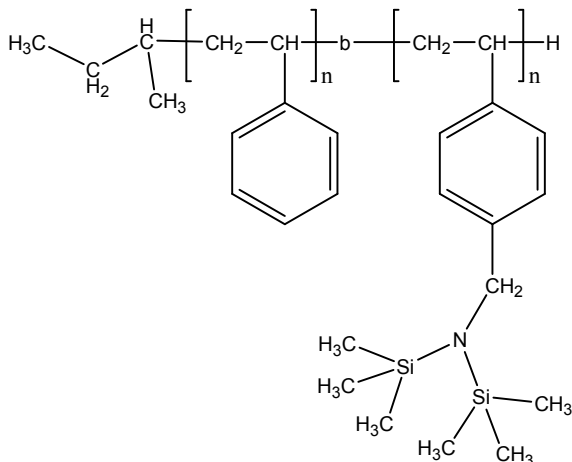


Sample Name:

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

Sample #: **P11250-S4AMS-Protected**

Structure:

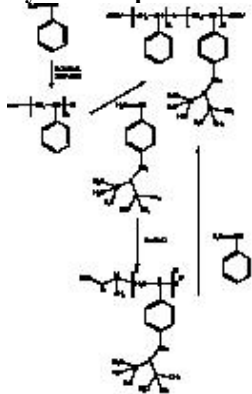


Composition:

Mn x 10 <sup>3</sup> S-b-4AMSProtected	Mw/Mn (PDI)
93.0-b-50.0	1.12

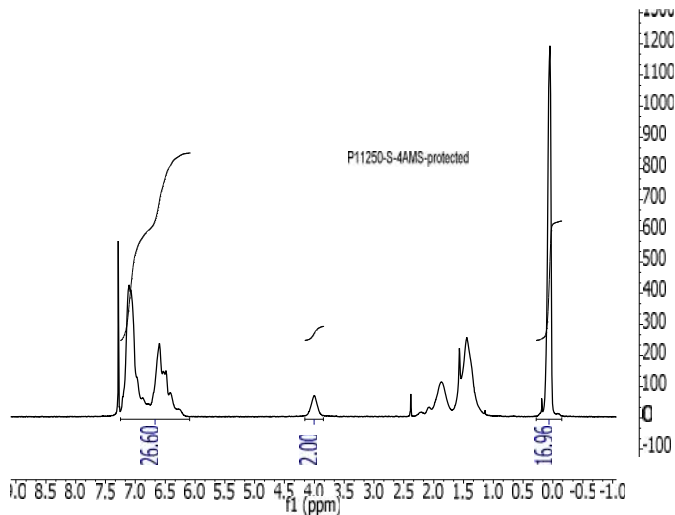
**Synthesis Procedure:** First 4-(N,N-bis (trimethylsilyl) aminomethyl) styrene) monomer polymerized followed by addition of styrene

**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 <sup>1</sup>H-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 CdCl<sub>3</sub> for the amino protected group with trimethyl silyl groups. Block copolymer PDI is determined by SEC.



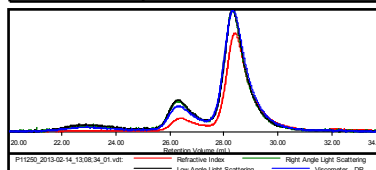
### Solubility of the polymer

Poly(styrene-b- 4-(N,N-bis (trimethylsilyl) aminomethyl) styrene) polymer (protected Amino compound) is soluble in THF, CHCl<sub>3</sub>, Toluene. Once the trimethyl silyl group removed the free amino methyl styrene block polymer was found insoluble in most of the solvents:

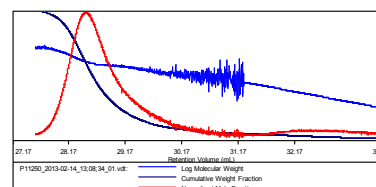
### SEC profile of the block copolymer

Sample ID: P11250-2

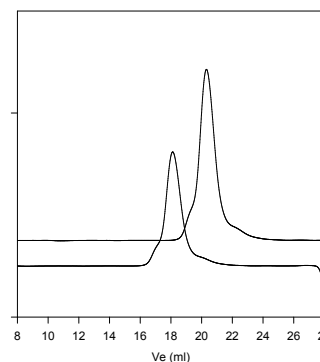
Concentration (mg/mL)	1.7051
Sample dn/dc (mL/g)	0.1720
Method File	PS80K-Feb-2013-0001.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P11250_2013-02-14_13:08:34_01.vdt	143,937	161,335	170,234	1.121	0.7337



**P11250-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<sub>n</sub>=50,000 Mw= 56,500 PI=1.11  
— 4-(N,N-bis (trimethylsilyl) aminomethyl) styrene (50,000)-b-Styrene 93,000,PI=1.12