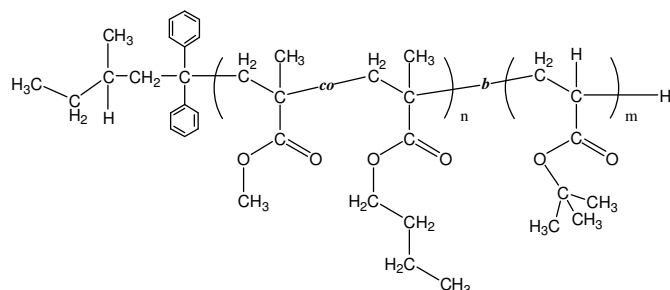


Poly(methyl methacrylate-*co*_(random)-n-butyl methacrylate)-*block*-poly(tert-butylacrylate)

Sample #: P19738-MMA_nBuMA_ran-b-tBuA

Structure:



Composition:

$M_n \times 10^3$ (g/mol)	17.5- <i>b</i> -5.0
M_w/M_n	1.22
Molar ratio MMA : nBuMA	52 : 48 (mol/mol)
T_g	40 °C

Synthesis Procedure:

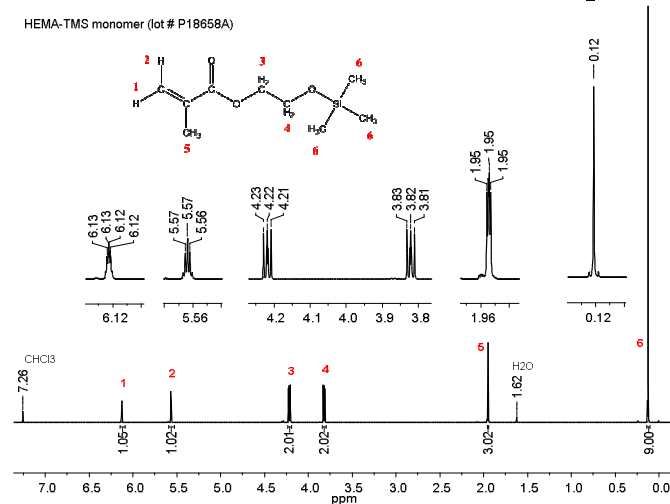
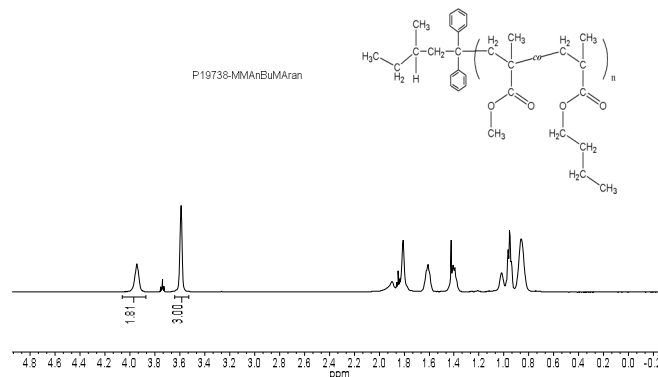
The polymer was synthesized by anionic process.

Solubility: The polymer is soluble in THF, DMF.

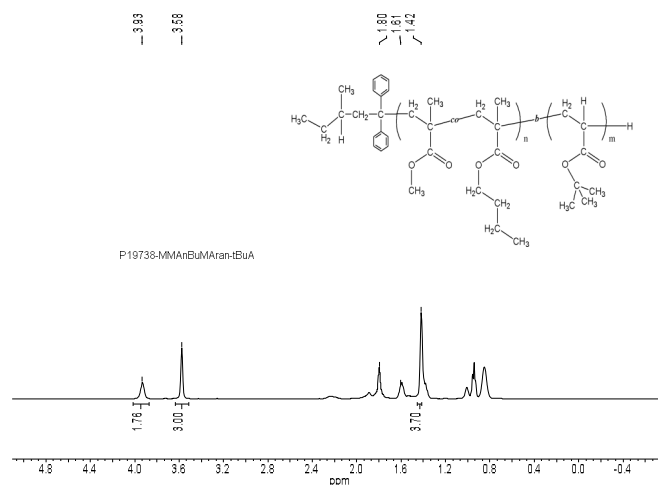
Characterization:

The polymer composition was calculated by ^1H NMR. The average molecular weight and polydispersity index were determined by size exclusion chromatography (SEC). Thermal analysis of the sample was done on a TA Q100 differential scanning calorimeter (DSC) at a heating rate of $10^\circ\text{C}/\text{min}$. The glass transition temperature (T_g) was determined as a midpoint of step change in heat flow curve for the second heating scan.

¹H NMR of HEMA-TMS monomer (500 MHz, CDCl₃):

¹H NMR of MManBuMA [first block] in CDCl₃:

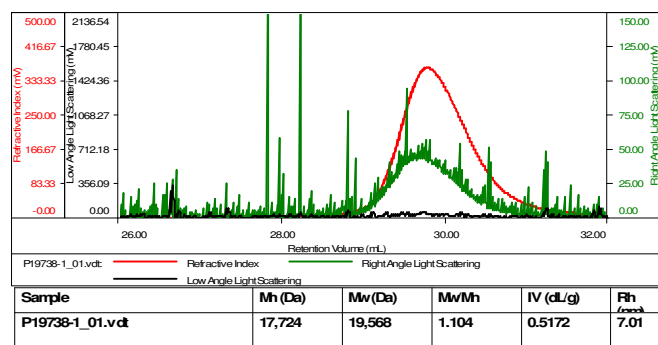
¹H NMR of MManBuMA-b-tBuA in CDCl₃:



SEC of MMA-nBuMA [first block]:

Sample ID-P19738-1 MMAnBuMAran

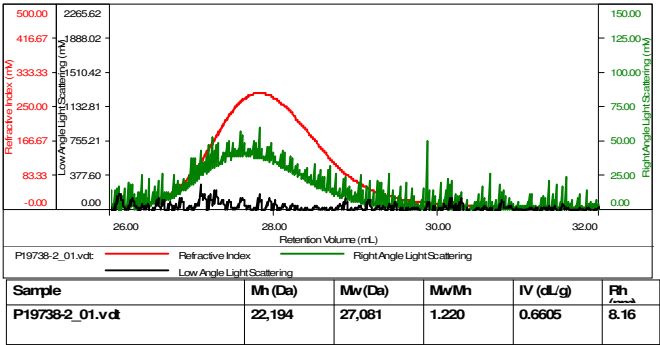
Concentration (mg/mL)	4.5746
Sample dn/dc (mL/g)	0.0850
Method File	PS80K-Jan-2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



SEC of [MMA-nBuMA]-b-tBuA:

Sample ID-P19738-2MMA-nBuMA-ran-tBuA

Concentration (mg/mL)	5.7274
Sample dn/dc (mL/g)	0.0940
Method File	PS80K-Jan-2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



DSC thermogram:

