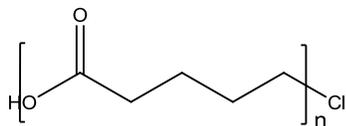


**Sample Name:**  $\alpha$ -Carboxy- $\omega$ -Chloro-terminated Poly( $\delta$ -valerolactone)

**Sample #:** P20070-VL-COOHCl



**Composition:**

$M_n \times 10^3$ HOOC-PVL-Cl	PDI
5.7 (NMR)	1.4 (SEC-LS)
5.0 (SEC)	

**Synthetic Procedure:**

HOOC-PVL-Cl is prepared by ring-opening polymerization of  $\delta$ -valerolactone according to the scheme illustrated below:



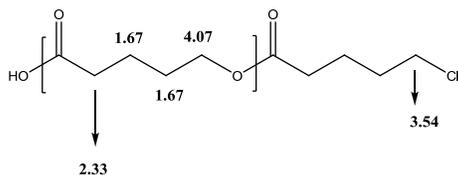
**Solubility:**

Poly( $\delta$ -valerolactone) is soluble in  $\text{CHCl}_3$ , Acetone, THF, insoluble in methanol, ethanol, ether. Precipitated from Acetone or DCM into hexane or ether.

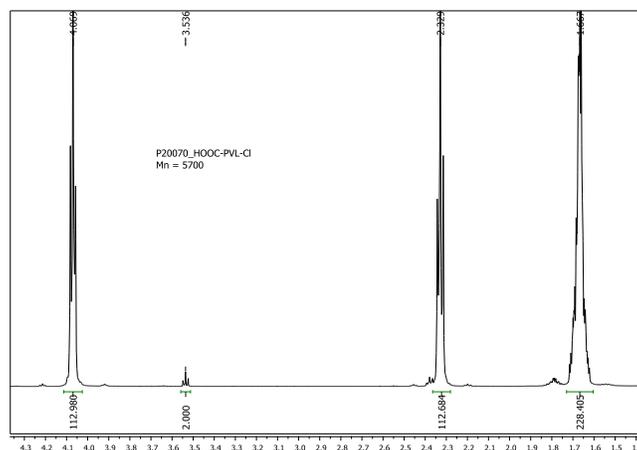
**Characterization:**

PVL, bearing carboxylic and chloroalkyl terminal units, was analyzed by size exclusion chromatography (SEC) to obtain the polydispersity index (PDI) and  $M_n$ .  $M_n$  was also determined by NMR.

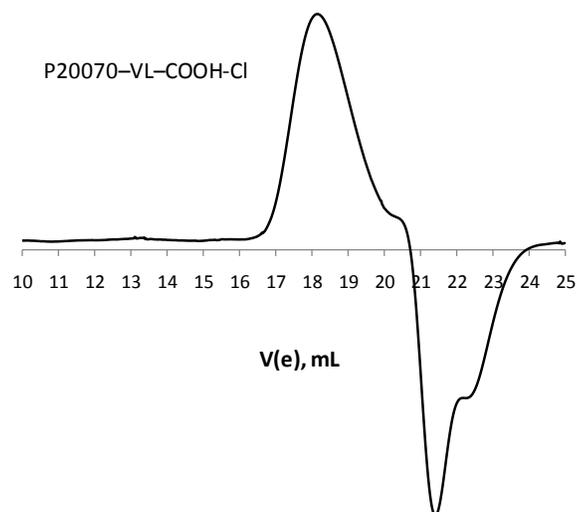
**Chemical shifts assignments**



**H NMR of HOOC-PVL-Cl**



**SEC of the polymer:**



N.B.: Certain broadening of the elugram might be due to the strong interaction of COOH-group with the column packing material