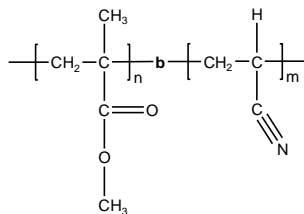


Sample Name:Poly(Methylmethacrylate-*b*-Acrylonitrile)**SEC profile of the block copolymer:****P14417-MMAACN****Sample #: P14417-MMAACN**

PMMA block rich in Syndiotactic fraction

Structure:**Composition:**

$M_n \times 10^3$ MMA- <i>b</i> -ACN	M_w/M_n (PDI)
11.0- <i>b</i> -1.1	1.20

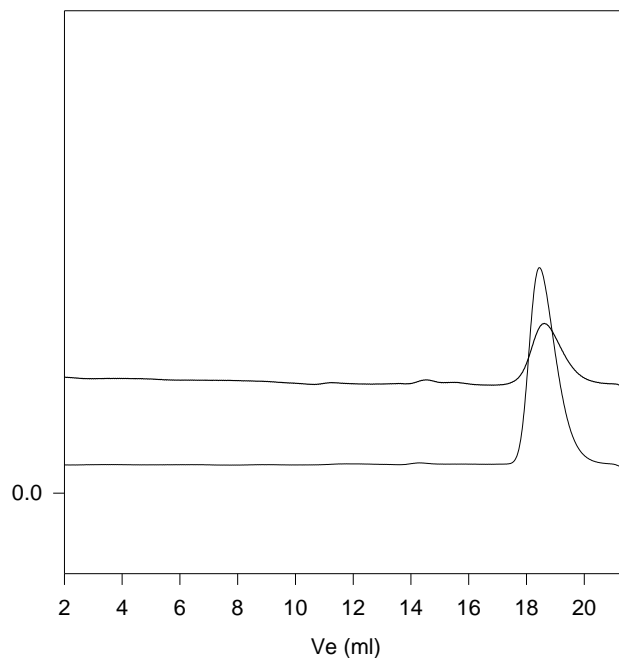
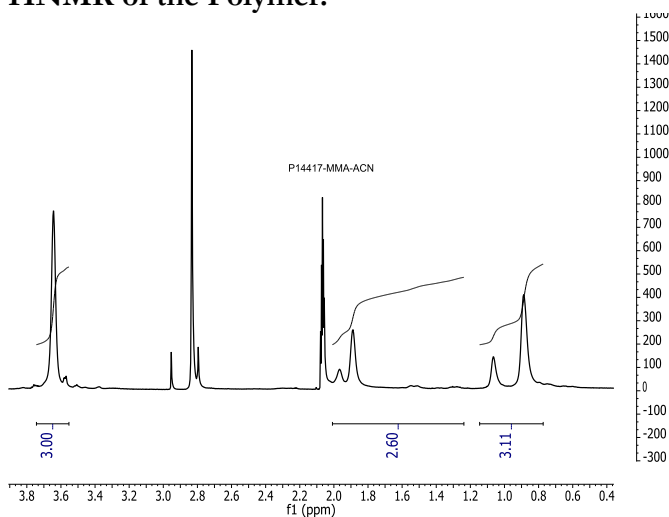
Synthesis Procedure:

Polymer is prepared by combination of anionic polymerization and controlled radical process.

Characterization: Block copolymer composition was calculated from $^1\text{H-NMR}$ spectroscopy by comparing the peak area of the Methyl ester protons at 3.6 ppm with the peak area and by subtracting the protons of backbone from MMA to Acrylonitrile.

Solubility:

Polymer is soluble in THF, Chloroform, DMF, and precipitated in methanol and hexanes.

 $^1\text{H-NMR}$ of the Polymer:

Size Exclusion Chromatography of Monohydroxy in THF

First Block of PMMA: $M_n=11,000$, $M_w = 12,600$, $PI=1.15$ PMMA-*b*-ACN: 11,000-*b*-1100 M_w/M_n 1.20