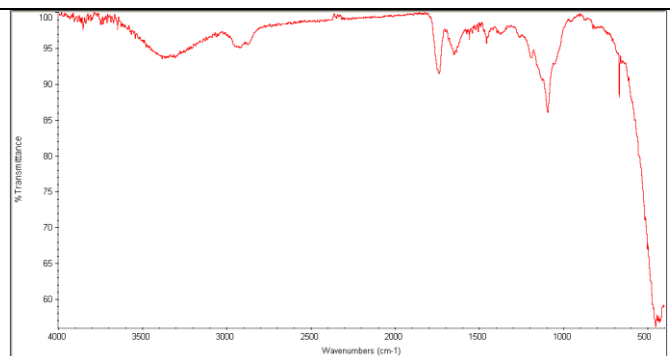
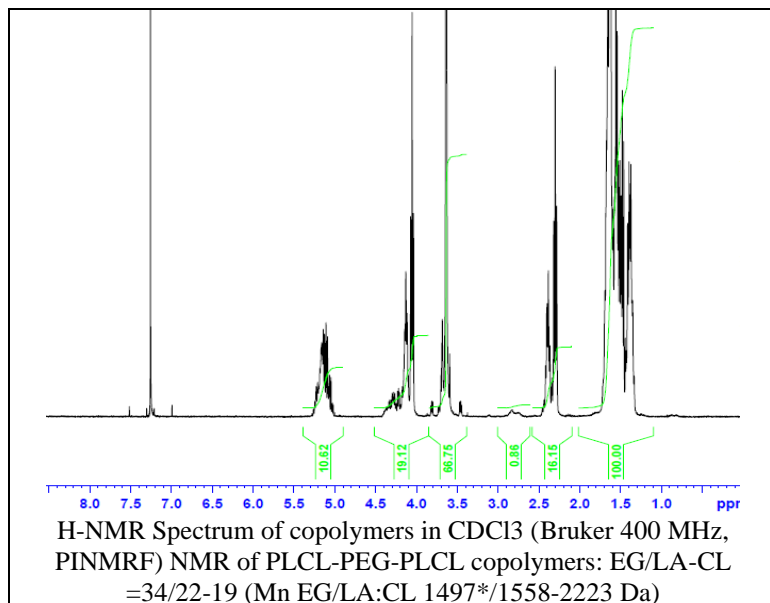


No. AK109

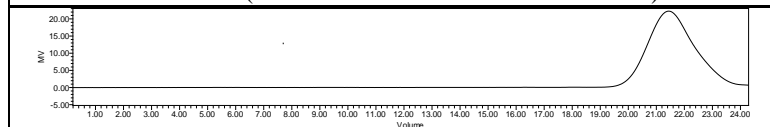
Certificate of Analysis



Product Name: Poly(lactide-co-caprolactone)-b-Poly(ethylene glycol)
-b-Poly(lactide-co-caprolactone) (~1700-1500-1700 Da, 60:40 CL:LA) (Lot#:190912RAI-A)



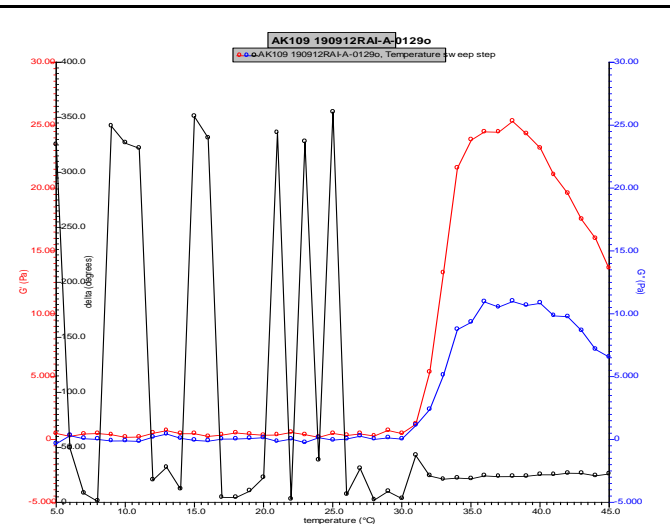
FTIR Analysis: Collected from cast-film on KBr salt-plate placed in Nicolet Avatar 320 spectrometer and analyzed in transmission mode.



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 _n (from GPC)	M _w (from GPC)	PDI
PLCL-PEG-PLCL	6787	9219	1.36
PEG precursor*	1484*		

*- 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⁻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 20% w/v solution at 5°C | **.02366 Pa/s**

Structure of PLCL-PEG-PLCL copolymers

