

# Bio-Spectrophotometer



**SpectroArt 200S**



Benchtop SpectroArt200 and SpectroArt200S bio-spectrophotometers are dedicated for determination of protein and nucleic acid concentration in molecular biology labs. Consists of 7" touch LCD, 10mm cuvette holder, thermal printer. The SpectroArt 200 is the fast, simple, accurate tool for DNA / RNA, Protein measurement, OD600 bacterial growth, enzyme Kinetic, wavelength scanning, pick peak function, Fluorescence cooperation define FOI, Single Drop ready. Each analysis category with auto conversion function provides operator to change and readout data in desirable Abs, T%, 260 / 280 ratio, or concentration include Bradford @ 595nm, Lowry @ 750nm, and BCA @ 562nm standard curve programs. Moreover, labeling density of fluorescent labeled nucleotide probe can be determined through FOI function. Build in thermal printer direct print out Abs, mean value, SD, concentration, spectrum, T%, calibration curve, date, categories...etc. PC software optional.

SpectroArt 200S equipped with Single Drop function that consists of internal calibration for applying with Traycell\*. Applicable sample volume ranges from 5 $\mu$ l down to 0.7 $\mu$ l by using 1.0 and 0.2mm cap. Simply recalibrate the cell alignment with single point recalibration function when exchanging the Traycell with other cuvettes.

The core of SpectroArt configure includes high intensity long life Xenon flash lamp as light source, high resolution linear CCD for detection, thermal printer, two USB port, in-build software no need training, direct result read out, suitable for all molecular biology laboratory. The wavelength accuracy of compact optical module was calibrated by Holmium oxide for longest stability. Standard, semi-micro, micro, ultra-micro disposable cuvettes can be also adaptable for general applications.

## Features

- Pre-set single drop analysis for 0.7 - 5 $\mu$ l volume
- Compact, Fast, Accurate, Simple, Small footprint
- Optical resolution less than 1nm
- Single point recalibrate function
- Ten wavelength peak pick
- Real-time result storage
- PC software available

## Applications

- Fluorescent nucleotide probe labeling density determination
- Education, university, academic and research institute
- Analytical chemistry, molecular laboratory
- Food industrial and inspection laboratory
- Drug discovery, Biotechnology company
- Water testing and colorimetric analysis
- Proteomics, genomics core facility
- Enzyme reaction, immunology

## Single drop analysis mode

Available with 0.2 / 1.0mm light path providing simple and easy operation capability. Pre-set program requests no necessary to do any parameter setting.



## Control and display

7 inches large size energy-saved TFT LCD touch screen, direct dialogue operation for function selectable, calibration curve and spectrum display, parameter setting, and printer control.



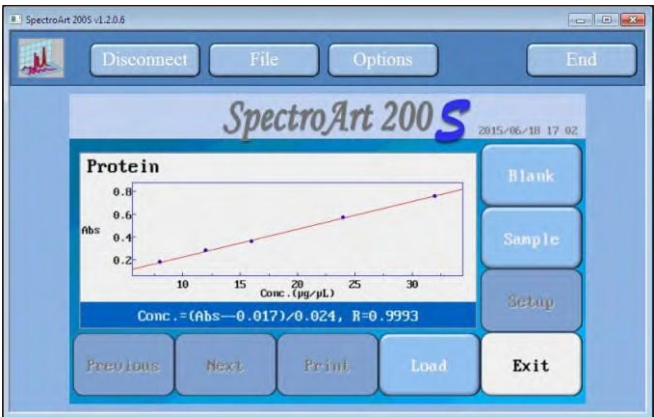
## Printer

56.8mm width built-in thermal printer, direct print out complete data such as: sample ID, Date, Spectrum, Abs, T%, Concentration, Mean value, and Peak wavelength.

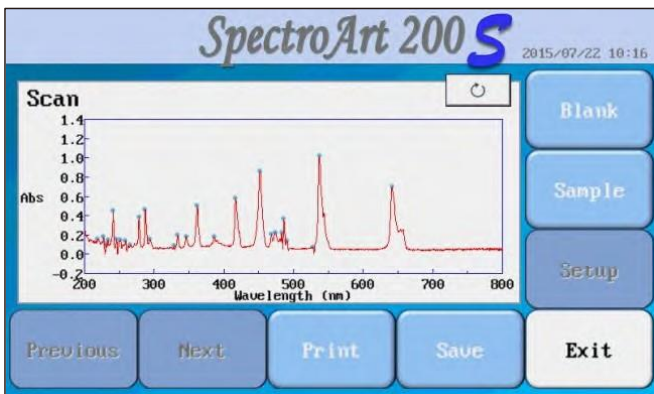
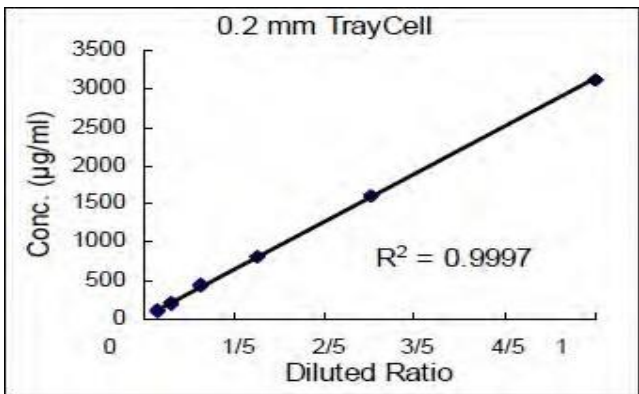


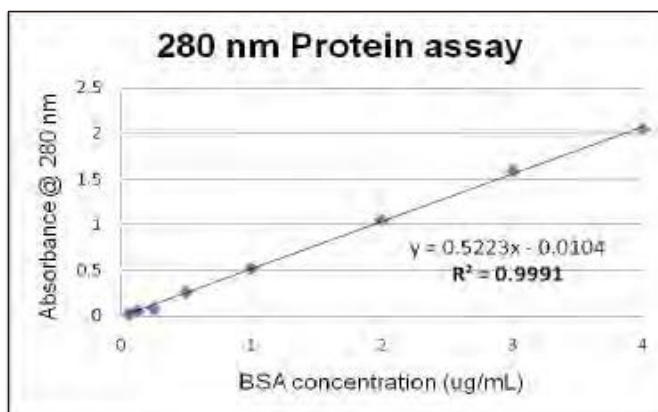
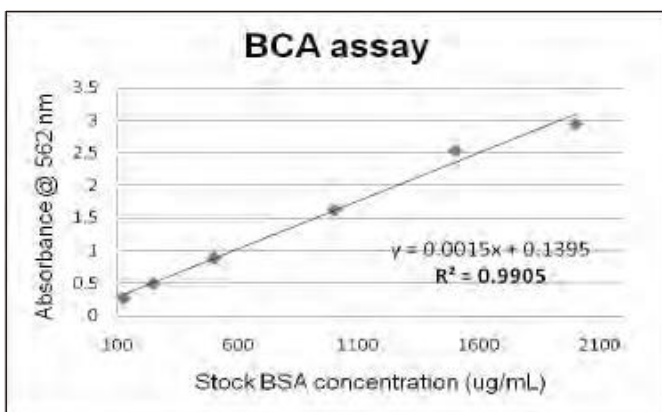
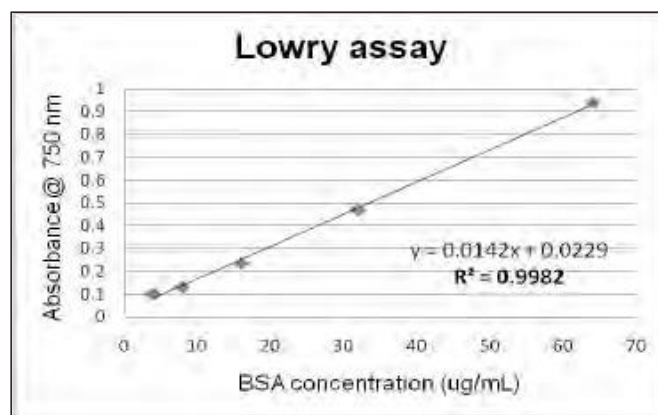
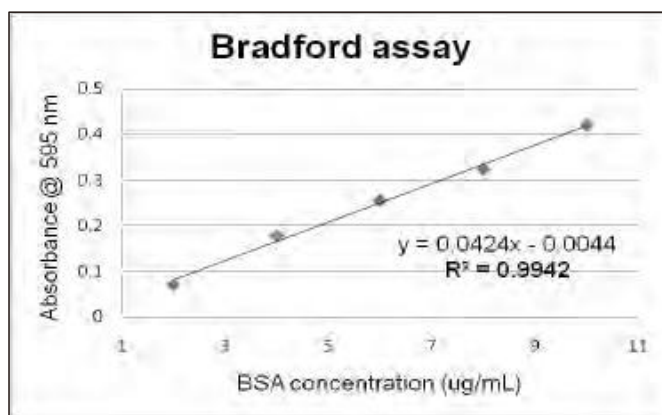
## PC Software available

Allow to control through PC software. All measured data can be transferred into PC while connected. Detail reports with editable information can be print out into formal format.



## Applications





## Ordering Information

Catalog No.	Description
1210000	SpectroArt 200 Bio-spectrophotometer system, 100 - 240V, 50 - 60Hz
1210021	SpectroArt 200S Bio-spectrophotometer system complete with 1211005 for single drop analysis, 100 - 240V, 50 - 60Hz
<b>Accessories</b>	
1211001	Standard cuvette, 3.5ml 10mm lightpath, quartz, black wall, 2pcs
1211002	Semi-micro cuvette, 1.4ml 10mm lightpath, quartz, black wall, 2pcs
1211003	Micro cuvette, 700µl, 10mm lightpath, quartz, black wall, 2pcs
1211015	Micro cuvette 100µl, 10mm light path, z-8.5mm, black wall, 1pc
1211016	Micro cuvette for 30-50µl, 10mm light path, z-8.5mm, black wall, 1pc
1211005	Single Drop Fiber-Optic Ultra-Micro Cell 0.7 - 5µl, light path 1.0mm / 0.2mm, 1pc (TrayCell*)
1211006	Disposable cuvette, 3.5ml, 100 pcs / pk
1211014	Liquid Holmium Oxide wavelength reference standard
1212001	Thermal printer paper, 5 roll / pk
1212011	SpectroArt 200 single drop software upgrade package
1212012	PC software

\*TrayCell is a product from Hellma® and Hellma® is a registered trademark of Hellma GmbH & Co. KG.

# Specifications

Model	SpectroArt 200	SpectroArt 200S
Light source	Flash Xenon Lamp	
Detector	2048-elements linear silicon CCD array	
Display	7" Touch screen TFT LCD	
Wavelength range	200 – 800nm	
Wavelength accuracy	± 1.5 from 200 – 800nm	
Abs / Photometric accuracy	± 0.01nm @1 & 0.5AU	
Abs /Photometric repeatability	± 0.01nm @1AU; ± 0.004nm @0.5AU	
Stray light	< 0.05% @ 600nm; < 0.1% @ 435nm	
Photometric noise	0.003 @ 0AU, 550nm	
Spectral bandwidth	< 2nm	
Absorbance range	0 – 3.5AU	
Data collection speed	10 to 200ms	
Light path	10mm	
Z-dimension	8.5mm	
Multiple wavelength	10 Max.	
Sample test repetition	10 Max.	
Analytic data storage	999 Max.	
Kinetic analysis range	60 – 6000 sec.	
Communication port	RS 232 x 1, USB 2.0 x 2	
Single beam	Yes	
Applicable cuvette types	Standard / Semi-micro / Micro-volume	
Pre-set single drop analysis	Option	Standard
DNA / RNA / Protein / Wavelength	Standard	
Kinetics / OD 600 / Scan / FOI	Standard	
PC software	Option	
Printer	Built-in	
dsDNA recommended working range		10-100µg/ml; 100-8000µg/ml @ single drop mode
Physical dimensions	320 x 255 x 150 mm (W x D x H)	
Weight	4.5kg	
Power Input	100 - 240V AC, 50 - 60Hz Max. 50W	
Certification	CE	

The spec is subject to change without prior notice.



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