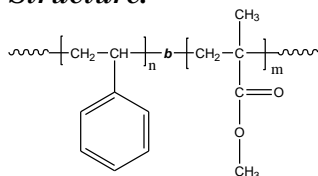


Sample Name: Poly(styrene-b-methyl methacrylate)

(polymethylmethacrylate rich in syndiotactic contents > 78%)

Sample #: P11079P-SMMA

Structure:



Composition:

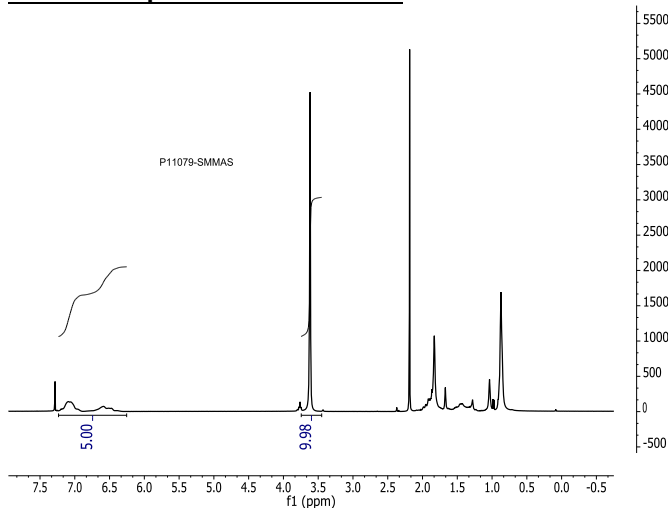
Mn x 10 ³ S-b-MMA	PDI
160.0-460.0	1.16
T _g for PS block: 107°C	T _g for PMMA block: 132 oC
dn/dc in THF at 35 oC	0.100
Mn alues obtained from LS detector on line:	

Synthesis Procedure:

By anionic process: For further details please see our published articles.¹⁻⁵

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 ¹H-NMR spectroscopy by comparing the peak area of the poly(methyl methacrylate) protons (eg. -OCH₃ at 3.6ppm) with of aromatic protons of polystyrene at 6.3-7.2 ppm. Copolymer PDI is determined by SEC. Thermal analysis of the samples was carried out using a differential scanning calorimeter (TA Q100) at a heating rate of 10°C/min. The inflection glass transition temperature (T_g) of the sample has been considered.

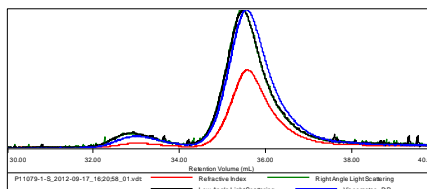
¹H-NMR Spectrum of SMMA:



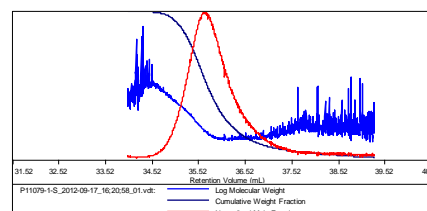
SEC of Sample PS Block

Sample ID: P11079-1-S

Concentration (mg/mL)	2.3847
Sample dn/dc (mL/g)	0.1850
Method File	PS80-sept2012-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

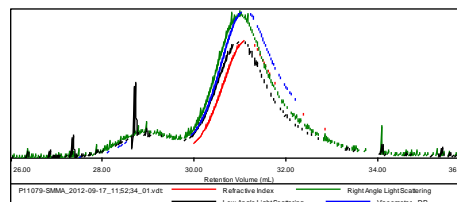


Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P11079-1-S_2012-09-17_16:20:58_01.v	163,417	171,275	164,569	1.048	1.0235

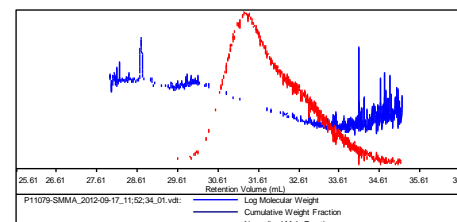


Sample ID: P11079-SMMAS

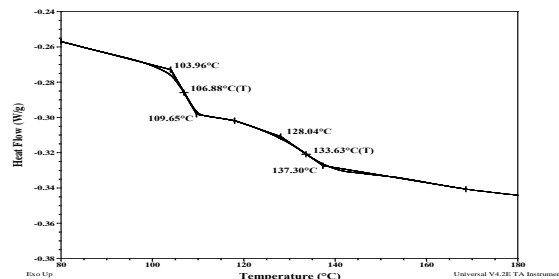
Concentration (mg/mL)	2.0260
Sample dn/dc (mL/g)	0.1060
Method File	PS80-sept2012-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P11079-SMMA_2012-09-17_11:52:34_0	617,896	716,476	714,790	1.160	1.8611



Thermogram for the sample



References for further information:

1. S. K. Varshney, R. Fayt, Ph. Teyssie, and J.P. Hautekeer US Patent 5,264,527 (1993)
2. Ph. Teyssie, Ph. Bayard, R. Jerome, S. K. Varshney, and J. S. Wang, *35th IUPAC International Union of Pure & Applied Chemistry International Symposium on Macromolecules* 1994, 67.
3. Ph. Teyssie, R. Fayt, J. P. Hautekeer, C. Jacobs, R. Jerome, L. Leemans and S. K. Varshney *Makromolekular Chemie, Macromol. Symp.*, 1990, 32,61-73.
4. S. K. Varshney, J. P. Hautekeer, R. Fayt, R. Jerome, and Ph.Teyssie *Macromolecules*, 1990, 23, 2618-2622.