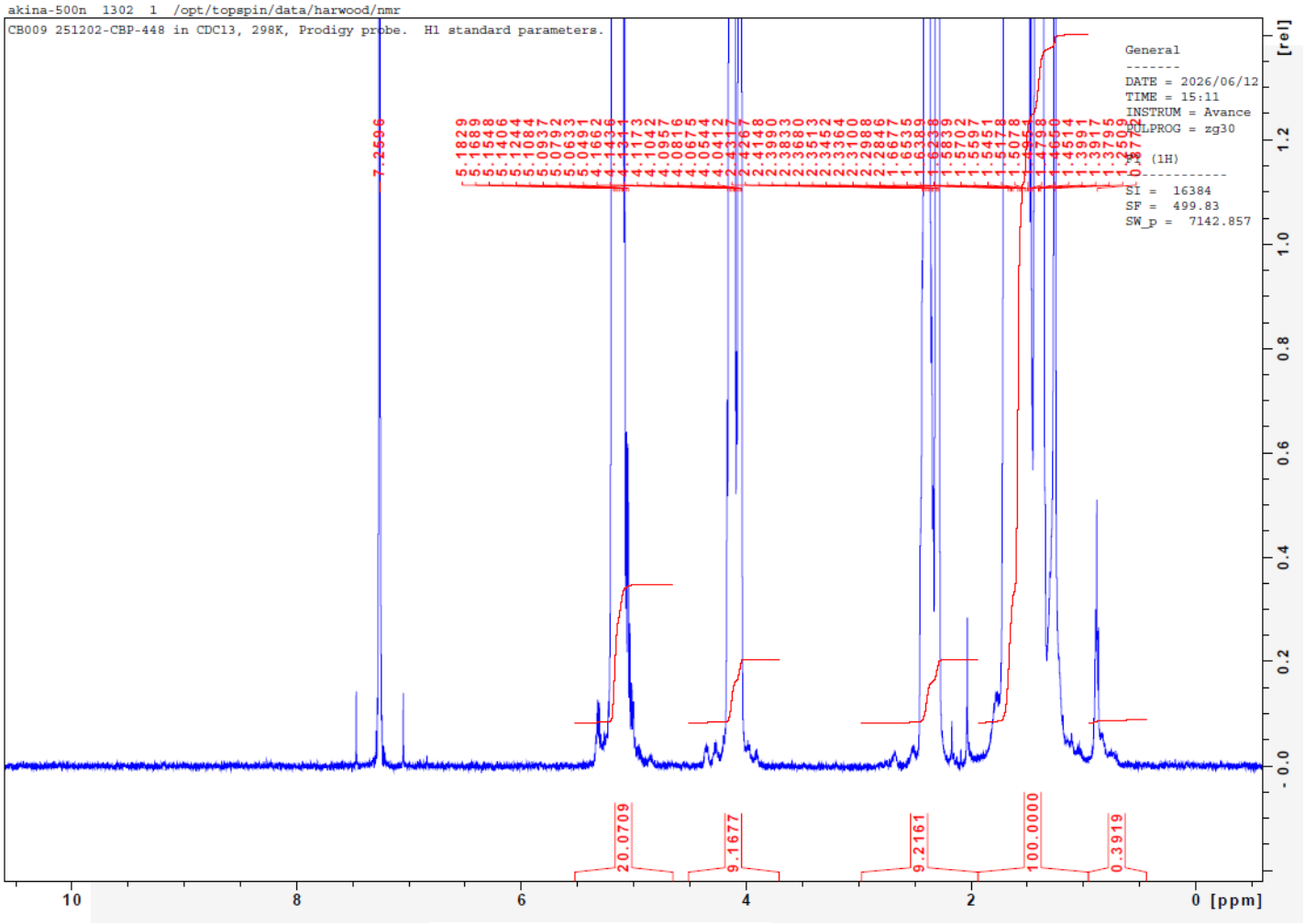
No. CB009 Certificate of Analysis

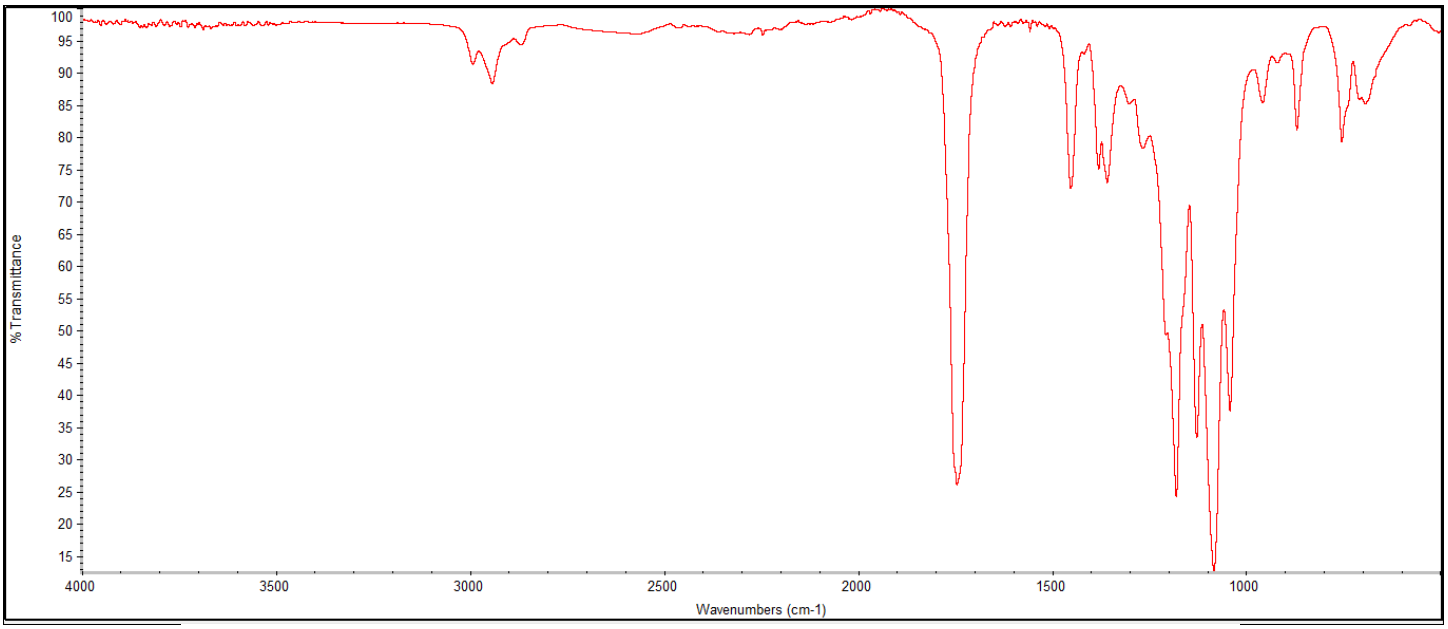
Product Name: Poly(L-Lactide-co-Caprolactone) I.V. 1.2 – 1.8 dl/g, LC 70:30, ester endcap (PLC 7015) (Lot # 251202CBP-448)

