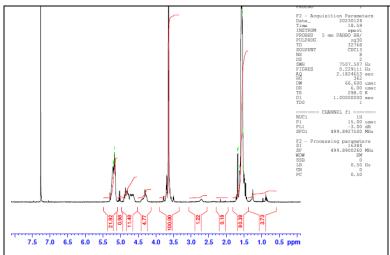
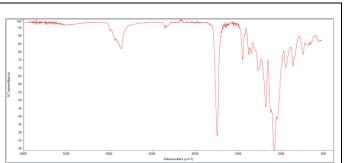
No. AK091

Certificate of Analysis

Product Name: Poly(lactide-co-glycolide)-*b*-Poly(ethylene glycol)-*b*-Poly(lactide-co-glycolide) copolymers (M_n 1,500:1,500:1,500 Da, 6:1, LA:GA) (Lot# 230119RAI-A)

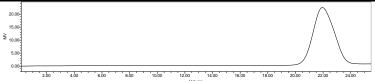


H-NMR Spectrum of copolymers in CDCl3 (Bruker ≥300 MHz, PINMRF) NMR of PLGA-PEG-PLGA copolymer: EG*/LA-GA =33*/29-8 (Mn EG*/LA:GA 1454*/2083-437 Da) *- from MFG data



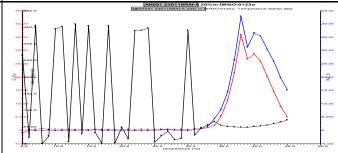
PolySciTech®

FTIR Analysis: Collected from Nicollet 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 _n (from GPC)	M _w (from GPC)	PDI
PLGA-PEG- PLGA	5128	6292	1.23
PEG precursor*	1472*		
*- from MFG data			



Rheology performed on AR2000 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 2 days with stirring at 10°C. Viscosity of solution at 0.1 (sec⁻¹) 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 .1863 Pa/s

• Structure of PLGA-PEG-PLGA copolymer

$$HO = \left(\begin{array}{c|c} CH_3 & O \\ \hline CH_2 & CH_2 \\ \hline CH_2 & CH_2 \\ \hline CH_3 & CH_2 \\ \hline CH_2 & CH_2 \\ \hline CH_3 & CH_2 \\ \hline CH_3 & CH_2 \\ \hline CH_2 & CH_2 \\ \hline CH_3 & CH_2 \\ \hline CH_3 & CH_2 \\ \hline CH_3 & CH_2 \\ \hline CH_2 & CH_2 \\ \hline CH_3 & CH_3 \\ \hline$$