Safe Swim

Digital Water Testing For Pools & Hot Tubs

INSTRUCTION MANUAL

TABLE OF CONTENTS

KIT CONTAINS

(1) Safe Swim® Meter

(1) Plastic Carrying Case with foam

(1) Instruction manual

(1) Cleaning brush

(6) Safe Swim® Meter Reagent Strip DPD-1 Free Chlorine – CL

(6) Safe Swim® Meter Reagent Strip DPD-3 Combined Chlorine – CL

(6) Safe Swim® Meter Reagent Strip pH - PH

(6) Safe Swim® Meter Reagent Strip Alkalinity - AL

(6) Safe Swim® Meter Reagent Strip DPD-4 Total Bromine – bR

(6) Safe Swim® Meter Reagent Strip Copper - CU

HOW TO INSTALL 'AAA' BATTERIES

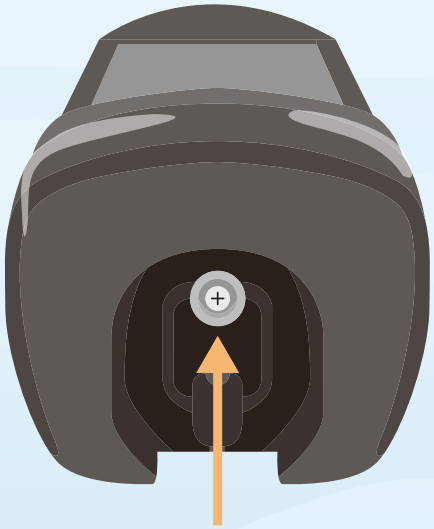
1. Use a Phillips head screwdriver to remove the screw from the base of your Safe Swim® Meter.

2. Remove the base.

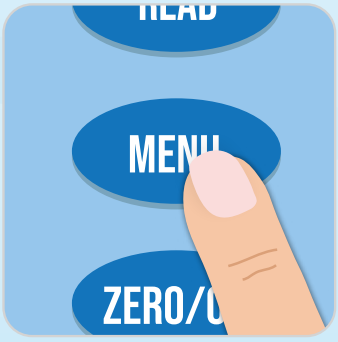
3. Install Four (4) new AAA batteries as illustrated inside your photometer's battery compartment. We recommend using high quality batteries.

4. Replace the base firmly with pressure while tightening the screw. The meter will turn on automatically.

5. Tighten the screw with a Phillips head screwdriver. Be sure not to over tighten.



QUICK START TEST PROCEDURE

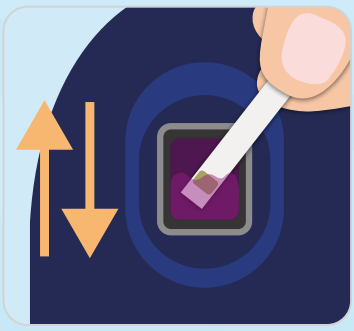


1. Select Test

CL – Free, Combined & Total Chlorine
PH – pH
TA – Total Alkalinity
bR – Total Bromine
CU – Copper

2. Fill Cell & Zero

Add water from Swimming pool or hot tub. Then press "ZERO/ON" button.



3. Press READ and Dip Strip for 20 seconds

For best accuracy in water above 35°C (95°F) remove strip at 10 seconds.

4. Read result after countdown

Down to 0.01 resolution depending on parameter tested.

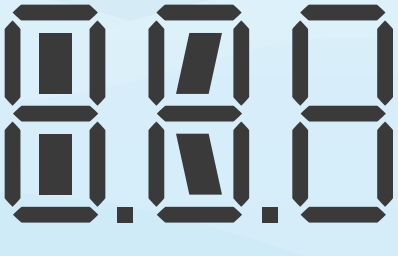
SAFE SWIM® METER OVERVIEW

Your new Safe Swim® photometer is ideal for testing and maintaining your pool and hot tub.

Pool Water temp: 25°C-29°C (77°F-85°F)
Hot Tub Water temp: 35°C-41°C (95°F-106°F)

SAMPLE CELL - 4 ML
Built-in plastic 4ml cell for collecting your water sample

LCD DISPLAY
Displays results and test name



Low Battery Results Unit

LIGHT SOURCE
Uses 525nm wavelength and 11mm path-length for testing

READ BUTTON
Starts test timer

MENU BUTTON
Cycles through available tests

ZERO/ON BUTTON
Turns the meter on and creates a baseline for your water testing

BASE
Install/replace batteries here (IP67 rated waterproof)

