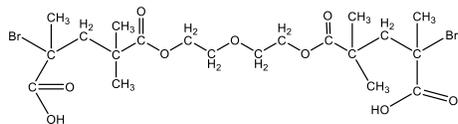


**Sample Name:**

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

**Sample #: P43884B-MAAEOMAA**

**Structure:**

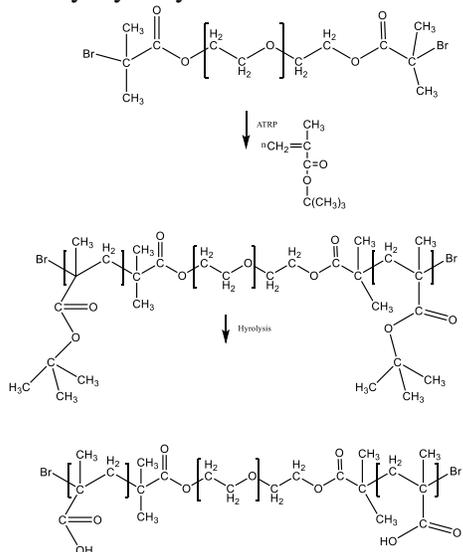


**Composition:**

Mn x 10 <sup>3</sup>	PDI
PMAA-b-EO-MAA	1.45
9.0-b-10.0-9.0	
tBuMA-EO-tBuMA	
16.0-b-10.0-16.0	

**Synthesis Procedure:**

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



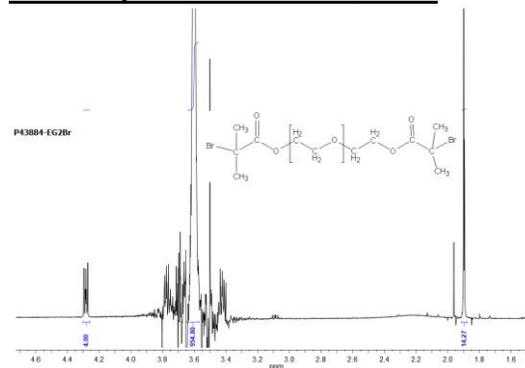
**Characterization:**

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

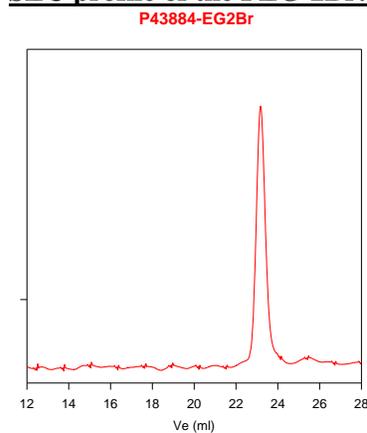
**Solubility:**

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

**HNMR spectrum of the PEG-2Br:**



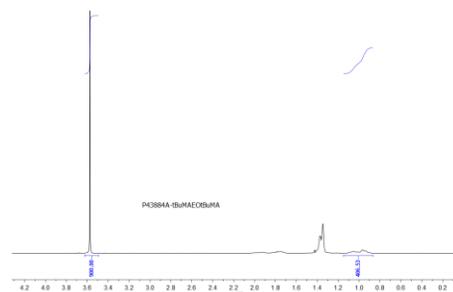
**SEC profile of the PEG-2Br:**



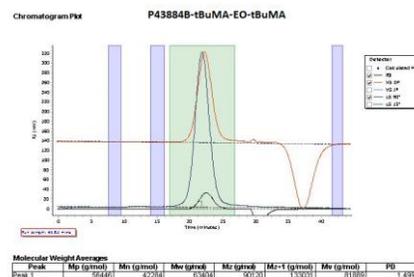
Size exclusion chromatograph of EG2Br:

M<sub>n</sub>=10,000, M<sub>w</sub>=11,000, PDI=1.09

**HNMR spectrum of tBuMA-EO-tBuMA:**



**SEC profile of the tBuMA-EO-tBuMA:**



After Hydrolysis of tBuMA ester

Mn PMAA-b-EO-MAA 9,000-b-10,000-b-9,000