ColorQ DW

ColorQ Photometer for Drinking Water

For software Version 5.73 or higher

To insure proper testing results.

Insert tubes into ColorQ with line and arrow facing forward.

Sun = Shade meter from bright sunlight. Press/Hold button to turn off.

Er7 =Tube is misaligned or scratched, or light chamber is stained. See Users Guide for more instructions.

Brush and rinse all tubes promptly after use.

Rinse tablet crusher between test factors.

Allow tubes to dry before returning to case.

Replace reagent caps securely.

Use only LaMotte replacement reagents and ColorQ test tubes Code 0201.

If unit should auto-off during testing rinse and fill one tube to Blank and return to testing.

To skip test in the sequence press button to advance past that test factor.

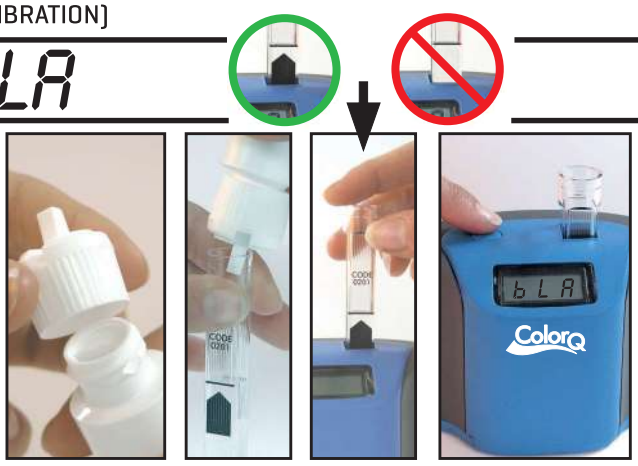
To turn meter off at any time, press and hold the button until **off** is displayed.

bAt = battery is low.

WARNING! This set contains chemicals that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.

BLANK (CALIBRATION)

1 bLA



1. Fill sample bottle with water sample. Replace cap.
2. Fill clean tube (#0201) to the 5mL line with water sample.
3. Insert tube into ColorQ as shown.
4. Press button to turn meter on. When bLA appears press button to Blank the meter, and go to pH. Remove tube.

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pH ColorQ Range: 4.0-9.0

2 PH

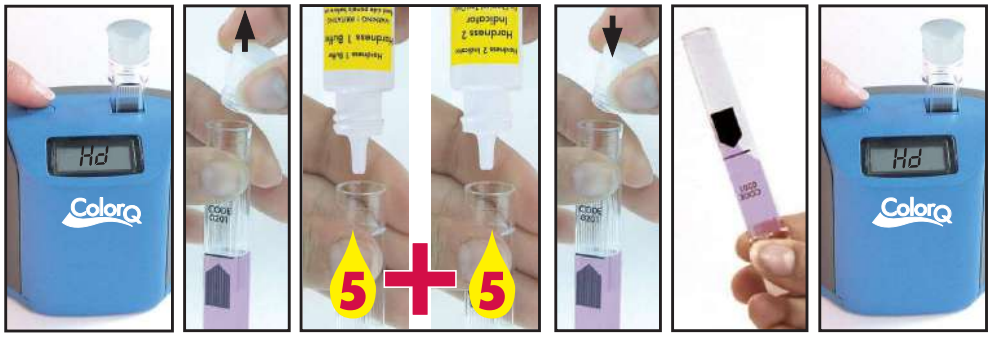
pH - Code 7059-E

1. Add 5 drops **Wide Range pH Reagent (7059)** to the same tube.
2. Cap. Invert 3 times to mix. Insert tube into ColorQ.
3. Press button to read "pH" pH. Remove tube.

HARDNESS ColorQ Range: 1-41 GPG

3 Hd

*Hardness 1 Buffer: Code 7045-G
Hardness 2 Indicator: Code 7046-G



1. Press button to go to "Hd" Hardness.
2. Fill a clean tube (0201) to the 5 mL line with water sample.
3. Add 5 drops **Hardness 1 Buffer (7045)** and **Hardness 2 Indicator (7046)** to same tube.
4. Cap. Invert 3 times to mix. Insert tube into ColorQ.
5. Press button to read "Hd" Hardness in gpg. Remove tube.

DILUTION

Samples with hardness concentrations above **41 gpg** must be diluted. The meter will display "**Hi**".

A. Use the 1 mL pipet (0354) to add 2 measures (2mL) water sample to a clean test tube (0201).

B. Dilute to the 5 mL line with distilled or deionized water. Cap and mix.

C. Blank with the diluted sample from Step B. Follow test procedure Step 3-5 with dluted sample. **Multiply** the displayed result by **2.5**

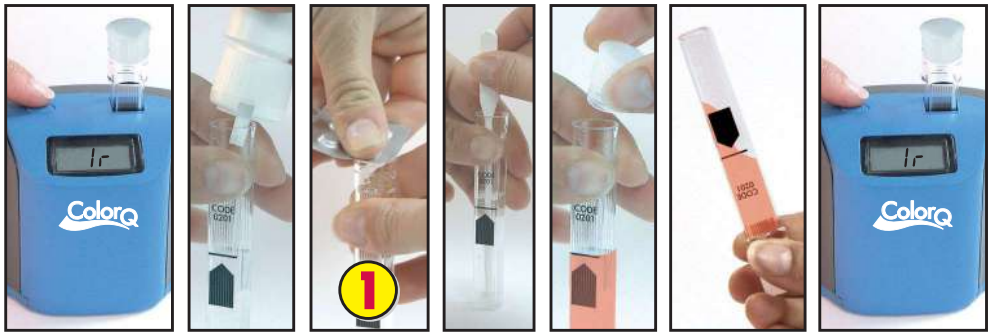
NOTE: To convert from GPG to ppm; Multiply GPG by 17.1

TOTAL IRON

ColorQ Range: 0.0-3.0 ppm

4 Ir

*Iron IG- Code 3725A-H



1. Press button to go to "Ir" Iron.
2. Fill a clean tube (0201) to the 5 mL line with water sample.
3. Add 1 **Iron IG (3725)** Tablet. Crush with tablet crusher (0175).
4. Cap. Invert 3 times to mix. Tablet will not disslve completely. Insert tube into Color Q.
5. Press button to read "Ir" Total Iron in ppm. Remove tube.

DILUTION

Samples with iron concentrations above **3 ppm** must be diluted. The meter will display "**Hi**".

A. Use the 1 mL pipet (0354) to add 1 mL water sample to a test tube.

B. Dilute to the 5 mL line with distilled or deionized water. Cap and mix.

C. Blank with the diluted sample from Step B. Follow Steps 3-5 of the test procedure with the diluted sample.. **Multiply** the displayed result by **5**.

FREE / TOTAL CHLORINE

ColorQ Range: 0.0-10.0 ppm Chlorine

5 FCL/+CL

DPD#1 IG - Code 6903A-H
DPD#3 IG - Code 6197A-H

Free Chlorine and Total Chlorine

1. Press button to go to "FCL" Free Chlorine.
2. Fill a clean tube (0201) to the 5 mL line with water sample.
3. Add 1 **DPD#1 IG (6903A)** Tablet. Cap. Shake for TEN seconds. Invert slowly 5 times.
4. Press button to read "FCL" Free Chlorine in ppm. Remove tube.

1. Press button to go to "tCL" Total Chlorine.
2. Remove cap from reacted FCL tube.
3. Add 1 **DPD#3 IG (6197A)** Tablet. Cap. Shake for TEN seconds. Invert slowly 5 times.
4. Insert tube into ColorQ.
5. Press button to read "tCL" Total Chlorine in ppm. Remove tube.

Total Chlorine Only

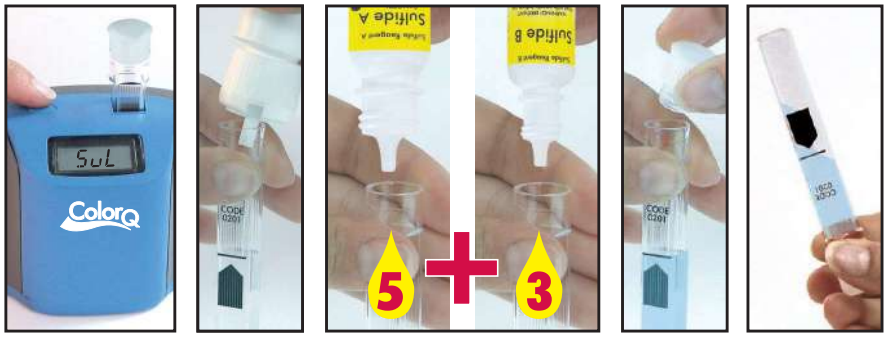
1. Press button past "FCL" Free Chlorine to go to "tCL" Total Chlorine.
2. Fill a clean tube (0201)to the 5 mL line with water sample.
3. Add 1 **DPD#1 IG (6903A)** Tablet. Cap. Shake for TEN seconds. Invert slowly 5 times.
4. Remove cap. Add 1 **DPD#3 IG (6197A)** Tablet. Cap. Shake for TEN seconds. Invert slowly 5 times.
5. Insert tube into ColorQ.
6. Press button to read "tCL" Total Chlorine in ppm. Remove tube.

