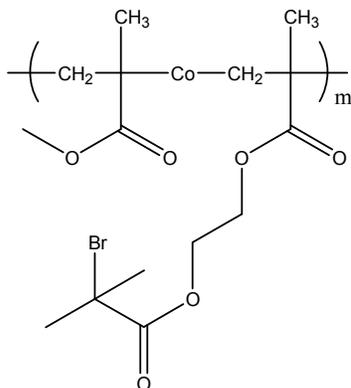


Sample Name:

Poly(methylmethacrylate-co-bromo isobutryl ethylmethacrylate)

Sample #: P13079-MMABrIBEtMAran

Structure:

**Composition:**

Mn × 10 ³ MMA-Co-BrIBEMA	PDI
7.5	1.6
Mol % MMA: 68%	Synd:60%; Hetero:36%; Iso:4%
T _g for the polymer	92°C

Synthesis Procedure:

Poly(methylmethacrylate-Co-2-bromoisobutryl ethylmethacrylate) random copolymer was synthesized by reversible addition-fragmentation chain-transfer (RAFT).

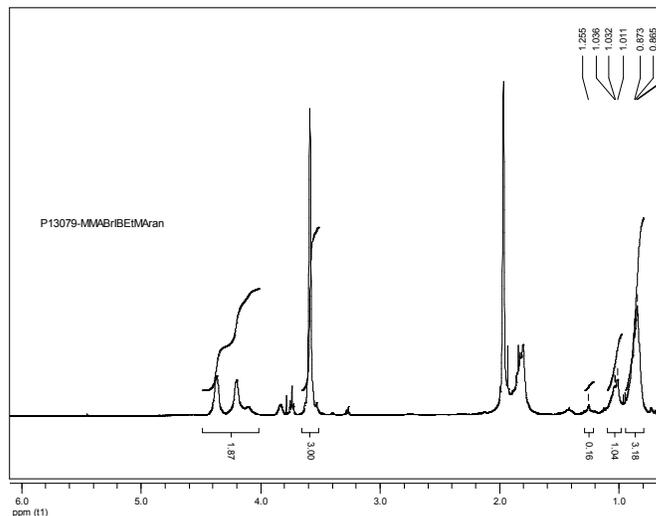
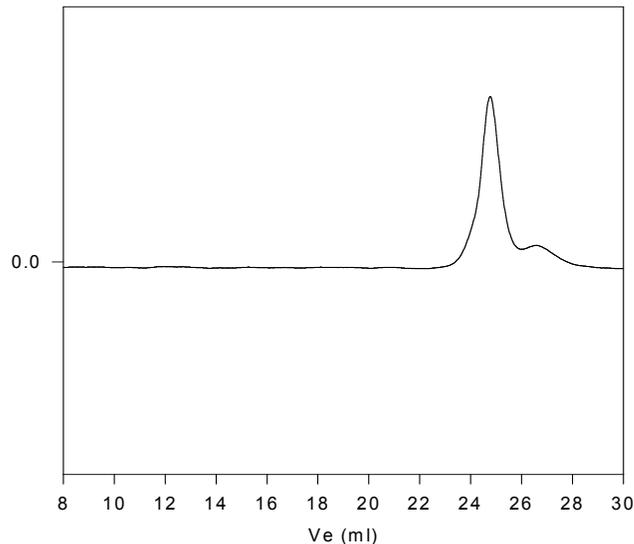
SEC analysis of the obtained block copolymer in THF was carried out in THF and triethyl amine as eluent. The final random copolymer composition was confirmed by ¹H-NMR spectroscopy in CdCl₂ by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate at 4.2-4.17 ppm. Block 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:****P13079-MMABrIBEMAran**

Size exclusion chromatography:

— Random Copolymer Mn: 7500 Mw: 12000 Mw/Mn 1.6
Mol % of MMA: 68%
composition from H NMR: s: 60%, h: 36%, i: 4%

DSC thermogram for the polymer: