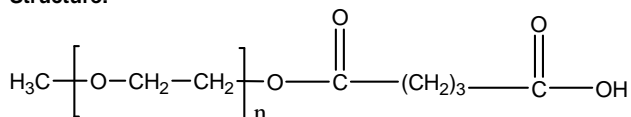


Sample Name: **ω -Carboxyl Terminated Poly(ethylene glycol) methyl ether****Sample #: P5024-EGOCH3GA****Structure:****Composition:**

$M_n \times 10^3$	PDI
2.0	1.04

Synthesis Procedure:

α -Carboxy ω -methoxy terminated poly(ethylene glycol) was synthesized by reacting methoxy end functionalized poly ethylene glycol with glutaric anhydride.

Characterization:

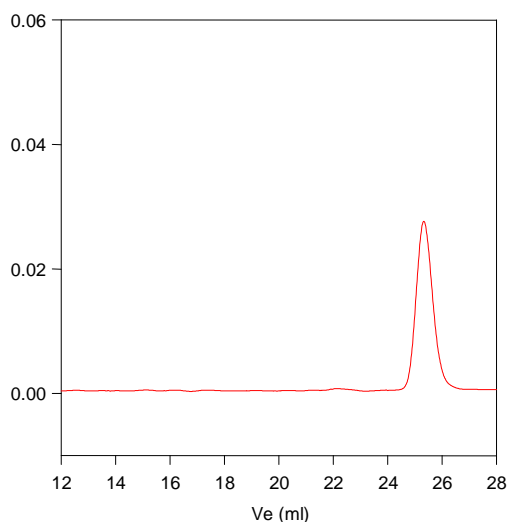
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

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_3 . It is precipitated out from cold ethanol, isopropanol, hexane and ether.

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

P5024-EGOCH3 used for P5024-EGOCH3GA

Size Exclusion Chromatography of Poly(ethylene glycol) methyl ether (parent polymer of P5024-EGOCH3 before reacting with glutaric anhydride)

$M_n = 2000$, $M = 2080$, $M_w/M_n = 1.04$

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