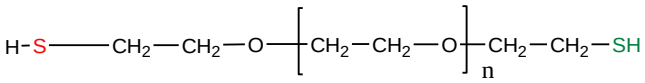
Sample Name:
Poly(ethylene glycol), α,ω-bis(thiol)-terminated

Sample #: **P14900-EG2SH**

Structure:

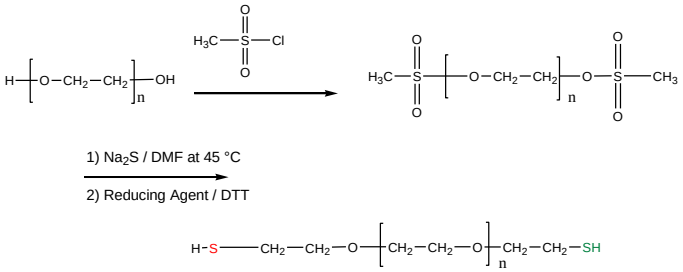


Composition:

Mn x 10^3	PDI	SH functionality
3.4*	1.04	> 86%
*Mn is based on starting material		

S-S >4%
S-Na >4%
Other Free OH and mesylate, tributyl phosphine >6%

Synthesis Procedure:
The polymer was synthesized by anionic polymerization process and modifications of terminal OH to SH:



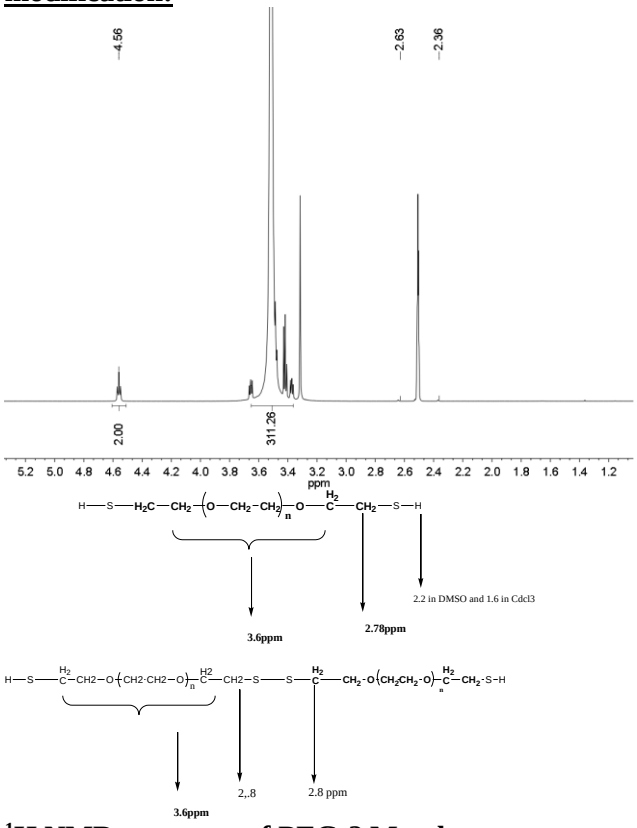
S. K. Varshney, J.X. Zhang, Apply US patent 09/895,323, 2001. Heterofunctional Polyethylene glycol and Polyethylene oxide, process for their Manufacture.

Characterization:
The polymer was characterized by SEC and ^{1}H NMR analysis.

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

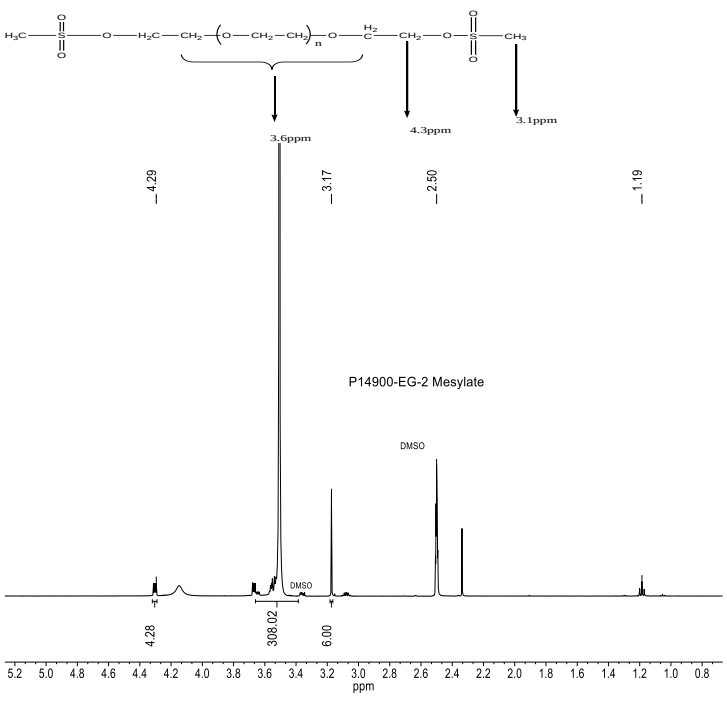
Solubility:
Polymer is soluble in water, methanol, ethanol and THF.

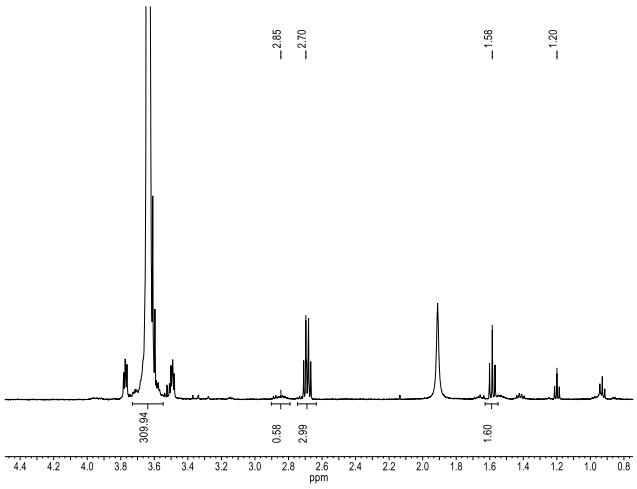
^{1}H NMR spectrum of PEG-2OH used for this modification:



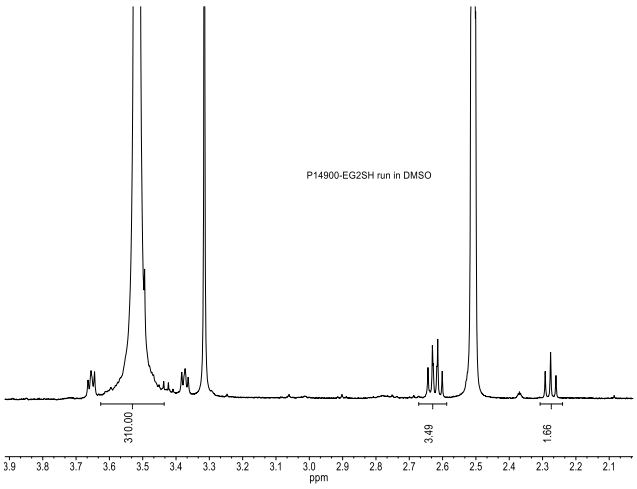
^{1}H NMR spectrum of PEG-2 Mesylate:

1. Absence of free OH (not dectected)





^{1}H NMR spectrum of the Sample:



SEC elugram of the starting polymer: