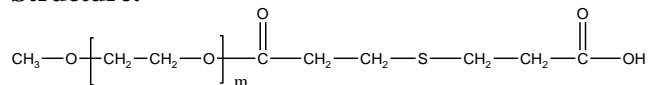


Sample Name:

**$\omega$ -Carboxy Terminated Poly (ethylene glycol) methyl ether**

Sample #: **P3765-EGOCH3COOH**

**Structure:**

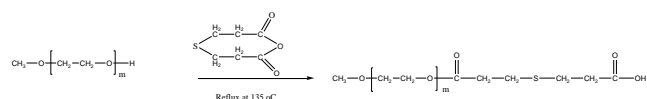


**Composition:**

Mn x 10 <sup>3</sup>	PDI
0.6	1.09

**Synthesis Procedure:**

$\omega$ -Carboxy alpha-methoxy terminated poly (ethylene glycol) was synthesized as follows:



**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.

**Functionality:** Functionality of the polymer was determined by acid base titration and from H NMR analysis.

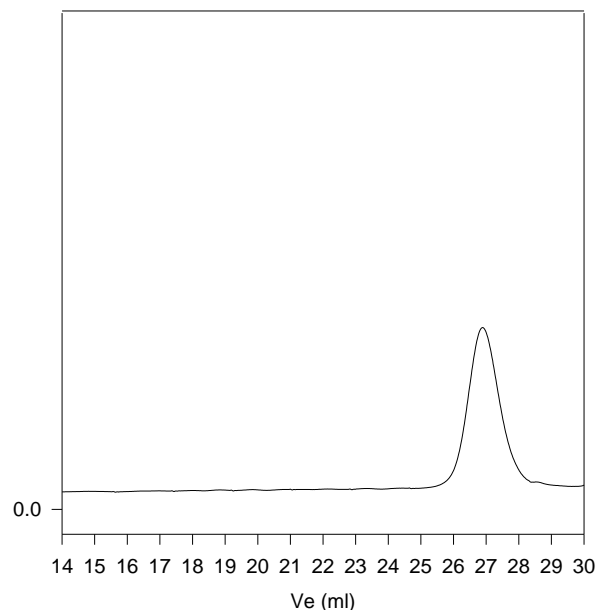
**Solubility:**

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

SEC of Sample:

**P3765-EGOCH3**

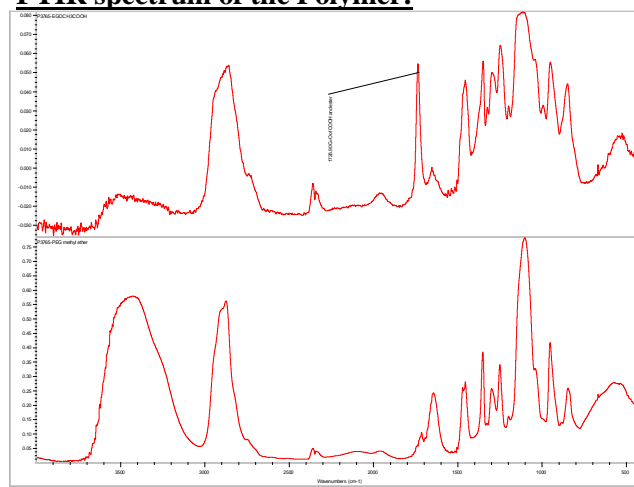
**Before reacting with Thio Propionic anhydride**



Size exclusion chromatography of poly(ethylene glycol):

Mn=600, Mw=660, PI=1.09

**FTIR spectrum of the Polymer:**



Reference (s):

**S. K. Varshney, J.X. Zhang, US patent 7,009,033 B2, 2006**

Assigned to Polymer source, Inc. Canada

Heterofunctional Polyethylene glycol and Poly ethylene oxide, process for their Manufacture