

Instrumentation

SMART2 & COD PLUS Colorimeters

**Over 80
Pre-Programmed Tests**

2-Year Warranty



The user-friendly **SMART2 Colorimeter** and **COD PLUS** colorimeter are the ideal direct reading colorimeters for complete on-site water analyses.

All pre-programmed tests can be run on these compact instruments and each test features automatic wavelength selection. The entire multi-LED optical system is embedded in the light chambers and optimized for LaMotte test reagent systems. The analyst can simply select the test and put in the sample with reagent. The microprocessor, which selects the wavelength, also allows the user to load up to 10 tests for analyzing custom reagent systems. LaMotte stands behind every system we provide.

**See pages 15-16 for
complete reagent system
listing.**

* SMART 2 Turbidity is not the same as EPA Turbidity.
SMART 2 turbidity ranges from 2-400 NTU.

These portable colorimeters have the user in mind with these advanced features:

- Simple, menu-driven operation
- Alphabetical test selection
- User-selected test sequences
- Self diagnostics with error/warning messages
- Instant readiness without "count down" delays; achieved by active stabilization of lamp intensity
- Auto-blank; Auto-off
- European CE mark

The user may select any of the wavelengths in each meter to determine the absorbance or %T of a sample at the desired wavelength.

Additional advancements include:

- Superior narrow band-width interference filters
- New Super Twist LCD display for improved readability
- RS-232 interface
- Optional computer cable and software for data storage and manipulation
- 9-Volt battery and AC adapter are included

As well as the incorporated features:

- All wavelength filters - 430, 520, 570, 620 nm (SMART2 only)
- RS-232 serial port
- and more...

SMART Colorimeter® is a registered trademark of LaMotte Company.

<i>Range:</i>	0-125%T
<i>Resolution:</i>	1% FS
<i>Accuracy:</i>	2% FS
<i>CE Mark:</i>	Yes
<i>Light Source:</i>	COD PLUS: LED/Filter setup at 430nm and 620nm SMART2: LED/Filter setup; 430nm, 520nm, 570nm, 620nm
<i>Detector:</i>	Photodiode
<i>Display:</i>	122x32 LCD, 16x4 line graphics display
<i>Sample Cell:</i>	25 mm round cell, 10 mm square cuvette, 16 mm COD tubes
<i>Datalogging:</i>	RS-232, time and date stamped
<i>Keypad:</i>	6-button membrane switch
<i>Calibration:</i>	Factory set
<i>Power:</i>	9V or AC adapter; battery life 500 tests
<i>Dimensions:</i>	15 x 8 x 5.5 cm; 6 x 3.25 x 2.5 inches (152 x 83 x 64 mm)
<i>Weight:</i>	11 ounces
<i>Bandwidth:</i>	10 mm

SMART2 (120V/60Hz) • Code 1919

Comes with 4 sample tubes, AC adapter and manual

SMART2 (230V/50Hz) • Code 1919-EX2

Comes with 4 sample tubes, AC adapter and manual

COD PLUS (120V/60Hz) • Code 1922

Comes with COD adapter, 4 sample tubes, AC adapter and manual

COD PLUS (230V/50Hz) • Code 1922-EX2

Comes with COD adapter, 4 sample tubes, AC adapter and manual

Accessories/Replacement Items:

- COD adapter • Code 5-0087
- UDV Adapter • Code 5-0086
- 6 sample tubes • Code 0290-6
- AC adapters • Code 1731-110; Code 1754 for Ex2 versions

Options:

- Small Carrying Case (37.5 x 27.5 x 13.75 cm) • Code 1919-GCS150
- Large Carrying Case (45 x 32.5 x 20 cm) • Code 1919-GCS440



SMARTLink 2 Program

Order Code 1912-CD

Interface the SMART Spectro, SMART2, COD Plus Colorimeters, and TC-3000 meters with a Windows-based personal computer. The program can be used to download data stored in the dataloggers of these meters. The program allows the user to identify, organize, view, manipulate and store data as a database on a PC. Data can also be copied and pasted or exported to other applications as an ASCII tab delimited text file.

Instrumentation

Instrument Reagent Listing

New tests are being developed for the SMART Spectro and SMART 2. Please contact our Technical Service Department for information regarding additions of new tests to the SMART2.

Test Name	Test Method (# of reagents)	Spectro Range	Smart 2 Range	COD Plus Range	# of Tests	Order Code#	Ship Code
Alkalinity UDV*	UDV (1)	0-200	0-200	---	50	4318-H	NH
Aluminum	Eriochrome Cyanine R (4)	0-0.3	0-0.3	---	50	3641-SC	NH
Ammonia Nitrogen (Fresh/Salt)	Salicylate (3)	0-1.0	0-1.0	0-1.0	25	3659-01-SC	R2
Ammonia Nitrogen HR	Nesslerization (2)	0-4.0	0-4.0	0-4.0	50	3642-SC	R2
Benzotriazole	UV Oxidation/Dichromate	0-30	0-30	---	50	4047	R1
Biguanide	Colorimetric	0-70	0-70	---	50	4044	NH
Boron	Azomethine-H	0-0.8	0-0.8	0-0.8	50	4868	NH
Bromine LR	DPD Tablets (2)	0-9.0	0-9.0	---	100	3643-SC	NH
Bromine UDV*	Unit Dose Vial DPD (1)	0-22	0-22	---	50	4311-H	NH
Cadmium	PAN (4)	0-1.0	0-1.0	---	50	4017	R1
Ca & Mg Hardness UDV	UDV (1)	10-500	10-500	---	50	4309-H	NH
Carbohydrazide	Iron Reduction (3)	0-0.9	0-0.9	---	100	4857	R1
Chloride TT	Test Tab	0-50	0-50	---	50	3693-SC	NH
Chlorine - Free & Total	DPD Tablets (3)	0-4	0-4	---	100	3643-SC	NH
Chlorine - Free UDV*	Unit Dose Vial (1)	0-10	0-10	---	50	4311-H	NH
Chlorine - Liquid DPD	DPD (3)	0-4	0-4	---	144	4859	R1
Chlorine - Total UDV*	Unit Dose Vial (1)	0-10	0-10	---	50	4312-H	NH
Chlorine Dioxide	DPD tablet/Glycine (2)	0-7.0	0-8.0	---	50	3644-SC	NH
Chromium Hexavalent	Diphenylcarbohydrazide (1)	0-1.0	0-1.0	---	100	3645-SC	HA
Chromium TT	TestTab	0-1.0	0-1.0	---	50	3889A-H	NH
Chromium (Total, Hex & Trivalent)	Diphenylcarbohydrazide (1)	0-1.0	0-1.0	---	100	3698-SC	HF
Cobalt	PAN	0-2.0	0-2.0	0-2.0	50	4851	HF
COD LR 0-150 w/ Mercury**	Digestion (1)	0-150	0-150	0-150	25	0075-SC	R1
COD LR 0-150 w/o Mercury**	Digestion (1)	0-150	0-150	0-150	25	0072-SC	R1
COD SR 0-1500 w/ Mercury**	Digestion (1)	0-1,500	0-1,500	0-1,500	25	0076-SC	R1
COD SR 0-1500 w/o Mercury**	Digestion (1)	0-1,500	0-1,500	0-1,500	25	0073-SC	R1
COD HR 0-15,000 w/ Mercury**	Digestion (1)	0-15,000	0-15,000	0-15,000	25	0077-SC	R1
COD HR 0-15,000 w/o Mercury**	Digestion (1)	0-15,000	0-15,000	0-15,000	25	0074-SC	R1
Color	Platinum Cobalt	0-1,000	0-1,000	0-1,000	∞	NA	NH
Copper BCA - LR	Bicinchoninic Acid (1)	0-3.5	0-3.5	---	50	3640-SC	NH
Copper Cuprizone	Cuprizone (2)	0-2.0	0-2.0	---	50	4023	R1
Copper DDC	Diethyldithiocarbamate (1)	0-6.0	0-6.0	0-6.0	100	3646-SC	NH
Copper UDV*	UDV, Bicinchoninic Acid (1)	0-4.0	0-4.0	---	50	4314-H	NH
Cyanide	Pyridine-Barbituric Acid (5)	0-0.50	0-0.35	---	50	3660-SC	R1
Cyanuric Acid	Melamine (1)	0-200	0-200	0-200	50	3661-SC	NH
Cyanuric Acid UDV*	Melamine, UDV (1)	0-150	0-150	---	50	4313-H	NH
DEHA	Iron Reduction (3)	0-0.7	0-0.7	---	100	4857	R1
Dissolved Oxygen (DO)	Winkler Colorimetric (3)	0-12	0-11	0-11	200	3688-SC	R1
Erythorbic Acid	Iron Reduction (3)	0-3.0	0-3.0	---	100	4857	R1
Fluoride	SPADNS (2)	0-2.0	0-2.0	0-2.0	50	3647-01-SC	R1
Hydrazine	P-dimethylaminobenzaldehyde (2)	0-0.75	0-1.0	0-1.0	50	3656-SC	R2
Hydrogen Peroxide LR	DPD Tablets (2)	0-1.5	0-1.5	---	100	3662-SC	NH
Hydrogen Peroxide HR	DPD (2)	0-60	0-60	---	50	4045	NH
Hydrogen Peroxide Shock	DPD (2)	0-225	0-225	---	100	4045	NH
Hydroquinone	Iron Reduction (3)	0-1.8	0-2.0	---	100	4857	R1

* Requires UDV Adapter Code Number 5-0086 and Accessory Package 1961 or 1962

** Requires COD Adapter Code 5-0087 and Heater Block

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Instrumentation

Instrument Reagent Listing



Test Name	Test Method (# of reagents)	Spectro Range	Smart 2 Range	COD Plus Range	# of Tests	Order Code#	Ship Code
Iodine	DPD Tablets (2)	0-14	0-14	---	100	3643-SC	NH
Iron	Bipyridyl (2)	0-6	0-6	---	50	3648-SC	R1
Iron UDV*	Bipyridyl UDV (1)	0-10	0-10	---	50	4315-H	NH
Iron Phen	1,10 Phenanthroline (2)	0-4.5	0-5.0	---	50	3668-SC	R1
Lead	PAR (5)	0-5.0	0-5.0	---	50	4031	R1
Manganese LR	PAN (3)	0-0.50	0-0.7	---	50	3658-SC	HF
Manganese HR	Periodate (2)	0-15	0-15	---	50	3669-SC	R1
Mercury	TMK	0-1.5	0-1.5	---	50	4861	HF
Methylethylketoxime	Iron Reduction (3)	0-3.0	0-3.0	---	100	4857	R1
Molybdenum HR	Thioglycolate (3)	0-30	0-50	0-50	50	3699-02-SC	R1
Nickel	Dimethylglyoxime (6)	0-8.0	0-8.0	---	50	3663-SC	HF
Nitrate Nitrogen LR	Cadmium Reduction (2)	0-3.0	0-3.0	---	20	3649-SC	R1
Nitrate TT	Zinc Reduction (1)	0-60	0-60	---	50	3689-SC	NH
Nitrite Nitrogen LR	Diazotization (2)	0-0.8	0-0.8	---	20	3650-SC	NH
Nitrite TT	Diazotization (1)	0-1.6	0-1.6	---	50	3886-H	NH
Nitrogen, Total**	CTA/Digestion (7)	0-25	0-25	---	25	4026	R1
Ozone LR	Indigo Trisulfonate (3)	0-0.4	0-0.4	0-0.4	100	3651-SC	NH
Ozone HR	Indigo Trisulfonate (3)	0-1.5	0-2.5	0-2.5	20	3651-SC	NH
pH CPR (Chlorphenol Red)	Colorimetric (3)	5-7	5-6.8	---	100	3700-SC	NH
pH PR (Phenol Red)	Colorimetric (3)	6.6-8.4	6.6-8.4	---	100	3700-SC	NH
pH TB (Thymol Blue)	Colorimetric (3)	8-9.5	8-9.6	---	100	3700-SC	NH
Phenol	4-Aminoantipyrine (3)	0-6	0-6	---	50	3652-SC	NH
Phosphate LR	Ascorbic Acid Reduction (2)	0-3.0	0-3.0	0-3.0	50	3653-SC	R2
Phosphate HR	Molybdovanadate (1)	0-70	0-70	0-70	50	3655-SC	R1
Phosphorus, Total - LR**	Ascorbic Acid/Digestion (5)	0.0-3.0	0.0-3.5	---	25	4024	R1
Phosphorus, Total - HR**	Molybdovanadate/Digestion (5)	0-100	0-100	---	25	4025	R1
Potassium	Tetraphenylboron (2)	0-10	0.5-10.0	0.5-10.0	100	3639-SC	R1
Silica LR	Heteropoly Blue (4)	0-2.5	0-4.0	0-4.0	100	3664-SC	R1
Silica HR	Silicomolybdate	0-50	0-75	0-75	50	3687-SC	R1
Sulfate HR	Barium Chloride (1)	5-100	0-100	0-100	100	3665-SC	R1
Sulfide LR	Methylene Blue (3)	0-1.0	0-1.5	0-1.5	50	3654-01-SC	R1
Surfactants	Ion Pair Extraction (3)	0-8.0	0-8.0	---	100	4876	HF
Tannin	Tungsto-Molybdophosphoric Acid (2)	0-10	0-10	0-10	50	3666-SC	R1
Tolytriazole	UV Oxidation/Dichromate	0-30	0-30	---	50	4047	R1
Turbidity	Absorptometric	2-400	2-400	2-400	∞	NA	NH
Zinc LR	Zincon (6)	0-3.0	0-3.0	0-3.0	50	3667-SC	HF

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