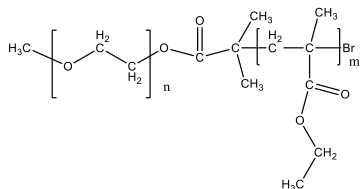


Sample Name: Poly(ethylene oxide)-b-Poly(ethyl methacrylate)

Sample #: P43922-EOEtMA

Structure:

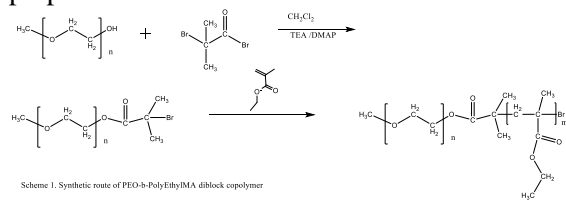


Composition:

| | |
|---|------------|
| Mn x 10 ³ PEO-b-EtMA 5.0-b-6.8 | PDI 1.4 |
|---|------------|

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

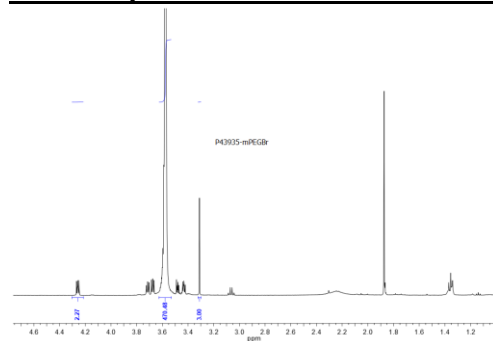
Characterization:

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:

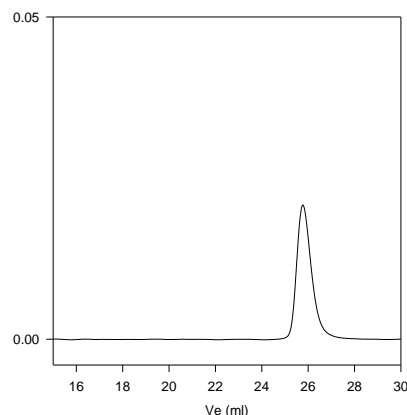
Poly(ethylene oxide -b- EtMA) is soluble in CHCl₃, THF, toluene. The polymer precipitated out from hexane.

H NMR spectrum of the PEGBr Mn of 5000:



SEC profile of the PEG Sample:

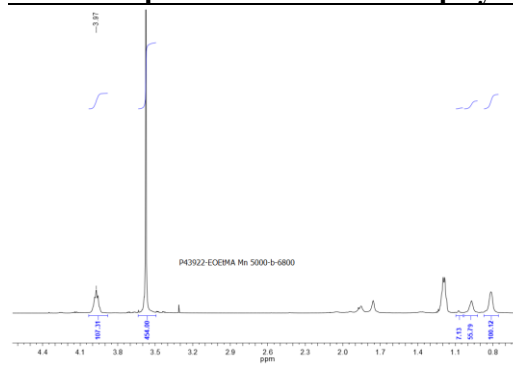
P43935-EGOCH3Br



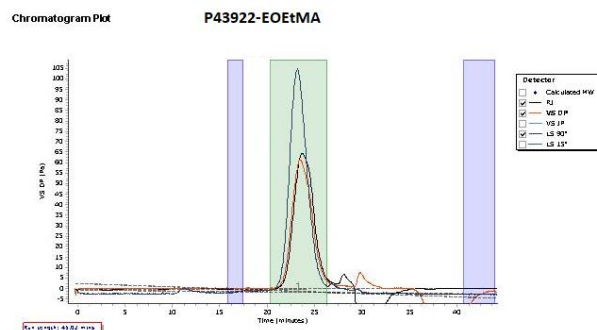
Size exclusion chromatography:

— Bromo terminated Poly(ethylene glycol methyl ether),
M_n=5,000, M_w=5,400, PI=1.06

¹H-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) | Me (g/mol) | PD |
|--------|------------|------------|------------|------------|--------------|------------|-------|
| Peak 1 | 15970 | 11720 | 16950 | 23987 | 33418 | 21578 | 1.446 |

