## POOL & SPA WATER TESTS

- 1. Keep test kit out of reach of children.
- read to use this product properly. 2. Read precautions on all labels.

## Free, Combined & Total Chlorine Test

- 1. Rinse and fill small comparator tube to 9 mL mark with water to be tested.
- 2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
- 3. Match color with color standard.\* Record as parts per million (ppm) free chlorine (Cl<sub>2</sub>).
- 4. Add 5 drops R-0003. Cap and invert to mix.
- 5. Match color immediately. Record as ppm total chlorine (Cl2).
- 6. Subtract free chlorine (FC) from total chlorine (TC). Record as ppm combined chlorine (CC) as  $Cl_2$ . Formula: TC - FC = CC.

## **Total Bromine Test**

- 1. Rinse and fill small comparator tube to 9 mL mark with water to be tested.
- 2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
- 3. Match color with color standard.\* Record as parts per million (ppm) total bromine (Br<sub>2</sub>).

\* If color is off-scale: Repeat test using 4.5 mL sample diluted to 9 mL mark with tap

3. Store test kit in cool, dark place. 4. Replace reagents once each year.

5. Do not dispose of solutions in pool or spa.

## Total Alkalinity (TA) Test

- 1.Rinse and fill large comparator tube to 25 mL mark with water to be tested.\*
- 2.Add 2 drops R-0007. Swirl to mix.
- 3.Add 5 drops R-0008, Swirl to mix. Sample will turn
- 4.Add R-0009 dropwise, swirling and counting after each drop, until color changes from green to red.
- 5. Multiply drops in Step 4 by 10. Record as parts per million (ppm) total alkalinity as calcium carbonate (CaCO<sub>3</sub>).
- \* When high TA is anticipated: Use 10 mL sample, 1 drop R-0007, 3 drops R-0008, and multiply drops in

6. Rinse tubes before and after each test.

7. Obtain samples 18" (45 cm) below water surface.

8. Hold dropper bottle vertically when dispensing reagent.

## Cvanuric Acid (CYA) Test

- 1. Rinse and fill bottle (#9191) to 7 mL mark with water to be
- 2. Add R-0013 to 14 mL mark. Cap and mix for 30 seconds.
- 3. Slowly transfer cloudy solution to small comparator tube until black dot on bottom just disappears when viewed from top.
- 4. Read tube at liquid level on back of comparator block. Record reading as parts per million (ppm) cyanuric acid (CYA).

## Sodium Chloride (Salt) Test

For 1 drop = 200 ppm

1. Rinse and fill sample tube (#9198) to 10 mL mark with water to be tested

Swirl to mix. Sample will turn

Instr. #5136

Guidebook (#2004B) amplifies these instructions and should be read to use this product properly.

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

Include

K-2006

tests?

Double-

final size!

sided?

Match colors in sunlight while facing north.



## Free, Combined & Total Chlorine (DPD)

- 1. Fill small tube to 9 mL mark with sample water.
- 2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
- 3. Match color.\* Record as ppm free chlorine (Cl2). 4. Add 5 drops R-0003. Cap and
- invert to mix. 5. Match color immediately. Record as ppm total chlorine
- 6. Subtract free chlorine (FC) from total chlorine (TC). Record as ppm combined chlorine (CC) as (Cl<sub>2</sub>). Formula: TC - FC = CC.

### **Total Bromine**

- 1. Fill small tube to 9 mL mark with sample water.
- 2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
- 3. Match color.\* Record as ppm total bromine (Br<sub>2</sub>).
- \* If color is off-scale: Repeat test using 4.5 mL sample diluted to 9 mL mark with tap water. Multiply reading by 2 to obtain approximate sanitizer level.

If color is still off-scale: Repeat test using 1.8 mL sample diluted to 9 mL mark with tap water. Multiply reading by 5 to obtain approximate sanitizer level.

### Free & Combined Chlorine (FAS-DPD)

- 1. Fill large tube to desired mark with sample water. NOTE: For 1 drop = 0.2ppm, use 25 mL sample. For 1 drop = 0.5 ppm, use 10 mL sample.
- 2. Add 2 dippers R-0870. Swirl until dissolved. If free chlorine is present. sample will turn pink. NOTE: If pink color disappears or no pink color develops, add R-0870 until
- color turns pink. 3. Add R-0871 dropwise, swirling and counting OR after each drop, until color changes from pink to colorless.
  - 4. Multiply drops in Step 3 by drop equivalence (Step 1) Record as ppm free chlorine (Cl<sub>2</sub>).
  - 5. Add 5 drops R-0003. Swirl to mix. If combined chlorine is present, sample will turn pink.
  - 6. Add R-0871 dropwise, swirling and counting after each drop, until color changes from pink to colorless.
  - 7. Multiply drops in Step 6 by drop equivalence (Step 1). Record as ppm combined chlorine (Cl<sub>2</sub>).

