

unit



UNCHAINED
LABS

Unlock stability

The UNit lets you learn more about protein stability with less sample than any other tool out there. Up your knowledge base on your protein constructs and formulations. Measure T_m and T_{agg} simultaneously in under two hours. Do it all on the most powerful biologics stability screening platform.

- Same-time T_m and T_{agg}
- 9 μ L sample size
- Sealed samples, no evaporation
- Full-spectrum fluorescence and SLS
- Label-free detection
- Optional dye-based applications



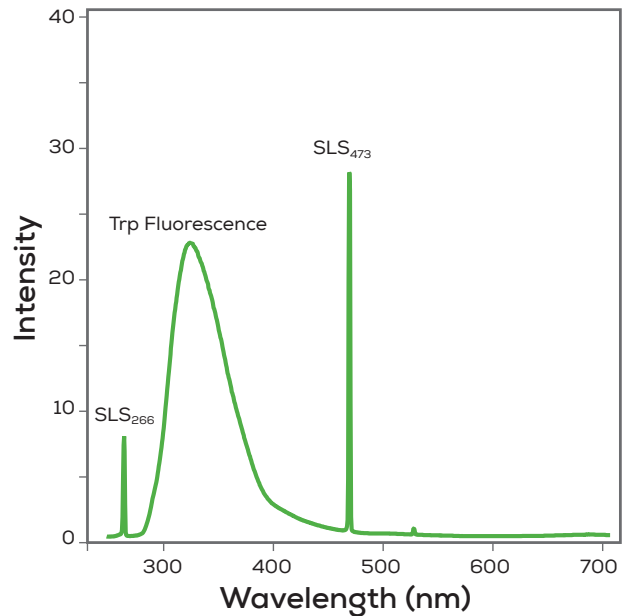
Unleash the UNi

Get more data with way less protein. The UNi lets you measure 9 μL of each sample. Run up to 48 samples at a time. Each sample is sealed air-tight, so runs can be short or long – your call.



Full-spectrum

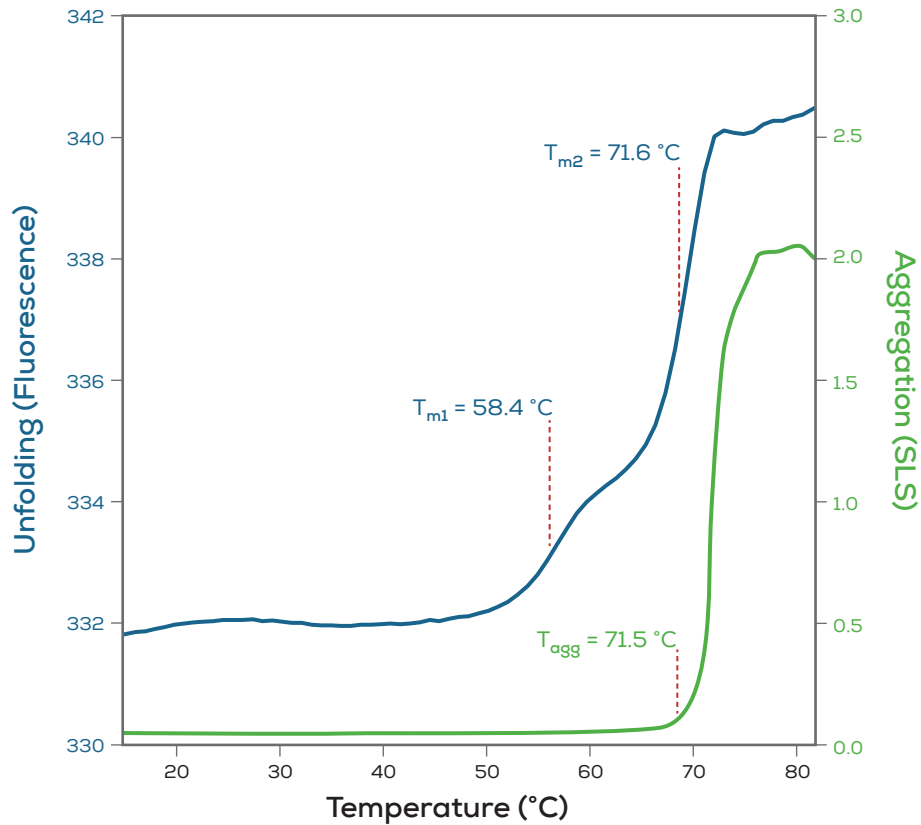
Biologics behave differently. The UNi measures the whole fluorescence spectrum for proteins, giving you a complete picture of stability. At the same time it monitors aggregation by static light scattering at two wavelengths, making sure you'll see both small and large aggregates.



Understand your protein

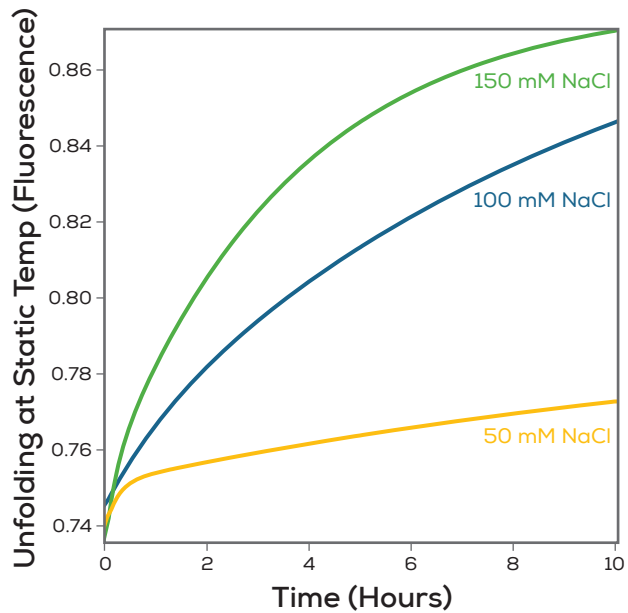
Melting and aggregation temperature

Measure T_m and T_{agg} at the same time. Know when unfolding leads to aggregation.



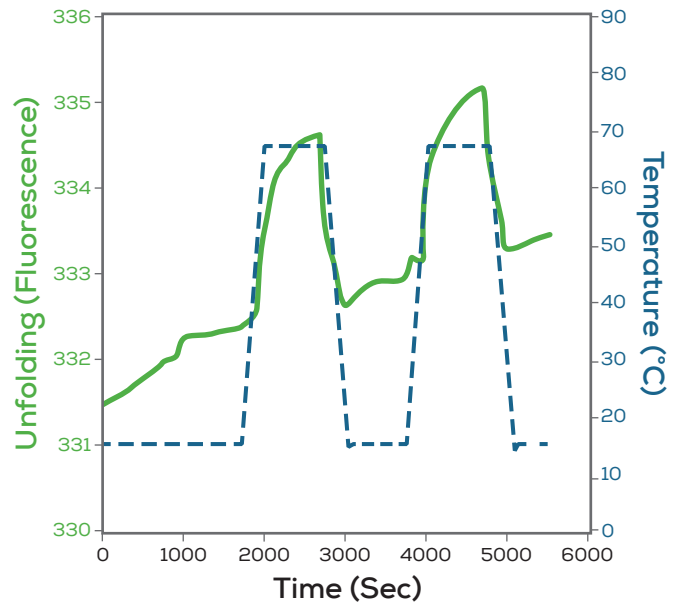
Isothermal stability

Simmer at steady temperature. Run for hours or days. See which conditions affect stability most.



