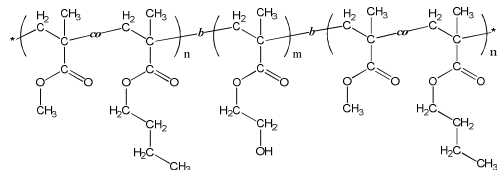


**Sample Name:** Poly(Methyl methacrylate-co-n-Butyl methacrylate random-b-2-Hydroxy ethyl methacrylate-b-Methyl methacrylate-co-n-Butyl methacrylate random)

**Sample #:** P40455-MMAAnBuMAran-b-HEMA-b-MMAAnBuMAran

**Structure:**



**Composition:**

$M_n \times 10^3$	PDI
MMAAnBuMAran-b-HEMA-b- MMAAnBuMAran 15.5-b-38.0-b-24.0	1.09

Molar ratio MMA:nBuMA (mol%):	70:30
Weight ratio MMA:nBuMA (wt%):	62:38
Glass transition temperature, $T_g$ (average):	107 °C

**Synthesis Procedure:**

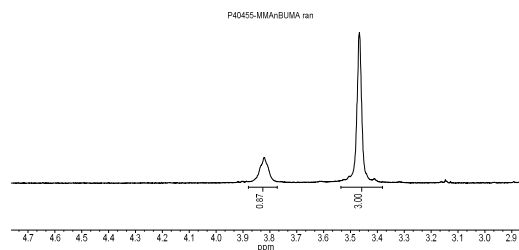
The polymer was synthesized by anionic process by sequential addition of monomers.

**Characterization:**

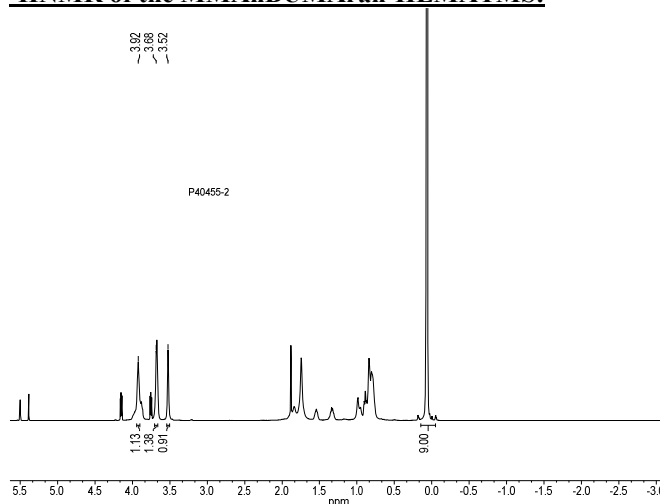
The polymer was characterized by  $^1\text{H-NMR}$  and size exclusion chromatography (SEC).

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.

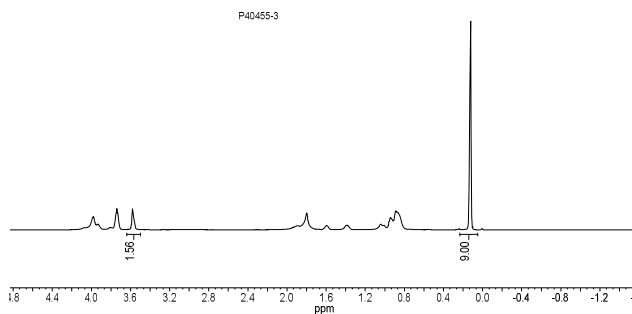
**$^1\text{H-NMR}$  of the MMAAnBUMAran First Block:**



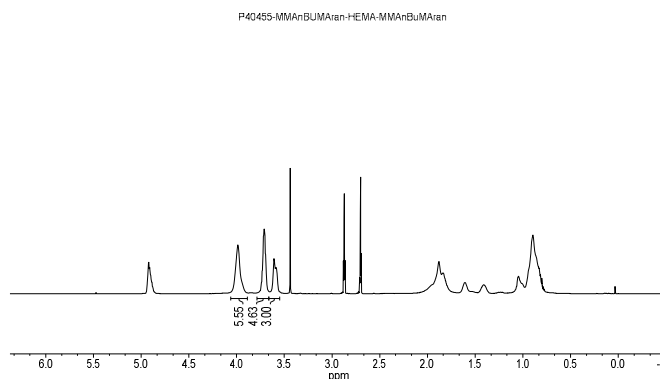
**$^1\text{H-NMR}$  of the MMAAnBUMAran-HEMATMS:**



