

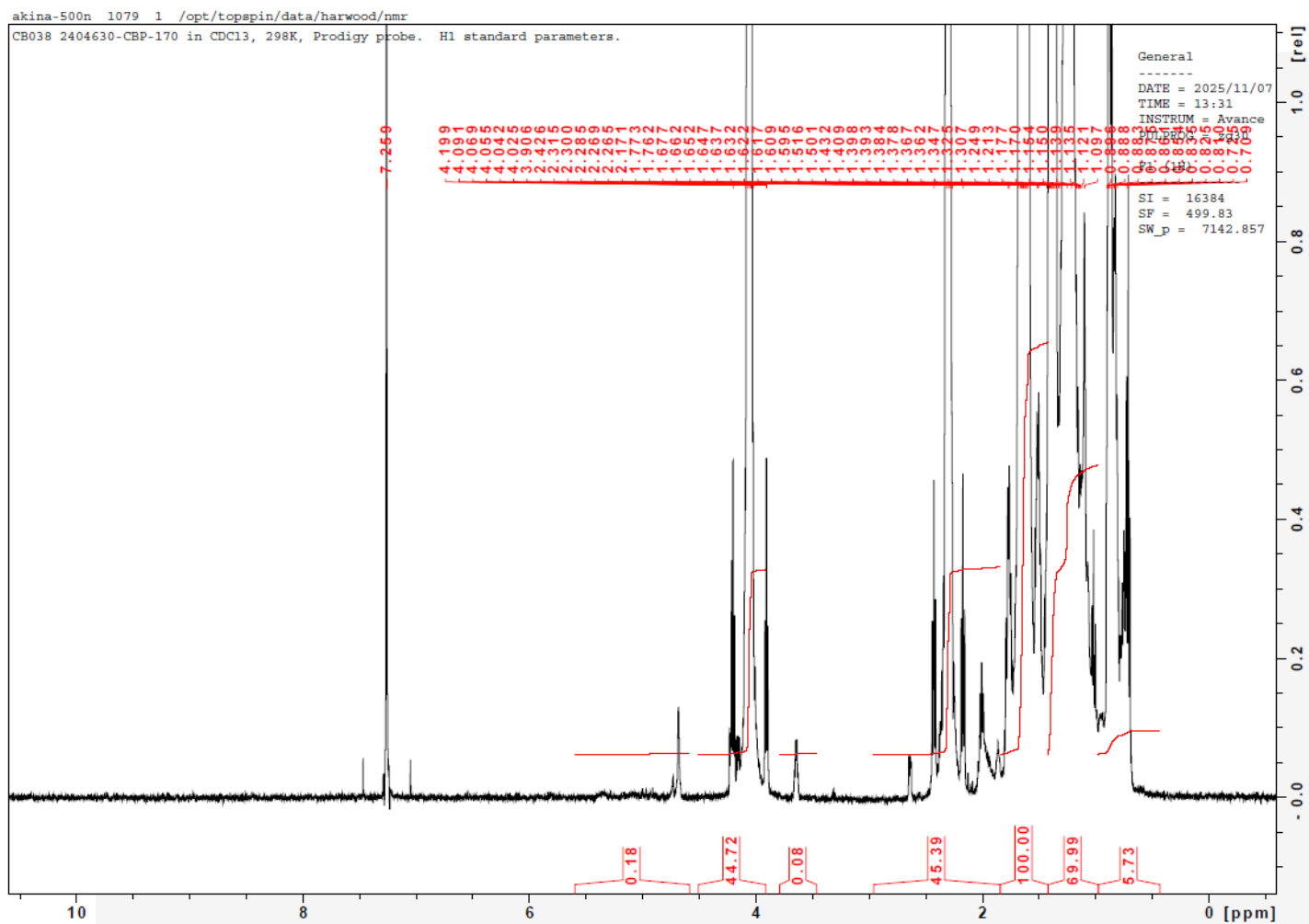
No. CB038

Certificate of Analysis



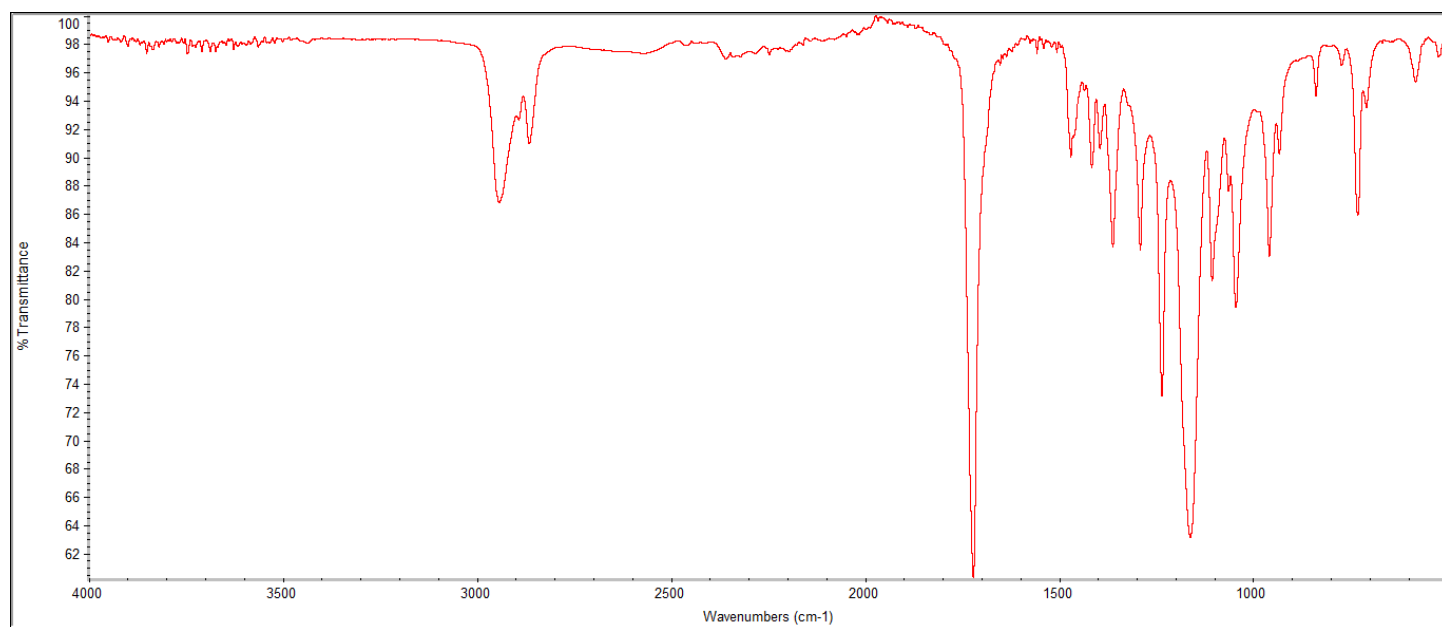
Product Name: Poly(Caprolactone) I.V. 1.50 – 1.90 dl/g, ester endcap (PC 17)
(Lot # 240630CPB-170)

H-NMR



