

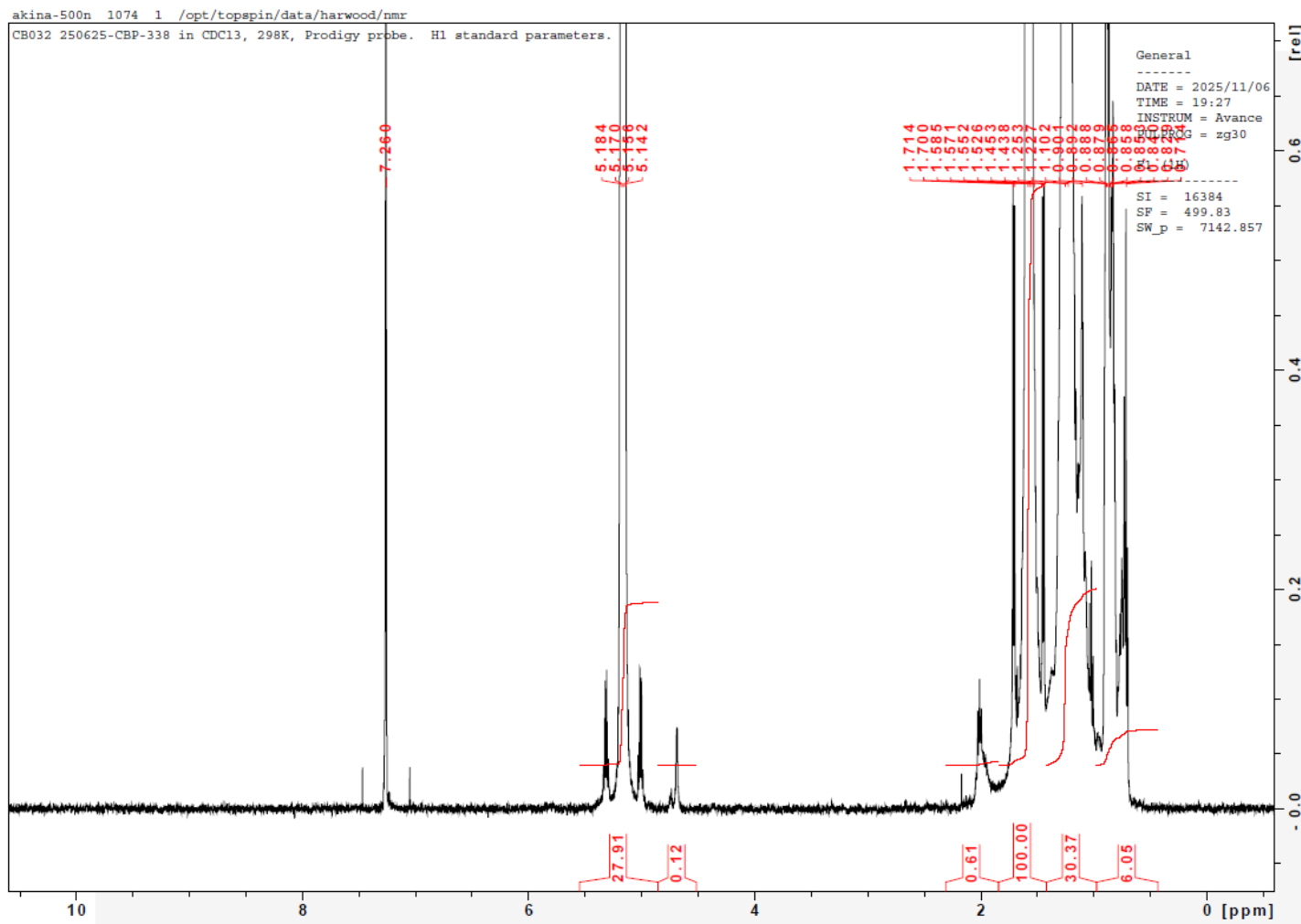
No. CB032

Certificate of Analysis



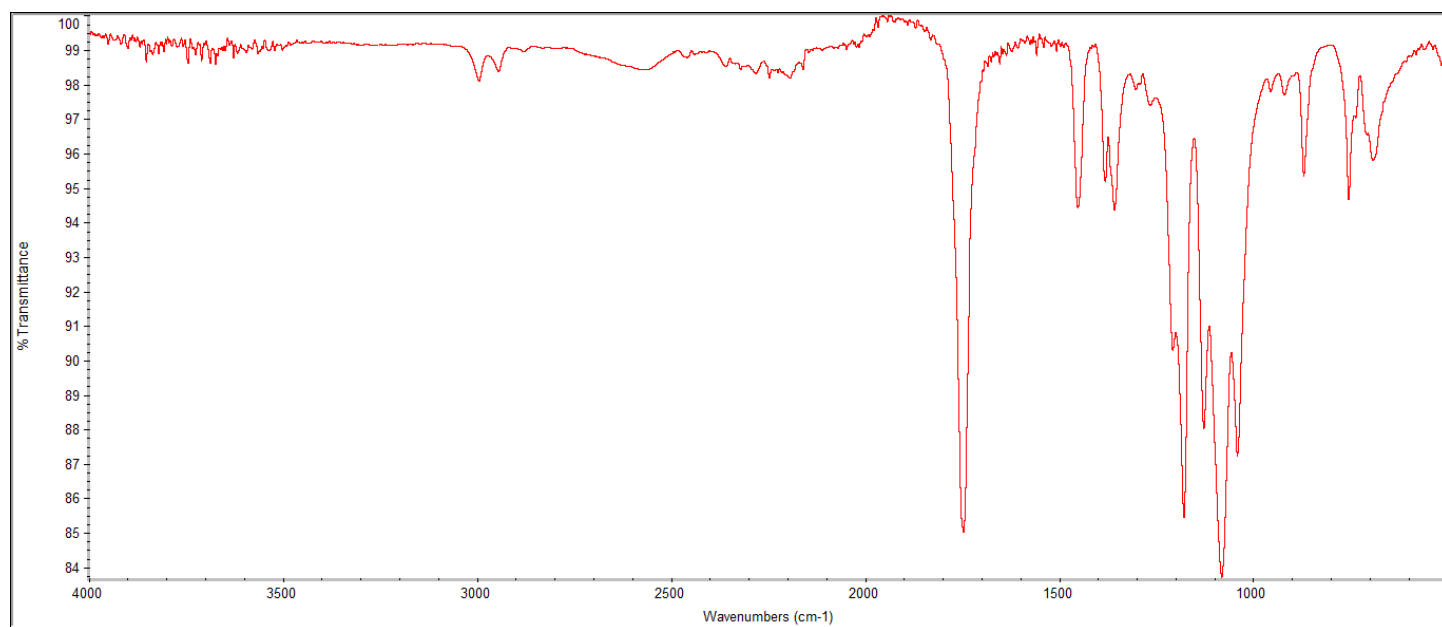
Product Name: Poly(L-Lactide) I.V. 5.50 – 7.50 dl/g, ester endcap (PL 65)
(Lot # 250625CPB-338)

H-NMR



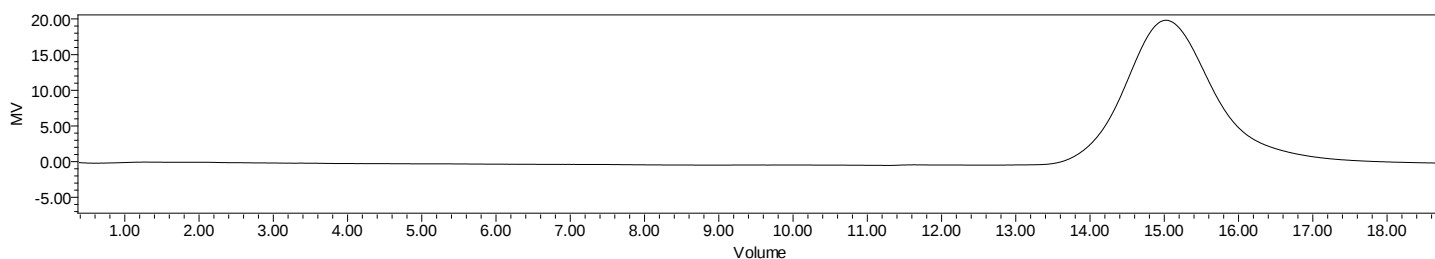
H-NMR Spectrum of copolymers in CDCl₃ (NMReady-60e, Nanalysis 60 MHz) NMR of PL copolymer.

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
PL	296,895	427,119	1.44

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.

