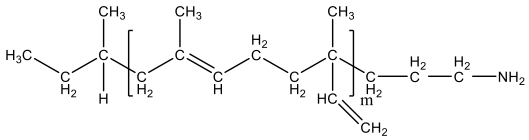
Product Profile

Identification

Product Name: Poly(1,4-isoprene), ω-Amino-terminated

Sample #: **P44183-IPNH2**

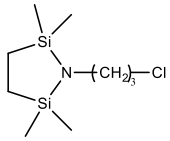
Structure:



Composition:

Mn (g/mole)	**5,800**
Mw (g/mole)	**6,000**
Mw/Mn	**1.01**
Primary Amino group test using ninhydrin	 **Blue color pass**

Method of Synthesis 1, 4-addition hydroxy terminated polyisoprene was prepared by anionic living polymerization in a non-polar solvent using sec.BuLi initiator followed by termination with following electrophile;



Solubility in different solvents:

THF	√	Methanol	**X**
CHCl3	√	Hexane	√
Toluene	√		

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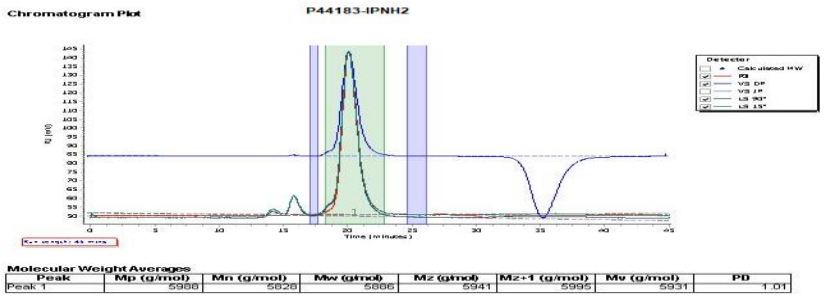
Validation of Architecture

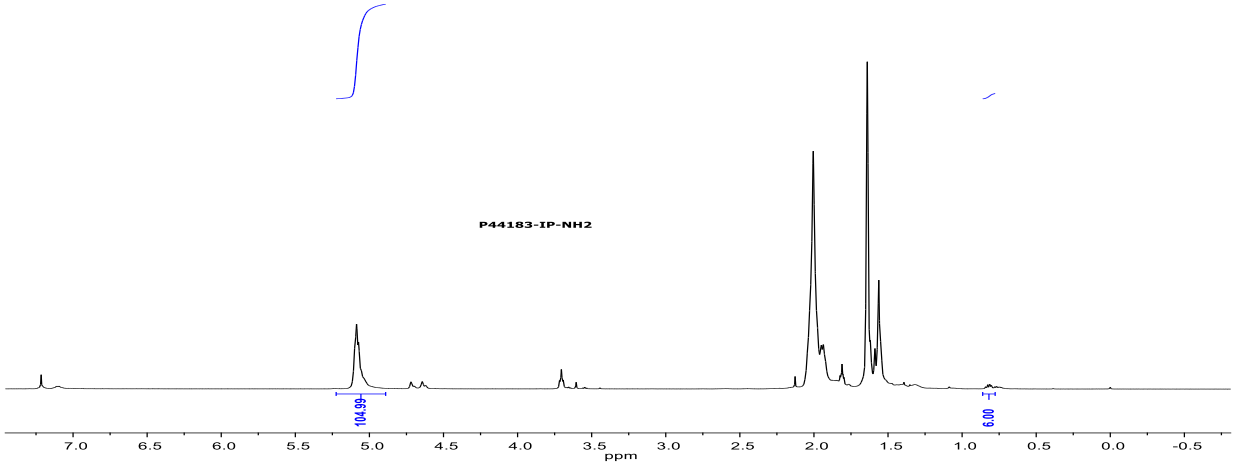
A. Gel Permeation Chromatography (GPC), SEC Profile:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. However, amino terminated polystyrene was found to interact with chromatography columns and therefore the amino group was protected by reaction with 1-naphthyl isocyanate before GPC analysis. Removal of the protecting group was confirmed by UV spectroscopy and the degree of functionality was confirmed by titration with HClO4 using crystal violet as the indicator.



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	5986	5828	5886	5941	5995	5931	1.01



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