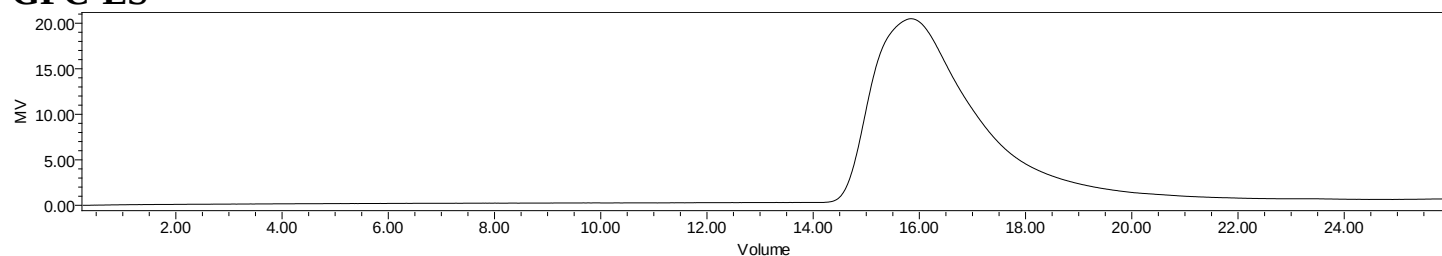
H-NMR Spectrum of copolymers in CDCl₃ (NMReady-60e, Nanalysis 60 MHz) NMR of PC copolymer.

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	118,125	176,781	1.50

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.

