

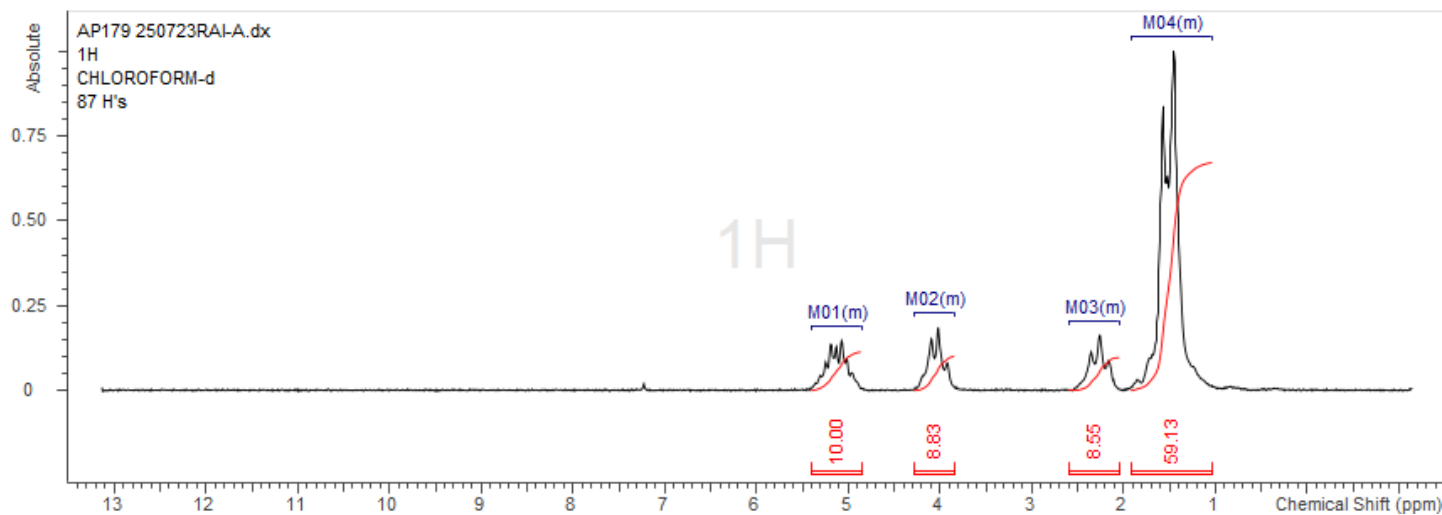
No. AP179

Certificate of Analysis



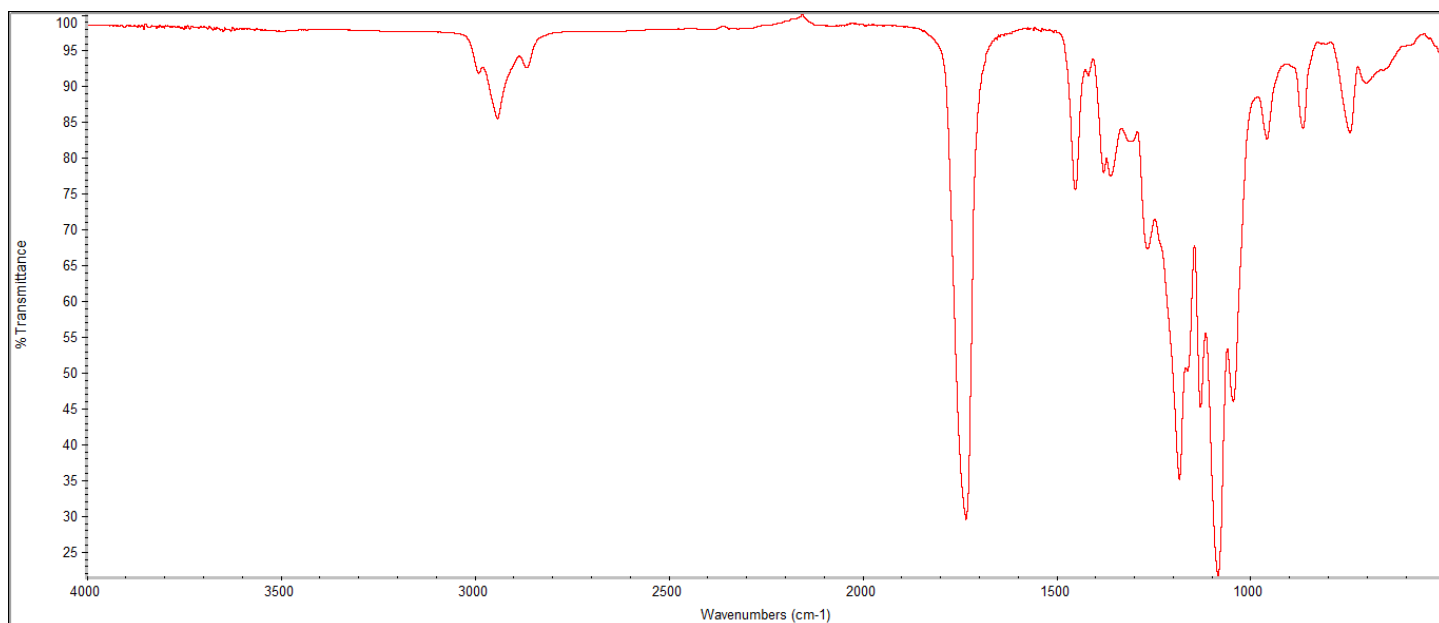
Product Name: Poly((D,L)Lactide-co-caprolactone) copolymers acid end-capped (70:30 LA:CL, M_n : 35,000-45,000 Da) (Lot#: 250723RAI-A)

