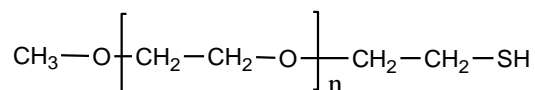


Sample Name:

**Thiol Terminated Poly(ethylene glycol)methyl ether**

Sample #: P8697-EGOCH3SH

**Structure:**

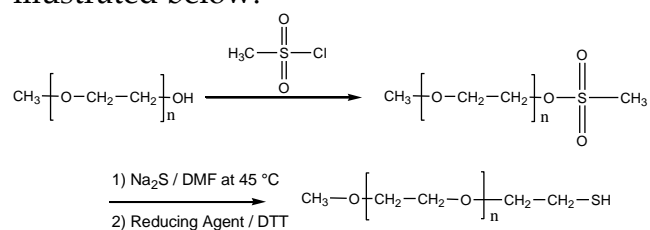


**Composition:**

Mn x 10 <sup>3</sup>	PDI	SH functionality
0.75	1.10	>98%

**Synthesis Procedure:**

Thiol terminated Poly(ethylene glycol methyl ether) was prepared by mesylation of OH terminated PEG reacting it with NaSH in polar solvent. The product was stabilized with DTT to avoid the formation of disulfide. The scheme of the reaction is illustrated below.



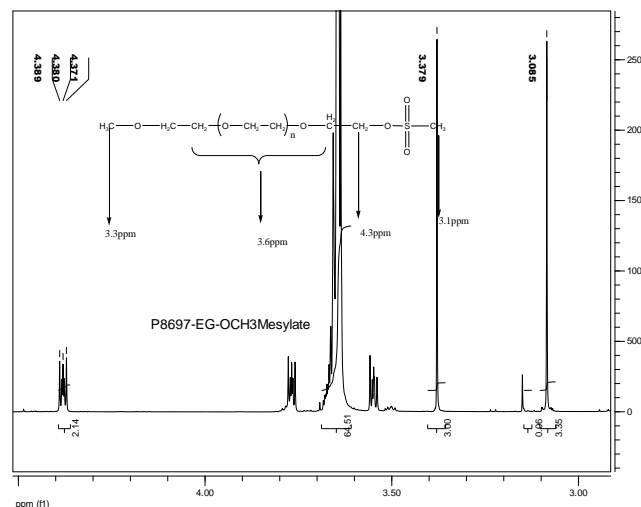
**Characterization:**

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 oxidation of the thiol to disulfide.

**Solubility:**

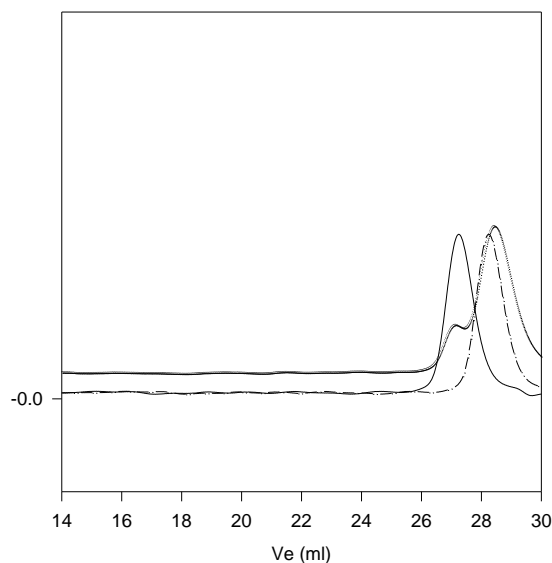
Polymer is soluble in water, methanol and ethanol, THF, CHCl<sub>3</sub>. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

**HNMR of the PEGOCH3Mesylate**



**SEC of Sample:**

**P8697-EGOCH3SH**



Size exclusion chromatography of  $\alpha$ -methoxy- $\omega$ -thiol poly(ethylene glycol):

----M<sub>n</sub>=750, M<sub>w</sub>=830, PI=1.10 (Methoxy mesylate form)

\_\_\_\_\_ After SH -formation

After oxidation with iodine - showing quantitative functionality