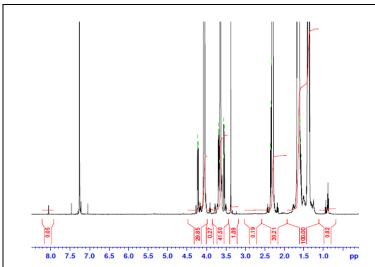
No. AK036

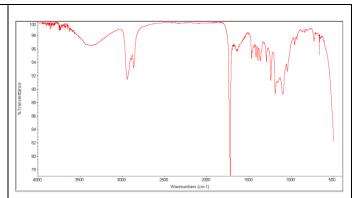
Certificate of Analysis



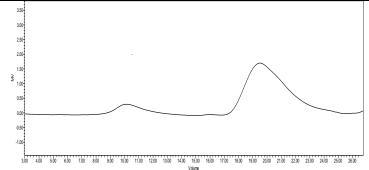
Product Name: Methoxy Poly(ethylene glycol)-b-Polycaprolactone copolymers (MW ~ 750-2500 Da) (Lot#: 171010SLG-A)



H-NMR Spectrum of copolymers in CDCl3 (Varian Inova 500 MHz instrument) NMR of mPEG-PCL repeat units: EG-CL = 17-24 (Mn 749*-2791Da) (* MFG nominal)

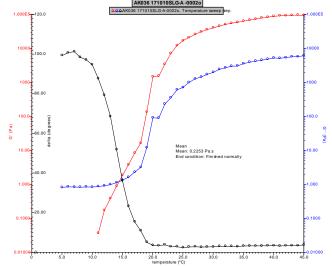


FTIR Analysis: Collected from cast-film on KBr salt-plate placed in Protégé 460 spectrometer and analyzed in transmission E.S.P. mode.



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	M _w (from	PDI
	GPC)	GPC)	
PLA-PEG-PLA	4849	8729	1.8



Rheology performed on AR550 (TA instruments) with 60mm 2degree cone on 20% w/v polymer in water dissolved over 3 days with stirring at 4°C followed by sonication. 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 | 0.2253 Pa*s

• Structure of mPEG-PCL copolymers

$$\mathsf{H_3C-O} = \mathsf{CH_2CH_2O} = \mathsf{H_3C-O} = \mathsf{CH_2D_3-O} = \mathsf{H_3C-O} = \mathsf{CH_2D_3-O} = \mathsf{H_3C-O} = \mathsf{CH_3D_3-O} = \mathsf{CH_3D_3-O} = \mathsf{H_3C-O} = \mathsf{CH_3D_3-O} = \mathsf$$