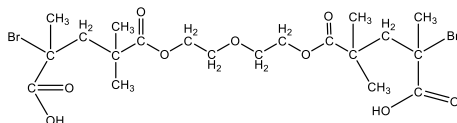


Sample Name:

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

Sample #: **P43883A-MAAEOMAA**

**Structure:**

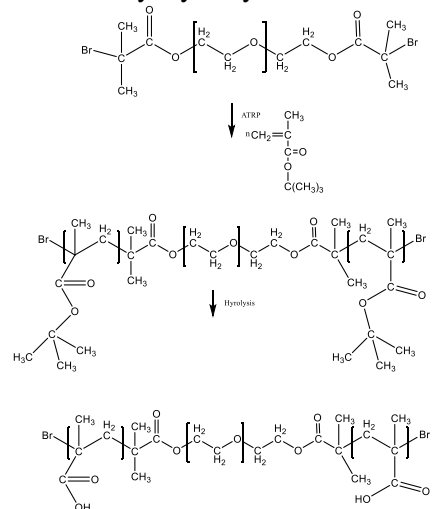


**Composition:**

Mn x 10 <sup>3</sup>	PDI
PMAA-b-EO-MAA	
3.0-b-5.0-3.0	2.6
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  $\alpha$ -Bromoisobutyryl bromide. Dibromo PEO was used in ATRP process for the polymerization of tBuMA followed by Hydrolysis of ester to COOH.



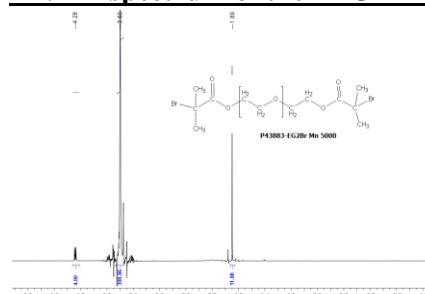
**Characterization:**

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

**Solubility:**

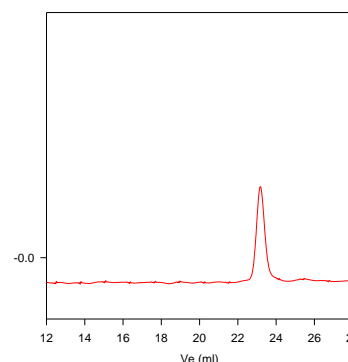
Polymer is soluble in water, methanol, ethanol, and THF.

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



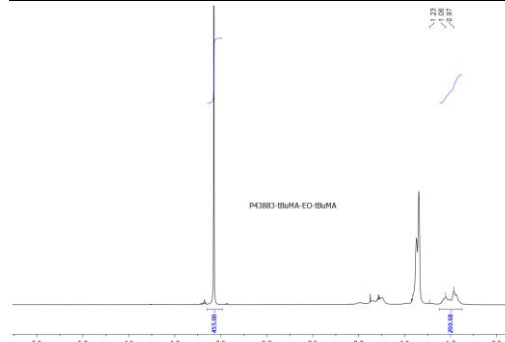
**SEC profile of the PEG-2Br:**

P43883-EG2Br

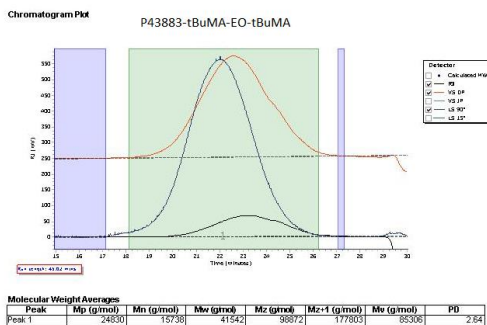


M<sub>n</sub>=5000, M<sub>w</sub>=5,200, Mw/Mn 1.09

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



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



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