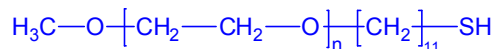


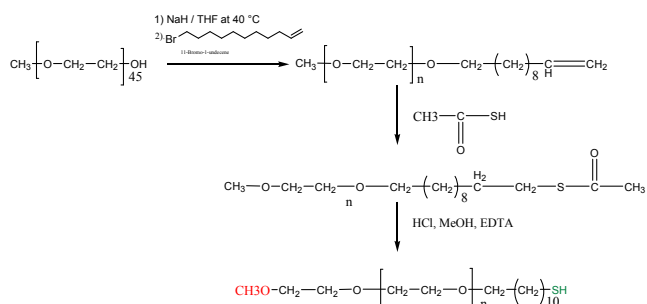
### Alkane (undecane) Thiol Terminated Poly(ethylene glycol)

### Structure:



Mn x 10 <sup>3</sup>	PDI	SH functionality
2.0	1.10	>80%

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



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.

Polymer is soluble in water, methanol and ethanol, THF,  $\text{CHCl}_3$ . It is precipitated out from cold ethanol, isopropanol, hexane and ether.

**P8949-EG-undecene Functionality: 80%**

The spectrum shows a very large peak at approximately 3.4 ppm, which is the characteristic signal for the terminal hydroxyl group of the PEG chain. This peak is significantly more intense than the other signals, indicating a high concentration of the desired product. Other peaks are visible in the aliphatic region (1.1-2.1 ppm) and the olefinic region (5.1-5.9 ppm), corresponding to the undecene chain. Integration values are provided below the baseline for several groups: 0.04 for the peak at ~5.9 ppm, 1.00 for the peak at ~5.2 ppm, 4.00 for the large peak at ~3.4 ppm, 0.03 for the peak at ~2.1 ppm, 0.03 for the peak at ~1.9 ppm, 1.01 for the peak at ~1.6 ppm, 0.03 for the peak at ~1.4 ppm, 1.04 for the peak at ~1.2 ppm, and 0.09 for the peak at ~1.1 ppm.

[illegible]

SEC chromatograms showing the elution profiles of PEGundecaneSH (solid line) and PEGundecane thioester (dashed line). The x-axis represents elution volume (Ve) in ml, ranging from 10 to 30. The PEGundecaneSH curve shows a broad peak centered around 26.5 ml. The PEGundecane thioester curve shows a sharp, narrow peak centered around 26.5 ml. Arrows indicate the peak positions for each compound.

$M_n = 2000, M_w = 2100 \quad PI = 1.10$