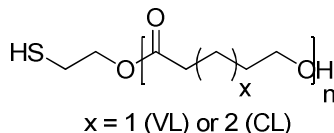


**Sample Name:  $\alpha$ -Thiol- $\omega$ -Hydroxy-terminated  
Poly( $\epsilon$ -caprolactone-co- $\delta$ -valerolactone)**

**Sample #: P14749B-CLVL-OHSH**

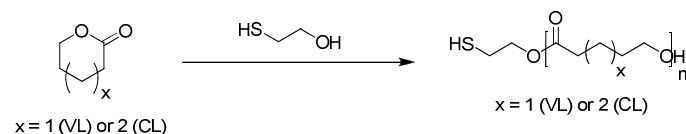


**Composition:**

$M_n \times 10^3$ HS-PCL-co-PVL	PDI
8.6 (NMR), 8.2 (SEC)	1.2
SH functionality >60% (NMR)	
Contains DTT as a stabilizer	

**Synthetic Procedure:**

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



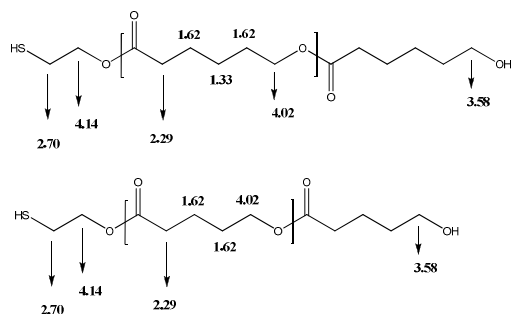
**Solubility:**

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.

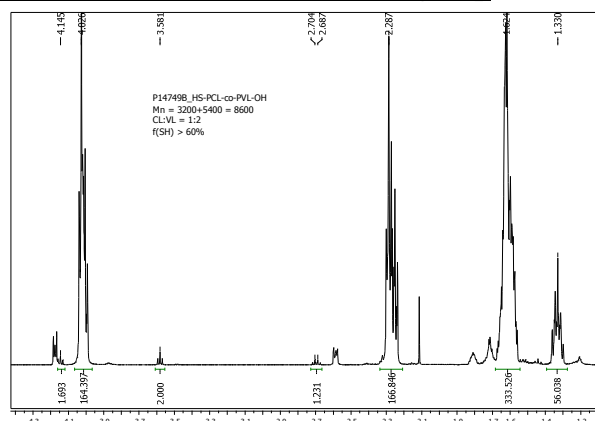
**Characterization:**

P(CL-co-VL) 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 3.58 and 2.70 ppm.

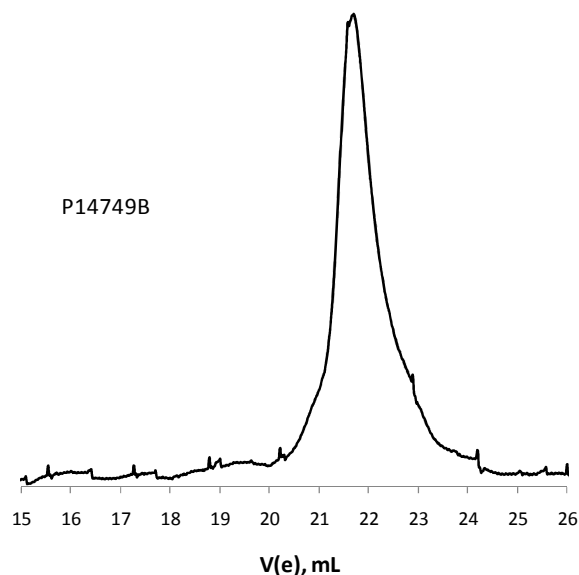
**Chemical shifts assignments**



**P(CL-co-VL) 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