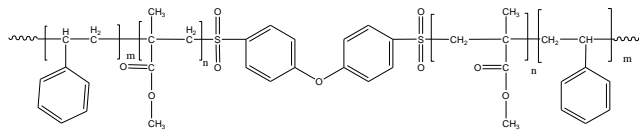


Sample Name:**Poly(Styrene-b-methyl methacrylate-b-Styrene)****(radical process) PMMA : atactic rich**

Sample #: P10052A-SMMAS

Structure:

**Composition:**

Mn × 10 ³ (S-b-MMA-S)	PDI
3.2-b-120.0-b-3.2	1.4
Microstructure of PMMA block	S:H:I contents 55:37:8
T _g for PS block: Not distinct	T _g for MMA block: 110 °C

Synthesis Procedure:

Poly(styrene-b-methylmethacrylate-b-styrene) is prepared by controlled process.

Characterization:

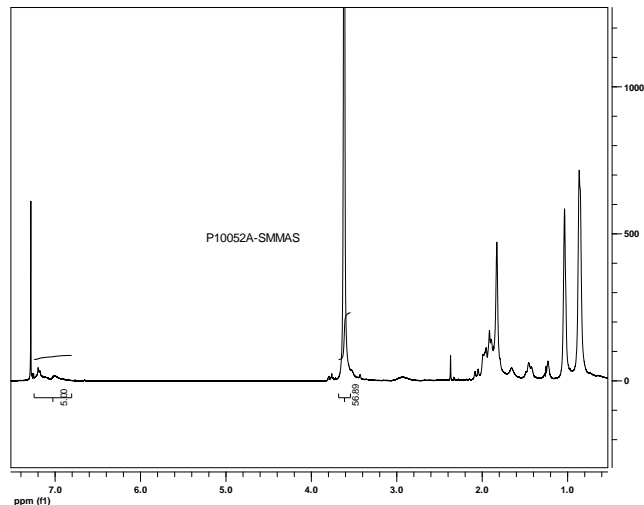
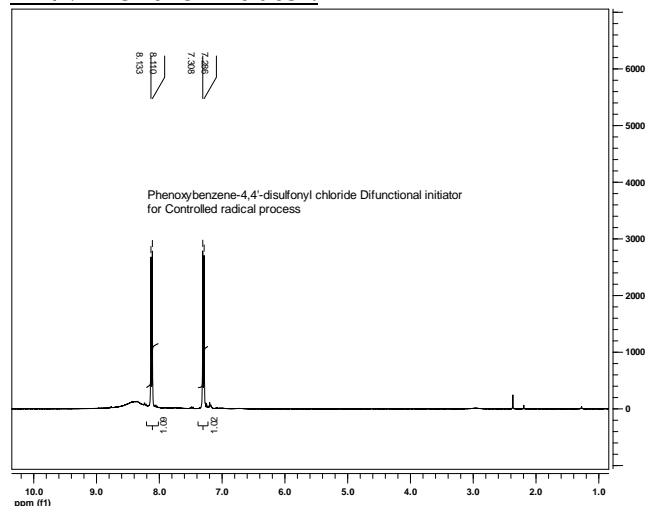
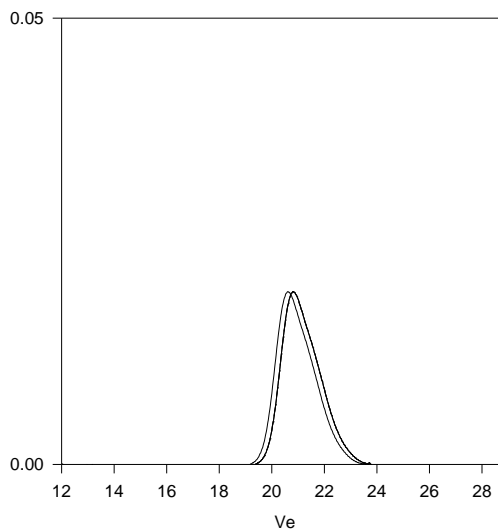
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

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_g).

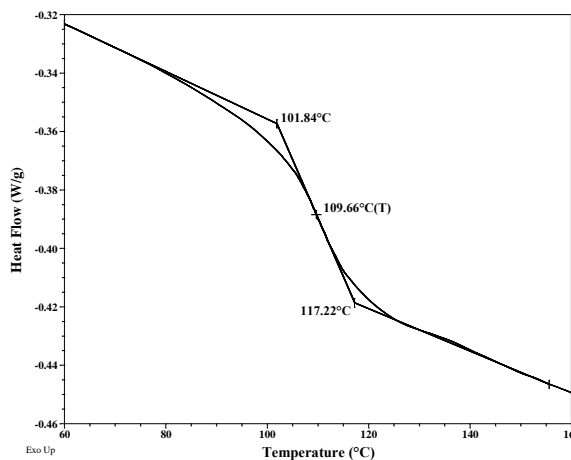
Solubility:

Polymer is soluble in THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

HNMR of the initiator:**SEC of Sample:****P10052A-SMMAS**

Size Exclusion Chromatography of:

— PMMA center block, M_n=120,000, PI=1.45
 — SMMAS, the triblock PS(3,000)-b-PMMA(120000)-b-PS(3000), PI=1.4

DSC thermogram for MMA block:**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.