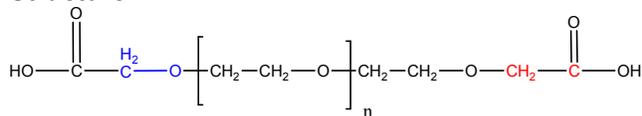


Sample Name:

$\alpha$ -  $\omega$ - O-acetic acid terminated Poly(ethylene glycol)

Sample #: P14179-EG2CH2COOH

Structure:

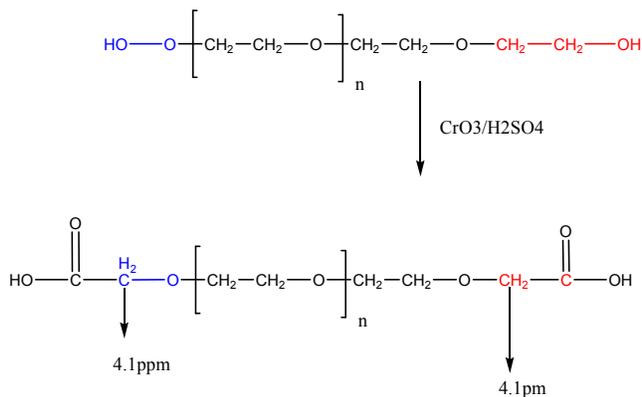


Composition:

Mn x 10 <sup>3</sup>	PDI
3.4	1.05

Synthesis Procedure:

$\alpha$ -Carboxy  $\omega$ -methoxy terminated poly(ethylene glycol) was synthesized by a simple procedure. The details can be found in the US patent published.<sup>1</sup>



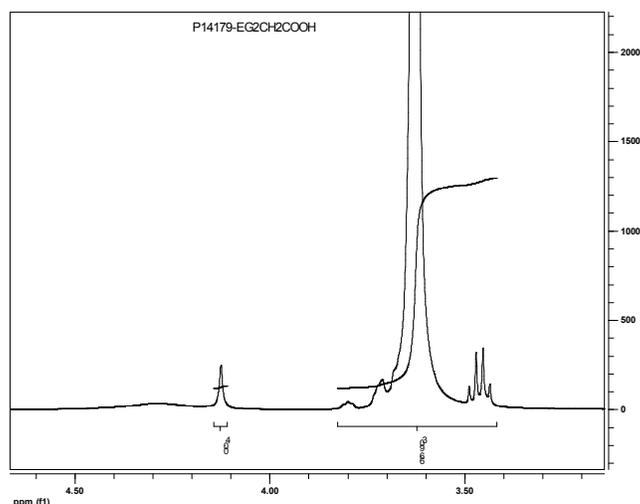
Characterization:

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.

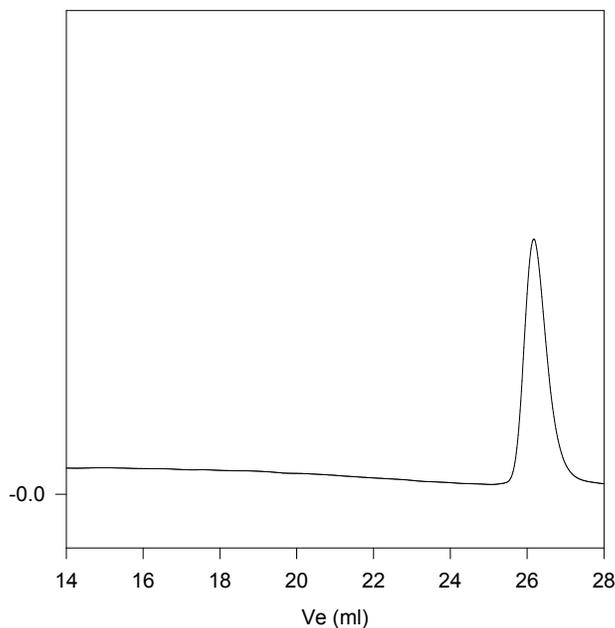
Solubility: Polymer is soluble in water, methanol and ethanol, THF, CHCl<sub>3</sub>. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

NMR of the product



SEC of the product: Before converting the terminal end group to COOH

**P14179 EG2OH**



Size exclusion chromatograph of poly(ethylene glycol):

M<sub>n</sub>=3400, M<sub>w</sub>=3600 PI=1.05

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 Polyethylene oxide, process for their Manufacture