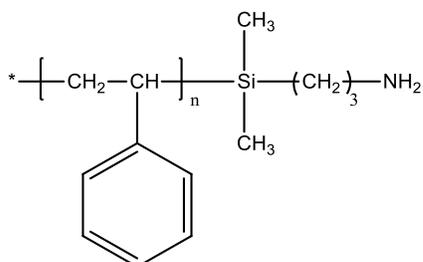


Sample Name: Amino-Terminated Polystyrene

Sample #: P3694-SNH2

Structure:

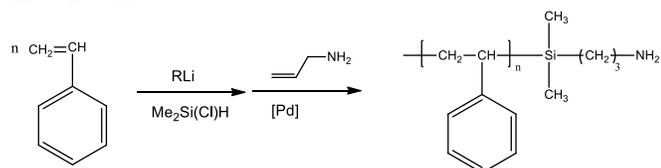


Composition:

$M_n \times 10^3$	M_w/M_n	-NH ₂ functionality
25.0	1.25	> 95 %

Synthesis Procedure:

α -Amino-terminated polystyrene was synthesized by anionic living polymerization. The reaction scheme is shown below:

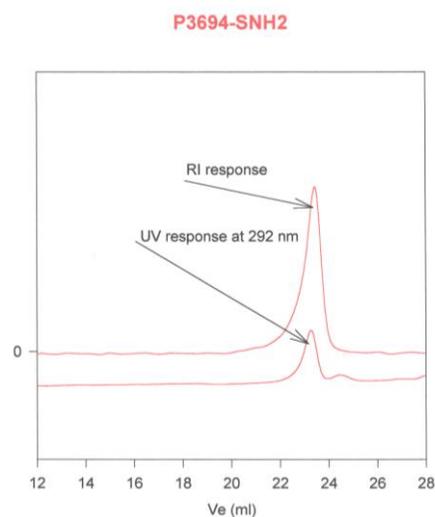


Characterization:

The molecular weight and polydispersity index (M_w/M_n) of the polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. As amino-terminated polystyrene interacts with chromatography columns, amino-group was protected by reaction with 1-naphthyl isocyanate before SEC analysis. Removal of the protecting group was confirmed by UV spectroscopy, and the degree of functionality was confirmed by titration with HClO_4 using crystal violet as the indicator.

Solubility: The polymer is soluble in THF, CHCl_3 , and toluene. It precipitates from methanol and hexane.

SEC elugram of the end-group protected polymer:



Size exclusion chromatography of Amino Terminated polystyrene end capped with 1-naphthyl isocyanate:

$M_n=25000$, $M_w=31000$, $PI=1.25$, functionality>0.95