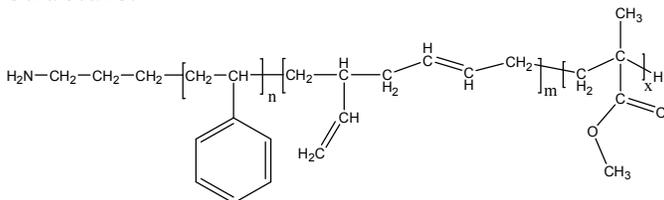


Sample Name:

Amino terminated Polystyrene-b-butadiene (rich in 1,2-addition)-b-methylmethacrylate)

Sample #: P11134-NH2-SBdMMA

Structure:



Composition:

Mn x 10 ³ NH2-S-b-Bd-b-MMA		PDI
28.0-b-9.0-b-49.0		1.45
T _g for PS block 100 oC	T _g for Bd block Not clear	T _g for MMA block 132°C

Synthesis Procedure:

The triblock polymer is synthesized by living anionic polymerization with sequence addition of styrene, butadiene (Bd), followed by methyl methacrylate (MMA). Amino protected lithium based initiator was used. For details you may read our published work.

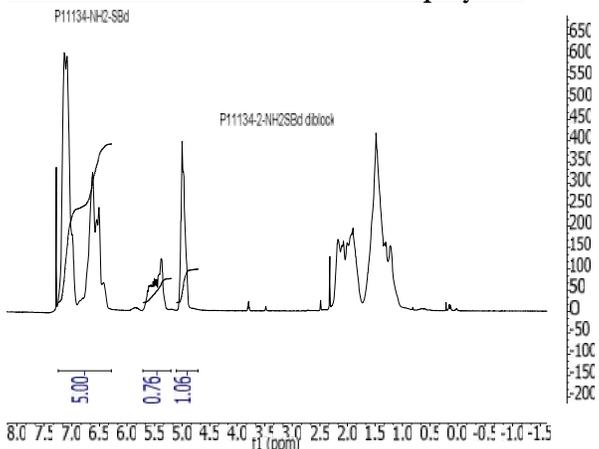
1. Varshney, S. K.; Song, Z.; Zhang, Jian-Xin.; Jerome, Robert. Rapid Communication; J. Polym. Sci. Part A, 2006, 44, 3400.

Characterization: Size exclusion chromatography (SEC): Varian liquid chromatograph equipped with UV and refractive detector. SEC columns from Supelco were used with THF as the eluent.. The molecular weights and the polydispersity index were calculated.

Solubility:

Polymer is soluble in THF, toluene, acetone and CHCl₃. The polymer readily precipitates from hexanes, ether and water.

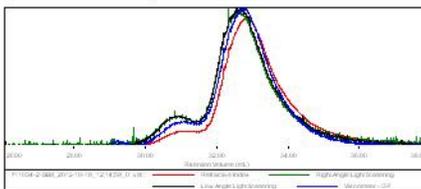
¹H NMR of NH2-SBD diblock copolymer



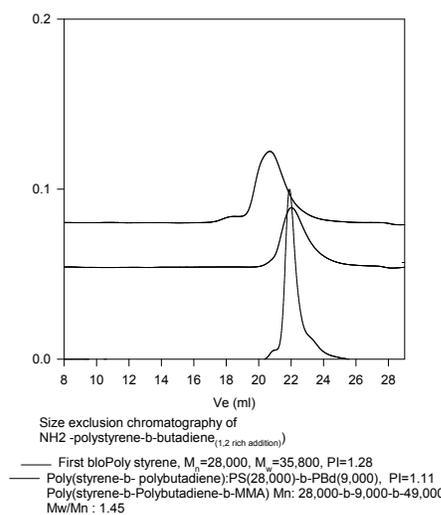
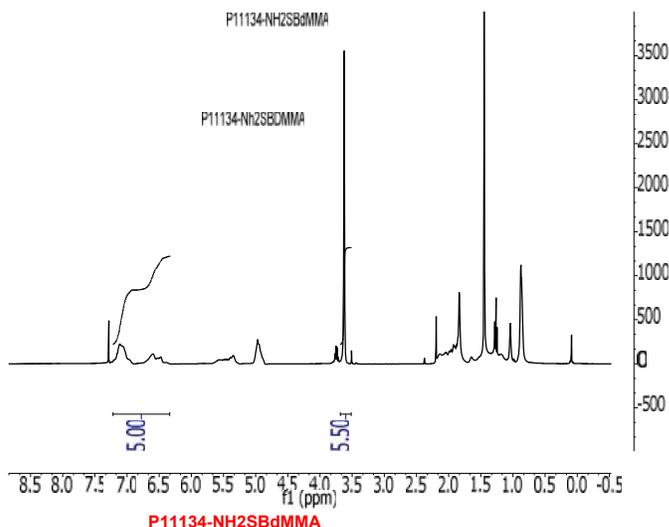
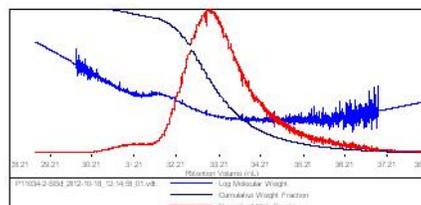
SEC of the polymer:

Sample ID: P11034-2-SBd

Concentration (mg/mL)	3.6601
Sample dn/dc (mL/g)	0.1701
Method File	P580 <Oct-2012-0002.wcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P11034-2-3Bd_2012-10-18_12:14:59_0	36,396	39,704	36,252	1.100	0.3751



Size exclusion chromatography of NH2-polystyrene-b-butadiene (1,2 rich addition)

- First block Poly styrene, M_n=28,000, M_w=35,800, PI=1.28
- Poly(styrene-b-polybutadiene):PS(28,000)-b-PBd(9,000), PI=1.11
- Poly(styrene-b-Polybutadiene-b-MMA) Mn: 28,000-b-9,000-b-49,000 Mw/Mn : 1.45