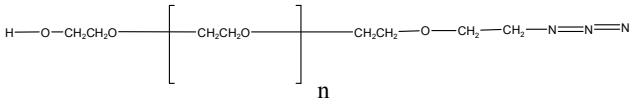
Sample Name:

α-hydroxy ω-Azide end functionalized Poly(ethylene glycol)

Or azide terminated Poly ethylene glycol

Sample #: **P9722-EGOHN3**

Structure:



Composition:

Mn x 10^3	PDI
5.0	1.05
Azide functionality by ^{1}H NMR	> 97%

Synthesis Procedure: In this case the initiator was azido ethoxy ethanol:

Azide end functionalized Poly(ethylene glycol)methyl ether is prepared by living anionic polymerization of ethylene oxide, followed by modification of OH terminal to mesylate and than to azide group.

Characterization:

An aliquot of the poly(ethylene oxide) before addition of mestyl chloride was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The polymer obtained at each step and the final block copolymer composition was calculated from ^{1}H-NMR spectroscopy.

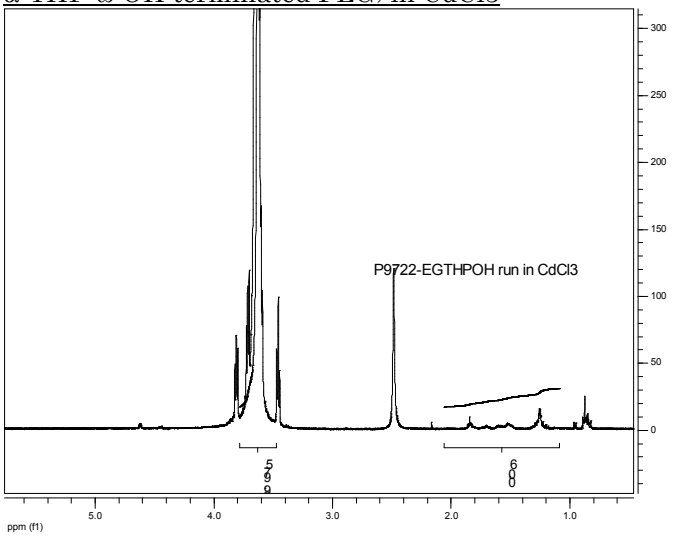
FTIR:

N3 characteristic appears at 2101 cm^{-1}.

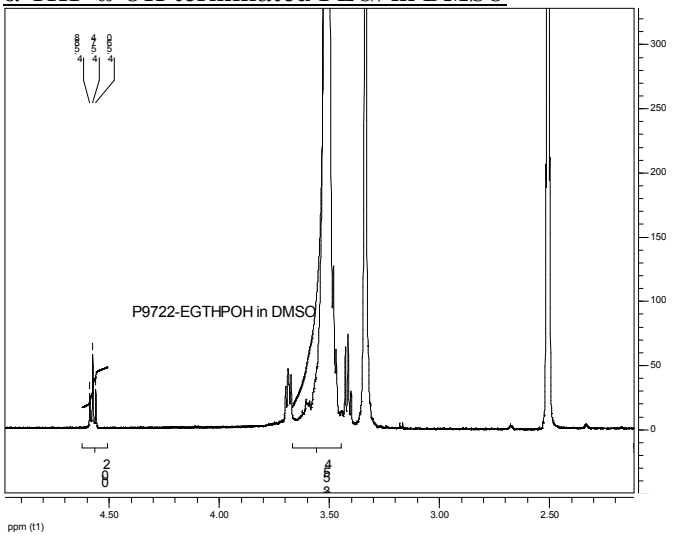
Solubility:

N3 end functionalized Poly(ethylene oxide) is soluble in CHCl3, THF and precipitated out from cold ethanol, diethyl ether.

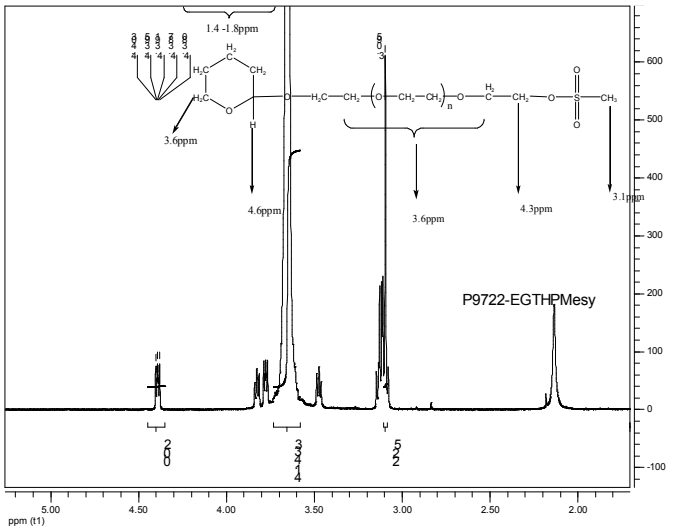
α-THP-ω-OH terminated PEG; in CdCl3



α-THP-ω-OH terminated PEG; in DMSO



α-THP-ω-Mesylate terminated PEG; in CdCl3



α-OH-ω-N3 terminated PEG; in DMSO