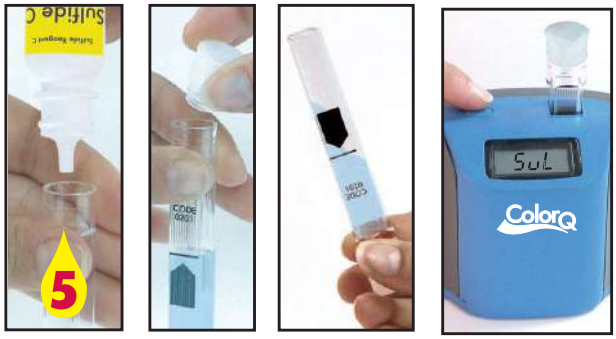
FREE / TOTAL CHLORINE

ColorQ Range: 0.0-10.0 ppm Chlorine

6 SuL

*Sulfide Reagent A: Code V-4458LWT-G
*Sulfide Reagent B: Code V-4459-E
Sulfide Reagent C: Code 4460LWT-G





1. Press button to go to "SuL" Sulfide.
2. Fill a clean tube (0201) to the 5 mL line with water sample.
3. Add 5 drops of **SULFIDE REAGENT A (4458)**.
4. Add 3 drops of **SULFIDE REAGENT B (4459)**.
5. Cap and invert 3 times to mix. Allow tube to sit for ONE minute.
6. Add 5 drops of **SULFIDE REAGENT C (4460)**.
7. Cap. Invert 3 times to mix. Insert tube into ColorQ.
8. Press button to read "SuL" Total Sulfide in ppm. Remove tube.

DILUTION

Samples with sulfide concentrations above **3 ppm** must be diluted. The meter will display "**Hi**".

A. Use the 1 mL pipet (0354) to add 1 mL water sample to a test tube.

B. Dilute to the 5 mL line with distilled or deionized water. Cap and mix.

C. Blank with the diluted sample from Step B. Follow the test procedure, steps 3 - 8, with the diluted sample. **Multiply** the displayed result by **5**.

NITRATE-NITROGEN ColorQ Range: 0-15 ppm

7 nit *Nitrate IG - Code 3884A-H

1. Press button to go to “nit” Nitrate.
2. Fill a clean tube (0201) to the 5 mL line with water sample.
3. Add 1 **NITRATE IG (3884A)** Tablet. Crush with tablet crusher.
4. Cap. Invert 30 times per minute for TWO minutes.
5. Wait FIVE minutes. Insert tube into Color Q.
6. Press button to read “nit” Nitrate-Nitrogen in ppm. Remove tube.

ColorQ User Tips

Testing Tips

Read all instructions before testing.

If not testing all tests in the sequence, follow blanking procedure and then press button until desired test factor is shown. Follow test procedure.

In one complete inversion, the tube will be turned cap down and then right side up. The air bubble will move slowly to the bottom of the tube and back again to the cap end.

If small bubbles form after adding reagents, tap bottom of tube sharply once or twice to dislodge bubbles. Bubbles will interfere with the test results.

Samples with concentrations greater than the range of the reagent system must be diluted. Add 2.5 mL of sample water to a test tube. Fill to the 5 mL line with distilled or deionized water. Cap and mix. Blank with the diluted sample. Follow the test procedure with the diluted sample. Multiply the displayed result by 2. (This will not work for the pH test).

Be sure the outside of the tubes are dry before putting them into the ColorQ. This is best accomplished by dispensing the water sample from the sample bottle.

Always rinse tubes and caps after testing. Reagent left behind can affect the next test or stain the tube.

Replace liquid reagents annually. To learn more about reagent storage guidelines and shelf-life go to Support Section then Reagent Refills/ Shelf Life at www.lamotte.com.

Low pH Low pH levels can significantly lower the hardness results.

Error Messages

Er 3 = Insufficient light is reaching the detector. Sample may be too dark, or tube may be in sideways. Turn off meter and retest.

Er 7 = The blank was not properly set. Turn off meter and retest blank making sure the black arrow on the tube is facing forward, toward the user [not left or right].

SUN = Extremely bright sunlight is penetrating the chamber. Turn your back to the sun to shade the meter from bright sunlight.

Lo = Result is below the effective measuring range for the system [e.g. < 4.0 pH for Code 7059 reagent.]

Hi = Result is above the effective measuring range for the system [e.g. >9.0 pH for Code 7059 reagent.]

bAt = Battery is low.

Maintenance

Clean ColorQ optics with a damp cotton swab. Avoid abrasive cleaners that can damage plastic.

Do not use the test tube **brush** to clean the ColorQ meter chamber.

Replace stained or scratched tubes (0201).

Battery Replacement

Use a small Phillips head screwdriver to remove all 5 screws in the base. Gently pull the battery holder from the inside and replace TWO AA style batteries. Replace screws securely but do not over-tighten screws which can tear the rubber base.

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