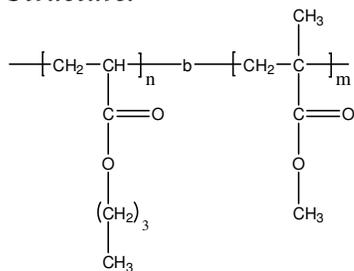


Sample Name: Poly(n-butyl acrylate-b-methyl methacrylate)

Sample #: P1091-nBuAMMA

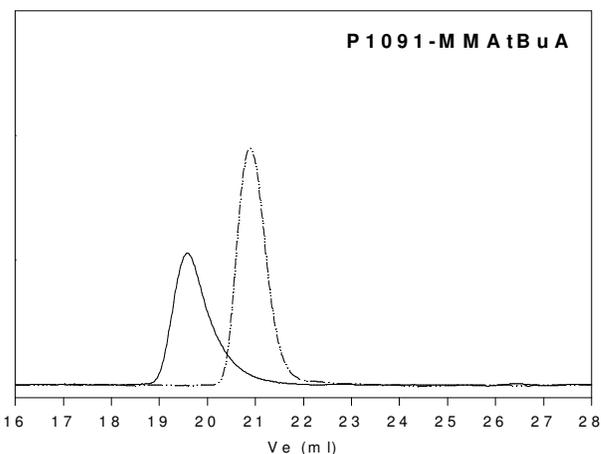
Structure:



Composition:

| Mn x 10 ³ PnBuA-PMMA | PDI |
|------------------------------------|------|
| 40.3-b-46.3 | 1.11 |

SEC of Sample P1091-nBuAMMA:



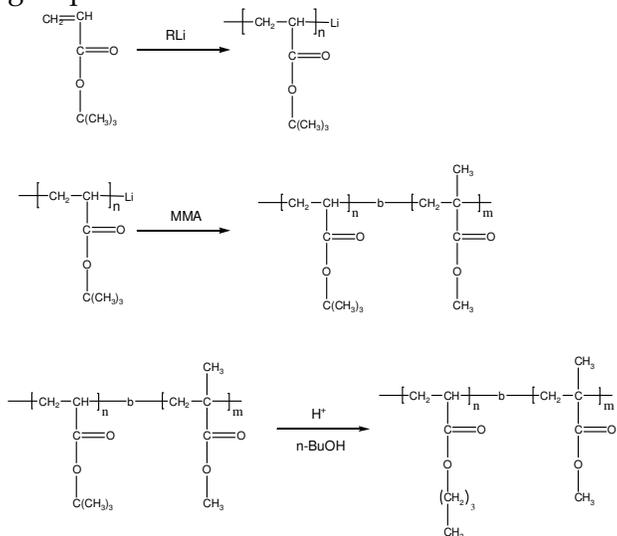
..... Poly(methyl methacrylate), $M_n = 46300$, $M_w = 50000$, $PI = 1.07$
 ——— Block Copolymer MMA(46300)-b-tBuA(40300), $PI = 1.11$

After transesterification:

Mn: PnBuA-b-PMMA: 40300-b-46300

Synthesis Procedure:

Poly(n-butyl acrylate-b-methyl methacrylate) is prepared by living anionic polymerization through sequence addition of poly(t-butyl acrylate) followed by methyl methacrylate and transesterification of the t-butyl group. The reaction scheme is shown below:



Characterization:

An aliquot of the anionic poly(t-butyl acrylate) block was terminated before addition of methyl methacrylate and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was determined by ¹H NMR by comparing t-butyl protons at about 1.43 ppm with the methyl methacrylate protons at about 3.6 ppm.

Solubility:

Poly(n-butyl acrylate-b-methyl methacrylate) is soluble in THF.