

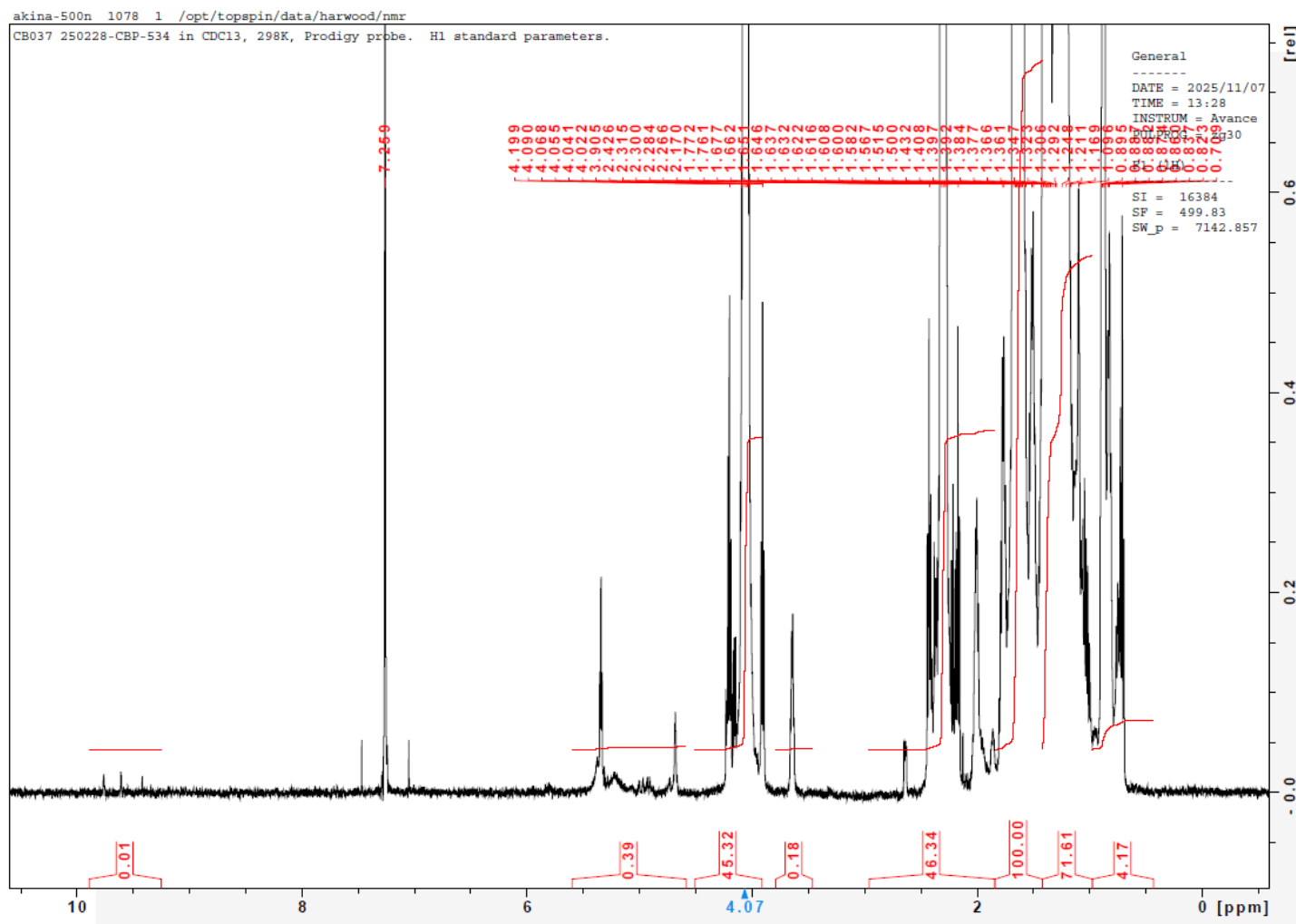
No. CB037

Certificate of Analysis



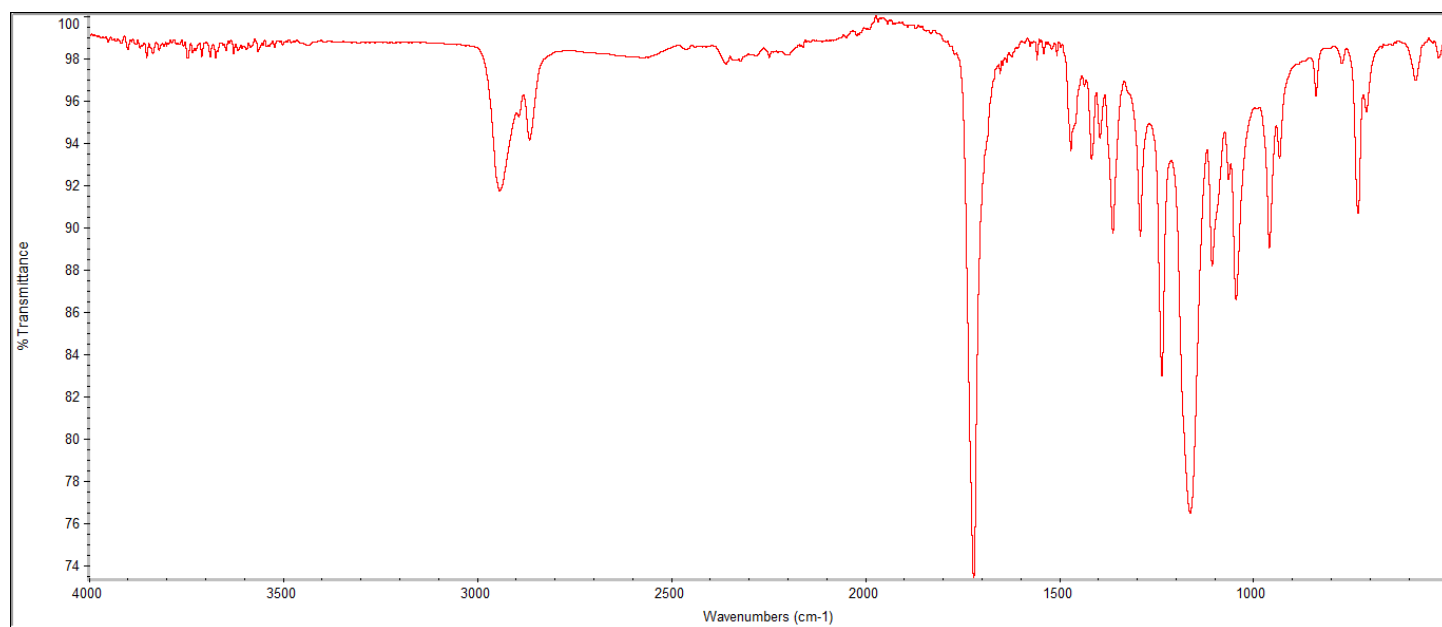
Product Name: Poly(Caprolactone) I.V. 1.00 – 1.30 dl/g, ester endcap (PC 12)
(Lot # 250228CPB-534)

H-NMR



