

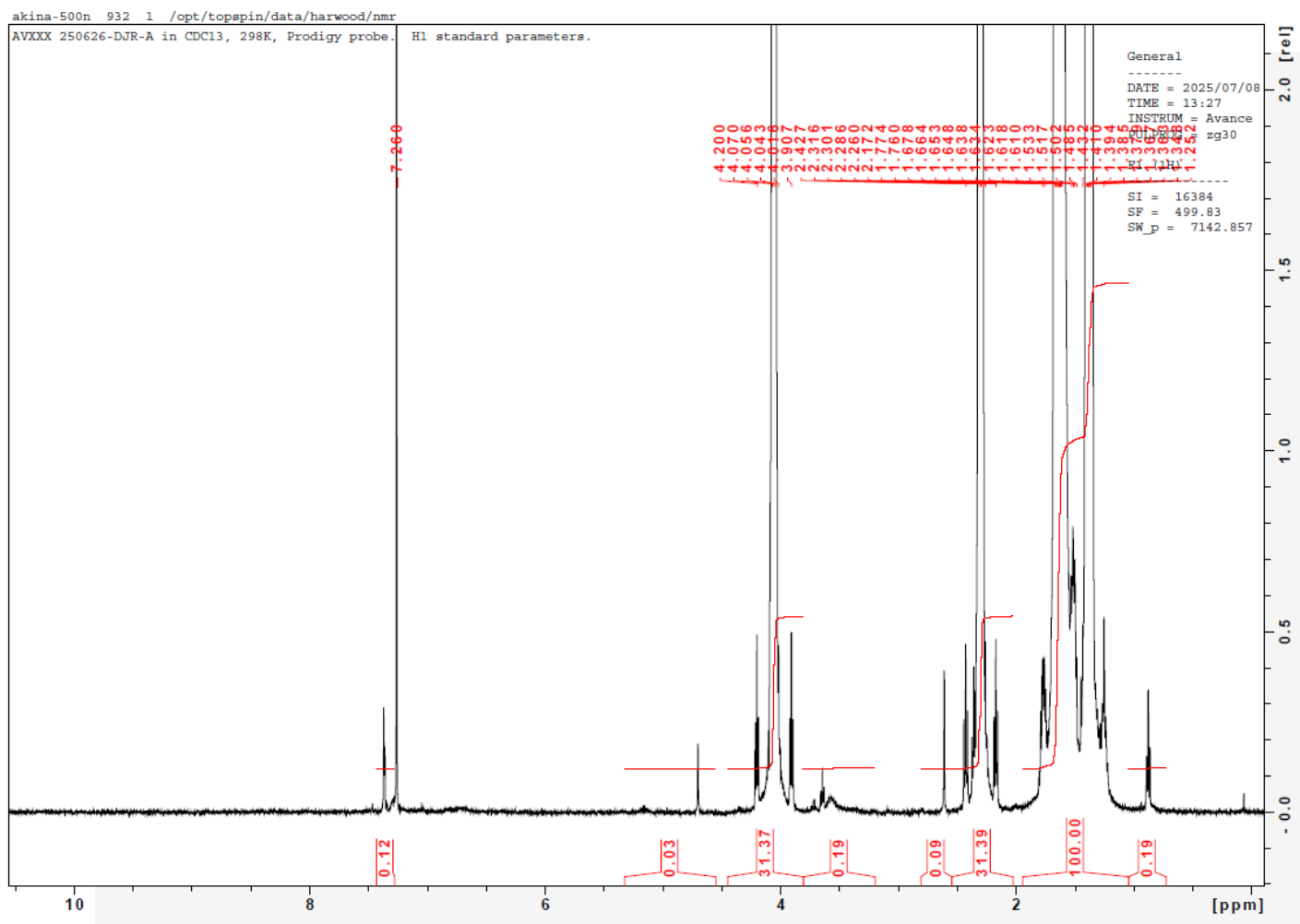
No. AV055

# Certificate of Analysis



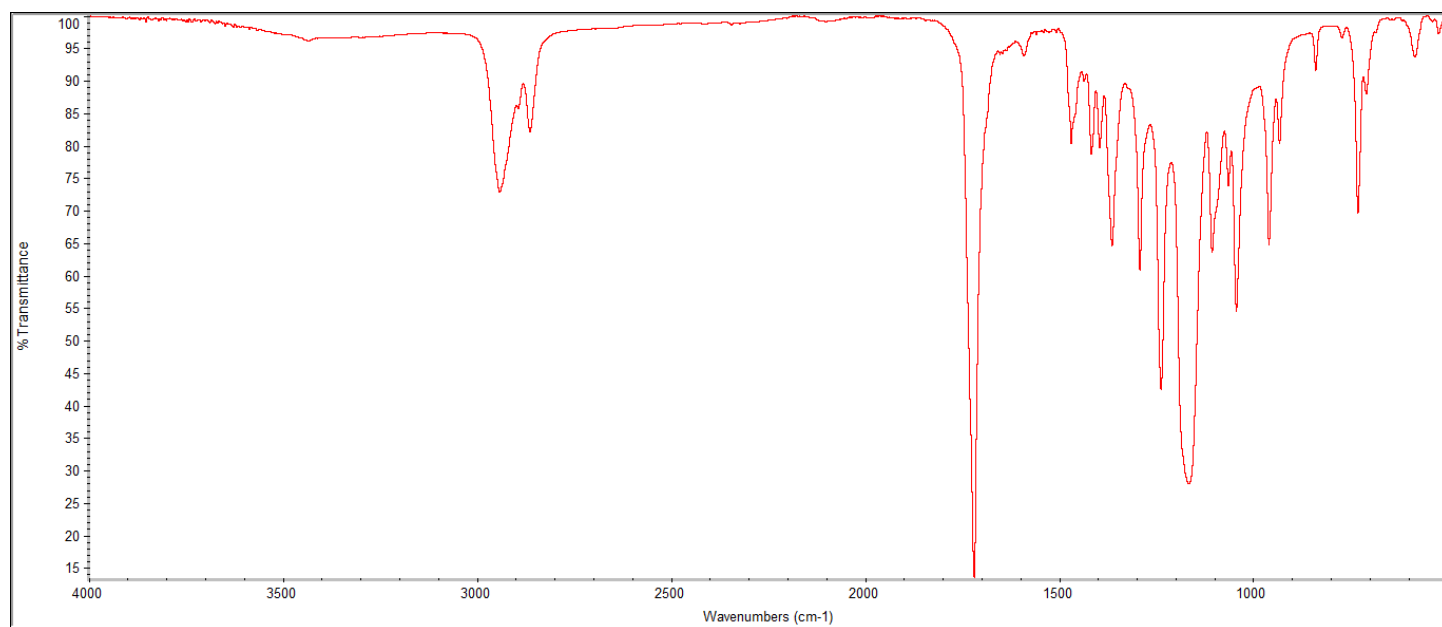
Product Name: Poly(caprolactone)-Rhodamine B acid endcap (Mn: 70,000-90,000 Da)  
(Lot#: 250626DJR-A)

## H-NMR



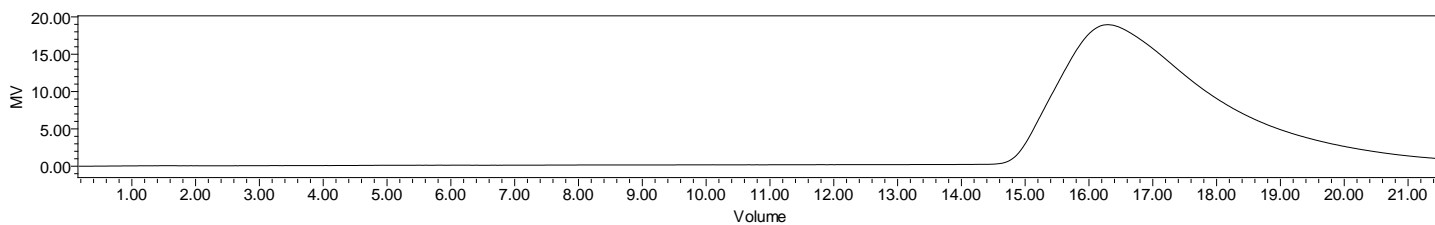
H-NMR Spectrum of copolymers in CDCl<sub>3</sub> (NMReady-60e, Nanalysis 60 MHz) NMR of PCL-Rhod B copolymer

## FTIR



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

## GPC-ES



| Polymer    | M <sub>n</sub> (from GPC) | M <sub>w</sub> (from GPC) | PDI  |
|------------|---------------------------|---------------------------|------|
| PCL-Rhod B | 84,855                    | 122,148                   | 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.

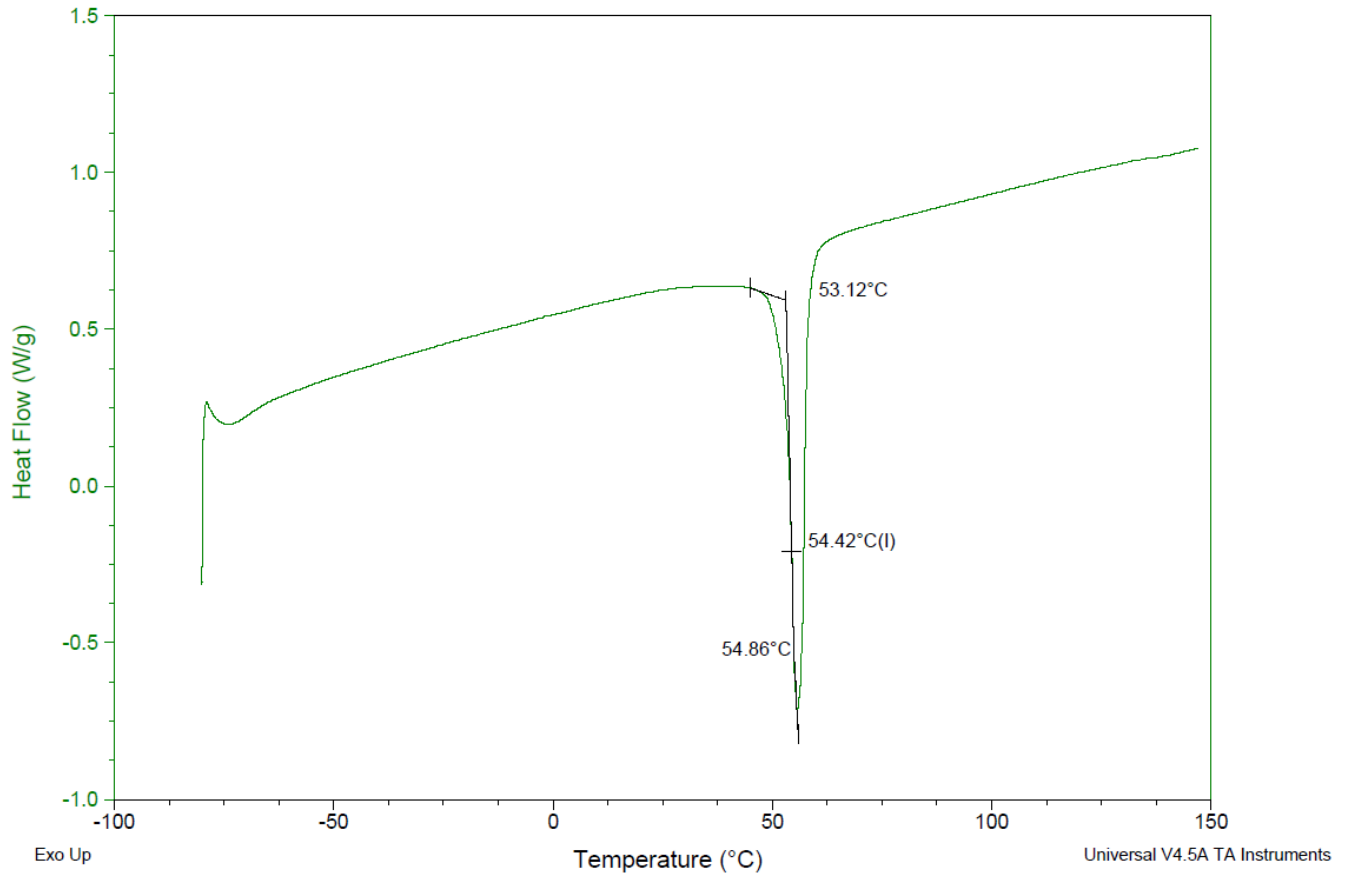
## DSC

Sample: AVXXX 250626DJR-A  
Size: 3.6000 mg  
Method: Ramp

DSC

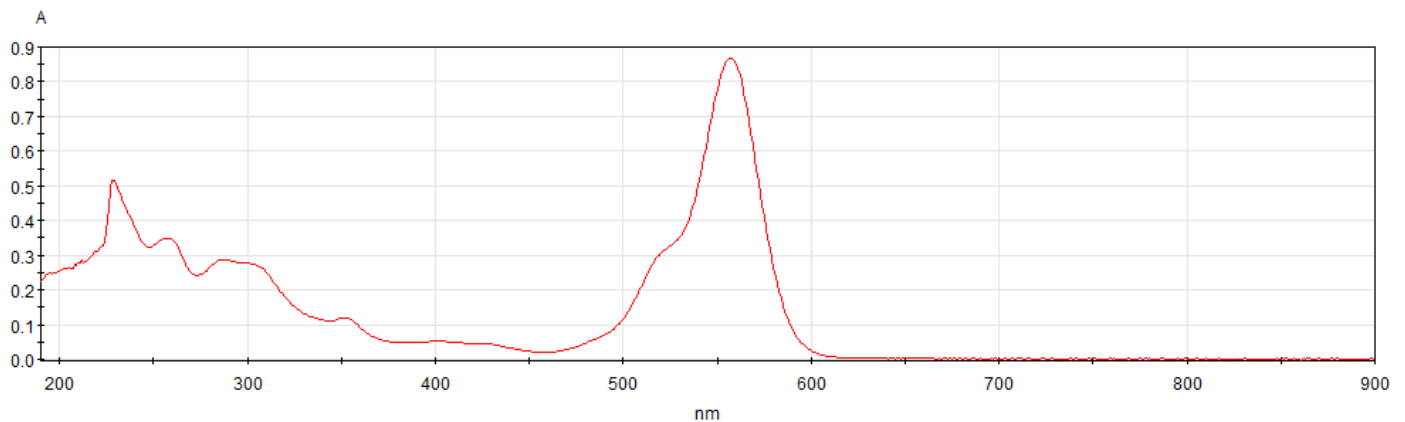
File: C:\...\COA\AVXXX 250626DJR-A.001

Run Date: 10-Jul-2025 11:03  
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 = 54.42 °C

## DYE CONTENT

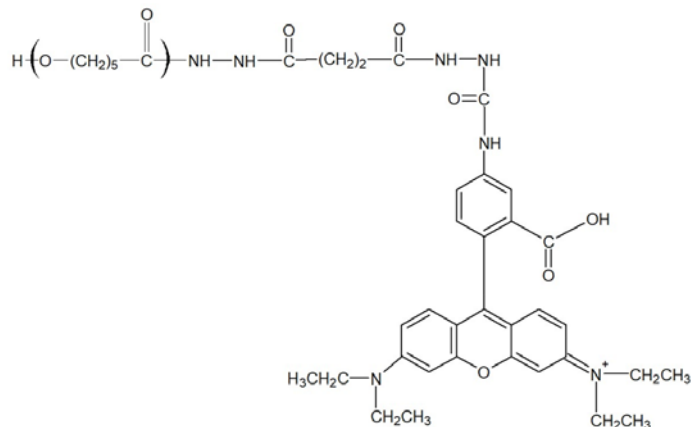


**Dye Content:** Testing of absorbance of polymer in DCM solution at 543 nm as compared to series of Rhodamine-B isothiocyanate standards has indicated a dye content of 7.09 µg/mg polymer

## IV

**Inherent Viscosity:**  $0.472 \pm 0.019$  dL/g (calculated from kinematic viscosity at 2% w/v Acetone on Rheosense microVISC, n=3) at 25°C.

### Structure of copolymers



Approved By:  
*Amie Tyler*  
Quality Manager