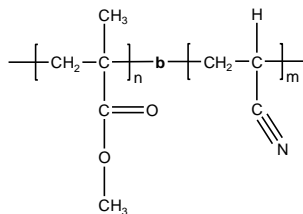


**Sample Name:****Poly(Methylmethacrylate-b-Acrylonitrile)****Sample #: P14416-MMAACN**

PMMA block rich in Syndiotactic fraction

**Structure:****Composition:**

$M_n \times 10^3$ MMA-b-ACN	$M_w/M_n$ (PDI)
11.0-b-1.0	1.20

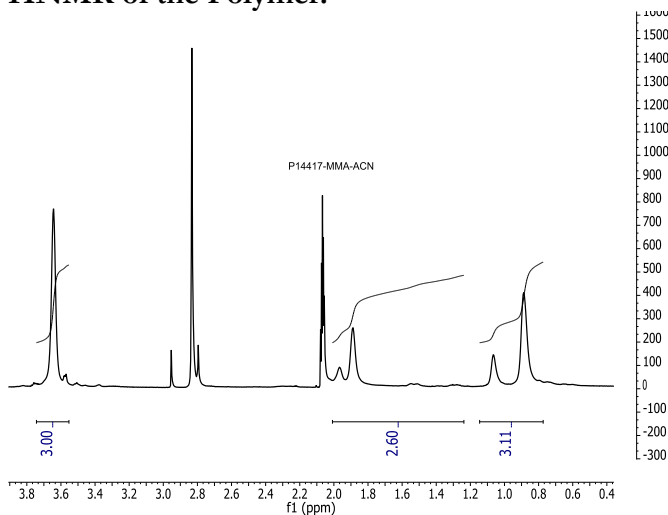
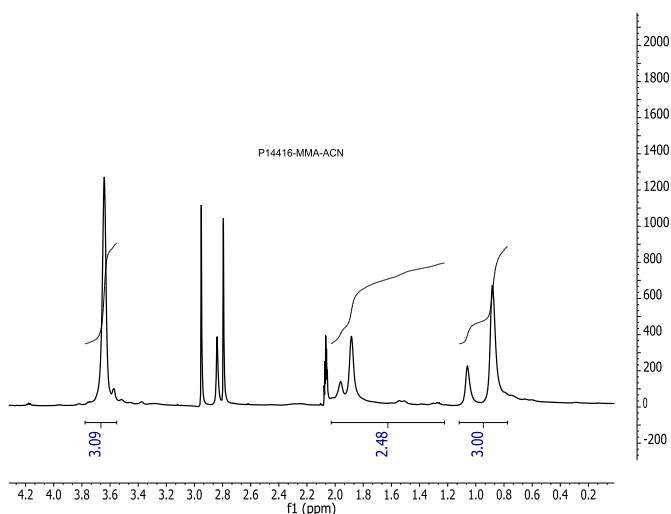
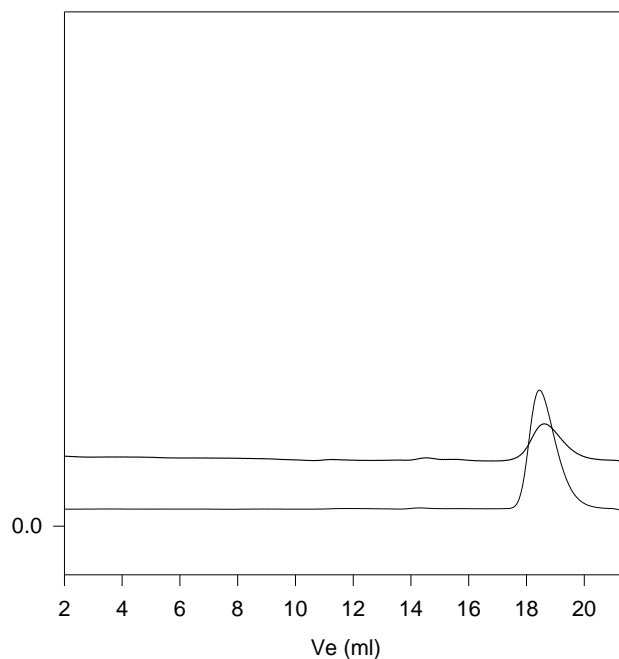
**Synthesis Procedure:**

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:****SEC profile of the block copolymer:****P14416-MMAACN**

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-1000  $M_w/M_n$  1.20