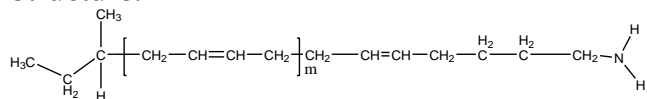


Sample Name: Amino Terminated
Polybutadiene, 1, 4- rich microstructure
Sample #: P6056-BdNH₂

Structure:

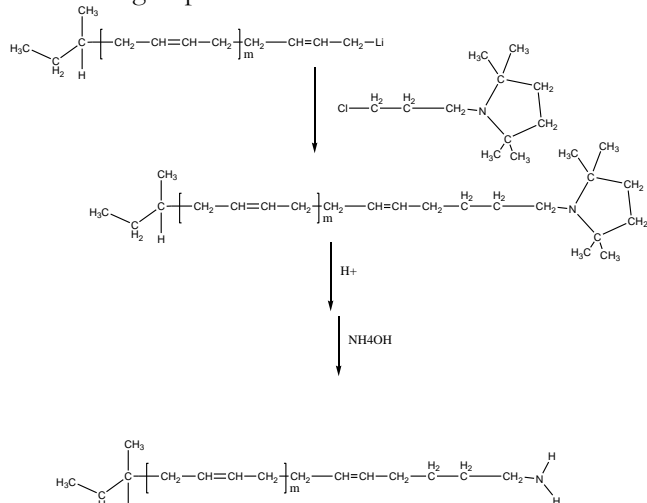


Composition:

Mn x 10 ³	PDI
3.0	1.05
Functionality	>60%
By titration	> 64%

Synthesis Procedure:

1,4-addition amino terminated polybutadiene was prepared by anionic living polymerization of butadiene in apolar solvent using *Sec. BuLi* followed by termination of polymerization reaction by 2,2,5,5-tetramethyl-1-(3-chloropropyl)-1-aza-2,5-disilacyclopentane, followed by deprotection of NH₂ functional group.



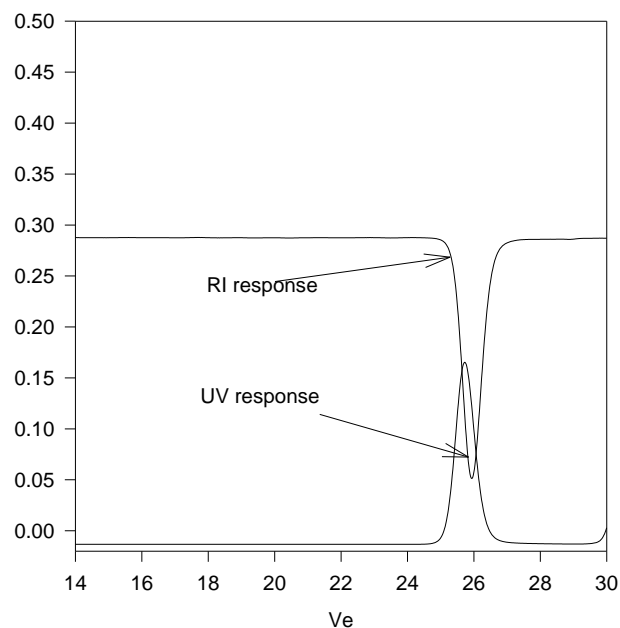
Characterization:

The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography (SEC) in THF. SEC analysis was performed on a Varian liquid chromatograph equipped with refractive and UV light scattering detectors. Three SEC columns from Supelco (G6000-4000-2000 HXL) were used with triple detectors from Viscotek Co.

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

GPC of the polymer:

P6056-BdNH₂ (1, 4 addition)



Size Exclusion Chromatography :

- Mn: 3000 Mw: 3200 Mw/Mn 1.05 Functionality: > 60%
- UV response at 290nm after end capping NH₂ group with 1-Naphthyl isocyanate