H-NMR



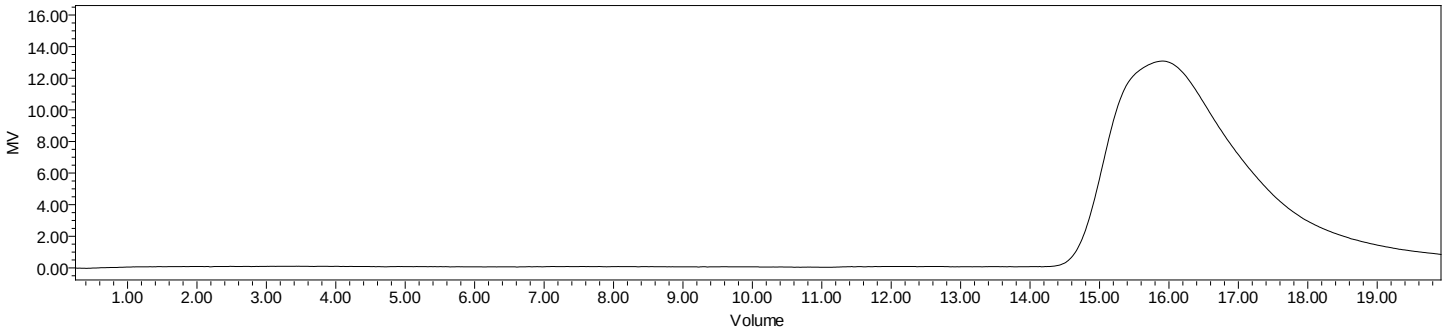
H-NMR Spectrum of copolymers in CDCl3 (NMReady-60e, Nanalysis 60 MHz) NMR of PLGA copolymer: LA-CL =81%-19% molar ratio (LA:CL 73%:27% w:w)

FTIR



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

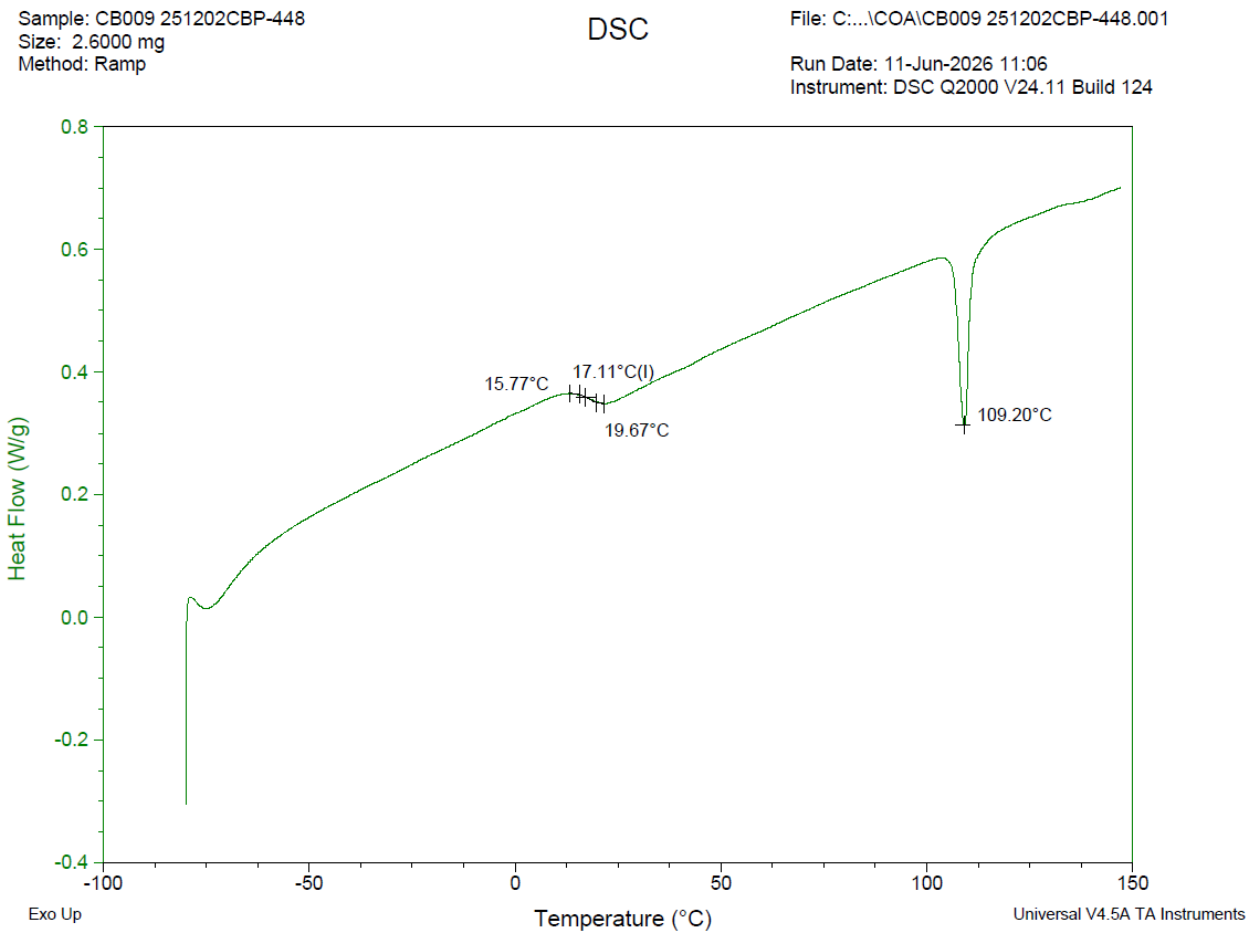
GPC-ES



Polymer	M_n (from GPC)	M_w (from GPC)	PDI
PLGA	122,366	176,563	177,240

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



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 = 17.11 °C

Manufacturer Provided Data

Assay	Specification	Result
Tin content	<50ppm	63 ppm
Water content[1]	<0.50%	0.06%
Residual monomer, L Lactide	<0.50%	0.09%
Residual monomer, Caprolactone	<0.50%	0.04%
Inherent Viscosity[2]	1.20-1.80 dL/g	1.58 dL/g
Tg, melting onset-peak	100.0-120.0 ºC	109.2-112.8 ºC
Residual solvent, Toluene	<890 ppm	<0 ppm
Residual solvent, Acetone	<5000 ppm	11 ppm
Residual solvent, Total	<0.10 %	0.00 %

1 - Measured by Titration

2 – Measured at 25 ºC in Chloroform c=0.1 g/dL

Approved By:
Amie Tyler
Quality Manager