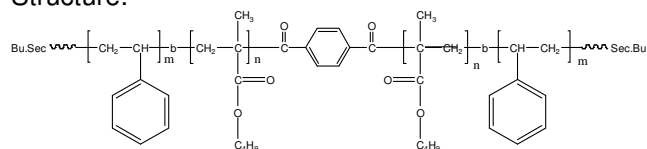


**Sample Name:**  
Poly(Styrene-b-methyl methacrylate-b-Styrene)

**Sample #: P18605-SMMAS**

**Structure:**



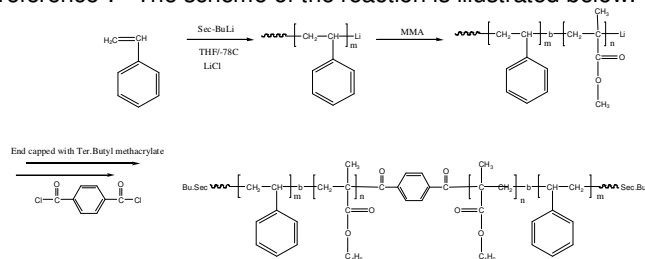
**Composition:**

Mn × 10 <sup>3</sup> (S-b-MMA-S)	PDI
9.5-b-40.0-b-9.5	1.13

T <sub>g</sub> for MMA block: 113°C	T <sub>g</sub> for PS block: Not distinct
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**Synthesis:**

Poly(styrene-b-methylmethacrylate-b-styrene) is prepared by living anionic polymerization. The details are reported in the reference<sup>1</sup>. The scheme of the reaction is illustrated below:



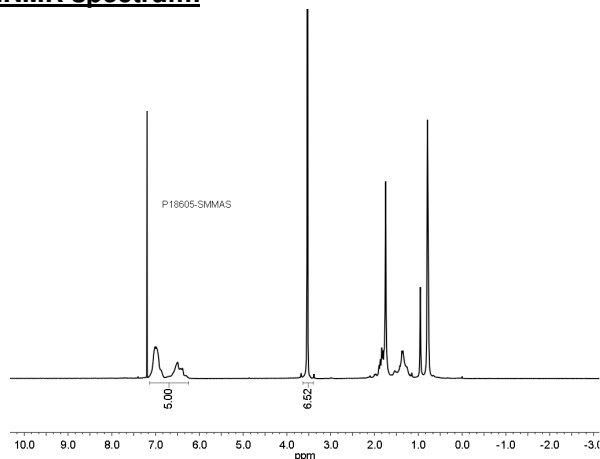
**Characterization:**

By size exclusion chromatography (SEC) and HNMR spectroscopy.

**Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

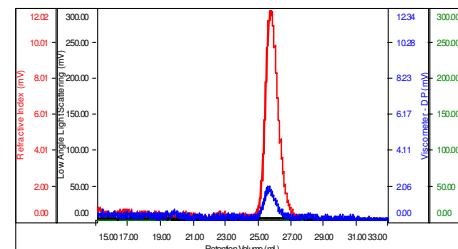
**<sup>1</sup>HNMR spectrum:**



**SEC of Sample:**

**Sample ID: P18605-S**

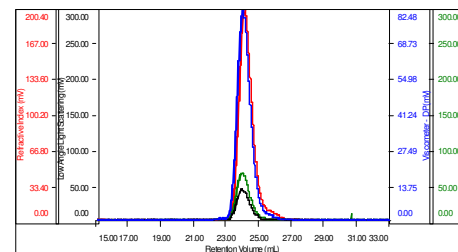
Concentration (mg/mL)	0.1418
Sample ch/dc (mL/g)	0.1850
Method File	PS80K\March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mh	Mw	Mp	Mw/Mh	IV
P18651-1_01.vcl	9,737	10,781	10,515	1.107	0.2196

**Sample ID: P18605\_SMMA before linking**

Concentration (mg/mL)	3.3967
Sample ch/dc (mL/g)	0.1370
Method File	PS80K\March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

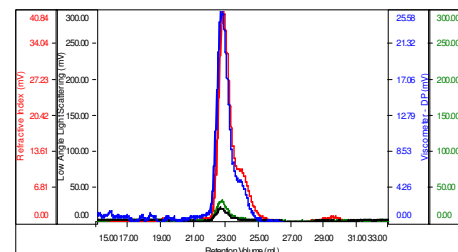


Sample	Mh	Mw	Mp	Mw/Mh	IV
P18651-2_01.vcl	28,401	30,209	29,819	1.064	0.4514

**Sample ID:**

**P18605-SMMAS crd**

Concentration (mg/mL)	0.5726
Sample ch/dc (mL/g)	0.1360
Method File	PS80K\March13-2014-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mh	Mw	Mp	Mw/Mh	IV
P18651-3_crd_01.vcl	58,541	62,238	59,403	1.063	0.7171

**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.