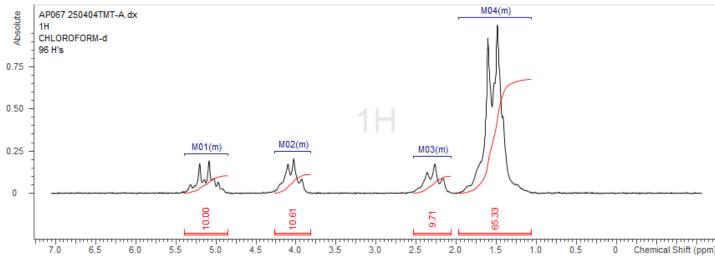
No. AP142

Certificate of Analysis



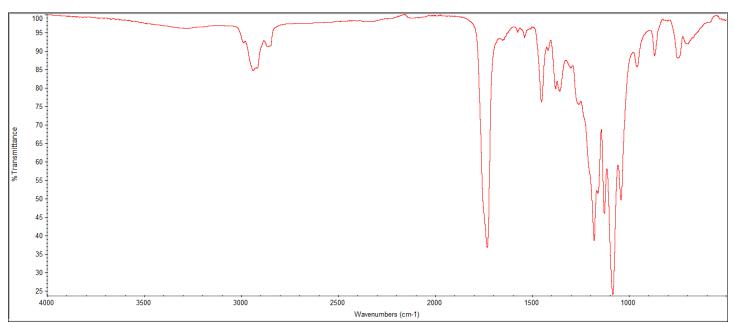
Product Name: Poly(L-Lactic-co-caprolactone) Copolymer ester endcap (60:40 LA:CL, M_n: 45,000-55,000 Da) (Lot#: 250404TMT-A)

H-NMR



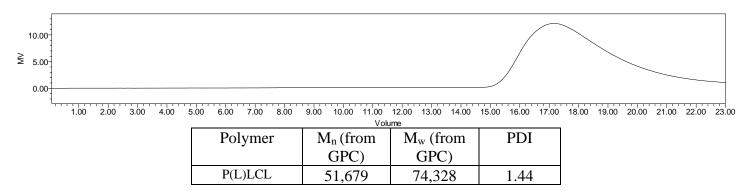
H-NMR Spectrum of copolymers in CDCl3 (NMReady-60e, Nanalysis 60 MHz) NMR of P(L)LCL copolymer: LA-CL =65%:35% molar ratio (LA:CL 54%:46% w:w)

FTIR



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

GPC-ES



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

File: C:...\COA\AP067 250404TMT-A DSC.002

DSC

0.0

-0.2

-0.4

Sample: AP067 250404TMT-A

Size: 3.1000 mg Method: Modulate-no-eqb Run Date: 22-Apr-2025 09:16 Instrument: DSC Q2000 V24.11 Build 124 0.6 0.4 0.2 Heat Flow (W/g) -19.98°C(I) -20.15°C -19.34°C

-50 50 100 -100 150 Universal V4.5A TA Instruments Temperature (°C) 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 = -19.98 °C

IV

Inherent Viscosity: 0.133 ± 0.104 dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

Structure of copolymers

$$H - - \left(\begin{array}{c|c} CH_2 & CH_3 & O \\ \hline \\ C & CH_2 \end{array} \right)_5 C - \begin{array}{c|c} CH_3 & O \\ \hline \\ CH & C \end{array} - \begin{array}{c|c} CH_3 & O \\ \hline \\ CH & C \end{array} - \begin{array}{c|c} CH_2 \\ \hline \\ LA \end{array} - O - (CH_2)_9 - CH_3$$

Approved By: *Amie Tyler* Quality Manager