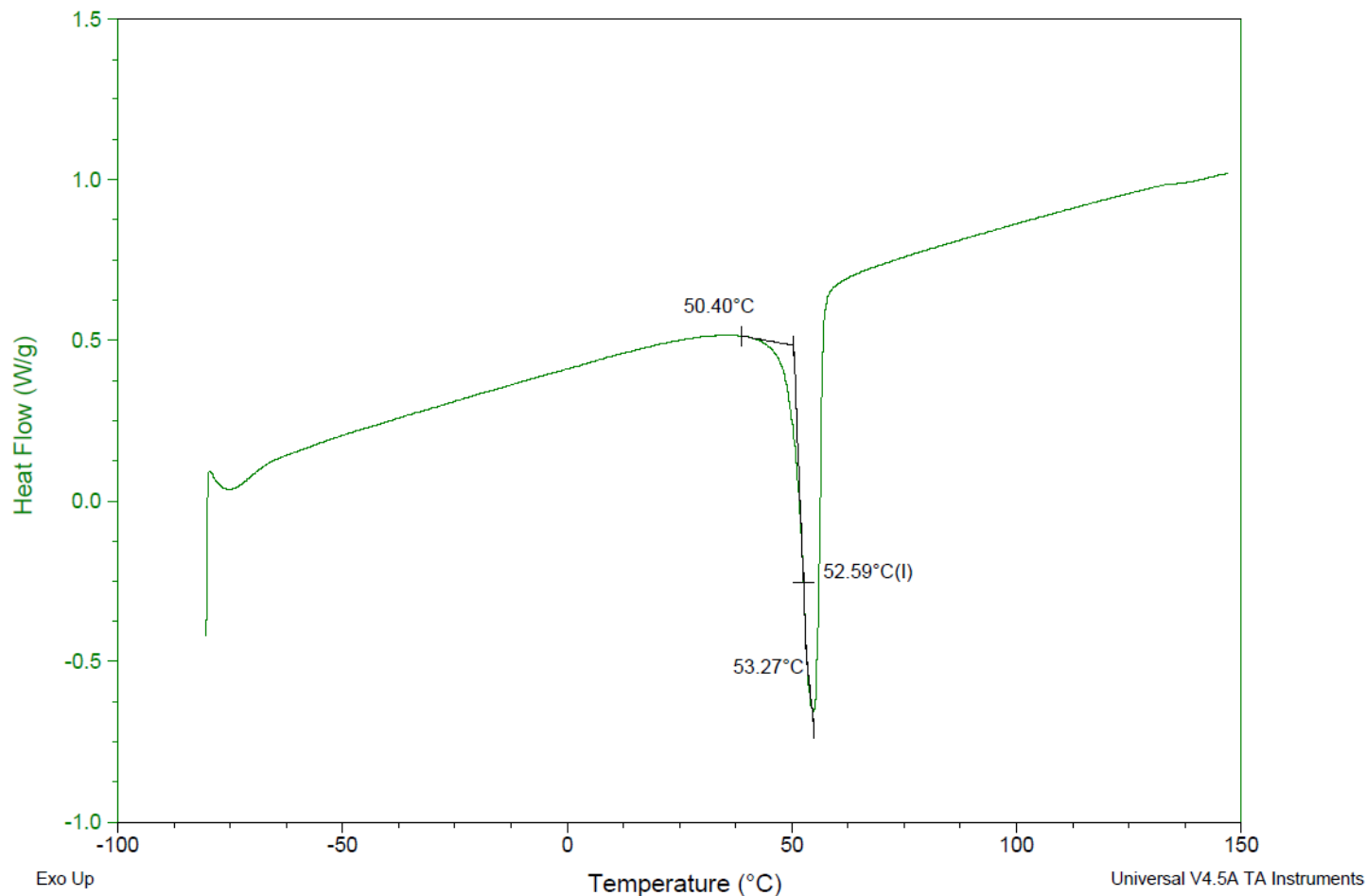
DSC

Sample: CB038 240630CBP-170
Size: 2.4000 mg
Method: Ramp

DSC

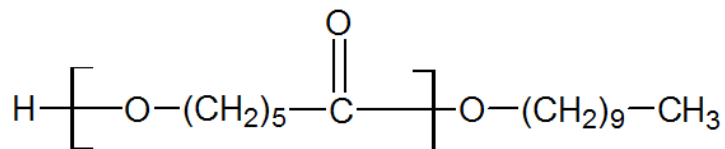
File: C:\...\COA\CB038 240630CBP-170.001

Run Date: 11-Nov-2025 10:13
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 equilibration 100 °C, isothermal 5 minutes, equilibrate -80 °C, data on, ramp 10 °C/min to 150 °C. Tg = 52.59 °C

Structure of copolymers



Manufacturer Provided Data

Assay	Specification	Result
Melting onset, DSC, 10 °C/min	50.0 °C	56.1 °C
Melting peak, DSC, 10 °C/min	75.0 °C	65.7 °C
Tin content	<100ppm	34 ppm
Water content ¹	<0.50%	0.09%
Residual monomer, Total	<0.50%	0.15%
Inherent Viscosity ²	1.50-1.90 dL/g	1.79 dL/g
Residual solvent, Toluene	<890 ppm	4 ppm

1 – Measured by titration

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

Approved By:
Amie Tyler
 Quality Manager