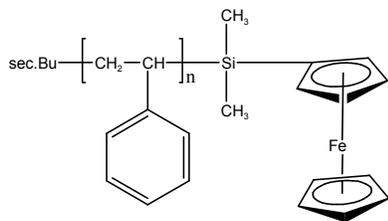


**Sample Name:****Ferrocenyl Dimethyl Silane Terminated Polystyrene****Sample #:** P3522- SFerro**Structure:****Composition:**

$M_n \times 10^3$	PDI
40.0	1.30
$T_g$ ( $^{\circ}\text{C}$ )	

**Synthesis Procedure:**

Ferrocenyl dimethyl silane terminated polystyrene was prepared by living anionic polymerization. The living polymer was terminated by ferrocenyl chlorodimethyl silane.

**Characterization:**

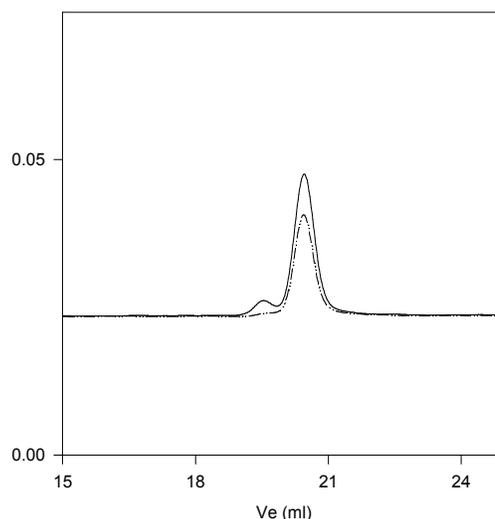
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was determined by titration with NaOH using phenolphthalein as the indicator.

**Thermal analysis:**

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of  $10^{\circ}\text{C}/\text{min}$ . The inflection glass transition temperature ( $T_g$ ) has been considered.

**Solubility:**

Polymer is soluble in toluene, THF,  $\text{CHCl}_3$  and can be precipitated in hexane and methanol.

**SEC of Sample:****P3522-Sferro**

Size Exclusion chromatography of polystyrene terminated with ferrocene

..... Polystyrene,  $M_n=270000$ ,  $M_w=280000$  PI=1.04  
 — After terminated with methylated silicon-bridged ferrocenophane PI=1.04

**DSC thermogram for the sample:**