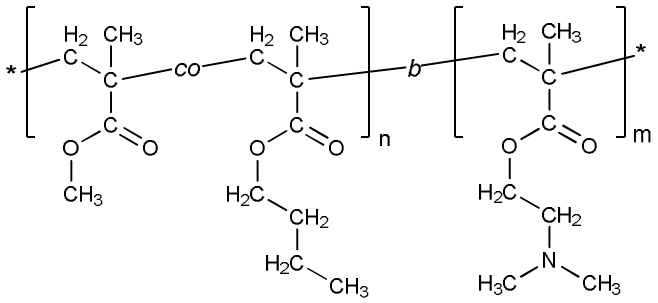
Sample Name:
Poly(Methyl methacrylate –co-n-butyl methacrylate random -b-N,N -dimethylaminoethylmethacrylate)

Sample #: P19507-MMAnBuMAran-b-DMAEMA

Structure:



Composition:

Mn × 10^3 MMAnBuMAran-b-HEMA	PDI
22.0-b-29.0	1.04

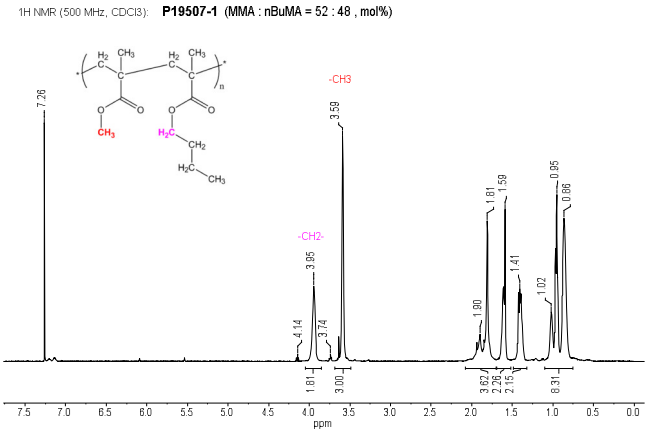
MMA:nBuMA (mol %)	52:48

Synthesis Procedure:
The polymer was synthesized by anionic process.

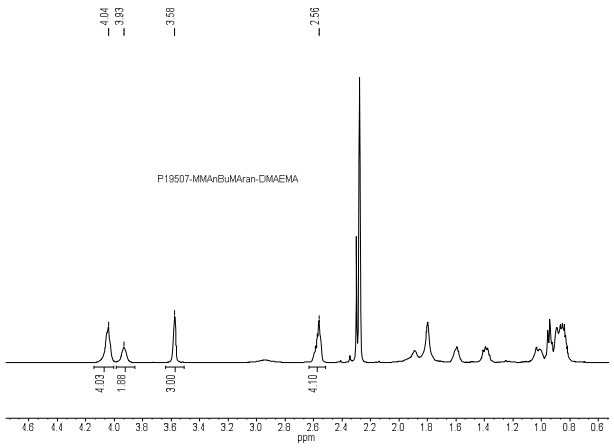
Characterization:
The product was characterized by ^{1}H NMR and SEC.

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).

^{1}H NMR of the first block:



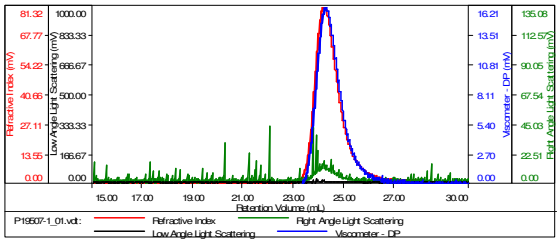
^{1}H NMR spectrum of the final block copolymer:



SEC of the random copolymer (first block):

Sample ID:P19507-1 MMAnBuMAran

Concentration (mg/mL)	1.0381
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

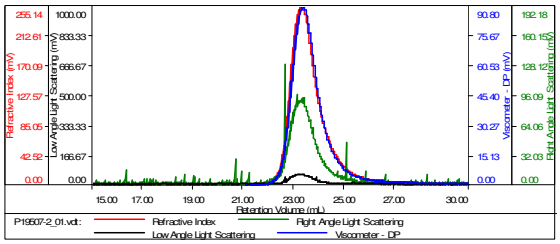


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersit	Intrinsic Viscosity (dL/g)
P19507-1_01.vdt	21,882	23,910	19,054	1.093	0.4999

SEC of the diblock copolymer:

Sample ID:P19507-2-MMAnBuMAran-b-DMAEMA

Concentration (mg/mL)	3.8488
Sample dn/dc (mL/g)	0.0840
Method File	PS80K-June30-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersit	Intrinsic Viscosity (dL/g)
P19507-2_01.vdt	49,624	51,538	54,538	1.039	0.8861