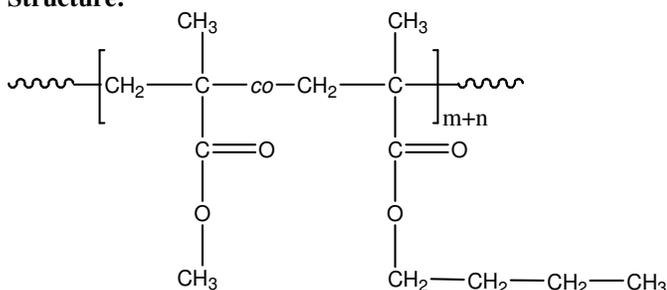


### Sample Name:

Random Copolymer Poly(methyl methacrylate-co-n-butyl methacrylate)

### Sample #: P11168-MMAnBuMAran

#### Structure:



#### Composition:

Mn x 10 <sup>3</sup> PMMA-co-PnBuMA	PDI
34.3	1.04
T <sub>g</sub> of random polymer	53.77 °C mid point
MMA:nBuMA molar ratio	25:75

#### Synthesis Procedure:

Random Copolymer Poly(methyl methacrylate-co-n-butyl methacrylate) is prepared by anionic polymerization

#### Characterization:

The polymer was analyzed by size exclusion chromatography (SEC). Copolymer composition was calculated from <sup>1</sup>H-NMR.

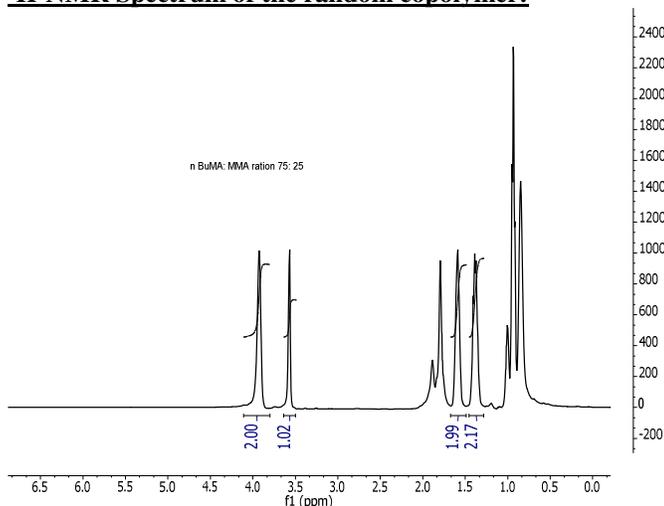
#### Thermal analysis

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

#### Solubility:

The polymer is soluble in CHCl<sub>3</sub>, THF, DMF, acetone and precipitated out from methanol and hexane.

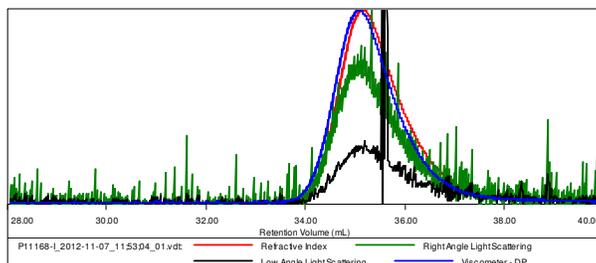
#### <sup>1</sup>H-NMR Spectrum of the random copolymer:



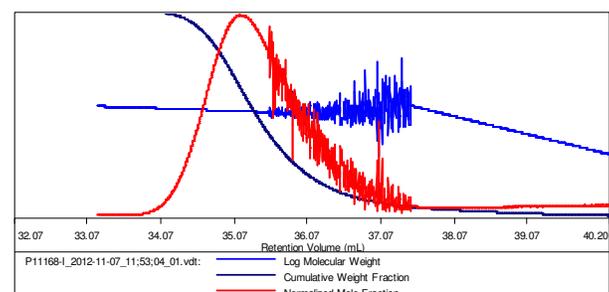
### SEC of the random copolymer:

Sample ID: P11168-I-MMAnBuMA

Concentration (mg/mL)	13.0734
Sample dn/dc (mL/g)	0.0800
Method File	PS80K-Nov-2012-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn (Da)	Mw (Da)	Mp (Da)	Mw/Mn	IV (dL/g)
P11168-I_2012-11-07_11:53:04_01.vdt	34,297	35,671	35,729	1.040	0.2085



#### Thermogram for the sample in Duplicate:

Heating rate : 10 °C/minute:

DSC of P11168-1-MMAnBuMA-1:

