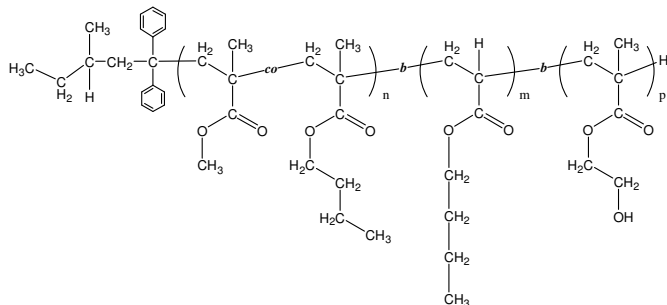


Sample Name:

Poly(methyl methacrylate-*co*(*random*)-*n*-butyl methacrylate)-*block*-poly(*n*-butylacrylate)-*block*-2-hydroxyethyl methacrylate

Sample #: **P19751A-MMA_nBuMA_{ran}-b-nBuA-HEMA**

Structure:



Composition:

$M_n \times 10^{-3}$ (g/mol)	20.5-b-4.5-b-4.5
M_w/M_n	1.4
Molar ratio MMA : nBuMA	51 : 49 (mol/mol)
T_g	48 °C

Synthesis Procedure:

The polymer was synthesized by anionic process.

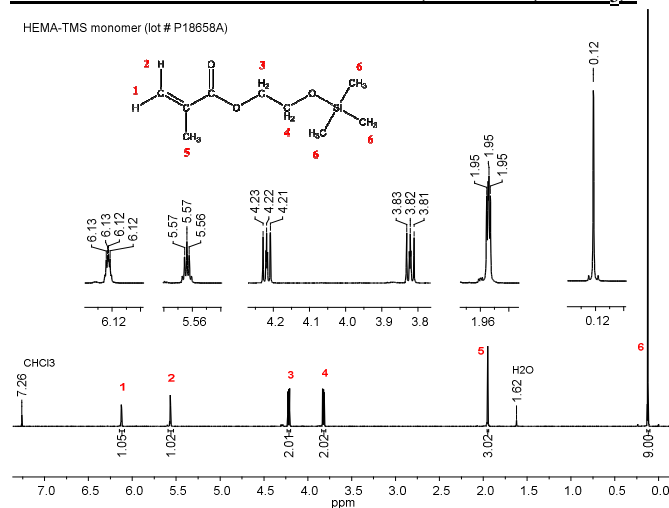
Solubility: The polymer is soluble in THF, DMF.

Characterization:

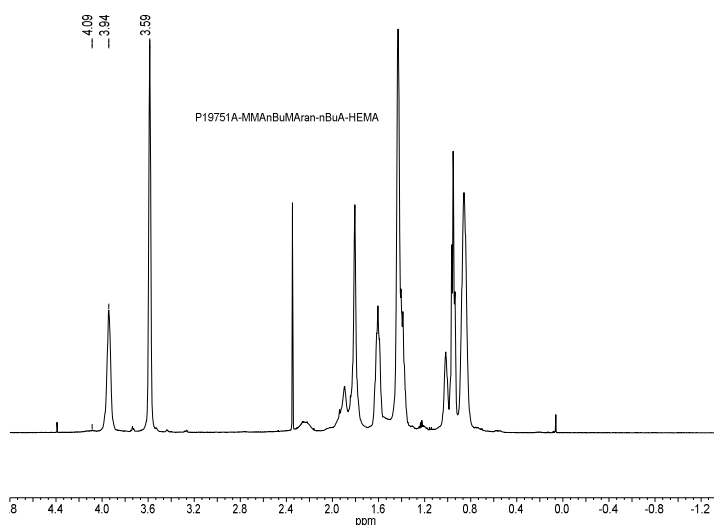
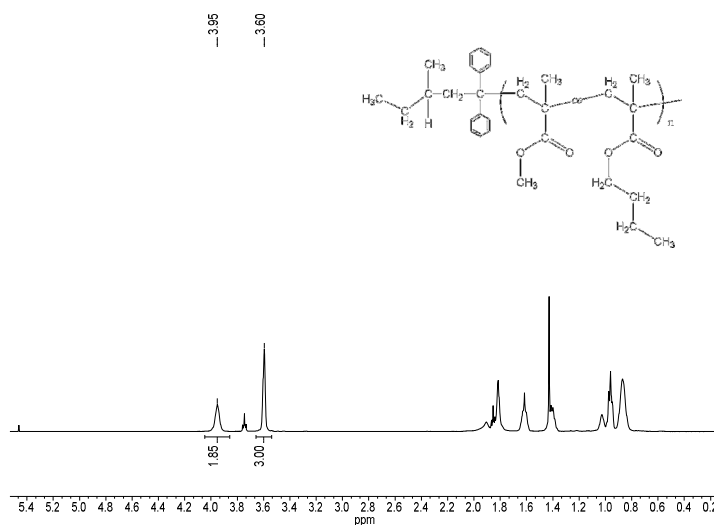
The polymer composition was calculated by ^1H NMR.

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, CDCl_3):



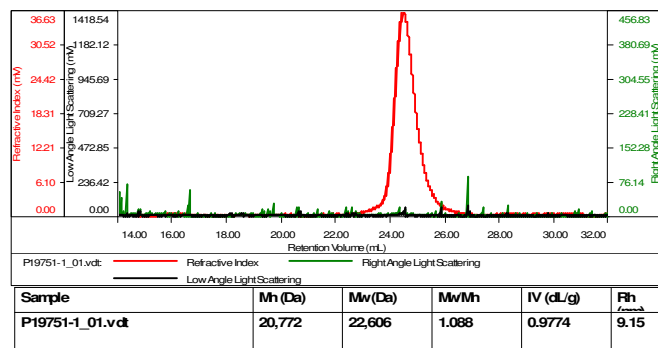
^1H NMR of MMA-nBuMA [first block] in CDCl_3 :



SEC of MMA_nBuMA [first block]:

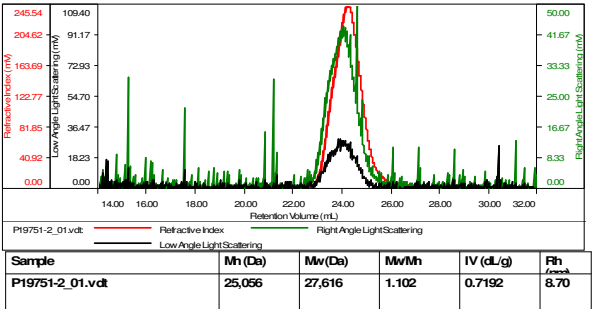
Sample ID-P19751-1-MMA_nBuMA-*ran*

Concentration (mg/mL)	0.4729
Sample dn/dc (mL/g)	0.0940
Method File	PS80K-Jan-2016-0000.vcm
Column Set	3x PL 1113/6300
Solvent	THF



SEC of [MMA-nBuMA]-b-tBuA diblock copolymer:
Sample ID:P19751-2-MMA-nBuMA-tBuA

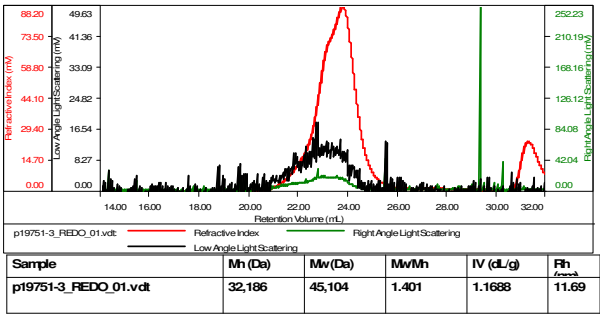
Concentration (mg/mL)	4.1975
Sample dn/dc (mL/g)	0.0940
Method File	PS90K-Jan-2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	TH-F



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

Sample ID:P19751-3-MMA-nBuMA-tBuA-HEMATMS

Concentration (mg/mL)	1.9339
Sample dn/dc (mL/g)	0.0940
Method File	PS90K-Jan-2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	TH-F



DSC thermogram (2nd heating run, 10°C/min):

