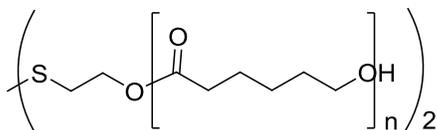


**Sample Name:** Poly( $\epsilon$ -caprolactone), bearing dithiodiethanol core

**Sample #:** P20057\_CLdisulf

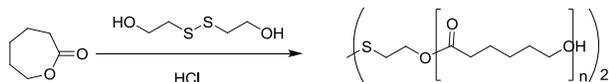
**Structure:**



**Composition:**

$M_n \times 10^3$ HO-PCL-SS-PCL-OH	PDI
6.4 (NMR)	1.2
SS functionality	$\geq 95\%$

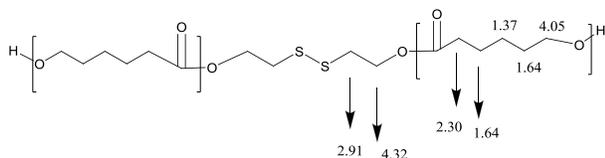
**Synthetic Procedure:** (-S-PCL)<sub>2</sub> is prepared by ring-opening polymerization of  $\epsilon$ -caprolactone using disulfide-based initiator. The scheme of the reaction is illustrated below:



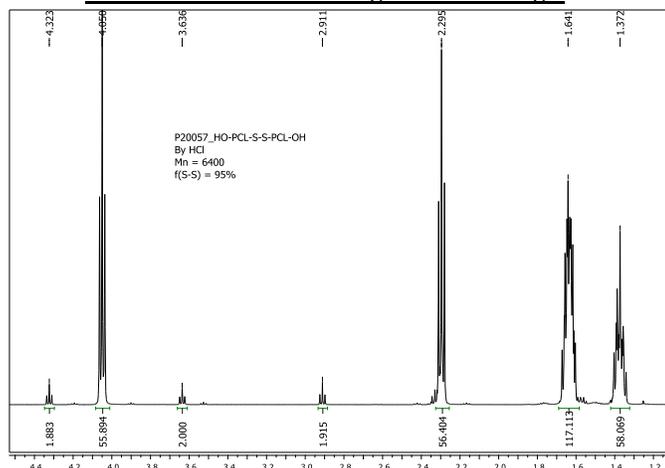
**Characterization:** PCL bearing the disulfide linkage was analyzed by size exclusion chromatography with light-scattering detector (SEC-LS) to obtain the  $M_n$  and polydispersity (PDI).

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

#### Chemical shifts assignments



#### <sup>1</sup>H-NMR of the PCL bearing disulfide linkage:



#### SEC of PCL-SS-PCL:

