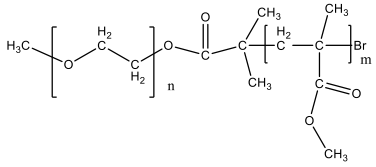
Sample Name:
Poly(ethylene oxide-b-methyl methacrylate)

Sample #: **P43921-EOMMA**

Structure:

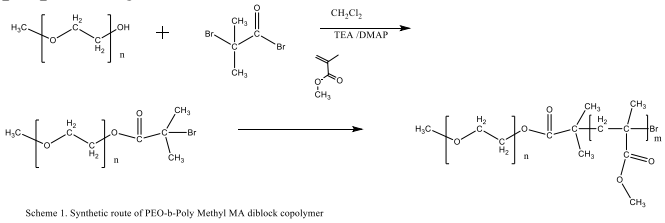


Composition:

Mn x 10^3 PEO-b-MMA	PDI
5.0-b-5.4	1.32
Microstructure of PMMA block S:h:iso 60:37:3	

Synthesis Procedure:

Poly(Ethylene oxide-methyl methacrylate) is prepared by ATRP Process:



Scheme 1. Synthetic route of PEO-b-Poly Methyl MA diblock copolymer

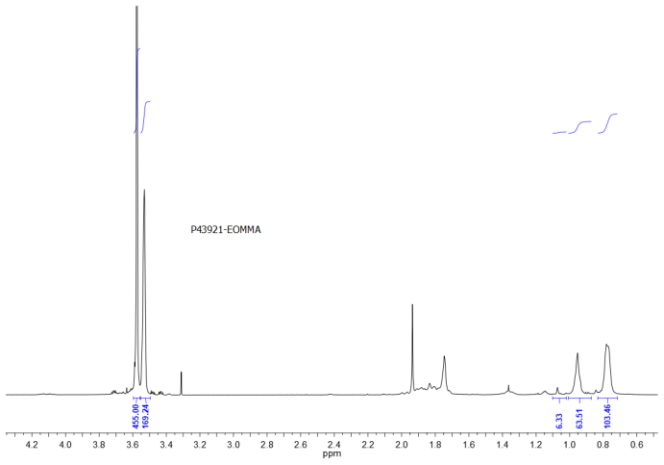
Characterization:

Polymer composition was determined by H NMR taking the integration of PEG block at 3.66 ppm and methyl ester of PMMA block at 3.62 ppm. Molecular weights of the first block and the Mw/Mn of the final and the first block was determined by SEC in THF.

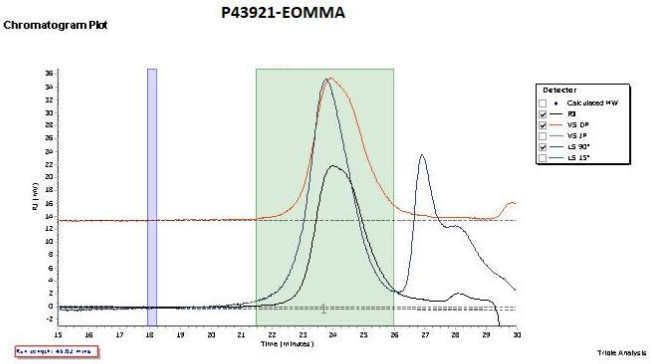
Solubility:

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

^{1}H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	14274	10257	13611	18292	25596	16301	1.327