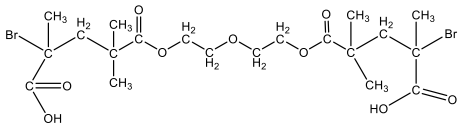
Sample Name:
Poly(methacrylic acid)-b-poly(ethylene oxide)-b-poly(methacrylic acid) acid

Sample #: **P43883B-MAAEOMAA**

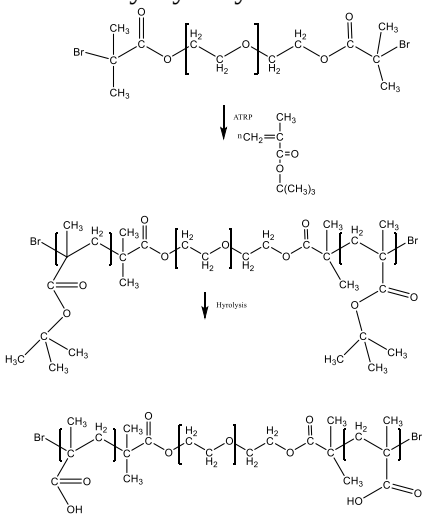
Structure:



Composition:

Mn x 10^3 PMAA-b-EO-MAA	PDI
3.0-b-5.0-3.0	1.6
tBuMA-EO-tBuMA 5.0-b-5.0-b-5.0	

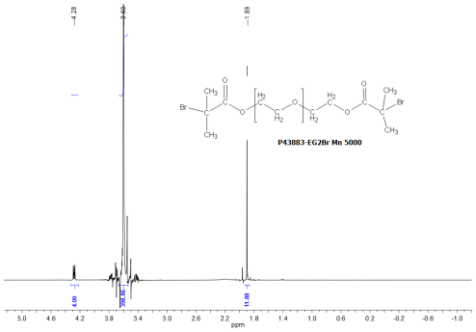
Synthesis Procedure:
Bromo terminated Poly(ethylene glycol methyl ether) was prepared by reaction of OH terminated PEG with α-Bromoisobutyryl bromide. Dibromo PEO was used in ATRP process for the polymerization of tBuMA followed by Hydrolysis of ester to COOH.



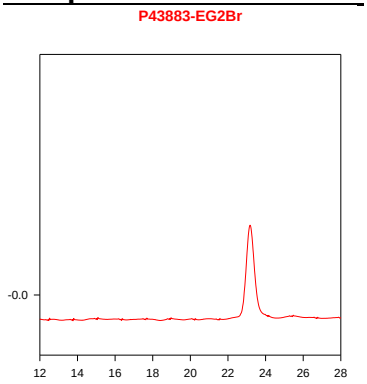
Characterization:
The product was characterized by size exclusion chromatography (SEC), FTIR and ^{1}H NMR data analysis.

Solubility:
Polymer is soluble in water, methanol, ethanol, and THF.

HNMR spectrum of the PEG-2Br:



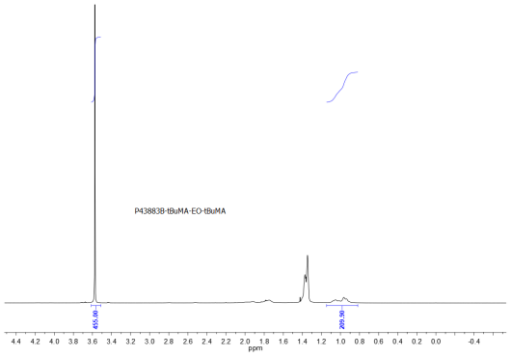
SEC profile of the PEG-2Br:



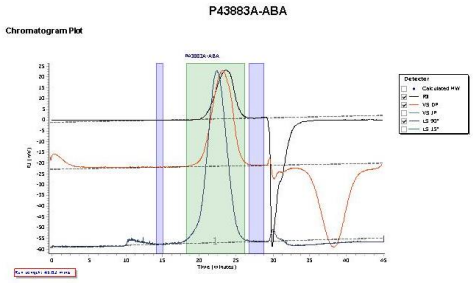
Size exclusion chromatograph of poly(ethylene glycol):

M_n=5000, M_w=5,200, Mw/Mn 1.09

HNMR spectrum of tBuMA-EO-tBuMA:



SEC profile of the tBuMA-EO-tBuMA:



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	19800	16446	26957	44436	68675	38041	1.639

After Hydrolysis of tBuMA ester
Mn PMAA-b-EO-MAA 3000-b-5,000-b-3,000