H-NMR



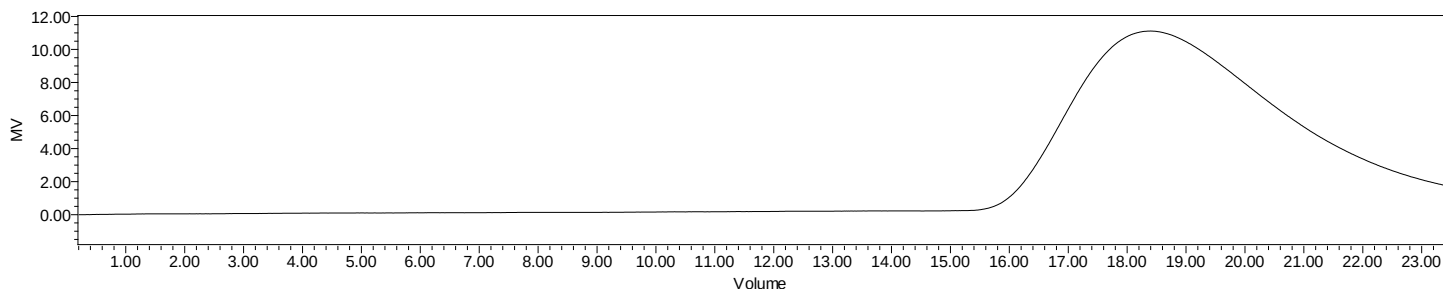
H-NMR Spectrum of copolymers in $CDCl_3$ (NMReady-60e, Nanalysis 60 MHz) NMR of P(DL)LCL copolymer: LA-CL =69%-31% molar ratio (LA:CL 74%:26% w:w)