- 1. Fill large tube to 44 mL mark with sample
- 2. Add 5 drops R-0004. Cap and invert to mix.
- 3. Match color. Record as pH units. If color is between two values. pH is average of the two. To LOWER pH: See Acid Demand. To RAISE pH: See Base Demand.

## Acid Demand

- 1. Use treated sample from pH test.
- 2. Add R-0005 dropwise. After each drop, count cap and invert to mix. and compare color until desired pH is matched. See Treatment Tables in Guidebook (#2004B) to continue.

# **Base Demand**

- 1. Use treated sample from pH test.
- 2. Add R-0006 dropwise. After each drop, count, cap and invert to mix, and compare color until desired pH is matched. See Treatment Tables in Guidebook (#2004B) to continue.

## Total Alkalinity (TA)

- 1. Fill large tube to 25 mL mark with sample water. 2. Add 2 drops R-0007. Swirl to
- 3. Add 5 drops R-0008. Swirl to
- mix. Sample will turn green.
- 4. Add R-0009 dropwise, swirling and counting after each drop, until color changes from green to red. 5. Multiply drops in Step 4 by 10. Record as ppm total alkalinity as
- calcium carbonate (CaCO<sub>3</sub>). \*When high TA is anticipated: Use

10 mL sample, 1 drop R-0007, 3 drops R-0008, and multiply drops in Step 4 by 25.

## Calcium Hardness (CH)

- 1. Fill large tube to 25 mL mark with sample water.
- 2. Add 20 drops R-0010. Swirl to
- 3. Add 5 drops R-0011L. Swirl to mix. If calcium hardness is present, sample will turn red. . Add R-0012 dropwise, swirling
- and counting after each drop, until color changes from red to blue.
- 5. Multiply drops in Step 4 by 10. Record as ppm calcium hardness as calcium carbonate (CaCO<sub>3</sub>).

\*When high CH is anticipated: Use 10 mL sample, 10 drops R-0010, 3 drops R-0011L, and multiply drops in Step 4 by 25.

2. Add 20 drops R-0010. Swirl to mix.

3. Add 5 drops R-0011L. Swirl to mix. If

4. Add R-0012 dropwise, swirling and

changes from red to blue.

carbonate (CaCO<sub>3</sub>).

calcium hardness is present, sample

counting after each drop, until color

as ppm calcium hardness as calcium

\*When high CH is anticipated: Use 10 mL

and multiply drops in Step 4 by 25.

sample, 10 drops R-0010, 3 drops R-0011L,

water.\*

will turn red.

## Cyanuric Acid (CYA)

- 1. Fill bottle (#9191) to 7 mL mark with sample water.
- 2. Add R-0013 to 14 mL mark. Cap and mix for 30 seconds.
- 3. Transfer cloudy solution to small tube until black dot on bottom just disappears when viewed from top.
- 4. Read tube at liquid level on back of comparator block. Record reading as ppm cyanuric acid (CYA).

## Sodium Chloride (Salt)

- For 1 drop = 200 ppm1. Fill tube (#9198) to 10 mL
- mark with sample water. 2. Add 1 drop R-0630, Swirl to mix. Sample will turn
- yellow. 3. Add R-0718 dropwise, swirling and counting after each drop, until color changes from yellow to a milky salmon (brick red). NOTE: A white precipitate will form as R-0718 Silver
- Nitrate Reagent is added to the sample. First change from yellow to a milky salmon (brick red) is the endpoint
- 4. Multiply drops of R-0718 by 200. Record as ppm sodium chloride (NaCl)

### See reverse.

For 1 drop = 200 ppm

- 1. Fill tube (#9198) to 10 mL mark with sample water.
- 2. Add 1 drop R-0630. Swirl to mix. Sample will turn vellow.
- 3. Add R-0718 dropwise. swirling and counting after each drop, until color changes from vellow to a milky salmon (brick red).

NOTE: A white precipitate will form as R-0718 Silver Nitrate Reagent is added to the sample. First change from yellow to a milky salmon (brick red) is the endpoint.

