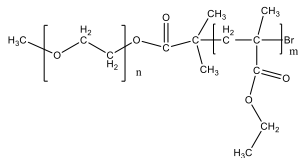


**Sample Name:** Poly(ethylene oxide-b-Ethyl methacrylate)

**Sample #:** P43913-EOEtMA

**Structure:**

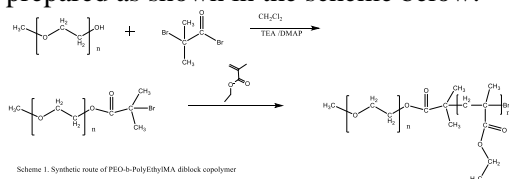


**Composition:**

Mn x 10 <sup>3</sup> PEO-b-EtMA	PDI
5.0-b-6.5	2.4

**Synthesis Procedure:**

Poly(Ethylene oxide-ethyl methacrylate) is prepared as shown in the scheme below:



Scheme 1. Synthetic route of PEO-b-PolyEthylMA diblock copolymer

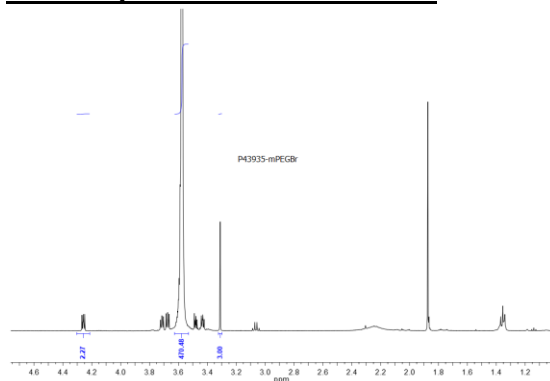
**Characterization:**

Polymer composition was determined by H NMR taking the integration of PEG block at 3.66 ppm and methyl ester of EtMA block at 3.92 ppm. Molecular weights of the first block and the Mw/Mn of the final and the first block was determined by SEC in THF.

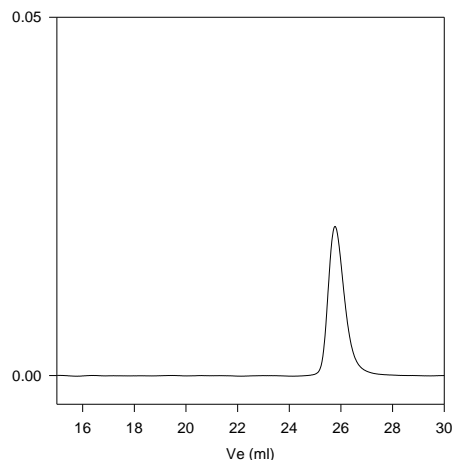
**Solubility:**

Poly(ethylene oxide -b- EtMA) is soluble in CHCl<sub>3</sub>, THF, toluene. The polymer precipitated out from hexane.

**HNMR spectrum of the mPEGBr:**



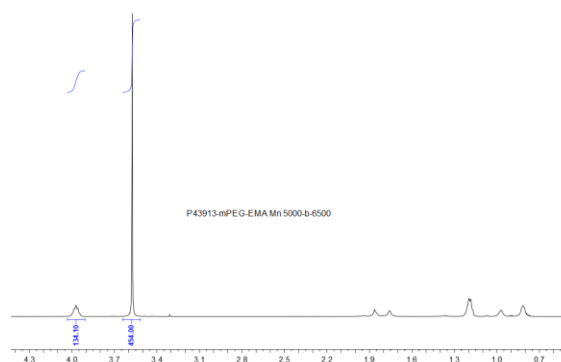
**SEC profile of the PEG Sample:**  
P43935-EGOCH3Br



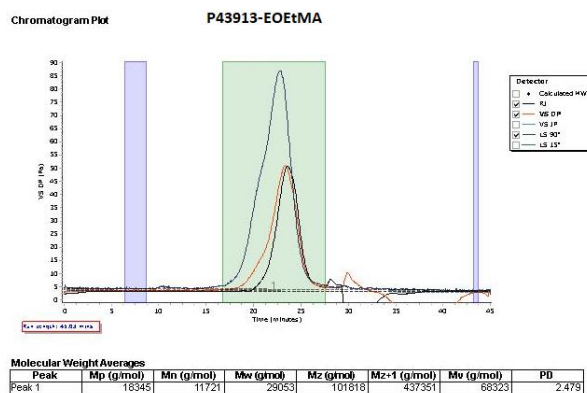
Size exclusion chromatography:

— Bromo terminated Poly(ethylene glycol methyl ether),  
M<sub>n</sub>=5,000, M<sub>w</sub>=5,400, PDI=1.06

**<sup>1</sup>H-NMR Spectrum of the block copolymer:**



**SEC elugram of the block copolymer:**



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mw (g/mol)	PDI
Peak 1	16345	11721	28053	101818	437351	66323	2.478