

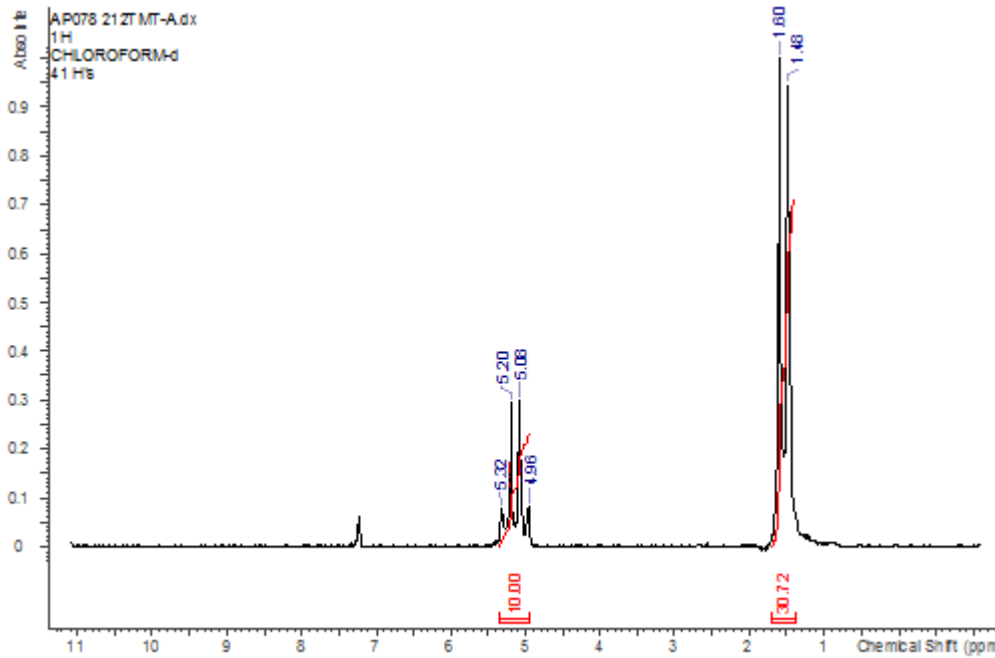
No. AP078

# Certificate of Analysis



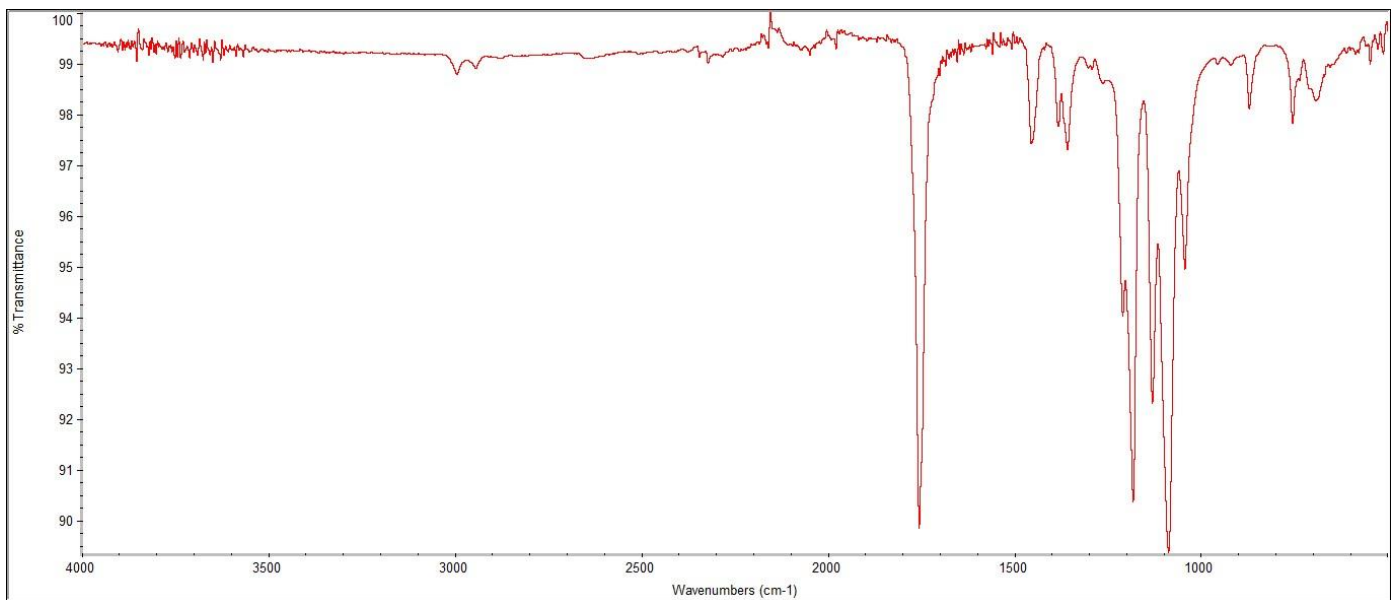
Product Name: Poly(L-lactic acid) acid endcap ( $M_n$ : 25,000-35,000 Da) (Lot#: 260212TMT-A)

## H-NMR



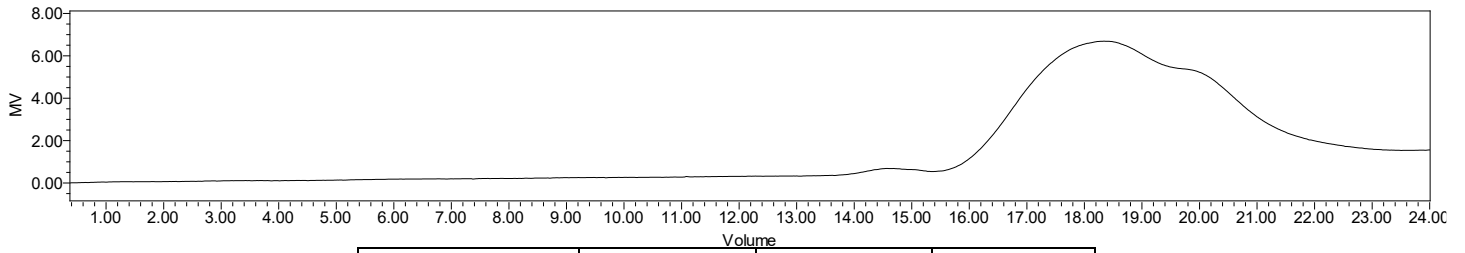
H-NMR Spectrum of copolymers in  $CDCl_3$  (NMReady-60e, Nanalysis 60 MHz) NMR of PLLA copolymer

## 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
PLLA	34,045	46,699	1.37

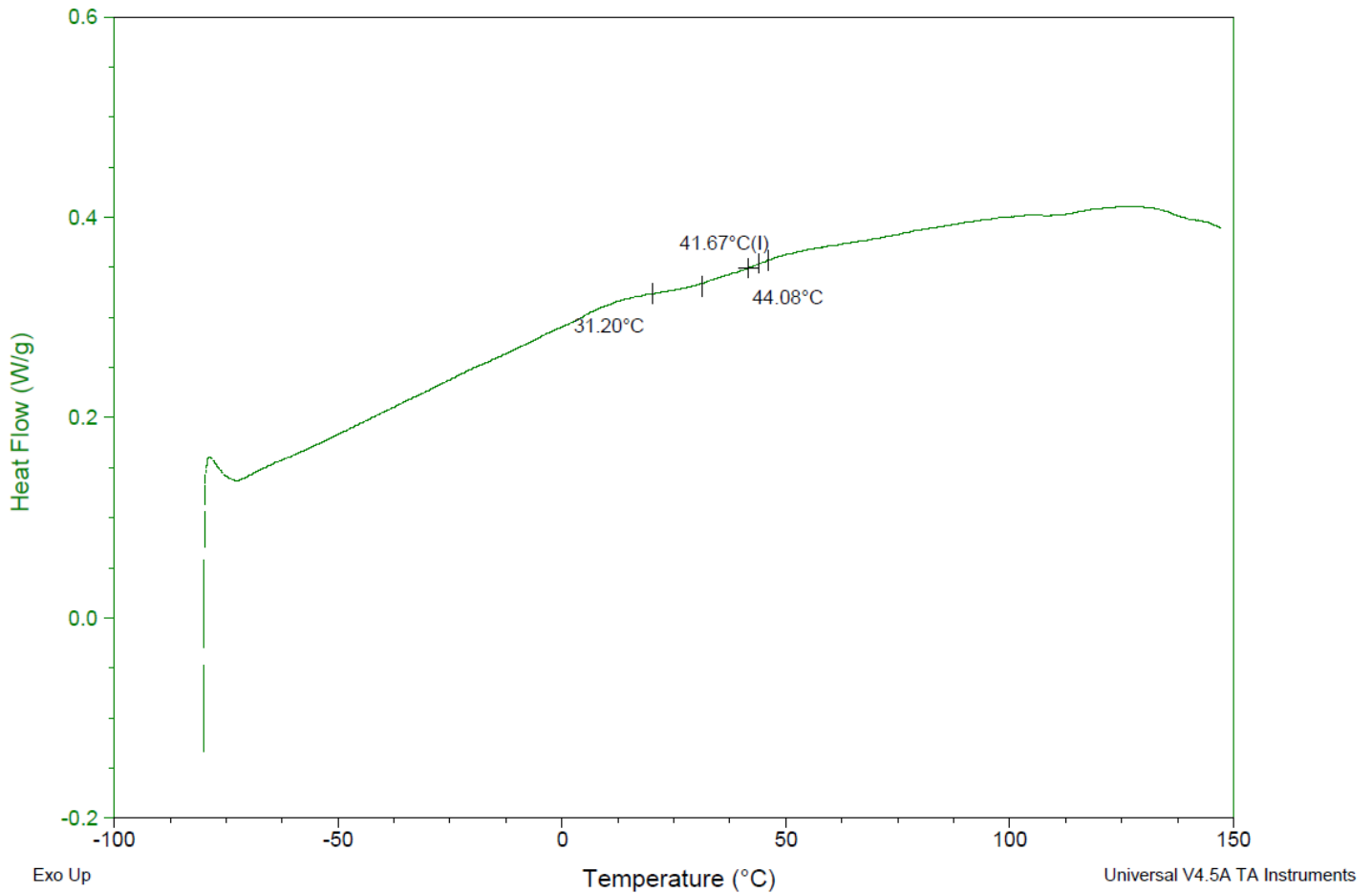
GPC-ES Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards.

## DSC

Sample: AP078 260212TMT-A  
Size: 3.2000 mg  
Method: Ramp

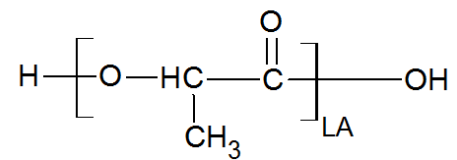
### DSC

File: C:\...\COA\AP078 260212TMT-A.001  
Run Date: 17-Feb-2026 09:19  
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 = 41.67 °C

## Structure of copolymers



Approved By:  
*John Garner*  
General Manager