CELL COVER
Covers the cell for mixing and bright light situations

waterproof IP67

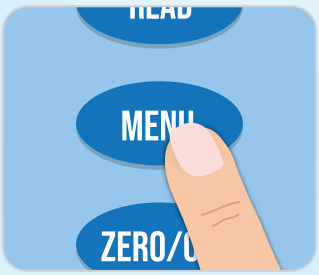
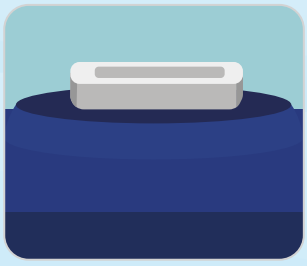
Protected against the effects of immersion in water to a depth of 1m

Part no. 486206-IES

FREE CHLORINE TESTING

This procedure describes how to test for FREE CHLORINE ONLY.

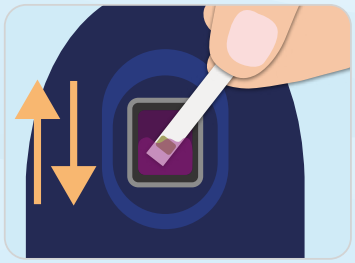
If you would like to test for Free Chlorine, Combined Chlorine and Total Chlorine, please see “COMBINED CHLORINE TESTING” on page 8.

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the “ZERO/ON” to power on the photometer.	If the meter is on, continue to step 2.
2. SELECT TEST. Press and re-press the MENU button until the display shows “CL”.  	If you have done previous chlorine testing with this meter, the “CL” will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity.  	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing.
4. ZERO METER. Press “ZERO/ON” button. Meter will set the zero for your water sample and show ‘0.00 ppm’ on display, indicating the meter is ready for testing. 	Place the cell cover onto the cell before pressing “ZERO/ON” button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip - Free Chlorine (CL) (Part number 486637-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.



When dipping the strip, gently touch the bottom of the cell. Be careful to not spill the sample from cell while moving the strip back and forth.

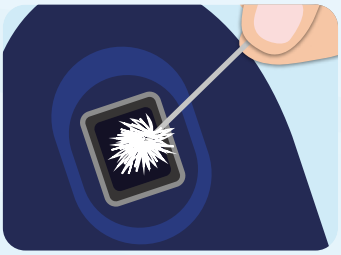
Make sure the strip is removed from cell when dashes "- -" appear on display.

For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays "10" and press READ again.

7. READ RESULTS. Result for the Free Chlorine test in ppm (mg/l) will be displayed momentarily. This result is automatically stored in meter's memory.

If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

8. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush.



To continue testing for FREE CHLORINE ONLY with another test sample, Press the MENU button once – the "CL" will show for a moment, followed by your previous Free Chlorine reading. Now the meter is ready for the next Free Chlorine test. Proceed to step 3 – FILL CELL of this procedure.

DPD will stain the CELL wall if allowed to remain in the CELL. To remove staining, rinse cell thoroughly and fill with water then add two (2) drops of bleach (5-8%) and clean with brush until stain is removed. Caution: Avoid contact of bleach with eyes and clothing.

What is Free Chlorine?

Free chlorine refers to the amount of chlorine present in the water that is actively available to disinfect and kill bacteria, viruses, and other microorganisms. It acts as a sanitizer and helps maintain water quality. Free chlorine can come from various sources, such as chlorine tablets, liquid chlorine, or saltwater chlorination systems.

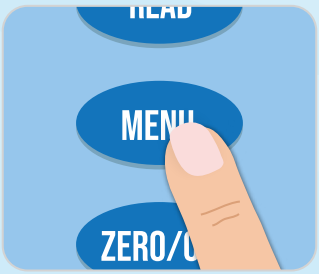
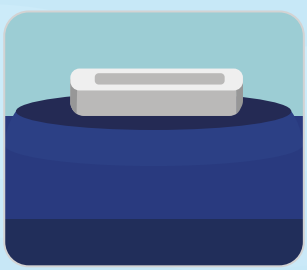
COMBINED CHLORINE TESTING

This procedure describes how to test for FREE CHLORINE, immediately followed by COMBINED CHLORINE. You will also be able to determine TOTAL CHLORINE at the end of this procedure.

Note. *This test procedure is designed and built in within our Safe Swim Meter for you to be able to determine a direct reading of COMBINED CHLORINE without any math required.*

You will need two reagents for this procedure – Safe Swim Meter Reagent Strip Free Chlorine (CL) (Part number 486637-IES) and Safe Swim Meter Reagent Strip Combined Chlorine (CL) (Part number 486638-IES).

If you would like to test for FREE CHLORINE ONLY, please see FREE CHLORINE TESTING on page 5.
If you would like to test for TOTAL CHLORINE ONLY, please see TOTAL CHLORINE TESTING on page 12.

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the "ZERO/ON" to power on the photometer.	If the meter is on, continue to step 2.
2. SELECT TEST. Press and re-press the MENU button until the display shows "CL".  	If you have done previous chlorine testing with this meter, the "CL" will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity.  	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing.

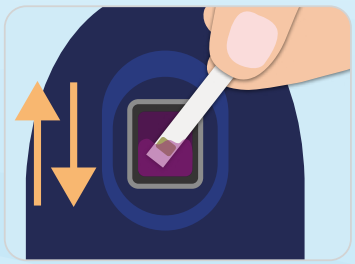
4. ZERO METER. Press “ZERO/ON” button. Meter will set the zero for your water sample and show ‘0.00 ppm’ on display, indicating the meter is ready for testing.

Place the cell cover onto the cell before pressing “ZERO/ON” button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip - Free Chlorine (CL) (Part number 486637-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the “READ” button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays “1”. Remove and discard strip.



When dipping the strip, gently touch the bottom of the cell.

Be careful to not spill the sample from cell while moving the strip back and forth.

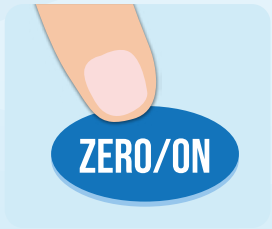
Make sure the strip is removed from cell when dashes “-“ appear on display.

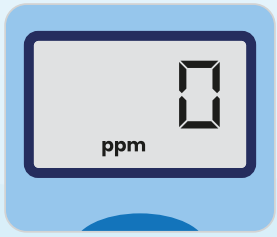
For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays “10” and press READ again.

7. READ RESULTS. Result for the Free Chlorine test in ppm (mg/l) will be displayed momentarily. This result is automatically stored in meter's memory.

If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

8. KEEP SAMPLE AND PRESS ZERO. Keep the water sample and continue with testing. Press "ZERO/ON" button. The display will show "0 ppm".

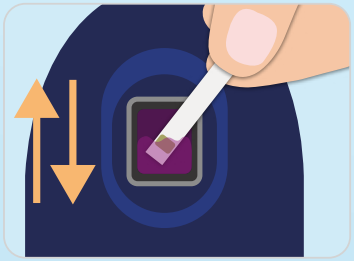




9. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip Combined Chlorine (CL) (Part number 486638-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

10. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.

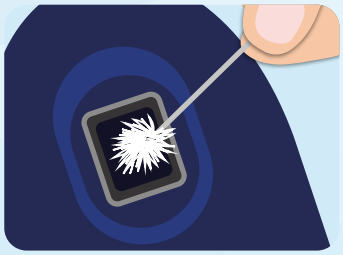


When dipping the strip, gently touch the bottom of the cell.

Be careful to not spill the sample from cell while moving the strip back and forth.

Make sure the strip is removed from cell when dashes "-" appear on display.

For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays "10" and press READ again.

11. READ RESULTS. Result for the Combined Chlorine test in ppm (mg/l) will be displayed momentarily. This result is automatically stored in meter's memory.	If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.
12. PRESS READ. Press READ one more time to immediately display the TOTAL CHLORINE result.	The TOTAL CHLORINE result should appear within one second of pressing the READ button without any delay.
13. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush. 	DPD will stain the CELL wall if allowed to remain in the CELL. To remove staining, rinse cell thoroughly and fill with water then add two (2) drops of bleach (5-8%) and clean with brush until stain is removed. Caution: Avoid contact of bleach with eyes and clothing.

You have now determined 3 results and they are stored consecutively in the "CL" menu – FREE CHLORINE, COMBINED CHLORINE and then TOTAL CHLORINE. You can access all of these and previous readings by pressing and holding the "MENU" button.

