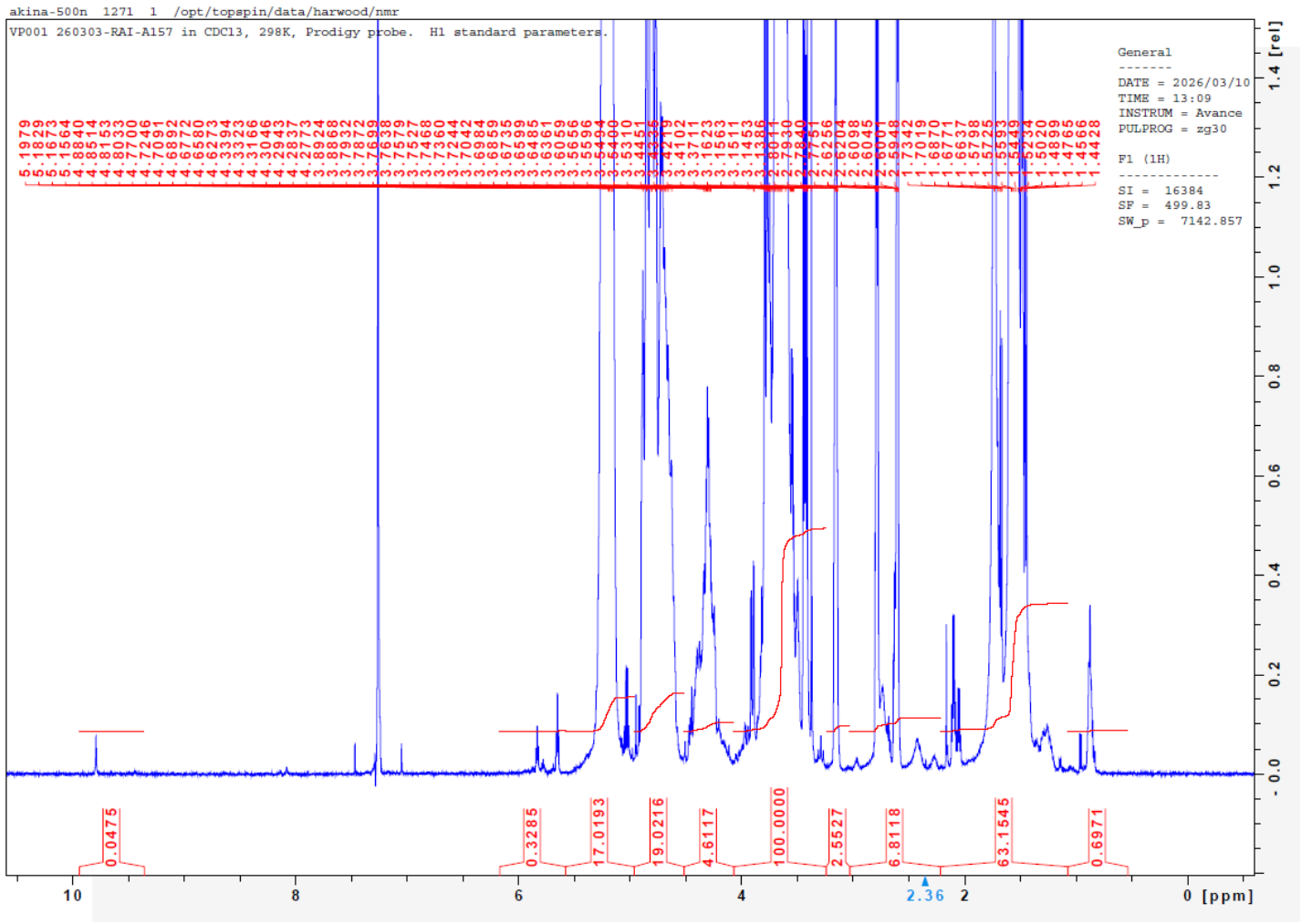
No. VP001 Certificate of Analysis

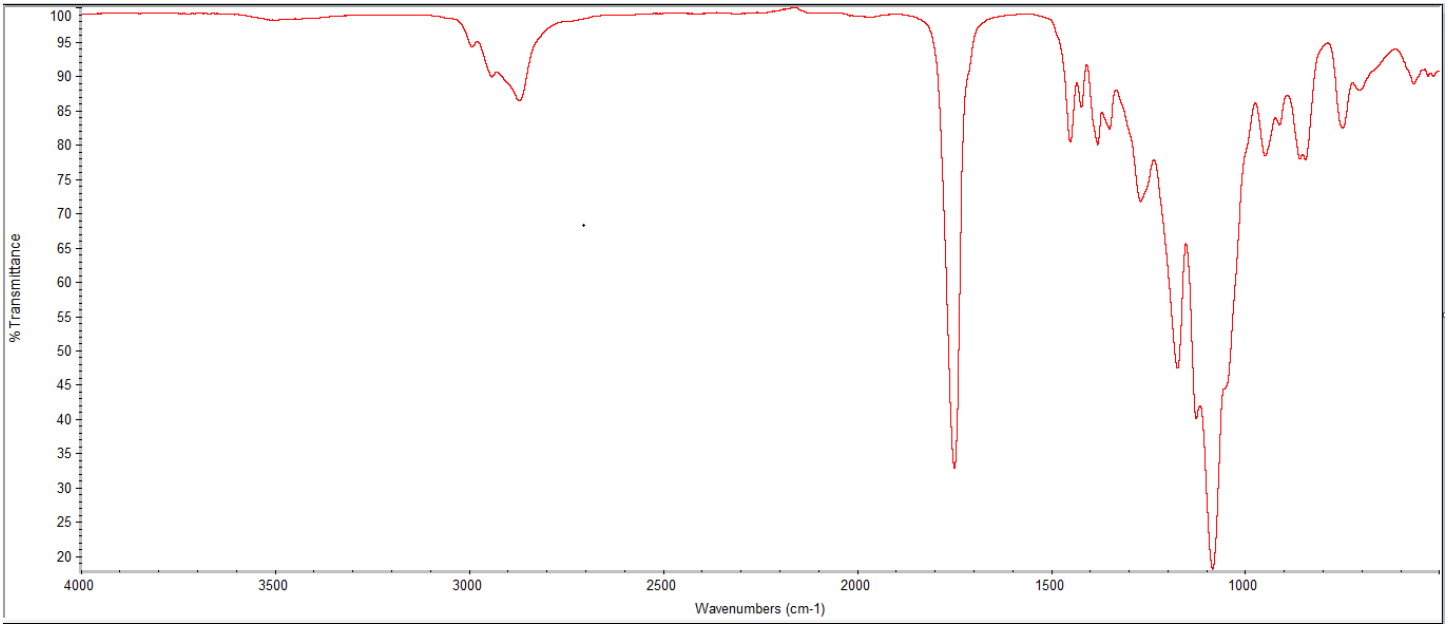
Product Name: Poly(lactide-co-glycolide-co-graft-poly(ethylene glycol)) PLGA-g-PEG (65:35 LA:GA, Mn 1500 - 3500, molar PEG content: 40 - 60%) (Lot#: 260303RAI-A157)

H-NMR



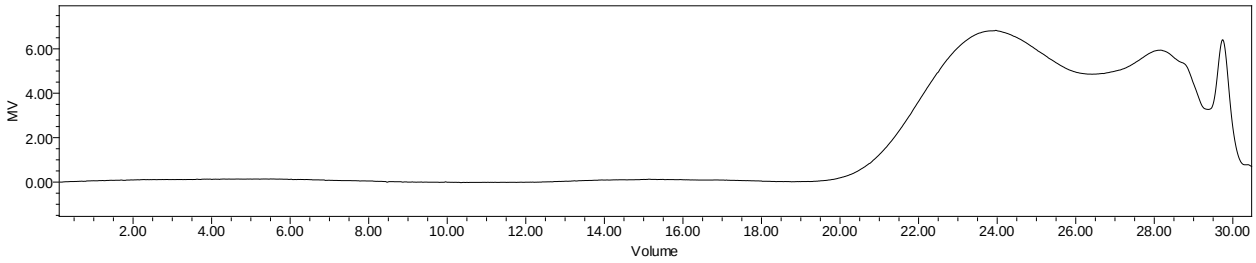
H-NMR Spectrum of copolymers in CDCl3 (Bruker ≥300 MHz, PINMRF) NMR of PLGA-g-PEG copolymer: LA:GA:EG = 1.7 : 1 : 2.5

FTIR



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

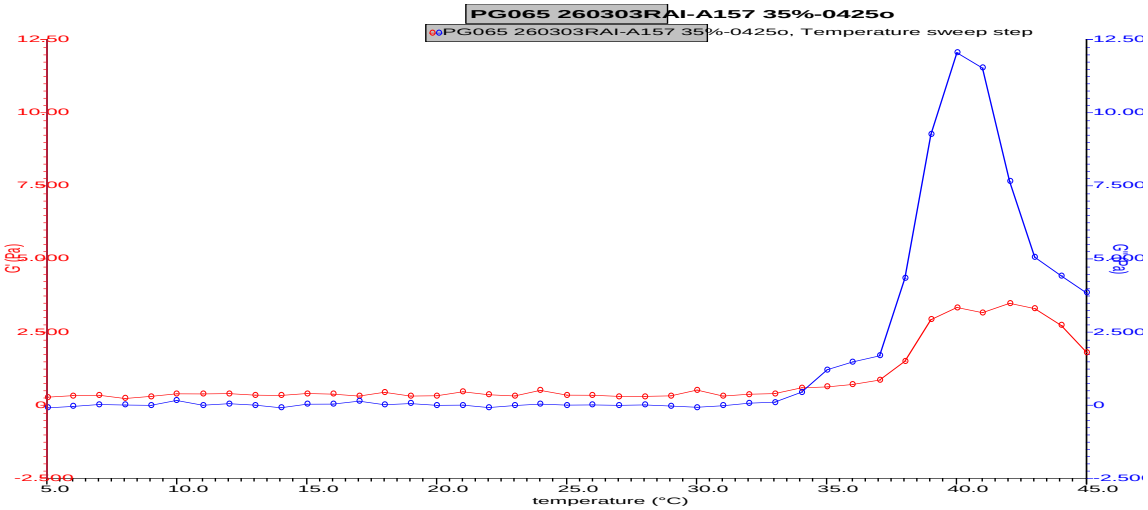
GPC-ES



Polymer	M_n (from GPC)	M_w (from GPC)	PDI
PLGA-g-PEG	2212	4784	2.16

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.

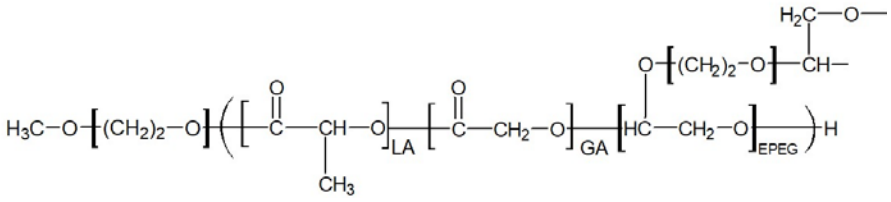
RHEOLOGY



Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 35% w/v polymer in PBS 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 30% w/v solution at 5°C	**0.01880 Pa/s**
Gelation onset temperature	**34.2C**

Structure of copolymers



Approved By:
Amie Tyler
Quality Manager