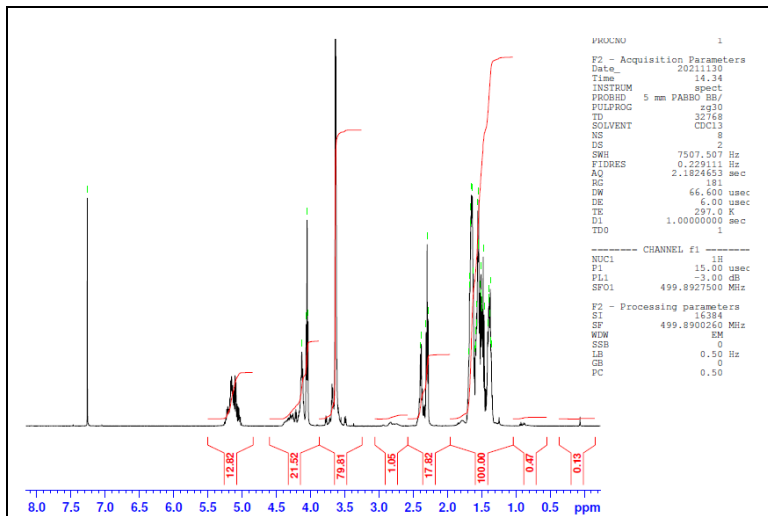


# No. AK109

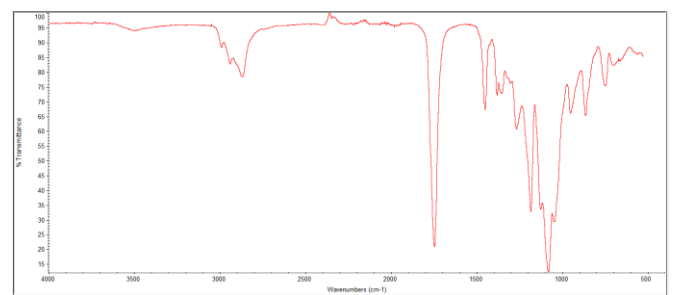
# Certificate of Analysis



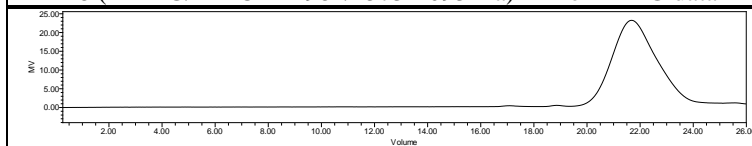
Product Name: Poly(lactide-co-caprolactone)-b-Poly(ethylene glycol)  
-b-Poly(lactide-co-caprolactone) (~1700-1500-1700 Da, 60:40 CL:LA) (Lot# 211123RAI-B)



H-NMR Spectrum of copolymers in CDCl<sub>3</sub> (Bruker ≥300 MHz, PINMRF) NMR of PCL-PEG-PCL copolymer: EG/LA-CL = 34\*/22-18 (M<sub>n</sub> EG/LA-CL 1498\*/1573-2093 Da) \*- from MFG data



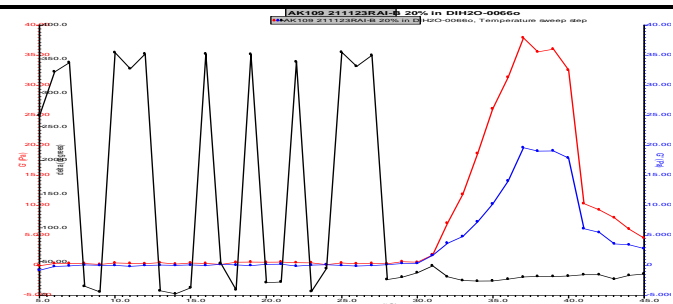
FTIR Analysis: Collected from Nicolet Avatar 380 spectrometer with ATR Smart Orbit and analyzed in transmission mode.



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.

Polymer	M <sub>n</sub> (from GPC)	M <sub>w</sub> (from GPC)	PDI
PCL-PEG-PCL	6407	8482	1.32
PEG precursor*	1485*		

\*- 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 **.01919 Pa/s**

## Structure of PLCL-PEG-PLCL copolymers

