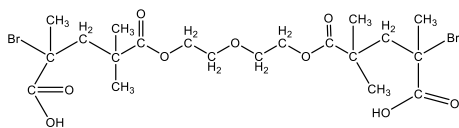


Sample Name:

Poly(methacrylic acid)-b-poly(ethylene oxide)-b-poly(methacrylic acid)

Sample #: **P43885A-MAAEOMAA**

Structure:

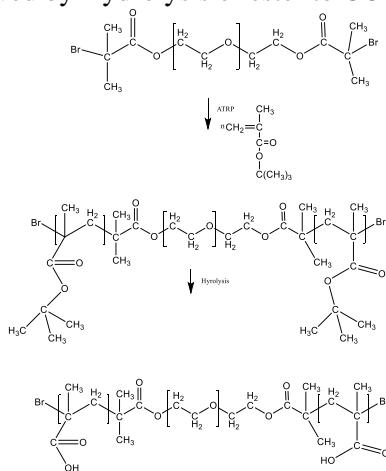


Composition:

Mn x 10 ³	PDI
PMAA-b-EO-MAA	
1.5-b-3.0-1.5	2.3
tBuMA-EO-tBuMA	
2.5-b-3.0-b-2.5	

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.



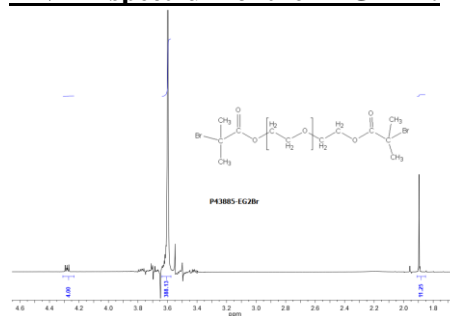
Characterization:

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

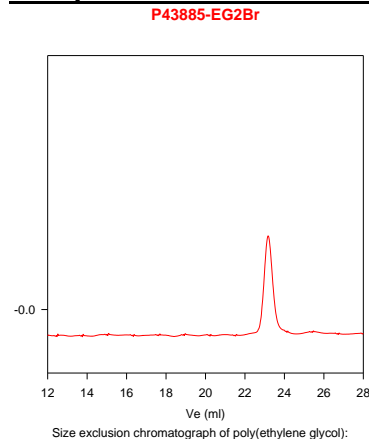
Solubility:

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

HNMR spectrum of the PEG-2Br:

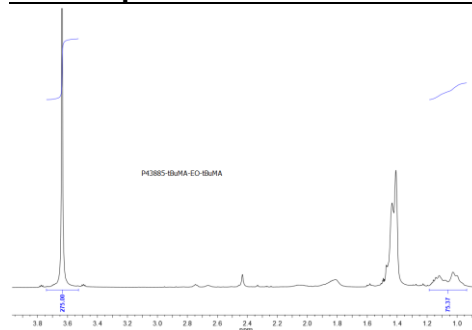


SEC profile of the PEG-2Br:

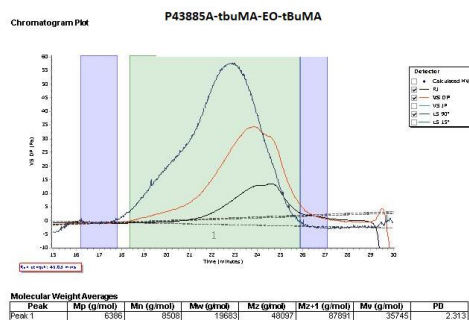


M_n=3,000, M_w=3300, PI=1.10

HNMR spectrum of tBuMA-EO-tBuMA:



SEC profile of the tBuMA-EO-tBuMA:



After Hydrolysis of tBuMA ester

Mn PMAA-b-EO-MAA 1,500-b-3,000-b-1,500