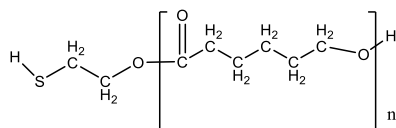


**Sample Name:** Poly( $\epsilon$ -caprolactone), ( $\alpha$ -thiol,  $\omega$ -hydroxy)-terminated

**Sample #:** P44073A2-CLOHSH

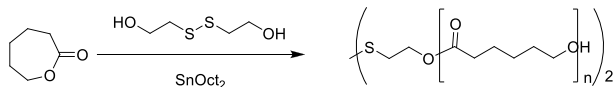
**Structure:**



**Composition:**

$M_n \times 10^3$ HOS-PCL-OH	PDI
3.5	1.3
SH functionality $\geq 70\%$	

**Synthetic Procedure:**  $(-S-PCL)_2$  is prepared by ring-opening polymerization of  $\epsilon$ -caprolactone using disulfide-based initiator. The scheme of the reaction is illustrated below:



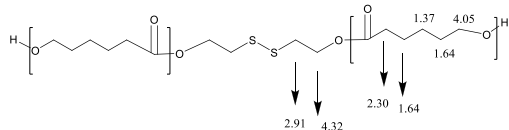
**Characterization:**

PCL bearing the disulfide linkage was analyzed by size exclusion chromatography with light-scattering detector (SEC-LS) to obtain the  $M_n$  and polydispersity (PDI).

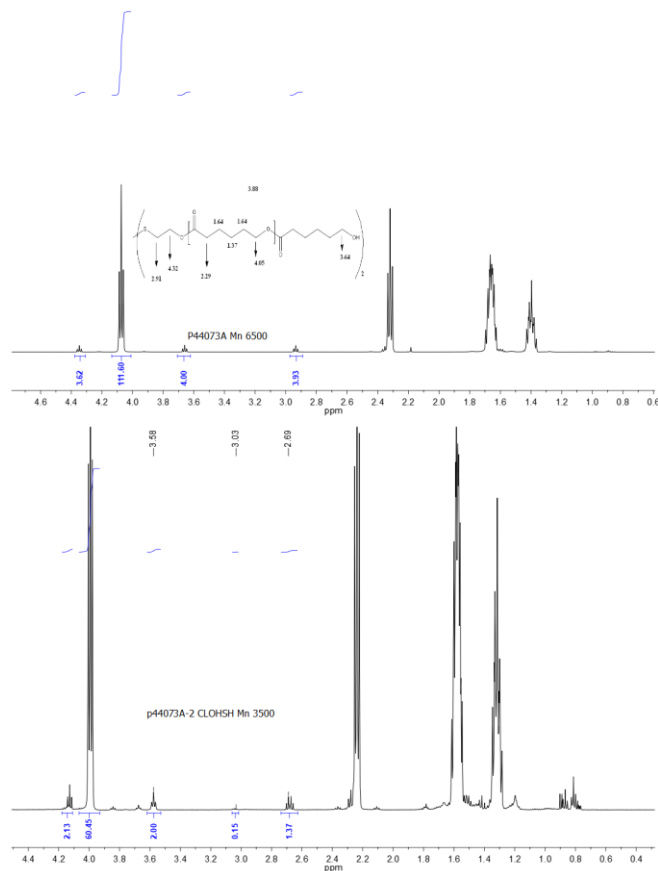
**Solubility:**

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

**Chemical shifts assignments**



**$^1H$ -NMR of the PCL bearing disulfide linkage:**

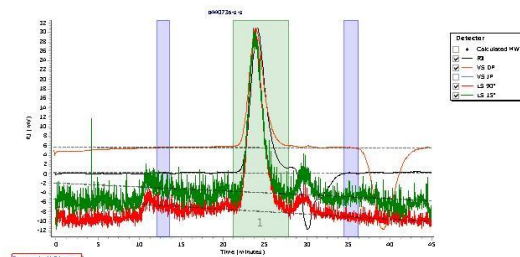


**SEC of PCL-SS-PCL:**

Agilent GPC/SEC Software

p44073a-s-s

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mw (g/mol)	PDI
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Peak 1	4640	3438	4571	5685	6950	5340	1.328
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