

## SmartSpec™ 3000 Spectrophotometer

This instrument is a scanning tabletop UV/visible spectrophotometer that measures absorbance from 200 nm to 800 nm. It is ideal for:

- Quantitation of PCR products, cloning, sequencing and protein quantitation plus monitoring cell culture growth

### The SmartSpec 3000 Unit Features Include:

- Direct display of absorbance and concentration ( $\mu\text{g/ml}$ ; for oligos in  $\text{pmol}/\mu\text{l}$  and  $\mu\text{g/ml}$ )
- Construction and storage of standard curves, and determination of unknown sample concentration
- Wavelength scanning
- Kinetic assays
- Exclusive built-in printer to record results immediately

### Use as a Calculator for Quick Conversions to Standard Units

- $A_{260}/A_{280}$  ratio for nucleic acid purity check
- Background correction at 320 nm
- Concentration determination in  $\mu\text{g/ml}$  and, for oligos, in  $\text{pmol}/\mu\text{l}$  and  $\mu\text{g/ml}$
- Calculation of molar extinction coefficient and molecular weight of oligonucleotides based upon sequence, length or composition
- Built-in functions for nucleic acid quantitation, Lowry, Bradford, BCA protein assays and quantitation of proteins in nucleic acid backgrounds
- Monitoring cell culture growth at  $\text{O.D.}_{600}$

### Touch-Button Operation

The SmartSpec 3000 spectrophotometer's user-friendly interface guides you through computations at the touch of a button. You can store conversion factors and overwrite them as your needs change. Up to ten standard curves can be stored under user-assigned names. In addition, samples and standards can be analyzed in groups of up to nine replicates. The SmartSpec 3000 device calculates the mean and standard deviation for each replicates group.

### We've Taken Care of All the Details

The SmartSpec 3000 spectrophotometer was designed with your needs in mind. It offers a combination of features and conveniences you won't find in other spectrophotometers.

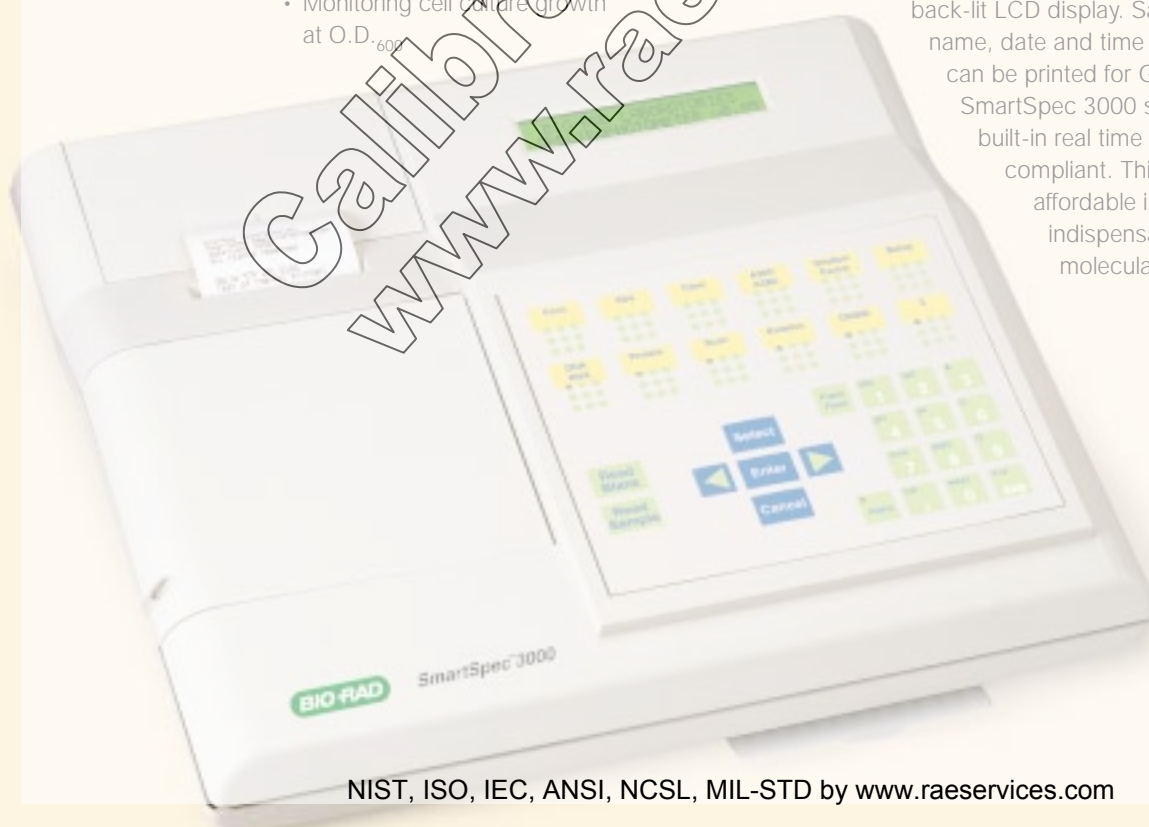
- The built-in printer records results immediately; there's no need to carry a laboratory notebook
- RS-232 serial port for output to a serial printer or computer

