

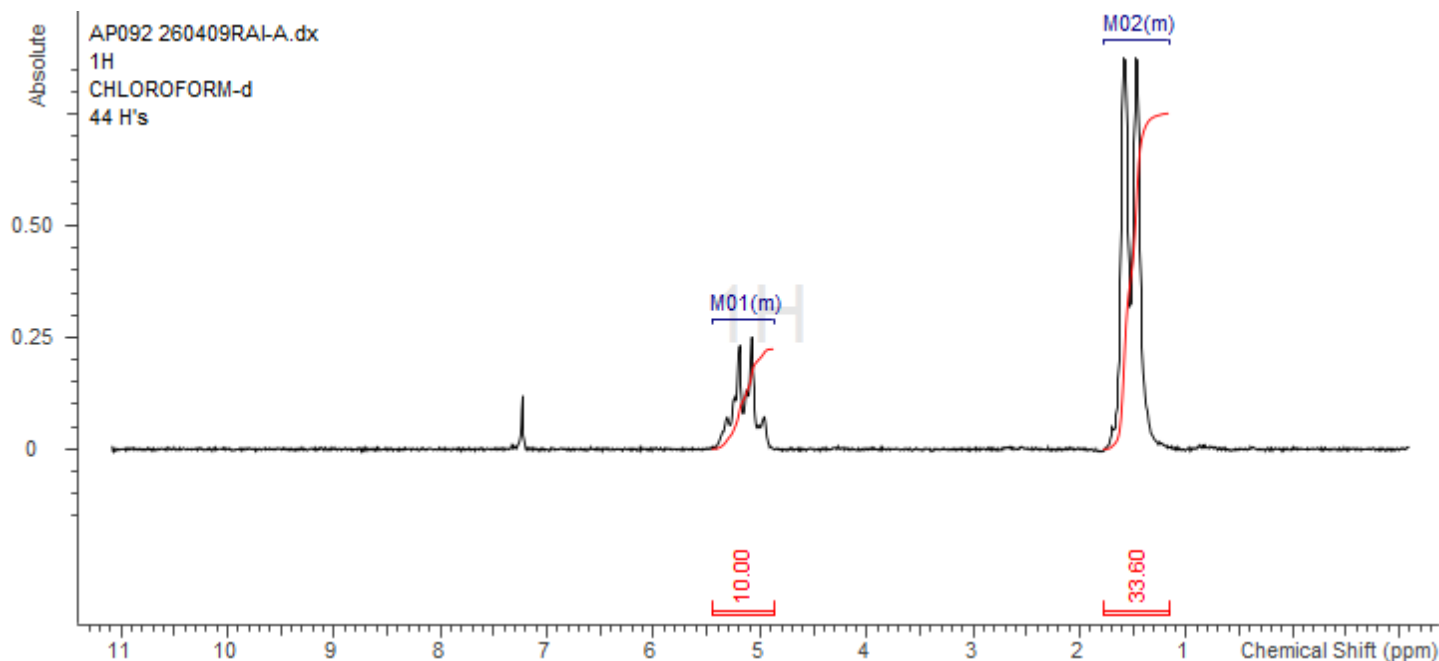
No. AP092

Certificate of Analysis



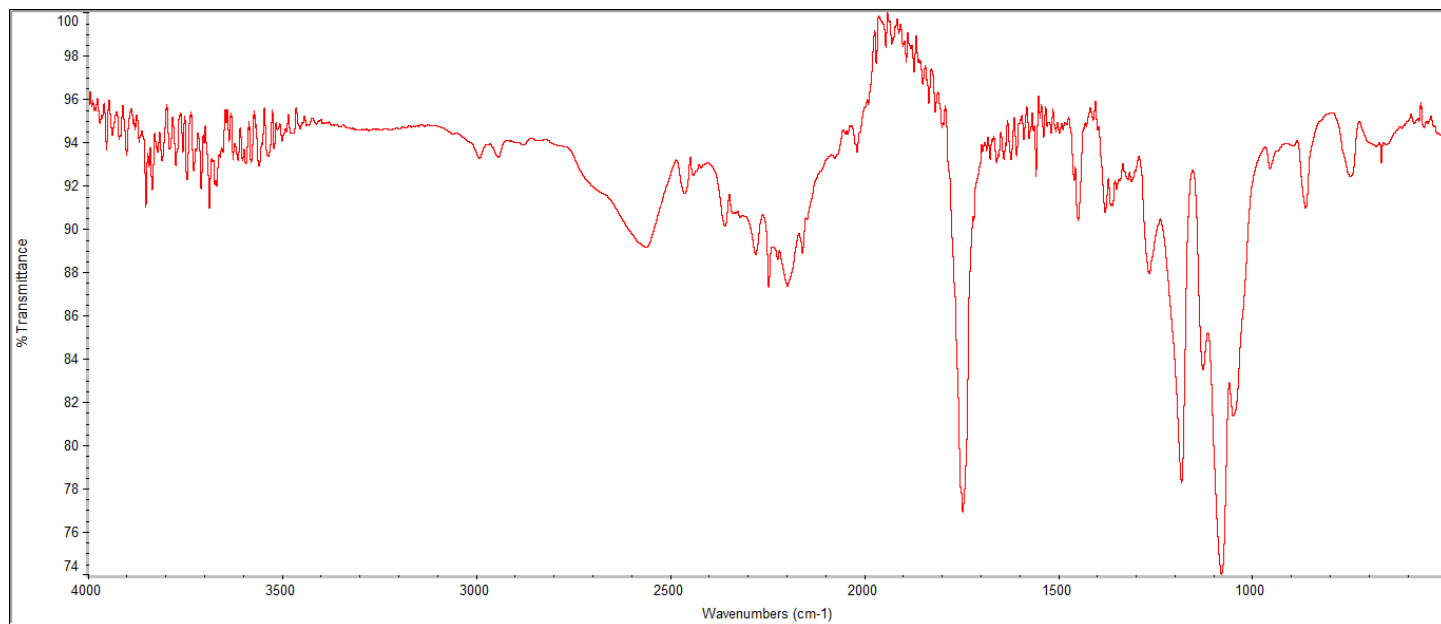
Product Name: Poly((D,L)lactic acid)-Glycerol star polymer (Mn ~ 10,000 – 20,000 Da)
(Lot#: 260409RAI-A)

H-NMR



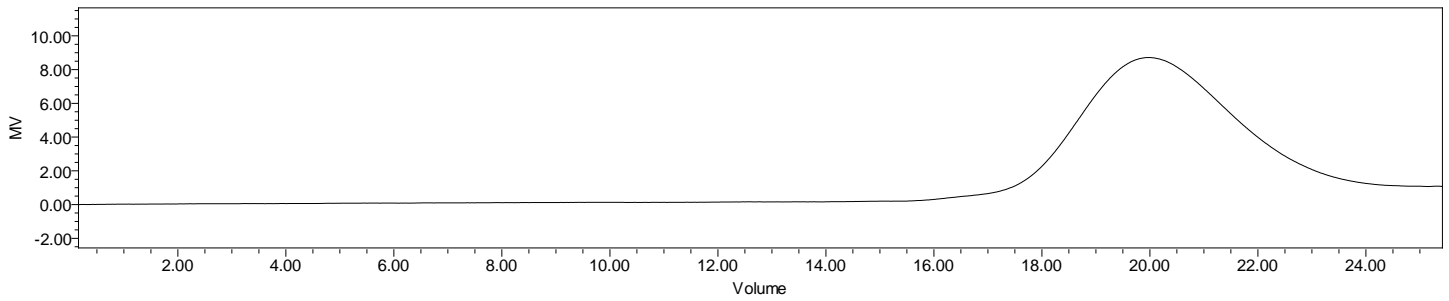
H-NMR Spectrum of copolymers in CDCl₃ (NMReady-60e, Nanalysis 60 MHz) NMR of PDLLA copolymer

FTIR



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

GPC-ES



Polymer	M _n (from GPC)	M _w (from GPC)	PDI
PDLLA	18,675	23,938	1.28

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.

