

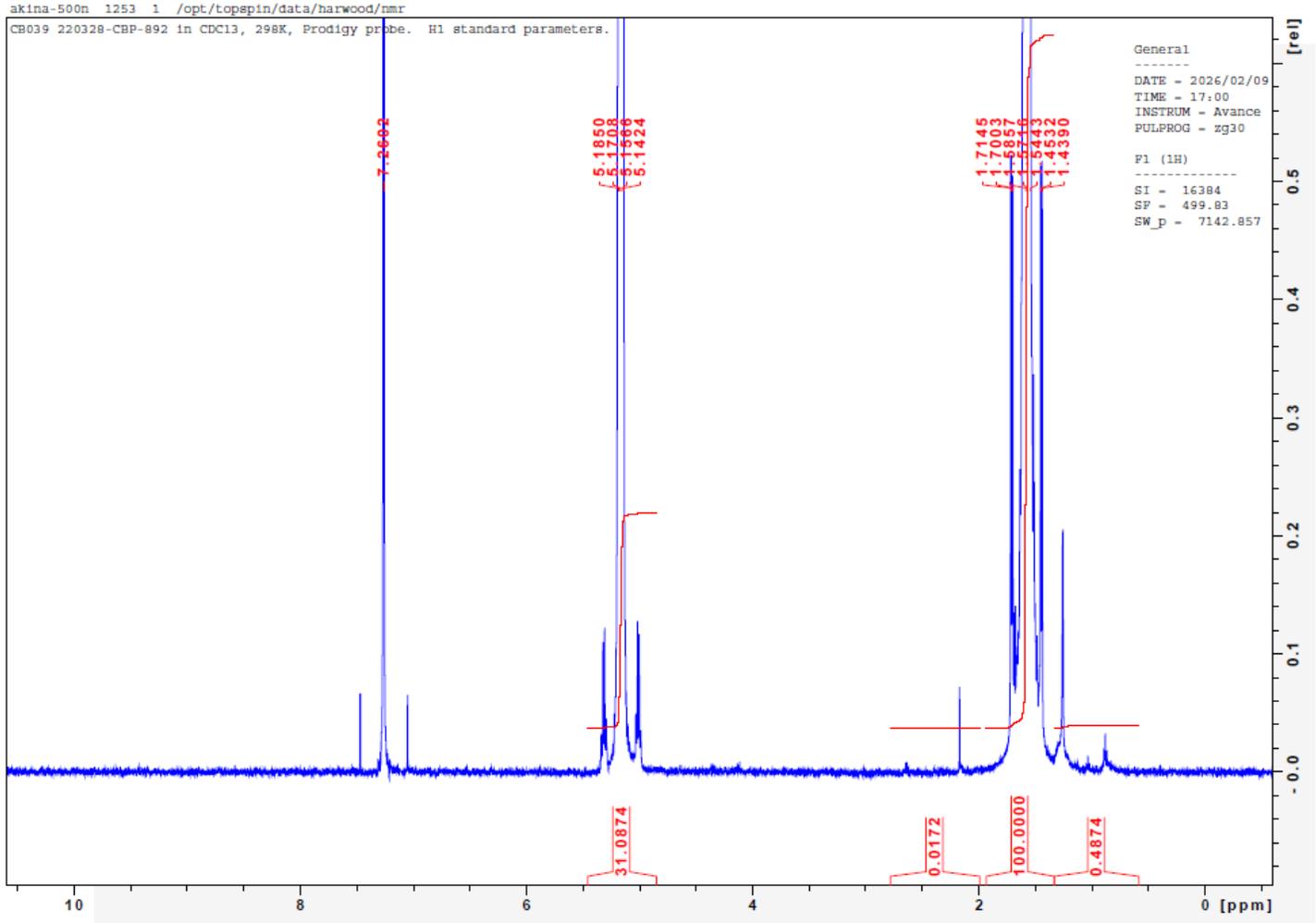
No. CB039

Certificate of Analysis



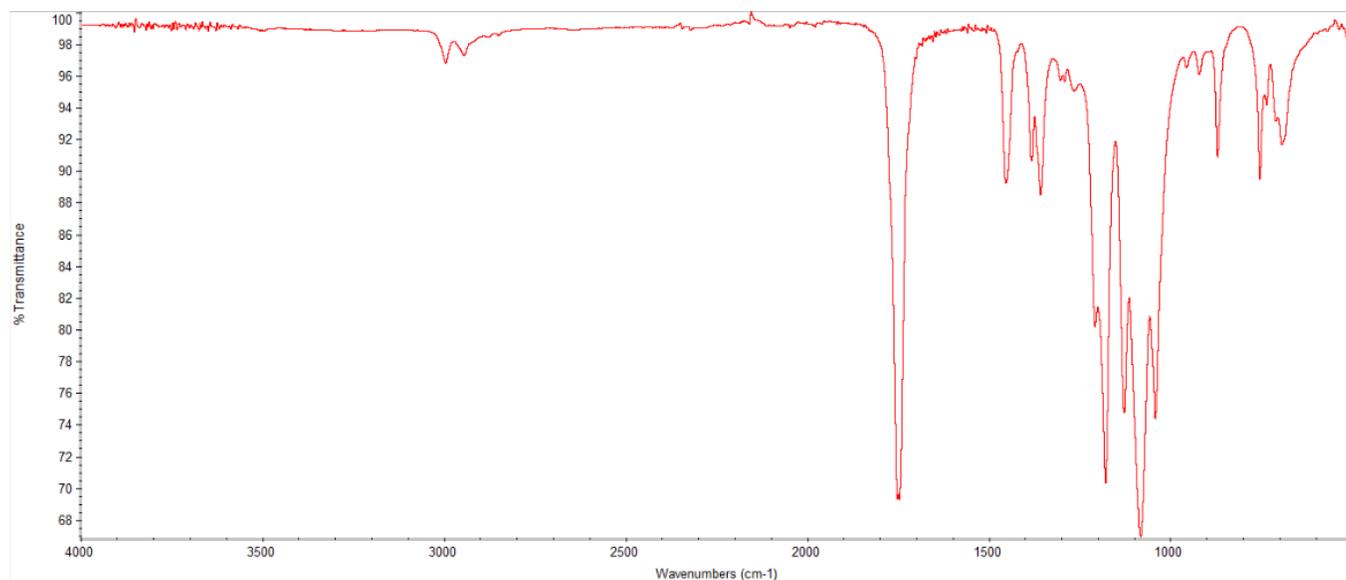
Product Name: Poly(L-Lactide) I.V. 4.30 – 5.50 dl/g, ester endcap (PL 49)
(Lot#: 220328CBP-892)

H-NMR



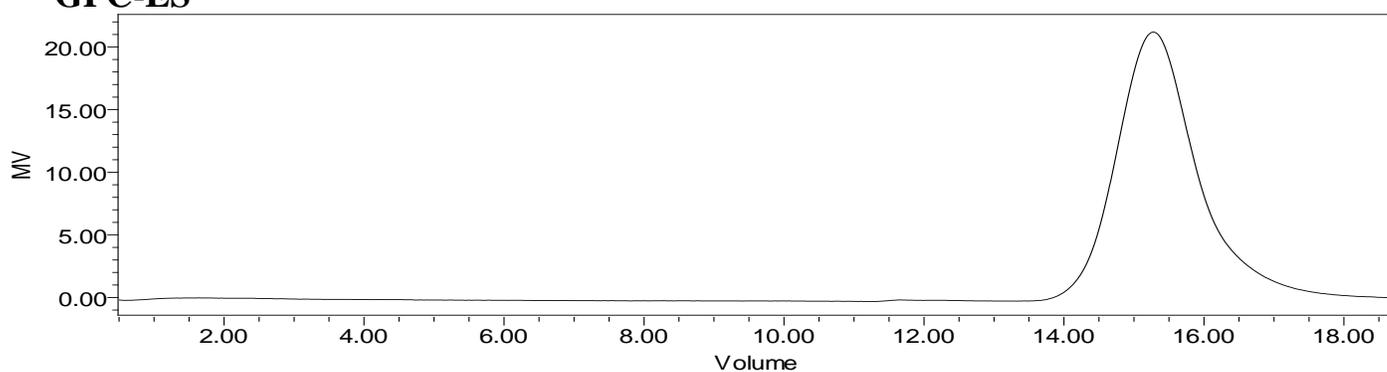
H-NMR Spectrum of copolymers in CDCl₃ (NMReady-60e, Nanalysis 60 MHz) NMR of PLLA copolymer

FTIR



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

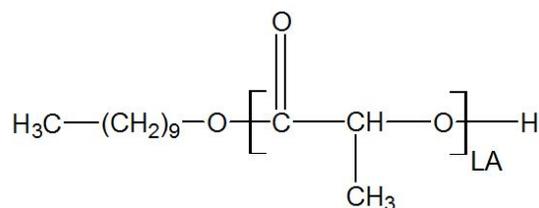
GPC-ES



Polymer	M _n (from GPC)	M _w (from GPC)	PDI
PLLA	239,755	328,409	1.37

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.

Structure of copolymers



Manufacturer Provided Data

Assay	Specification	Result
Melting onset, DSC, 10 °C/min	170.0 °C	179.1 °C
Melting peak, DSC, 10 °C/min	200.0 °C	193.7 °C
Tin content	<50ppm	14 ppm
Water content ¹	<0.50%	0.04%
Residual monomer, Total	<0.10%	0.05%
Inherent Viscosity ²	4.30-5.50 dL/g	4.53 dL/g
Residual solvent, Total	<0.01%	0.001 %
Residual solvent, Toluene	<890 ppm	0 ppm
Residual solvent, Acetone	<5000 ppm	8 ppm

1 – Measured by titration

2 – Measured at 25 °C in Chloroform c=0.1 g/dL

Approved By: <i>Amie Tyler</i> Quality Manager
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