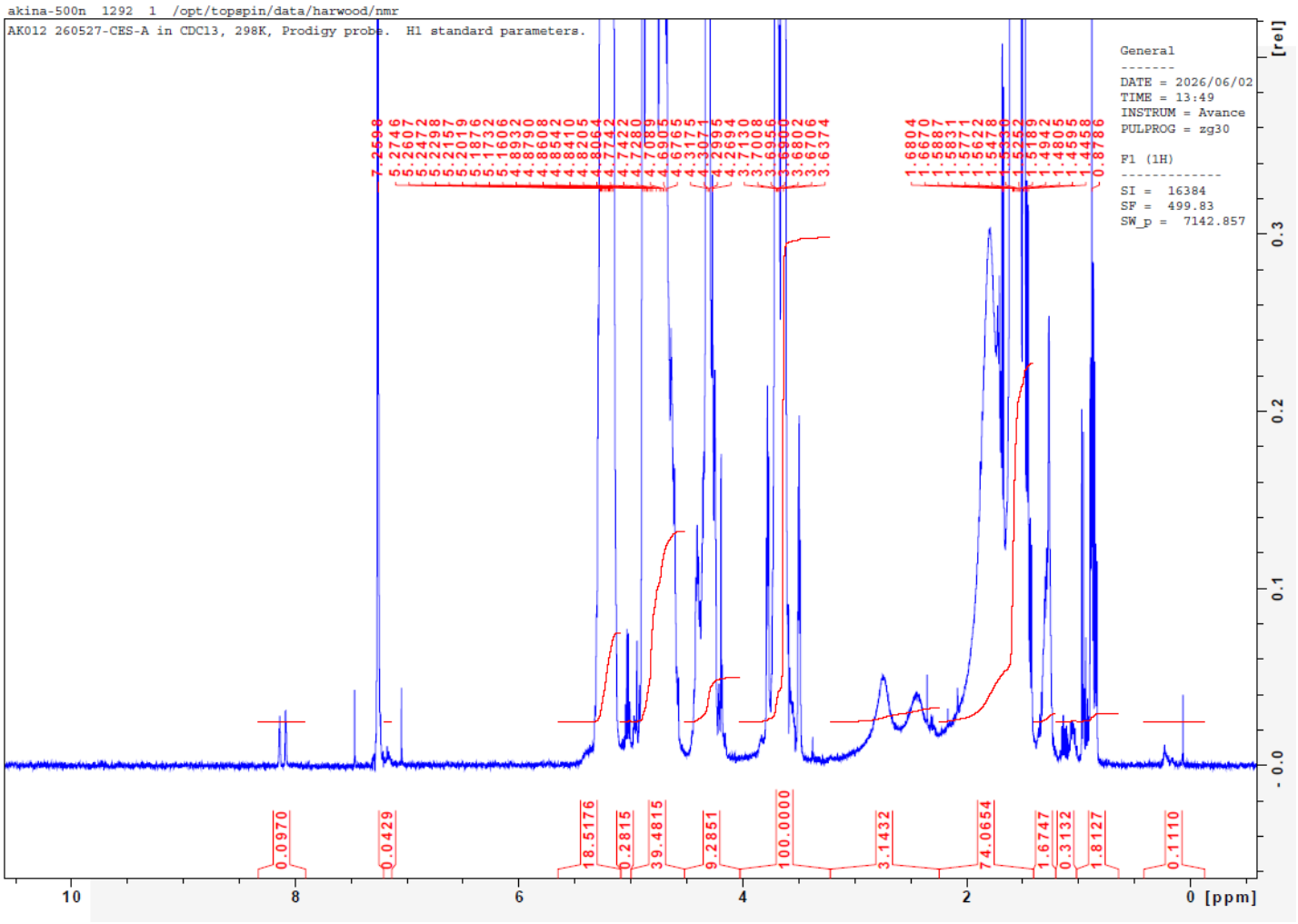
No. AK012 Certificate of Analysis

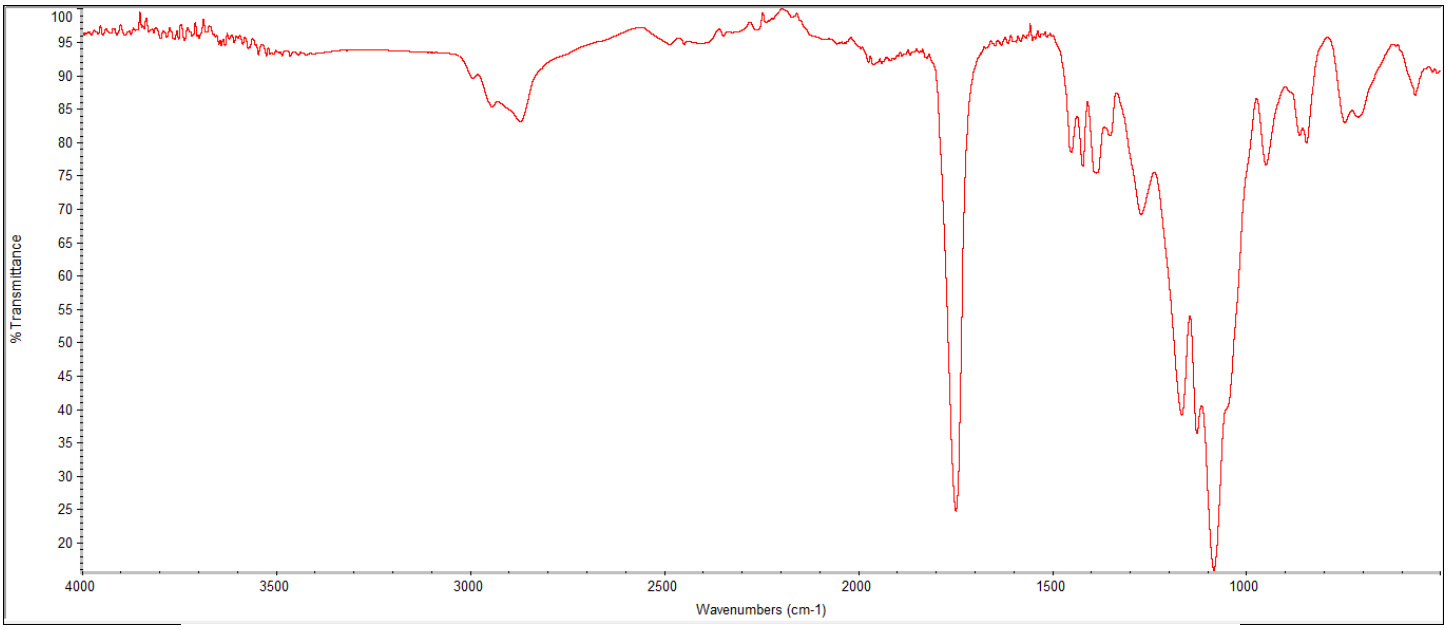
Product Name: Poly(lactide-co-glycolide)-*b*-Poly(ethylene glycol)-*b*-Poly (lactide-co-glycolide) LA:GA 50:50 (M_w ~1,000:1,000:1,000 Da) (Lot#: 260527CES-A)

H-NMR



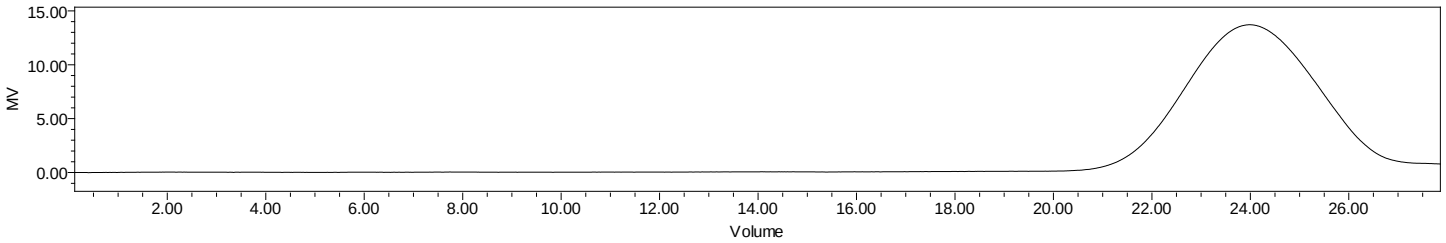
H-NMR Spectrum of copolymers in CDCl3 (Bruker ≥300 MHz, PINMRF) NMR of PLGA-PEG copolymer: EG*/LA-GA =23*/17-18 (Mn EG*/LA:GA 1013*/1227*1054 Da) LA:GA 54%:46% *- from MFG data

FTIR



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

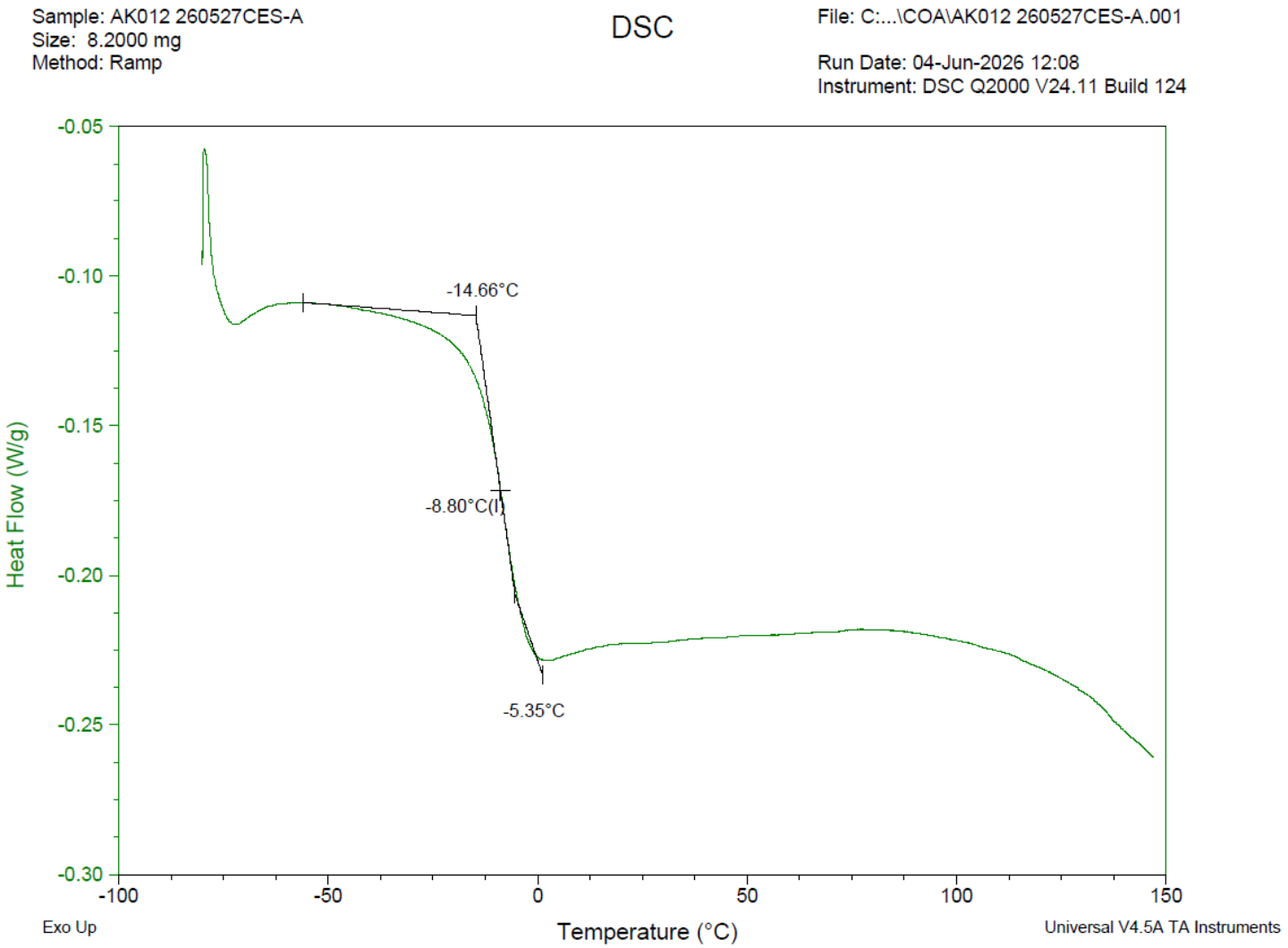
GPC-ES



Polymer	M_n (from GPC)	M_w (from GPC)	PDI
PLGA-PEG-PLGA	3814	4870	1.28
PEG-Precursor*	1013*		

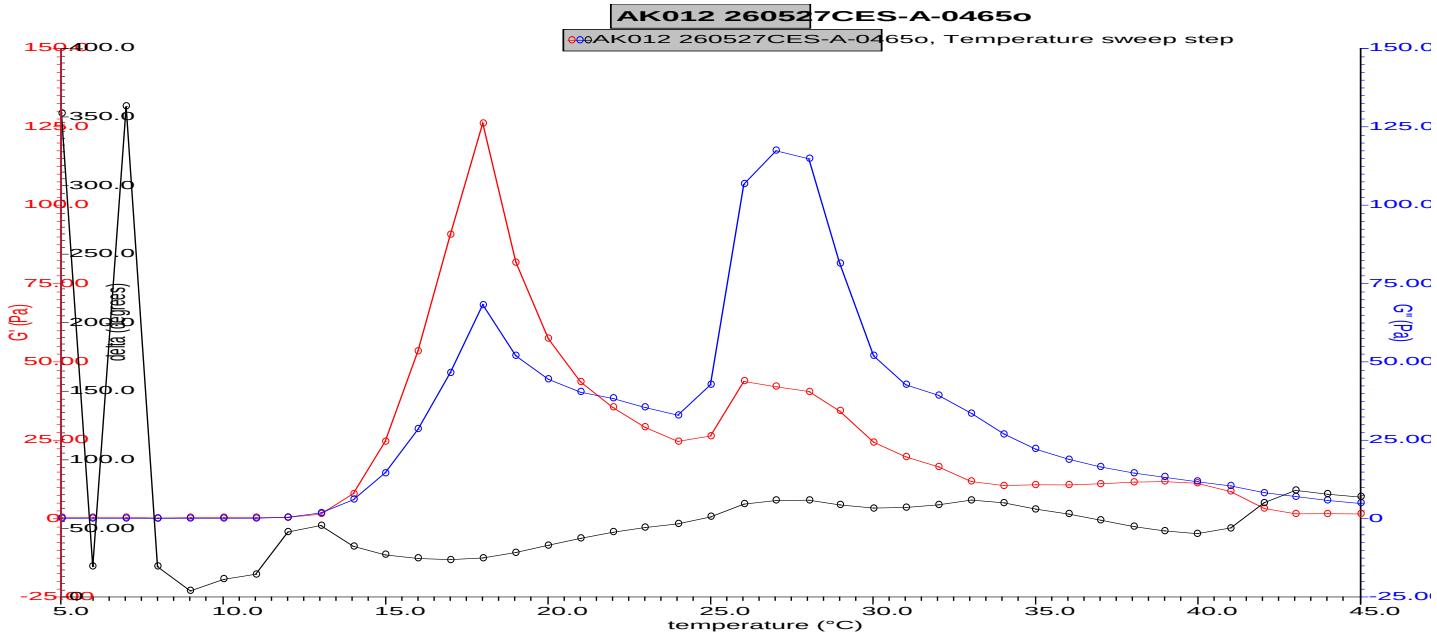
GPC-ES Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards. *- from MFG data

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 = -8.80 °C

RHEOLOGY



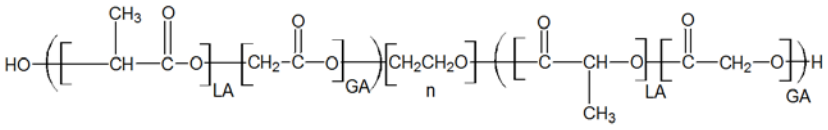
Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 24 hours with stirring at 4°C. Viscosity of solution at 0.1 (sec^{-1}) and 5°C was measured (1 minute peak hold 5 second test intervals). Rheology performed by oscillating at constant 6.283 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	**0.1017 Pa/s**

IV

Inherent Viscosity: 0.081 ± 0.014 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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