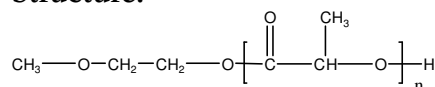


Sample Name: Polylactide

Sample #: P5349-LA (DL-Form)

Structure:

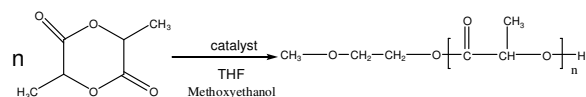


Composition:

$M_n \times 10^3$	PDI
6.5 (from HNMR)	1.55
T_g (°C)	42°C

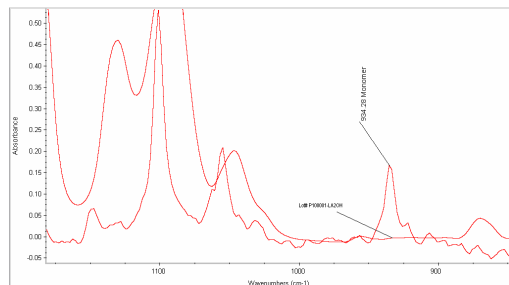
Synthesis Procedure:

The polymerization of 3, 6-dimethyl-1,4-dioxane-2,5-dione was carried out by ring opening polymerization using a catalyst.



Purification:

The polymeric solution was washed with cold ethanol to ensure the removal of un-reacted monomer (by FTIR absence of characteristic absorbance at 934 cm⁻¹) and then polymer was precipitated in ethanol/ether.



Characterization: The molecular weight and polydispersity index (PDI) are obtained by size exclusion chromatography.

Thermal analysis:

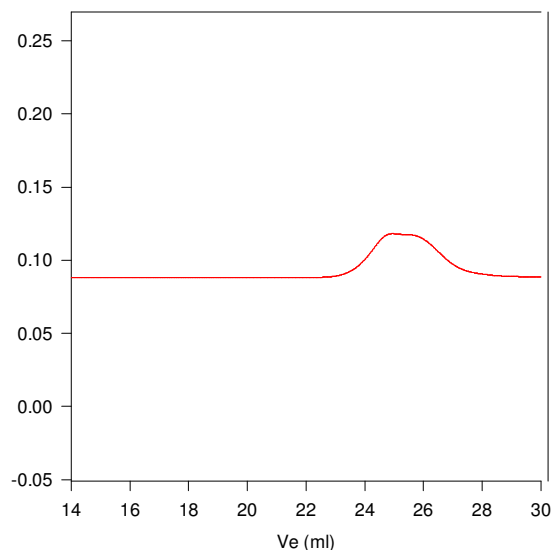
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Poly(DL-lactide) is soluble in toluene, THF, CHCl₃ and CH₂Cl₂. The polymer is insoluble in methanol, hexane and ether.

SEC of Homopolymer:

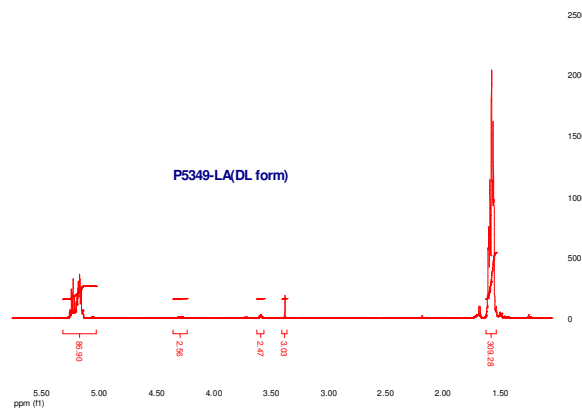
P5349-LA(DL form)



Size exclusion chromatograph of Polymer:

$M_n=6500$, $M_w=10000$, $PI=1.55$

¹H NMR of the Polymer:



DSC thermogram for the sample:

