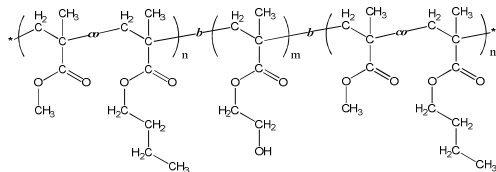


**Sample Name:** Poly(Methyl methacrylate-co-n-Butyl methacrylate random-b-2-Hydroxy ethyl methacrylate-b-Methyl methacrylate-co-n-Butyl methacrylate random)

**Sample #:** P40458-MMAnBuMAran-b-HEMA-b-MMAnBuMAran

**Structure:**



**Composition:**

Mn × 10 <sup>3</sup>	PDI
MMAnBuMAran-b-HEMA-b-MMAnBuMAran 29.0-b-40.0-b-54.0	1.11

Molar ratio MMA:nBuMA (mol%):	51:49
Weight ratio MMA:nBuMA (wt%):	44:66
Glass transition temperature, T <sub>g1</sub> :	75 °C
Glass transition temperature, T <sub>g2</sub> :	111 °C

**Synthesis Procedure:**

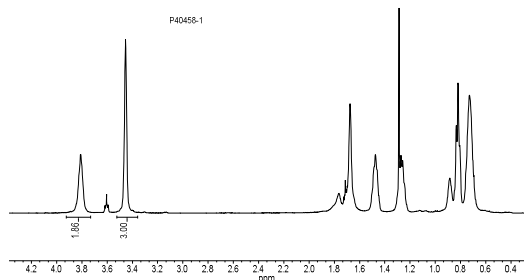
The polymer was synthesized by anionic process by sequential addition of monomers.

**Characterization:**

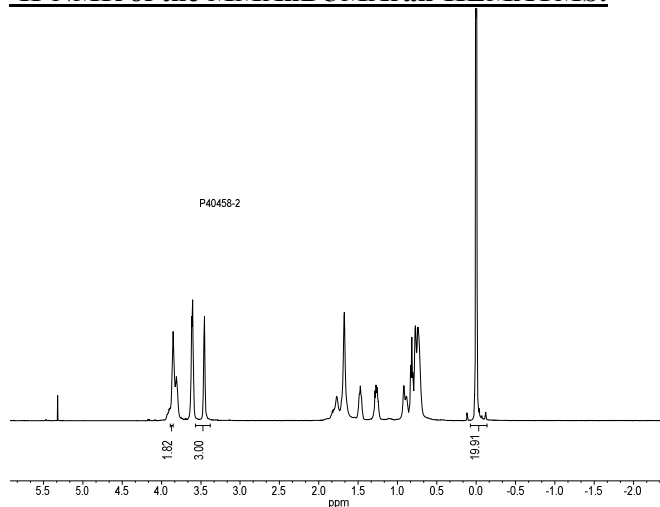
The polymer was characterized by <sup>1</sup>H-NMR and size exclusion chromatography (SEC).

Thermal analysis of the sample was done on a TA Q100 differential scanning calorimeter (DSC) at a heating rate of 10°C/min. The glass transition temperature (T<sub>g</sub>) was determined as a midpoint of step change in heat flow curve for the second heating scan.

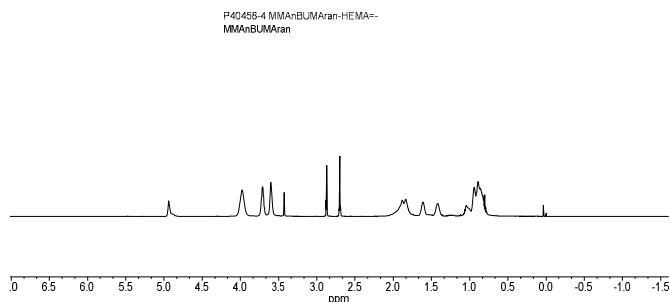
**<sup>1</sup>H-NMR of the MAnBUMAran First Block:**



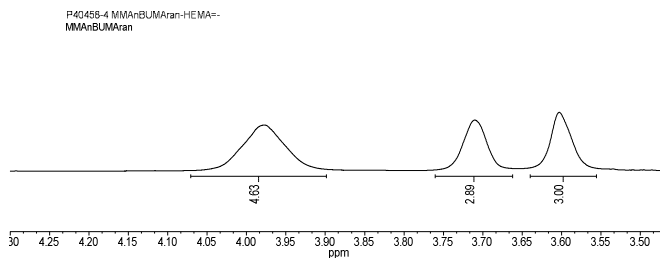
**<sup>1</sup>H-NMR of the MMAnBUMAran-HEMATMS:**



**<sup>1</sup>H-NMR of the MMAnBuMAran-b-HEMA-b-MMAnBuMAran tri block:**



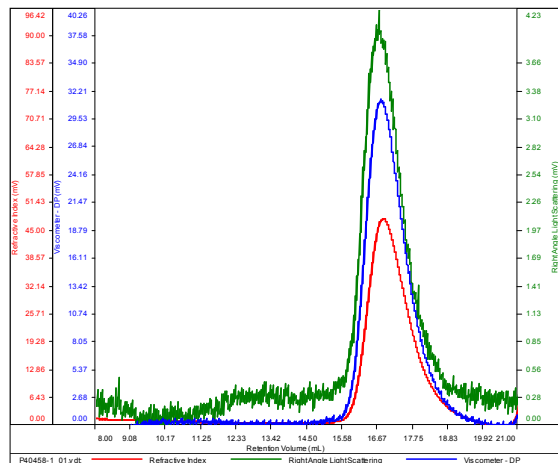
**MMA-nBuMAran-HEMA-MMAnBuMAran**



## SEC elugram of the MManBUMAran First Block:

P40458-MManBUMAran

Conc (mg/mL)	6.7487
dn/dc (mL/g)	0.0650
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS

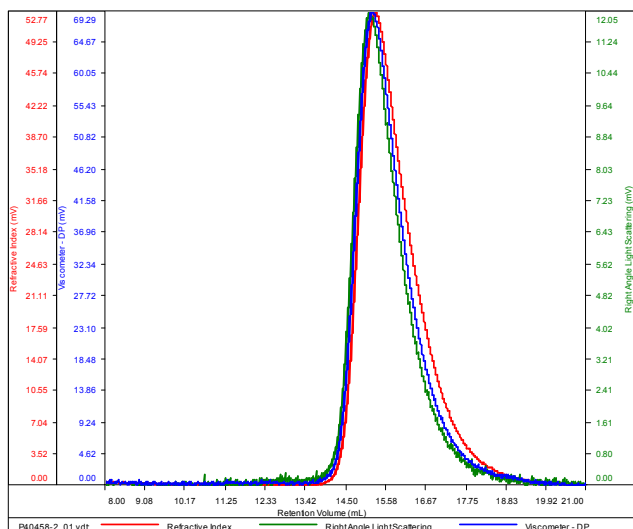


Sample	Mn	Mw	Mp	Mw/Mn	IV
P40458-1_01.vdt	28,991	33,145	27,855	1.143	0.0758

## SEC elugram of the MMA-nBuMAran-HEMA:

P40458-MManBUMAran-HEMA

Conc (mg/mL)	8.2670
dn/dc (mL/g)	0.0650
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS

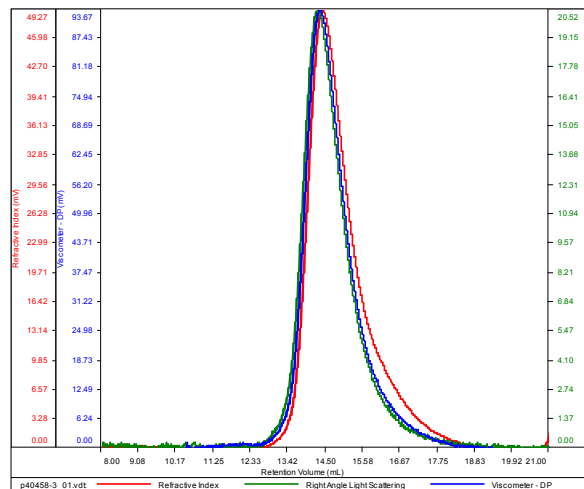


Sample	Mn	Mw	Mp	Mw/Mn	IV
P40458-2_01.vdt	69,283	76,721	80,753	1.107	0.1446

## SEC elugram of the MMA-nBuMAran-HEMA-MMA-nBuMAran:

P40458-MManBUMAran-HEMA-MMA-nBuMAran

Conc (mg/mL)	7.3561
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
p40458-3_01.vdt	123,671	137,829	139,862	1.114	0.2080

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

Sample: P40458\_MManBuMA-HEMA-MMA-nBuMA  
Size: 22.5000 mg

DSC

File: P40458\_MManBuMA-HEMA-MMA-nBuMA.001

