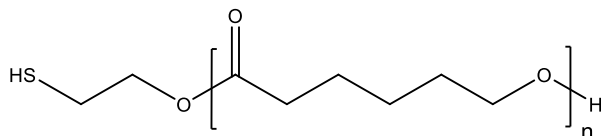


Sample Name: α -Thiol- ω -Hydroxy-terminated
Poly(ϵ -caprolactone)

Sample #: P44046-CLOHSH

Structure:



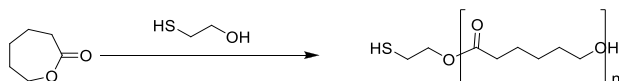
(Contains DTT as stabilizer.)

Composition:

$M_n \times 10^3$ HS-PCL	M_w/M_n	-SH functionality*
3.8	1.45	42 %

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:



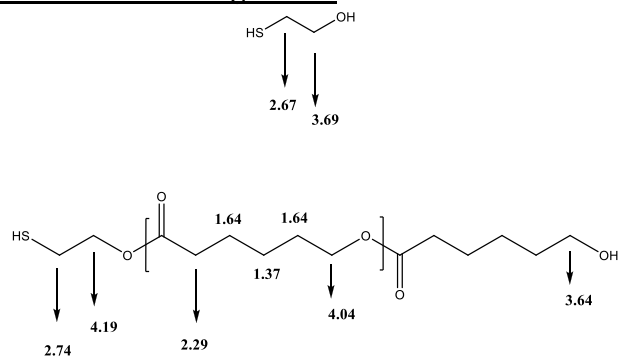
Solubility:

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.

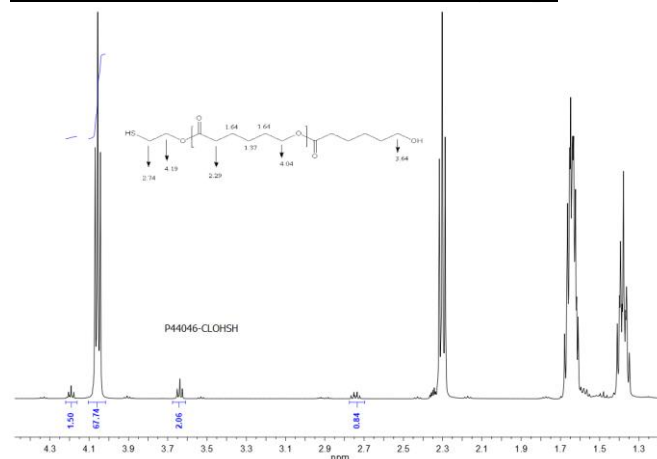
Characterization:

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.

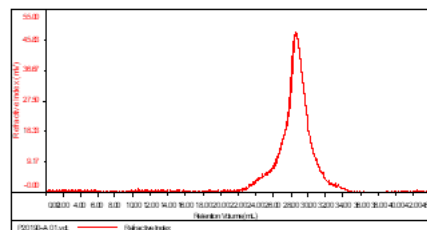
Chemical shifts assignments



^1H NMR 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.