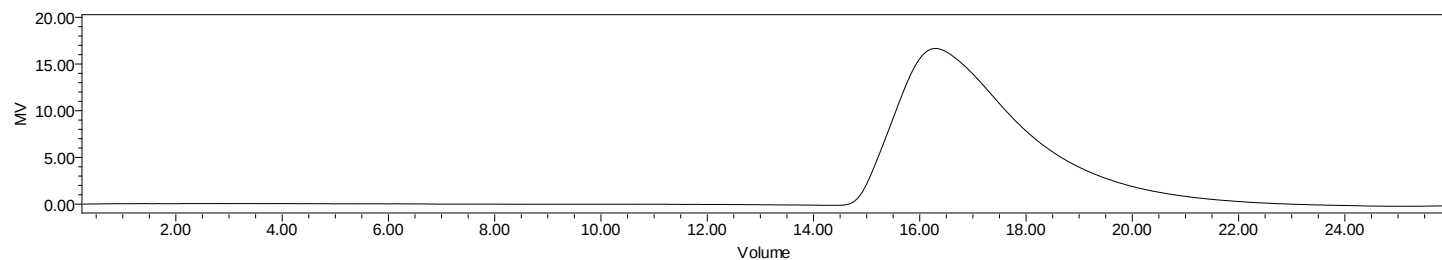
H-NMR Spectrum of copolymers in CDCl₃ (NMReady-60e, Nanalysis 60 MHz) NMR of PC copolymer.

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
PC	78,302	116,288	1.49

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.

