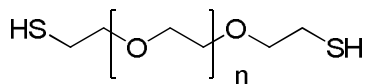


**Sample Name:** $\alpha$ -  $\omega$ -bis(Thiol)-Terminated Poly(Ethylene Glycol)**Sample #** P20257-EG2SH**Structure:****Composition:**

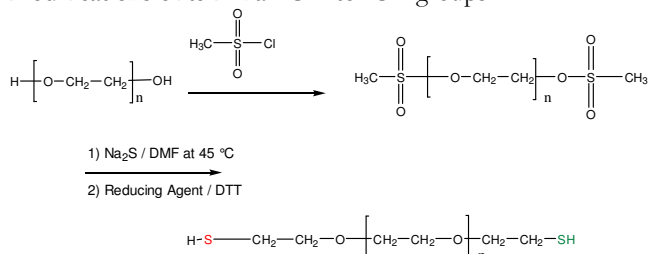
$M_n \times 10^3$ (g/mol)	PDI
1.4*	1.10

\* $M_n$  is based on starting material.

-SH functionality:	>83%
S-S	<4%
-O-CH <sub>2</sub> CH <sub>2</sub> -S-K	12%
Other: free -OH, mesylate, tributyl phosphine	<1%

**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.

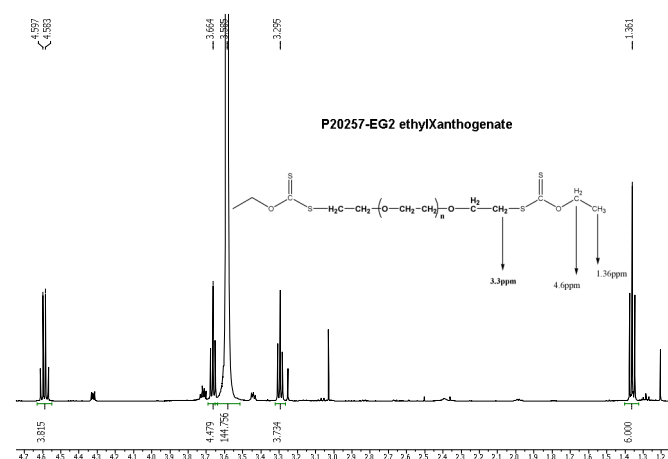
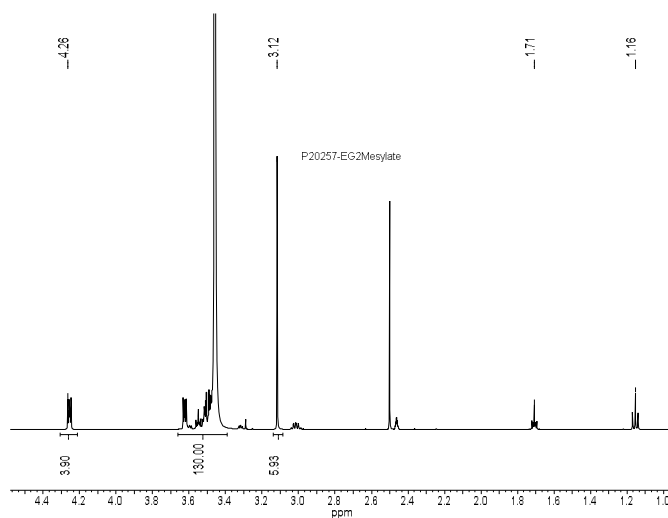
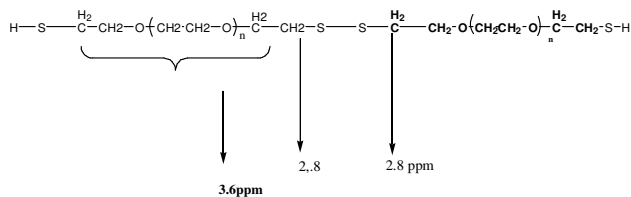
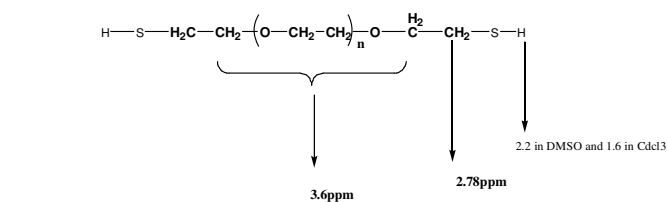
**Characterization:**

