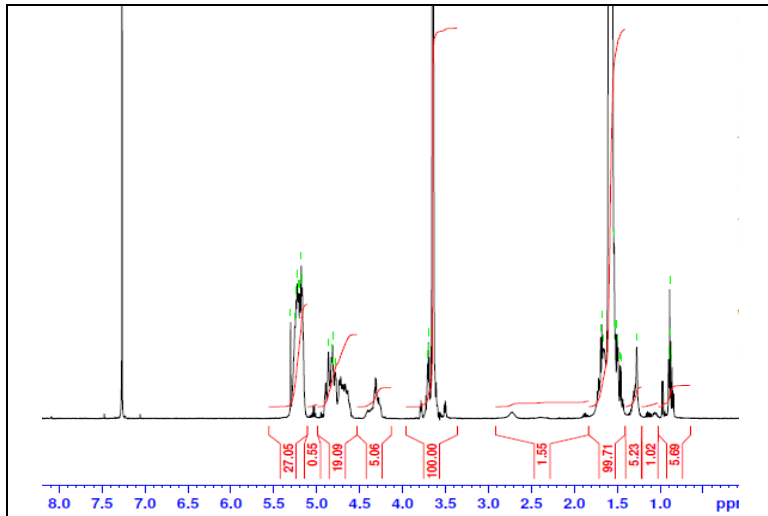


# No. AK092

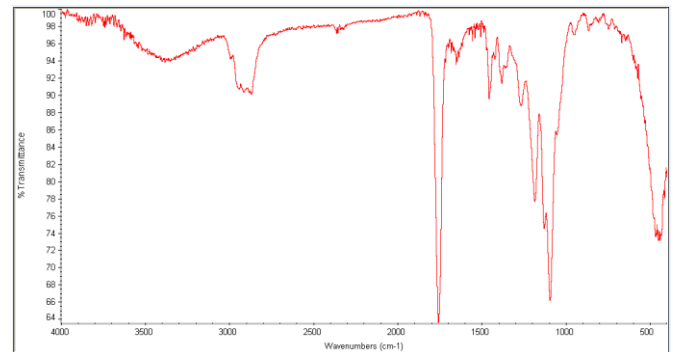
# Certificate of Analysis



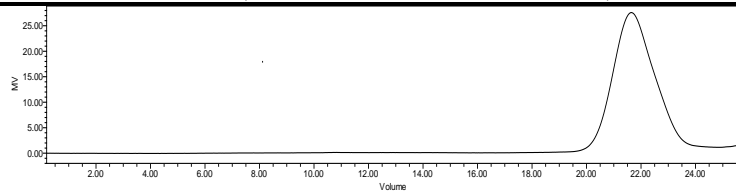
Product Name: Poly(lactide-co-glycolide)-*b*-Poly(ethylene glycol)-*b*-Poly(lactide-co-glycolide) copolymers (M<sub>n</sub> 1,700:1,500:1,700 Da, 3:1, LA:GA) (Lot# 180920RAI-B)



H-NMR Spectrum of copolymers in CDCl<sub>3</sub> (Varian Inova 500 MHz instrument) NMR of PLGA-PEG-PLGA copolymer: EG-LA/GA = 34-37/13 (M<sub>n</sub> EG-LA/GA 1498\*-2649/753)



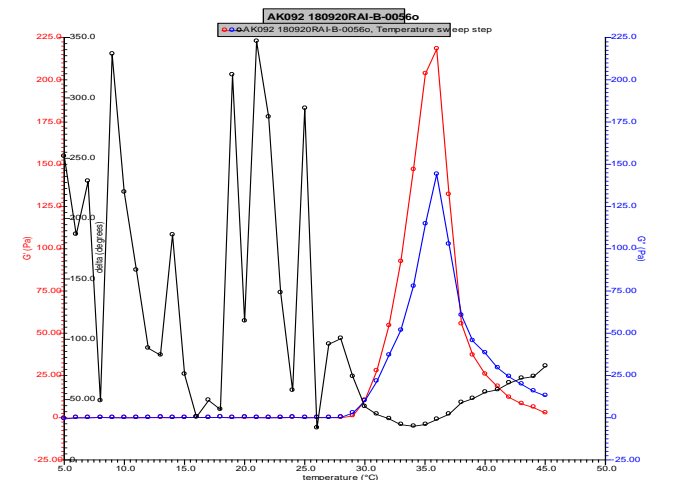
FTIR Analysis: Collected from cast-film on KBr salt-plate placed in Nicolet Avatar 320 spectrometer and analyzed in transmission mode.



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

Polymer	M <sub>n</sub> (from GPC)	M <sub>w</sub> (from GPC)	PDI
PLGA-PEG-PLGA	5929	7425	1.25
PEG*		1498*	

\* - from MFG data



Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 3 days with stirring at 4°C. Viscosity of solution at 0.1 (sec<sup>-1</sup>) 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.

Viscosity 20% w/v solution at 5°C **.04458 Pa/s**

## Structure of PLGA-PEG-PLGA copolymer

