

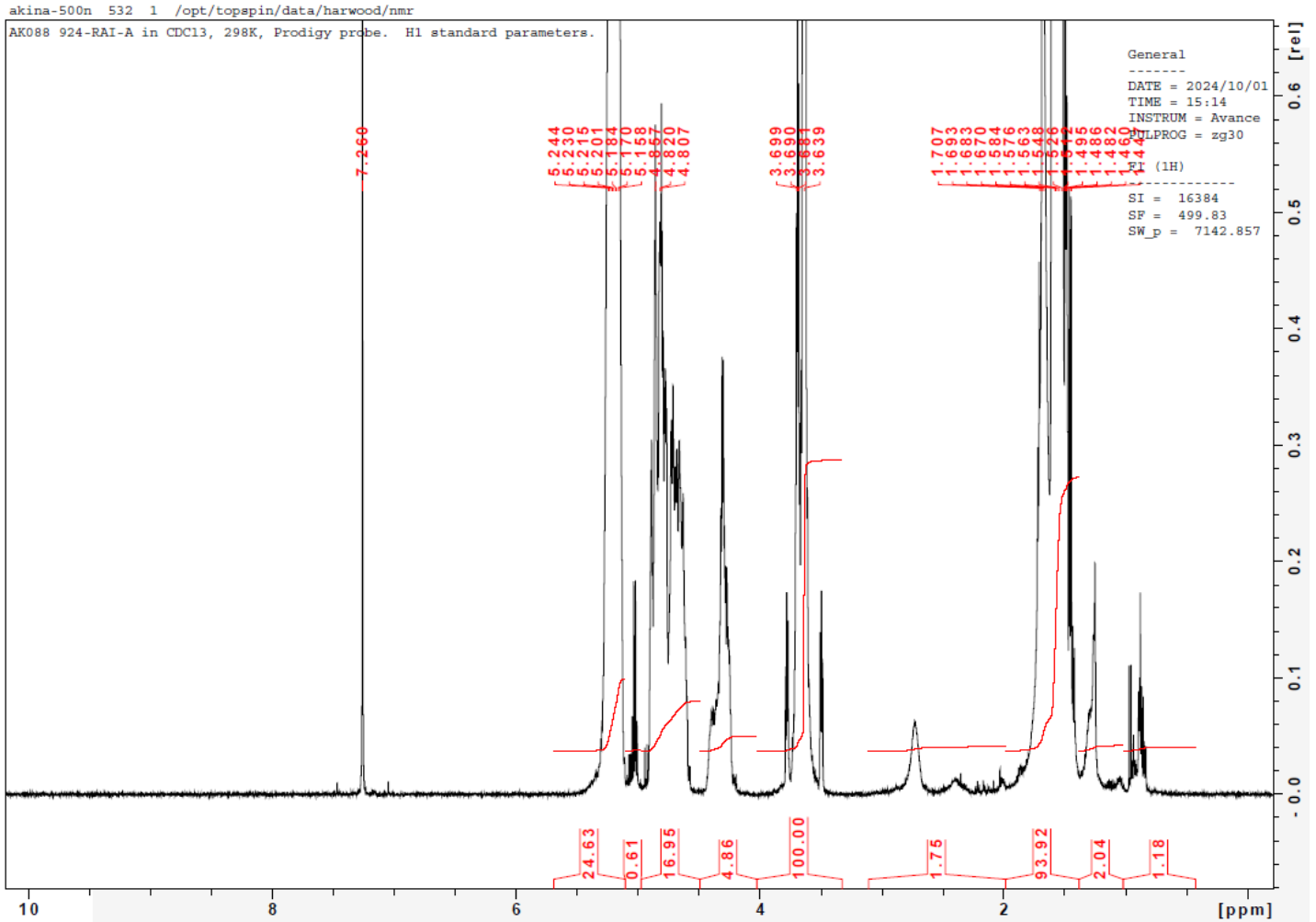
No. AK088

Certificate of Analysis



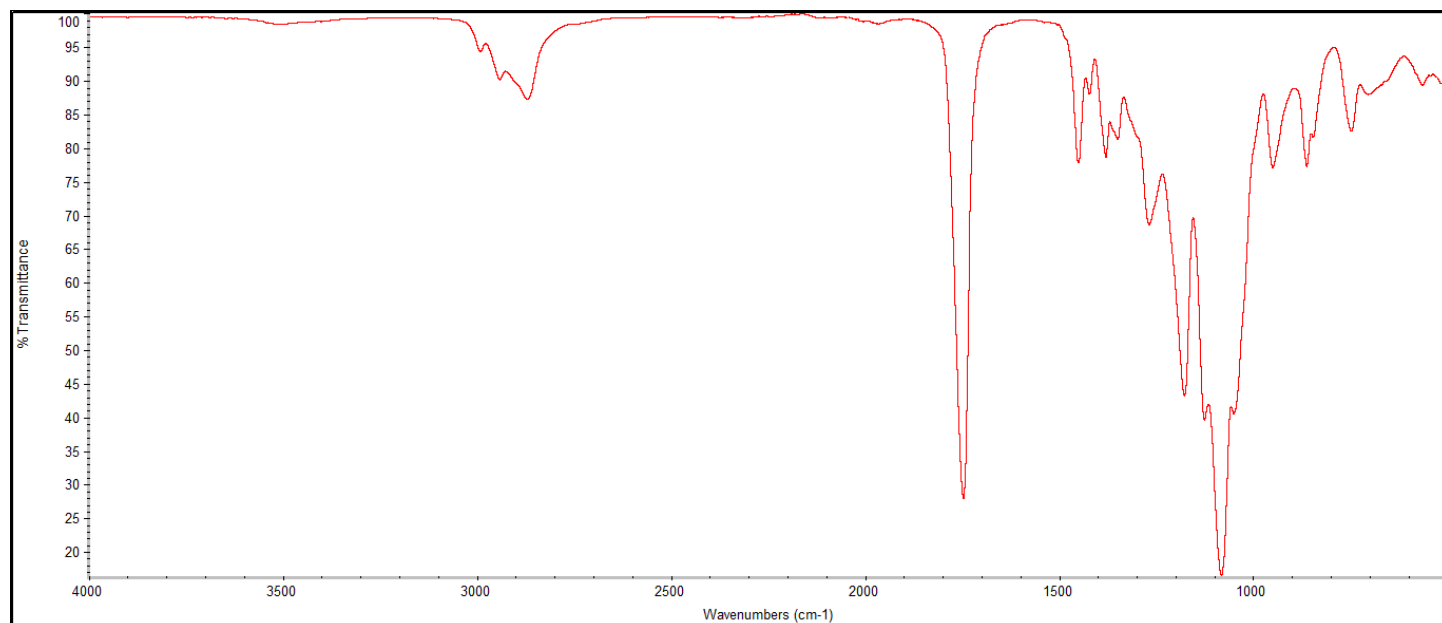
Product Name: Poly(lactide-co-glycolide)-*b*-Poly(ethylene glycol)-*b*-Poly(lactide-co-glycolide) copolymers (Mw ~ 1,600:1,500:1,600 Da, 75:25 LA:GA)
(Lot# 240924RAI-A)

H-NMR



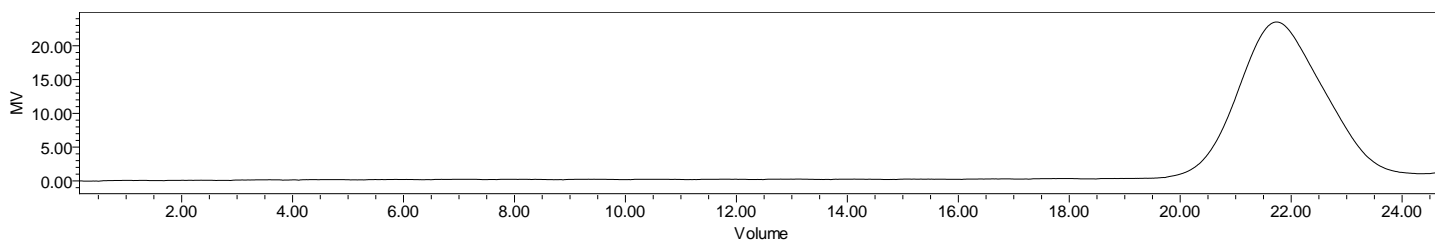
H-NMR Spectrum of copolymers in CDCl₃ (Bruker ≥300 MHz, PINMRF) NMR of PLGA-PEG-PLGA copolymer: EG/LA-GA =33*/33-11 (Mn EG/LA:GA 1452*/2341-649 Da) LA:GA 78%:22% *- from MFG data

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	5742	7345	1.28
PEG-Precursor*	1472*		

*- from MFG data

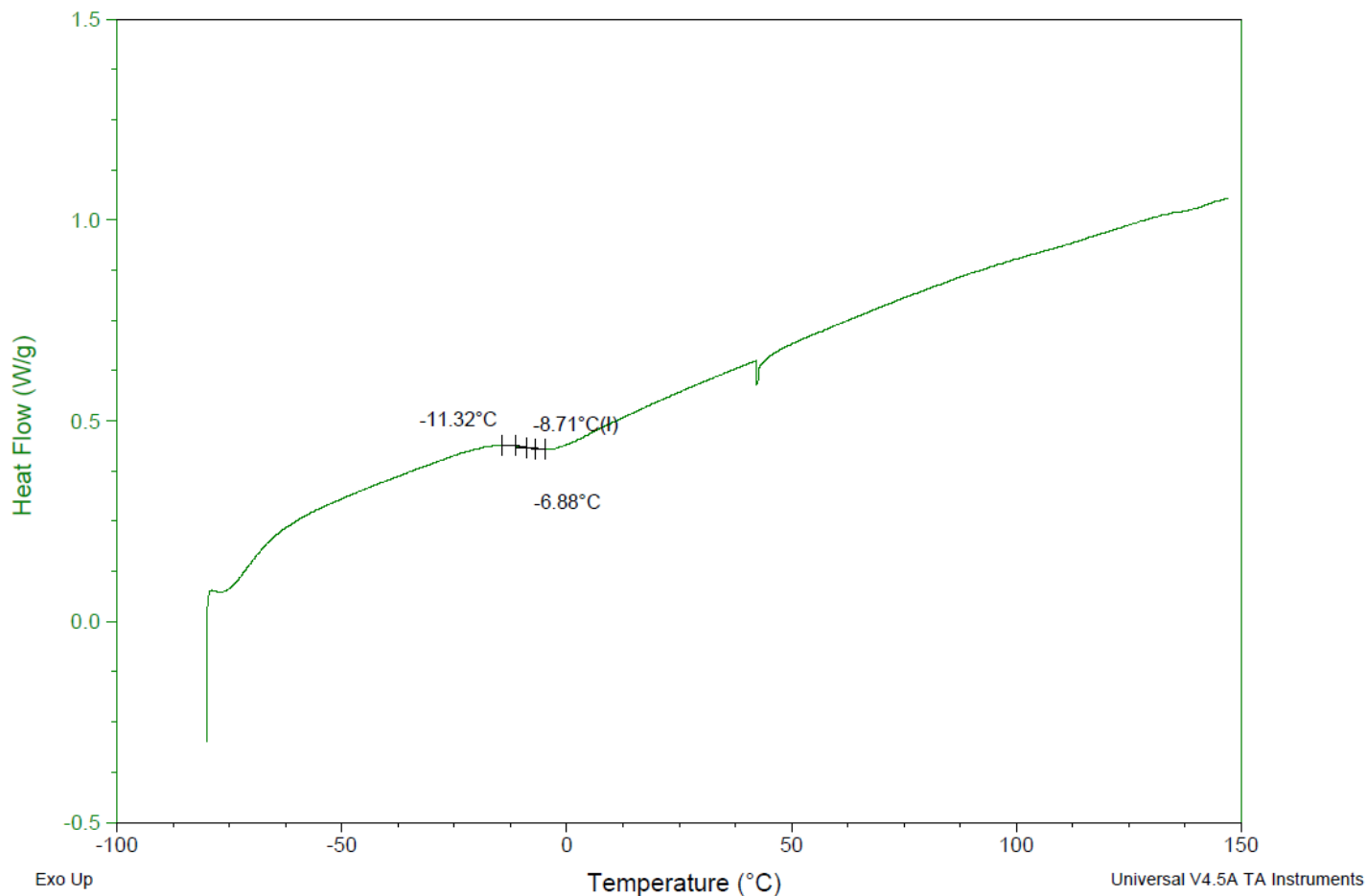
GPC-ES Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards.

DSC

Sample: AK088 240924RAI-A
Size: 3.1000 mg
Method: Ramp

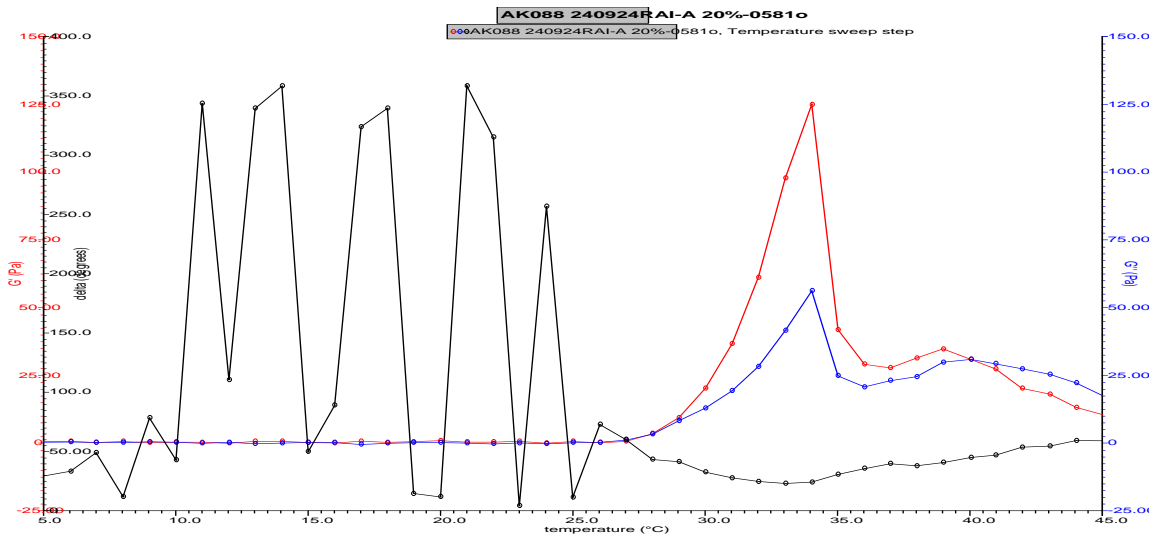
DSC

File: \\...COA\AK088 240924RAI-A DSC.001
Run Date: 04-Oct-2024 11:22
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. Tg = -8.71 °C

RHEOLOGY



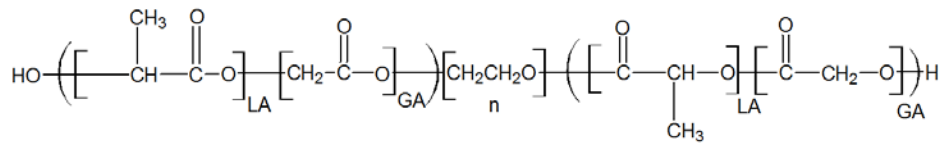
Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 3 days with stirring at 22°C. Viscosity of solution at 0.1 (sec⁻¹) and 5°C was measured (1 minute peak hold 5 second test intervals). Rheology performed by oscillating at constant 6.283 rad/s, 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	0.04218 Pa/s
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IV

Inherent Viscosity: 0.090 dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

Structure of PLGA-PEG-PLGA copolymers



Approved By: <i>Amie Tyler</i> Quality Manager
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