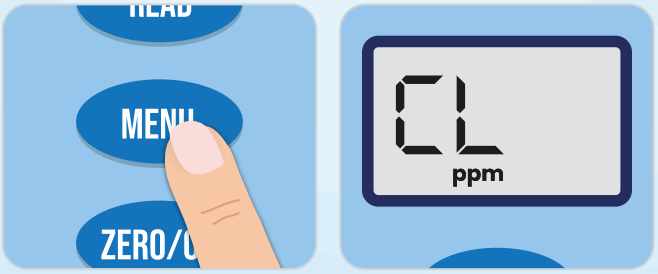
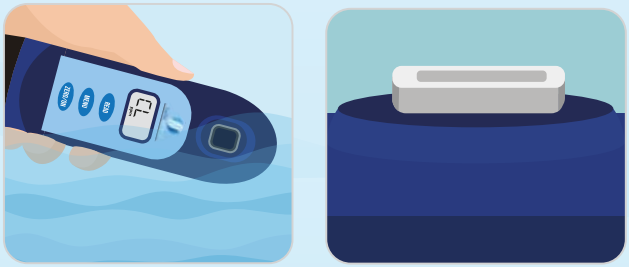
The display will show the test results starting with latest result (TOTAL CHLORINE), going back to older results (COMBINED CHLORINE, FREE CHLORINE and so on) up to a maximum of 20 latest results. You can stop at any result to record it if necessary by releasing the MENU button.

What is Combined Chlorine?

Combined chlorine, also known as chloramines, is a result of the chemical reaction between free chlorine and organic or inorganic contaminants in the water. When free chlorine combines with substances like sweat, urine, oils, or other organic matter brought into the pool by swimmers, it loses its disinfecting properties. Combined chlorine is less effective at sanitizing and can cause unpleasant odors, eye irritation, and skin discomfort.

TOTAL CHLORINE TESTING

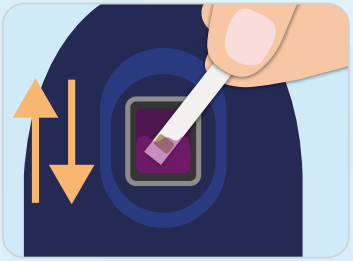
This procedure describes how to test for TOTAL CHLORINE ONLY.
If you would like to test for Free Chlorine, Combined Chlorine and Total Chlorine, please see “COMBINED CHLORINE TESTING” on page 8.

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the “ZERO/ON” to power on the photometer.	If the meter is on, continue to step 2.
2. SELECT TEST. Press and re-press the MENU button until the display shows “CL”. 	If you have done previous chlorine testing with this meter, the “CL” will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity. 	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing.
4. ZERO METER. Press “ZERO/ON” button. Meter will set the zero for your water sample and show ‘0.00 ppm’ on display, indicating the meter is ready for testing. 	Place the cell cover onto the cell before pressing “ZERO/ON” button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip - Total Chlorine (CL) (Part number 486670-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.



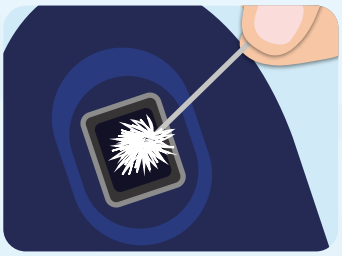
When dipping the strip, gently touch the bottom of the cell. Be careful to not spill the sample from cell while moving the strip back and forth. Make sure the strip is removed from cell when dashes "-" appear on display.

For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays "10" and press READ again.

7. READ RESULTS. Result for the Total Chlorine test in ppm (mg/l) will be displayed momentarily. This result is automatically stored in meter's memory.

If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

8. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush.



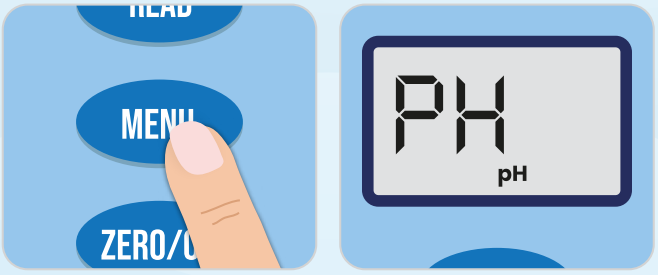
To continue testing for TOTAL CHLORINE ONLY with another test sample, Press the MENU button once – the "CL" will show for a moment, followed by your previous Total Chlorine reading. Now the meter is ready for the next Total Chlorine test. Proceed to step 3 – FILL CELL of this procedure.

DPD will stain the CELL wall if allowed to remain in the CELL. To remove staining, rinse cell thoroughly and fill with water then add two (2) drops of bleach (5-8%) and clean with brush until stain is removed. Caution: Avoid contact of bleach with eyes and clothing.

What is Total Chlorine?

Total chlorine represents the overall amount of chlorine in the water, including both free chlorine and combined chlorine. It provides a measurement of the total chlorine content in the pool or hot tub.