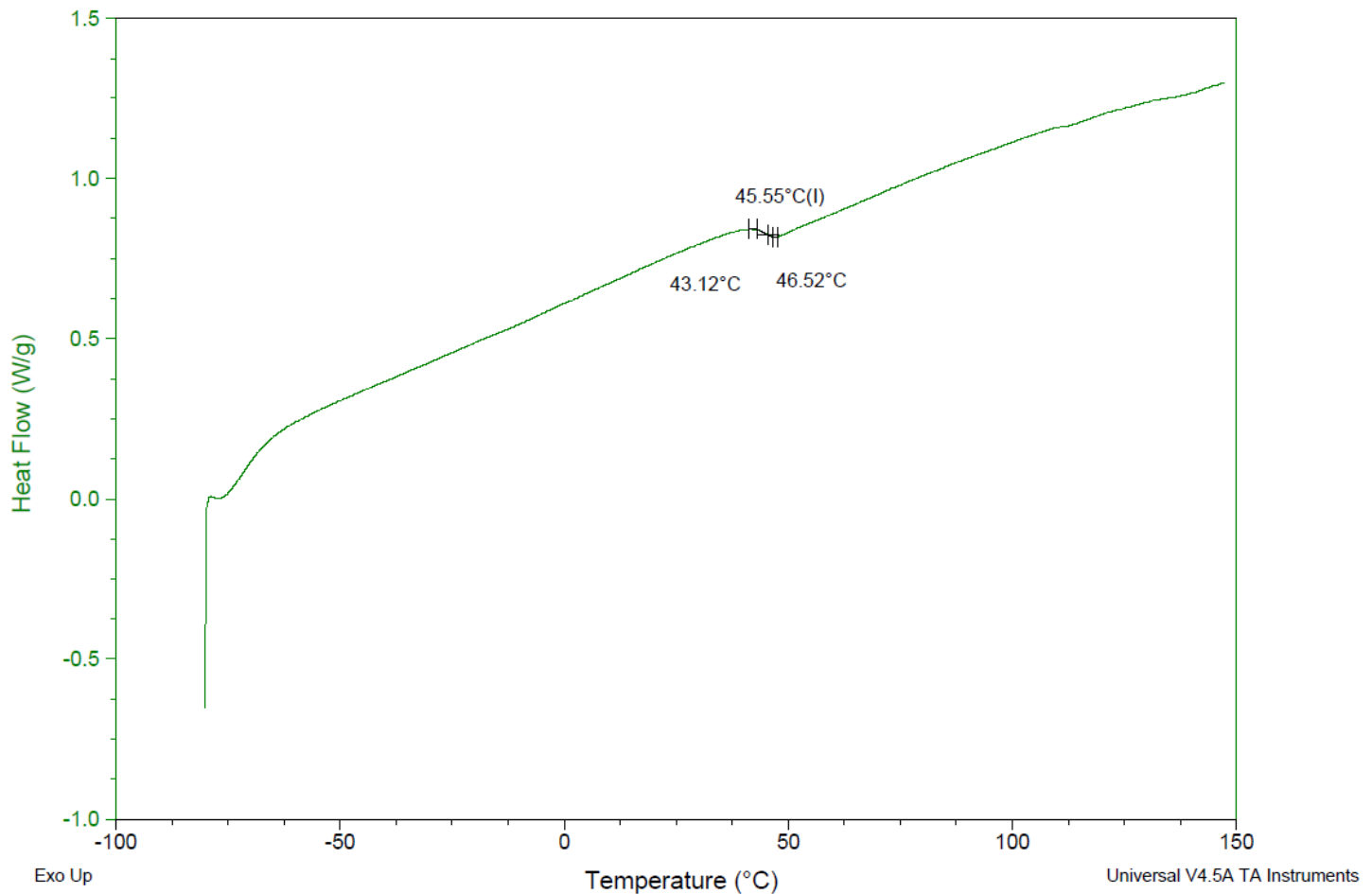
DSC

Sample: AP092 260409RAI-A
Size: 1.9000 mg
Method: Ramp

DSC

File: C:\...\COA\AP092 260409RAI-A.001

Run Date: 14-Apr-2026 12:59
Instrument: DSC Q2000 V24.11 Build 124

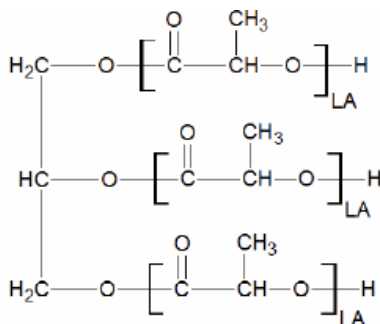


DSC Testing: 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. T_g = 45.55 °C

IV

Inherent Viscosity: 0.178 ± 0.005 dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

Structure of copolymers



Approved By:
Amie Tyler
Quality Manager