

The Department of Chemistry

Tycho NT.6 Nanotemper Differential Scanning Fluorimeter: measures the change in intrinsic fluorescence of tyrosine and tryptophan residues in protein samples.

Located in JM Smith Chemistry, room 433 | Contact Daniel L Baker dlbaker@memphis.edu

The Tycho NT.6 Nanotemper instrument is a differential scanning fluorimeter that measures fluorescence of intrinsic tyrosine and tryptophan residues in peptide/ protein samples. This can be an important step in validating the expression, purification, and function of protein samples obtained from commercial sources, or via homologous or heterologous systems. The change in intrinsic fluorescence is monitored across a temperature range from 35° to 95° C. The resulting data can be used to compare batch to batch variation in peptide/ protein samples, to analyze fractions from peptide/ protein purifications, to interrogate proper storage/ assay conditions, and functionality (i.e. ligand binding etc). This instrument requires very small volumes (10 μ L) of samples. Additional information regarding this systems' capabilities can be found [here](#).



Usage Policy

The Tycho NT.6 Nanotemper instrument is available to users across campus that require the analysis and/ or verification of protein samples as described above. There is no charge for instrument access, however, users will be required to purchase capillaries for their experiments (the only non-sample consumable required for operation). Chemistry and Non-Chemistry users are asked to contact Dr. Daniel Baker, Associate Professor of Chemistry (dlbaker@memphis.edu) to discuss instrument capabilities, access (mostly during business hours but also by appointment as necessary), and training.