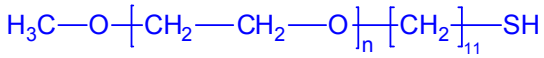
Sample Name:
Alkane (undecane) Thiol Terminated Poly(ethylene glycol) methyl ether

Sample #: **P9072-EG-Alkane-SH**

Structure:



Composition:

Mn x 10^3	PDI	SH functionality
2.5	1.08	>99%

Synthesis Procedure:
Alkane hiol terminated Poly(ethylene glycol methyl ether) was prepared and subjected for the publication.

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.

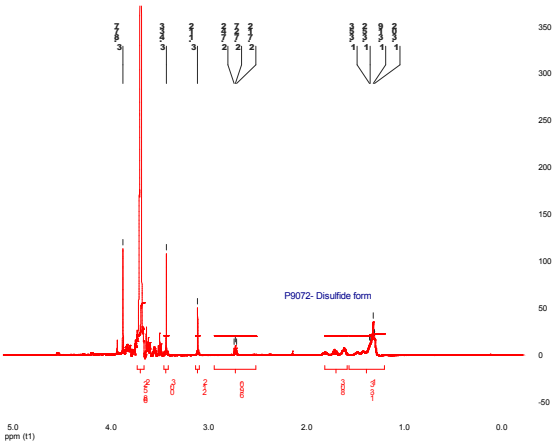
FTIR:
FTIR is used to monitored the reaction of thio ester terminated PEG to free SH.

Solubility:

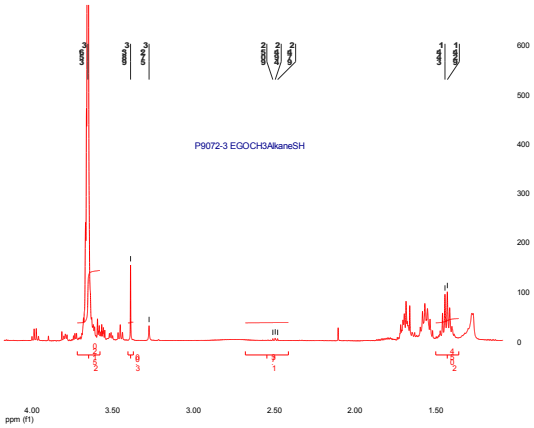
Polymer is soluble in water, methanol and ethanol, THF, $CHCl_3$. It is precipitated out from cold ethanol, isopropanol, hexane and ether.

^{1}H NMR of the CH_3O-PEG-Undecene terminated; Functionality > 99%

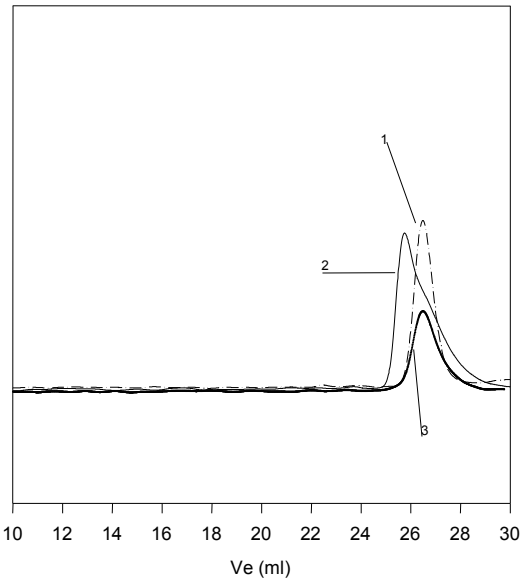
^{1}H NMR in disulfide form



^{1}H NMR of the $EGOCH_3$-undecande-SH



SEC of the Sample:



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

M_n = 2500, M_w =2900 PI=1.08

1. In protected SH form
2. After oxidation in the presence of I2/O2
3. Free thiol form after reduction