

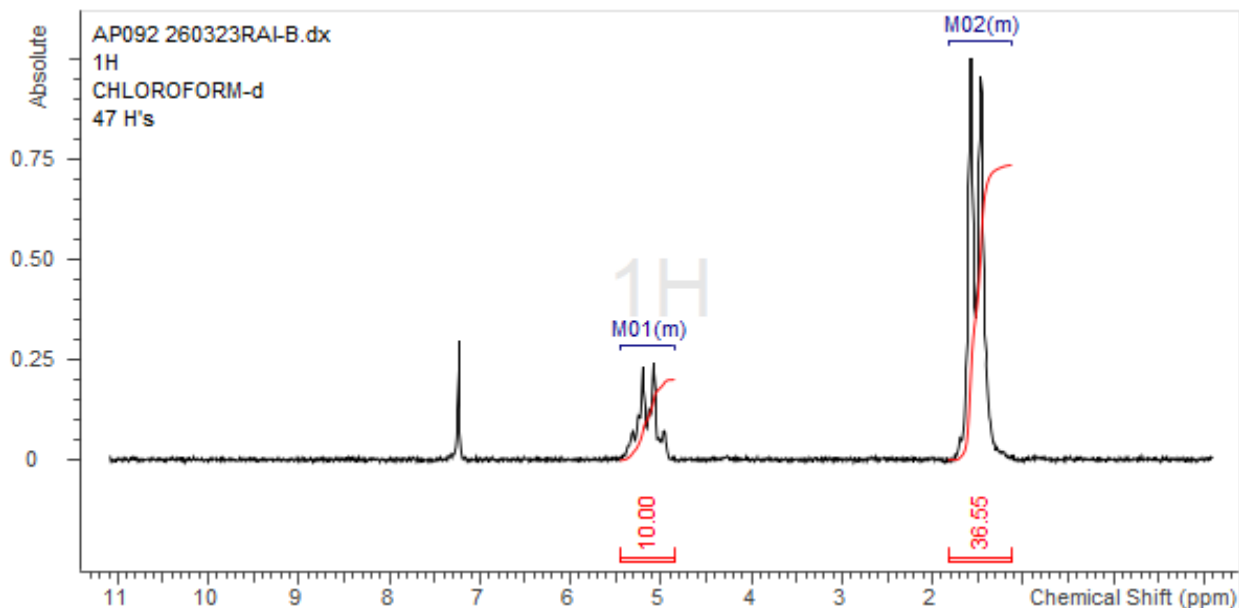
No. AP092

Certificate of Analysis



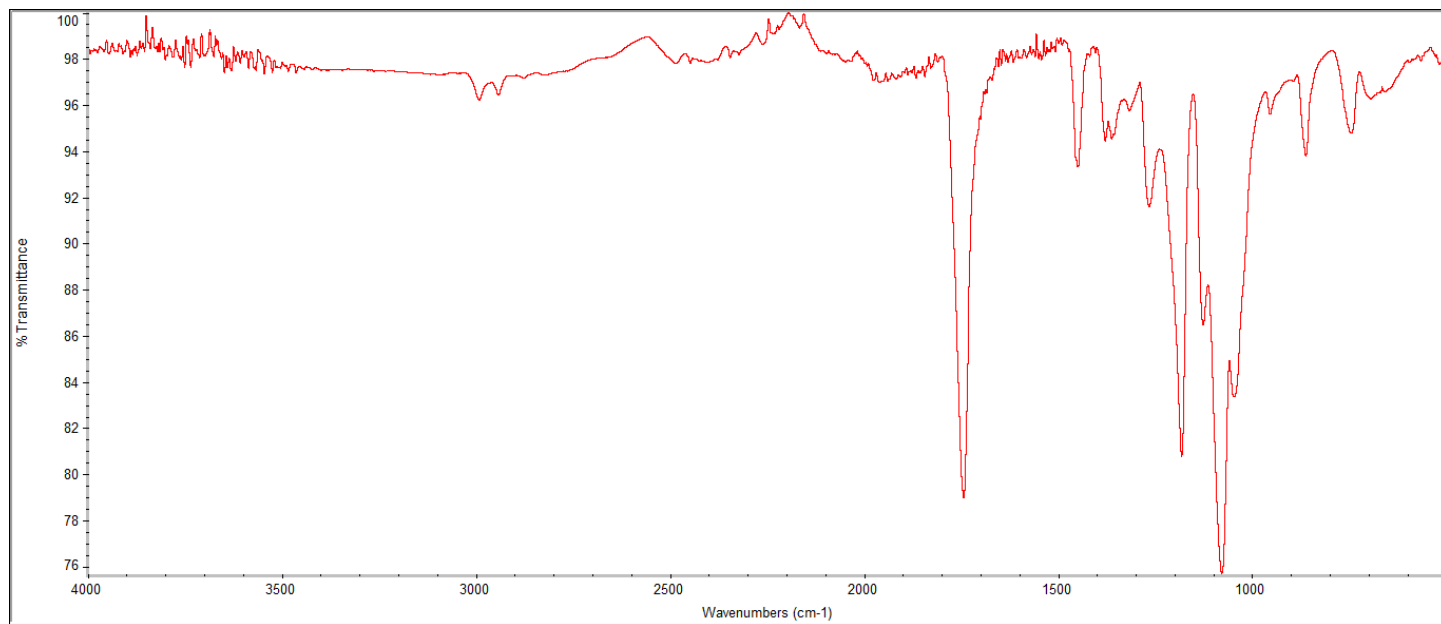
Product Name: Poly((D,L)lactic acid)-Glycerol star polymer (Mn ~ 10,000 – 20,000 Da)
(Lot#: 260323RAI-B)

H-NMR



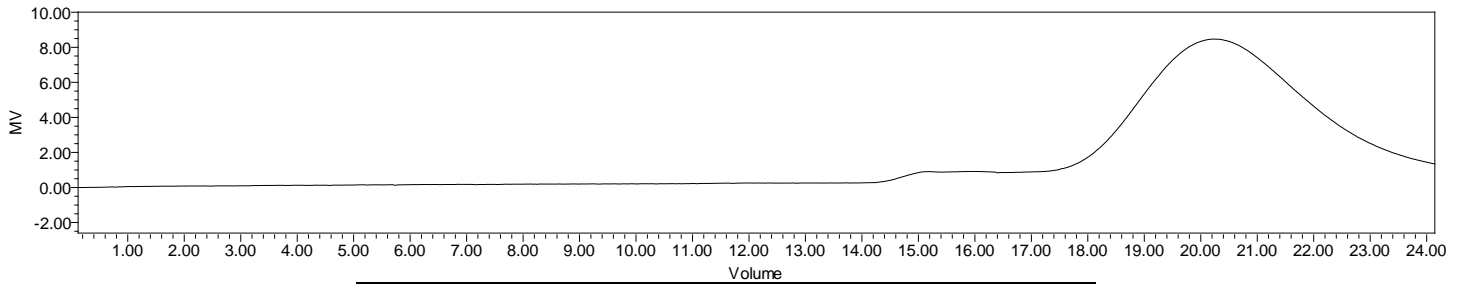
H-NMR Spectrum of copolymers in CDCl₃ (NMReady-60e, Nanalysis 60 MHz) NMR of PDLLA copolymer

