

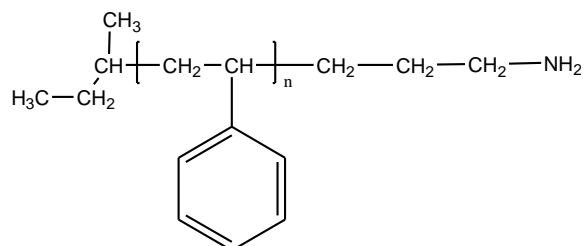
Product Profile

Identification

Product Name: Amino Terminated Polystyrene

Product Lot Number: P11123-SNH2

Chemical Architecture:

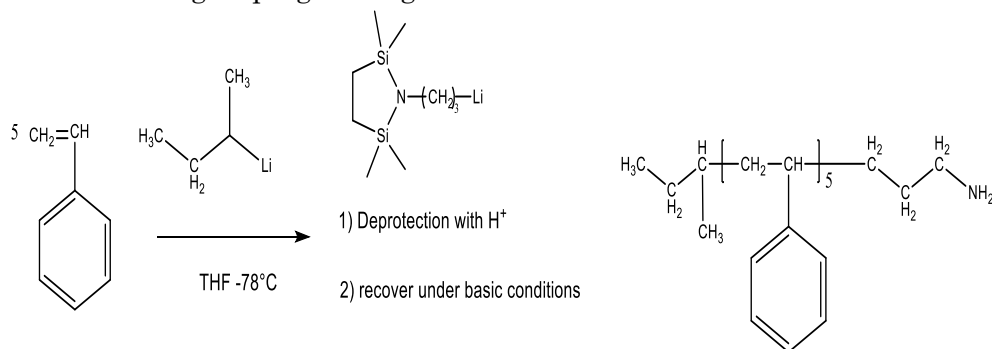


Composition:

Mn (g/mole)	9,000
Mw (g/mole)	13,000
Mw/Mn	1.45

Method of Synthesis

α , ω -amino terminated polystyrene was synthesized by anionic living polymerization with different end-grouping strategies. The reaction schemes are shown below:



Solubility in different solvents:

THF	√	Methanol	X
CHCl3	√	Hexane	X
Toluene	√		

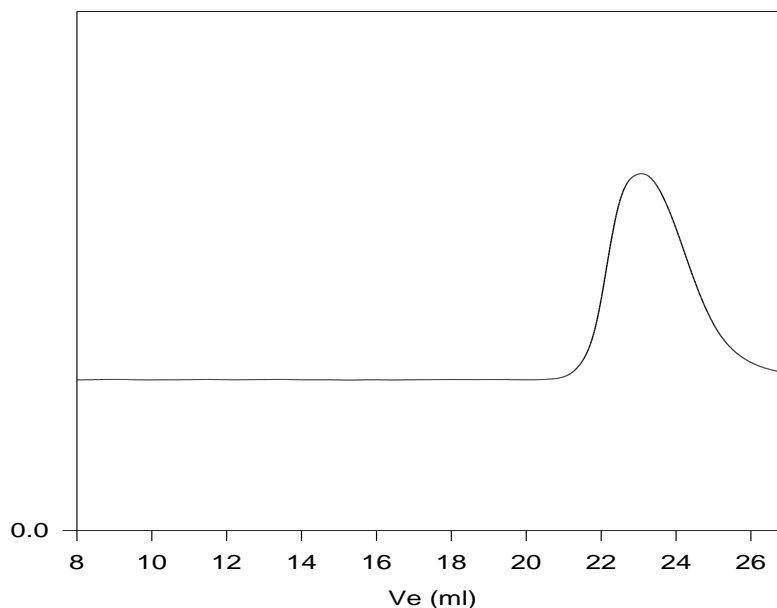
Validation of Architecture

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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.

P11123-SNH2



Size exclusion chromatography of monoamino terminated polystyrene.
(NH₂ group end capped with 1-naphthyl isocyanate)

$M_n=9,000$, $M_w=13,000$, , $PI=1.45$, functionality=0.98.