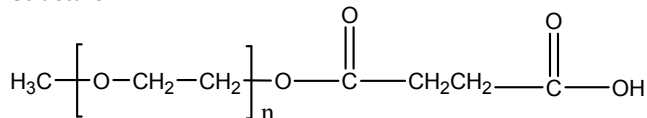


**Sample Name:** **$\alpha$ -Carboxy  $\omega$ -methoxy Terminated Poly(ethylene glycol)****Sample #:** P4984-EGOCH<sub>3</sub>COOH**Structure:****Composition:**

Mn x 10 <sup>3</sup>	PDI
20.5	1.08

**Synthesis Procedure:**

$\alpha$ -Carboxy  $\omega$ -methoxy terminated poly(ethylene glycol) was synthesized by reacting methoxy poly ethylene glycol with succinic anhydride

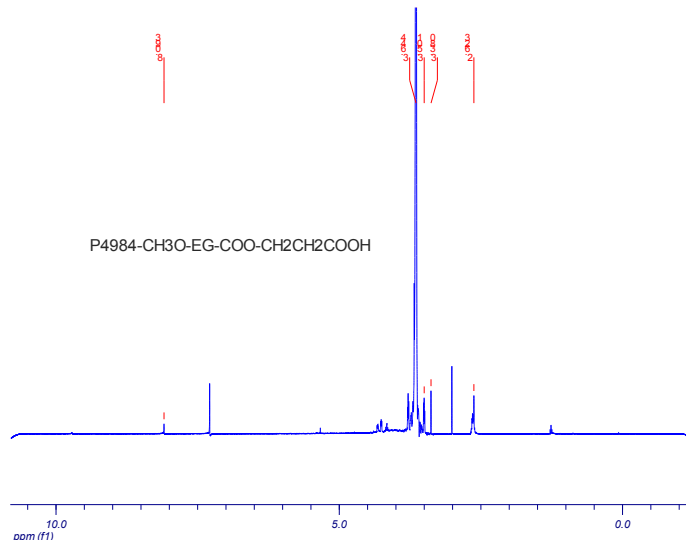
**Characterization:**

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.

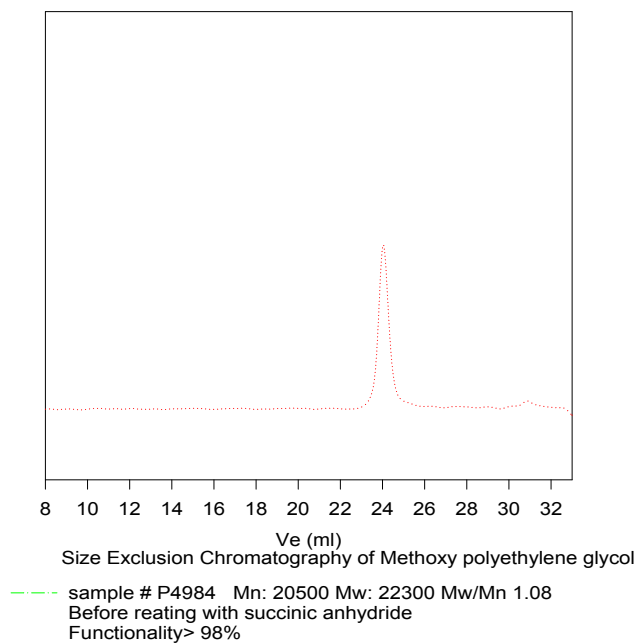
**Functionality:** Functionality of the polymer was determined by acid base titration and from H NMR analysis.

**Solubility:**

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

**NMR of the product**

SEC of the product: Before converting the terminal end group to COOH (reacting with succinic anhydride)

**P4984-EGCOOH****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