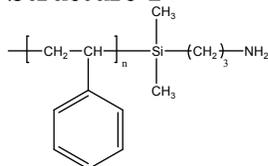


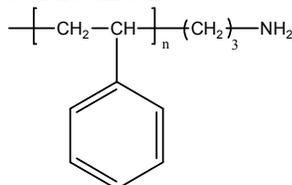
Sample Name:  
**Amino Terminated Polystyrene**

Sample #: P11124C-SNH2  
This lot bears structure # 2

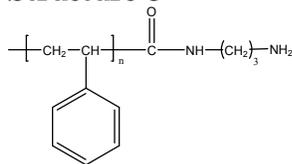
**Structure 1:**



**Structure 2:**



**Structure 3:**

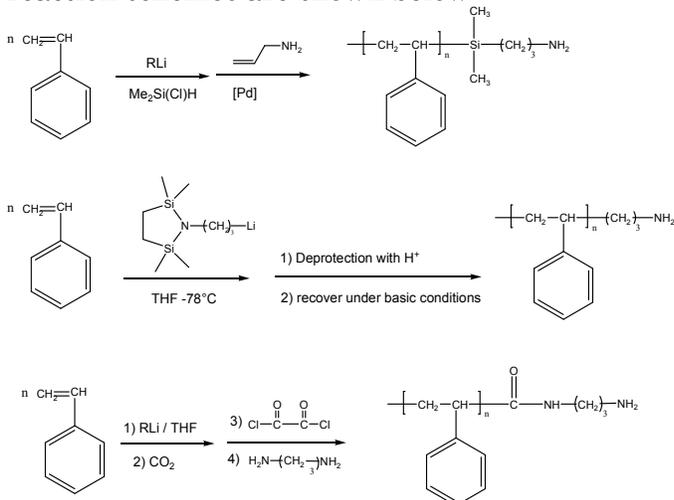


**Composition:**

Mn × 10 <sup>3</sup>	PDI
350.0	1.25
T <sub>g</sub> (°C)	102

**Synthesis Procedure:**

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.

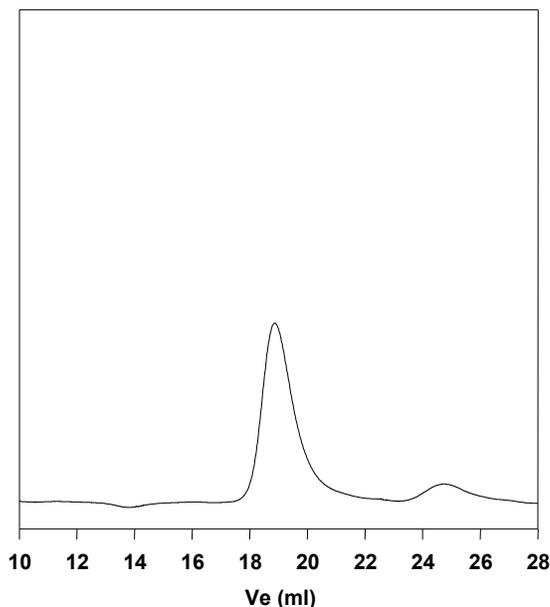
**Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

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

**SEC of Sample:**

**P11124C-SNH2**



**Size exclusion chromatography of Amino Terminated polystyrene**  
M<sub>n</sub>=350,000, M<sub>w</sub>=433,000, PI=1.25 functionality>0.98