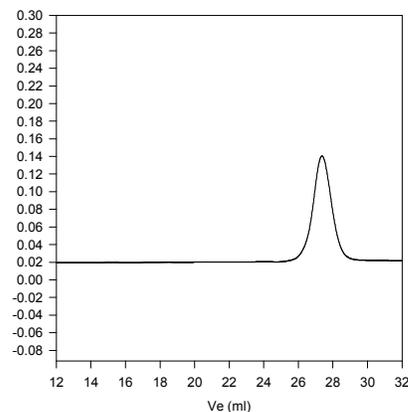


## SEC of the polymer :

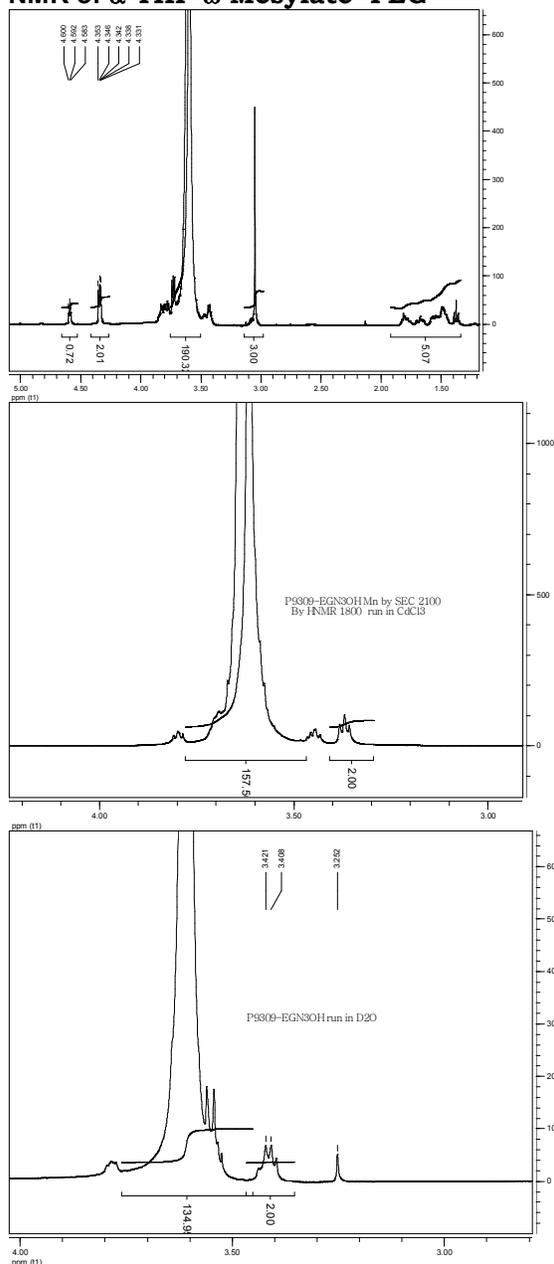
P9309-EGOHN3



Size Exclusion Chromatography of N3 end functionalized Poly(ethylene glycol)

$M_n = 2100$ ,  $M_w = 2400$ ,  $M_w/M_n = 1.14$

## NMR of $\alpha$ -THP- $\omega$ -Mesylate PEG



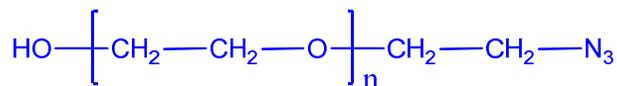
Sample Name:

$\alpha$ -hydroxy- $\omega$ -Azide terminated Poly(ethylene glycol)

Or azide terminated Poly ethylene glycol

Sample #: P9309- EGOHN3

Structure:



Composition:

$M_n \times 10^3$	PDI
2.1	1.14
Azide functionality by HNMR	>98 %

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

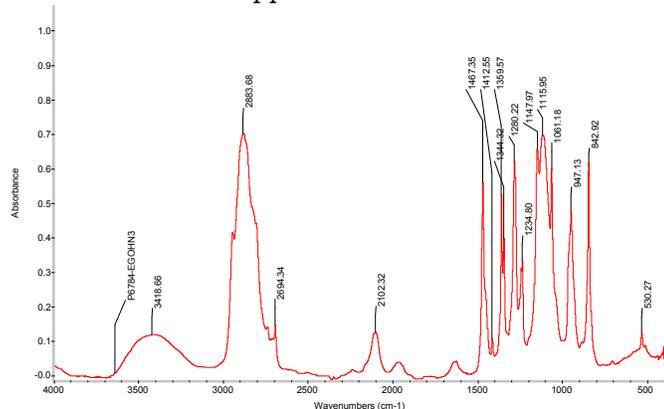
Azide end functionalized Poly(ethylene glycol) is prepared by living anionic polymerization of ethylene oxide, using potassium salt of  $\alpha$ -Tetrahydropyranyl- $\omega$ -Hydroxyethylene glycol as initiator. Hydroxy end groups were then modified to azide group. At each step of the reaction was followed by its HNMR and FTIR.

**Characterization:**

An aliquot of the poly(ethylene oxide) was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The polymer obtained at each step was calculated from  $^1\text{H-NMR}$  spectroscopy.

**FTIR:**

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



**Solubility:**

N3 end functionalized poly(ethylene oxide) is soluble in water,  $\text{CHCl}_3$ , THF and precipitated out from hexanes.