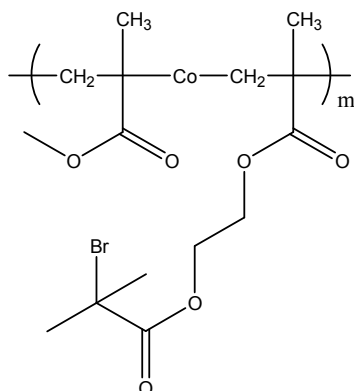


Sample Name:

Poly(methylmethacrylate-co-(isobutryl)ethylmethacrylate

Sample #: P13068-3-MMABrIBEtMAran**Structure:****Composition:**

Mn × 10 ³ MMA-Co-BrIBEMA	PDI
24.5	2.51
Mol % BrIBEMA: 14%	Synd:57% Hetero:27% Iso:16%
T _g for the polymer	86 °C

Synthesis Procedure:

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

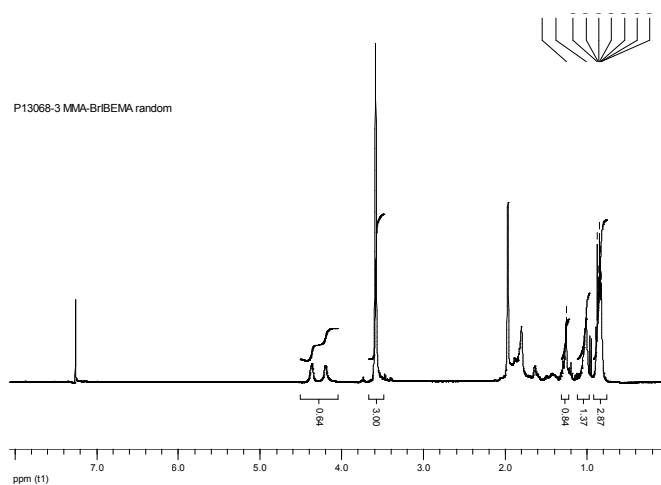
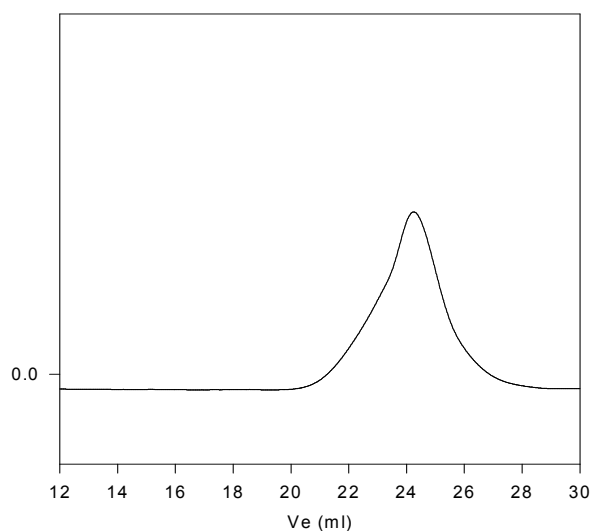
SEC analysis of the obtained block copolymer in THF was carried out in THF and triethyl amine as eluent. The final random copolymer composition was confirmed by ¹H-NMR spectroscopy in CdCl₂ by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate at 4.2-4.17 ppm. Block 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°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 and CHCl₃.

¹H-NMR Spectrum of the block copolymer :**SEC of the block copolymer:****P13068-3-MMA-Co-BrIBEMA**

Size exclusion chromatography:

— Random Copolymer PMMA-Co-BrIBEMA, Mn: 24.5, PI=2.51
Mol % of Br: 14%
composition from H NMR: s: 57%, h: 27%, i: 16%

DSC thermogram for the polymer: