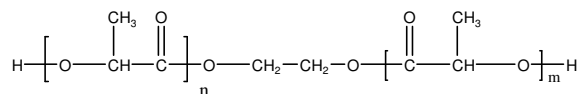


**Sample Name:** Dihydroxyl ended  
polylactide

**Sample #:** P7250-HOLAOH (DL-Form)

**Structure:**

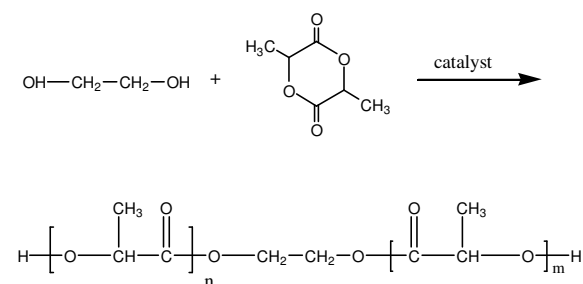


**Composition:**

Mn x 10 <sup>3</sup>	PDI
1.6	1.3
T <sub>g</sub> (°C)	26

**Synthesis Procedure:**

The polymerization of 3, 6-dimethyl-1,4-dioxane-2,5-dione was initiated with catalyst, and the reaction is shown as below:



**Characterization:**

The Mn is calculated from NMR by comparing the peak area of the ethylene glycol protons at about 4.3 ppm with the lactide protons at about 5.1 ppm and polydispersity index (PDI) are obtained by size exclusion chromatography.

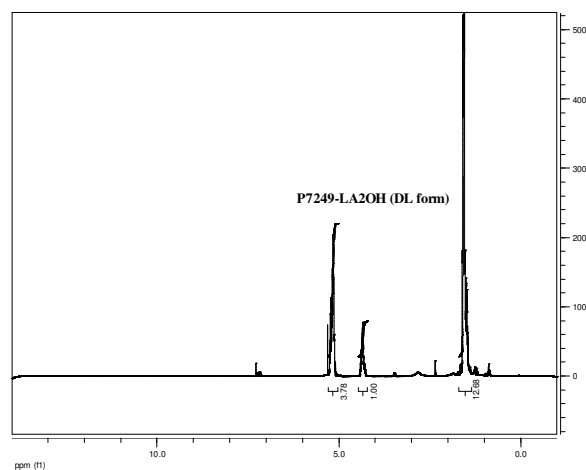
**Thermal analysis:**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

**Solubility:**

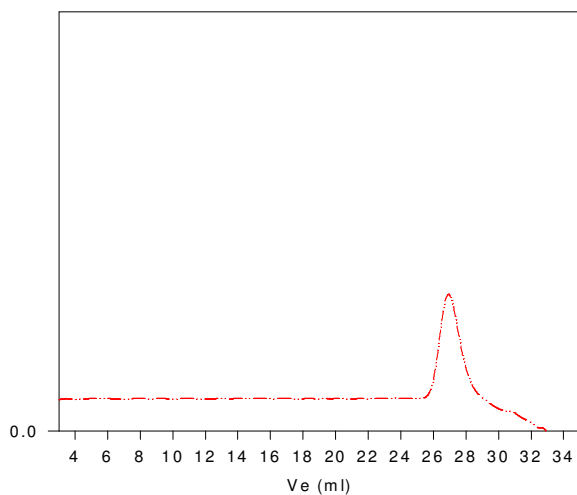
The polymer is soluble in toluene, THF, CHCl<sub>3</sub> and CH<sub>2</sub>Cl<sub>2</sub>. The polymer is insoluble in methanol, hexane and ether.

**NMR of polymer**



**SEC of polymer:**

**P7250-LA2OH (DL form)**



Size exclusion chromatography result:

— M<sub>n</sub>=1600, M<sub>w</sub>=2100 PI=1.3 (M<sub>n</sub> calculated from NMR)

**DSC thermogram for the polymer:**

