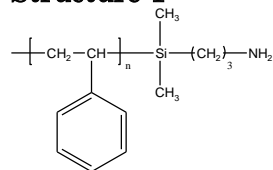


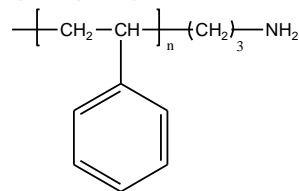
Sample Name:
Amino Terminated Polystyrene

Sample #: P5147-SNH2

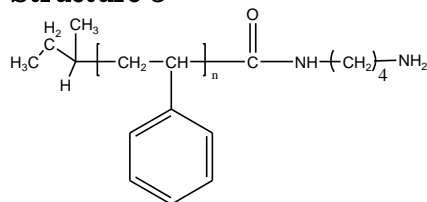
Structure 1:



Structure 2:



Structure 3:

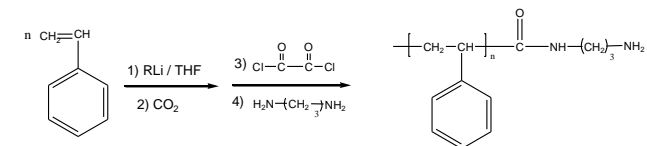
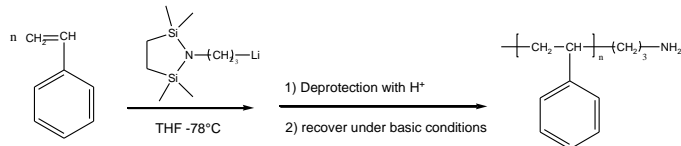
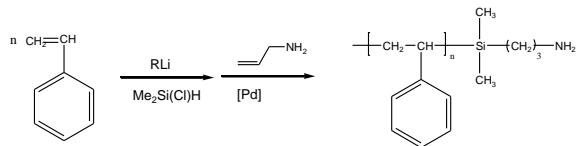


Composition:

| Mn × 10 ³ | PDI |
|----------------------|-----|
| 2.8 | 1.3 |

Synthesis Procedure:

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

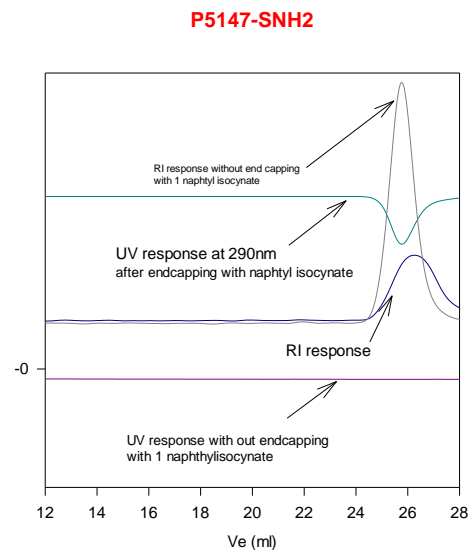


Characterization:

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 HClO₄ using crystal violet as the indicator.

Solubility: Polymer is soluble in THF, CHCl₃ toluene and precipitated out from methanol and hexane.

SEC of Sample:



Size exclusion chromatography of monoamino terminated terminated polystyrene. (NH₂ group end capped with 1-naphthyl isocyanate)
M_n=2800, M_w=3700, PI=1.30, functionality=0.98.