

Instructions

Instruction Number: 5507

Component	Description
>	POOL/SPA COMBINATION KIT

IMPORTANT TIPS:

1. Guide book (#2004B) amplifies these instructions and should be read to use this product properly.
2. Thoroughly rinse test cell/sample tube before and after each test.
3. Obtain samples approximately 18" (45 cm) below surface of water.
4. Hold bottle vertically when dispensing reagent.
5. Protect kit from direct sunlight and temperature extremes.
6. Handle chemicals carefully; follow label precautions.
7. Keep reagents away from children.

TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 800-TEST KIT (800-837-8548).

PROCEDURE:

NOTE: Be sure to pair the test cells and comparators correctly in the sanitizer and pH tests below. The correct test cell to use is printed on the face of the comparator.

FREE CHLORINE (FC) TEST

1. Rinse and fill test cell (#4024 OR #4025) to mark with water to be tested.
2. Add 5 drops R-0001 DPD Reagent #1 and 5 drops R-0002 DPD Reagent #2. Cap and mix. Wipe dry and place test cell in comparator WITH FROSTED SIDE FACING OPERATOR.
3. Match color in test cell with a color standard. Record as parts per million (ppm) free chlorine (FC).
4. Save sample for TC test.

TOTAL CHLORINE (TC) TEST

1. Use treated sample from FC test.
2. Add 5 drops R-0003 DPD Reagent #3. Cap and mix. Wipe dry and place test cell in comparator WITH FROSTED SIDE FACING OPERATOR.
3. Match color immediately. Record as ppm total chlorine (TC).

COMBINED CHLORINE (CC) CALCULATION

1. Subtract FC from TC. Record as ppm combined chlorine (CC).
Formula: $TC - FC = CC$.

BROMINE TEST

1. Rinse and fill test cell (#4025) to 5 mL mark with water to be tested.
2. Add 5 drops R-0001 DPD Reagent #1 and 5 drops R-0002 DPD Reagent #2. Cap and mix. Wipe dry and place test cell

in comparator WITH FROSTED SIDE FACING OPERATOR.

3. Match color in test cell with a color standard. Record as parts per million (ppm) bromine.

NOTE: The pH Indicator, Acid Demand Reagent, and Base Demand Reagent used with the Midget comparator are not interchangeable with the reagents for the 2000 Series comparator. That is, reagents R-0004, R-0005, and R-0006 cannot be substituted for reagents R-1003J, R-0853, and R-0862 in the following three tests.

pH Test

1. Rinse and fill 11.5 mL test cell (#4024) to 11.5 mL mark with water to be tested.
2. Using a 1.0 mL pipet (#4030), add 0.5 mL R-1003J Phenol Red Indicator. Cap and mix. Wipe dry and place test cell in comparator WITH FROSTED SIDE FACING OPERATOR.
3. Match color in test cell with a color standard. Record as pH units. If color is between two values, pH is the average of the two.
4. Save sample for acid demand test (if pH needs to be LOWERED), or base demand test (if pH needs to be RAISED).

ACID DEMAND TEST

1. Use treated sample from pH test.
2. Add R-0853 Acid Demand Reagent dropwise, mixing and comparing after each drop, until desired pH is reached on comparator. Keep count of drops added. See treatment tables to continue.

BASE DEMAND TEST

1. Use treated sample from pH test.
2. Add R-0862 Base Demand Reagent dropwise, mixing and comparing after each drop, until desired pH is reached on comparator. Keep count of drops added. See treatment tables to continue.

TOTAL ALKALINITY TEST

1. Rinse and fill 25 mL sample tube (#9198) to 25 mL mark with water to be tested.*
2. Add 2 drops R-0007 Thiosulfate N/10. Swirl to mix.
3. Add 5 drops R-0008 Total Alkalinity Indicator. Swirl to mix. Sample should turn green.
4. Add R-0009 Sulfuric Acid .12N dropwise, swirling and counting after each drop, until color changes from green to red.
5. Multiply drops of R-0009 Sulfuric Acid .12N by 10. Record as parts per million (ppm) total alkalinity as calcium carbonate. See treatment tables to continue.

*When high TA is anticipated, this procedure may be used:
Use 10 mL sample, 1 drop R-0007, 3 drops R-0008, and multiply drops in Step 4 by 25.

CALCIUM HARDNESS TEST

1. Rinse and fill 25 mL sample tube (#9198) to 25 mL mark with water to be tested.*
2. Add 20 drops R-0010 Calcium Buffer. Swirl to mix.

3. Add 5 drops R-0011L Calcium Indicator Liquid. Swirl to mix. Sample should turn red.
4. Add R-0012 Hardness Reagent dropwise, swirling and counting after each drop, until color changes from red to blue.
5. Multiply drops of R-0012 Hardness Reagent by 10. Record as parts per million (ppm) calcium hardness as calcium carbonate. See treatment table to increase calcium hardness; high hardness can be eliminated by partially draining and refilling with fresh water of lower hardness.

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

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