.952
Sample dn/dc (mL/g)	0.1270
Method File	PS80K-Nov-2015-0000.vom
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19592-BdNH ₂	61,568	71,088	65,047	1.147	10.6057

¹H NMR of sample:





DSC thermogram for the sample:

