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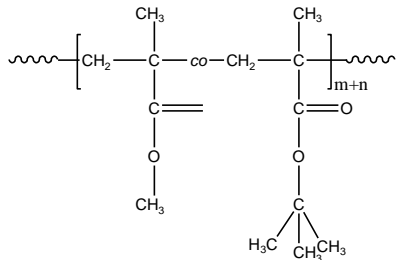**Random Copolymer Poly(methyl methacrylate-co-t-butyl methacrylate)**

Sample #: P5318-MMAtBuMAran

Structure:

Composition:
PMMA (85 mol%) :

Mn x 10^3 PMMA-co-PtBuMA	PDI
4.5	1.24

Synthesis Procedure:

Random Copolymer Poly(methyl methacrylate and tert.Butylmethacrylate) is prepared by either anionic or group transfer or radical polymerization of methyl methacrylate and t-butyl methacrylate.
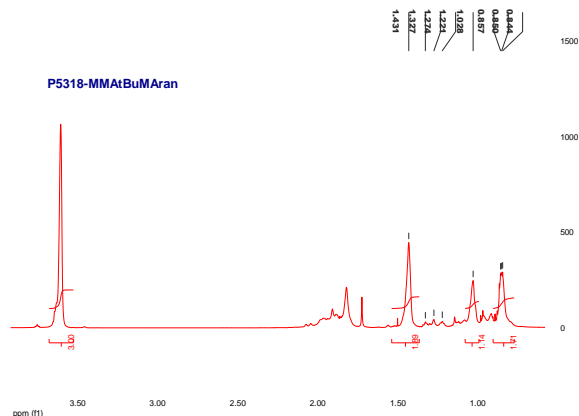
Characterization:
The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from ^{1}H-NMR spectroscopy by comparing the peak area the aromatic protons of ppm with the protons of methyl methacrylate at about ppm that deducts the contribution of the styrene back bone protons.
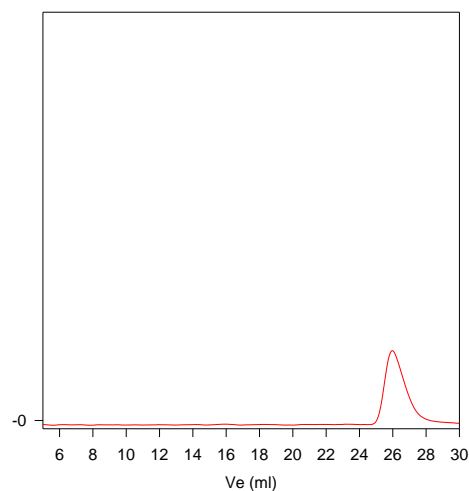
Solubility:
The polymer is soluble in $CHCl_3$, THF, DMF, toluene and precipitated out from methanol and water.

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

P5318-MMAtBuMAran

SEC of the random copolymer:
P5318-MMAtBuMAran

Size exclusion chromatograph of poly(MMA-co-tBuMA):
M_w=4500, M_n=5600, M_w/M_n=1.24
Composition by HNMR: PMMA: 85mol%