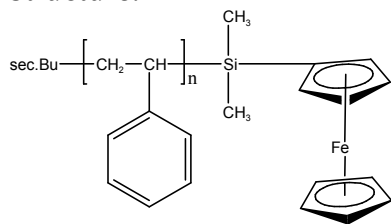


Sample Name:**Ferrocenyl Dimethyl Silane Terminated Polystyrene****Sample #:** P3522- SFerro**Structure:****Composition:**

$M_n \times 10^3$	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:

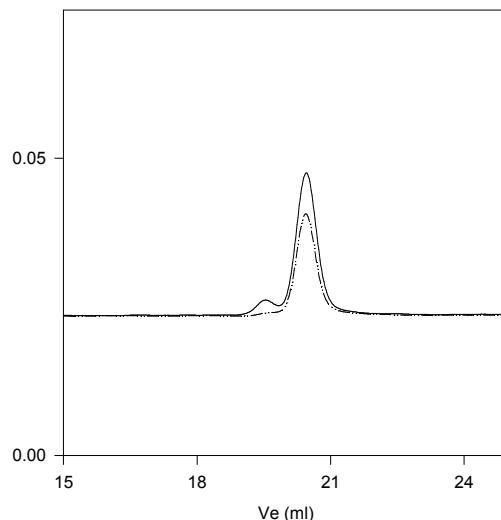
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was determined by titration with NaOH using phenolphthalein as the indicator.

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, 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: