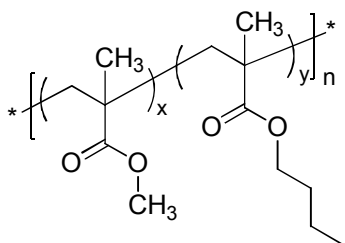


Sample Name:

**Poly(methyl methacrylate-*co*-n-butyl methacrylate)
random copolymer**

Sample #: P40429-MMA_nBuMA_ran

Structure:**Composition:**

$M_n \times 10^3$ (g/mol)	58
M_w/M_n	1.6
Molar ratio MMA : nBuMA:	52:48
Glass transition temperature:	$T_g = 62^\circ\text{C}$

Synthesis Procedure:

Poly(methyl methacrylate-*co*-n-butyl methacrylate) was synthesized by living anionic polymerization.

Characterization:

MMA:nBuMA ratio was calculated from ^1H NMR spectroscopy data by comparing the integration of methoxy protons of nBuMA to the integration of methoxy group of MMA.

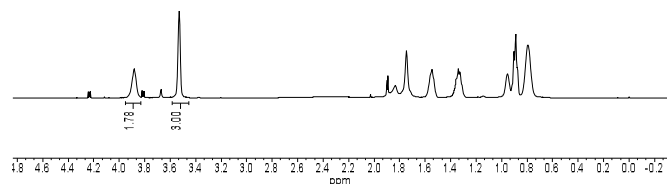
The average molecular weight and polydispersity index were determined by size exclusion chromatography (SEC).

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) and melting point (T_m) were measured at a scan rate of $10^\circ\text{C}/\text{min}$ shortly after creating thermal history of the sample.

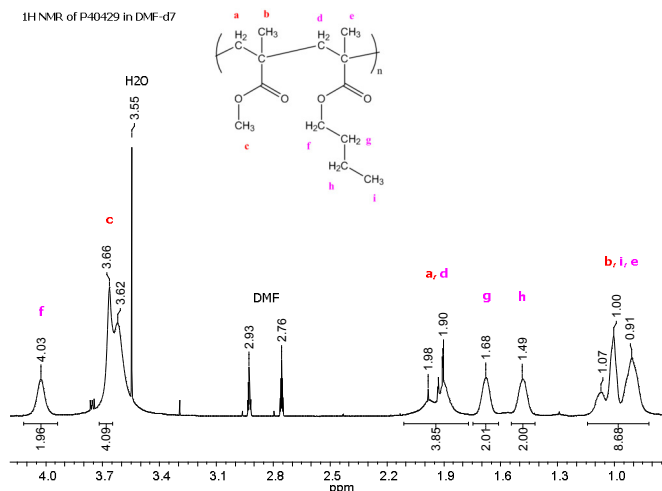
Solubility: The polymer is soluble in THF, DMF.

 ^1H NMR of MMA_nBuMA_ran in CDCl_3 :

P40429-MMA_nBuMA_ran

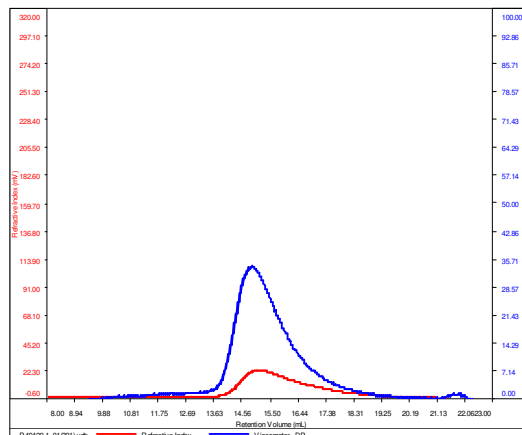
 **^1H NMR of MMA_nBuMA_ran in DMF-d_7 :**

^1H NMR of P40429 in DMF-d_7

**SEC elugram of the polymer in DMF:**

P40429-MMA_nBuMA_ran

Conc	3.5021
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_August-2017-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40429-1_01(391).vdt	57,743	93,781	92,323	1.624	0.2160

DSC thermogram (2nd heating scan, $10^\circ\text{C}/\text{min}$):

Sample: P40429
Size: 13.1000 mg

File: P40429.002

