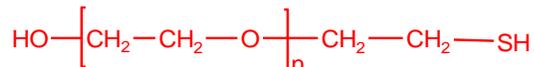


Sample Name:

α -Hydroxy- ω -Thiol terminated Poly(ethylene glycol)

Sample #: P9773-EGSHOH

Structure:

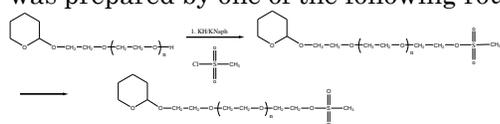


Composition:

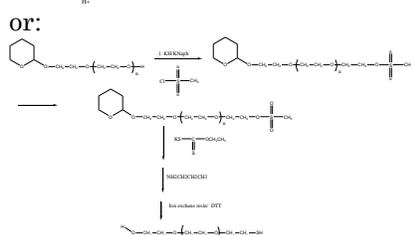
Mn x 10 ³	PDI
5.0	1.10

Synthesis Procedure:

α -Hydroxy- ω -thiol terminated poly(ethylene glycol) was prepared by one of the following route:



or:



Characterization:

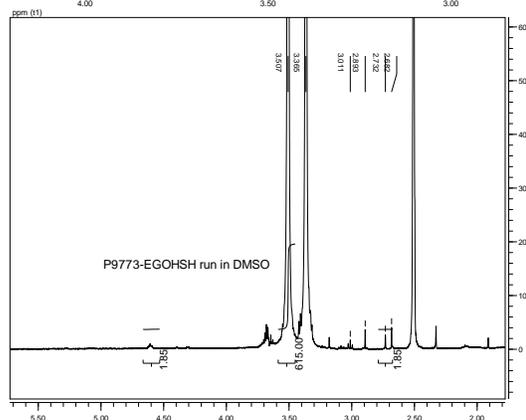
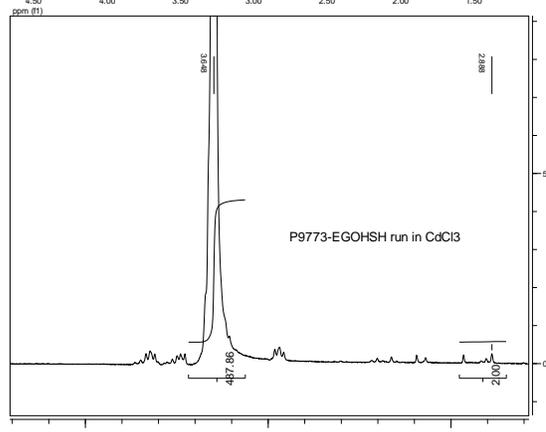
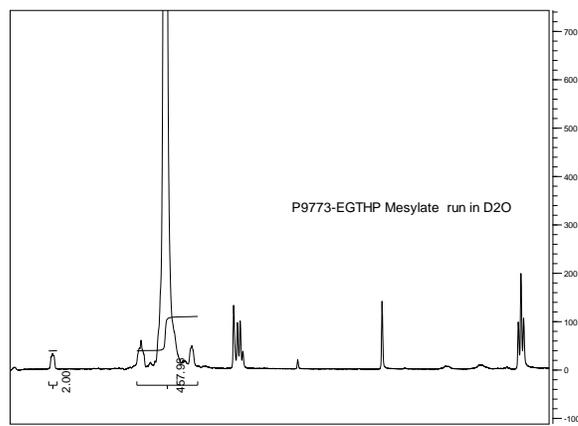
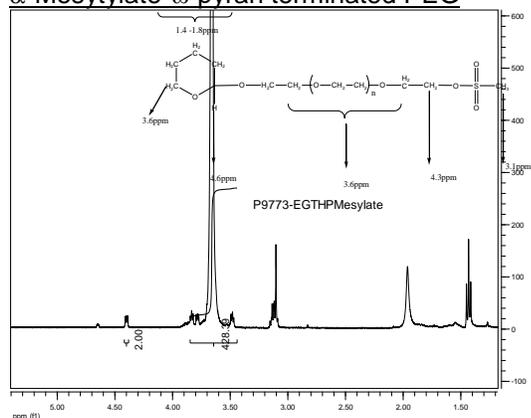
An aliquot of the poly(ethylene oxide) before addition of mesityl chloride was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The polymer obtained at each step and the final block copolymer composition was calculated from ¹H-NMR spectroscopy.

Solubility:

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

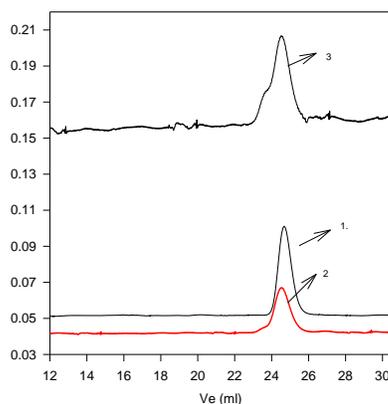
¹H-NMR Spectrum of the starting polymer:

α -Mesitylate- ω -pyran terminated PEG



SEC of the polymer :

P9773-EOSHOH



Size exclusion chromatography of α -hydroxy- ω -thiol poly(ethylene glycol):

- EGTHPOH $M_n=5000$, $M_w=5,500$, $M_w/M_n=1.10$
- EGTHP-SH
- EGSHOH