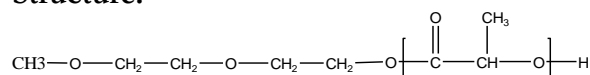


Sample Name: Polylactide monomethoxy terminated (L form)

Sample #: P18733B-LA (L-Form)

Structure:

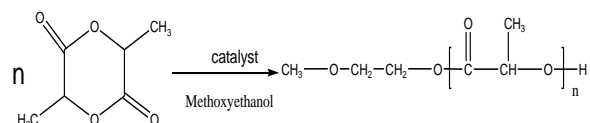


Composition:

$M_n \times 10^3$	PDI
18.0	1.3
T_g	54.2 °C
T_m	177 °C
T_c	105 °C

Synthesis Procedure:

The polymerization of 3, 6-dimethyl-1,4-dioxane-2,5-dione was initiated with a 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 3.4ppm, and polydispersity index (PDI) is obtained by size exclusion chromatography.

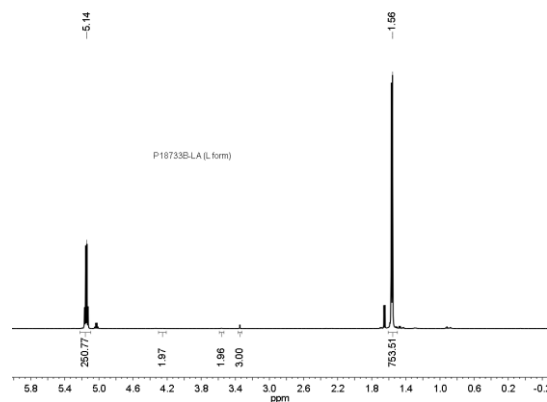
Thermal analysis:

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:

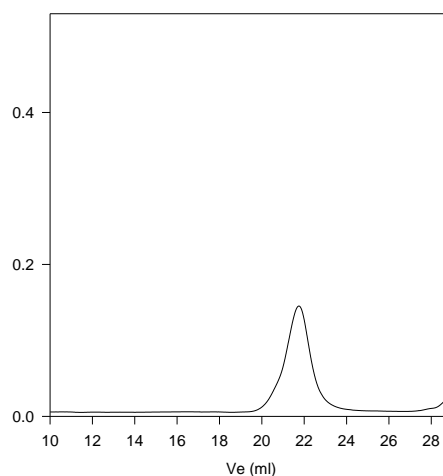
Poly L-lactide is soluble in CHCl_3 and CH_2Cl_2 . The polymer is insoluble in methanol, hexane and ether.

H NMR:



SEC of Homopolymer:

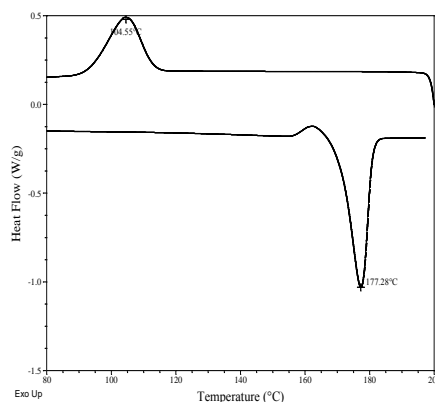
P18733B-LA (L form)



Size exclusion chromatography result:

— $M_n=18,000$ $M_w=23,000$ $PI=1.3$

Thermogram for the sample:



Reference: for further reading :

Ahmed, J., Zhang, J-X., Song, Z., Varshney, S.K. J. Thermal Analysis & Calorimetry, 95, 3, 957-964, 2009.