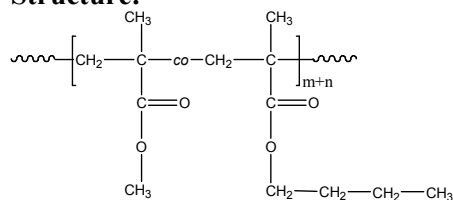


**Sample Name:** Random Copolymer Poly (methyl methacrylate-co-n-butyl methacrylate)

**Sample #:** P40399-MMA<sub>n</sub>BuMA<sub>r</sub>

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> PMMA-co-PnBuMA	PDI
47.0	1.7
T <sub>g</sub> of random polymer	62 °C mid point
MMA:nBuMA molar ratio	55:45

**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.

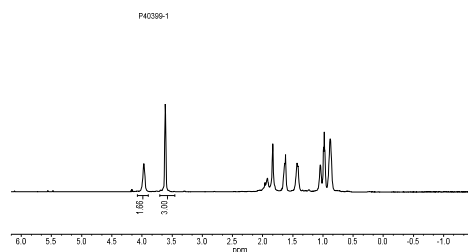
**Thermal analysis**

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, and acetone. It precipitated out from methanol and hexane.

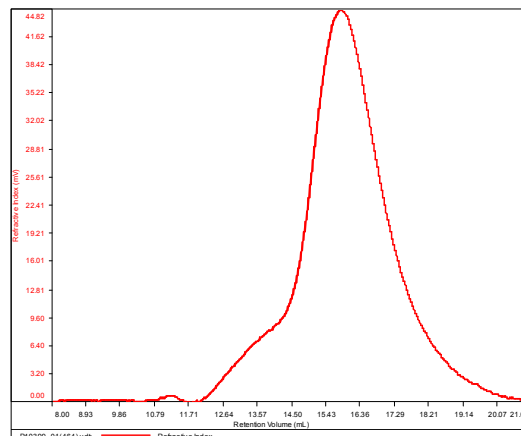
**<sup>1</sup>H-NMR Spectrum of the random copolymer:**



**SEC of the random copolymer:**

P40399-MMA<sub>n</sub>BuMA<sub>r</sub> ran

Conc	11.0643
dn/dc	0.0650
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k-March2017-0002.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40399_014641.vdt	47,217	81,514	49,557	1.726	0.1825

**Thermogram for the sample in Duplicate:**  
**Heating rate : 10 °C/minute:**

**DSC -MMA<sub>n</sub>BuMA-1:**

