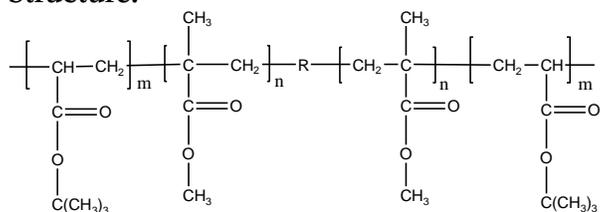


Sample Name:

Poly(t-butyl acrylate-b-methyl methacrylate-b-t-butyl acrylate)

Sample #: P832-tBuAMMAAtBuA

Structure:

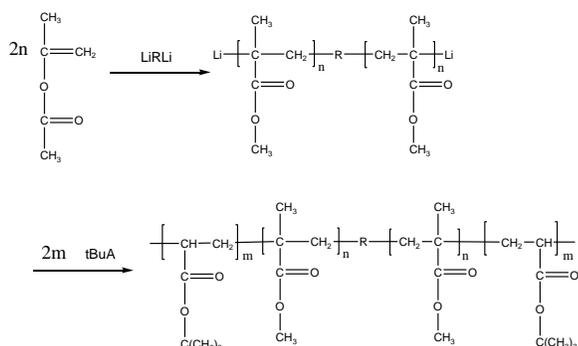


Composition:

Mn x 10 ³	PDI
14.9-5.6-14.9	1.10
T _g for tBuA block	47°C
T _g for MMA block	93°C

Synthesis Procedure:

Poly(t-butyl acrylate-b-methyl methacrylate-b-t-butyl acrylate) is prepared by living anionic polymerization using a bifunctional initiator with sequence addition of methyl methacrylate (MMA) followed by tert-butyl acrylate (tBA). The scheme of the reaction is illustrated below:



Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis:

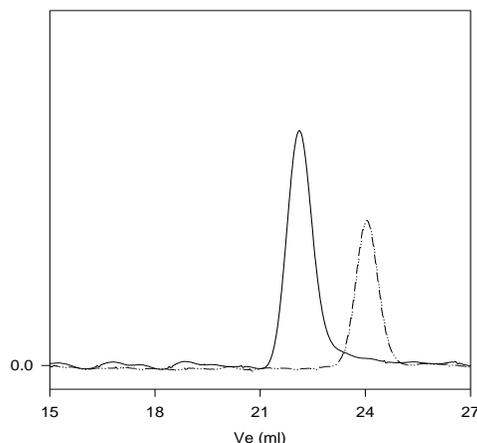
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

The tri-block polymer is soluble in THF, toluene and CHCl₃.

SEC of Sample:

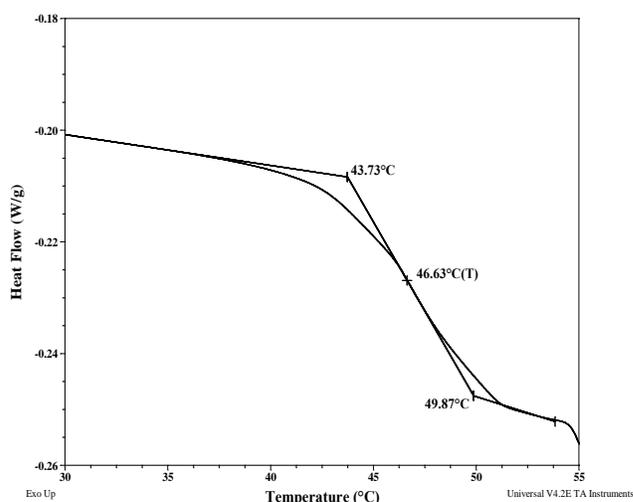
P832-BAMmBA



Size exclusion chromatography of:
Poly(t-butyl acrylate-b-methylmethacrylate-b-t-butylacrylate)

--- Poly(methylmethacrylate), M_n=5600, M_w=6100, PI=1.09
— Triblock Copolymer PtBuA(14900)-b-PMMA(5600)-b-PtBuA(14900) PI=1.10

DSC thermograms for the sample:



Thermogram for MMA block;