4. Multiply drops of R-0718 by 200. Record as ppm sodium chloride (NaCl).

### each year. Need to 5. Do not dispose of solution in confirm pool or spa.

- 6. Rinse tubes before and after each test.
- 7. Obtain samples 18" (45 cm) below water surface.
- 8. Hold dropper bottle vertically when dispensing reagent.
- taylor

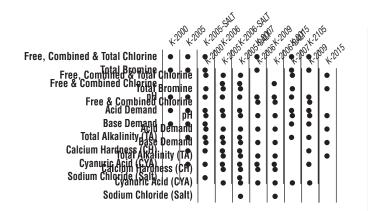
- K-2005-SALI, K-2007, K-2015, K-2100, K-2105 and K-2115
- 1. Fill to 9 mL mark with sample water
- 2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix. 3. Match color.\* Record as ppm

total bromine (Br<sub>2</sub>).

- \* If color is off-scale: Repeat test using 4.5 mL sample diluted to 9 mL mark with tap water. Multiply reading by 2 to obtain approximate sanitizer level.
- If color is still off-scale: Repeat test using 1.8 mL sample diluted to 9 mL mark with tap water. Multiply reading by 5 to obtain approximate sanitizer level.

- COIOL CHANGES HOIH PINK to colorless.
- 4. Multiply drops in Step 3 by drop equivalence (Step 1). Record as ppm free chlorine (Cl<sub>2</sub>).
- Add 5 drops R-0003. Swirl to mix. If combined chlorine is present. sample will turn pink.
- 6. Add R-0871 dropwise. swirling and counting after each drop, until color changes from pink to colorless.
- 7. Multiply drops in Step 6 by drop equivalence (Step 1). Record as ppm combined chlorine (Cl2).

- 2. Add K-0005 dropwise. After each drop, count, cap and invert to mix, and compare color until desired pH is matched. See Treatment Tables in Guidebook (#2004B) to continue.
- Base Demand for K-2000 K-2005, K-2005-SALT, K-2015. K-2100, K-2105 and K-2115
- 2. Add R-0006 dropwise. After to mix, and compare color until desired pH is matched. See Treatment Tables in Guidebook (#2004B) to continue.
- Calcium Hardness (CH) for K-2005, K-2005-SALT, K-2006, K-2006-SALT and 1. Fill to 25 mL mark with sample
- 1. Use treated sample from pH
- 5. Multiply drops in Step 4 by 10. Record each drop, count, cap and invert



Ideal Ranges:

Free Chlorine 2-4 ppm (pools or spas) Combined Chlorine 0 ppm (pools or spas) Total Chlorine 2-4 ppm (pools or spas)

Total Bromine 2-3 ppm (residential pools), 3-4 ppm (public pools) 2-4 ppm (residential spas), 4-6 ppm (public spas)

7.4–7.6 (pools or spas) Total Alkalinity 80-120 ppm (pools or spas) Calcium Hardness 200-400 ppm (gunite pools)

150-250 ppm (spas, aboveground pools, vinyl liner pools and fiberglass shells)

Cvanuric Acid 30–50 ppm (outdoor pools or spas) Sodium Chloride (Salt) See manufacturer's recommendations



0-10 ppm Free, Combined & Total Chlorine (DPD) 0-20 ppm Free & Combined Chlorine (FAS-DPD) 0-20 ppm Total Bromine 7.0-8.0 pH 30-100 ppm CYA

## Contact:

**Range Limitations:** 

Please visit www.taylortechnologies.com for replacement parts and additional information.

## **NSF 50 Classification:**

(DPD) Free Chlorine - L3 (Pool), L3 (Spa/Hot Tub) (DPD) Combined Chlorine – L3 (Pool), L3 (Spa/Hot Tub)
(FAS-DPD) Free Chlorine, 1 drop = 0.2 ppm – L2 (Pool), L1 (Spa/Hot Tub)
(FAS-DPD) Combined Chlorine, 1 drop = 0.2 ppm – L2 (Pool), L1 (Spa/Hot Tub) (FAS-DPD) Free Chlorine, 1 drop = 0.5 ppm - L2 (Pool), L1 (Spa/Hot Tub) (FAS-DPD) Combined Chlorine, 1 drop = 0.5 ppm - L3 (Pool), L2 (Spa/Hot Tub) Total Bromine – L3 (Pool), L3 (Spa/Hot Tub) pH - L3 (Pool), L3 (Spa/Hot Tub) Cyanuric Acid - L3 (Pool), L3 (Spa/Hot Tub)