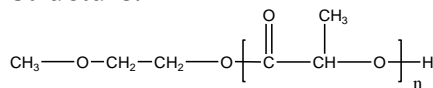


**Sample Name:** Polylactide monomethoxy terminated (DL form)

**Sample #:** P7149-LAOCH3 (DL-Form)

**Structure:**

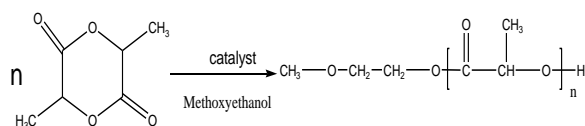


**Composition:**

$M_n \times 10^3$	PDI
1.7	1.12
$T_g (^{\circ}\text{C})$	24

**Synthesis Procedure:**

The polymerization of 3, 6-dimethyl-1,4-dioxane-2,5-dione was initiated with an catalyst and the reaction was carried out in THF.



**Characterization:**

The molecular weight is calculated from NMR by comparing methane proton of lactide at 5.1ppm and methoxyethanol protons at 3.4 and polydispersity index (PDI) is obtained by size exclusion chromatography.

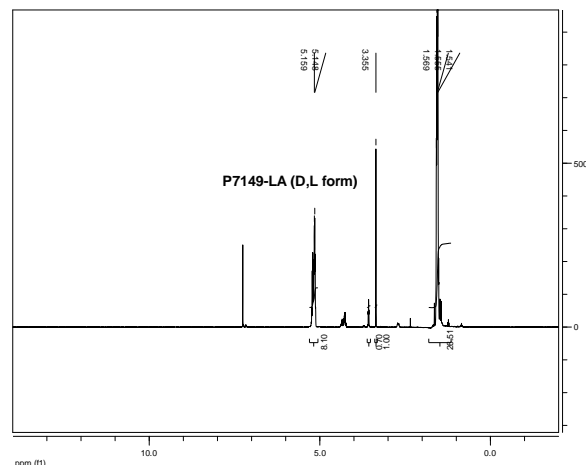
**Thermal analysis:**

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 ( $T_g$ ).

**Solubility:**

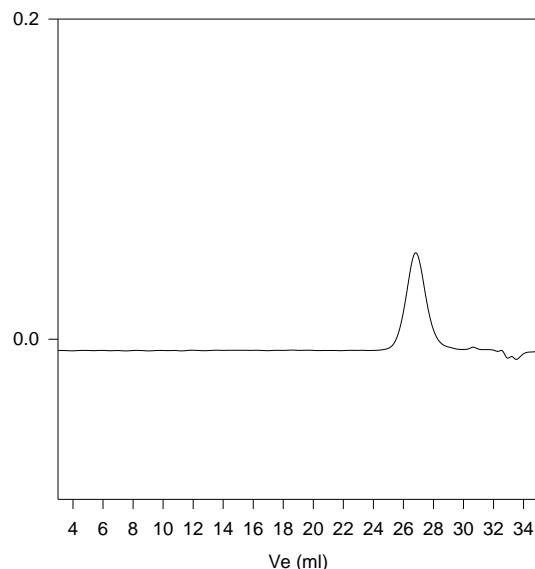
Polylactide is soluble in toluene, THF,  $\text{CHCl}_3$  and  $\text{CH}_2\text{Cl}_2$ . The polymer is insoluble in methanol, hexane and ether.

**NMR of the homopolymer:**



**SEC of Homopolymer:**

**P7149-LA (DL form)**



Size exclusion chromatography result:

—  $M_n=1,700$ ,  $M_w=1,900$   $PI=1.12$  ( $M_n$  calculated from NMR)

**DSC thermogram for the sample:**

