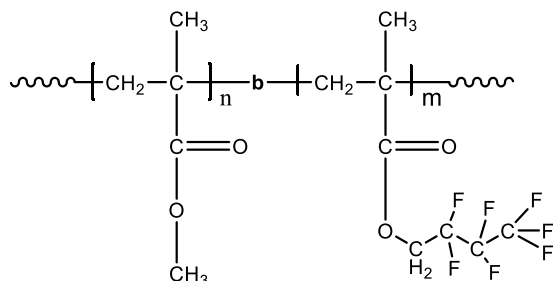Sample Name: **Poly(methyl methacrylate–co–2,2,3,3,4,4,4-heptafluorobutyl methacrylate), random**

Sample #: **P19176-MMA7FBuMAran**

Structure:

Composition:

Mn x 10^3 PMMA-co-7FBuMA	PDI
80.5	1.44

T_g of random polymer	86.3 °C
MMA:7FBuMA molar ratio	59:41

Synthesis Procedure:
The polymer was synthesized by GTP polymerization process.

Characterization:

The molecular weight and polydispersity index (PDI) of the block copolymer are characterized by size exclusion chromatography (SEC). The composition of random copolymer was confirmed by ^{1}H NMR.
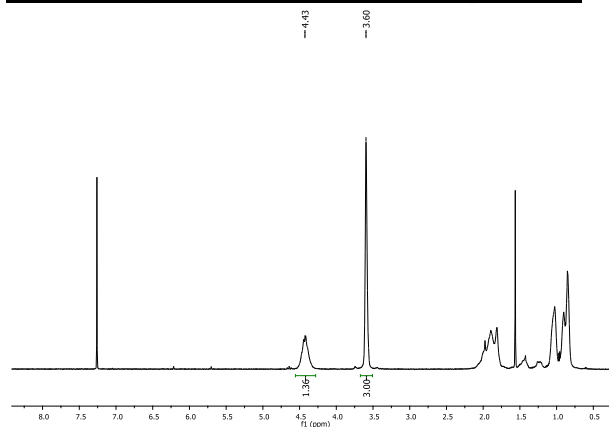
Thermal analysis
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).
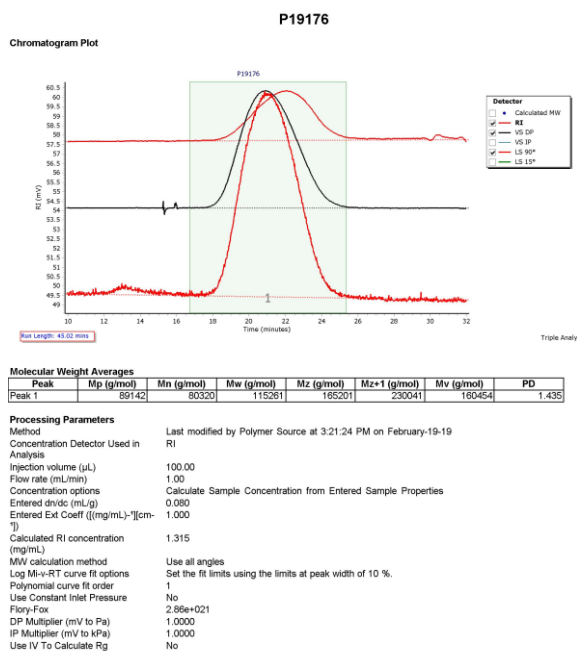
Solubility:
The polymer is soluble in $CHCl_3$ and THF.

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

SEC of the random copolymer:

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	89142	80320	115261	165201	230041	160454	1.435

Processing Parameters

Method	Last modified by Polymer Source at 3:21:24 PM on February-19-19
Concentration Detector Used in Analysis	RI
Injection volume (µL)	100.00
Flow rate (mL/min)	1.00
Concentration options	Calculate Sample Concentration from Entered Sample Properties
Entered dn/dc (mL/g)	0.080
Entered Ext Coeff ([(mg/mL)-¹][cm-¹])	1.000
Calculated RI concentration (mg/mL)	1.315
MW calculation method	Use all angles
Log Mi-v-RT curve fit options	Set the fit limits using the limits at peak width of 10 %.
Polynomial curve fit order	1
Use Constant Inlet Pressure	No
Flory-Fox	2.86e+021
DP Multiplier (mV to Pa)	1.0000
IP Multiplier (mV to kPa)	1.0000
Use IV To Calculate Rg	No

DSC Thermogram for the sample:

v.R-01