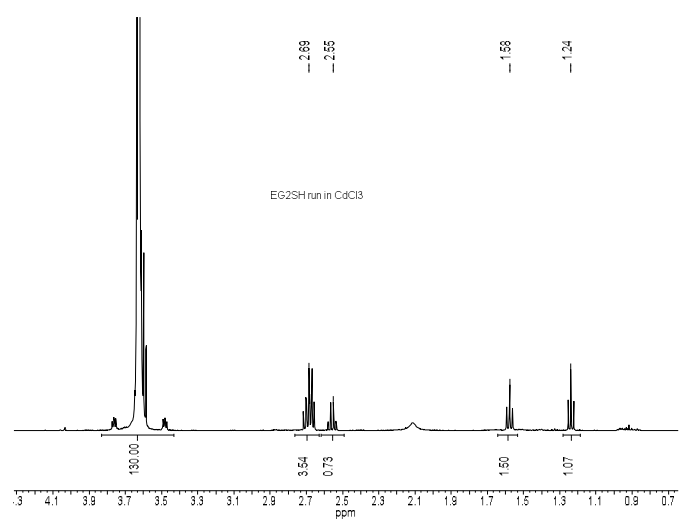
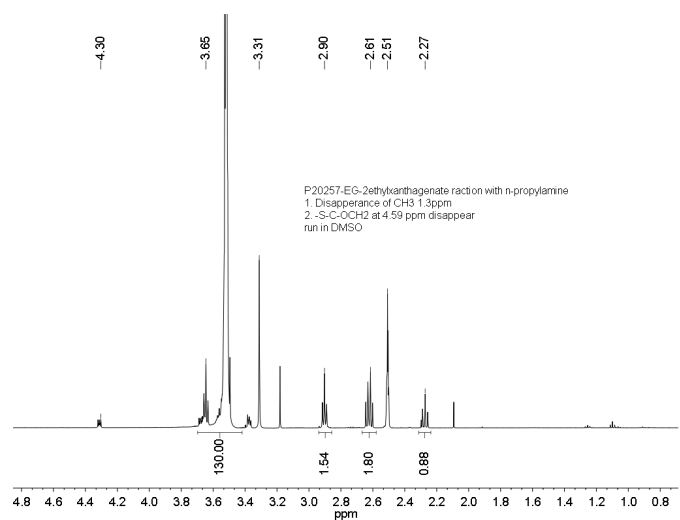
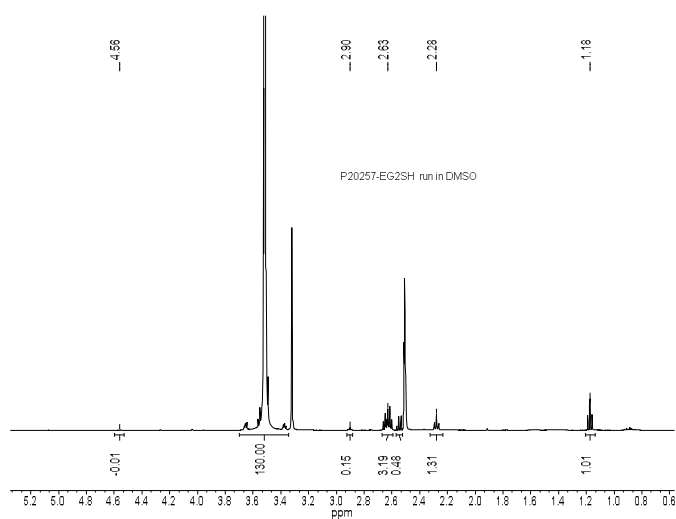
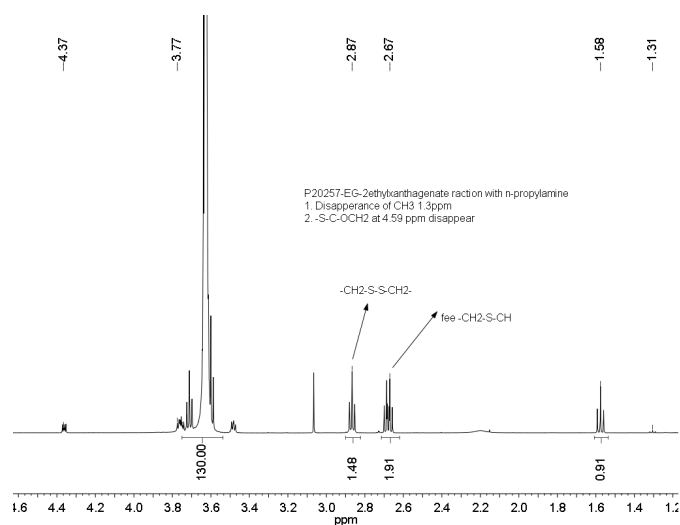
By SEC and HNMR analysis.

**Functionality** was determined by <sup>1</sup>H NMR or FT-IR spectroscopy or by titration.

**Solubility:**

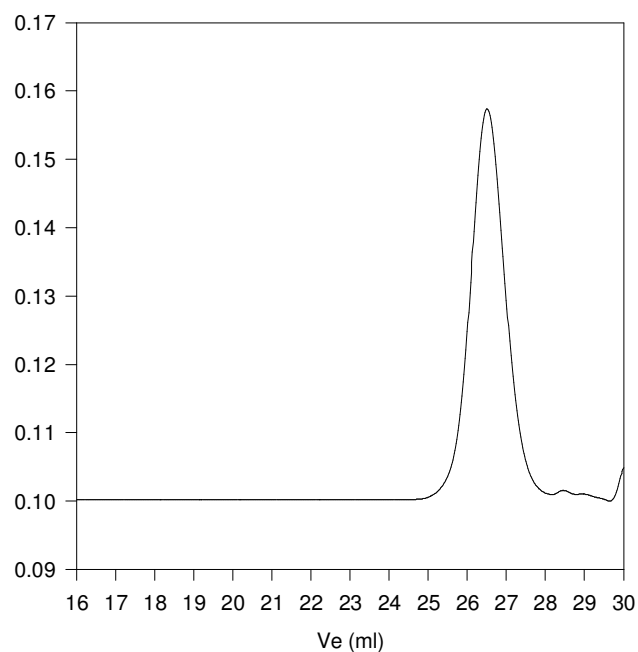
Polymer is soluble in water, methanol and ethanol, THF.

**<sup>1</sup>H NMR of PEG-2OH used as a precursor:**



### SEC of Sample:

**P20257-EG2OH**



Size exclusion chromatography of poly(ethylene glycol)  
 Mn=1,400, Mw=1,500, PI=1.10