Low Range
COD Photometer

A-7320

0 to 150
PPM (mg/Liter)

CHEMetrics
By AquaPhoenix Scientific
Simplicity in Water Analysis

Cell Adapter Installation

Insert the cell adapter into the instrument's sample chamber by aligning the arrow on the adapter with the arrow on the instrument. Be sure that the adapter seats completely into the sample chamber.

Operating Instructions

1. Follow the CHEMetrics COD Test Procedure (Steps 1-11) which is included in every CHEMetrics COD Test Kit.
   Note: Use only COD vials with a range of 0 - 150 mg/L (LR) with this photometer.
2. Press the ON/OFF key.
3. The display will show "cod".
4. Wipe the exterior of a digested COD reagent blank vial until it is clean and dry, and then insert it into the sample compartment (see operating tips). Press the Zero/Test key. The "cod" symbol will flash for approximately 8 seconds, then the display will show "0.0.0".
5. Wipe the exterior of a digested COD vial until it is clean and dry, and then insert it into the sample compartment. Press the Zero/Test key. The "cod" symbol will flash for 3 seconds, then the sample test result will appear in the display as mg/L COD.
6. Record the test result.

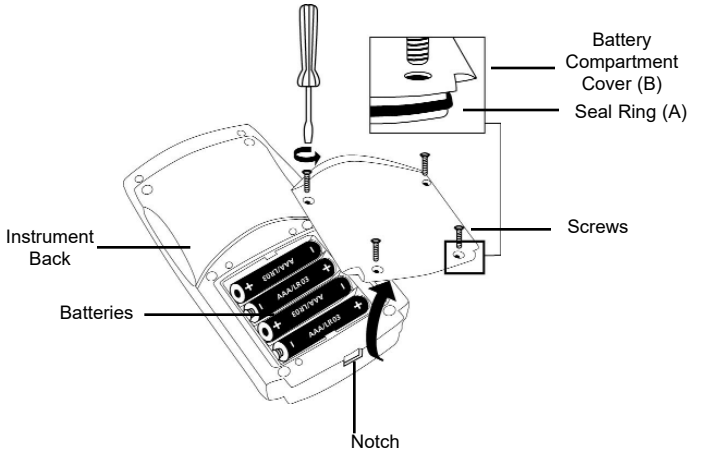
Operating Tips

- Upon startup, the photometer automatically proceeds to the zeroing process. Every time the photometer powers on, it must be re-zeroed.
- To re-zero the photometer, it must be turned off and back on again.
- A series of readings can be taken without re-zeroing, as long as the photometer stays on during the series.
- When the vial is appropriately seated in the sample compartment, the cap is almost touching the top edge of the cell adapter.
- Protect photometer from extreme humidity, corrosive fumes and dusty areas. Store in a cool, dry place.
- Remove the batteries when the photometer is not in use.
- Press the **!** key to turn the display back light on or off.
- When moving the photometer from one temperature extreme to another, wait at least 10 minutes before use to allow photometer to come to temperature equilibrium.
- To avoid errors caused by stray light, do not use the instrument in bright sunlight.
- Contamination of the optics in the sample chamber will result in incorrect measurements. The windows in the sample chamber should be checked at regular intervals and cleaned as necessary. Use a soft moist cloth or cotton swab for cleaning purposes.

Displays and Troubleshooting

E01: Light absorption too great (dirty optics)
E020 or E021: Too much light reaching detector
E022 or Battery Icon: Battery should be replaced
E027, E028 or E029 : Instrument zeroed incorrectly, misaligned adapter, vial not fully seated, dirty optics or failing light source.
Hi or E03: Measuring range exceeded or excessive turbidity
Lo: Test result has a negative value (less than 0 ppm) or vial not fully seated.

Battery Installation



To ensure that the instrument is waterproof:
- seal ring (A) must be in position
- battery compartment cover (B) must be fixed with the four screws

Specifications

Auto Shutoff: After 15 minutes of non-use
Optics: 430 nm LED/interference filter and photosensor in transparent sample chamber
Operating Temp.: 5 to 40°C (41 to 104°F)
Battery: 4 AAA batteries (approx. 5,000 tests or 17 hours)
Waterproof: Floating, IP68 (1 hour at 0.1 meter)
Wavelength Accuracy: ± 1 nm
Photometric Accuracy: 3% full scale (T = 20 - 25° C / 68 - 77° F)
Photometric Resolution: 0.01 A
Ambient Conditions: Temperature 5 - 40° C / 41 - 104° F
Rel. humidity 30 - 90 % (non-condensing)
CE: Certificate of Declaration of CE-Conformity available upon request.

Menu Selection

Setting Date and Time

Upon initial start-up, the SAM will display "Set", "dAtE", and "YYYY", then a 4 digit number. Proceed to Step 4 in the procedure below to set the date and time, or power the instrument off and on again to bypass this process. At any time that the time and/or data need to be reset, follow steps 1-6 of the procedure below.

1. Press the Mode key and hold. Turn the instrument on by pressing and releasing the ON/OFF key. Once three decimal points appear in the display, release the Mode key. The display will show "di 5".
2. Press and release the ! key until the display shows arrows in the upper right and lower left corners of the display, pointing to "Time" and "Date".
3. Press the Mode key. "Set", "dAtE" will briefly appear in the display.
4. Date and time settings are displayed in the following order: Year ("YYYY"), Month ("MM"), Day ("dd"), Hour ("hh"), Minutes ("mm"). Increase the displayed value for each setting by pressing the Mode key or decrease the value by pressing the Zero/Test key until the desired value is displayed.
5. Press the ! key to save the displayed value and to proceed to the next setting.
6. After setting the minutes, press the ! key. The display will flash "iS" "SEt" and then will return to the measurement mode.

Recall of Stored Data

The SAM photometer automatically stores the last 15 data sets. To recall stored data:

1. Press the Mode key and hold. Turn the instrument on by pressing and releasing the ON/OFF key. Once three decimal points appear in the display, release the Mode key. The display will show "di 5".
   Note: If the instrument is already on, press and hold the ! key for at least 4 seconds and release to access the stored data.
2. Press the Mode key. The photometer will display the stored data sets in the following format:
   a. Sample Number: nXX (e.g. n15, n14, … n1)
   b. Year: XXXX (e.g. 2017)
   c. Date: mm.dd (e.g. 03.15)
   d. Time: hh.mm (e.g. 12:05)
   e. Analyte
   f. Result
3. Press the Zero/Test key to repeat the current data set.
4. Press the Mode key to proceed to the next data set.
5. Press the ! key to return to the measurement mode.