



## COD Instrumentation



SMART3, SMART Spectro, & COD3 Plus Colorimeters

# SMART3 & COD3 Plus Colorimeters

SMART3 (120V/60Hz) · Code 1910 Comes with 6 sample tubes, AC adapter and manual

COD3 Plus (120V/60Hz) · Code 1925 Comes with COD/UDV chamber adapter, 6 sample tubes, AC adapter and manual

The user-friendly SMART3 Colorimeter and COD3 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.

## 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
- Mini USB port
- Optional computer cable and software for data storage and manipulation
- Lithium ion rechargeable battery and AC adapter are included

## As well as the incorporated features:

- All wavelength filters - 428, 525, 568, 638 nm (Smart 3); 428, 635 nm (COD3 Plus)
- Mini USB port
- and more...

## Accessories/Replacement Items:

- Sample tubes (6) · Code 0290-6
- USB cable · Code 1720
- USB wall adapter (requires 1720) · Code 1724
- Car charger · Code 5-0132
- SMARTLink software · 1901-CD

## 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



Code 1925

Code 1910

**2**  
YEAR  
WARRANTY

**80+**  
PRE-PROGRAMMED  
TESTS!

## Features

|               |  |
|---------------|--|
| Range:        | 0-125%T  |
| Resolution:   | 1% FS  |
| Accuracy:     | 2% FS  |
| CE Mark:      | Yes  |
| Light Source: | COD3 Plus: LED/Filter setup at 428nm and 635nm<br>SMART3: LED/Filter setup; 428nm, 525nm, 568nm, 638nm |
| Detector:     | Photodiode   |
| Display:      | 160 x 100 Backlight LCD, 20 x 4 line graphic display   |
| Sample Cell:  | 25 mm round cell, 10 mm square cuvette, 16 mm COD tubes  |
| Datalogging:  | Up to 500 data points; USB transfer; time and date stamped   |
| Keypad:       | 6-button mechanical  |
| Calibration:  | Factory set-user adjustable  |
| Power:        | USB computer/wall adapter or lithium ion rechargeable battery, 3.7V, 2.5" x 0.75", 1.7 oz.             |
| Dimensions:   | 7.5 x 3.5 x 2.5 inches; 19.05 x 8.84 x 6.35 cm   |
| Weight:       | 15 ounces  |
| Bandwidth     | 10 mm typical  |

# SMART Spectro Spectrophotometer

SMART Spectro · Code 2000-01

A spectrophotometer that is easier to use and more accurate than anything in its price range. The SMART Spectro features include pre-programmed tests, automatic wavelength selection, extremely high resolution, menu driven display, wide wavelength range and continuous wavelength accuracy.

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

## Accessories:

- Carrying Case · Code 2000-CS
- Battery Pack w/holder (rechargeable) · Code 2000-BP



## Instrument Reagent Systems

| Test Factor                       | Spectro Range† | Spectro MDL† | COD3 Plus Range |
|-----------------------------------|----------------|--------------|-----------------|
| Alkalinity UDV                    | 0-200          | 15           | --              |
| Aluminum                          | 0.00-0.30      | 0.01         | --              |
| Ammonia Nitrogen LR, Fresh        | 0.0-1.00       | 0.02         | 0-1.0           |
| Ammonia Nitrogen HR, Salt         | 0.0-1.00       | 0.10         | 0-1.0           |
| Ammonia Nitrogen HR               | 0.00-4.00      | 0.05         | 0-4.0           |
| Benzotriazole                     | 0.0-30.0       | 1.0          | --              |
| Biguanide                         | 0-70           | 5            | --              |
| Boron                             | 0.00-0.80      | 0.05         | 0-0.8           |
| Bromine LR                        | 0.00-9.00      | 0.04         | --              |
| Bromine UDV †                     | 0.0-20.0       | 0.3          | --              |
| Cadmium                           | 0.00-1.00      | 0.02         | --              |
| Carbohydrazide                    | 0.000-0.900    | 0.005        | --              |
| Chloride TesTab                   | 0.0-50.0       | 0.5          | --              |
| Chlorine                          | 0.00-4.00      | 0.02         | --              |
| Chlorine - Free UDV †             | 0.00-10.00     | 0.10         | --              |
| Chlorine - Liquid DPD             | 0-4            | 0.025        | --              |
| Chlorine - Total UDV †            | 0.00-10.00     | 0.10         | --              |
| Chlorine Dioxide                  | 0-7.0          | 0.04         | --              |
| Chromium (Hexavalent)             | 0.00-1.00      | 0.01         | --              |
| Chromium (Total, Hex & Trivalent) | 0.00-1.00      | 0.03         | --              |
| Cobalt                            | 0.00-2.00      | 0.02         | 0-2.0           |
| COD LR with Mercury*              | 0-150          | 5 mg/L       | 0-150           |
| COD LR without Mercury*           | 0-150          | 5 mg/L       | 0-150           |
| COD SR with Mercury*              | 0-1,500        | 50 mg/L      | 0-1,500         |
| COD HR without Mercury*           | 0-1,500        | 50 mg/L      | 0-1,500         |
| COD HR with Mercury*              | 0-15,000       | 500 mg/L     | 0-15,000        |
| COD SR without Mercury*           | 0-15,000       | 500 mg/L     | 0-15,000        |
| Color                             | 0-1,000        | 15           | 0-1,000         |
| Copper BCA - LR                   | 0.00-3.50      | 0.05         | --              |
| Copper - Cuprizone                | 0.00-2.00      | 0.01         | --              |
| Copper DDC                        | 0.00-6.00      | 0.05         | 0-6.0           |
| Copper UDV†                       | 0.00-4.00      | 0.20         | --              |
| Cyanide                           | 0.00-0.50      | 0.05         | --              |
| Cyanuric Acid                     | 0-200          | 16           | 0-200           |
| Cyanuric Acid UDV†                | 0-150          | 5            | --              |
| DEHA                              | 0.00-0.700     | 0.005        | --              |
| Dissolved Oxygen [DO]             | 0.00-12.00     | 0.25         | 0-11            |
| Erythorbic Acid                   | 0.00-3.00      | 0.02         | --              |
| Fluoride                          | 0.00-2.00      | 0.05         | 0-2.0           |
| Hardness UDV†                     | 10-500         | 10           | --              |
| Hydrazine                         | 0.000-0.750    | 0.010        | 0-1.0           |
| Hydrogen Peroxide LR              | 0.00-1.50      | 0.02         | --              |
| Hydrogen Peroxide HR              | 0-60           | 1            | --              |
| Hydrogen Peroxide Shock           | 0-225          | 4            | --              |

