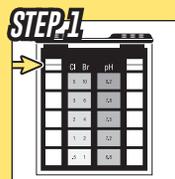


POOL & SPA WATER TESTS

1. Keep test kit out of reach of children.
2. Read precautions on all labels.
3. Store test kit in cool, dark place.
4. Replace reagents once each year.
5. Do not dispose of solutions in pool or spa.
6. Rinse cells/tube before and after each test.
7. Obtain samples 18" (45 cm) below water surface.
8. Hold dropper bottle vertically when dispensing reagent.

Instr. #5116

Free, Combined & Total Chlorine / Total Bromine Test Test daily Ideal Free Chlorine Range: 2-4 ppm (pools or spas) Ideal Total Bromine Range: 2-3 ppm (pools) / 2-4 ppm (spas)



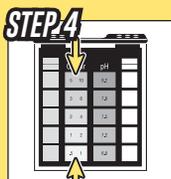
Rinse left comparator test cell and fill with sample water up to the black line.



Add 5 drops R-0001 and 5 drops R-0002.



Cap and invert to mix (DO NOT SHAKE).



Match color with color standard. Record as parts per million (ppm) free chlorine or total bromine.



For total chlorine, use the same sample from Step 4 and add 5 drops R-0003. Cap and invert to mix (DO NOT SHAKE).

STEP 6
Match color immediately and record as ppm total chlorine.

STEP 7
Subtract free chlorine (FC) from total chlorine (TC). Record as ppm combined chlorine (CC). Formula: $TC - FC = CC$ *

more below fold ↓

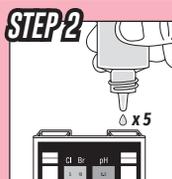
pH Test

Test daily Ideal pH Range: 7.4-7.6 (pools or spas)

Acid Demand Test



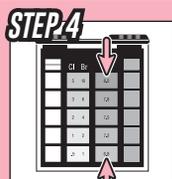
Rinse right comparator test cell and fill with sample water up to black line.



Add 5 drops R-0014.



Cap and invert to mix (DO NOT SHAKE).



Match color with color standard. Record as pH units. If sample color is between two values, pH is average of the two.*

STEP 1
Use treated sample from pH test.

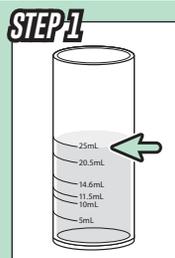
STEP 2
To LOWER pH, add R-0015. After each drop, cap and invert to mix (DO NOT SHAKE). Compare with color standards until desired pH is matched. Record number of drops needed and contact your local pool/spa supply store for recommendations.

*If any adjustments are needed, contact your local pool/spa supply store for recommendations.

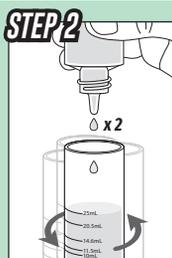
Note: This kit is designed for testing water in residential pools and spas. Upgrading to a kit with additional tests is recommended for those with higher usage or recurrent water problems.

Total Alkalinity Test

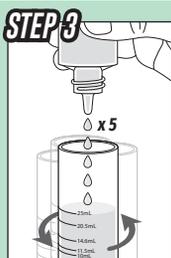
Test weekly Ideal Total Alkalinity Range: 80-120 ppm (pools or spas)



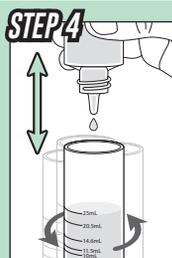
Rinse and fill sample tube (#9198) to 25 mL mark with sample water.



Add 2 drops R-0007. Swirl to mix.



Add 5 drops R-0008. Swirl to mix. Sample will turn green.



Holding bottle vertically, add R-0009 drop by drop, swirling to mix after each drop, until color changes from green to red.

STEP 5
Multiply drops in Step 4 by 10. Record as parts per million (ppm) total alkalinity.*

Visit web.suretreat.com to create an account, save your test results, and receive personalized treatment recommendations.

800-TEST KIT (837-8548)
www.taylor technologies.com

taylor
rev. 042619

TEST DESCRIPTION & RECOMMENDED RANGES

Chlorine & Bromine

Chlorine and bromine are both sanitizers (killing algae, bacteria, and disease-causing organisms) and oxidizers (eliminating swimmer wastes and other organic material). Chlorine's effectiveness is depleted as free chlorine becomes combined chlorine. Free chlorine is the active sanitizer and oxidizer while combined chlorine can cause skin/eye irritation and rashes. This kit reads free chlorine and total chlorine. To obtain the combined chlorine reading, subtract the free chlorine reading from the total chlorine reading. Bromine differs in that free and combined bromine are each effective sanitizers and oxidizers. The reading is for total bromine.

pH

pH defines water's acidic or alkaline nature. At a value of 7 pH is neutral; above 7 water becomes more alkaline; below 7 more acidic. pH can vary for many reasons including overdosing with certain sanitizers and the addition of new water. pH control is important because it affects bather comfort, sanitizer efficiency, and overall water balance.

Recommended Ideal Range: 7.4 to 7.6 (pools & spas)

Test daily (or as bather load demands)

Potential Problems:

- too low = corrodes surfaces/irritates eyes & skin
- too high = scale deposits/cloudy water/poor sanitizer efficiency/bather discomfort

Total Alkalinity

Total alkalinity is the measurement of the water's ability to control pH. Maintaining the correct total alkalinity in your pool/spa water will help prevent costly equipment repairs and the extra expense of additional treatment chemicals.

Recommended Ideal Range: 80 to 120 ppm (pools and spas)

Test weekly

Potential Problems:

- too low = pH bounce (difficult to maintain)/corrosion tendency
- too high = pH lock (difficult to adjust) potential for scaling/cloudy water

Recommended Ideal Range:

Free Chlorine: 2 to 4 ppm (pools or spas)

Bromine: 2 to 3 ppm (pools) / 2 to 4 ppm (spas)

Combined Chlorine: None

Test daily (or as bather load demands)

Potential Problems:

- too low = bacteria & algae growth; bather discomfort
- too high = skin/eye irritation

TROUBLE PREVENTION CHART

| Symptom | Cause | Potential Solution |
|--|--|---|
| Plaster etching, concrete pitting, grout dissolving. | Unbalanced water. | Have pH, total alkalinity & calcium hardness levels tested. Balance water with treatment chemicals recommended by your supplier. |
| Scale on walls & fixtures. (Common in new inground pools.) | | |
| Corrosion of metal fixtures in contact with pool water. Rust & copper stains. | Unbalanced water. Low pH. | Have pH, total alkalinity & calcium hardness levels tested. Balance water with treatment chemicals recommended by your supplier. Add a chelating or sequestering agent per instructions to prevent more stains. |
| Bleached hair or bathing suits. Eye irritation. | Excessive chlorine. | Add sodium thiosulfate or sodium sulfite to neutralize. |
| Eye irritation and/or itchy skin. Water has foul odor. Complaints of "too much chlorine" in water. | High combined chlorine, low free chlorine. | Adjust pH to 7.4 to 7.6.* Perform breakpoint chlorination to eliminate combined chlorine. Do not reenter water until free chlorine level drops below 5 ppm. |
| Skin/eye irritation. | Improper pH. | Adjust pH to 7.4 to 7.6.* |
| Hazy, cloudy water. No sparkle. | Early algae growth. | Superchlorinate or shock. |
| | Poor filtration. | Check filter for proper operation. |
| | High pH. | Lower pH to 7.4 to 7.6.* |
| | High total alkalinity. | Lower total alkalinity to 80-120 ppm. |
| Red-brown water. | Iron. | Seek expert advice on source of metals & treatment solution. |
| Purple-black water. | Manganese. | |
| Blue-green water. | Copper. | |
| Green, slippery pool surfaces & cloudy or green water. Black spotty patches on pool surfaces. Yellow powdery deposits on shady side of pool. | Algae. | Adjust pH to 7.4 to 7.6.* Superchlorinate to 30 ppm. Concrete: Brush sides & bottom with stainless steel brush. Vinyl liner: Use soft nylon brush. Repeat if necessary. Use algaecides. |

* Always bring total alkalinity into recommended range before adjusting pH.