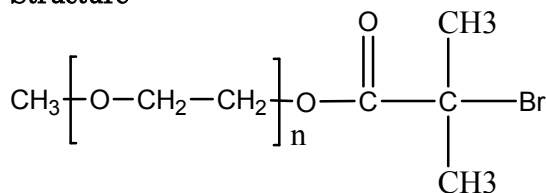


Sample Name:

**Bromo end functionalized Poly(ethylene glycol) methyl ether**

Sample #: P11302A-EGOCH3Br

**Structure:**

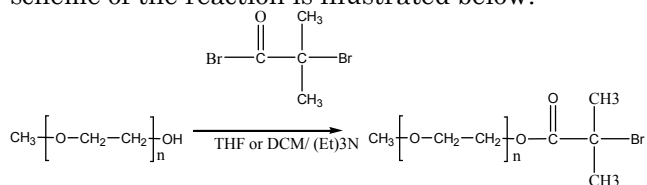


**Composition:**

Mn x 10 <sup>3</sup>	PDI
22.5	1.09
Functionality Br	>99%

**Synthesis Procedure:**

Bromo terminated Poly(ethylene glycol methyl ether) was prepared by reaction of OH terminated PEG with  $\alpha$ -Bromoisobutyryl bromide in DCM or in THF in the presence of triethyl amine. The scheme of the reaction is illustrated below.

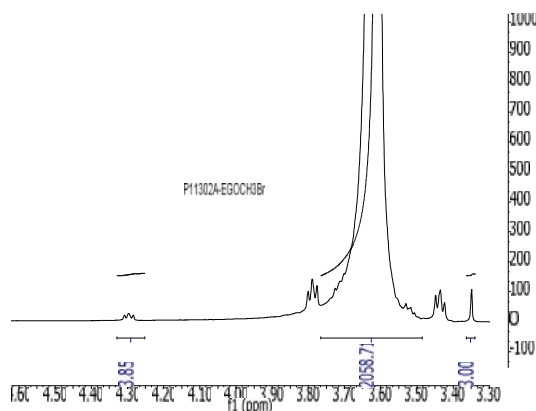


**Characterization:**

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.

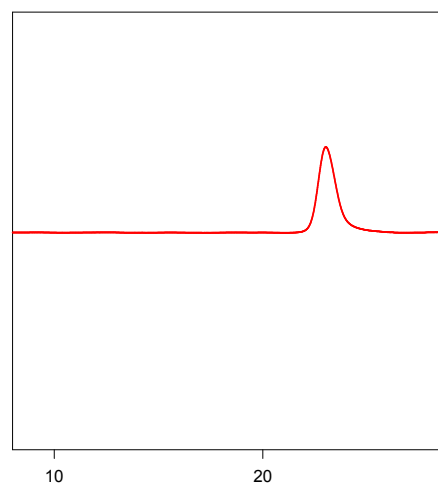
**Solubility:**

Polymer is soluble in water, methanol and ethanol, THF, CHCl<sub>3</sub>. It is precipitated out from cold ethanol, isopropanol, hexane and ether.



**SEC of Sample:**

**P11302A-EGOCH3Br**



Size exclusion chromatography of the product:

— Poly(ethylene glycol methyleher) : M<sub>n</sub>=22,500, M<sub>w</sub>=24,000, M<sub>w</sub>/M<sub>n</sub>=1.09

**FTIR Spectrum of the Product:**

