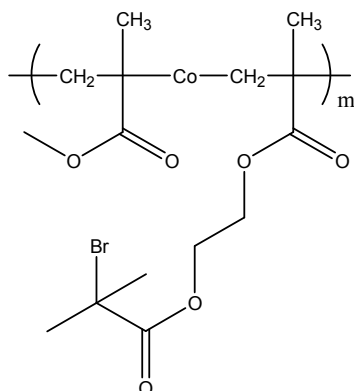


**Sample Name:**

Poly( methylmethacrylate-co-bromo isobutryl ethylmethacrylate)

**Sample #:** P13079-MMABrIBEtMAran

**Structure:****Composition:**

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

**Synthesis Procedure:**

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

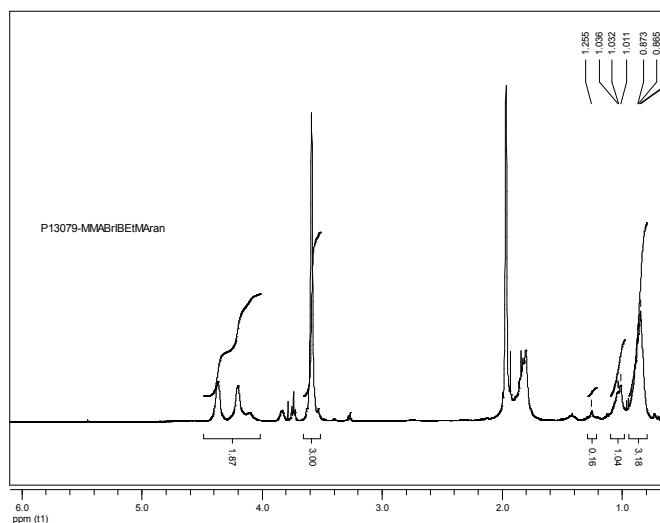
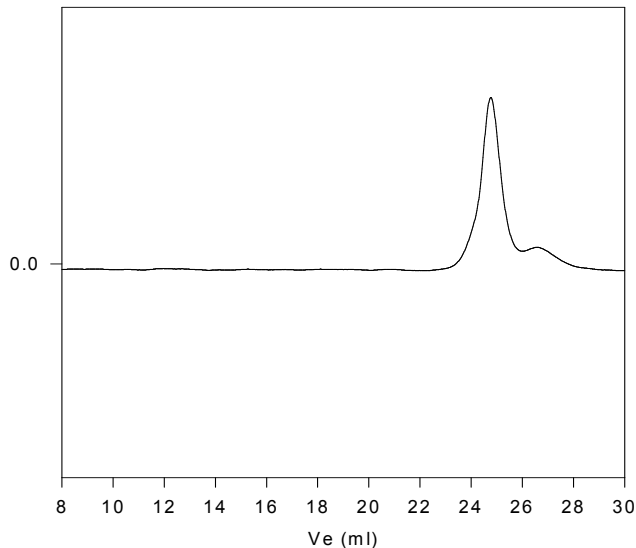
SEC analysis of the obtained block copolymer in THF was carried out in THF and triethyl amine as eluent. The final random copolymer composition was confirmed by <sup>1</sup>H-NMR spectroscopy in CdCl<sub>2</sub> by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate 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<sub>g</sub>).

**Solubility:**

Polymer is soluble in THF and CHCl<sub>3</sub>.

**<sup>1</sup>H-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:**