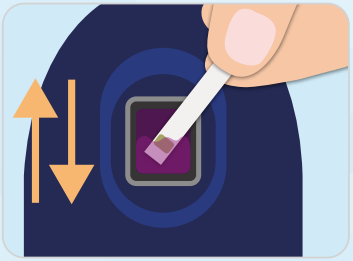
PH TESTING

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the "ZERO/ON" to power on the photometer.	If the meter is on, continue to step 2.
2. 2. SELECT TEST. Press and re-press the MENU button until the display shows "PH". 	If you have done previous pH testing with this meter, the "PH" will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity. 	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing. NOTE: For accurate results, water sample must have a minimum Total Alkalinity of 20 ppm.
4. ZERO METER. Press "ZERO/ON" button. Meter will set the zero for your water sample and show '0.0 pH' on display, indicating the meter is ready for testing. 	Place the cell cover onto the cell before pressing "ZERO/ON" button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip – pH (PH) (Part number 486639-II-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.



When dipping the strip, gently touch the bottom of the cell.

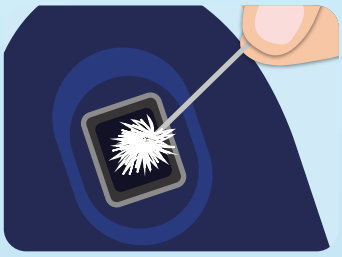
Be careful to not spill the sample from cell while moving the strip back and forth. Make sure the strip is removed from cell when dashes "-" appear on display.

For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays "10" and press READ again

7. READ RESULTS. Result for the pH test will be displayed momentarily. This result is automatically stored in meter's memory.

If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

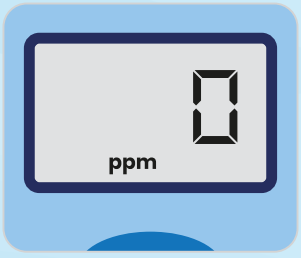
8. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush.



If result reads "LO" that means pH is below 6.4.

If the result reads "HI" that means pH is above 8.4.

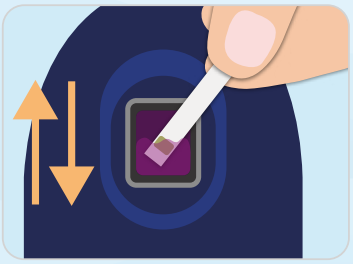
TOTAL ALKALINITY TESTING

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the "ZERO/ON" to power on the photometer.	If the meter is on, continue to step 2.
2. SELECT TEST. Press and re-press the MENU button until the display shows "AL". 	If you have done previous Total Alkalinity testing with this meter, the "AL" will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity. 	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing.
4. ZERO METER. Press "ZERO/ON" button. Meter will set the zero for your water sample and show '0 ppm' on display, indicating the meter is ready for testing. 	Place the cell cover onto the cell before pressing "ZERO/ON" button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip – Total Alkalinity (AL) (Part number 486641-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.



When dipping the strip, gently touch the bottom of the cell.

Be careful to not spill the sample from cell while moving the strip back and forth.

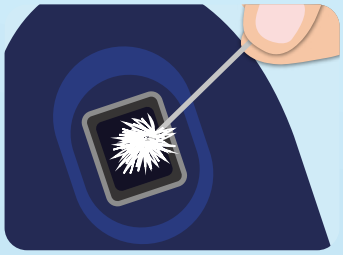
Make sure the strip is removed from cell when dashes "-" appear on display.

For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays "10" and press READ again.

7. READ RESULTS. Result for the Total Alkalinity test will be displayed momentarily. This result is automatically stored in meter's memory.

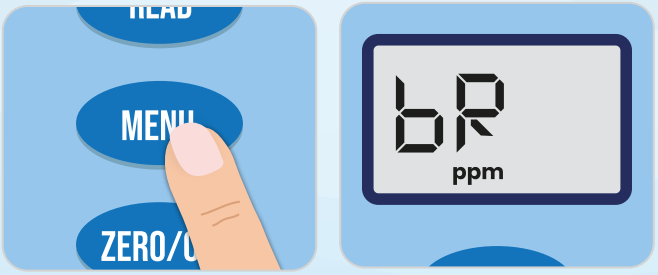
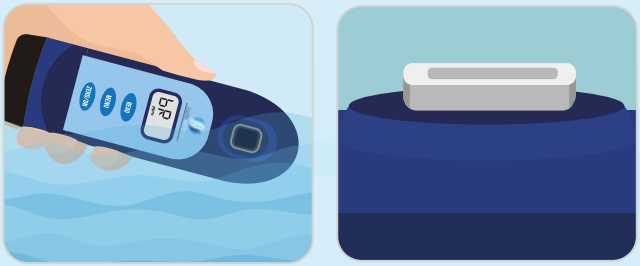
If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

8. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush.



If result reads "HI" that means Total Alkalinity is above 200 ppm.

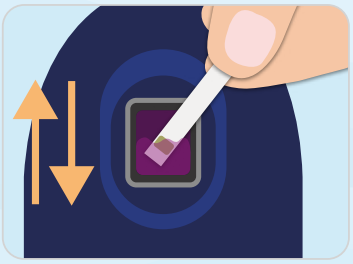
TOTAL BROMINE TESTING

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the "ZERO/ON" to power on the photometer.	If the meter is on, continue to step 2.
2. SELECT TEST. Press and re-press the MENU button until the display shows "bR". 	If you have done previous bromine testing with this meter, the "bR" will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity. 	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing.
4. ZERO METER. Press "ZERO/ON" button. Meter will set the zero for your water sample and show '0.00 ppm' on display, indicating the meter is ready for testing. 	Place the cell cover onto the cell before pressing "ZERO/ON" button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip - Total Bromine (bR) (Part number 486644-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.



When dipping the strip, gently touch the bottom of the cell.

Be careful to not spill the sample from cell while moving the strip back and forth.

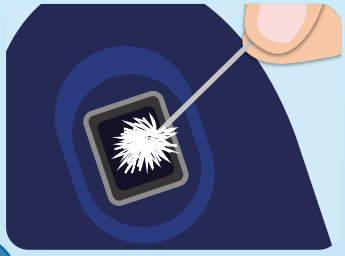
Make sure the strip is removed from cell when dashes "-" appear on display.

For water temperatures above 35°C/95°F (hot tubs), remove and discard strip when timer displays "10" and press READ again.

7. READ RESULTS. Result for the Total Bromine test in ppm (mg/l) will be displayed momentarily. This result is automatically stored in meter's memory.

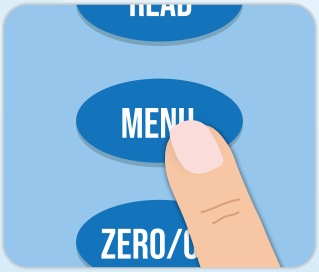
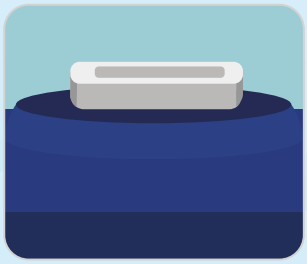
If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

8. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush.



DPD will stain the CELL wall if allowed to remain in the CELL. To remove staining, rinse cell thoroughly and fill with water then add two (2) drops of bleach (5-8%) and clean with brush until stain is removed. Caution: Avoid contact of bleach with eyes and clothing.

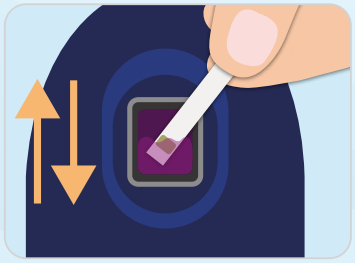
COPPER TESTING

Instructions	Tips
1. POWER ON THE PHOTOMETER. Press the "ZERO/ON" to power on the photometer.	If the meter is on, continue to step 2.
2. SELECT TEST. Press and re-press the MENU button until the display shows "CU".  	If you have done previous Copper testing with this meter, the "CU" will be shortly followed by the last result from your previous testing session. This is NOT your current test result – continue to step 3.
3. FILL CELL. Rinse cell 3 times with the water sample to be tested. Then FILL CELL to capacity.  	Rinse cell and clean with brush thoroughly to ensure accuracy of test. Make sure the cell is full of water before testing.
4. ZERO METER. Press "ZERO/ON" button. Meter will set the zero for your water sample and show '0.00 ppm' on display, indicating the meter is ready for testing. 	Place the cell cover onto the cell before pressing "ZERO/ON" button to remove any potential external light interference.

5. REMOVE STRIP. Remove one Safe Swim Meter Reagent Strip – Copper (CU) (Part number 486632-IES) and set in a dry and convenient place.

Replace the cap on bottle to ensure remaining strips are protected from moisture.

6. PRESS READ AND DIP STRIP. Press the "READ" button to initiate 20 second countdown timer and simultaneously DIP the Safe Swim Meter Reagent Strip in the sample. Use a gentle constant back and forth motion with 2 strokes per second until meter displays "1". Remove and discard strip.



When dipping the strip, gently touch the bottom of the cell.

Be careful to not spill the sample from cell while moving the strip back and forth.

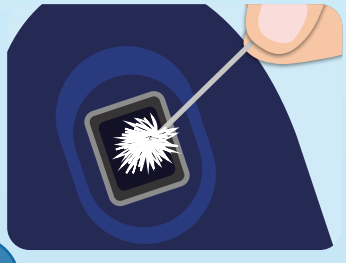
Make sure the strip is removed from cell when dashes "-" appear on display.

For cold water temperatures below 20°C/70°F, after the result is shown, press READ again to initiate another 20 second timer. Don't dip another strip – just wait for the timer to end and display a new result. Use this NEW result.

7. READ RESULTS. Result for the Copper test will be displayed momentarily. This result is automatically stored in meter's memory.

If you used the cell cover when Zeroing meter (STEP 4), use the cell cover again immediately after removing strip. Make sure you cover the cell before result is displayed to avoid any potential external light interference.

8. TESTING COMPLETE – DISCARD SAMPLE. Testing is now complete, discard the sample, rinse the cell without delay and clean with brush.



TIPS FOR BEST ACCURACY

• The Safe Swim® Meter has a 5 minute auto-shutoff timer.

• For best results, use the cell cover when zeroing and reading samples.

• Before testing rinse CELL and clean with brush thoroughly. (Rinsing minimizes the potential for cross-contamination from a previous test.)

• Always fill the cell to capacity (4mL); be careful not to splash liquid over the side.

• When testing pH, it is recommended to run the pH test prior to running Chlorine. If you choose to run the pH after Chlorine, ensure you thoroughly clean the cell with water and the brush provided. Test immediately after filling the cell with the water sample.

• Due to the strip slitting process, you may find one or two strips that are noticeably smaller or larger in width than the normal strips in the bottle. These should be discarded. Using these strips may give unreliable results.

• Meter is not compatible for use with powder pillows, tablets, or liquids from other manufacturers.

• Dip strip for entire countdown of timer.

• Each Safe Swim® Meter Reagent Strip is valid for ONLY one test. Discard strip after use.

• Dry the outside of the meter and inside the mixing cap before storage to prevent corrosion.

• Remove batteries before storing for prolonged periods.

• Store the meter and test materials out of direct sunlight and away from chemical storage areas.

• Minimize exposure of meter and test reagents to heat above 32°C (90°F).

• When installing batteries, verify the O-ring is still attached to the screw before tightening.

• Even if all pads are not immersed in water, DO NOT BEND THE STRIP. Make sure the strip touches the bottom of the CELL while dipping the strip for 20 seconds.

• To ensure lab quality results, it is recommended to clean the cell with the brush provided after every test.

• Each test menu can store 20 results. To retrieve the stored results, go to the desired test using the MENU key. When the desired test is displayed, press and hold down the MENU key. Continue holding down the MENU key to scroll the stored results for that test, starting with the most recent result. The meter will display, from memory, the last 20 readings in sequence beginning with -20, which is the latest result, followed by -19, which is the 2nd latest result, etc; and finally -01, which is the oldest result retained. Only the last 20 readings are stored in each menu. This meter is able to store 100 results in memory (20 in each menu).

TROUBLESHOOTING

Listed below are possible situations that may arise while testing. Please contact one of our knowledgeable customer service representatives if you require further assistance.

Problem	Cause	Tips
Dim screen or no response from meter	Low battery	Replace batteries
"LO" on LCD while zeroing	Low battery	Replace batteries
	Dirty Cell	Clean cell
	Cloudy sample	Dilute sample or use filter
	Bad LED	Contact us
"HI" on LCD while reading	Result above detection level	Re-run test to verify result
"LO" on LCD while reading	Result below detection level	Re-run test to verify result
"LO" flashes on LCD, then "Err"	Improper test procedure for Combined Chlorine	Re-read test procedure and follow directions carefully
"HI" flashes on LCD, then "Err"	Combined Chlorine result above detection limit	Re-run test to verify result Dilute and re-run test

SAFE SWIM ACCURACY

All tests have been calibrated using certified reference standards and analytical spectrophotometric methods. The Safe Swim® Meter has been factory calibrated and will stay valid because of its exceptional quality. We are so confident in the Safe Swim® Meter, we offer an industry leading 2-year warranty.

We built the Safe Swim® Meter to be easy, accurate and environmentally friendly. We have achieved this by utilizing our patented Safe Swim® Meter Reagent Strip Technology, which uses 60% less water and chemistry than alternative methods. Instead of using a 10mL water sample, Safe Swim® Meter Reagent Strip uses a 4mL water sample. The accuracy of the meter is maintained by designing the sample cell with an 11mm path-length.

