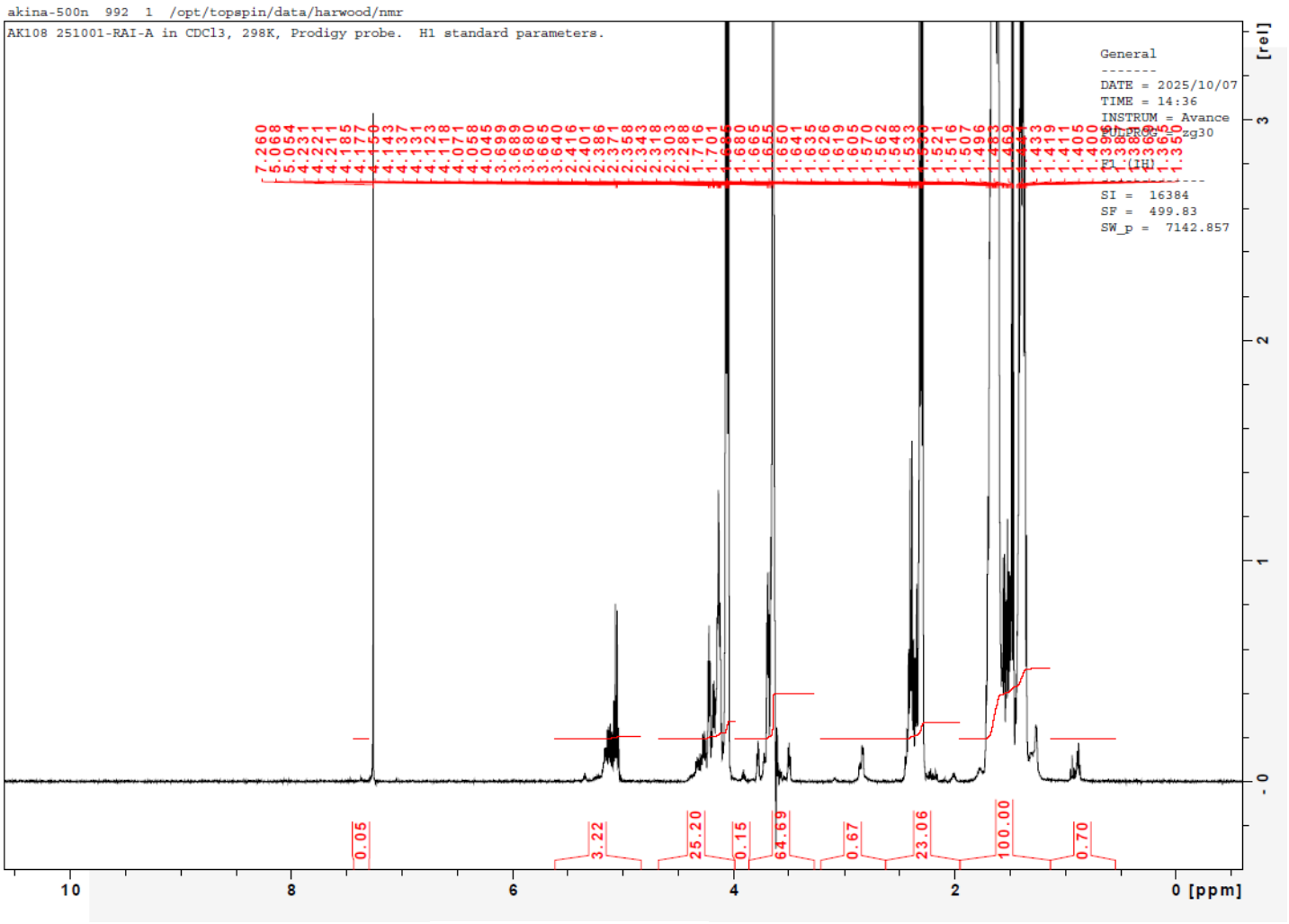
No. AK108 Certificate of Analysis

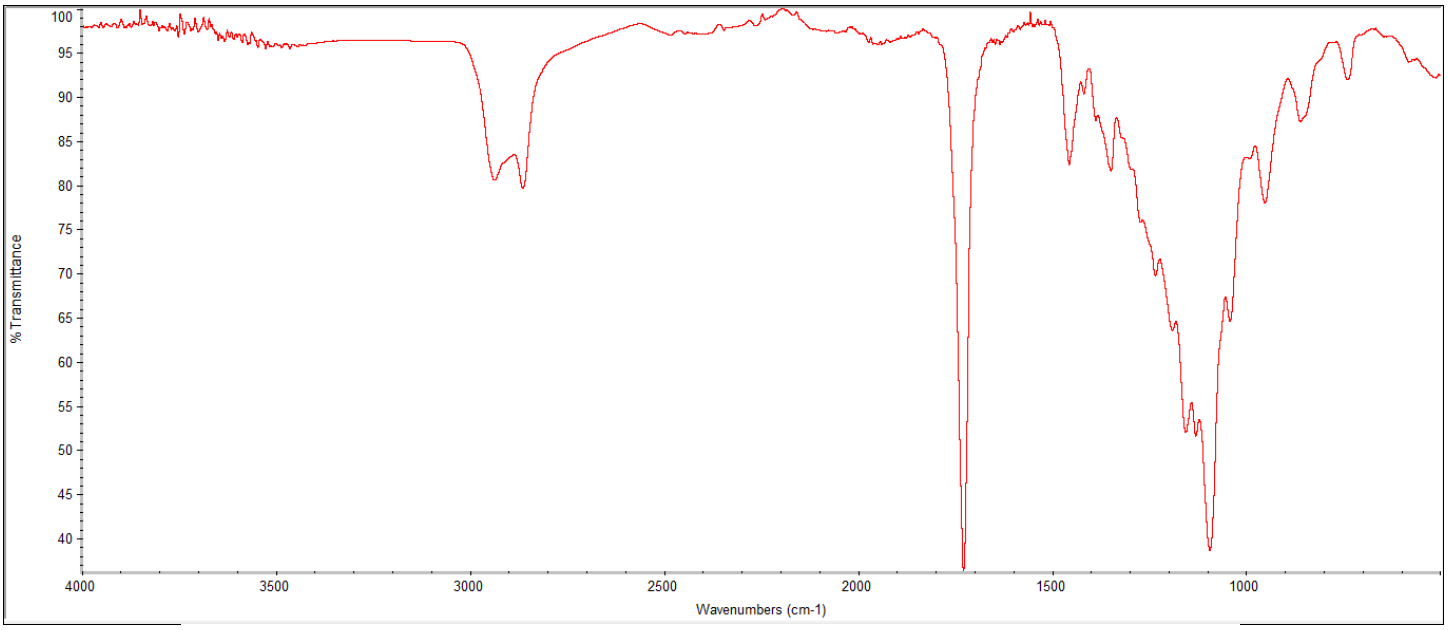
Product Name: Poly(lactide-co-caprolactone)-b-Poly(ethylene glycol)-b-Poly(lactide-co-caprolactone) (~1600-1500-1600 Da, 75:25 CL:LA) (Lot#: 251001RAI-A)

H-NMR



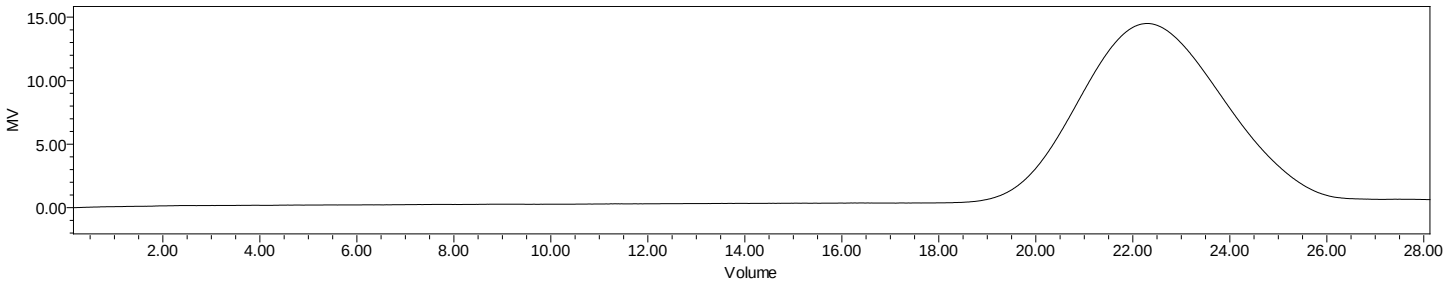
H-NMR Spectrum of copolymers in CDCl3 (Bruker ≥300 MHz, PINMRF) NMR of PLGA-PEG copolymer: EG*/CL-LA =33*/7-26 (Mn EG*/CL-LA 1454*/473-2935 Da) CL:LA 80%:20% *- from MFG data

FTIR



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

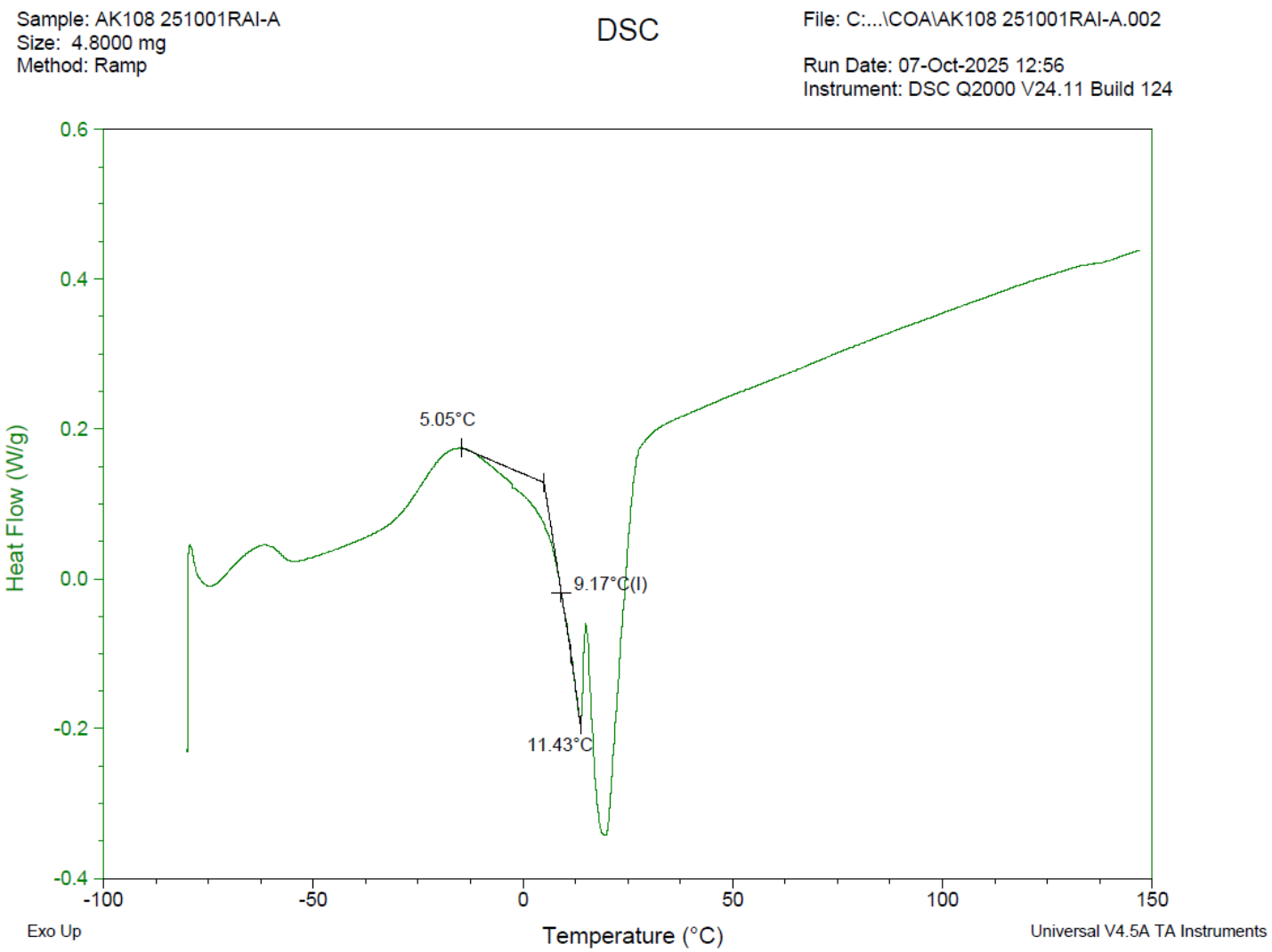
GPC-ES



Polymer	M_n (from GPC)	M_w (from GPC)	PDI
PLCL-PEG-PLCL	7009	9501	1.36
PEG-Precursor*	Mn 1472*		

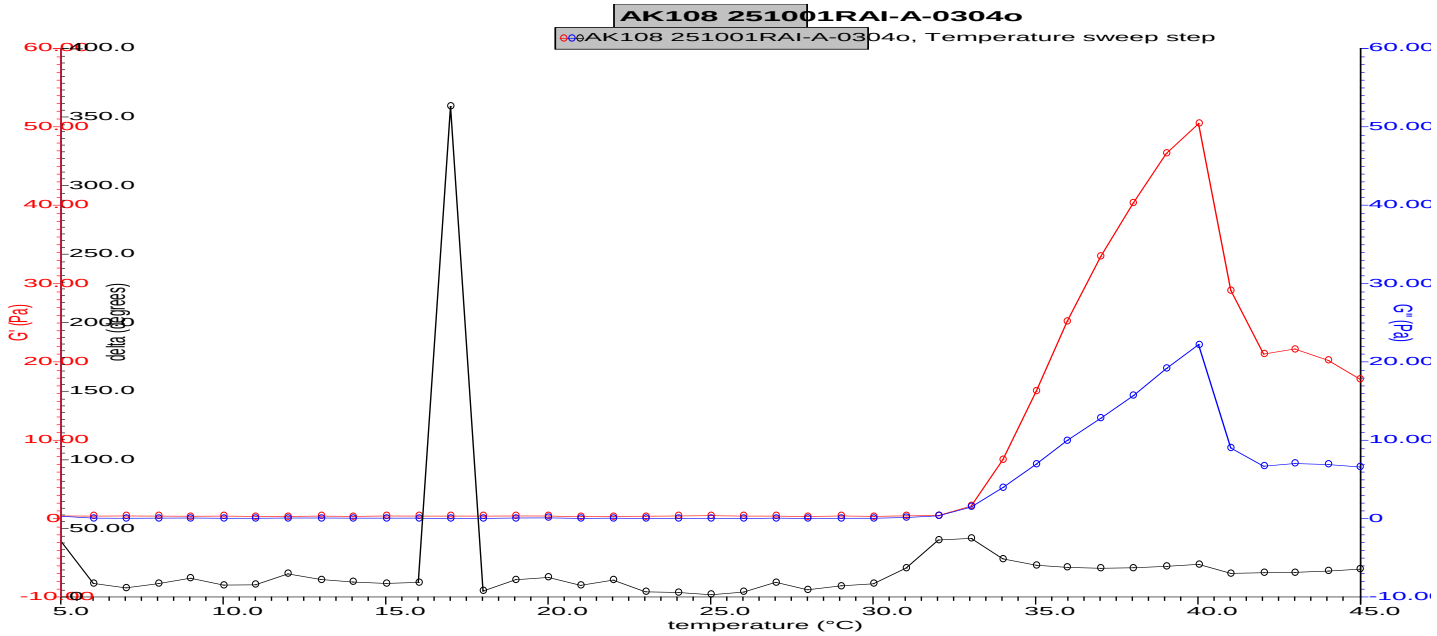
GPC-ES Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards. *- from MFG data

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 = 9.17 °C

RHEOLOGY



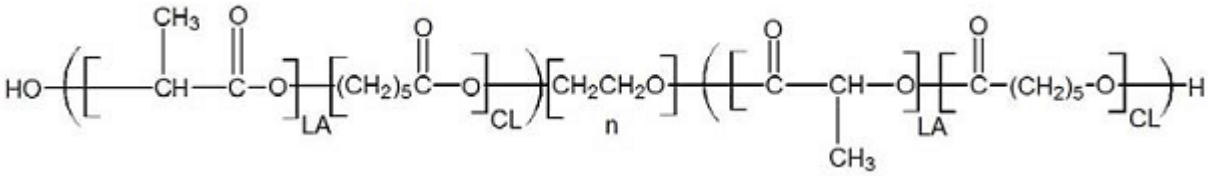
Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 3 days with stirring at 22°C. Viscosity of solution at 0.1 (sec^{-1}) and 5°C was measured (1 minute peak hold 5 second test intervals). Rheology performed by oscillating at constant 6.283 rad/s, 0.1% strain, in increments of 1°C ranging from 5-45°C with 1 minutes of temperature equilibration at each point.

Viscosity 20% w/v solution at 5°C	**0.05036 Pa/s**

IV

Inherent Viscosity: 0.105 ± .014 dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25ºC.

Structure of copolymers



Approved By:
Amie Tyler
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