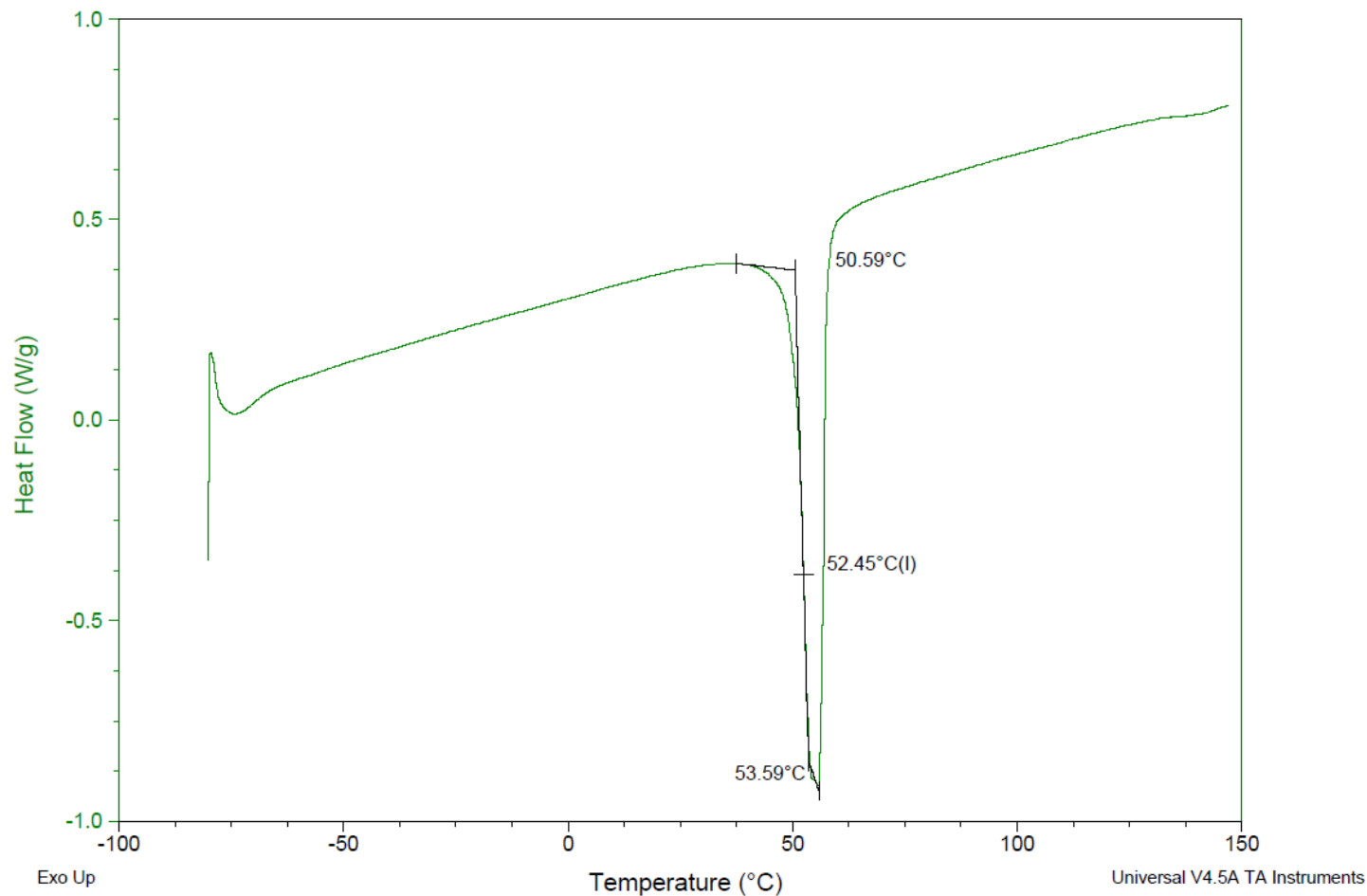
DSC

Sample: CB037 250228CBP-534
Size: 2.5000 mg
Method: Ramp

DSC

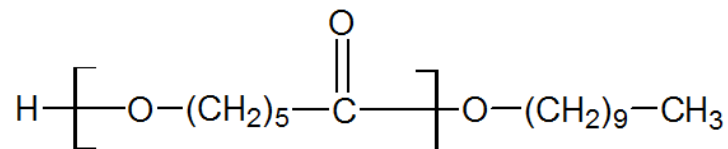
File: C:\COA\CB037 250228CBP-534.001

Run Date: 10-Nov-2025 15:36
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. Tg = 52.45 °C

Structure of copolymers



Manufacturer Provided Data

Assay	Specification	Result
Melting onset, DSC, 10 °C/min	50.0 °C	58.0 °C
Melting peak, DSC, 10 °C/min	75.0 °C	67.1 °C
Tin content	<100ppm	34 ppm
Water content ¹	<0.50%	0.04%
Residual monomer, Total	<0.50%	0.14%
Inherent Viscosity ²	1.00 dL/g	1.30 dL/g
Residual solvent, Toluene	<890 ppm	3 ppm

1 – Measured by titration

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

Approved By:
Amie Tyler
 Quality Manager