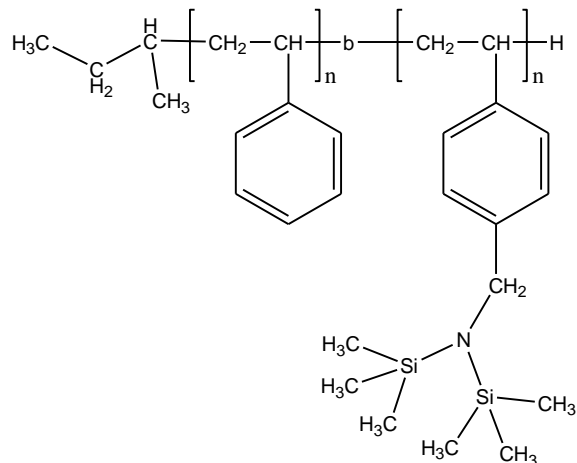


Sample Name:

Poly(styrene-b-4-(N,N-bis (trimethylsilyl) aminomethyl) styrene)

Sample #: **P11250B-S4AMS-Protected**

Structure:

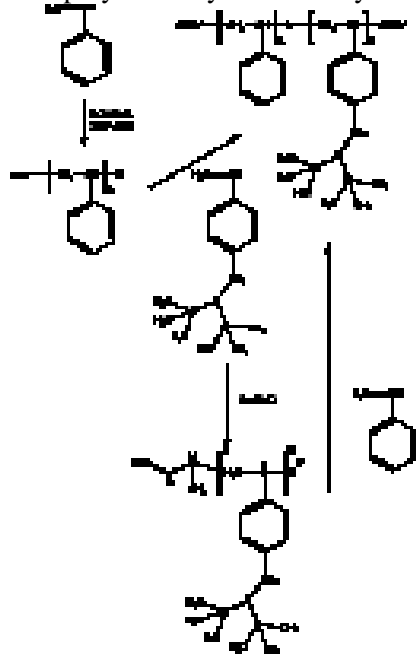


Composition:

$M_n \times 10^{-3}$ S-b-4AMSProtected	M_w/M_n (PDI)
2.5-b-30.0	1.25

Synthesis Procedure:

The polymer is synthesized by anionic process:



Characterization:

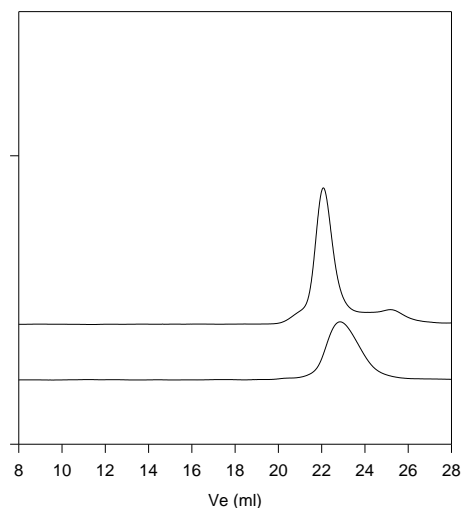
Polymer analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from ¹H-NMR spectroscopy by comparing the peak area of the styrene protons at 6.3-7.2 ppm with the peak area at 3.76. HNMR analysis was carried out in CdCl₃ for the amino protected group with trimethyl silyl groups. Block copolymer PDI is determined by SEC.

Solubility of the polymer

Poly(styrene-b-4-(N,N-bis (trimethylsilyl) aminomethyl) styrene) polymer (protected Amino compound) is soluble in THF, CHCl₃, Toluene. Once the trimethyl silyl group removed the free amino methyl styrene block polymer was found insoluble in most of the solvents:

SEC profile of the block copolymer

P11250B-S4AMS (protected amino group)



Size exclusion chromatography of
poly(styrene-b-4-(N,N-bis (trimethylsilyl) aminomethyl) styrene

—— 4-NN-Bis Trimethyl silyl amino methyl styrene, $M_n=30,000$ $M_w=37,500$ $PI=1.25$
—— -4-(N,N-bis (trimethylsilyl) aminomethyl) styrene (30,000)-b-Styrene 2,500, $PI=1.25$