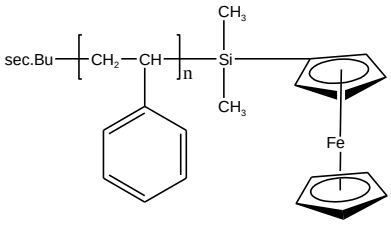
Sample Name:
Ferrocenyl Dimethyl Silane Terminated Polystyrene

Sample #: P8219A- SFerro

Structure:



Composition:

Mn $\times 10^3$	PDI
40.0	1.30
T_g (°C)	103

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.

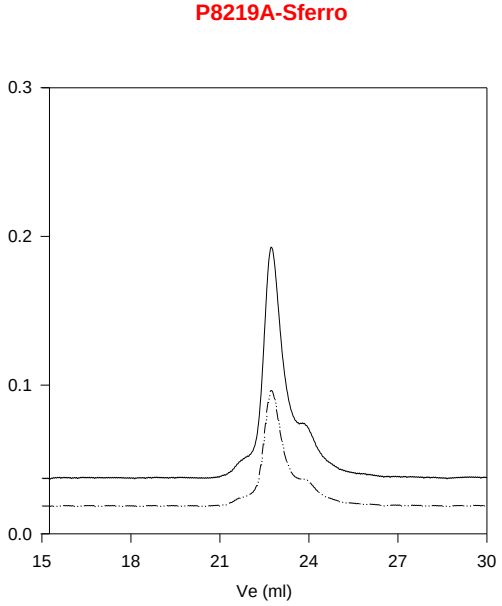
Thermal analysis:

Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/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:



Size Exclusion chromatography of polystyrene terminated with ferrocene

Polystyrene, M_n=40000, M_w=52000 PI=1.3

After terminated with methylated silicon-bridged ferrocenophane PI=1.3

DSC thermogram for the sample: