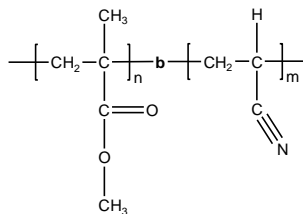


Sample Name:Poly(Methylmethacrylate-*b*-Acrylonitrile)**SEC profile of the block copolymer:****P14418-MMAACN****Sample #: P14418-MMAACN**

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> -0.3	1.20

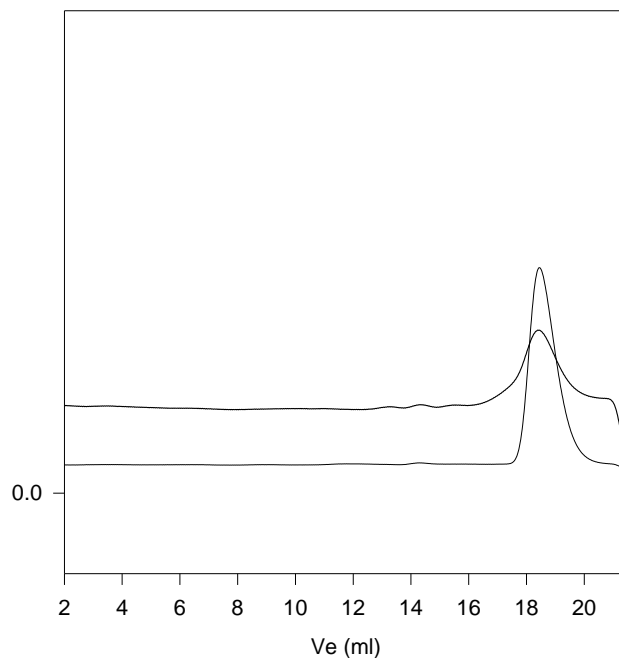
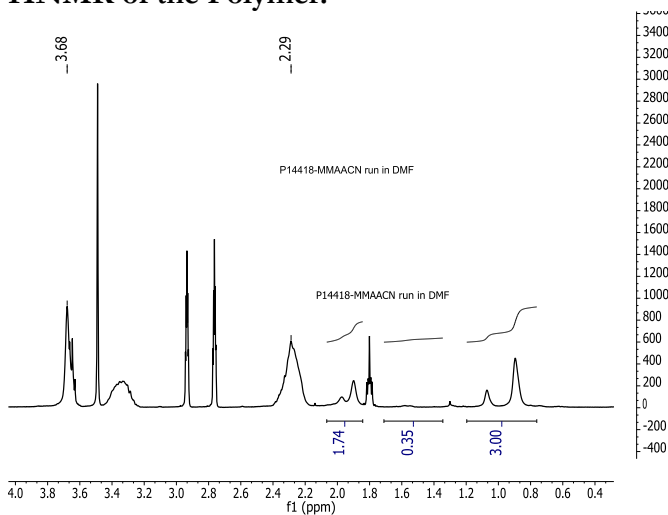
Synthesis Procedure:

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

Characterization: Block copolymer composition was calculated from ^1H -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.

 ^1H 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*-300 M_w/M_n 1.20