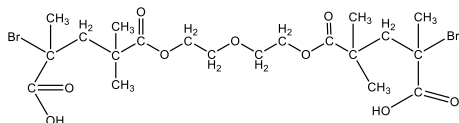


Sample Name:

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

Sample #: P43901A-MAAEOMAA

**Structure:**

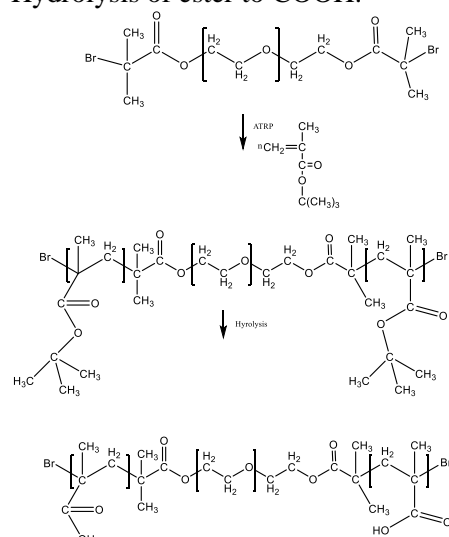


**Composition:**

Mn x 10 <sup>3</sup>	PDI
PMAA-b-EO-MAA	
3.0-b-10-3.0	1.45
tBuMA-EO-tBuMA	
4.5-b-10-b-4.5	

**Synthesis Procedure:**

Bromo terminated Poly(ethylene glycol) 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.



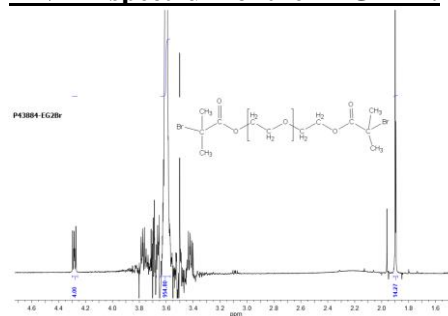
**Characterization:**

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

**Solubility:**

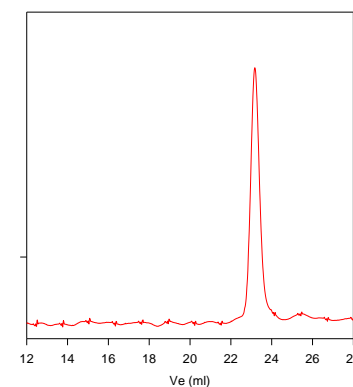
Polymer is soluble in water, methanol, ethanol, and THF.

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



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

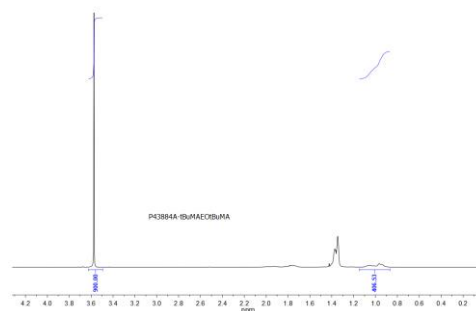
P43884-EG2Br



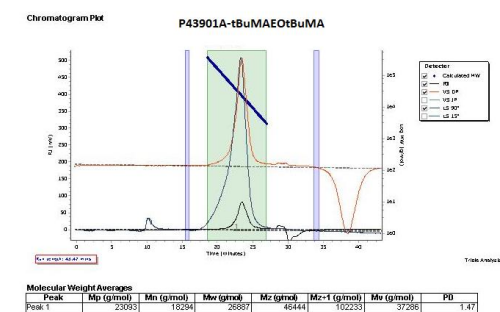
Size exclusion chromatograph of EG2Br:

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 3,000-b-10,000-b-3,000