NANOTEMPER

# When protein quality matters

## Quickly detect the quality of any protein using a tiny volume of sample with Tycho™ NT.6


## Make the right choice faster

For the first time ever, find out the quality of any protein sample in minutes and make your assay development and purification workflows more efficient. Decide which batches, buffers, or conditions are best by comparing the relative stability of each sample along every step of an experiment. Identify unfolding events, important indicators of protein stability, by monitoring temperature inflections ($T_i$) — that way, you can be confident you're choosing the right sample moving forward.

### Conveniently verify protein quality

Ever wonder if your protein is the same as it was a day or a year ago? Is it even present? Confirm sample quality after any step in a protein purification workflow so you know you still have the right protein.

### Get answers in minutes

Generating informative data fast makes deciding what to do next that much easier. Monitor relative protein stability in 3 minutes and move forward with the right sample quickly.

### Easily analyze any protein sample type

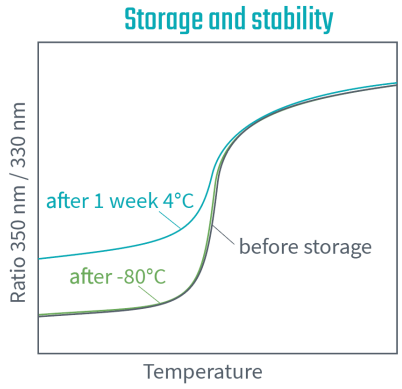
Stop dialyzing or doing sample dilutions. Determine the quality of any protein in any type of buffer and over a wide range of concentrations.

### Conserve precious sample

Purifying protein for the umpteenth time because you've run out sample is painful. Not only can checking your protein's quality help you run less experimental parameters later, but it only requires a tiny amount of sample for analysis.

### Small benchtop footprint

Save scarce bench space for handwork while getting valuable info from a powerful system with a tiny footprint.




## Get precise results fast with Tycho NT.6

Determine the quality of protein samples in minutes. Be confident you are working with the highest quality samples by quickly monitoring storage and formulation conditions. Tycho NT.6 delivers precise comparisons using small volumes of material, so you can focus on generating the best results.

## Tycho NT.6 system specifications

| | |
|---|---|
| **Samples per run** | Up to 6 |
| **Experimental time per run** | 3 minutes |
| **Sample volume measured** | 10 µL |
| **Detected molecule concentration range (standard IgG)** | 0.010 to > 200 mg/mL |
| **Dynamic molecule concentration range within one run** | 500-fold difference in concentration (standard IgG) |
| **Result output** | Inflection temperature ($T_i$)<br>Initial ratio (350 nm/330 nm at 35 °C)<br>Δ ratio (between 95 °C and 35 °C)<br>Sample brightness |
| **Repeatability of $T_i$* (@ 70 °C)** | Standard deviation < 0.15 °C<br>Relative standard deviation < 0.2 % |
| **$\Delta T_i$* sufficient for significance** | ± 0.3 °C |
| **Heating range** | 35 °C to 95 °C |
| **Thermal ramp** | 30 °C/min |
| **Precision of thermal ramp slope** | ± 0.05 °C/min |
| **Fluorescence detection** | 330 +/- 5 nm and 350 +/- 5 nm |
| **Source of fluorescence** | Instrinsic tryptophan and/or tyrosine |
| **Dimensions** | 31 cm W x 37 cm H x 18 cm D |
| **Weight** | 6.6 kg |

*Depends on the unfolding profile and sample brightness. The values apply for samples showing a single unfolding transition with a Δ ratio value > 0.1 at concentrations at least 10-fold above the lower detection limit. The values apply for measurements performed at a constant ambient temperature of 23 °C.

## Tycho NT.6 consumables

| | Quantity | Sample volume | Concentration range (standard IgG) |
|---|---|---|---|
| **Tycho NT.6 Capillaries** | 200 count | 10 µL | 0.010 to > 200 mg/mL |