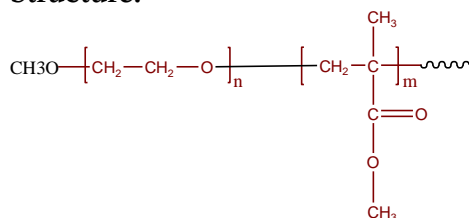


Sample Name:

Poly(ethylene oxide-b-methyl methacrylate)

Sample #: **P3041B-EOMMA**

Structure:

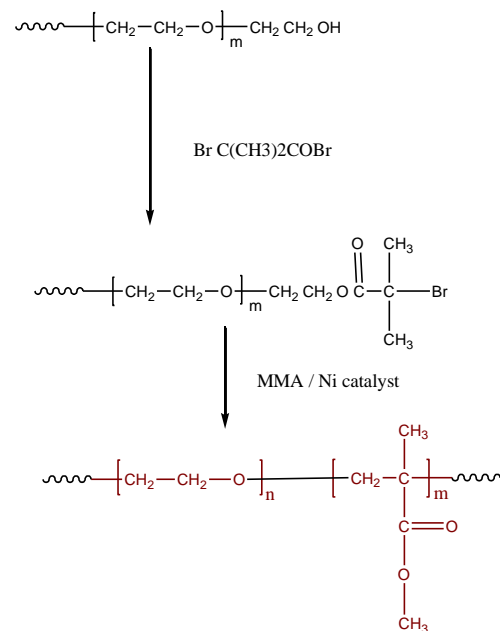


Composition:

Mn x 10 ³ PEO-b-MMA	PDI
3.5-b-1.7	1.10

Synthesis Procedure:

Poly(Ethylene oxide-methylmethacrylate) is prepared as the scheme below:



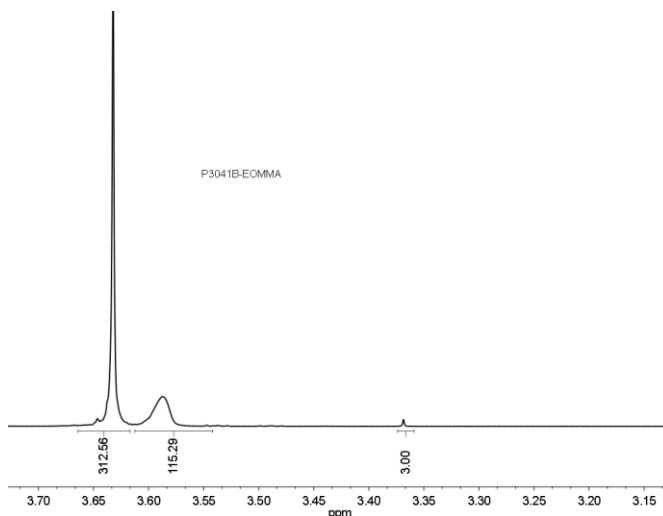
Characterization:

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:

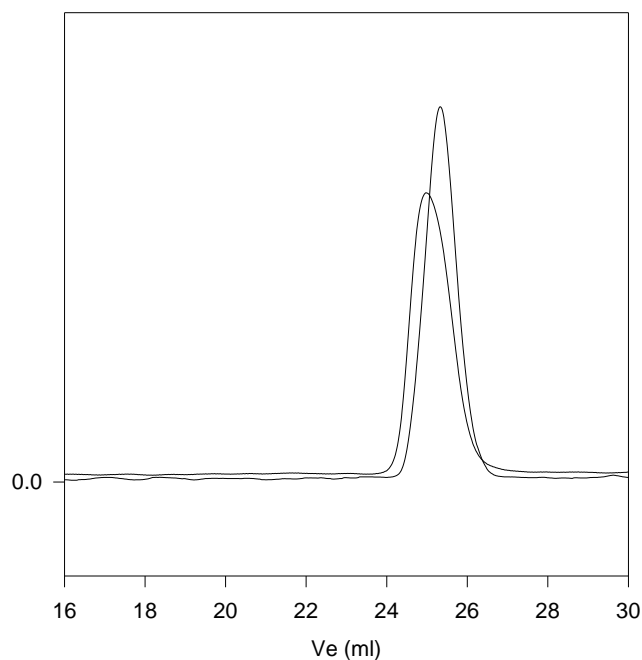
Poly(ethylene oxide -b- MMA) is soluble in CHCl_3 , THF, toluene. The polymer precipitated out from hexane.

¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

P3041B-EOMMA



Size exclusion chromatography of poly(EO-b-MMA)

— PEO, $M_n=3500$, $M_w=3,700$, $M_w/M_n=1.06$

— Poly(ethylene oxide-b-methyl methacrylate)

Mn: PEO(3500)-b-MMA(1700) $M_w/M_n=1.15$