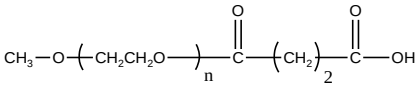
Sample Name:
**COOH terminated (Succinate) Poly(ethylene glycol) methyl ether**

Sample #: **P6040-EGOCH3COOH**

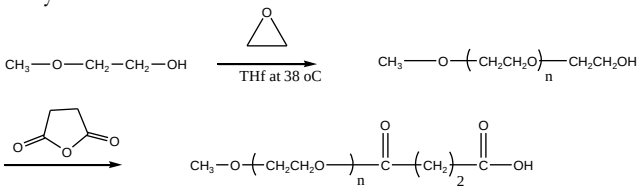
**Structure:**



**Composition:**

| Mn x $10^3$ | PDI |
|---|---|
| 7.0 | 1.03 |

**Synthesis Procedure:**
Succinate terminated poly(ethylene glycol**)** was synthesized by anionic living polymerization of ethylene oxide using ethylene glycol/potassium salt as an initiator. The hydroxyl end groups were converted into carboxyl groups by reacting them with succinic anhydride. The reaction is illustrated as Scheme 1.



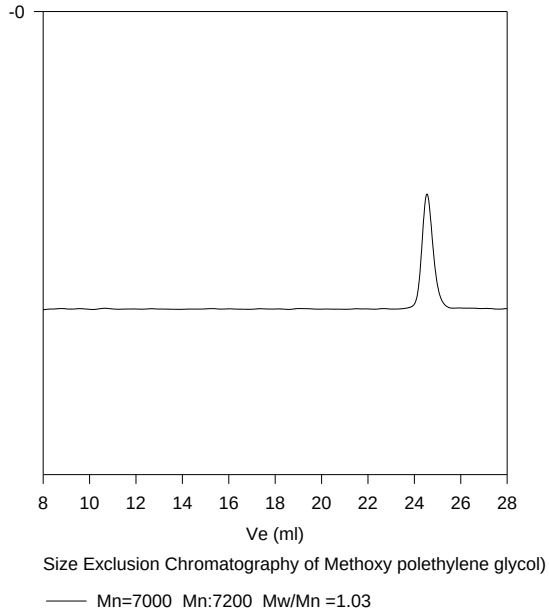

**Characterization:**
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**Functionality:** Functionality of the polymer was determined by H NMR analysis or FT-IR spectroscopy.

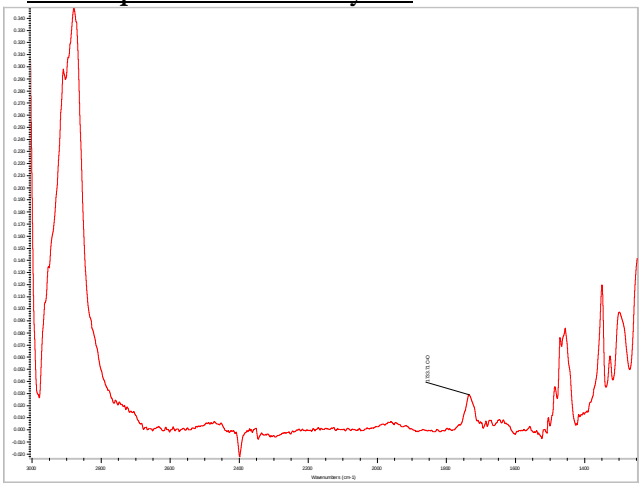
**Solubility:**
Polymer is soluble in water, methanol and ethanol, THF, $CHCl_3$. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

**SEC of Sample:**

**P6040-EG OCH3 Precursor for P6040-EGOCH3COOH**




**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