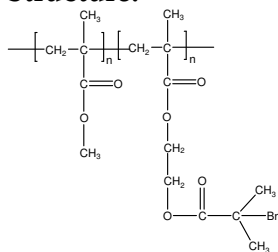


Sample Name:

Poly(methylmethacrylate-b- 2-(bromoisobutryl)ethylmethacrylate)

Sample #: P5713-MMABrIEMA**Structure:****Composition:**

$M_n \times 10^3$ MMA-b-BrIEMA	PDI
1.0-b-1.0	1.3
T_g for MMA: 89°C	T_g for BrIEMA: 28°C

Synthesis Procedure:

Poly(Methylmethacrylate-b-2-bromoisobutryl)ethylmethacrylate) block copolymer is synthesized by living anionic polymerization with sequential addition of methyl methacrylate and 2-(bromoisobutryl)ethylmethacrylate. Proprietary procedure is under publication.

Characterization:

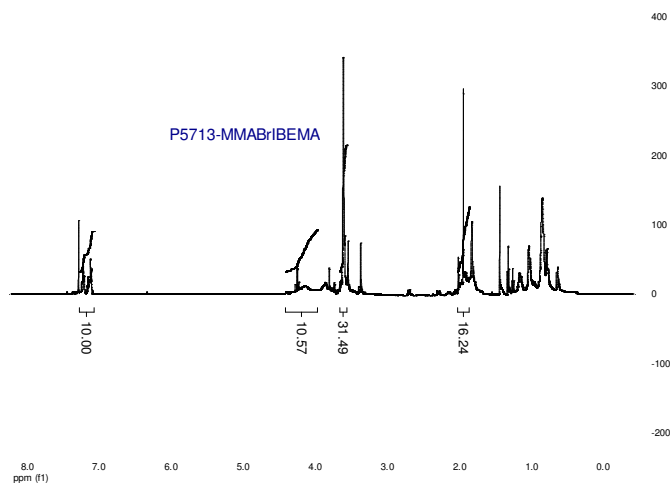
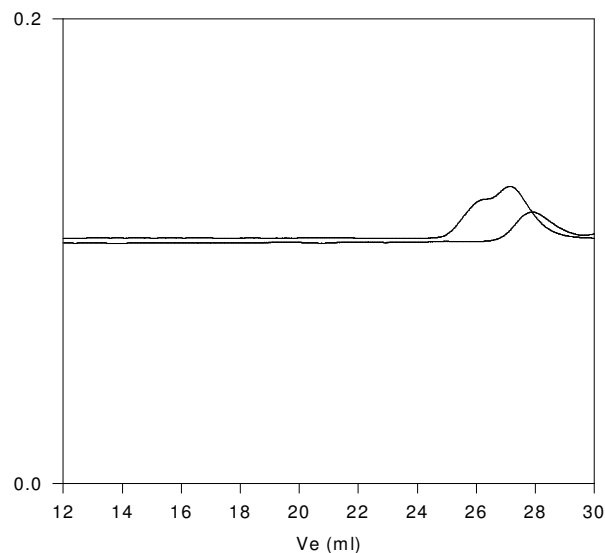
SEC analysis of the obtained block copolymer in THF was carried out in presence of triethyl amine as eluent. The final block copolymer composition was confirmed by $^1\text{H-NMR}$ spectroscopy in CDCl_3 by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate at 4.2-4.17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

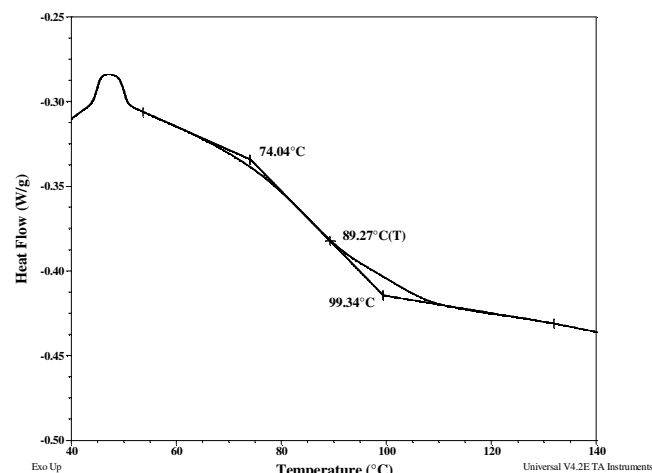
Polymer is soluble in THF and CHCl_3 .

 $^1\text{H-NMR}$ Spectrum of the block copolymer :**SEC of the block copolymer:****P5713-MMABrIEMA**

Size exclusion chromatography of poly(methyl methacrylate-b-Bromo isobutryl ethylmethacrylate):

— Poly(methyl methacrylate), $M_n=1000$, $PI=1.3$

— Block Copolymer PMMA(1000)-b-PBrIEMA(1000), $PI=1.3$ composition from H NMR

DSC thermogram for MMA block:**DSC thermogram for BrIEMA block:**