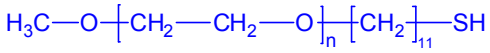
Sample Name:
Alkane (undecane) Thiol Terminated Poly(ethylene glycol)

Sample #: **P8949-EG-Alkane-SH**

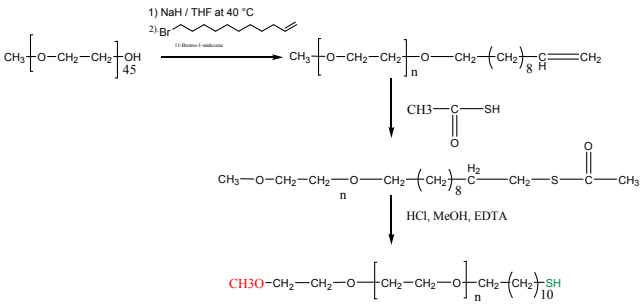
Structure:



Composition:

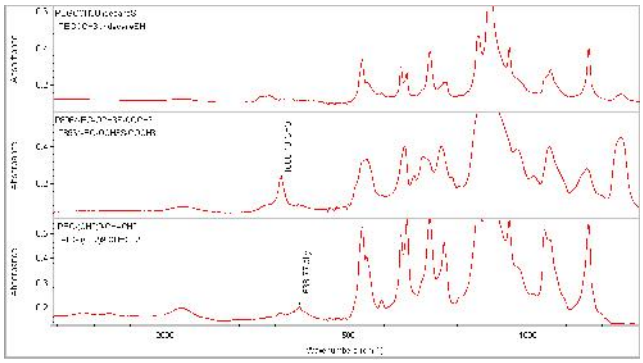
Mn x 10^3	PDI	SH functionality
2.0	1.10	>80%

Synthesis Procedure:
Alkane hiol terminated Poly(ethylene glycol methyl ether) was prepared by procedure reported in Langmuir, 2002, 18, 8862.



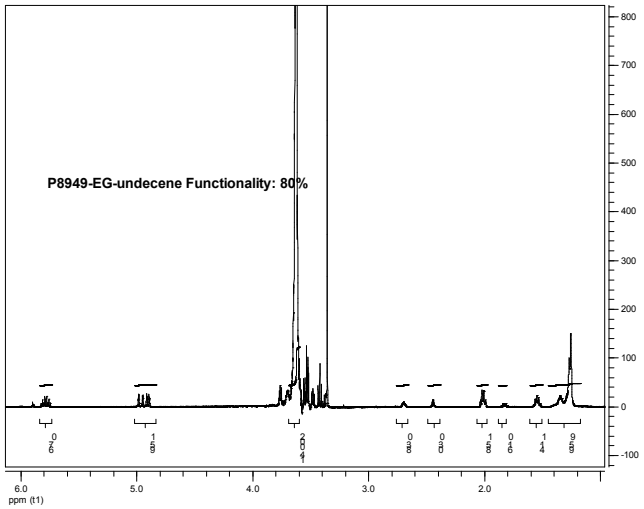
Characterization:
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

FTIR is used to monitored the reaction of thio ester terminated PEG to free SH. Disapperance of the C=O at 1688 cm-1.

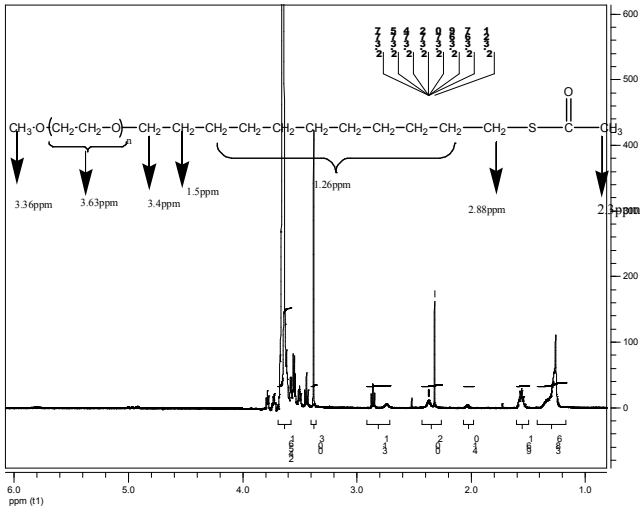


Solubility:
Polymer is soluble in water, methanol and ethanol, THF, $CHCl_3$. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

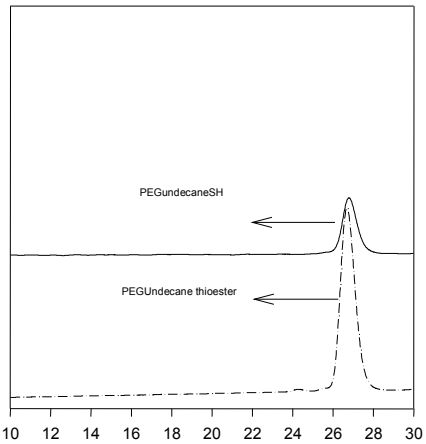
^{1}H NMR of the CH3O-PEG-Undecene terminated:



^{1}H NMR of the CH3OPEG-Undecande-SCOCH3



SEC of the Sample:



Size Exclusion Chromatography of thiol terminated Polyethylene oxide (SEC in THF at 35C):

M_n = 2000, M_w=2100 PI=1.10