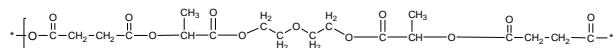


Sample Name:
Polyanhydride based on polylactide (L form)

Sample #: P10014-LA(L)-Anh

Structure:

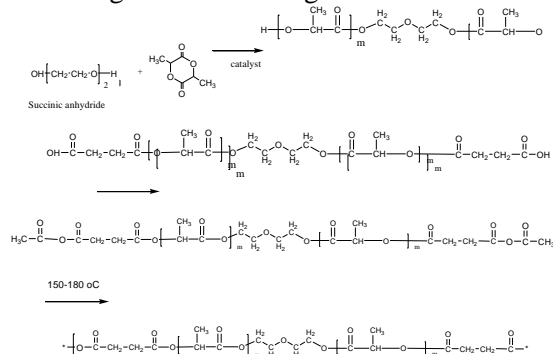


Composition:

| | |
|--|-----------|
| $M_n \times 10^3$ (g/mol) (total) | 22.0 |
| M_w/M_n | 2.0 |
| M_n of L polylactide chain | 7,500 |
| Number of repeating polylactide chain | 3 by GPC |
| Number of repeating polylactide chain based on terminal end groups | 4 by HNMR |

Synthesis Procedure: Center block Diethylene glycol

The polyanhydride based on polylactide (L) is prepared according to the following reaction scheme:



Characterization:

The product was characterized by size exclusion chromatography (SEC) runs in DMF and ^1H NMR solution viscosity in CDCl_3 .

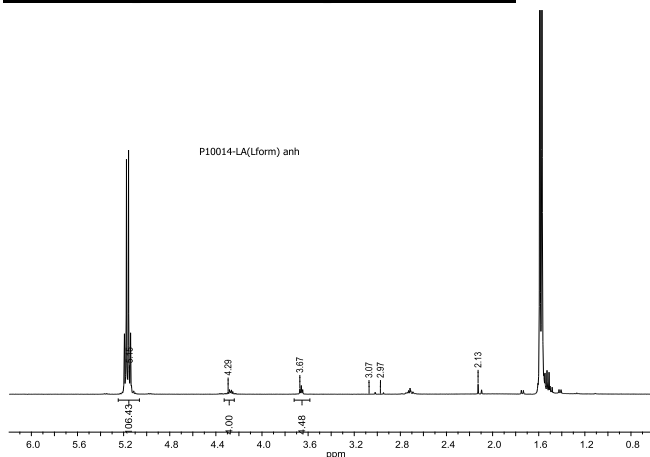
Solubility:

The polyanhydride is soluble in chloroform, DMF. And it precipitated out from ether and hexanes.

Following Photo shows that Fiber can be drawn by melt process, since LA is L form Crystalline, the obtain fiber is brittle:



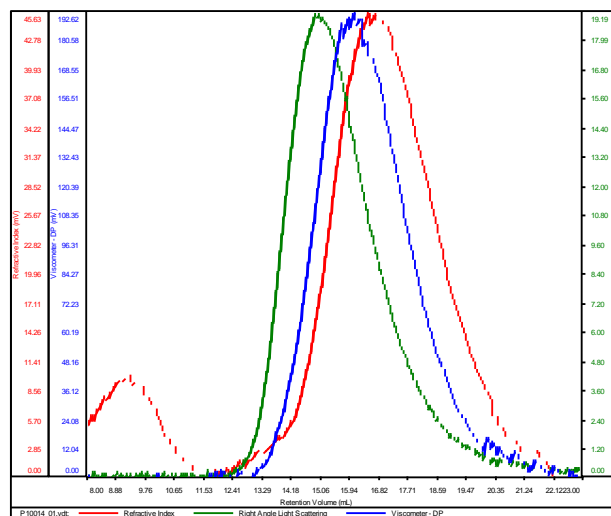
^1H NMR spectrum of the polyanhydride:



SEC elugram of the polyanhydride:

P10014-LA(L) Anh

| | |
|-----------|----------------------------|
| Conc | 3.8245 |
| dn/dc | 0.1650 |
| Solvent | DMF w 0.023M LiBr |
| Flow Rate | 0.7000 |
| Method | PS-80k_2018-04-02-0000.vcm |



| Sample | Mn | Mw | Mp | Mw/Mn | IV |
|---------------|--------|--------|--------|-------|--------|
| P10014_01.vdt | 22,114 | 46,511 | 29,105 | 2.103 | 1.8936 |

References:

S. K. Varshney, Olexander Hnojewyl, J.X. Zhang, and Patrick Rivelli, US Pat 7,674,285 B2 2010 Poly anhydride Polymers and Their Uses inn Biomedical Devices And 2009/0253806A1