# DROP TEST HYDROXYL ALKALINITY (1 drop = 10 or 50 ppm)

#### **COMPONENTS:**

1 x 5086 Instruction

1 x 9011 Pipet, Calibrated (0.5 & 1.0 mL) w/ green cap, plastic Sample Tube, Graduated (25 mL) w/ cap & green dot, plastic

1 x R-0638G-C Phenolphthalein Indicator, 2 oz w/ green cap, DB

1 x R-0711-C Barium Chloride Solution 20%, 2 oz

1 x R-0724-C Hydrochloric Acid .12N, 2 oz, DB

1 x R-0735G-C Hydrochloric Acid .6N, 2 oz w/ green cap, DB

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

### PROCEDURE:

# CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS. KEEP REAGENTS AWAY FROM CHILDREN.

NOTE: When dispensing reagents from dropper bottles, **always** hold bottle in a vertical position.

# **Hydroxyl Alkalinity Test**

# For 1 drop = 10 ppm Calcium Carbonate

- 1. Rinse and fill 25 mL sample tube (#9198G) to 25 mL mark with water to be tested.
- NOTE: For results in grains per gallon (gpg), fill to 14.6 mL mark.
- Using 1.0 mL pipet (#9011), add 1 dropperful (as much as can be drawn up by means of bulb) R-0711 Barium Chloride Solution 20%. Swirl to mix.
- 3. Add 2 drops R-0638G Phenolphthalein Indicator. Swirl to mix. Sample will turn pink (Fig. 1) if hydroxyl alkalinity is present.

4. Add R-0724 Hydrochloric Acid .12N dropwise, swirling and counting after each drop, until color changes from pink to colorless.

NOTE: Disregard any reappearance of pink color.

5. Multiply drops of R-0724 Hydrochloric Acid .12N by 10. Record as parts per million (ppm) hydroxyl alkalinity as calcium carbonate (CaCO<sub>2</sub>).

NOTE: For 14.6 mL sample, record drops of R-0724 Hydrochloric Acid .12N as grains per gallon (gpg) hydroxyl alkalinity as calcium carbonate (CaCO<sub>3</sub>).

## For 1 drop = 50 ppm Calcium Carbonate

- 1. Rinse and fill 25 mL sample tube (#9198G) to 25 mL mark with water to be tested.
- NOTE: For results in grains per gallon (gpg), fill to 14.6 mL mark.
- 2. Using 1.0 mL pipet (#9011), add 1 dropperful (as much as can be drawn up by means of bulb) R-0711 Barium Chloride Solution 20%. Swirl to mix.
- 3. Add 2 drops R-0638G Phenolphthalein Indicator. Swirl to mix. Sample will turn pink (Fig. 1) if hydroxyl alkalinity is present.
- 4. Add R-0735G Hydrochloric Acid .6N dropwise, swirling and counting after each drop, until color changes from pink to colorless.
- NOTE: Disregard any reappearance of red color.
- 5. Multiply drops of R-0735G Hydrochloric Acid .6N by 50. Record as parts per million (ppm) hydroxyl alkalinity as calcium carbonate (CaCO<sub>2</sub>).
- NOTE: For 14.6 mL sample, multiply drops of R-0735G Hydrochloric Acid .6N by 5. Record as grains per gallon (gpg) hydroxyl alkalinity as calcium carbonate (CaCO<sub>3</sub>).



Fig. 1