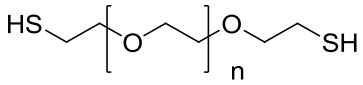
Sample Name:
α- ω-bis (Thiol)-Terminated Poly (Ethylene Glycol)

Sample # **P41092-EG2SH**

Structure:



Composition:

Mn x 10^3 (g/mol)	PDI
1.1*	1.10

*Mn is based on starting material.

-SH functionality:	>92%
S-S	<1%
$-O-CH_2CH_2-S-K$	5%
Other: free -OH, mesylate, tributyl phosphine	<2%

Synthesis Procedure:
The polymer was prepared by anionic process and modifications of terminal -OH to –SH groups:

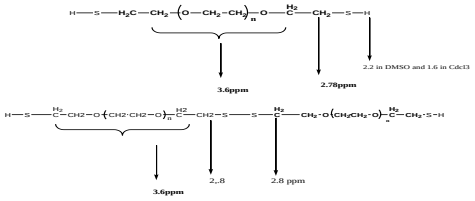
Reference:
S. K. Varshney, J.X. Zhang, Apply US patent 09/895,323, 2001. Heterofunctional Polyethylene glycol and Poly ethylene oxide, process for their Manufacture.

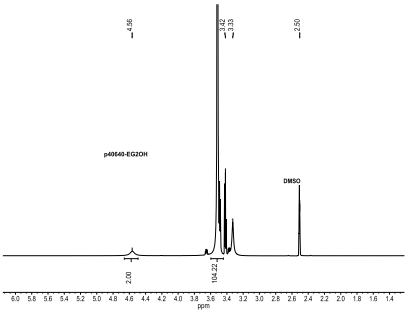
Characterization:
The product was characterized by size exclusion chromatography (SEC), and ^{1}H NMR.

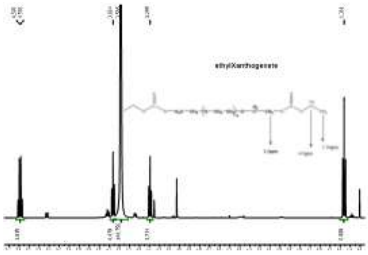
Functionality
It was determined by ^{1}H NMR or FT-IR spectroscopy or by titration.

Solubility:
Polymer is soluble in water, methanol and ethanol, THF.

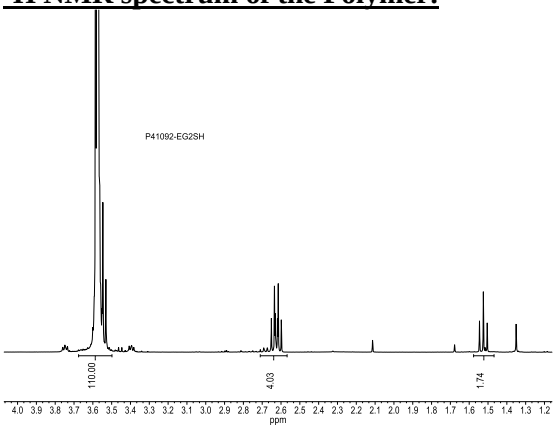
^{1}H NMR of PEG-2OH used as a precursor lot # P40640



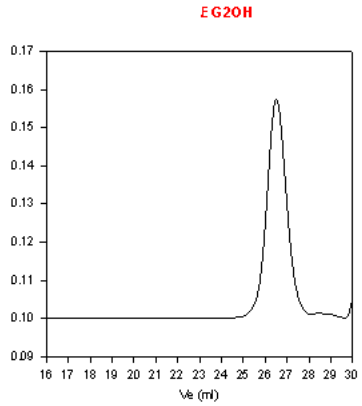




^{1}H NMR spectrum of the Polymer:



SEC profile of the PEG-2OH Sample:



Size exclusion chromatography of poly(ethylene glycol)
Mn=1100, Mw=1200, PI=1.10

(v. R-01)