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
P(DL)CL	36,172	46,903	1.30

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

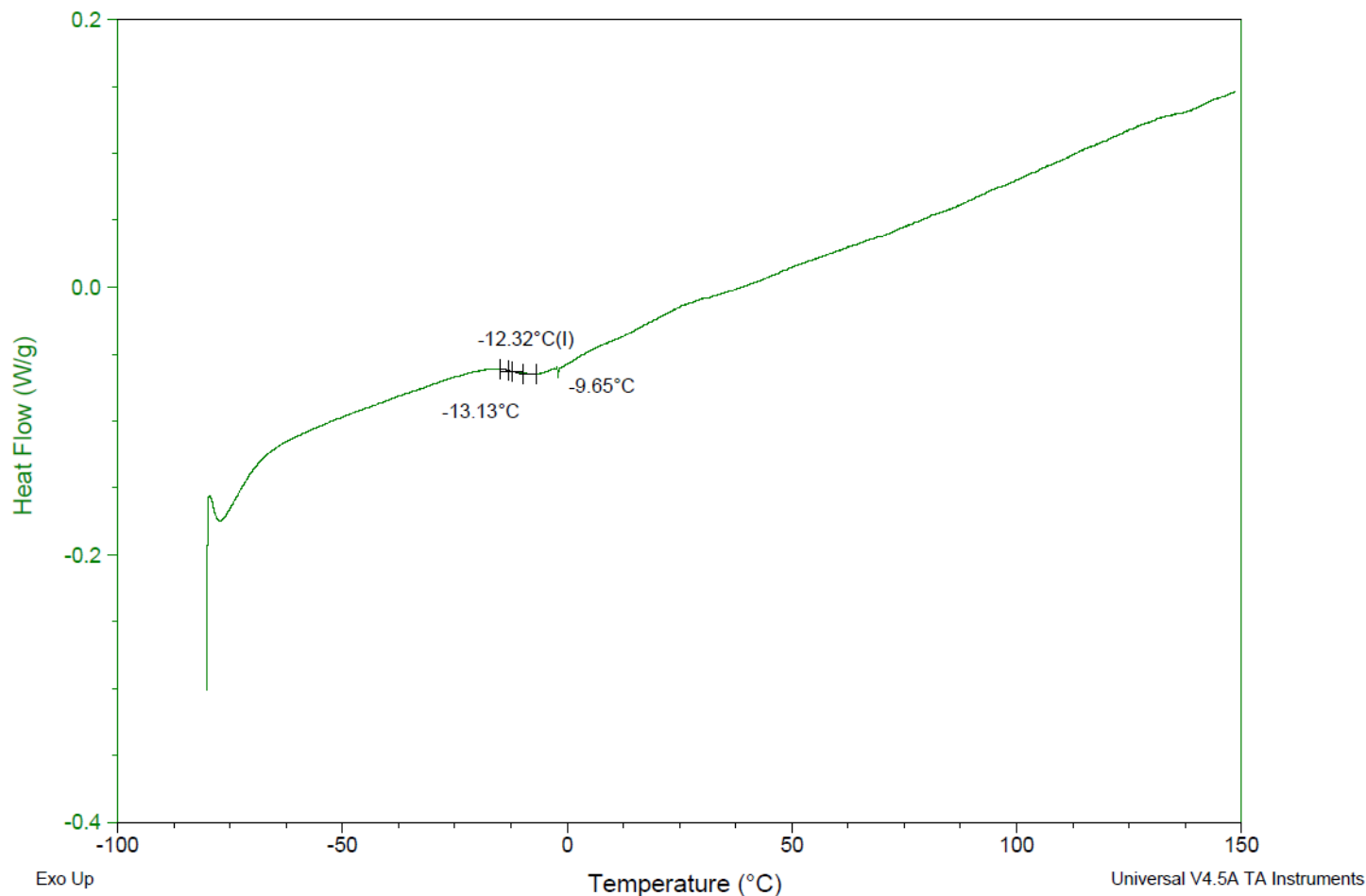
Sample: AP179 250723RAI-A
Size: 3.3000 mg
Method: Modulate-no-eqb

DSC

File: C:\...\COA\AP179 250723RAI-A DSC.001

Run Date: 29-Jul-2025 09:19

Instrument: DSC Q2000 V24.11 Build 124

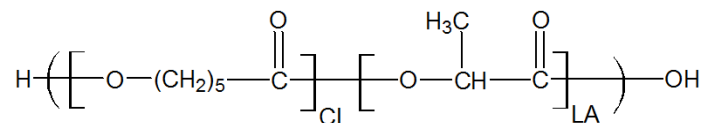


DSC Testing: 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. T_g = -12.32 °C

IV

Inherent Viscosity: 0.236 ± 0.034 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