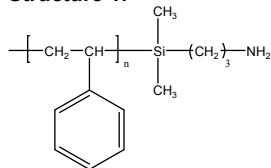


**Sample Name:**  
**Amino Terminated Polystyrene**

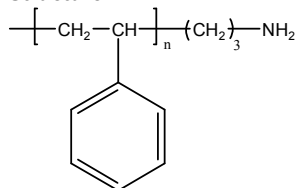
**Sample #: P1486-SNH2**

This has architecture # 1.

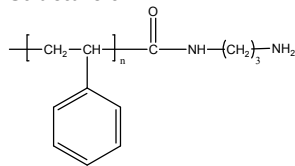
**Structure 1:**



**Structure 2:**



**Structure 3:**

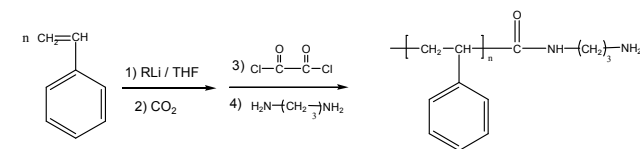
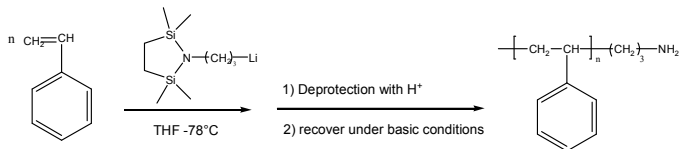
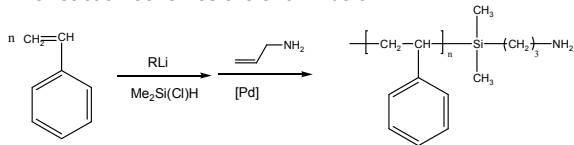


**Composition:**

Mn x 10 <sup>3</sup>	PDI
17.3	1.03

**Synthesis Procedure:**

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



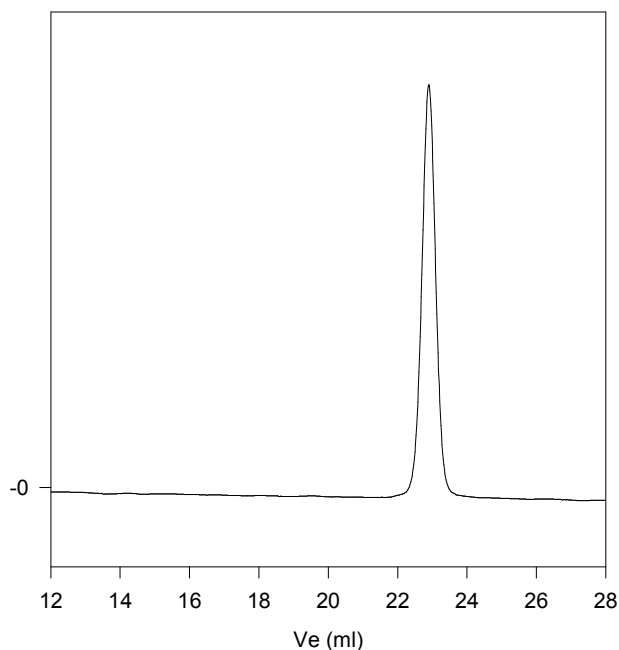
**Characterization:**

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 HClO<sub>4</sub> using crystal violet as the indicator.

**Solubility:** Polymer is soluble in THF, CHCl<sub>3</sub> toluene and precipitated out from methanol, hexane.

**SEC of Sample:**

**P1486-SNH2**



Size exclusion chromatography of Amino Terminated polystyrene:

M<sub>n</sub>=17300, M<sub>w</sub>=17820, PI=1.03, functionality>0.95