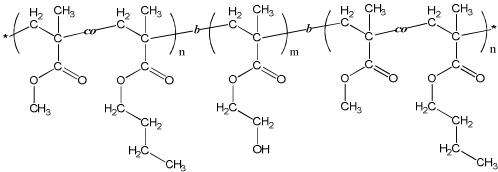


**Sample Name:** Poly(Methyl methacrylate-co-n-Butyl methacrylate random-b-2-Hydroxy ethyl methacrylate-b-Methyl methacrylate-co-n-Butyl methacrylate random)

**Sample #:** P40457-MMAnBuMAran-b-HEMA-b-MMAnBuMAran

**Structure:**



**Composition:**

$Mn \times 10^3$	PDI
MMAnBuMAran-b-HEMA-b- MMAnBuMAran 18.5-b-23.0-b-15.0	1.11

MMA:nBuMA (mol%):	60:40
MMA:nBuMA (wt%):	52:48
Glass transition temperature, $T_{g1}$ :	86 °C
Glass transition temperature, $T_{g2}$ :	117 °C

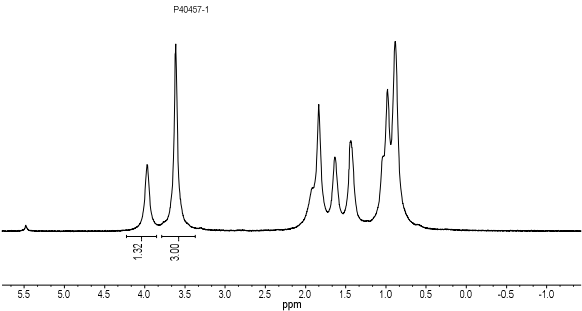
**Synthesis Procedure:**

The polymer was synthesized by anionic process by sequential addition of monomers. 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 ( $T_g$ ) was determined as a midpoint of step change in heat flow curve for the second heating scan.

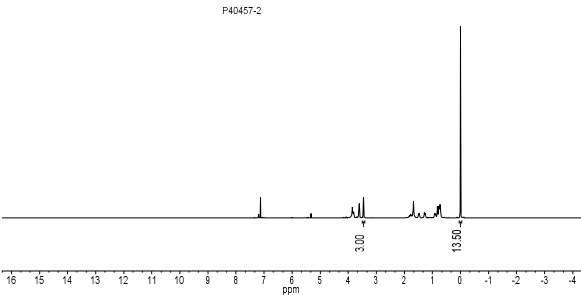
**Characterization:**

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

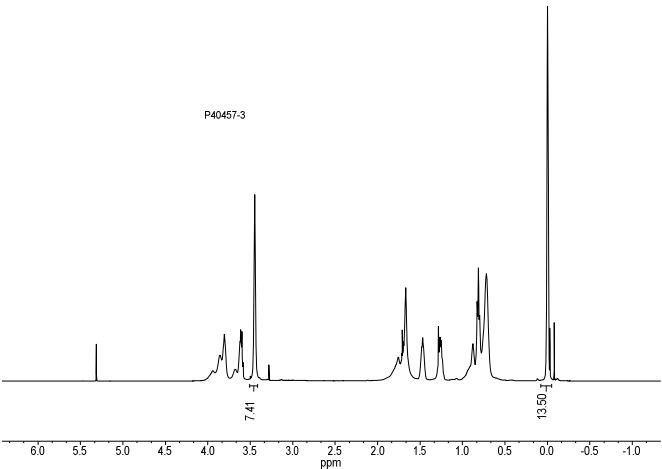
**$^1\text{H-NMR}$  of the MAnBUMAran First Block:**



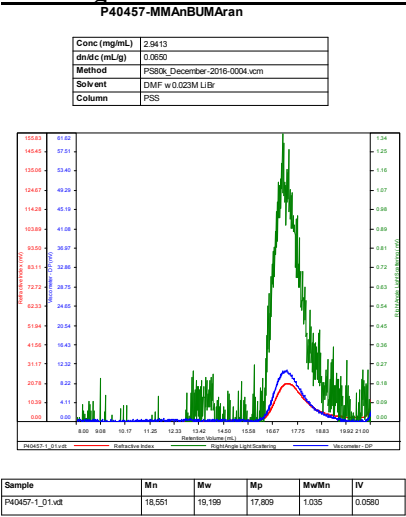
**$^1\text{H-NMR}$  of the MMAnBUMAran-HEMATMS:**



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

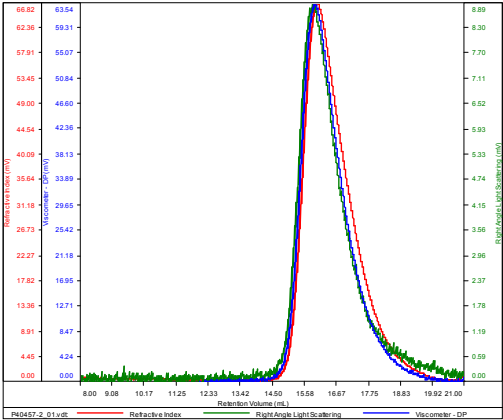


**SEC elugram of the MMAnBUMAran First Block:**



**SEC elugram of the MMA-nBuMAran-HEMA:**  
**P40457-MMAAnBUMAran-HEMA**

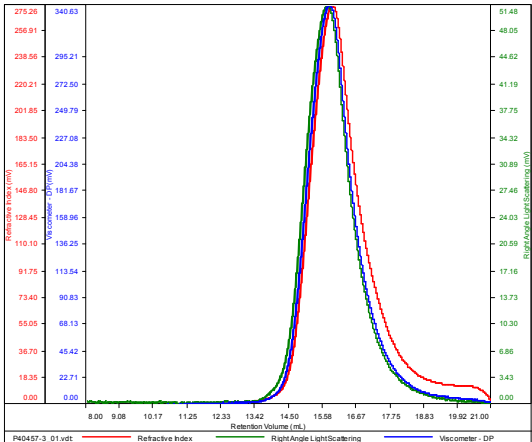
Conc (mg/mL)	11.0933
dn/dc (mL/g)	0.0650
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40457-2_01.vdt	41,960	43,717	44,205	1.042	0.1043

**SEC elugram of the MMA-nBuMAran-HEMA-MMA-nBuMAran:**  
**P40457-MMAAnBUMAran-HEMA-MMAAnBUMAran**

Conc (mg/mL)	48.9588
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
P40457-3_01.vdt	56,680	63,277	62,590	1.116	0.1325

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

Sample: P40457\_MMAAnBuMA-HEMA-MMAAnBuMA  
Size: 10.2000 mg  
DSC  
File: P40457\_MMAAnBuMA-HEMA-MMAAnBuMA.001

