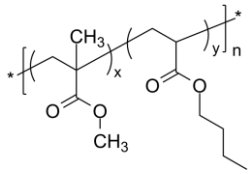
Sample Name: **Random Copolymer Poly (methyl methacrylate-co-n-butyl acrylate)**

Sample #: **P1704-MMAnBuAran**

Structure:



Composition:

Mn x 10^3 PMMA-co-PnBuA	PDI
97.0	1.3

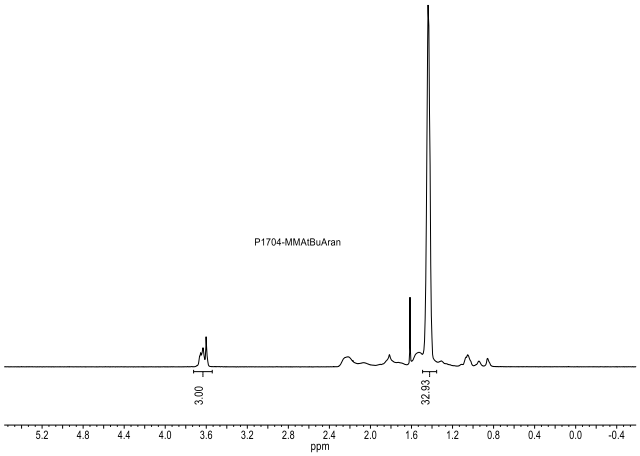
T_g of random polymer	50°C
PMMA (mol%): 20.0	

Synthesis Procedure:
Random Copolymer is prepared by either anionic or group transfer or radical polymerization of methyl methacrylate and t-butyl acrylate.

Characterization:
The product was characterized by size exclusion chromatography (SEC) and ^{1}H NMR.

Solubility:
The polymer is soluble in $CHCl_3$, THF, DMF and toluene. The polymer precipitated out from methanol and water.

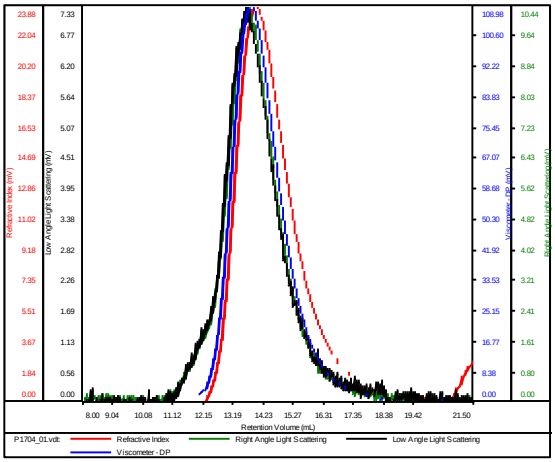
^{1}H-NMR Spectrum of the random copolymer used as precursor:



SEC of the random copolymer used as precursor:

P1704-MMAtBuAran

Conc	5.9909
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-May2017-0000.vcm



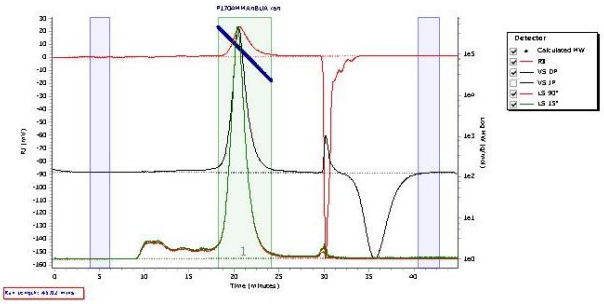
Sample	Mn	Mw	Mp	Mw/Mn	IV
P1704_01.vdt	96,779	127,005	117,656	1.312	0.4008

SEC elugram of the Sample:

Agilent GPC/SEC Software

P1704MMAnBUA ran

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	138689	97589	129183	160579	193449	154063	1.324