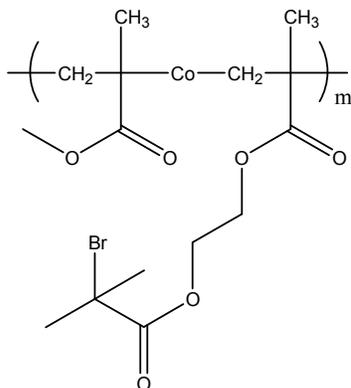


Sample Name:

Poly(methylmethacrylate-co-(isobutryl)ethylmethacrylate)

Sample #: P13068-5-MMABrIBEMAran

Structure:



Composition:

$M_n \times 10^3$ MMA-Co-BrIBEMA	PDI
19.1	6.67
Mol % BrIBEMA: 42%	Synd:56% Hetero:22% Iso:22%
T_g for the polymer	63 °C

Synthesis Procedure:

Poly(Methylmethacrylate-Co-2-bromoisobutryl ethylmethacrylate) random copolymer was synthesized by Reversible Addition-Fragmentation chain-transfer (RAFT).

SEC analysis of the obtained block copolymer in THF was carried out in THF and triethyl amine as eluent. The final random copolymer composition was confirmed by $^1\text{H-NMR}$ spectroscopy in CDCl_3 by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate at 4.2-4.17 ppm. Block copolymer PDI was determined by SEC.

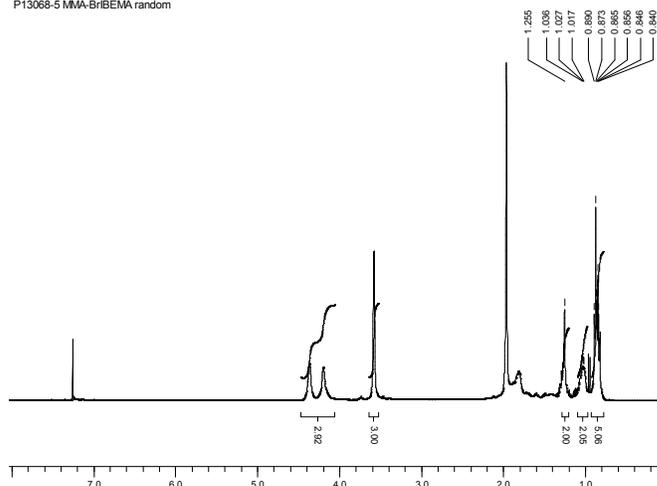
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^\circ\text{C}/\text{min}$. 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:

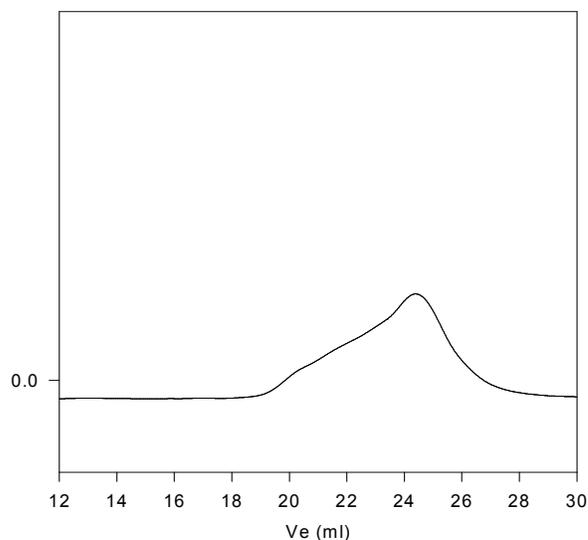
Polymer is soluble in THF and CHCl_3 .

P13068-5 MMA-BrIBEMA random



SEC of the block copolymer:

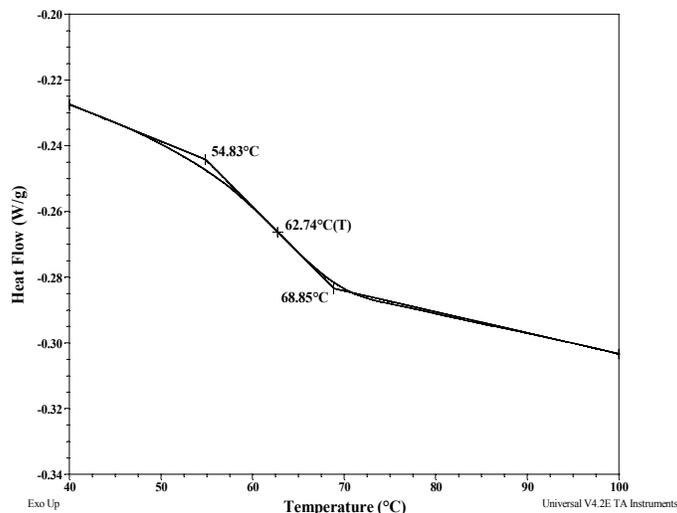
P13068-5-MMA-Co-BrIBEMA



Size exclusion chromatography:

— Random Copolymer PMMA-Co-BrIBEMA, M_n : 19.1, PI : 6.67
Mol % of Br: 42%
composition from H NMR: s: 56%, h: 22%, i: 22%

DSC thermogram for the polymer:



$^1\text{H-NMR}$ Spectrum of the block copolymer :