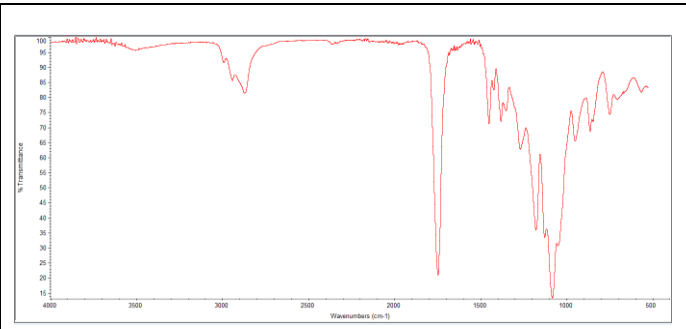
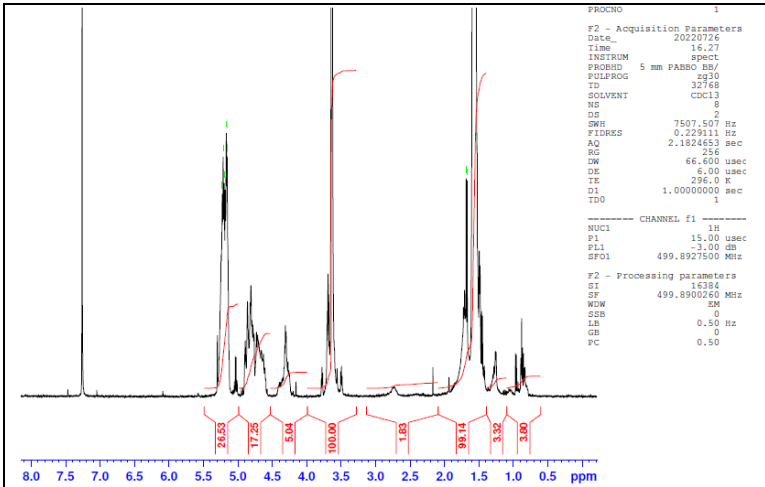


No. AK088

Certificate of Analysis

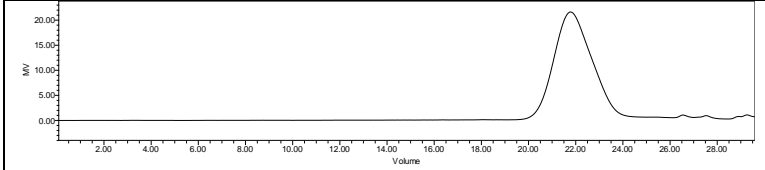


Product Name: Poly(lactide-co-glycolide)-*b*-Poly(ethylene glycol)-*b*-Poly(lactide-co-glycolide) copolymers (Mw ~ 1,600:1,500:1,600 Da, 75:25 LA:GA)
(Lot# 220719RAI-A)

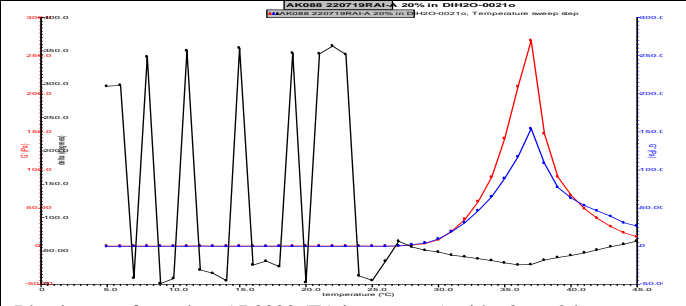


FTIR Analysis: Collected from Nicolet Avator 380 spectrometer with ATR Smart Orbit and analyzed in transmission mode.

H-NMR Spectrum of copolymers in CDCl₃ (Bruker ≥300 MHz, PINMRF) NMR of PLGA-PEG copolymer: EG/LA-GA =34/36-12 (Mn EG/LA:GA 1498/2598-681 Da) *- 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.



Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 3 days with stirring at room temperature. Viscosity of solution at 0.1 (sec⁻¹) and 5°C was measured (1minute 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.

Polymer	M _n (from GPC)	M _w (from GPC)	PDI
PLGA-PEG	5530	7289	1.31
PEG precursor*		1485*	

*- from MFG data

Viscosity 20% w/v solution at 5°C	8.52E-3 Pa/s
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Structure of PLGA-PEG-PLGA copolymers

