Agilent ChemStation for UV-visible Spectroscopy: Biochemical Analysis Software

Specifications

General Description

The biochemical analysis software for Agilent ChemStation adds single cell kinetics, multicell kinetics and thermal denaturation (DNA melt) capabilities to the general purpose software.

Kinetics — Data Acquisition

- For time-based measurements the run, start, and cycle time can be defined. For non-equidistant time intervals, a percent increase of the cycle time can be defined.
- Full or partial spectra can be acquired.
- Measurements can be made in parallel using the cell multicell transport.
- The positions of the blank and sample cells for time-based measurements are defined by the user.
- All traces and the spectra of one selected cell can be monitored online in a trace monitor and a spectra monitor.

Kinetics — Data Analysis

- Data from single (multiple cell acquisition) or multiple wavelengths (single cell acquisition only) can be extracted from time-based spectra.
- A choice of four rate calculation types is available: initial rate, delta AU, zero and first order.
- Time traces may be interactively processed by the user with mathematical functions.
- Time traces and rate data can be exported as CSV and DIF files which are common ASCII text file formats.

Thermal Denaturation — Instrument Control and Data Acquisition

- For temperature-based measurements, a ramp with multiple start, step, and end temperatures can be defined.
- The temperature can be taken from the cell holder or the optional dipping probe.
- Full or partial spectra can be acquired.
- The temperature trace can be monitored online.

Thermal Denaturation — Temperature Trace Evaluation

- Data from single wavelength can be extracted from temperature-based spectra.
- The transition temperature can be determined in a user-defined calculation range by absorbance average or first derivative.
- An equation allows the user to enter an equation for the calculation of a result from the Tm value. The default equation is the calculation of %GC.
- Temperature traces can be exported as CSV and DIF files which are common ASCII text file formats.

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