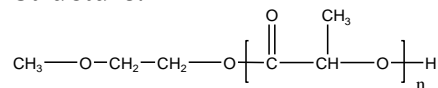


Sample Name: Polylactide monomethoxy terminated (L form)

Sample #: P7150-LA (L-Form)

Structure:

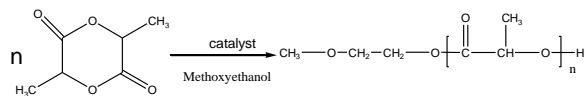


Composition:

Mn x 10 ³	PDI
1.4	1.12

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.



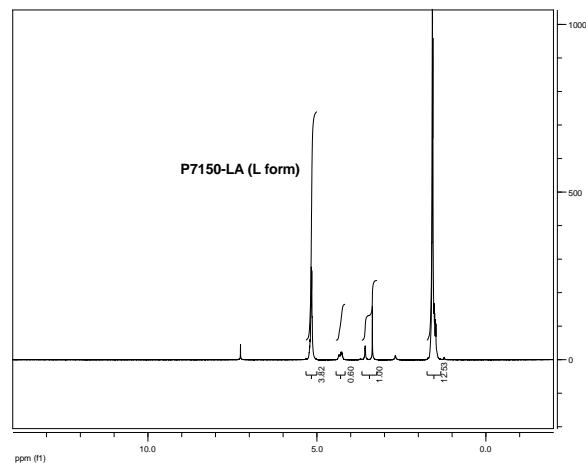
Characterization:

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

Solubility:

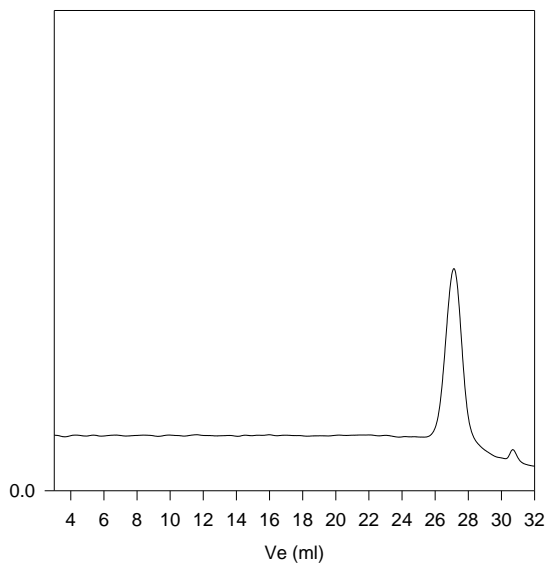
Polylactide is soluble in toluene, THF, CHCl₃ and CH₂Cl₂. The polymer is insoluble in methanol, hexane and ether.

NMR of the homopolymer:



SEC of Homopolymer:

P7150-LAOCH3 (L form)



Size exclusion chromatography result:

— M_n=1400, M_w=1,700 PI=1.12 (Mn calculated from NMR)

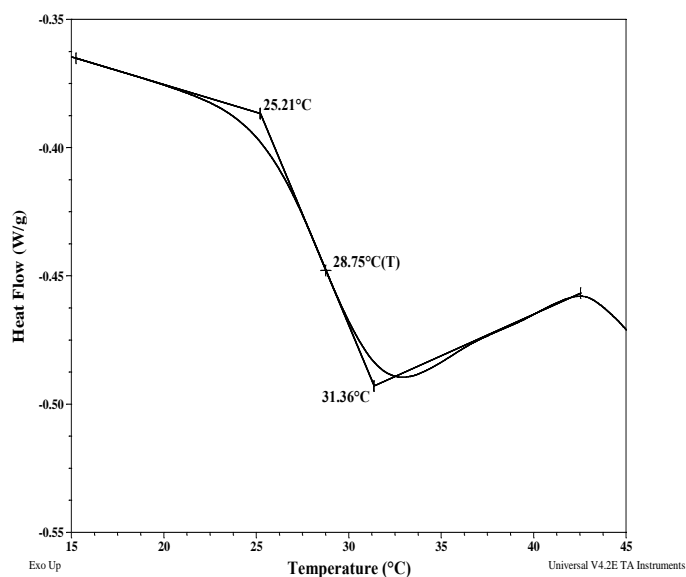
Thermal analysis of the sample P7150-LA

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).

Thermal analysis results at a glance

T_m (°C)	T_c (°C)	T_g (°C)
111	Not found	29

Thermogram for the sample



Melting and crystallization curves

The melting temperature (T_m) was taken as the maximum of the endothermic peak where as the crystallization temperature (T_c) was considered as the minimum of the exothermic peak.

Melting curve for the LA sample:

