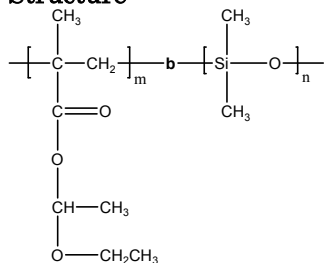


**Sample Name:** Poly(dimethyl siloxane-*b*-ethoxy ethyl methacrylate)

**Sample #** P5726-DMSEtOEtMA

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> DMS- <i>b</i> -EtOEtMA	Mw/Mn (PDI)
5.0- <i>b</i> -0.50	1.15

**Synthesis Procedure:**

Poly(dimethylsiloxane-*b*- ethoxy ethyl methacrylate) is prepared by living anionic polymerization of hexamethyl cyclotrisiloxane followed by controlled radical polymerization of 1-ethoxyethyl methacrylate. The reaction scheme is illustrated below:

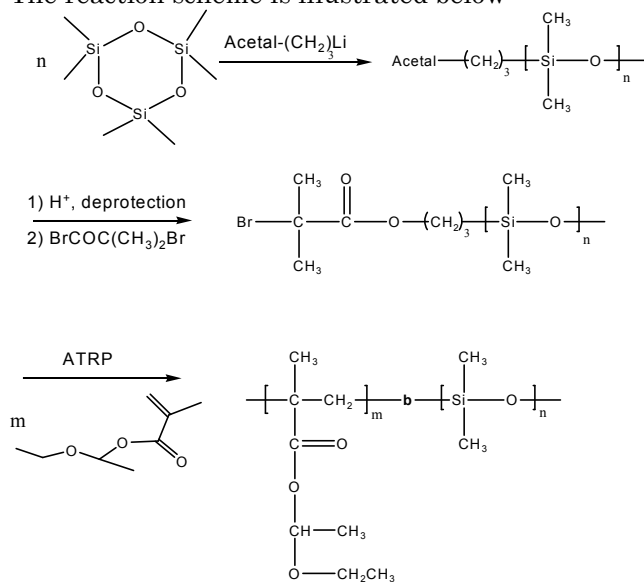
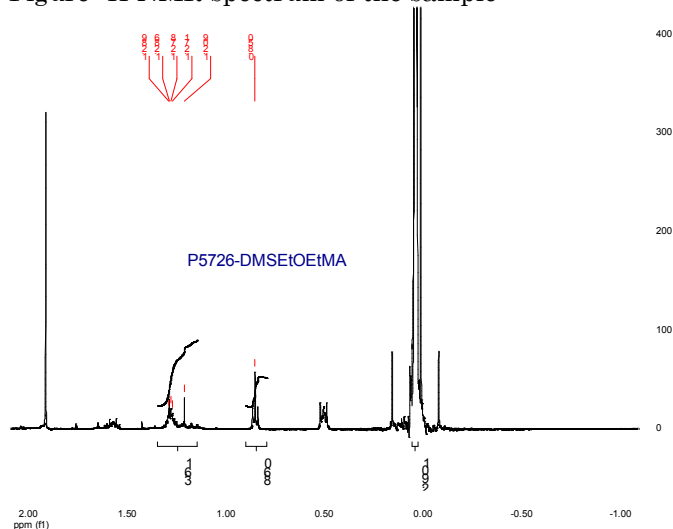


Figure: <sup>1</sup>H NMR spectrum of the sample



**Characterization:**

An aliquot of the anionic poly(dimethyl siloxane) block was terminated before addition of 1-ethoxyethyl methacrylate and analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The final block copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the dimethyl siloxane protons near 0 ppm with the ethoxyethyl methacrylate protons at about 3.7-3.8 ppm (OCH<sub>2</sub>-). Block copolymer PDI is determined by SEC.

**Solubility:**

Poly(dimethylsiloxane-*b*- ethoxy ethyl methacrylate) is soluble in THF and in CHCl<sub>3</sub> it swell. .