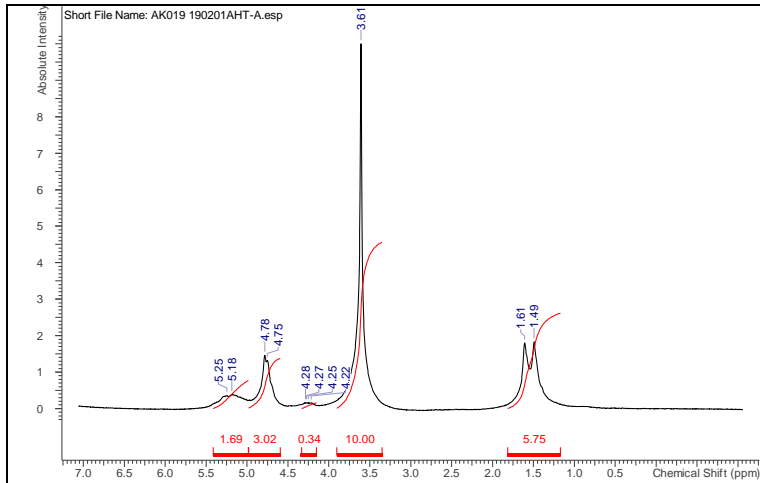


# No. AK019

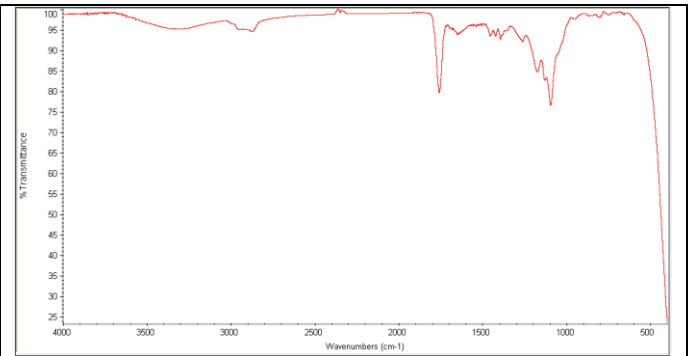
# Certificate of Analysis



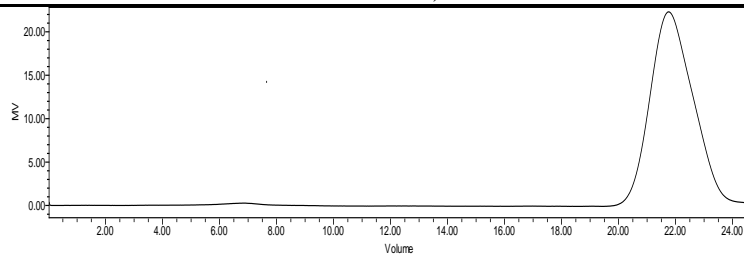
Product Name: Poly(lactide-co-glycolide)-*b*-Poly(ethylene glycol)-*b*-Poly(lactide-co-glycolide) copolymers (1,500-1,500-1,500, 50:50 LA:GA) (Lot# 190201AHT-A)



H-NMR Spectrum of copolymers in CDCl<sub>3</sub> (NMReady 60e Nanalysis, 60 MHz instrument) NMR of PLGA-PEG-PLGA copolymers: EG/LA-GA = 34\*/23-21 (Mn EG-LA:GA 1498\*-1655:1192)



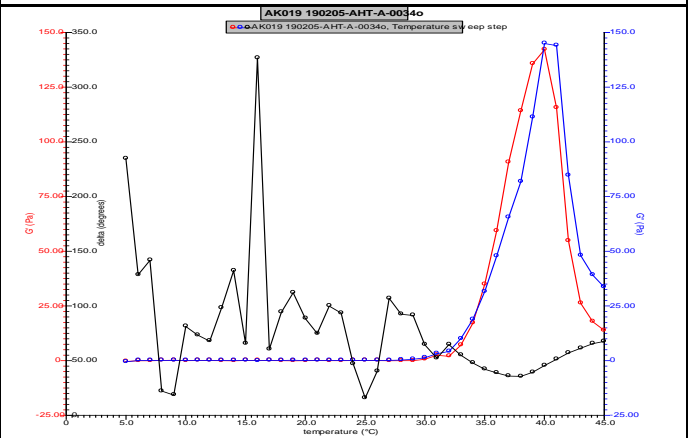
FTIR Analysis: Collected from cast-film on KBr salt-plate placed in Nicolet Avatar 320 spectrometer and analyzed in transmission mode.



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	5959	6919	1.22
PEG-precursor*	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 (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 20% w/v solution at 5°C	<b>0.01007 Pa/s</b>
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## Structure of PLGA-PEG-PLGA triblock copolymers

