

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

## Counterlab Rx 2™ (using DPD)

1. Keep reagents out of reach of children.

2. Read precautions on all labels.

3. Replace reagents once each year.

4. Rinse tubes before and after each test.

5. Hold dropper bottle vertically when dispensing reagent.

6. Turn off SpeedStir and Gepe Slim Lite after use.

7. Do not lose stirring bar when discarding solution.

8. Keep lab clean and dry.

9. Replace reagent caps after use.

Instr. #5245

### Free, Combined & Total Chlorine Test

1. Rinse and fill small comparator tube to 9 mL mark with water to be tested.
2. Turn on Gepe Slim Lite (#9199). 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 (Cl<sub>2</sub>).
6. Subtract free chlorine (FC) from total chlorine (TC) to determine combined chlorine (CC).  
Formula: TC - FC = CC. Record as ppm combined chlorine (CC) as Cl<sub>2</sub>.

### Total Bromine Test

1. Rinse and fill small comparator tube to 9 mL mark with water to be tested.
  2. Turn on Gepe Slim Lite (#9199). 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 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.

### pH Test

1. Using SampleSizer (#6191), rinse and fill large comparator tube to 44 mL mark with water to be tested.
2. Turn on Gepe Slim Lite (#9199). Add 5 drops R-0004. Cap and invert to mix.
3. Match color with color standard. Record as pH units and save sample if pH needs adjustment. If sample color is between two values, pH is average of the two. To LOWER pH: See Acid Demand Test. To RAISE pH: See Base Demand Test.

### Acid Demand Test

1. Use treated sample from pH test.
2. Turn on Gepe Slim Lite (#9199). Add R-0005 dropwise. After each drop, count, invert to mix, and compare with color standards until desired pH is matched. See Treatment Tables in guidebook (#2004B) to continue.

### Base Demand Test

1. Use treated sample from pH test.
2. Turn on Gepe Slim Lite (#9199). Add R-0006 dropwise. After each drop, count, invert to mix, and compare with color standards until desired pH is matched. See Treatment Tables in guidebook (#2004B) to continue.

### Total Alkalinity (TA) Test

1. Remove comparator adapter (#6582).
2. Using SampleSizer (#6190), rinse and fill sample tube (#9198) to 25 mL mark with water to be tested.\*
3. Carefully place stirring bar (#6101) in sample tube. Wipe dry and place on SpeedStir. Turn on SpeedStir.
4. Add 2 drops R-0007.
5. Add 5 drops R-0008. Sample will turn green.
6. Add R-0009 dropwise, counting after each drop, until color changes from green to red.
7. Multiply drops in Step 5 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 Step 6 by 25.

### Calcium Hardness (CH) Test

1. Remove comparator adapter (#6582).
2. Using SampleSizer (#6190), rinse and fill sample tube (#9198) to 25 mL mark with water to be tested.\*
3. Carefully place stirring bar (#6101) in sample tube. Wipe dry and place on SpeedStir. Turn on SpeedStir.
4. Add 20 drops R-0010.  
NOTE: To save time, in place of 20 drops, add 1.0 mL R-0010 using 1.0 mL pipet (#9007).
5. Add 5 drops R-0011L. If calcium hardness is present, sample will turn red.
6. Add R-0012 dropwise, counting after each drop, until color changes from red to blue.
7. Multiply drops in Step 5 by 10. Record as parts per million (ppm) calcium hardness as calcium carbonate (CaCO<sub>3</sub>).

**\*When high CH is anticipated:** Use 10 mL sample, 10 drops R-0010 (or 0.5 mL R-0010), 3 drops R-0011L, and multiply drops in Step 6 by 25.

### Cyanuric Acid (CYA) Test

1. Rinse and fill CYA cylinder (#4088) to "A" mark with water to be tested.
2. Add R-0013 to "B" mark. Move test stick up and down to mix for 30 seconds. WAIT 2 MINUTES. Read before 5 minutes.
3. Raise test stick, then slowly lower until black dot on test stick just disappears when viewed from top.
4. Read test stick at liquid level. Record as parts per million (ppm) cyanuric acid (CYA).



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