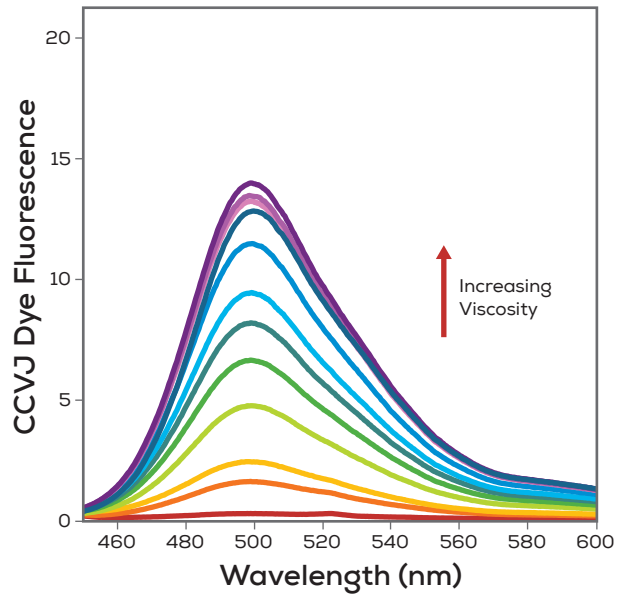
Thermal recovery

Ramp up the heat, cool it off, repeat. See if and when your biologic goes back to its usual self.



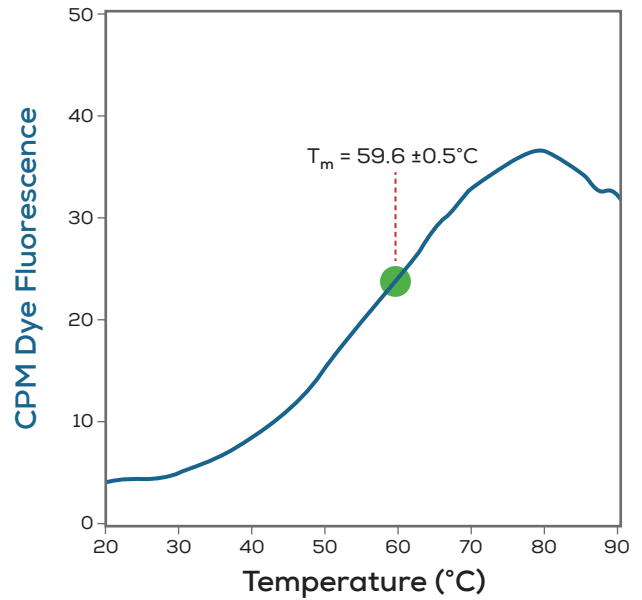
Relative viscosity

Add dye, measure viscosity. Not too thick, not too thin. Make sure your formulation's just right.



Soluble membrane protein stability

Add dye, unfold your protein. Land easy answers for unruly proteins.



Pick your UNit

Application	UNit	with 375 nm	with 445 nm
Melting temperature (T_m)	✓	✓	✓
Aggregation temperature (T_{agg})	✓	✓	✓
Isothermal stability	✓	✓	✓
Thermal recovery	✓	✓	✓
Relative viscosity			✓
Soluble membrane protein stability (T_m)		✓	
Chemical denaturation (ΔG)	✓	✓	✓

Specifications

Description	Specification
Minimum sample volume	9 μ L, sealed capillaries
Simultaneous samples per experiment	48
Protein concentration range	0.1 mg/mL–150 mg/mL IgG (protein dependent)
SLS resolution	~15 kDa change in mean molecular mass
Sample temperature range	15–95 °C
Heating rate	0.01–10 °C/minute
Sample T_m precision	<2% CV (protein dependent)
Excitation	Standard: 266 nm and 473 nm Optional: 375 nm or 445 nm
Fluorescence detector	Spectrometer: full 250–720 nm spectral range
Static light scattering detector	Spectrometer: scatter intensity at 266 nm and 473 nm
Environmental conditions	Temperature range: 18–28 °C Humidity: 40–60% relative humidity (non-condensing)
Physical	54 cm W x 50 cm D x 58 cm H, 46 kg
Electrical	Auto switching power supply, voltage 110–240 V AC, 50–60 Hz Fuse rating 6 A anti-surge, max power 600 W



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