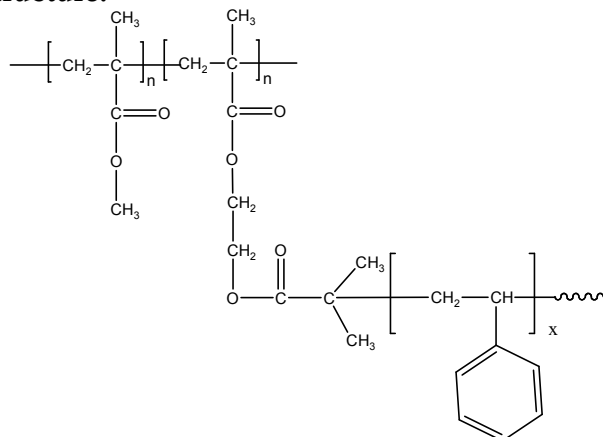


Sample Name:

Poly(methylmethacrylate-b-(isobutryl)ethylmethacrylate) grafted with polystyrene

Sample #: P13049-MMAIBEMA-G-S

Structure:**Composition:**

Mn × 10 ³ MMA-b-IEMA-G-S	PDI
5.5-b-2.5-g-8.0	1.45
Number of grafts ≈ 9	Molecular weight of Polystyrene brach ≈ 900
T _g for the polymer	90 oC

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. The grafting of polystyrene was carried out by controlled radical process.

Characterization:

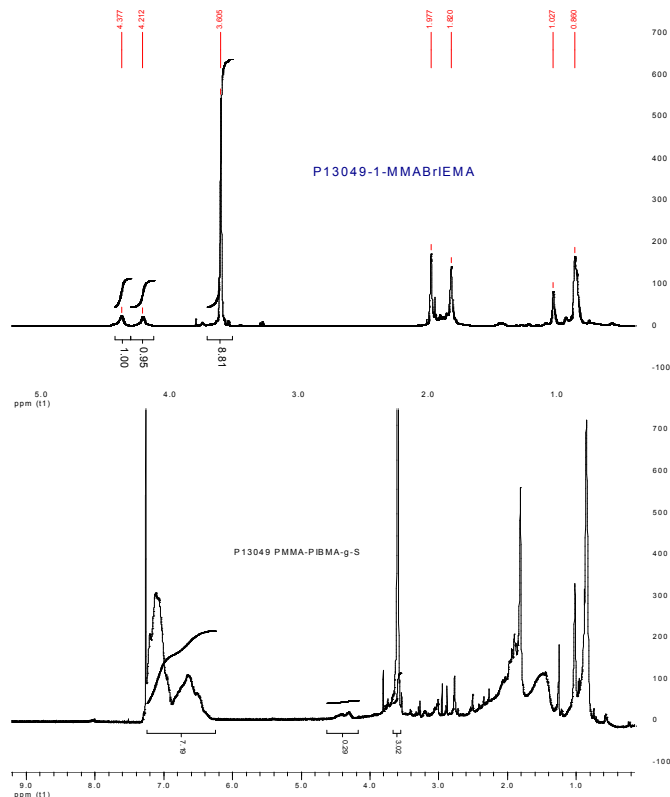
SEC analysis of the obtained block copolymer in THF was carried out in presence of triethyl amine as eluent. The final block copolymer composition was confirmed by ¹H-NMR spectroscopy in CdCl₃ by comparing the peak area of the methyl ester protons at 3.6 ppm against ethyl methacrylate at 4.2-4.17 ppm. Block copolymer PDI was determined by SEC.

Thermal analysis:

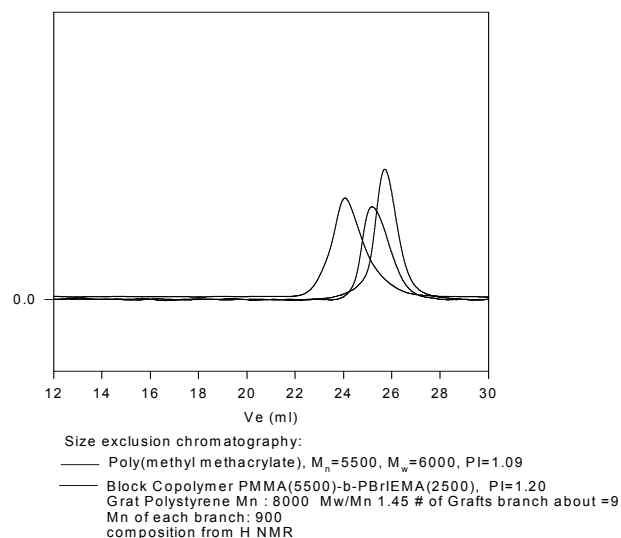
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF and CHCl₃.

¹H-NMR Spectrum of the block copolymer :**SEC of the block copolymer:**

P13049-MMAIBEMA -G-S

**DSC thermogram for the polymer:**