

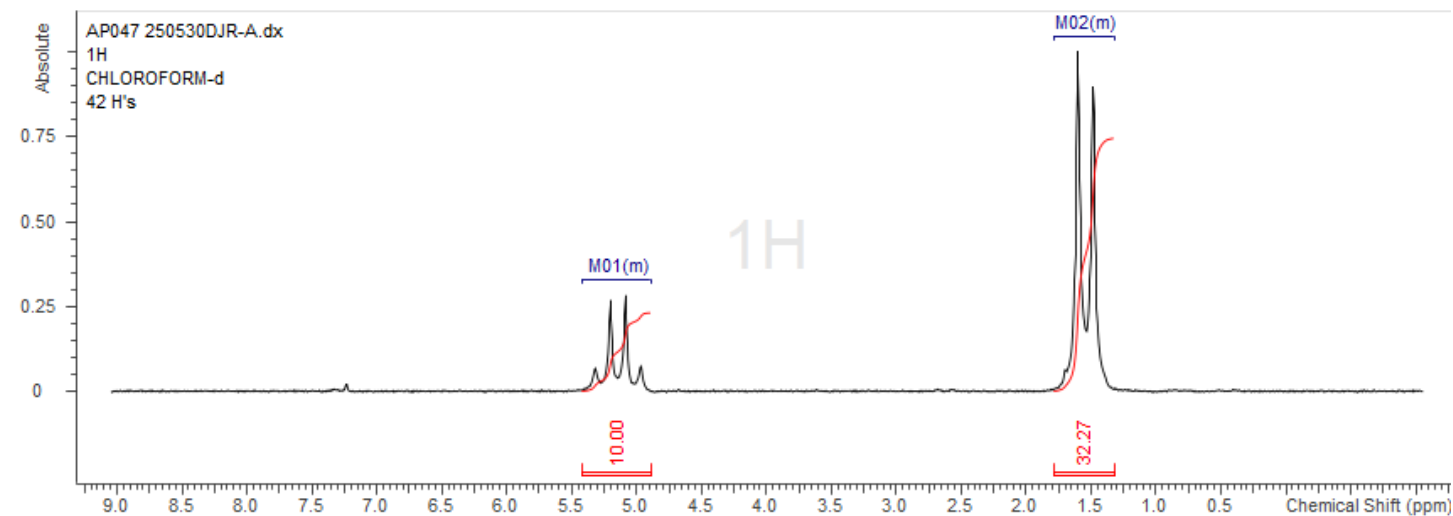
**No. AP047**

# Certificate of Analysis



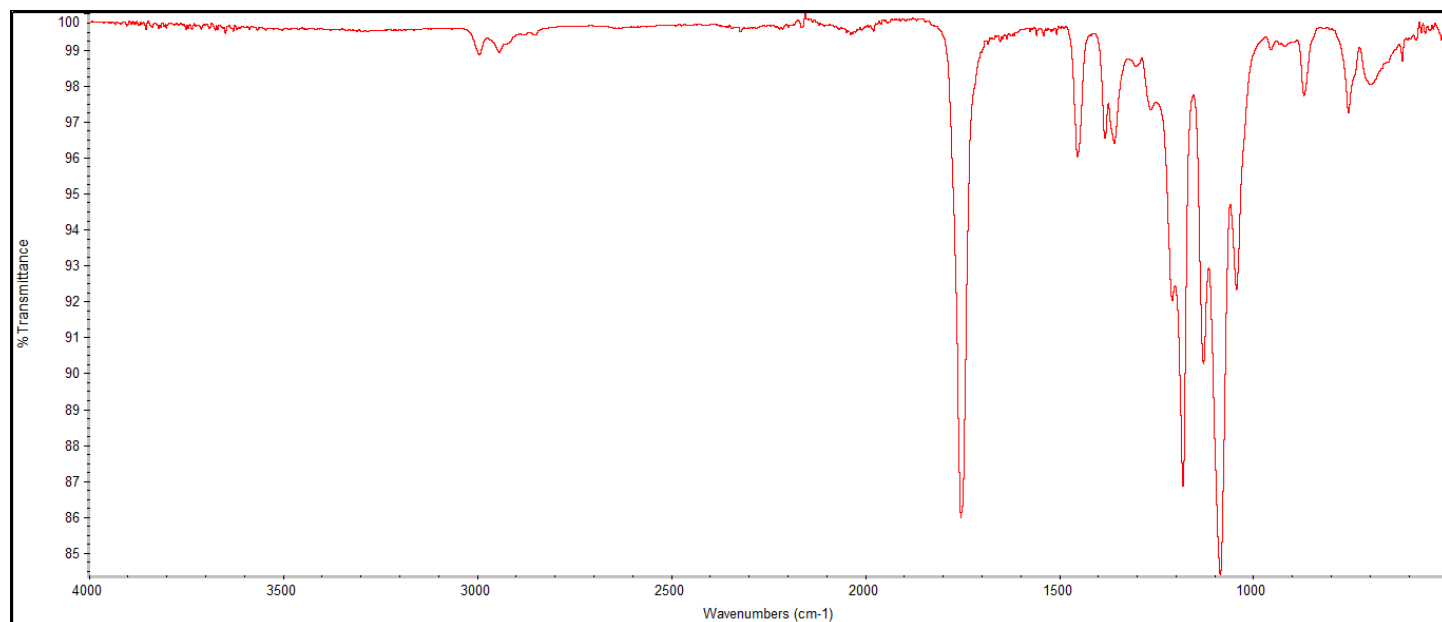
Product Name: Poly((L)Lactic acid) acid endcap ( $M_n$ : 45,000-55,000 Da)  
(Lot#: 250530DJR-A)

