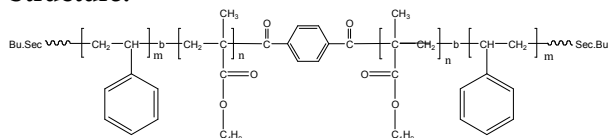


Sample Name: Poly(Styrene-b-methyl methacrylate-b-Styrene)

Sample #: P19234A-SMMAS

Structure:

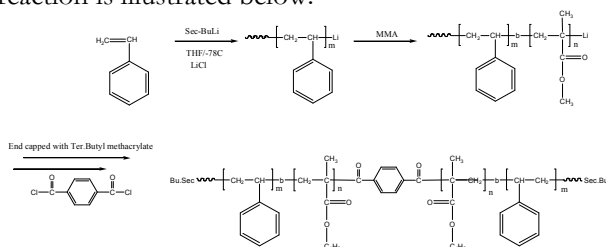


Composition:

Mn × 10 ³ (S-b-MMA-S)	PDI
29.0-b-92.0-b-29.0	1.14
T _g for MMA block: 113°C	T _g for PS block: Not distinct

Synthesis:

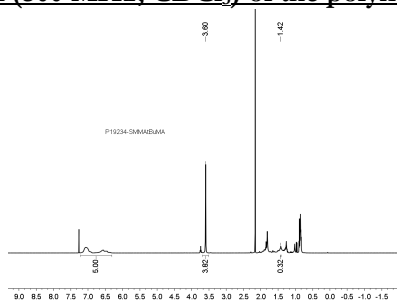
Poly (styrene-b-methylmethacrylate-b-styrene) is prepared by living anionic polymerization. The details are reported in the reference¹. The scheme of the reaction is illustrated below:



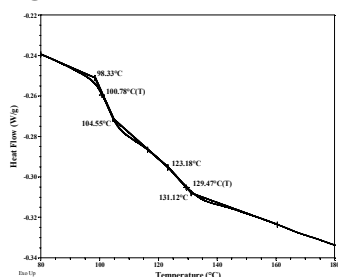
Characterization:

By size exclusion chromatography (SEC) and HNMR spectroscopy.

¹H NMR (500 MHz, CDCl₃) of the polymer:



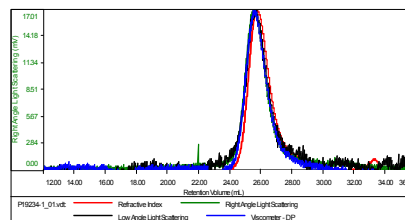
DSC thermogram for PS and MMA blocks:



SEC elugrams (PS, PS-PMMA, PS-PMMA-PtBuMA):

Sample IDP19234-S

Concentration (mg/mL)	0.5861
Sample dirct: (nL/g)	0.1850
Method File	PS80K-April 13-2015-0000.vcm
Column Set	3xPL 1113-6300
Solvent	THF

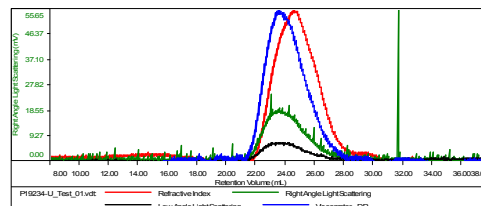


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19234-1_01.vdt	29,159	31,817	30,304	1.091	0.5504

Before linking reaction

Sample IDP19234-SMMA

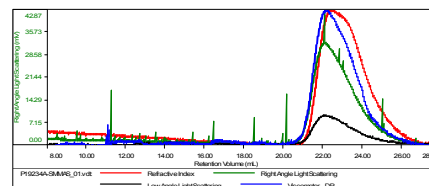
Concentration (mg/mL)	0.3581
Sample dirct: (nL/g)	0.1850
Method File	PS80K-April 29-2015-0000.vcm
Column Set	3xPL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19234-U_Test_01.vdt	66,694	81,536	66,197	1.223	1.8604

Sample IDP19234-SMMAS

Concentration (mg/mL)	0.4510
Sample dirct: (nL/g)	0.1300
Method File	PS80K-April 29-2015-0000.vcm
Column Set	3xPL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19234A-SMMAS_01.vdt	150,386	171,716	161,651	1.142	2.0775

Reference:

S.K. Varshney, P. Kesani, N. Agarwal, J. Xin. Zhang, and M. Rafailovich. Synthesis of ABA type thermoplastic elastomers based on Polyacrylates, Macromolecules, 1999, 32, 235.