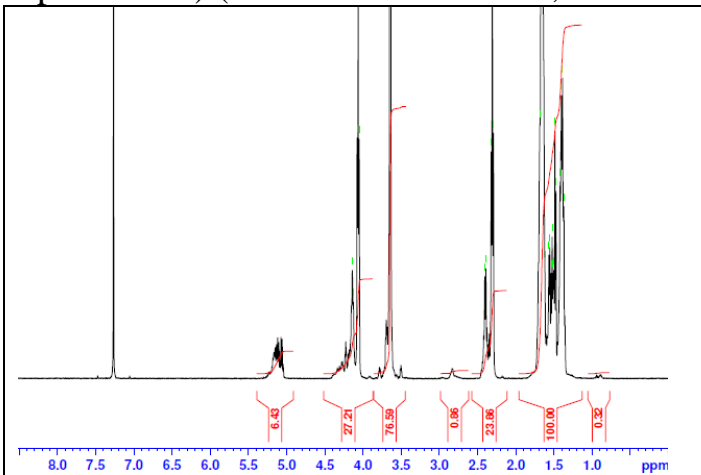


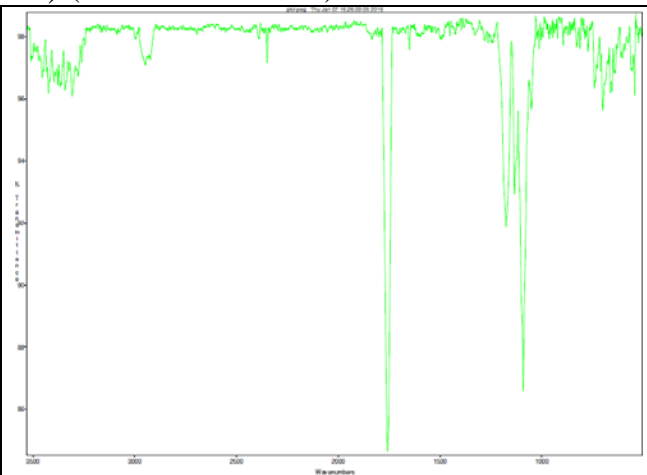
No. AK108

Certificate of Analysis

Product Name: Poly(lactide-co-caprolactone)-b-Poly(ethylene glycol)-b- Poly(lactide-co-caprolactone) (~1600-1500-1600 Da, 75:25 CL:LA) (Lot#: 51222JSG-A)

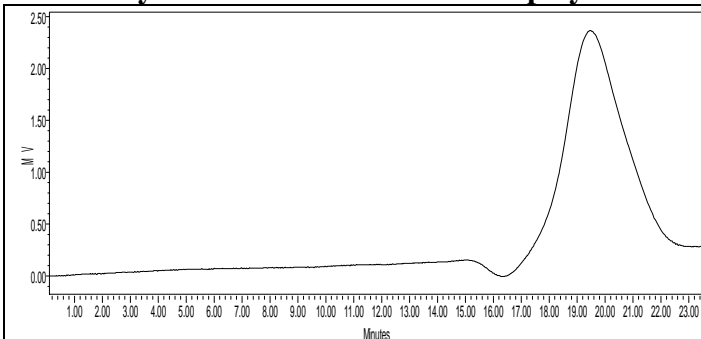


H-NMR Spectrum of PLCL-PEG-PLCL copolymers in CDCl₃ (Varian Inova 500 MHz instrument), NMR of PLCL-PEG-PLCL repeat units: EG-CL/LA = 34-24/11 (Mn EG-CL/LA: 1498-2757/822)



FTIR Analysis: Collected from cast-film on KBR salt-plate placed in Satellite FTIR (Thermo-Mattson) and analyzed in transmission mode. FTIR analysis of PLCL-PEG-PLCL copolymers

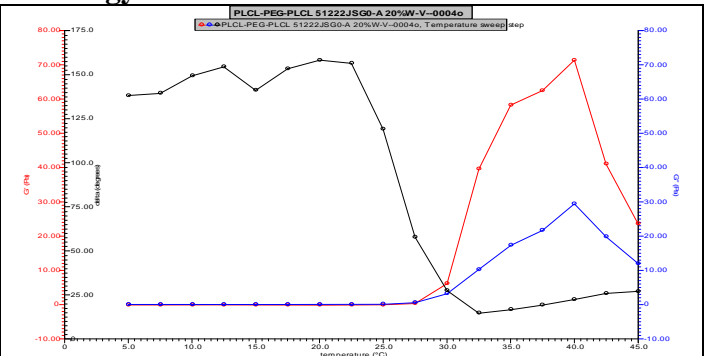
GPC analysis of PLCL-PEG-PLCL copolymers



Analysis Method: Waters Breeze 2 system with 1 ml/min DCM flow across three Phenogel 5um columns (Phenomenex). Detection via refractive index, calibrated against polystyrene standards

Polymer	Mn (from GPC)	Mw (from GPC)	PDI
PLCL-PEG-PLCL	10,352	16,329	1.58
PEG precursor	Mn=1,485 (MFG data)		

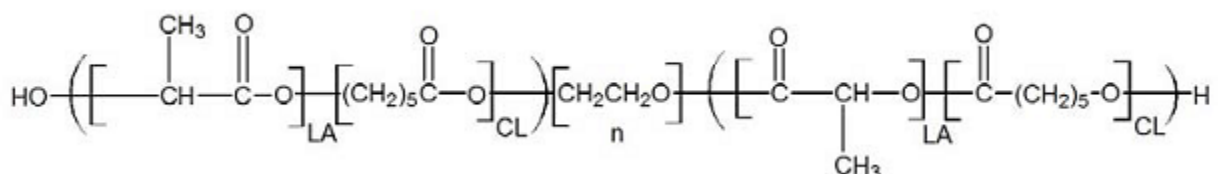
Rheology



Rheology performed on AR550 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in distilled water dissolved over 2 days with shaking at 4C. Viscosity of solution at 0.1 (sec-1) and 5C 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 2.5C ranging from 5-45C with 3 minutes of temperature equilibration at each point

Viscosity 20% w/v solution at 5C	0.07291 Pa.s
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Structure of PLCL-PEG-PLCL copolymers



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