Sample Name:

Poly(styrene-b-ferrocenyldimethylsilane)

Sample #: P10017A-SFES

Structure:

$$\operatorname{sec.bu} + \operatorname{CH_2-CH} - \operatorname{b} - \operatorname{CH_3} - \operatorname{Fe} - \operatorname{CH_3} - \operatorname{Fe} - \operatorname{CH_3} - \operatorname{CH_3$$

Composition:

Mn ×10³ S-b-FES	Mw/Mn (PDI)
27.0-b-2.7	1.2

Synthesis Procedure:

Poly(styrene-b- ferrocenyldimethylsilane) is prepared by anionic living polymerization by successive addition of styrene followed by addition of ferrocenyldimethylsilane the monomer.

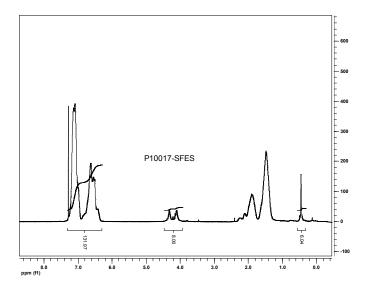
Characterization:

An aliquot of the polystyrene block was terminated before addition of hexamethyl analyzed cvclotrisiloxane and bv exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ¹H-NMR spectroscopy by comparing the peak area of the styrene protons at 6.3-7.2 ppm with the peak area of Si(CH3) at 0.2ppm.

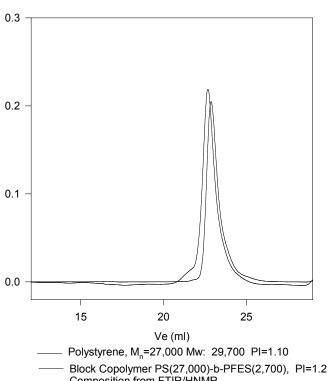
Solubility:

Polymer is soluble in THF, CHCl₃, Toluene and precipitate out from ether and hexanes.

¹H NMR spectrum of the sample:



SEC profile of the block copolymer: P10017-SFES



Composition from FTIR/HNMR