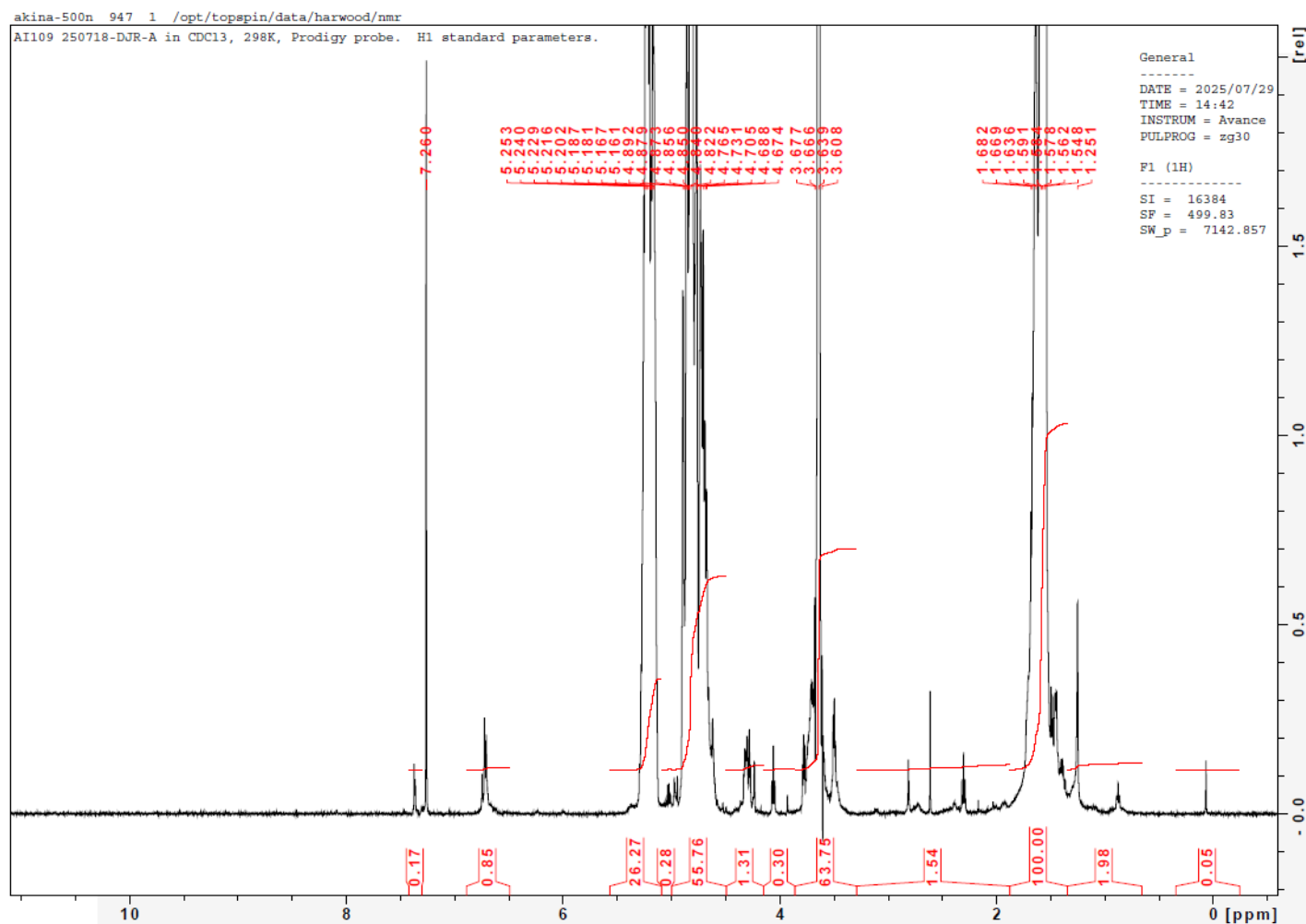


**No. AI109**      **Certificate of Analysis**

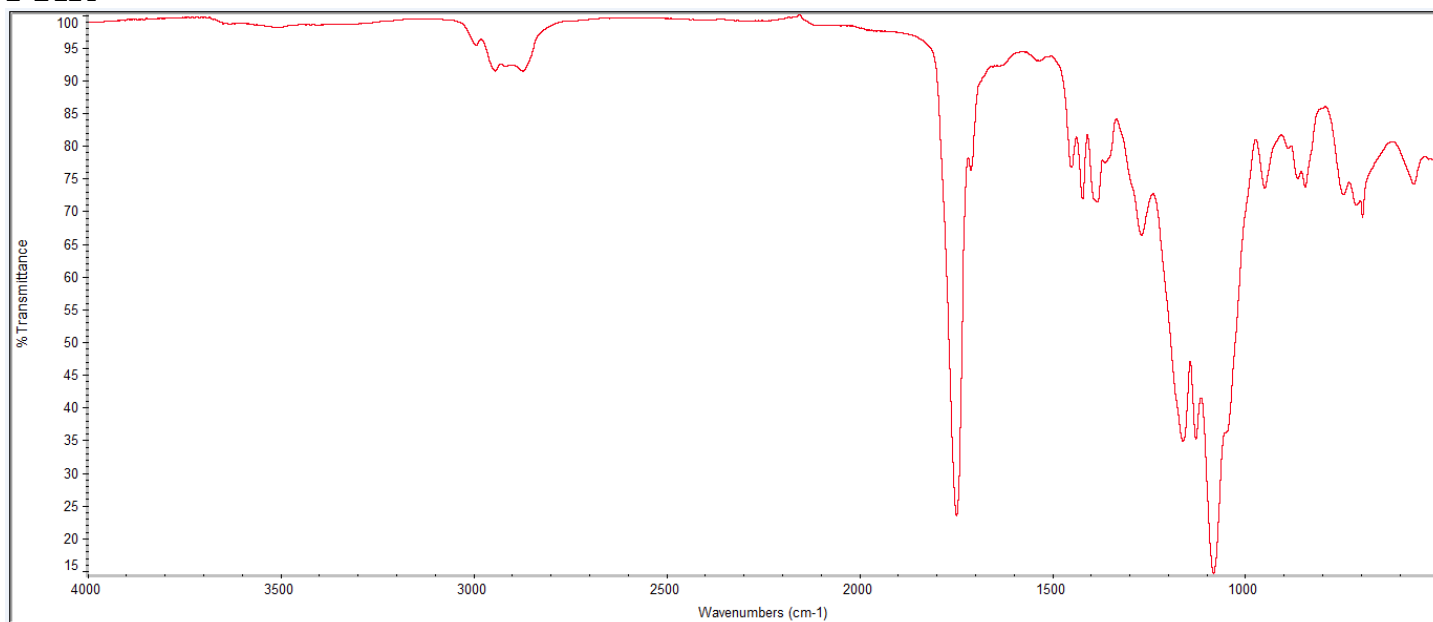
Product Name: Poly(lactic-co-glycolic)-b-Poly(ethylene glycol)-Maleimide Copolymers ( $M_w \sim 20,000-3,400\text{Da}$ ) (Lot#: 250717TMT-A)

## H-NMR



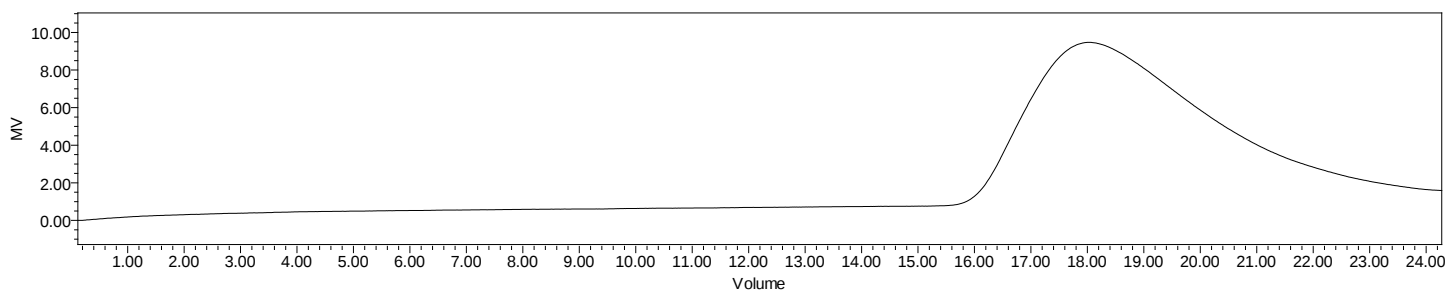
**H-NMR** Spectrum of copolymers in CDCl<sub>3</sub> (Bruker ≥300 MHz, PINMRF) NMR of PLGA-PEG-Mal copolymer: EG\*/LA-GA =77\*/127-135 (Mn EG\*/LA:GA 3392\*/9138-7818 Da) LA:GA 54%:46% \*from MFG data

## FTIR



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

## GPC-ES



| Polymer        | M <sub>n</sub> (from GPC) | M <sub>w</sub> (from GPC) | PDI  |
|----------------|---------------------------|---------------------------|------|
| PLGA-PEG-Mal   | 37,285                    | 49,003                    | 1.31 |
| PEG-precursor* | 3400*                     |                           |      |

**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

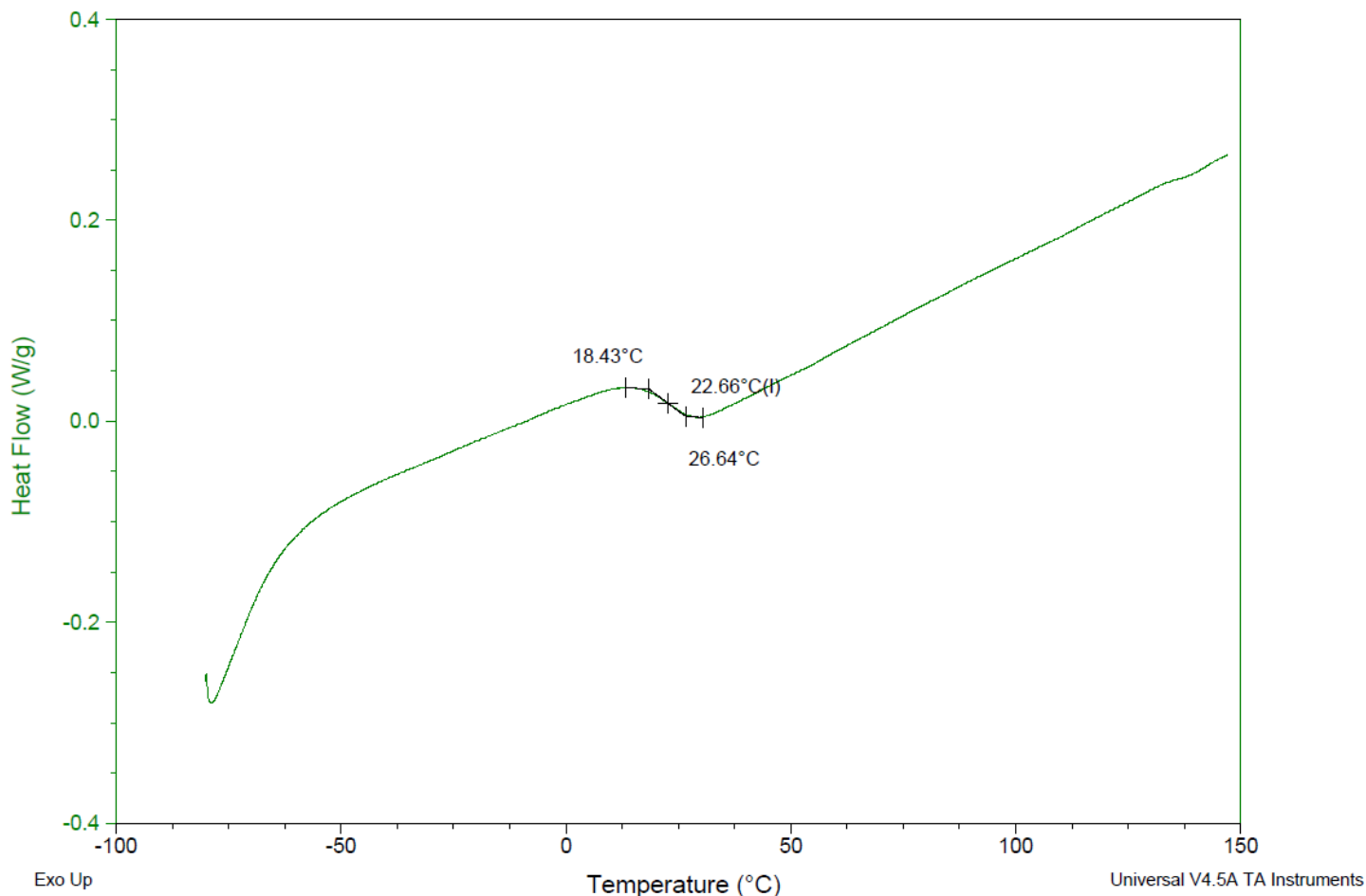
## DSC

Sample: AI109 250718DJR-A  
Size: 4.4000 mg  
Method: Ramp

DSC

File: C:\...\COA\AI109 250718DJR-A DSC.001

Run Date: 24-Jul-2025 14:46  
Instrument: DSC Q2000 V24.11 Build 124

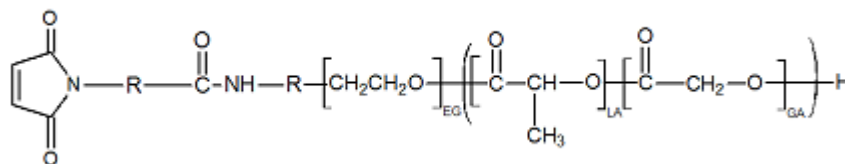


DSC Testing: 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. Tg = 22.66 °C

## IV

**Inherent Viscosity:**  $0.277 \pm 0.004$  dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

### Structure of copolymers



Approved By:  
Amie Tyler  
Quality Manager