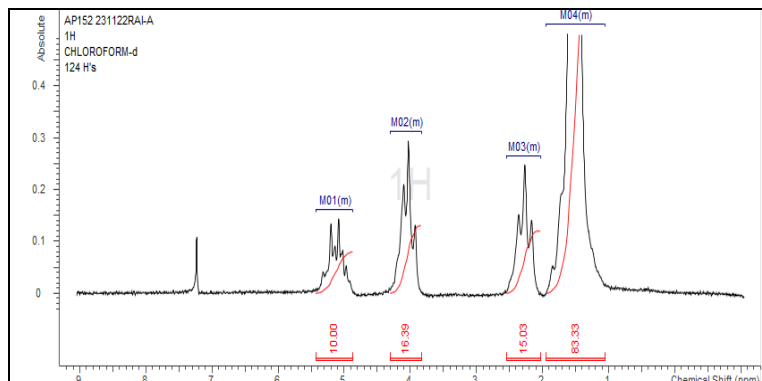


# No. AP290

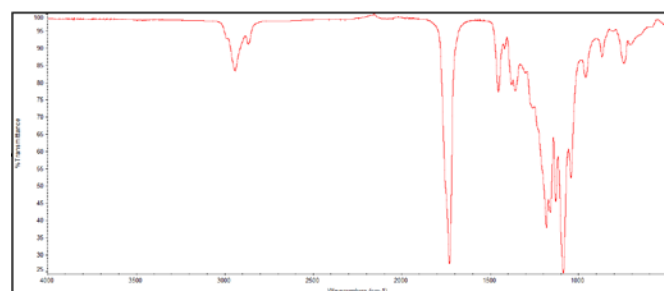
# Certificate of Analysis



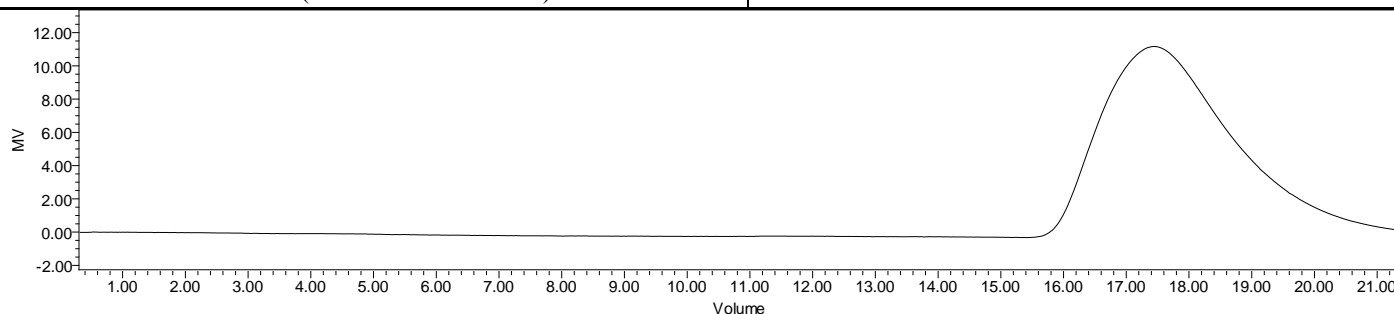
Product Name: Poly(L-lactide-co-caprolactone) copolymer ester endcap  
(50:50 LA:CL,  $M_n$ : 75,000-85,000 Da) (Lot#: 231122RAI-A)



H-NMR Spectrum of copolymers in CDCl<sub>3</sub> (NMReady-60e, Nanalysis 60 MHz) NMR of P(L)LCL Copolymer LA:CL 55%:45% molar ratio (LA:CL 43%:57% w:w)



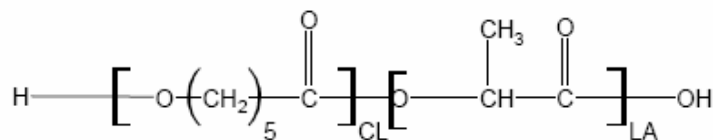
FTIR Analysis: Collected from IS5 ID7-ATR spectrometer (ThermoFisher) and analyzed in transmission mode.



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
P(L)LCL	84,130	138,758	1.65

## • Structure of P(L)LCL copolymers



Approved By:  
*Amie Tyler*  
Quality Manager