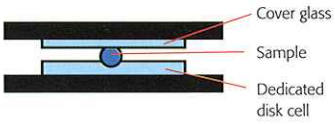
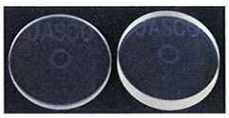
New Accessories for the V-600 Series UV-Vis/NIR Spectrometers

SAH-769 One Drop Accessory

Precise analysis of micro-volume samples for Life Science Studies

The SAH-769 One Drop accessory is a dedicated accessory for the V-600 Series to measure micro-volume samples of protein and nucleic acid. The sampling procedure is quite easy, by simply placing a droplet of a sample on the disk cell window, providing rapid measurements within 20 seconds per sample. The minimum sample volume is 5 µl for the standard 1 mm pathlength disk cell, while 0.6 µL can be used for the optional 0.2 mm pathlength disk cell. The shorter optical pathlength allows measurements of high concentration samples without dilution. A precise optical pathlength is maintained, assuring excellent reproducibility of measurements.





Dedicated disk cell for SAH-769
Optical pathlength : 1 mm (left), 0.2 mm (right)
Sample volume : 5 µL (left), 0.6 µL (right)

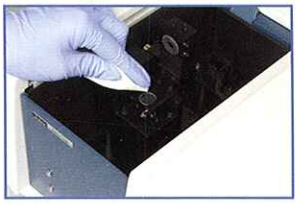
Quick, but highly accurate measurement by a research-grade spectrophotometer

Only 20 seconds per sample.

Step 1
Drop a sample on the cell.

Step 2
Set the cover glass.

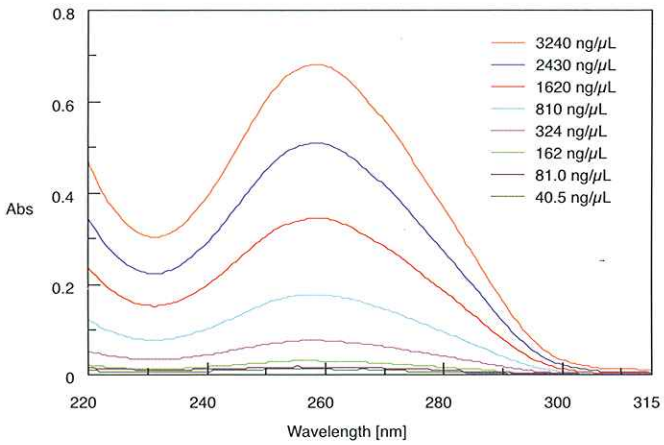
Step 3
Push the start button.



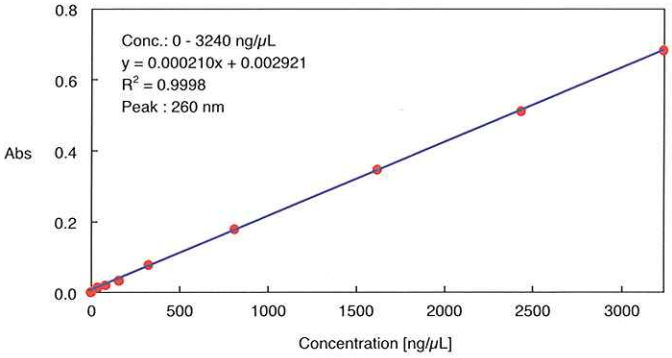
Step 4
Wipe the sample off.

Quantitative analysis of calf thymus DNA using a cell with a 0.2 mm pathlength

Only 0.6 µl sample volume is required.



Spectra of calf thymus DNA solutions



Calibration curve of calf thymus DNA

The figure illustrates good linearity up to approx. 3000 ng/µL. This is equivalent to a linearity up to 35 Abs by using a 10 mm pathlength cell.

