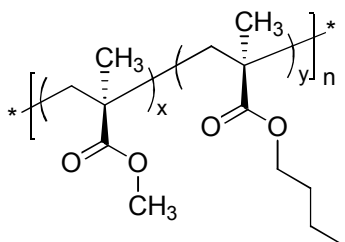Sample Name: **Poly(methyl methacrylate–*co*–n-butyl methacrylate)**, *isotactic-rich random copolymer*

Sample # **P40346-MMAnBuMAran-iso**

Structure:

Composition:

Mn x 10^3 (g/mol)	Mw/Mn
109.0	1.5

MMA : nBuMA (mol %)	58 : 42
T_g (^{o}C):	–14 °C
isotactic:	> 80%

Synthesis Procedure:

Poly(methyl methacrylate–*co*–n-butyl methacrylate) random copolymer was prepared by anionic polymerization.
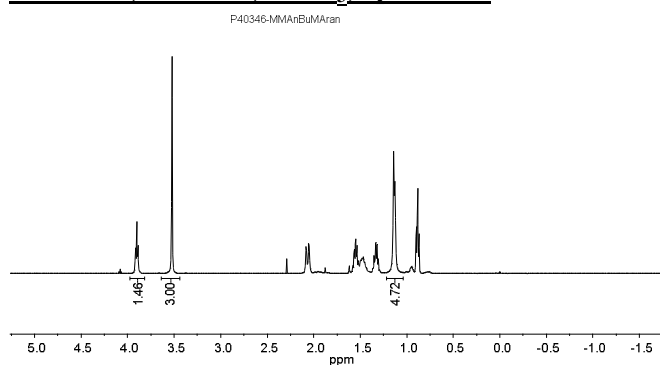
Characterization:

The molecular structure and tacticity of the polymer were confirmed by ^{1}H NMR spectroscopy analysis. The molecular weight and polydispersity index (M_w/M_n) of the polymer were obtained by size exclusion chromatography (SEC) using DMF as an eluent.

Thermal Analysis:

Thermal analysis was performed on TA Instruments Q100 differential scanning calorimeter (DSC) under a nitrogen atmosphere. The glass transition temperature (T_g) of the polymer was measured at a scan rate of 10°C/min shortly after creating thermal history of the sample.
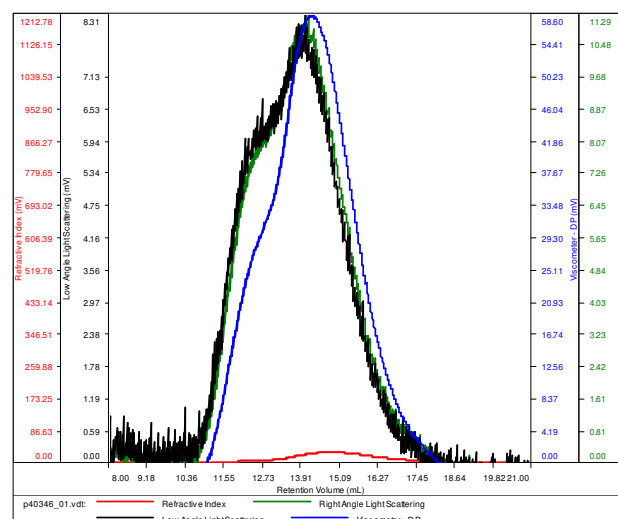
^{1}H NMR (500 MHz, CDCl$_3$) spectrum:

SEC elugram of the polymer in DMF:

P40346-MMAnBUMAran

Conc (mg/mL)	6.3284
dn/dc (mL/g)	0.0650
Method	PS80k_December-2016-0004.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS

Sample	Mn	Mw	Mp	Mw/Mn	IV
p40346_01.vdt	109,253	171,093	150,359	1.566	0.2860

DSC thermogram (2nd heating scan, 10°C/min):