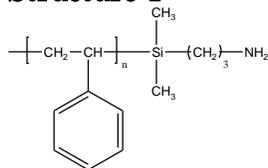


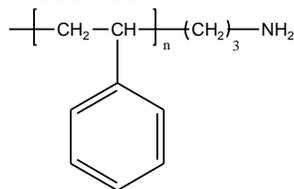
Sample Name:  
**Amino Terminated Polystyrene**

Sample #: P5147-SNH2

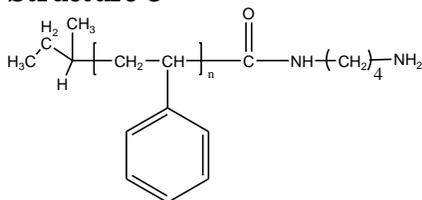
**Structure 1:**



**Structure 2:**



**Structure 3:**

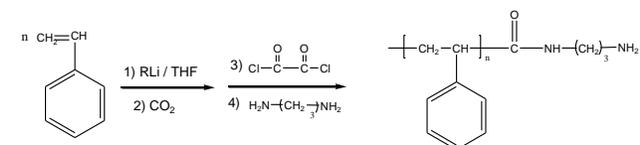
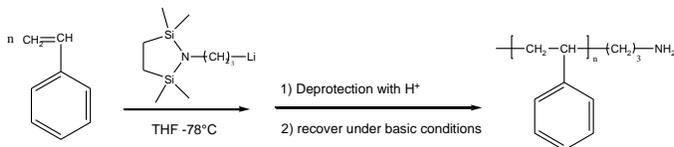
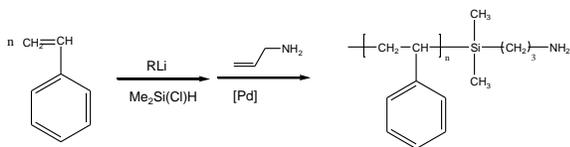


**Composition:**

$M_n \times 10^3$	PDI
2.8	1.3

**Synthesis Procedure:**

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

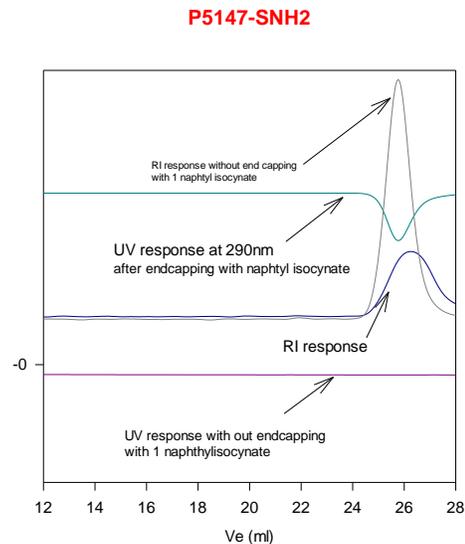


**Characterization:**

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 and hexane.

**SEC of Sample:**



Size exclusion chromatography of monoamino terminated terminated polystyrene. (NH<sub>2</sub> group end capped with 1-naphthyl isocyanate)  
 $M_n=2800$ ,  $M_w=3700$ ,  $PI=1.30$ , functionality=0.98.