| Test Factor              | Spectro Range† | Spectro MDL† | COD3 Plus Range |
|--------------------------|----------------|--------------|-----------------|
| Hydroquinone             | 0.00-1.80      | 0.01         | --              |
| Iodine                   | 0.00-14.00     | 0.08         | --              |
| Iron - Bipyridyl         | 0.00-6.00      | 0.06         | --              |
| Iron UDV†                | 0.00-10.00     | 0.07         | --              |
| Iron - Phenanthroline    | 0.00-4.50      | 0.04         | --              |
| Lead                     | 0.0-5.0        | 0.1          | --              |
| Manganese LR             | 0.00-0.50      | 0.02         | --              |
| Manganese HR             | 0.0-15.0       | 0.3          | --              |
| Mercury                  | 0.00-1.50      | 0.02         | --              |
| Methylethylketoxime      | 0-3.0          | 0.02         | --              |
| Molybdenum HR            | 0.0-30.0       | 0.2          | 0-50            |
| Nickel                   | 0.00-8.00      | 0.06         | --              |
| Nitrate Nitrogen LR      | 0.00-3.00      | 0.05         | --              |
| Nitrate TesTabs          | 0-60           | 2.5          | --              |
| Nitrite Nitrogen LR      | --             | --           | --              |
| Nitrate UDV†             | 0.00-0.80      | 0.02         | --              |
| Nitrogen, Total*         | 0-25 mg/L      | 2 mg/L       | --              |
| Ozone                    | 0.00-0.40      | 0.02         | 0-0.4           |
| Ozone LR                 | 0.00-1.50      | 0.05         | 0-2.5           |
| Ozone HR                 | 5-7            | --           | --              |
| pH CPR [Chlorphenol Red] | 6.8-8.4        | --           | --              |
| pH PR [Phenol Red]       | 8-9.5          | --           | --              |
| pH TB [Thymol Blue]      | 0.00-6.00      | 0.05         | --              |
| pH UDV†                  | 0.00-3.00      | 0.04         | --              |
| Phenol                   | 0.0-70.0       | 1            | --              |
| Phosphate LR             | --             | --           | 0-3.0           |
| Phosphate HR             | 0.00-3.00      | 0.07         | 0-70            |
| Phosphorus, ppb          | 0-70           | 5.0          | --              |
| Phosphorus, Total - LR*  | 0.0-10.0       | 0.5          | --              |
| Phosphorus, Total - HR*  | 0.00-2.50      | 0.03         | --              |
| Potassium                | 0-50           | 1            | 0.5-10.0        |
| Silica LR                | 5-100          | 5            | 0-4.0           |
| Silica HR                | 0.00-1.00      | 0.02         | 0-75            |
| Sulfate HR               | 0.0-8.0        | 0.5          | 0-100           |
| Sulfide LR               | 0.0-10.0       | 0.2          | 0-1.5           |
| Surfactants              | 0.0-30.0       | 1.0          | --              |
| Tannin                   | 2-400 FTU      | 2 FTU        | 0-10            |
| Tolytriazole             | 0.00-3.00      | 0.025        | --              |
| Turbidity                | 0-500 FAU      | 3 FAU        | 0-400           |
| Zinc LR                  | 0.00-3.00      | 0.05         | 0-3.0           |

\* 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)

## Digestion Tubes for Total Nitrogen and Total Phosphorus

LaMotte offers low and high Total Phosphorus and a Total Nitrogen test that are reacted in a heater block and are then tested using a colorimeter or spectrophotometer. All kits ship as R1.

| Order Code | Description  | Range      | # of Tests |
|------------|--------------|------------|------------|
| 4024-01    | Low Total P  | 0-3.5 mg/L | 25         |
| 4025-01    | High Total P | 0-100 mg/L | 25         |
| 4026-01    | Total N      | 0-25 mg/L  | 25         |



## Multi-Range COD Reagent Systems

LaMotte-manufactured Chemical Oxygen Demand reagent systems used with our COD3 Plus Colorimeter, SMART3 Colorimeter or SMART Spectro Spectrophotometer are an easy and precise way to measure critical COD levels. Measure low, medium or high levels of COD using your choice of mercury (USEPA approved method) or non-mercury reagent systems. Each package contains 25 ready to use vials. All kits ship as R1.

### Mercury Based Systems

| Code    | Range                     |
|---------|---------------------------|
| 0075-SC | 0-150 ppm [EPA approved]  |
| 0076-SC | 0-1500 ppm [EPA approved] |
| 0077-SC | 0-15,000 ppm              |

### Mercury-Free Systems

| Code    | Range        |
|---------|--------------|
| 0072-SC | 0-150 ppm    |
| 0073-SC | 0-1500 ppm   |
| 0074-SC | 0-15,000 ppm |

## COD Heater Block (12-Tube Capacity)

Order Code 5-0102 (120V)  
Order Code 5-0102-EX2 (230V)

This COD heater block features digital microprocessor control, programmable time and temperature settings, and a dual LED display to monitor both temperature and timer. Perfect for COD, Total Phosphorus, and Total Nitrogen testing PLUS other tests requiring digestion.

### Features

|                   |                           |
|-------------------|---------------------------|
| Temperature:      | 30-200°C                  |
| Timer:            | 0-999 minutes             |
| Vial Capacity:    | 12 (16 mm tubes)          |
| Stability:        | ±0.1°C @ 100°C            |
| Weight:           | 3.6 kg                    |
| Dimensions        | 310 x 250 x 80 mm [LxWxH] |
| CE Mark:          | Yes                       |
| Oven Temp Cutoff: | 212°C                     |



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