

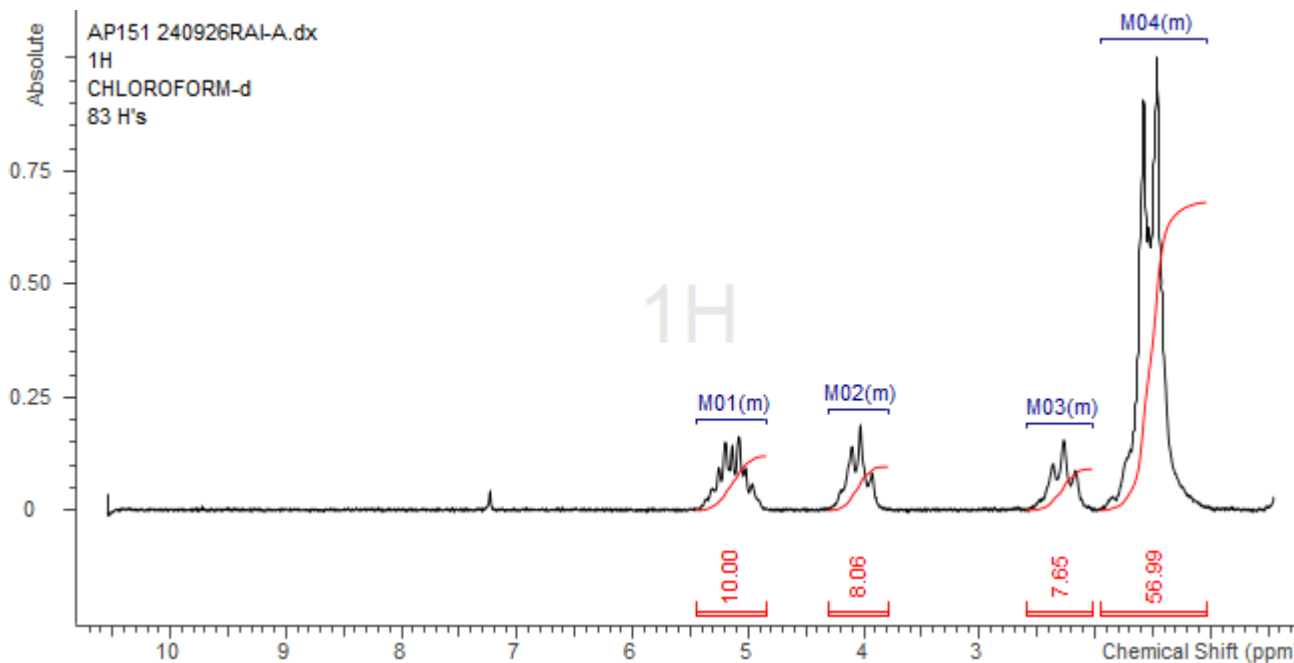
No. AP151

Certificate of Analysis



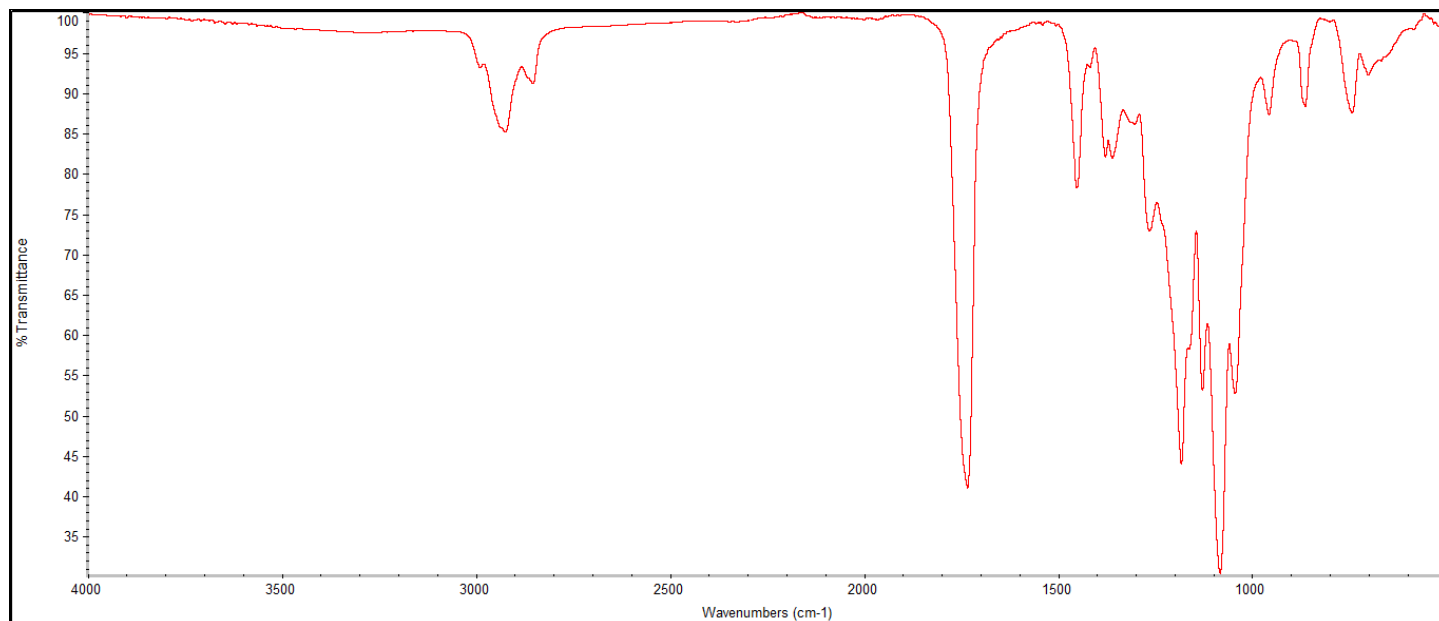
Product Name: Poly((D,L)Lactic-co-caprolactone) Copolymers acid end-capped (70:30 LA:CL, M_n : 75,000-85,000 Da) (Lot#: 240926RAI-A)

H-NMR



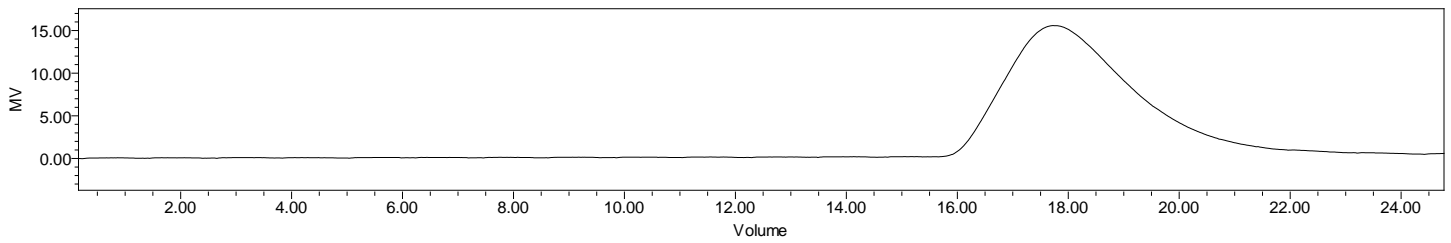
H-NMR Spectrum of copolymers in $CDCl_3$ (NMReady-60e, Nanalysis 60 MHz) NMR of PDLLCL copolymer: LA-CL = 71%-29% molar ratio (LA:CL 61%:39% w/w)

