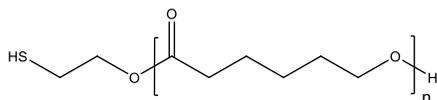


**Sample Name:** Poly( $\epsilon$ -caprolactone), ( $\alpha$ -thiol,  $\omega$ -hydroxy)-terminated

**Sample #:** P44073G-CLOHSH

**Structure:**

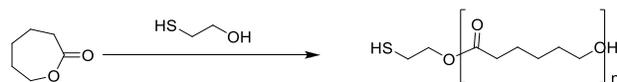


**Composition:**

$M_n \times 10^3$	PDI
HS-PCL	
2.5	1.3
SH functionality >80% (NMR)	
Contains DTT as stabilizer	

**Synthetic Procedure:**

HS-PCL is prepared by ring-opening polymerization of  $\epsilon$ -caprolactone using mercaptoethanol as an initiator. The scheme of the reaction is illustrated below:



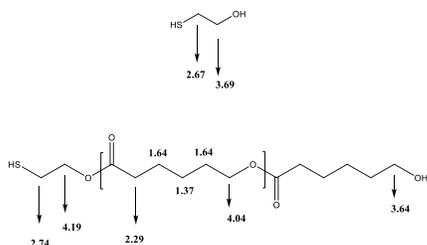
**Solubility:**

Poly( $\epsilon$ -caprolactone) is soluble in  $\text{CHCl}_3$ , Acetone, THF, insoluble in methanol, ethanol. Precipitated from Acetone or  $\text{CHCl}_3$  into hexane/EtOH or ether/EtOH.

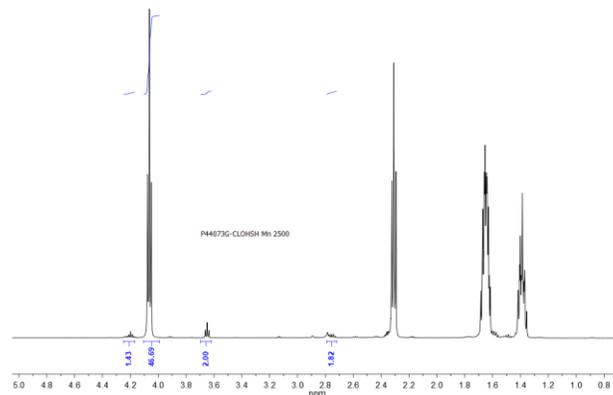
**Characterization:**

PCL bearing free thiol end was analyzed by size exclusion chromatography (SEC) to obtain the polydispersity index (PDI).  $M_n$  was estimated by NMR. Percentage of thiol functionality was determined from the integrals ratio of the peaks at 3.64 and 2.74 ppm.

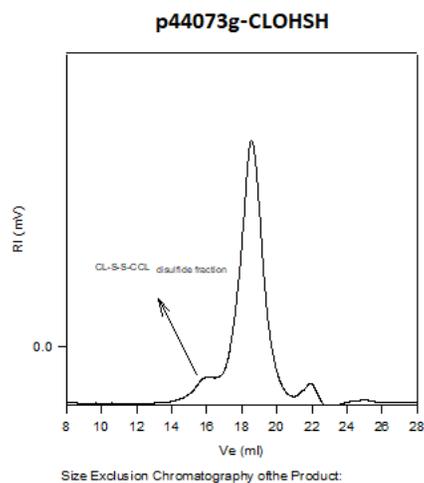
**Chemical shifts assignments**



**HNMR spectrum of PCL with free Thiol End group**



**SEC profile of the polymer:**



N.B.: Certain broadening of the elugram might be due to the strong interaction of SH-group with the column packing material