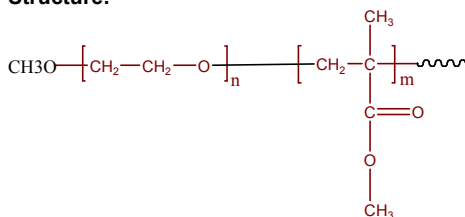


Sample Name:

Poly(ethylene oxide-b-methylmethacrylate)

Sample #: P4987-EOMMA

Structure:

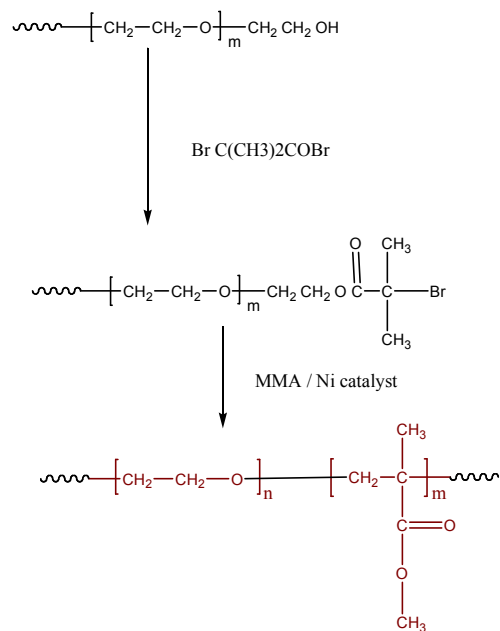


Composition:

Mn x 10 ³ PEO-b-MMA	PDI
11.0-b-8.0	1.15

Synthesis Procedure:

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



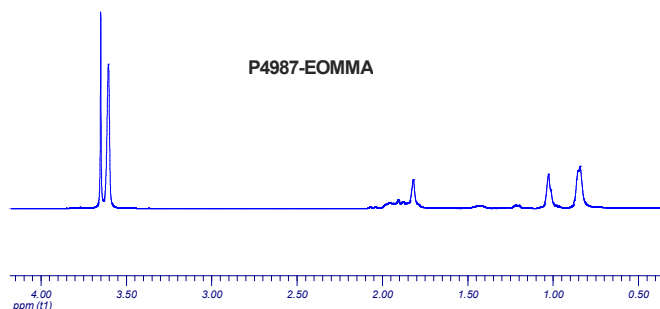
Characterization:

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:

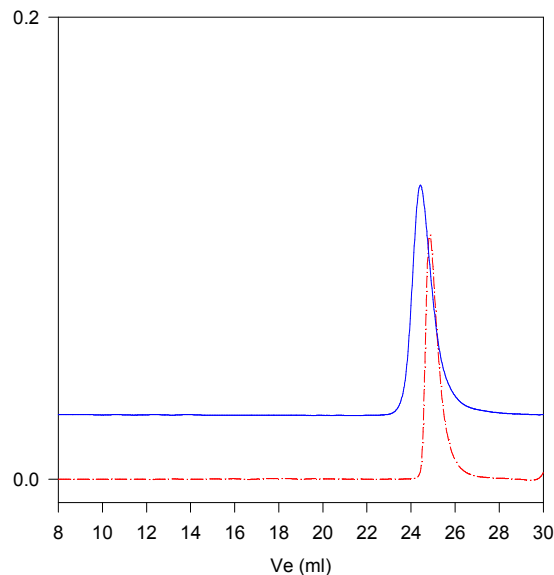
Poly(ethylene oxide -b- MMA) is soluble in CHCl_3 , THF, toluene. The polymer precipitated out from hexane.

¹H-NMR Spectrum of the block copolymer:



SEC of the block copolymer:

P4987-EOMMA



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

--- PEO, $M_n=11000$, $M_w=11600$, $M_w/M_n=1.05$

— Poly(ethylene oxide-b-methyl methacrylate)

Mn: PEO(11000)-b-MMA(8000) $M_w/M_n=1.15$

From Light scattering: dn/dc 0.070dl/g

Solution viscosity in THF at 35 oC: 0.269dl/g Radius of Gyration: 5.71nm