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
PDLLCL	79,590	117,292	1.47

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

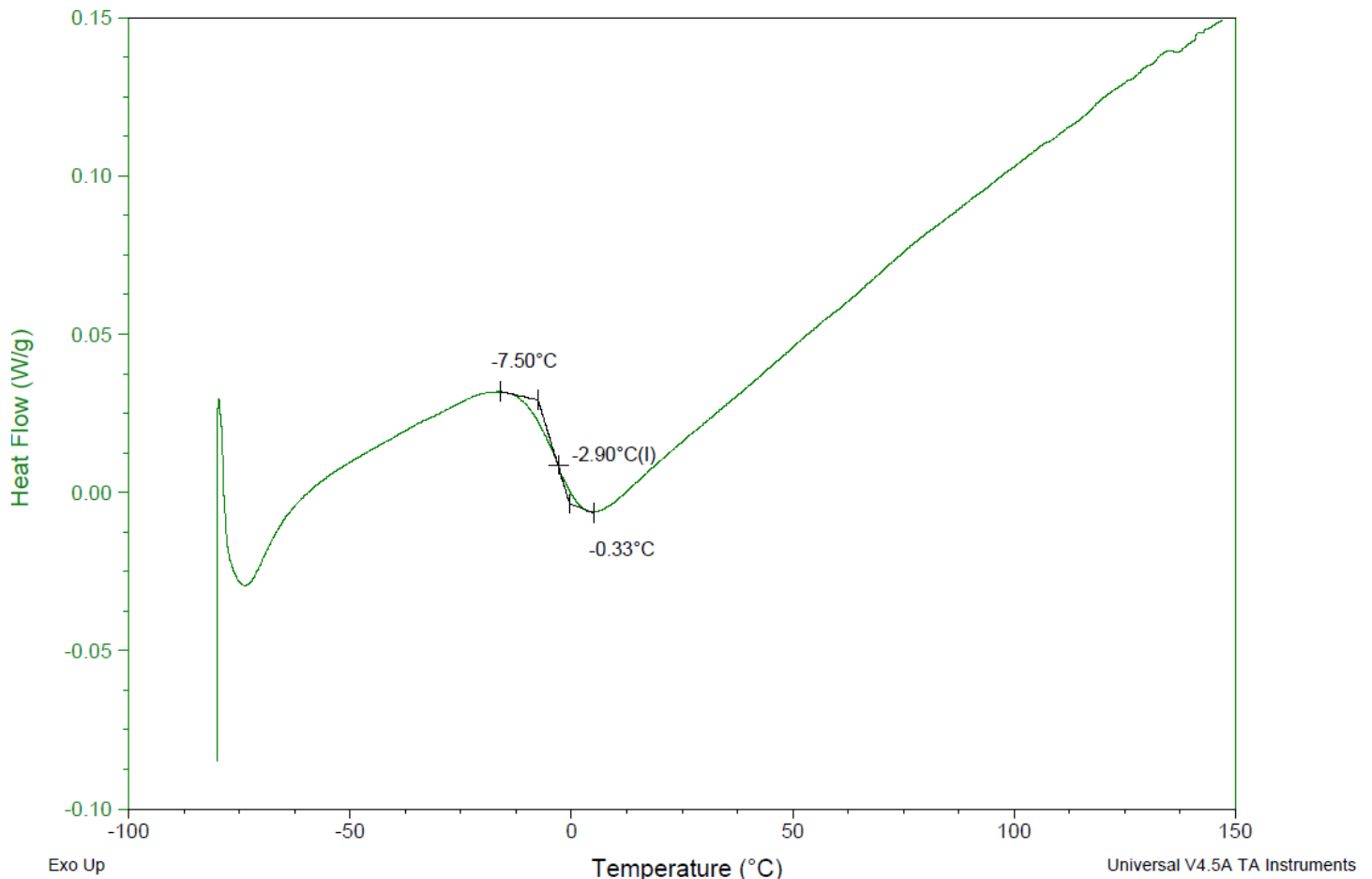
Sample: AP151 240926RAI-A
Size: 8.5000 mg
Method: Ramp

DSC

File: \\...COA\AP151 240926RAI-A DSC.001

Run Date: 04-Oct-2024 10:36

Instrument: DSC Q2000 V24.11 Build 124

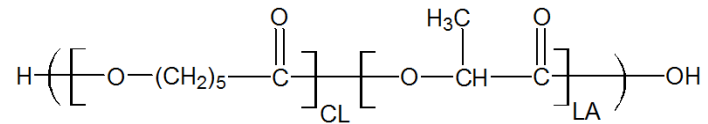


DSC Testing: 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. T_g = -2.90 °C

IV

Inherent Viscosity: 0.289 dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

Structure of P(D,L)LaCL copolymers



Approved By:
Amie Tyler
Quality Manager