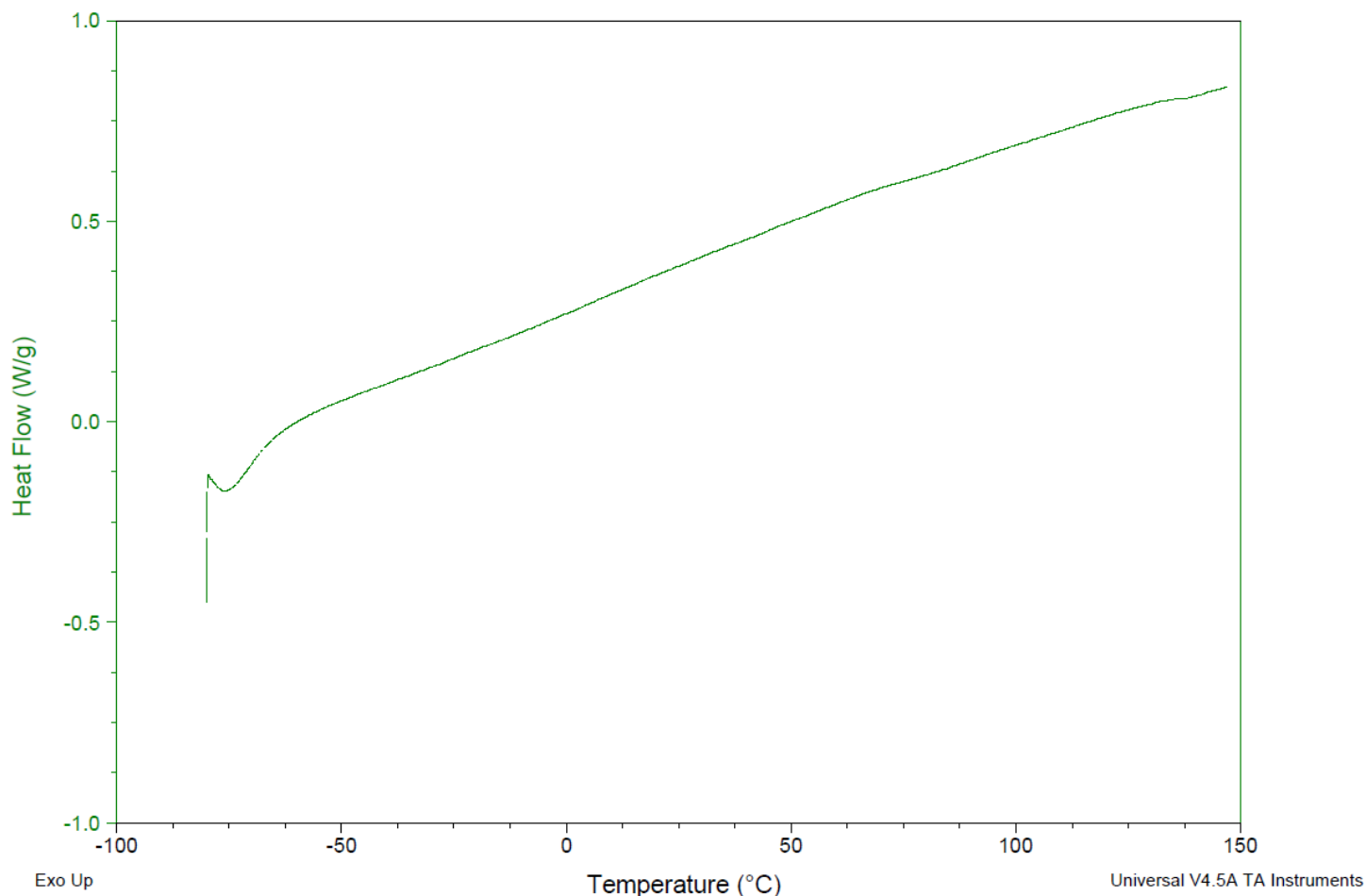
DSC

Sample: CB032 250625BP-338
Size: 2.3000 mg
Method: Ramp

DSC

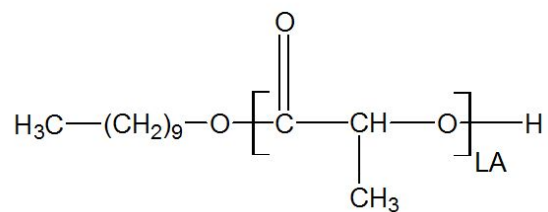
File: C:\...\COA\CB032 250625CBP-338.001

Run Date: 07-Nov-2025 15:29
Instrument: DSC Q2000 V24.11 Build 124



DSC Testing: 1-5 mg sample tested in crimped aluminum pan on a TA Instruments Model Q2000 with procedure equilibraion 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C.

Structure of copolymers



Manufacturer Provided Data

Assay	Specification	Result
Melting onset, DSC, 10 °C/min	170.0 °C	177.1 °C
Melting peak, DSC, 10 °C/min	200.0 °C	190.8 °C
Tin content	<50ppm	14 ppm
Water content ¹	<0.50%	0.14%
Residual monomer, Total	<0.10%	0.00%
Inherent Viscosity ²	5.50-7.50 dL/g	6.38 dL/g
Residual solvent, Total	<0.01%	0.001 %
Residual solvent, Toluene	<890 ppm	<0 ppm
Residual solvent, Acetone	<5000 ppm	10 ppm

1 – Measured by titration

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

Approved By:
Amie Tyler
 Quality Manager