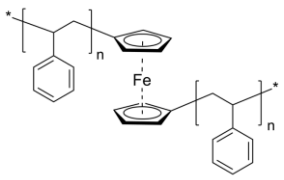
Sample Name: **Poly(styrene), with ferrocene group in center of polymer chain**

Sample #: **P43647-SferroS**

Structure:



Composition:

Mn $\times 10^3$	PDI
498.0	1.45
T_g (°C): 103	

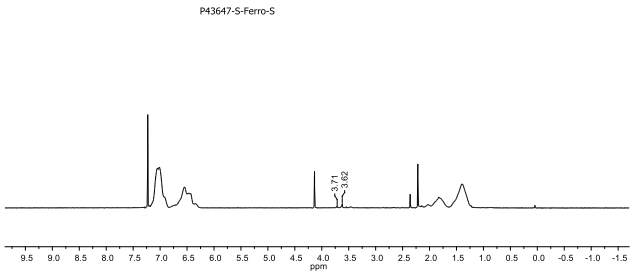
Synthesis Procedure:
Ferrocenyl dimethyl silane terminated polystyrene was prepared by living anionic polymerization. The living polymer was terminated by ferrocenyl chlorodimethyl silane.

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 and HNMR data analysis. Polymer functionality was determined by titration with NaOH using phenolphthalein as the indicator.

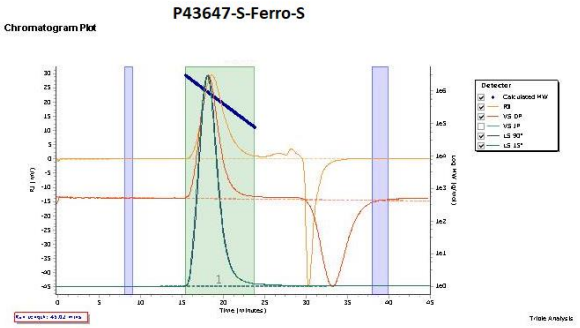
Thermal analysis:
Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min.The inflection glass transition temperature (T_g) has been considered.

Solubility:
Polymer is soluble in toluene, THF, $CHCl_3$ and can be precipitated in hexane and methanol.

HNMR spectrum of the polymer:



SEC profile of the sample:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	749610	498375	728042	948044	1154578	916535	1.461

DSC thermogram for the sample: