

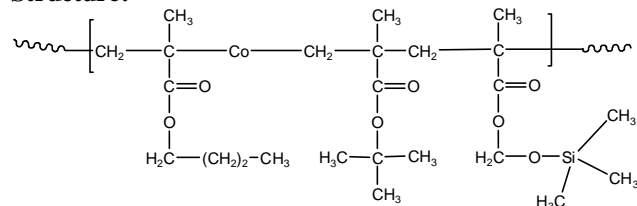
Sample Name:

Random Copolymer:

**Poly(n-Butyl Methacrylate –co– tert-Butyl Methacrylate
–co– 2-Trimethylsiloxy Ethyl Methacrylate)**

Sample # P18777-nBuMAAtBuMAHEMATMS ran

Structure:



Composition:

$M_n \times 10^3$	Mw/Mn
22.0	1.7
T_g of random copolymer	45°C
Ratio nBuMA : tBuMA :HEMATMS	30:30:40

Synthetic Procedure:

Poly(n-butylmethacrylate –co– tert-butyl methacrylate –co– 2-trimethylsiloxy ethyl methacrylate) random copolymer was prepared by GTP process.

Solubility:

The polymer is soluble in CHCl_3 , THF, DMF, toluene; and it precipitates from methanol and water.

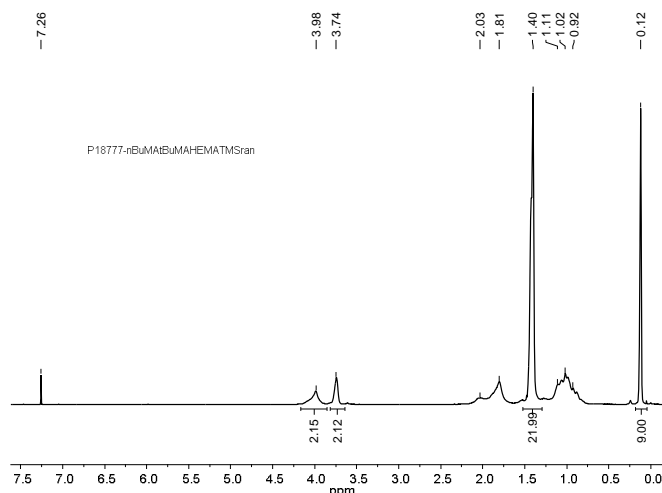
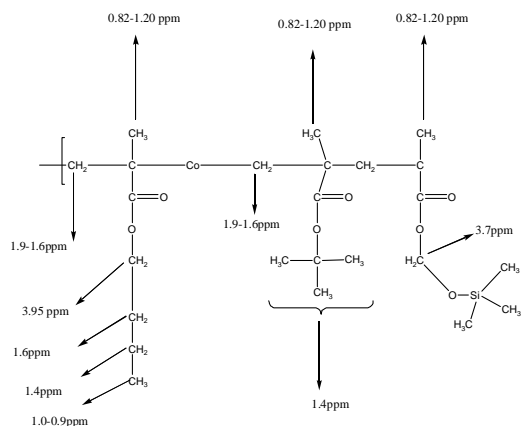
Thermal analysis

Thermal analysis of the samples was done 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).

Characterization:

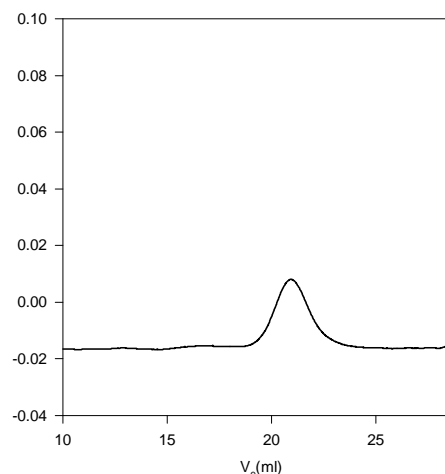
The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (Mw/Mn). The copolymer composition was calculated from $^1\text{H-NMR}$ spectroscopy.

$^1\text{H-NMR}$ (500 MHz, CDCl_3):



SEC elugram:

P18777-nBuMAAtBuMAHEMATMS ran



Size exclusion chromatography of polymer:

$M_n = 22,000$; $M_w = 37,500$; $PI = 1.7$

DSC curve:

