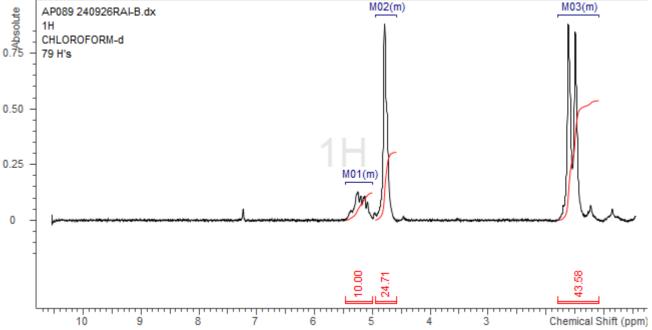
## No. AP089

# Certificate of Analysis



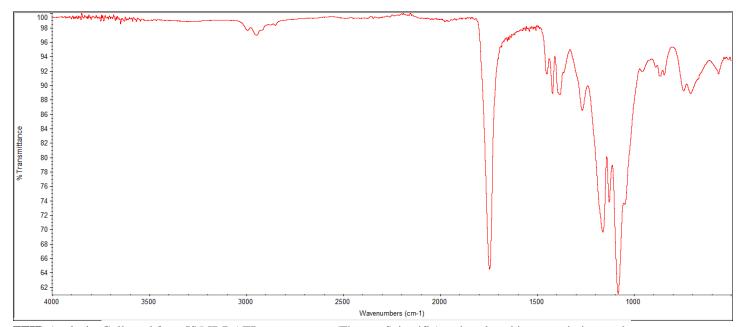
Product Name: Poly(lactic-co-glycolic acid) acid endcap (50:50 LA:GA, M<sub>n</sub>: 75,000–85,000 Da) (Lot#: 240926RAI-B)

#### H-NMR



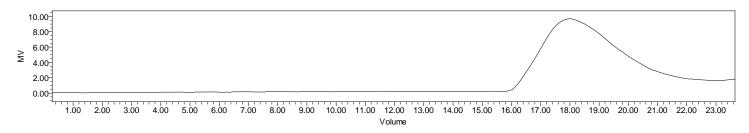
**H-NMR** Spectrum of copolymers in CDCl3 (Bruker ≥300 MHz, PINMRF) NMR of PLGA copolymer: LA-GA = 45%-55% (LA:GA 50%:50% w:w)

#### **FTIR**



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

#### **GPC-ES**



Polymer	M <sub>n</sub> (from	M <sub>w</sub> (from	PDI
	GPC)	GPC)	
PLGA	75,413	107,182	1.42

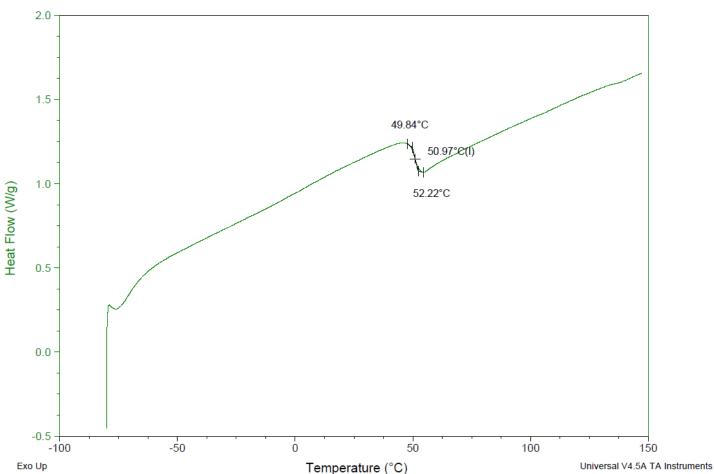
**GPC-ES** Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards.

#### **DSC**

Sample: AP089 240926RAI-B DSC.001 Size: 2.2000 mg DSC File: \...\COA\AP089 240926RAI-B DSC.001

Method: Ramp Run Date: 04-Oct-2024 13:03

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 = 50.97 °C

#### IV

**Inherent Viscosity:** 0.356 dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

### Structure of PLGA copolymers

$$\mathsf{H} - \mathsf{O} \underbrace{\left\{ \begin{array}{c} \mathsf{O} \\ \mathsf{H}_3 \mathsf{C} \end{array} \right\}}_{\mathsf{H}_3 \mathsf{C}} \mathsf{C} \mathsf{H}_2 - \mathsf{O} \underbrace{\left\{ \begin{array}{c} \mathsf{O} \\ \mathsf{I} \\ \mathsf{C} \end{array} \right\}}_{\mathsf{GA}} \mathsf{H}$$

Approved By: *Amie Tyler*Quality Manager