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	16,765	21,175	1.26

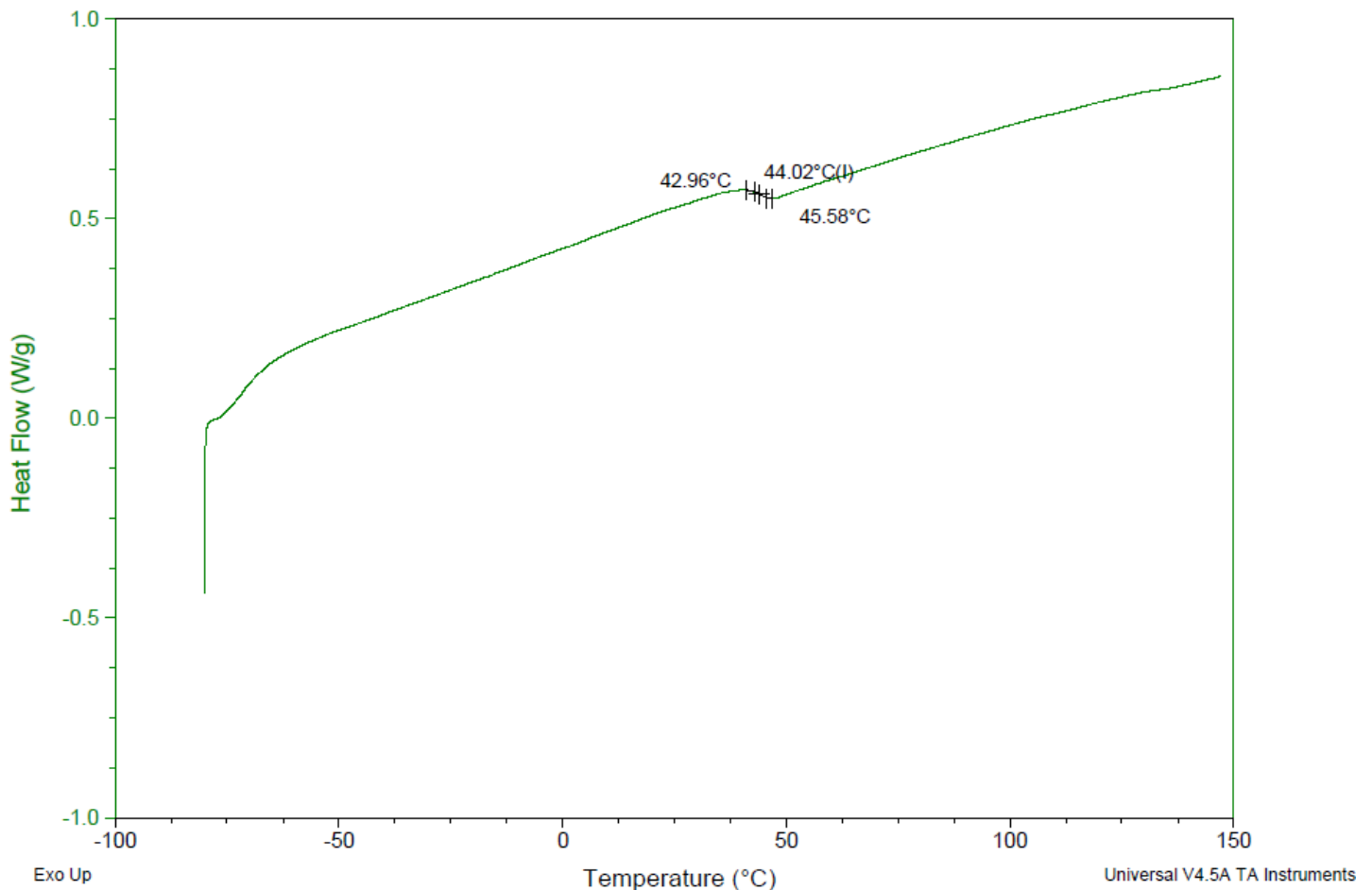
GPC-ES Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards.

DSC

Sample: AP092 260323RAI-B
 Size: 2.2000 mg
 Method: Ramp

DSC

File: C:\...\COA\AP092 260323RAI-B.001
 Run Date: 26-Mar-2026 09:32
 Instrument: DSC Q2000 V24.11 Build 124

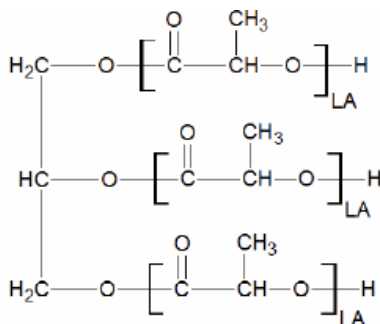


DSC Testing: 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. T_g = 44.02 °C

IV

Inherent Viscosity: 0.194 ± 0.011 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