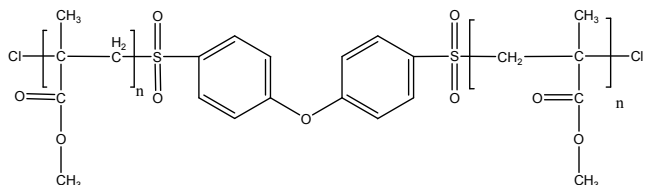


Sample Name:

α - ω di chloro terminated Poly(methyl methacrylate)
: Macroinitiator for controlled radical process
PMMA : atactic rich

Sample #: P10050A-MMA2Cl

Structure:**Composition:**

$M_n \times 10^3$ MMA	PDI
40.0	1.3
Microstructure of PMMA block	S:H:I contents 55:37:8
T_g for MMA block: 127 °C	

Synthesis Procedure:

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

Characterization:

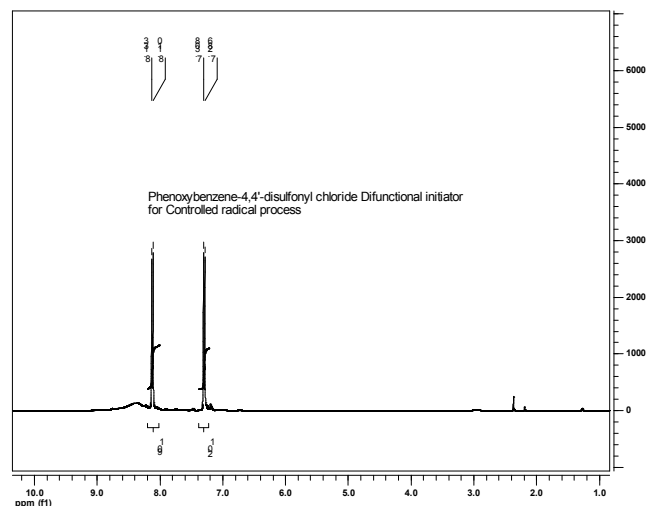
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis:

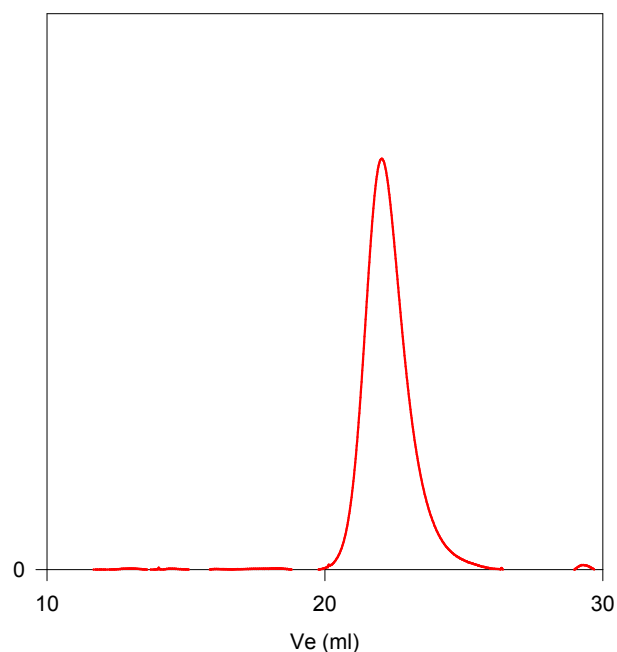
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, toluene and CHCl_3 . It precipitates from methanol, ethanol, water and hexanes.

 ^1H NMR of the initiator:**SEC of Sample:**

P10050A-MMA2Cl



Size exclusion chromatography of functional polymer:

— Poly(methyl methacrylate) macroinitiator:
 $M_n=40,000$, $M_w=52,000$, $M_w/M_n=1.3$

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.