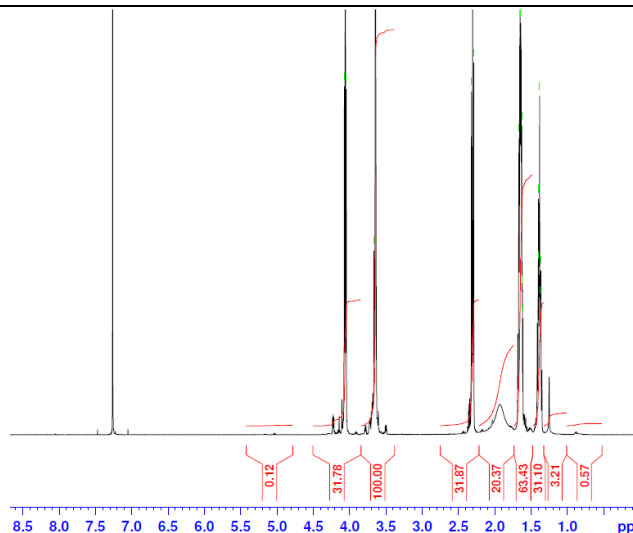


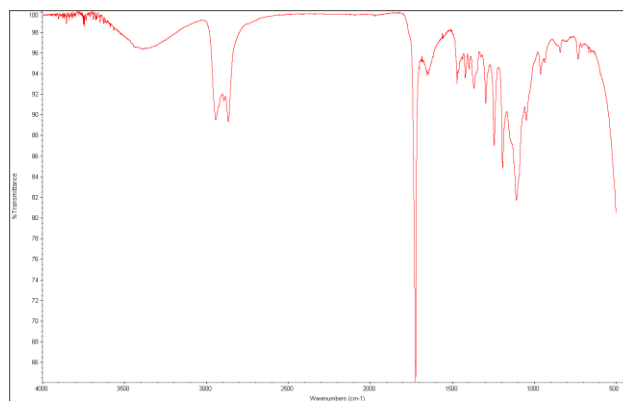
# No. AI155

# Certificate of Analysis

Product Name: Poly(caprolactone)-b-Poly(ethylene glycol) carboxylic acid (4000-2000 Da)  
 (Lot#: 170524JSG-A)

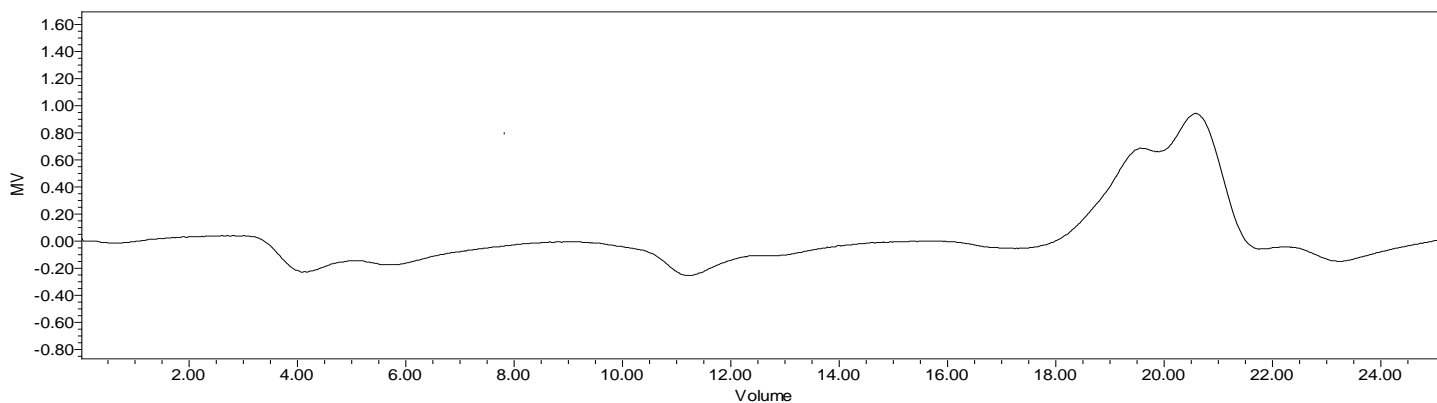


H-NMR Spectrum of PCL-PEG-COOH copolymer in CDCl<sub>3</sub> (Varian Inova 500 MHz instrument), NMR of PCL-PEG-COOH repeat units:  
 EG/CL = 55\*/35, Mn = 2423\*/3990 Da



FTIR Analysis: Collected from cast-film on salt-plate placed in Protégé 460 Spectrometer (Nicolet) and analyzed in transmission E.S.P. mode.

- GPC analysis of PCL-PEG-COOH copolymer**

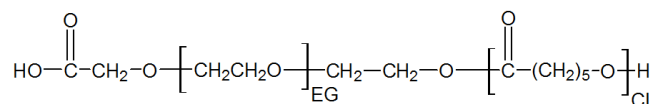


Analysis Method: Waters Breeze 2 system with 1 ml/min THF flow across three GPC columns. Detection via refractive index, calibrated against polystyrene standards.

| Polymer                | Mn (from GPC)      | Mw (from GPC) | PDI  |
|------------------------|--------------------|---------------|------|
| PCL-PEG-COOH           | 7547               | 9259          | 1.23 |
| HO-PEG-COOH precursor* | 2400 Da Mn by GFC* |               | NA   |

\*MFG supplied data

- Structure of PCL-PEG-COOH copolymer**



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