**$^1\text{H-NMR}$  of the MMAAnBuMAran-b-HEMA-TMS-b-MMAAnBuMAran tri block:**



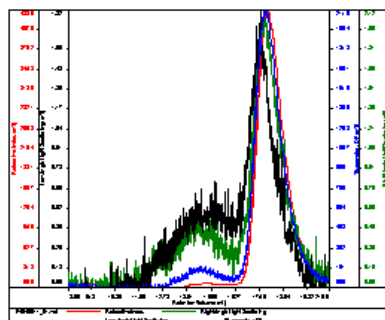
**$^1\text{H-NMR}$  of the MMA-nBuMAran-HEMA-MMAAnBuMAran:**



## SEC elugram of the MManBUMAran First Block:

MManBUMAran

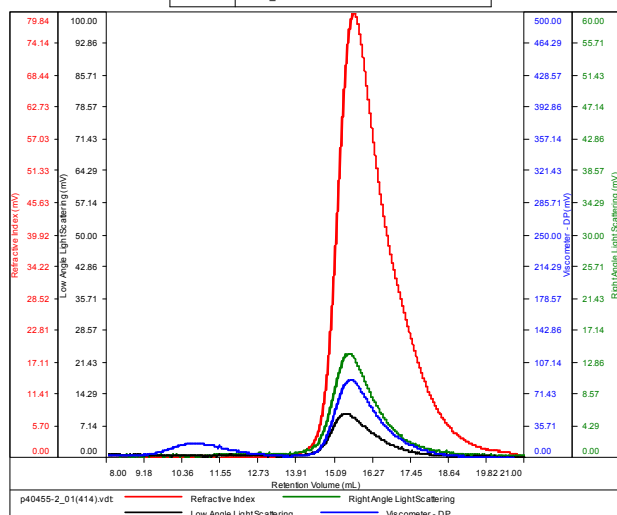
Concentration	0.050
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w/0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40455-1_01.vdt	15,443	15,912	14,902	1.026	0.0594

## SEC elugram of the MManBUMAran-HEMA: P40455-2MManBUMAran-HEMA

ID	p40455-2
Conc	12.2926
Recovery	1229.2592
dn/dc	0.0650
Method	PS80k_December-2016-0004.vcm

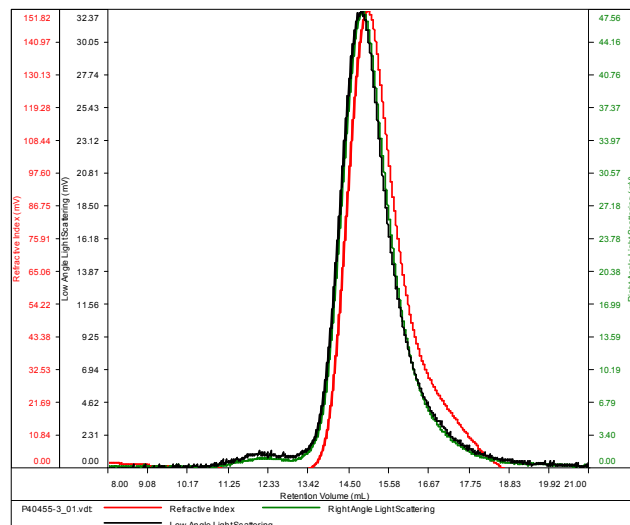


Sample	Mn	Mw	Mp	Mw/Mn	IV
p40455-2_01(414).vdt	53,384	59,391	59,922	1.113	0.1177

## SEC elugram of the MManBuMAran-b-HEMA-TMS-b-MManBuMAran tri block:

P40455-3-MManBUMAran-HEMATMS-MManBUMA

Conc (mg/mL)	23.8485
dn/dc (mL/g)	0.0650
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w/0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40455-3_01.vdt	99,484	108,779	109,038	1.093	0.1973

## DSC thermogram of MManBuMA-b-HEMA-b-MManBuMA (2<sup>nd</sup> heating scan, 10°C/min):

Sample: P40455\_MManBuMA-HEMA-MManBuMA  
Size: 12.6000 mg

DSC

File: P40455\_MManBuMA-HEMA-MManBuMA.001

