Sample Name:

Amino terminated Polstyrene-b-Isoprene (rich in 1,2addition)-b-methylmethacrylate)

Sample #: P11180-NH2-SIpMMA

Structure:

Composition:

Mn x 10³ NH2-S-b-Ip-b-MMA		PDI
60.0-b-1.0-b-234.0		1.25
T_g for PS block 100 oC	T_g for Ip block Not clear	T_g for MMA block 132oC

Synthesis Procedure:

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

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:

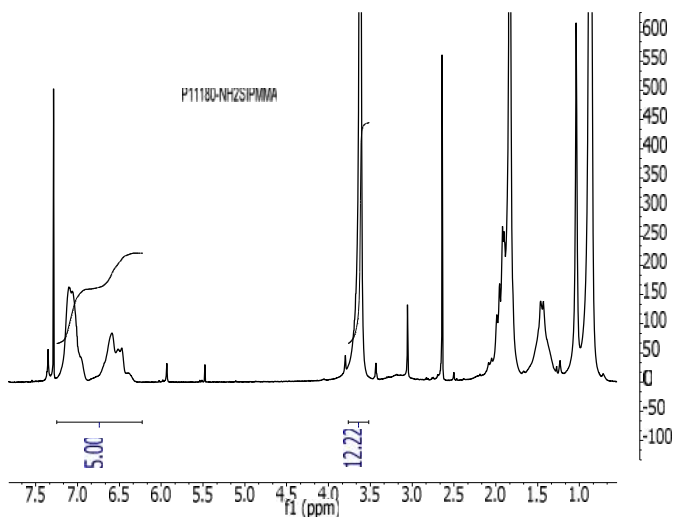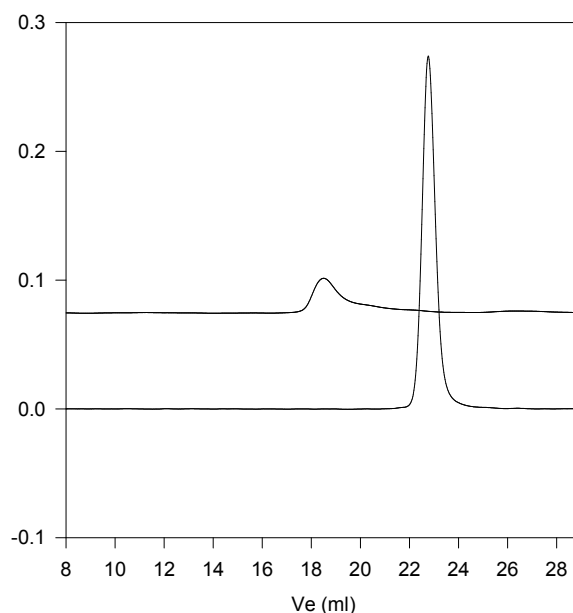Polymer is soluble in THF, toluene, acetone and CHCl₃. The polymer readily precipitates from hexanes, ether and water.

SEC of the polymer:

P11180-NH2SIpMMA

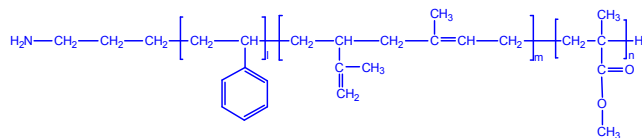Size exclusion chromatography of NH2 -polystyrene-b-Isoprene (1,2 rich addition))

—— First bloPoly styrene, M_n=60,000, M_w=70,500, PI=1.15
—— Poly(styrene-b- Poly isoprene):PS(60,000)-b-PIp(1,000), PI=1.11
Poly(styrene-b-Polyisoprene-b-MMA) Mn: 60,000-b-1,000-b-234,000 Mw/Mn : 1.25