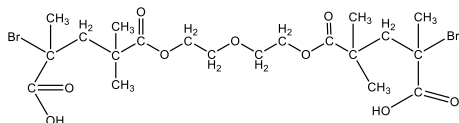


Sample Name:

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

Sample #: **P43901-MAAEOMAA**

Structure:

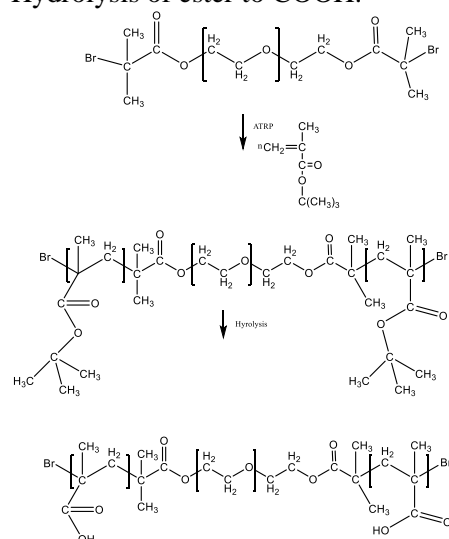


Composition:

Mn x 10 ³	PDI
PMAA-b-EO-MAA	
5.0-b-10-5.0	1.45
tBuMA-EO-tBuMA	
8.0-b-10-b-8.0	

Synthesis Procedure:

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



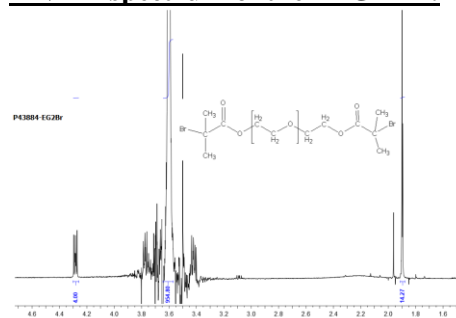
Characterization:

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

Solubility:

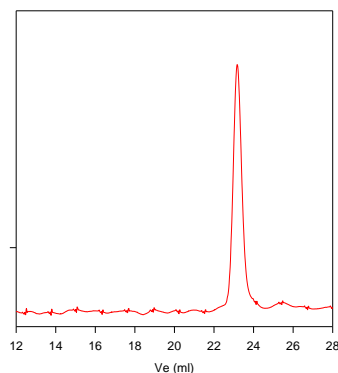
Polymer is soluble in water, methanol, ethanol, and THF.

¹H NMR spectrum of the PEG-2Br:



SEC profile of the PEG-2Br:

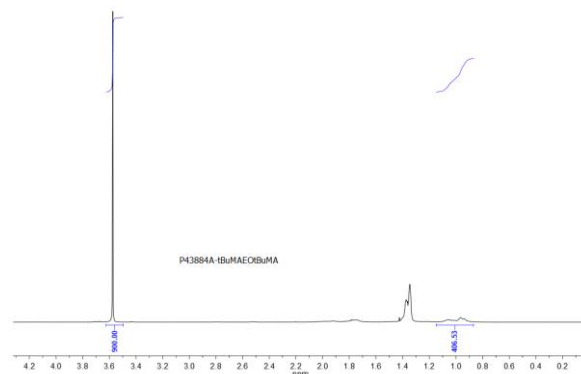
P43884-EG2Br



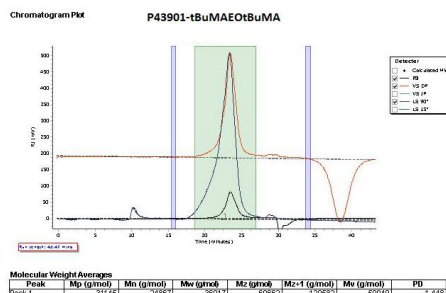
Size exclusion chromatograph of EG2Br:

M_n=10,000, M_w=11,000, PDI=1.09

¹H NMR spectrum of tBuMA-EO-tBuMA:



SEC profile of the tBuMA-EO-tBuMA:



After Hydrolysis of tBuMA ester
Mn PMAA-b-EO-MAA: 5,000-b-10,000-b-5,000