## H-NMR



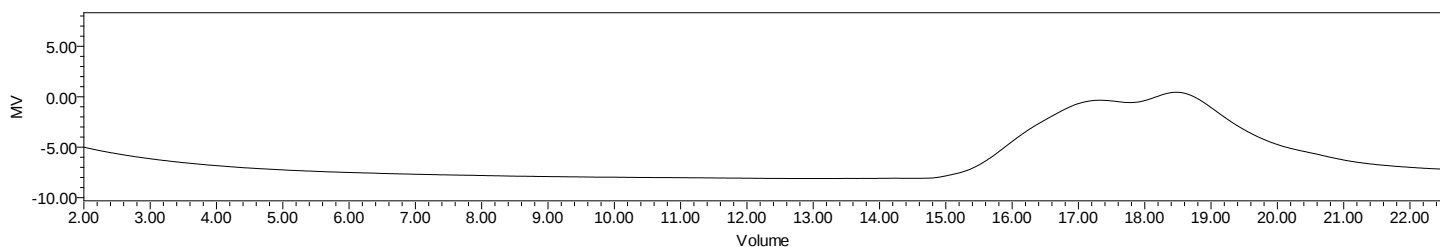
H-NMR Spectrum of copolymers in  $CDCl_3$  (NMReady-60e, Nanalysis 60 MHz) NMR of PLGA copolymer

## FTIR



FTIR Analysis: Collected from IS5 ID7-ATR spectrometer (Thermo Scientific) and analyzed in transmission mode.

## GPC-ES



| Polymer | M <sub>n</sub> (from GPC) | M <sub>w</sub> (from GPC) | PDI  |
|---------|---------------------------|---------------------------|------|
| PLLGA   | 50,247                    | 69,453                    | 1.38 |

**GPC-ES Analysis Method:** Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards.

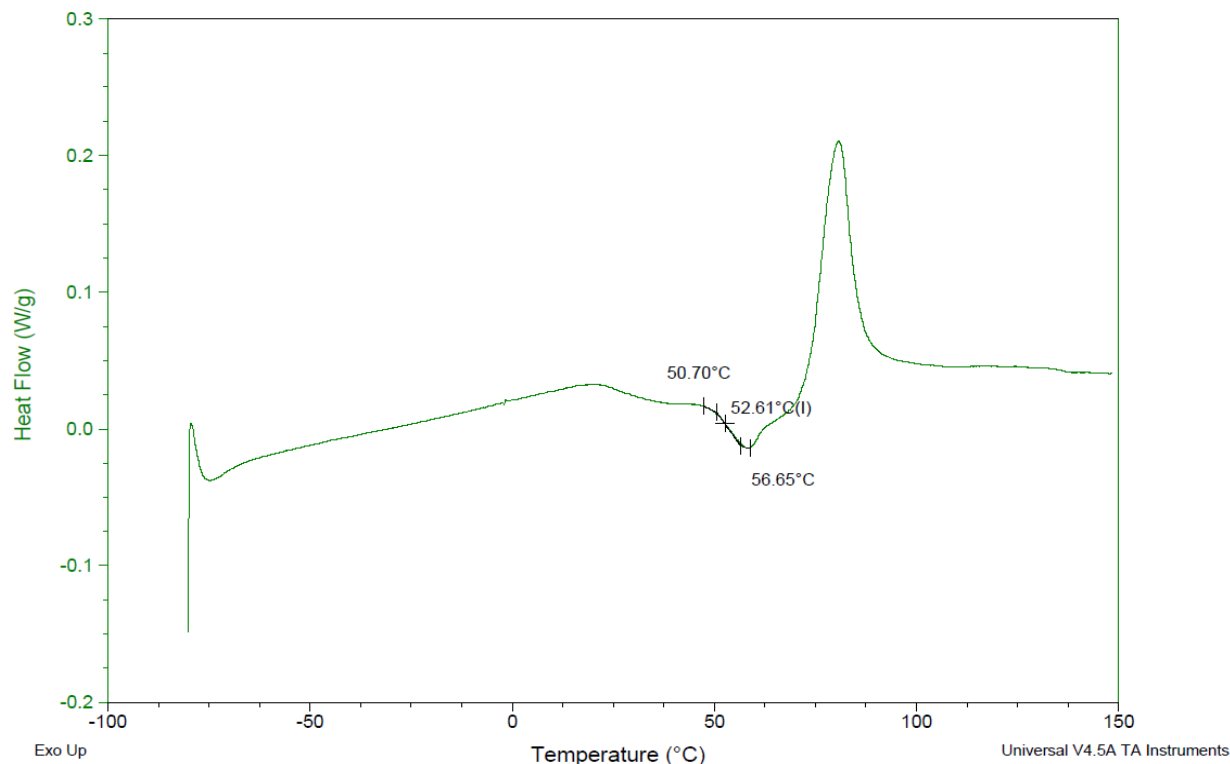
## DSC

Sample: AP047 250530DJR-A  
Size: 5.6000 mg  
Method: Modulate-no-eqb

DSC

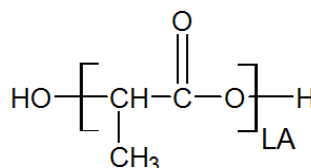
File: C:\COA\AP047 250530DJR-A DSC.002

Run Date: 04-Jun-2025 08:21  
Instrument: DSC Q2000 V24.11 Build 124



**DSC Testing:** 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. Tg = 52.61 °C

## Structure of copolymers



Approved By:  
Amie Tyler  
Quality Manager