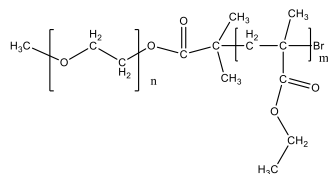


Sample Name: Poly(ethylene oxide)-b-Poly(ethyl methacrylate)

Sample #: P43924-EOEtMA

Structure:

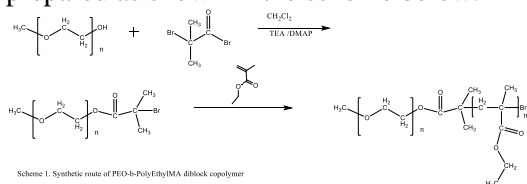


Composition:

Mn x 10 ³ PEO-b-EtMA	PDI
5.0-b-6.0	1.14
Microstructure of Poly EtMA S:H:I contents= 60:36:4	

Synthesis Procedure:

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



Scheme 1. Synthetic route of PEO-b-Poly(EtMA) diblock copolymer

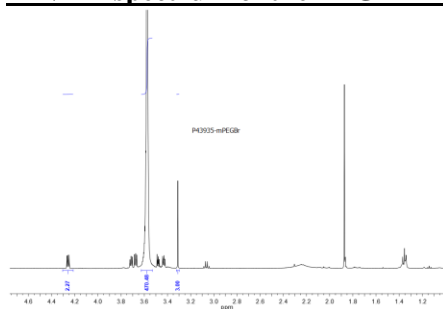
Characterization:

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:

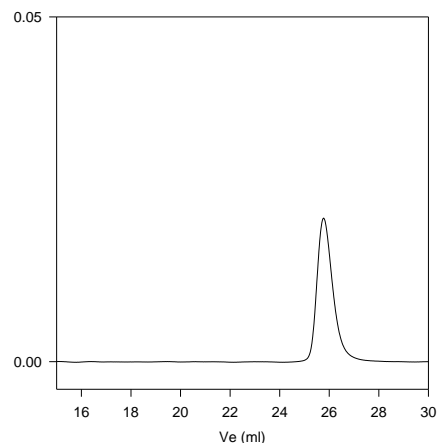
Poly(ethylene oxide -b- EtMA) is soluble in CHCl₃, THF, toluene. The polymer precipitated out from hexane.

H NMR spectrum of the PEGBr Mn of 5000:



SEC profile of the Sample:

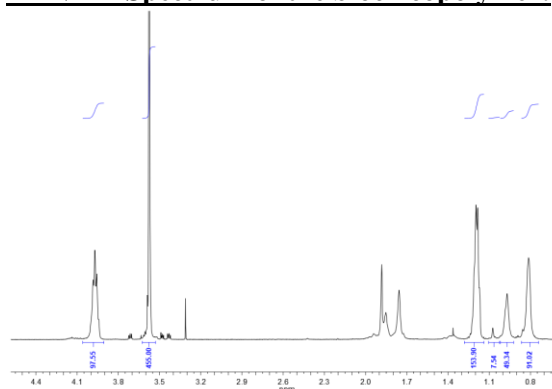
P43935-EGOCH3Br



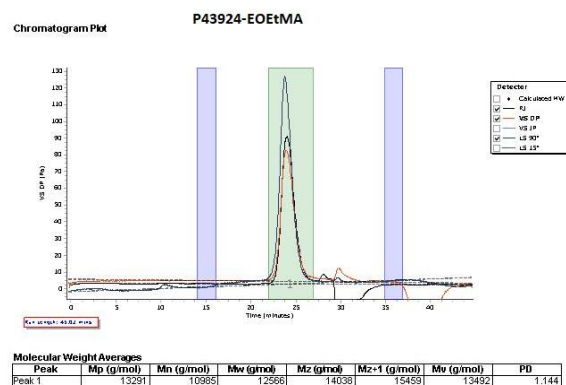
Size exclusion chromatography:

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

¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:



Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz-1 (g/mol)	Mz (g/mol)	PDI
Peak 1	13201	10985	12560	14038	15439	13492	1.144