Two cuvette storage compartments so cuvettes are right where you need them

- An advanced xenon flash lamp with lifetime guarantee

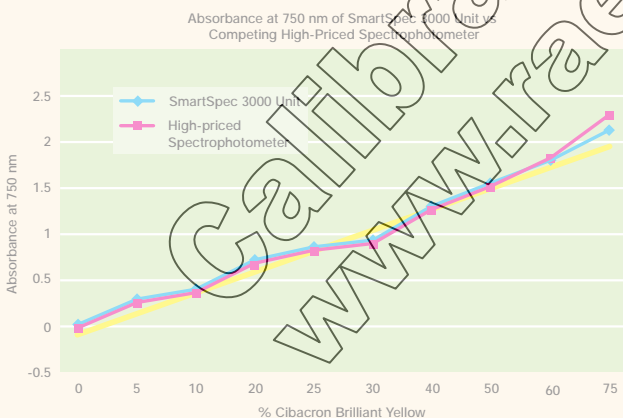
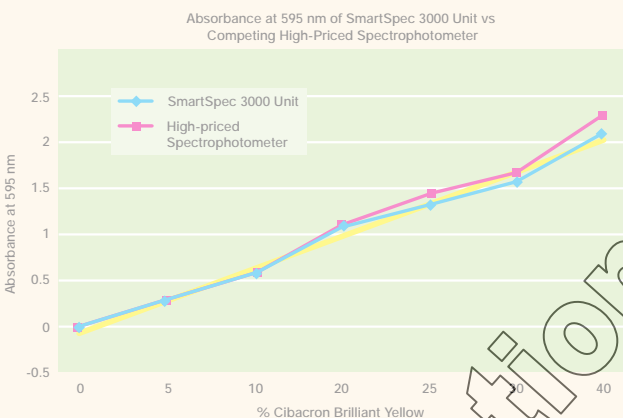
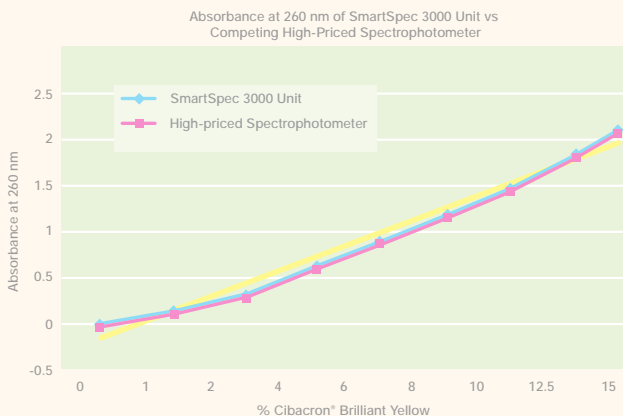
### And So Much More!

Reading data is easy with the alphanumeric back-lit LCD display. Sample ID, operator name, date and time log of your day's work can be printed for GLP purposes. The SmartSpec 3000 spectrophotometer's built-in real time clock is Year 2000 compliant. This compact and affordable instrument is an indispensable tool in every molecular biology laboratory.



To receive a calibration and/or repair quote-RMA from R.A.E. Services Inc.  
 Click here>> [www.raeservices.com/services/quote.htm](http://www.raeservices.com/services/quote.htm)

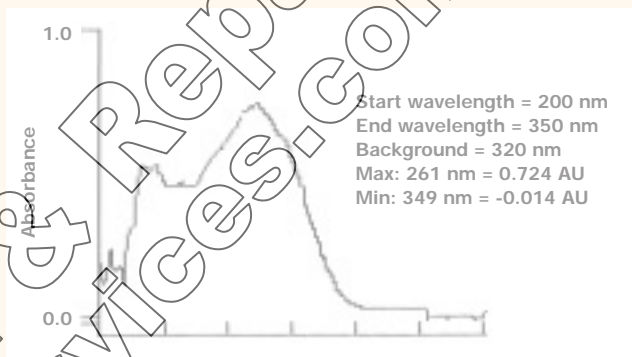
bio-rad science research



A comparison of spectrophotometric measurements using the SmartSpec 3000 unit and a high-priced spectrophotometer at  $A_{260}$ ,  $A_{595}$ ,  $A_{750}$  nm. The yellow line is the trend.



The SmartSpec 3000 spectrophotometer has a 2 x 24 alphanumeric backlit LED display that makes it easy to read data.



Wavelength scan of a DNA sample from 200 to 350 nm. The absorption maximum is at 261 nm. The instrument can be programmed to automatically subtract the background wavelength.

### Specifications

Wavelength range	200 to 800 nm
Wavelength accuracy	±2 nm
Light source	Xenon flash lamp
Detector	Photodiode array
Number of cuvettes	One
Display	2 x 24 alphanumeric back-lit LCD
Printer	Built-in alphanumeric/graphic printer
Interface	RS-232 serial port
Dimensions	33 cm (W) x 26 cm (D) x 14 cm (H)
Pathlength	1 mm, 2 mm, 5 mm, 10 mm
Cuvette sizes	100 µl, 700 µl, 1.5 ml, 3.5 ml
Weight	3.6 kg
Power requirement	90–260 VAC, 47–63 Hz
Regulatory	CE, TÜV

### Ordering Information

Catalog #	Description	Price
170-2501	SmartSpec 3000 Spectrophotometer	Inquire
170-2502	Standard 1–3.5 ml cuvette, quartz	Inquire
170-2503	Semi-microvolume 700 µl, quartz	Inquire
170-2504	Microvolume 250 µl, quartz	Inquire
170-2505	Sub-microvolume 50–100 µl, quartz	Inquire
170-2415	Standard cuvette, 1–3.5 ml, polystyrene disposable cuvettes, 100	Inquire

\* The Polymerase Chain Reaction (PCR) Process is covered by patents owned by Hoffman-LaRoche. Use of the PCR process requires a license. Cibacron is a trademark of Ciba Specialty Chemicals.

For additional information on this product, circle Response Number 2404, or visit our web site at [discover.bio-rad.com](http://discover.bio-rad.com).