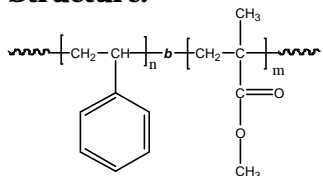Sample Name: **Poly(styrene-b-methyl methacrylate)**
 (polymethylmethacrylate rich in syndiotactic contents > 78%)
Sample #: **P10298-SMMA**
Structure:

Composition:

| Mn x 10³ S-b-MMA	PDI
150.0-b-135.0	1.13
T_g for PS block: 107°C	T_g for PMMA block: 132 oC
Molecular weight Light scattering data	281,000
dn/dc in THF at 35 oC	0.127

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:
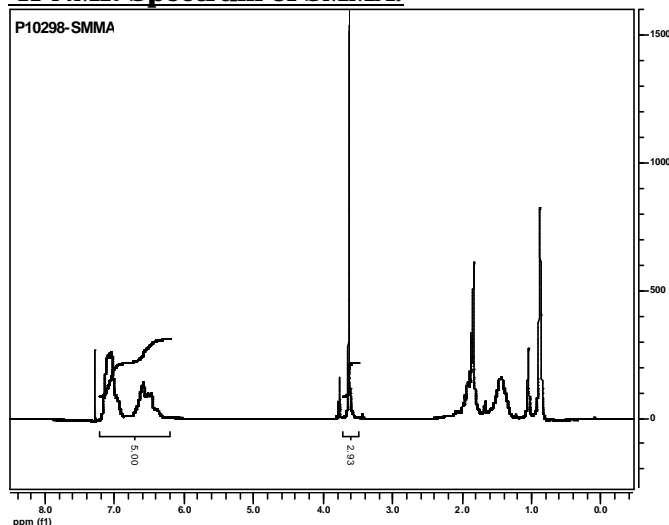
SEC of Sample -SMMA:
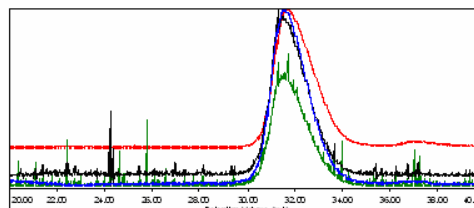
P10298-SMMA
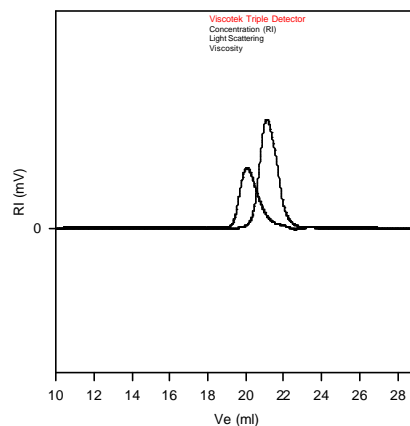
Size Exclusion Chromatography of Poly Styrene-b-MMA

    PS block M_n = =150,000, M_w = `169,500, M_w/M_n = 1.13
    PS-b-MMA: Mn; =150,000-b-130,000   PI: 1.13
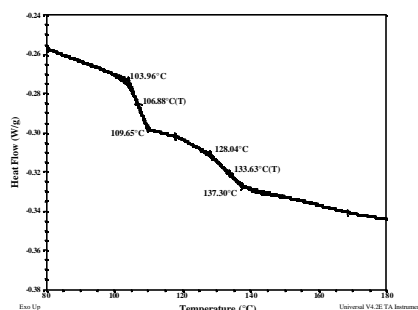
Sample ID: P10298-SMMA

Concentration (mg/ml)	1.3880
Sample dn/dc	0.1273
Method File	PS80K-July-0000.vcm
Column Set	3x PL 1113-6300
System	System 1

Sample	Mn (Daltons)	Mw (Daltons)	Mp (Daltons)	Mw/Mn	IV (dl/g)
2011-07-12_14;07;41_P10298_01.vdt	281,337	308,190	315,880	1.095	1.3271
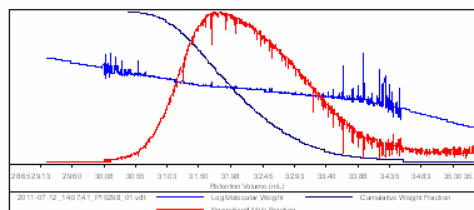
Thermogram for the sample

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.*