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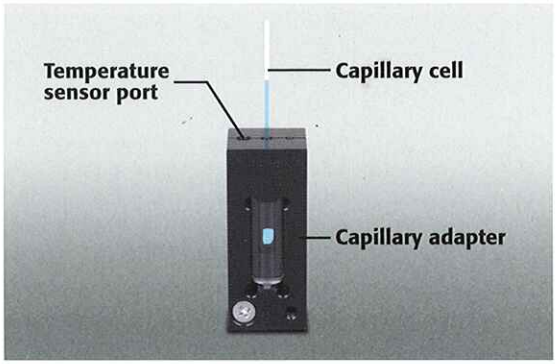
New Accessories for the V-630Bio UV-Vis Spectrophotometer

Dedicated Functionality for Life Science Applications

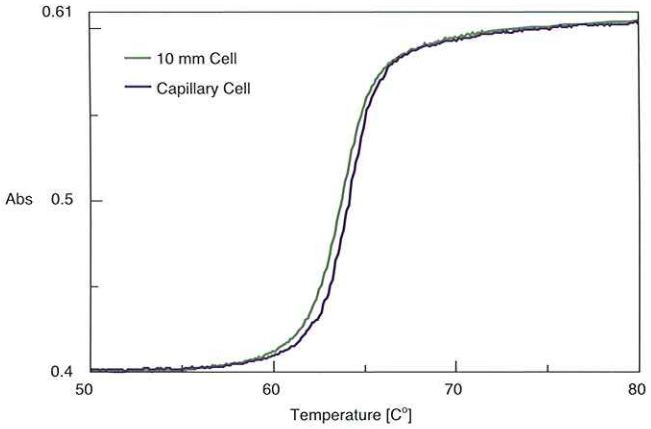
Capillary Cell and Adapter for Melting Analysis

Capillary cell with minimum sample volume of 3µL and 0.5 mm pathlength



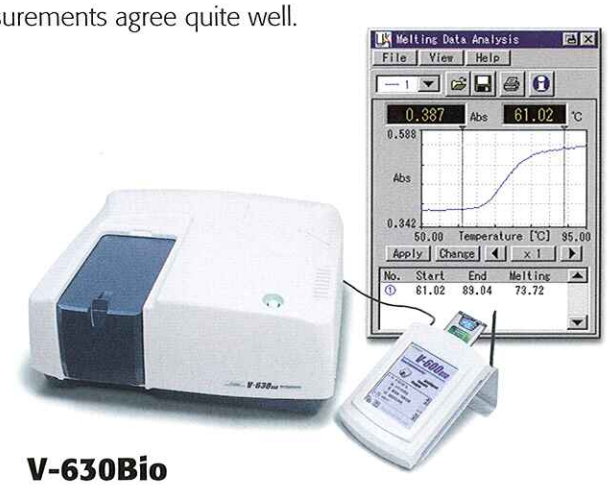
The capillary cell adapter provides temperature control of an extremely small amount of liquid samples when placed into a thermostated cell holder. The capillary cell is made of quartz with an approximately 0.5 mm optical pathlength and a minimum sample volume of 3 µL. The capillary adapter can be used with the Peltier thermostatted cell holders and the 6-position cell block of the PAC-743/743R automatic 6/8-position Peltier cell changer. An optional temperature sensor for the cell block is recommended for monitoring the temperature.

DNA melting analysis with capillary cell and 10 mm cell



Melting curves of DNA sample measured by a capillary cell and a 10 mm cell

The figure illustrates the DNA melting analysis of a DNA sample by using a capillary cell and a 10 mm pathlength cell with the ETCS-761 Peltier thermostatted single cell holder. The melting temperature calculated from the data measured with the capillary cell was 63.91°C, while 63.81°C was obtained with the 10 mm pathlength cell. The results of both measurements agree quite well.



PAC-743/743R
6/8-position automatic Peltier thermostatted cell changers and 6-position cell block

ETCS-761
Peltier thermostatted single cell holder

V-630Bio
Stand-alone UV-Vis Spectrophotometer

Bulit-in bio application programs include:

- **Protein/nucleic acid measuremnt**
- **Temperature ramping/DNA melting analysis**
- **Kinetic measurements and analysis software**

