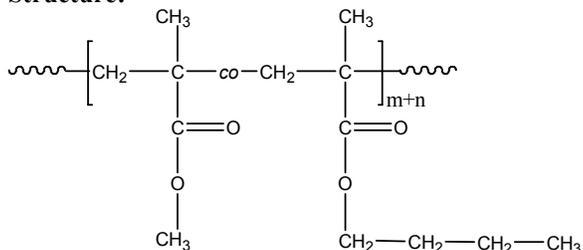


Sample Name: Random Copolymer Poly(methyl methacrylate-co-n-butyl methacrylate)

Sample #: P40432-MMAAnBuMAran

Structure:



Composition:

| | |
|--|-------------------|
| Mn x 10 ³ PMMA-co-PnBuMA | PDI |
| 38.0 | 1.06 |
| T _g of random polymer | 62.5 °C mid point |
| MMA:nBuMA molar ratio | 40:60 |

Synthesis Procedure:

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

Characterization:

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

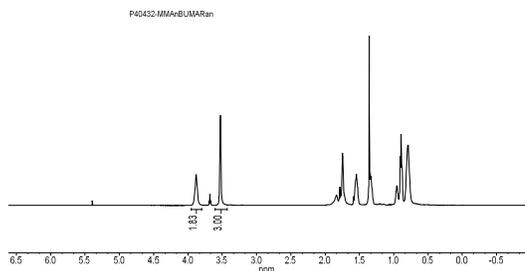
Thermal analysis

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_g).

Solubility:

The polymer is soluble in CHCl₃, THF, DMF, acetone and precipitated out from methanol and hexane.

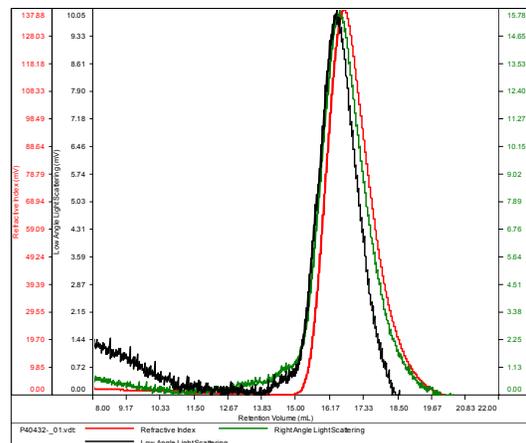
¹H-NMR Spectrum of the random copolymer:



SEC of the random copolymer:

P40432-MMAAnBuMAran

| | |
|--------------|------------------------------|
| Conc (mg/mL) | 23.0263 |
| dn/dc (mL/g) | 0.0660 |
| Method | PS80k_December-2016-0004.vcm |
| Solvent | DMF w0.023M LiBr |
| Column | PSS |



| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|---------------|--------|--------|--------|-------|--------|
| P40432_01.vdt | 37,742 | 40,126 | 37,602 | 1.063 | 0.0914 |

DSC -MMAAnBuMA-1:

