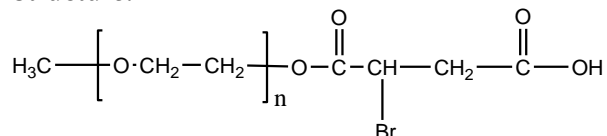


Sample Name:

α -Bromo α' -COOH ω -methoxy end functionalized Poly(ethylene glycol)

Sample #: P8281-EGBrCOOH

Structure:

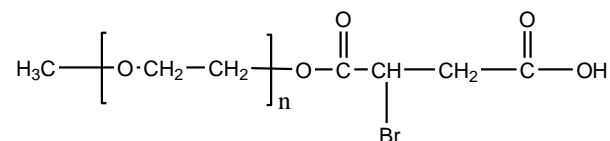
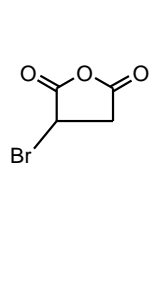
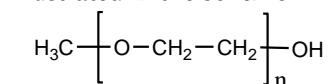


Composition:

Mn x 10 ³	PDI
5.0	1.06

Synthesis Procedure:

Bromo terminated Poly(ethylene glycol methyl ether) was prepared by reaction of OH terminated PEG as illustrated in the scheme:



Characterization:

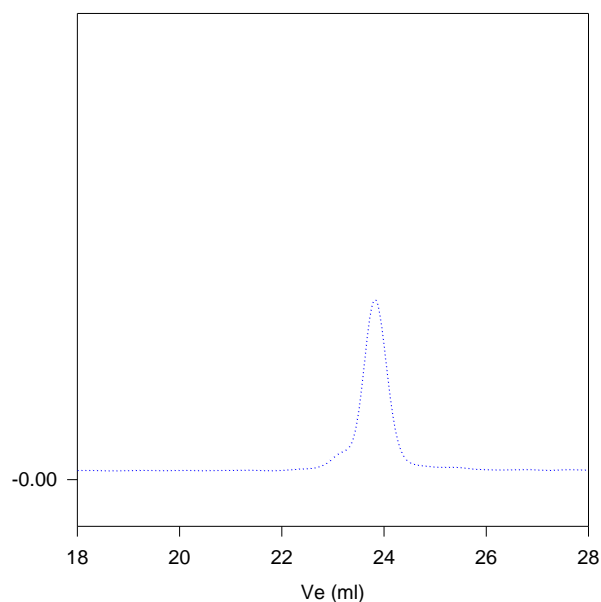
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector. Polymer functionality was verified by FTIR/H NMR depending on the molecular weights. Furthermore the quantitative yield of the end functionalization was also proven in the extinction of the polymer in the ATRP process to synthesize different diblock copolymers.

Solubility:

Polymer is soluble in water, methanol and ethanol, THF, CHCl₃. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

SEC of Sample:

PEG-OCH₃-5K Precursor for P8281-EGBrCOOH



Size Exclusion Chromatography of Polyethylene glycol mono-methyl ether

M_n=5000, M_w=5500, PI=1.06

H NMR Spectrum of the Product:

