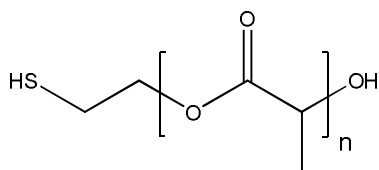


**Sample Name:  $\alpha$ -Thiol- $\omega$ -Hydroxy-terminated Poly(DL-lactide)**

**Sample #: P20157-DLLA-OHSH**

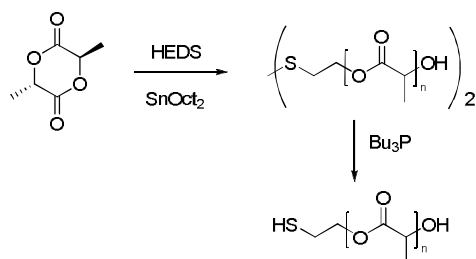


**Composition:**

$M_n \times 10^3$ HS-PDLLA	PDI
3.0 (NMR)	1.49
SH functionality $\geq 85\%$ (NMR)	
Contains DTT as stabilizer	

**Synthetic Procedure:**

HS-PDLLA is prepared by ring-opening polymerization of DL-lactide by tin octoate using 2,2'-hydroxyethyl disulfide (HEDS) as an initiator, followed by a reduction of disulfide bond. The scheme of the reaction is illustrated below:



**Solubility:**

PDLLA is soluble in  $\text{CHCl}_3$ , Acetone, THF, insoluble in ethanol, hexane. Precipitated from Acetone or  $\text{CHCl}_3$  into EtOH or hexane/EtOH.

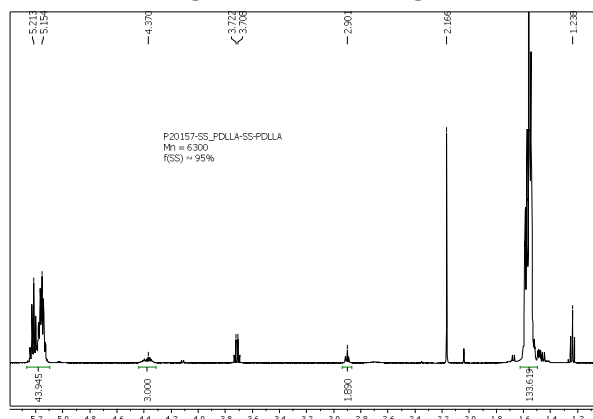
**Characterization:**

PDLLAs bearing a disulfide linkage and a free thiol were 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 4.40 and 2.90 or 4.36 and 2.74 ppm, respectively.

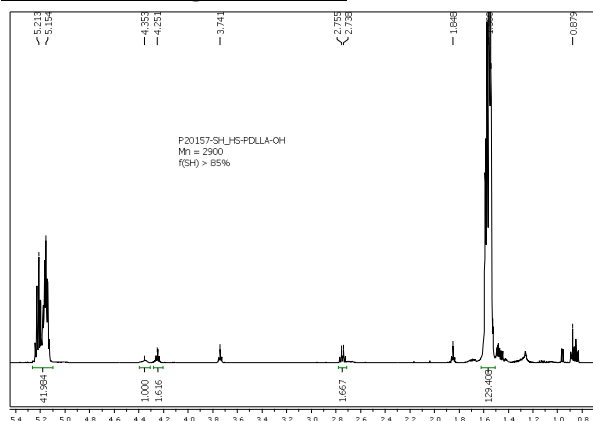
**Chemical shifts assignments**



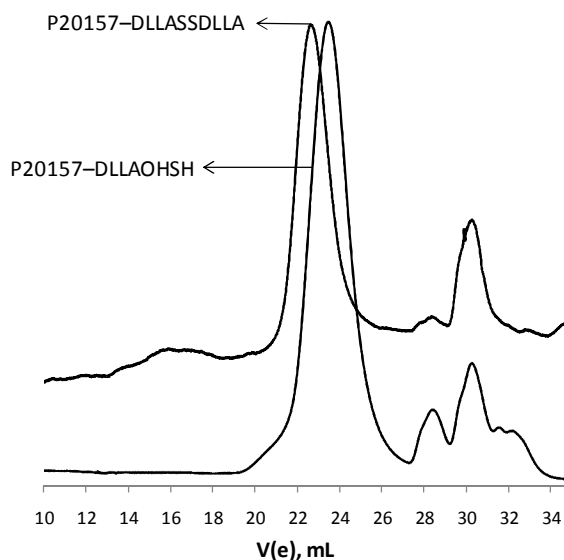
**PDLLA bearing a disulfide linkage**



**PDLLA bearing a free thiol**



**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