



SMART Spectro™ Spectrophotometer

An Affordable,
Pre-Programmed
Spectrophotometer
with Automatic
Wavelength Selection



Instrumentation for the Lab & Field!

SMART Spectro™ Spectrophotometer

A spectrophotometer that is easy to use and more accurate than anything in its price range. With automatic wavelength selection, pre-programmed tests, and superior performance – this is the best spectrophotometer for the money!

Menu Driven Display

Tests and functions are selected from scrolling menus for ultimate simplicity. Results are displayed as %T, absorbance, and concentration.

Pre-Programmed Tests, User Tests & Automatic Wavelength Selection

Over 80 pre-programmed tests. Up to 25 calibrations for additional tests can be entered into the memory. The user can also customize sequences for frequently run tests. The meter automatically moves the grating to the required wavelength.

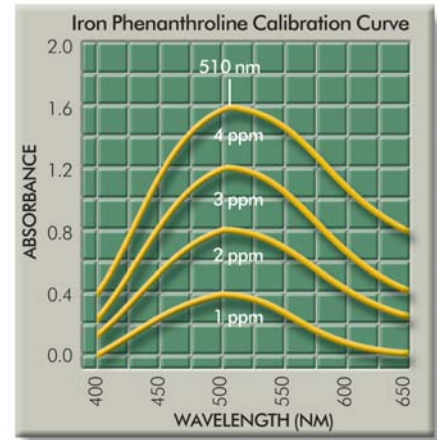
To Order:

Order Code 2000-01 (120V/60Hz and 220V/50Hz)

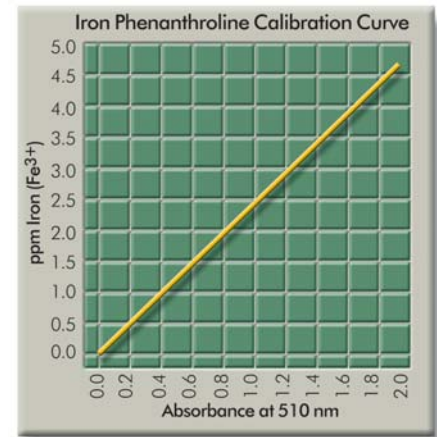
Includes 6 sample cells (25mm round), 2 sample cell holders (25mm round and COD, 10mm cuvettes), power supply, battery charger, and diagrammed manual.



2 YEAR
WARRANTY



Fully functional spectrophotometer allows the user to select the optimum wavelength for creating calibration curves.



The user calibration software automatically calculates the best straight line fit.

Options:

- Carrying Case, Order Code 2000-CS
- Battery Pack with holder (rechargeable), Order Code 2000-BP
- SMARTLink 3 Software with cable, Order Code 1912-CD
- Replacement Sample Cells [round], Order Code 0290-6
- Cuvettes, Order Code 29653-10

Wavelength Range:	350-1000 nm
Wavelength Accuracy:	±2 nm
Wavelength Resolution:	1 nm
Wavelength Bandwidth:	5 nm [max]
Photometric Range:	0-125%T, -0.1-2.5A
Photometric Accuracy:	±0.005A
Photometric Noise:	<0.001A at 0A; <0.002A at 2A
Photometric Drift:	±0.002A/hr @500 nm
Photometric Stray Light:	<0.5 %T
Dispersive Device:	Grating - based system
Optical Mount:	Modified Ebert
Grating:	1200 grooves/mm ruled grating
Light Source:	Quartz halogen

Bulb Life:	1000 hours minimum
Sample Chambers:	25 mm round cell, 10 mm square cuvette UDV, COD
Detector:	Silicon photodiode
Temperature Range:	0-40°C
Modes:	Conc., %T, ABS
Pre-Programmed Tests:	Yes
Wavelength Selection:	Automatic
User Tests:	Yes, up to 25 can be entered and edited
Datalogging:	Yes, RS-232, datalogs 500 tests
Diagnostics:	Yes
Power:	110/220 volt or battery pack (rechargeable)
Weight:	4.65 kgs [10.3 lbs]
Size [WxDxH:]:	35 cm x 28 cm x 17 cm

A wider wavelength range

350-1000 nm

The same accuracy, every test

±2 nm continuous wavelength accuracy

Extremely high resolution

1 nm resolution with 5 nm (max) bandpass over entire range

Holds Calibration Longer

Modified Ebert mounting, 1200 lines/mm grating

Better for higher absorbance samples

-0.1 to 2.5A photometric range

Better linearity for higher concentrations

±0.005A continuous photometric accuracy

Unique optical system design

Greater accuracy, and high resolution

An error-free design

Wavelength selection is fully automatic

Much easier to operate

Menu prompting with six-button simplicity

A full function display screen

Display %T, ABS, concentration; 4 line, 40 character

Truly superior utility

Pre-programmed tests, additional 25 user tests

A wider wavelength range

Optional battery pack, rugged optical bench

SMART Spectro™ Reagent Systems

Test Factor	Test Method [# or reagents]	Spectro Range†	Spectro MDL†	# of Tests	Order Code	Ship Code
Alkalinity UDV	Unit Dose Vial [1]	0-200	15	100	4318-J	NH
Aluminum	Eriochrome Cyanine R [4]	0.00-0.30	0.01	50	3641-01-SC	NH
Ammonia Nitrogen LR, Fresh	Salicylate [3]	0.0-1.00	0.02	25	3659-01-SC	R2
Ammonia Nitrogen HR, Salt	Salicylate [3]	0.0-1.00	0.10	25	3659-01-SC	R2
Ammonia Nitrogen HR	Nesslerization [2]	0.00-4.00	0.05	50	3642-SC	R1
Barium	Barium Chloride [1]	—	—	50	3638-SC	NH
Benzotriazole	UV Photolysis [4]	0.0-30.0	1.0	50	4047-01	R1
Biguanide	Colorimetric [1]	0-70	5	50	4044	NH
Borate UDV†	Unit Dose Vial [1]	—	—	100	4322-J	NH
Boron	Azomethine-H [2]	0.00-0.80	0.05	50	4868-01	NH
Bromine LR	DPD Tablets [2]	0.00-9.00	0.04	100	3643-SC	NH
Bromine UDV †	Unit Dose Vial, DPD [1]	0.0-20.0	0.3	100	4311-J	NH
Cadmium	PAN [4]	0.00-1.00	0.02	50	4017-01	R1
Carbohydrazide	Iron Reduction [3]	0.000-0.900	0.005	100	4857	R1
Chloride TesTab	TesTab [1]	0.0-50.0	0.5	50	3693-SC	NH
Chlorine	DPD Tablets [3]	0.00-4.00	0.02	100	3643-SC	NH
Chlorine - Free UDV †	Unit Dose Vial [1]	0.00-10.00	0.10	100	4311-J	NH
Chlorine - Liquid DPD	DPD [3]	0-4	0.025	144	4859	R1
Chlorine - Total UDV †	Unit Dose Vial [1]	0.00-10.00	0.10	100	4312-J	NH
Chlorine Dioxide	DPD tablet/Glycine [2]	0-7.0	0.04	100	3644-SC	NH
Chromium [Hexavalent]	Diphenylcarbohydrazide [1]	0.00-1.00	0.01	100	3645-SC	HA
Chromium [Total, Hex & Trivalent]	Diphenylcarbohydrazide [5]	0.00-1.00	0.03	100	3698-SC	LQ
Cobalt	PAN [3]	0.00-2.00	0.02	50	4851-01	LQ
COD LR with Mercury*	Digestion [1]	0-150 mg/L	5 mg/L	25	0075-SC	R1
COD LR without Mercury*	Digestion [1]	0-150 mg/L	5 mg/L	25	0072-SC	R1
COD SR with Mercury*	Digestion [1]	0-1,500 mg/L	50 mg/L	25	0076-SC	R1
COD HR without Mercury*	Digestion [1]	0-1,500 mg/L	50 mg/L	25	0074-SC	R1
COD HR with Mercury*	Digestion [1]	0-15,000 mg/L	500 mg/L	25	0077-SC	R1
COD SR without Mercury*	Digestion [1]	0-15,000 mg/L	500 mg/L	25	0073-SC	R1
Color	Platinum Cobalt [0]	0-1,000	15	∞	NA	—
Copper BCA - LR	Bicinchoninic Acid [1]	0.00-3.50	0.05	50	3640-SC	NH
Copper - Cuprizone	Cuprizone [2]	0.00-2.00	0.01	50	4023	R1
Copper DDC	Diethyldithiocarbamate [1]	0.00-6.00	0.05	100	3646-SC	NH
Copper UDV†	Unit Dose Vial, Bicinchoninic acid [1]	0.00-4.00	0.20	100	4314-J	NH

* Requires COD Heater Block & COD Adapter Code 5-0087 (sold separately)

† Requires UDV Adapter Code #5-0086 and Accessory Package 1961 or 1962 (sold separately)

Ship Codes: NH - Non Hazardous, No Fees; HF - Hazardous Materials, Air & Ground Fees; R1 - Small Quantity Hazardous Materials, No Fees; R2, R3, & LQ - Hazardous Materials, Air Fees Only

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Test Factor	Test Method [# or reagents]	Spectro Range†	Spectro MDL†	# of Tests	Order Code	Ship Code
Cyanide	Pyridine-Barbituric Acid [5]	0.00-0.50	0.05	50	3660-01-SC	R1
Cyanuric Acid	Melamine [1]	0-200	16	40	3661-01-SC	NH
Cyanuric Acid UDV†	Unit Dose Vial, Melamine [1]	0-150	5	100	4313-J	NH
DEHA	Iron Reduction [3]	0.00-0.700	0.005	100	4857	R1
Dissolved Oxygen [DO]	Winkler Colorimetric [3]	0.00-12.00	0.25	200	3688-SC	R1
Erythorbic Acid	Iron Reduction [3]	0.00-3.00	0.02	100	4857	R1
Fluoride	SPADNS [2]	0.00-2.00	0.05	50	3647-02-SC	R1
Hardness UDV†	Unit Dose Vial [1]	10-500	10	100	4309-J	NH
Hydrazine	P-dimethylaminobenzaldehyde [2]	0.000-0.750	0.010	50	3656-01-SC	R2
Hydrogen Peroxide LR	DPD [2]	0.00-1.50	0.02	100	3662-SC	NH
Hydrogen Peroxide HR	DPD [2]	0-60	1	50	4045-01	NH
Hydrogen Peroxide Shock	DPD [2]	0-225	4	100	4045-01	R2
Hydroquinone	Iron Reduction [3]	0.00-1.80	0.01	100	4857	R1
Iodine	DPD Tablets [2]	0.00-14.00	0.08	100	3643-SC	NH
Iron - Bipyridyl	Bipyridyl [2]	0.00-6.00	0.06	50	3648-SC	R1
Iron UDV†	Unit Dose Vial, Bipyridyl [1]	0.00-10.00	0.07	100	4315-J	NH
Iron - Phenanthroline	1,10 Phenanthroline [2]	0.00-4.50	0.04	50	3668-SC	R1
Lead	PAR [5]	0.0-5.0	0.1	50	4031-01	R1
Manganese LR	PAN [3]	0.00-0.50	0.02	50	3658-01-SC	HF
Manganese HR	Periodate [2]	0.0-15.0	0.3	50	3669-SC	R1
Mercury	TMK [3]	0.00-1.50	0.02	50	4861-01	LQ
Methylethylketoxime	Iron Reduction [3]	0-3.0	0.02	100	4857	R1
Molybdenum HR	Thioglycolate [3]	0.0-30.0	0.2	50	3699-03-SC	R1
Nickel	Dimethylglyoxime [6]	0.00-8.00	0.06	50	3663-01-SC	LQ
Nitrate Nitrogen LR	Cadmium Reduction [2]	0.00-3.00	0.05	20	3649-SC	R1
Nitrate TesTabs	Zinc Reduction [1]	0-60	2.5	50	3689-SC	NH
Nitrite Nitrogen LR	Diazotization [2]	—	—	20	3650-SC	NH
Nitrate UDV†	Unit Dose Vial, Zinc Reduction [1]	0.00-0.80	0.02	50	4321-J	NH
Nitrogen, Total*	Chromotropic Acid/ Digestion [6]	0-25 mg/L	2 mg/L	25	4026-01	R1
Oxygen Scavengers	Iron Reduction [3]	—	—	100	4857	R1
Ozone	DPD [3]	0.00-0.40	0.02	100	4881	R1
Ozone LR	Indigo Trisulfonate [3]	0.00-1.50	0.05	100	3651-SC	NH
Ozone HR	Indigo Trisulfonate [3]	5-7	—	20	3651-SC	NH
pH CPR [Chlorphenol Red]	Chlorophenyl Red [1]	6.8-8.4	—	100	3700-01-SC	NH
pH PR [Phenol Red]	Phenol Red [1]	8-9.5	—	100	3700-01-SC	NH
pH TB [Thymol Blue]	Thymol Blue [1]	0.00-6.00	0.05	100	3700-01-SC	NH
pH UDV†	Unit Dose Vial [1]	0.00-3.00	0.04	100	4310-J	NH
Phenol	Aminoantipyrine [3]	0.0-70.0	1	50	3652-01-SC	NH
Phosphate LR	Ascorbic Acid Reduction [2]	—	—	50	3653-SC	R2
Phosphate HR	Vanadomolybdovanadate Acid [1]	0.00-3.00	0.07	50	3655-SC	R1
Phosphorus, ppb	Ascorbic Acid/Digestion [5]	0-70	5.0	50	3653-SC	R2
Phosphorus, Total - LR*	Ascorbic Acid/Digestion [5]	0.0-10.0	0.5	25	4024-01	R1
Phosphorus, Total - HR*	Molybdovanadate/Digestion [5]	0.00-2.50	0.03	25	4025-01	R1
Potassium	Tetraphenylboron [2]	0-50	1	100	3639-SC	R1
Silica LR	Heteropoly Blue [4]	5-100	5	100	3664-SC	R1
Silica HR	Silicomolybdate [3]	0.00-1.00	0.02	50	3687-SC	R1
Sulfate HR	Barium Chloride [1]	0.0-8.0	0.5	100	3665-SC	R1
Sulfide LR	Methylene Blue [3]	0.0-10.0	0.2	50	3654-02-SC	R1
Surfactants	Bromthymol Blue [3]	0.0-30.0	1.0	100	4876-01	LQ
Tannin	Tungsto-Molybdophosphoric Acid [2]	2-400 FTU	2 FTU	50	3666-01-SC	R1
Tolytriazole	UV Oxidation/Dichromate [4]	0.00-3.00	0.025	50	4047-01	R1
Turbidity	Absorptimetric [0]	0-500 FAU	3 FAU	◊	NA	—
Zinc LR	Zincon [6]	0.00-3.00	0.05	50	3667-01-SC	LQ

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LaMotte Company · PO Box 329 · Chestertown · Maryland · 21620 · USA
t: 800-344-3100 · 410-778-3100 · f: 410-778-6394 · www.lamotte.com