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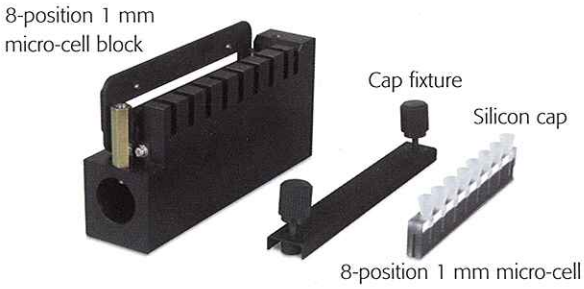
New Accessories for the V-600 Series UV-Vis/NIR Spectrometers

PAC-743/743R Automatic 6/8-Position Peltier Cell Changer



PAC-743/743R
Automatic 6/8-Position Peltier Cell Changer

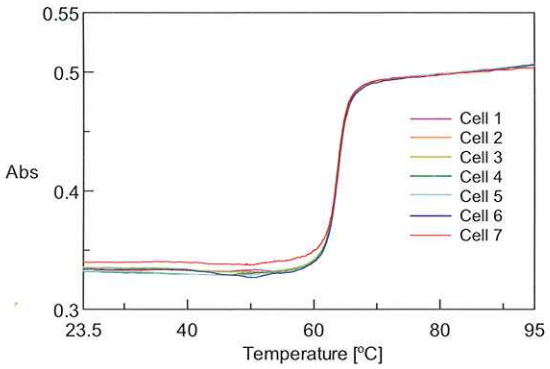
The PAC-743/PAC-743R Automatic 6/8-Position Peltier Cell Changers allow measurements of the transmittance/absorbance of multiple sample cells by using dedicated cell blocks. With a temperature range from 0 to 100°C, four dedicated cell blocks are available, an 8-position 1 mm micro-cell block, an 8-position 10 mm micro-cell block, an 8-position 5 mm cell block and a 6-position 10 mm cell block.

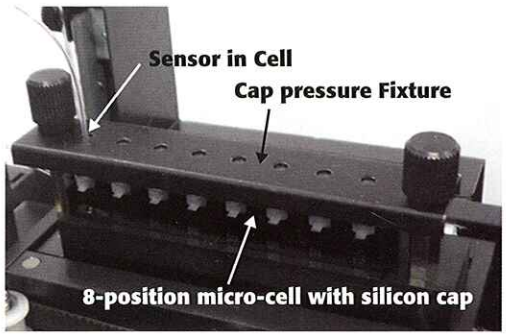
8-position 1 mm micro-cell

The 8-position 1 mm micro-cell block allows measurements of a maximum of 8 samples with a 10 µL sample volume using 1 mm optical pathlength cells. The silicon cap and cap fixture are available to prevent volatilization of samples during DNA melting measurements at high temperatures. An optional cell temperature sensor is recommended for accurate temperature readings of samples.

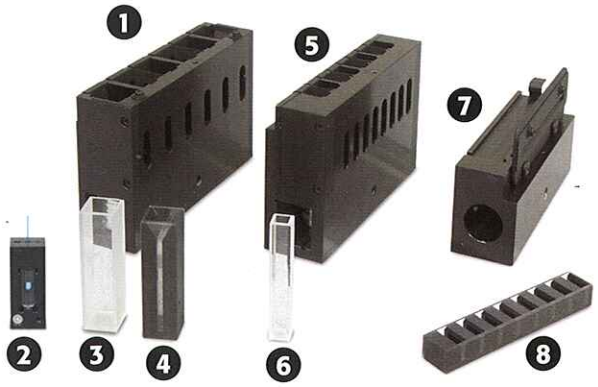
Parallel melting analysis of 10 µL samples

by using PAC-743 and 8-position 1 mm micro-cell





Options for PAC-743 and PAC-743R



❶ 6-position cell block

❷ Capillary cell and adapter (for V-630/V-630Bio only)
light path length: approx. 0.5 mm, minimum sample volume: 3µL

❸ Rectangular cell
light path length: 10 mm, light path width: 10 mm

❹ Rectangular micro-cell
light path length: 10 mm, light path width: 2 mm

❺ 8-position cell block

❻ Rectangular cell
light path length: 5 mm, light path width: 5 mm

❼ 8-position 10 mm micro-cell block

❽ 8-position 10 mm micro-cell
light path length: 10 mm, cell volume: 100 µL

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