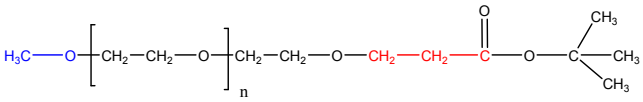
Sample Name:

α-propionic tert butyl ester ω-methoxy Terminated Poly(ethylene glycol)

Sample #: **P9490A-EGOCH3COOC4H9**

Structure:



Composition:

Mn x 10^3	PDI
0.75	1.10

Synthesis Procedure:

α-Carboxy ω-methoxy terminated poly(ethylene glycol) was synthesized by a simple procedure . The details can be found in the US patent published.[1]

Characterization:

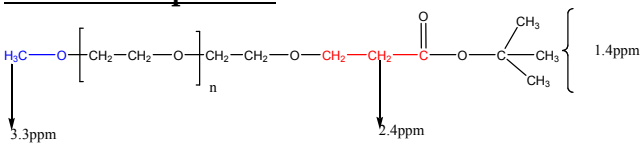
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

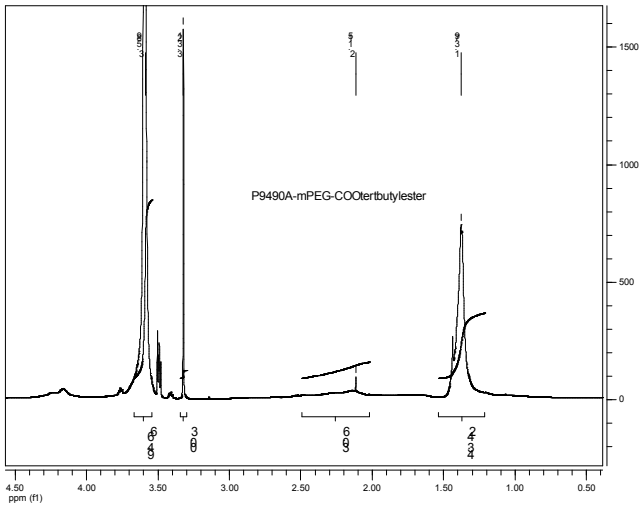
Functionality: Functionality of the polymer was determined by acid base titration and from H NMR analysis.

Solubility:

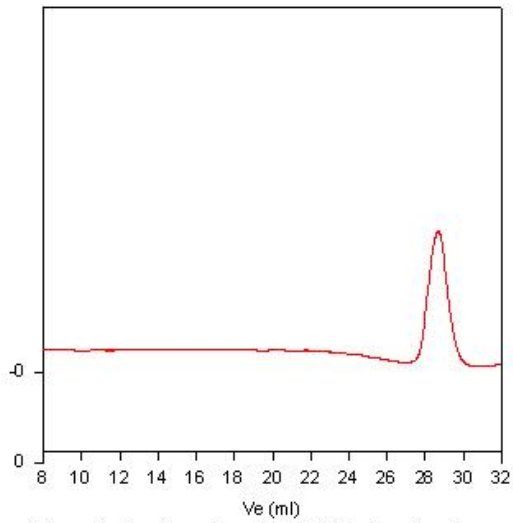
Polymer is soluble in water, methanol and ethanol, THF, $CHCl_3$. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

NMR of the product





SEC of the product



Size exclusion chromatograph of Poly(ethylene glycol) before converting terminal OH to COOH:
M_n=750, M_w=830 MwMn =1.10

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