

## DROP TEST

## CAUSTIC &amp; TOTAL ALKALINITY (Caustic 1 drop = 0.2 g/100 mL, Total 1 drop = 0.265 g/100 mL)

## COMPONENTS:

1 x 4029	Pipet, Calibrated (0.5 & 1.0 mL), plastic
1 x 5018	Instruction
1 x 9011	Pipet, Calibrated (0.5 & 1.0 mL) w/ green cap, plastic
1 x 9198G	Sample Tube, Graduated (25 mL) w/ cap & green dot, plastic
1 x R-0638G-C	Phenolphthalein Indicator (green cap), 2 oz, DB
1 x R-0645-C	Total Alkalinity Indicator, 2 oz, DB
1 x R-0709-C	Hydrochloric Acid Reagent, 2 oz, DB
1 x R-0711-C	Barium Chloride Solution 20%, 2 oz

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.

## Caustic Alkalinity Test

1. Rinse 25 mL sample tube (#9198G) with distilled, deionized, or tap water.
2. Using 1.0 mL pipet (#4029), add 1.0 mL washing or soaking solution. Dilute to 25 mL mark with distilled, deionized, or tap water.
3. Using 1.0 mL pipet (#9011), add 1 dropperful (as much as can be drawn up by means of the bulb) R-0711 Barium Chloride Solution 20%. Swirl to mix.
4. Add 2 drops R-0638G Phenolphthalein Indicator. Swirl to mix. Sample will turn pink (Fig. 1) if caustic alkalinity is present.

5. Add R-0709 Hydrochloric Acid Reagent dropwise, swirling and counting after each drop, until color changes from red to colorless.
6. Multiply drops of R-0709 Hydrochloric Acid Reagent by 0.2. Record as grams per 100 milliliters (g/100 mL) caustic alkalinity as sodium hydroxide (NaOH). For practical purposes this is the same as percent.

## Total Alkalinity Test

1. Rinse 25 mL sample tube (#9198G) with distilled, deionized, or tap water.
2. Using 1.0 mL pipet (#4029), add 1.0 mL washing or soaking solution. Dilute to 25 mL mark with distilled, deionized, or tap water.
3. Add 5 drops R-0645 Total Alkalinity Indicator. Swirl to mix. Sample will turn green (Fig. 2).
4. Add R-0709 Hydrochloric Acid Reagent dropwise, swirling and counting after each drop, until color changes from green to red (Fig. 3).
5. Subtract drops of R-0709 Hydrochloric Acid Reagent in Step 5 of caustic alkalinity test from drops in Step 4 of total alkalinity test. Multiply by 0.265. Record as grams per 100 milliliters (g/100 mL) total alkalinity as sodium carbonate ( $\text{Na}_2\text{CO}_3$ ).



Fig. 1



Fig. 2



Fig. 3



31 Loveton Circle, Sparks, MD 21152 USA  
800-TEST KIT (837-8548) • 410-472-4340

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