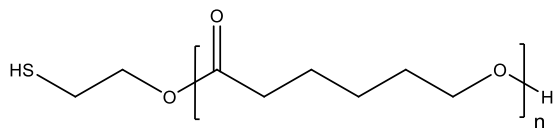


Sample Name: α -Thiol- ω -Hydroxy-terminated Poly(ϵ -caprolactone)

Sample #: P44049-CLOHSH

Structure:

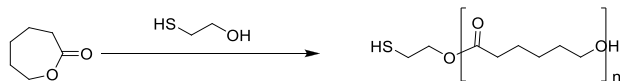


Composition:

$M_n \times 10^3$ HS-PCL	PDI
4.0	1.37
SH functionality $\geq 35\%$ (NMR)	
Contains DTT as stabilizer	

Synthetic Procedure:

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



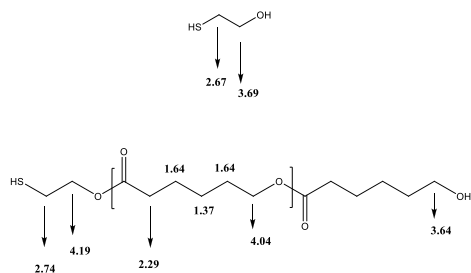
Solubility:

Poly(ϵ -caprolactone) is soluble in CHCl_3 , Acetone, THF, insoluble in methanol, ethanol. Precipitated from Acetone or CHCl_3 into hexane/EtOH or ether/EtOH.

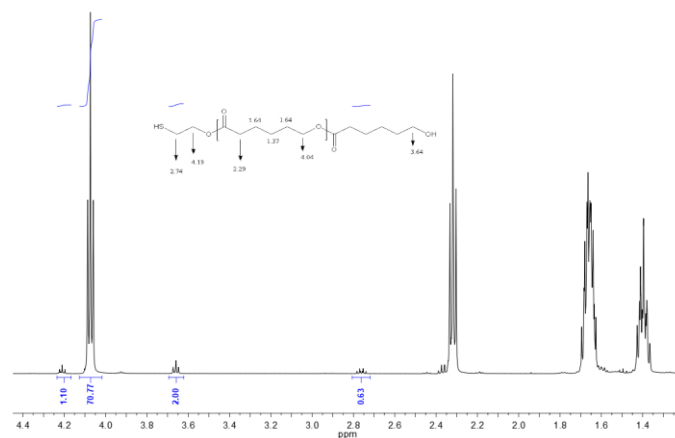
Characterization:

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.

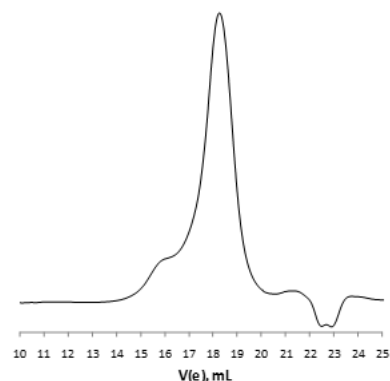
Chemical shifts assignments



1H NMR spectrum of PCL with free Thiol End group



SEC 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