

# Cole-Parmer®

## SP-300 Series Life Science Spectrophotometers

- Preprogrammed methods for DNA, RNA and protein analysis
- USB for saving results and method
- Icon-driven software and easy-to-use navigation system provide intuitive usability



[coleparmer.com](http://coleparmer.com)

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# SP-300 Series Life Science Spectrophotometers

SP-300 Series Life Science Spectrophotometers have all the features of a standard spectrophotometer plus features dedicated to life science analysis. Preprogrammed methods measure ssDNA, dsDNA, RNA, and oligonucleotide concentrations using wavelengths recorded at 260, 280 and 230 nm with an optional correction at 320 nm. For measuring protein concentrations, SP-350-BIO and SP-350-NANO models are preprogrammed with methods for Bradford, Lowry, Biuret, Bicinchoninic Acid (BCA), and Direct UV assays.

The lid of the instrument includes a large graphical display with the option of an integrated printer (SP-300-BIO only) to minimize the overall footprint of the spectrophotometer in the lab. Icon-driven software and soft key navigation ensures easy and intuitive use and setup.

## Key Features

- Life science spectrophotometer
- Preprogrammed for DNA, RNA and protein analysis
- Compatible with ultra-micro, semi-micro, micro, and macro cuvettes (SP-350-BIO only)
- Only a few  $\mu\text{L}$  of sample needed for measurement (SP-350-NANO only)
- Small footprint and lightweight
- 3 year warranty



Multiple measurement modes available



Graphical display with icon-driven software



DNA, RNA and protein analysis



Method and result saving to USB

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## Measurement Modes

**Cell density measurement mode** – bacterial cell cultures are routinely grown until the optical density at 600 nm reaches approximately 0.4, which indicates the optimum cell number for harvesting. This measurement mode enables cell growth to be monitored by measuring absorbance. Measurements can be performed at 600 nm, 595 nm or any other user selected wavelength.

**Purity scan measurement mode** – this measurement mode is used to check the purity of nucleic acids. This is especially useful for RNA samples where impurities may be present at 230 nm but cannot be detected using the 260/280 ratio measurement. The SP-300 series life science spectrophotometers enable scanning across the full wavelength range from 198 to 1000 nm to identify any distorted peaks.

**Multi-wavelength measurement mode** – This measurement mode allows the sample to be measured at 4 different wavelengths, with ratio calculations and formulae with various factors to calculate concentration.

**Concentration measurement mode** – This mode allows simple absorbance, % transmittance and concentration calculations to be performed. There are 27 units of concentration to select from.

## Improved Optics

This instrument has a 'press to read' xenon lamp to give more accurate readings and extend lamp life. Instruments also include an easy access USB port on the front of the instrument which enables results and methods to be stored directly to a USB memory stick, for easy transfer of data or setup of multiple instruments in a laboratory.

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## Technical Specifications

| Model                     | SP-350-BIO                                  | SP-350-NANO                                 |
|---------------------------|---|---|
| Wavelength range          | 198 to 1000 nm                              | 198 to 1000 nm                              |
| Wavelength accuracy       | ±2 nm                                       | ±2 nm                                       |
| Spectral bandwidth        | 5 nm  | 5 nm  |
| Photometric transmittance | 0 to 199.9% T                               | 0 to 199.9% T                               |
| Photometric absorbance    | -0.3 to 2.5 A                               | -15 to 125 A                                |
| Photometric accuracy      | ±0.01 A at 1 A; ±1%T (0 to 100%T)           | ±0.01 A at 1 A; ±1%T (0 to 100%T)           |
| Concentration             | 0 to 9999 ng/μL (dsDNA) at 0.2 mm           | 0 to 6000 ng/μL (dsDNA) at 0.2 mm           |
| Output                    | USB, RS-232 and analog                      | USB, RS-232 and analog                      |
| Display type              | LCD   | LCD   |
| Size (W x H x D)          | 27.5 x 22 x 40 cm<br>(10.8 x 8.7 x 15.7 in) | 27.5 x 22 x 40 cm<br>(10.8 x 8.7 x 15.7 in) |

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