NSF/ANSI 50 CERTIFICATION

The Model Aquatic Health Code (MAHC) is a set of guidelines published by the Centers for Disease Control and Prevention (CDC). This document brings together the latest knowledge based on science and best practices to help state and local government officials develop and update pool codes. They may use the code in whole, choose to use parts, or modify to fit their needs. Use of the MAHC is intended to save time and resources spent individually developing and updating codes across the country, while giving agencies the benefit of the latest science and best practices to help keep pools fun, safe, and healthy.

The MAHC requires NSF/ANSI 50 certification of water quality testing devices (WQTD) used in recreational facilities such as public swimming pools, interactive fountains, and Waterparks. Third-party certification to NSF/ANSI 50 allows manufacturers to make verified claims regarding the performance, accuracy and operating range of their WQTD. The performance testing of a WQTD involves accuracy and repeatability testing on two different lots of new production. Unlike most NSF/ANSI 50 certifications, WQTDs require follow-up testing of the product at the end of the manufacturer's specified shelf life. Certified products are given an accuracy rating to one of three levels: L1, L2 or L3, with L1 being the highest accuracy rating.

Test	Range	Accuracy Rating
Free Chlorine	0 - 12 ppm	L1
Combined Chlorine	0 - 12 ppm	L2
pH	6.4 - 8.4 pH	L1

COMPLIANCE TESTING

This DPD test system for Chlorine is accepted for reporting by most health departments because the tests are USEPA (DIN Standard 38 408 G4/G5, ISO 7393/2) accepted for testing requirements for Free Chlorine and Total Chlorine.

The compliance requirement is a photometer wavelength to measure between 490 and 530nm. The Safe Swim® meter uses a 525nm wavelength and 11 mm path-length. The Safe Swim® Meter Reagent Strip DPD-1 Free Chlorine use the same reagents and proportions, and the resulting solution pH is maintained between 6.2 and 6.5 as specified by AWWA method 4500-Cl G/ClO2-D.

The USEPA does not "approve" commercial DPD delivery systems. Safe Swim® Meter Reagent Strip DPD-1 Free Chlorine, and the Safe Swim® Meter Reagent Strip DPD-3 Combined Chlorine, and the Safe Swim® Meter Reagent Strip DPD-4 Total Chlorine meet your reportable testing requirements because the Safe Swim® Meter Reagent Strips deliver the same chemicals in identical proportions. Consult with your local health department for official regulation.

Component (Free Chlorine)	AWWA 4500-CL G	Safe Swim® Meter
Anhydrous DPD sulfate	1.5%	1.5%
Anhydrous Na_2HPO_4	33.4%	33.4%
Anhydrous $KH_2PO_4Na_2$	64.0%	64.0%
EDTA	1.1%	1.1%

PATENT INFORMATION

For use in accordance with: US Patent #7,333,194; Euro Pat No. 1 725 864 DE FR UK; South Africa Pat No 2007/0628
by Industrial Test Systems, Inc., 1875 Langston Street, Rock Hill, SC USA.

Safe Swim® is a registered trade mark of Industrial Test Systems Europe Limited in Salisbury, UK.

REORDER INFORMATION

Reagents can be purchased from your local store or online

Free Chlorine
100 Tests
486637-IES

Combined Chlorine
100 Tests
486638-IES

Total Chlorine
100 Tests
486670-IES

pH Level
100 Tests
486639-II-IES

Total Alkalinity
100 Tests
486641-IES

Total Bromine
100 Tests
486644-IES

Copper
50 Tests
486632-IES

Safe Swim® Meter

486206-IES

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TESTS AND REAGENTS

Parameter Test	Part #	Range PPM	% Best Accuracy	# Of Tests
Chlorine, Free (DPD–1)	486637-IES	0.00 - 12.0	NSF-50 L1	100
Chlorine, Combined (DPD–3)	486638-IES	0.00 - 12.0	NSF-50 L2	100
Chlorine, Total (DPD-4)	486670-IES	0.00 - 12.0	5	100
pH	486639-II-IES	6.4 - 8.4	NSF-50 L1	100
Alkalinity, Total	486641-IES	20 - 200	10	100
Bromine, Total (DPD-4)	486644-IES	0.00 - 17.0	5	100
Copper	486632-IES	0.00 - 8.0	2	50

TECHNICAL SUPPORT

Please visit **www.itseurope.co.uk/pages/safe-swim-test-kit-instructions-page** for the latest technical information and how-to-videos.

For additional technical support, call +44 (0) 1722 717 911

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All information in this manual is subject to change.

Visit us online: **www.itseurope.co.uk** for up–to–date product information.

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