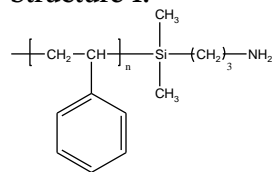


Sample Name: Amino Terminated Polystyrene

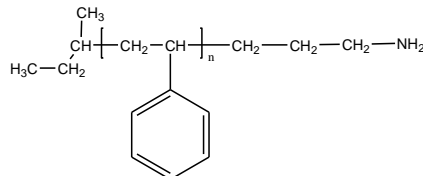
Sample #: P19087A-SNH2

This lot bears structure # 2

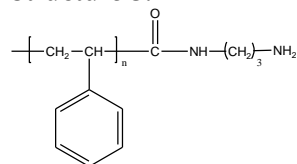
**Structure 1:**



**Structure 2:**



**Structure 3:**

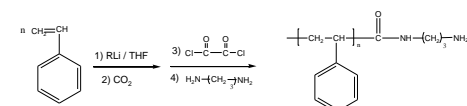
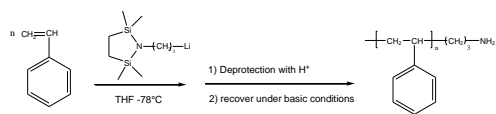
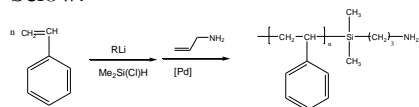


**Composition:**

Mn × 10 <sup>3</sup>	PDI
0.8	1.3

### Synthesis Procedure:

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



### Characterization:

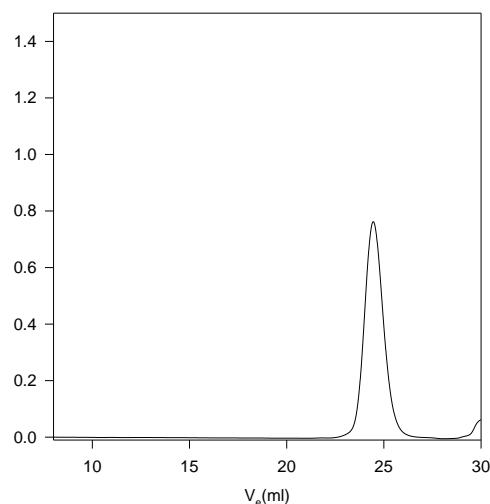
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. However, amino terminated polystyrene was found to interact with chromatography columns and therefore 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 and hexane.

### SEC of Sample:

**P19087A-S-NH2 (before termination)**



Size exclusion chromatography of polymer in THF at 30 °C  
1 PS Before termination Mn = 800 Mw: 1,000 Mw/Mn: 1.3

### H NMR:

