

# DROP TEST

## TOTAL HARDNESS (1 drop = 2 or 10 ppm)

Instr. #5225

### COMPONENTS:

1 x 5225	Instruction
1 x 9198B	Sample Tube, Graduated (25 mL) w/ cap & blue dot, plastic
1 x R-0614-C	Hardness Reagent A, 2 oz w/ blue cap, DB
1 x R-0615-I	Hardness Reagent B, 10 g w/ blue dot
1 x R-0683-C	Hardness Reagent, 2 oz, DB
1 x R-0806-C	Hardness Reagent, 2 oz, 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.

#### Total Hardness Test

##### For 1 drop = 2 ppm Calcium Carbonate

1. Rinse and fill 25 mL sample tube (#9198B) to 25 mL mark with water to be tested.

NOTE: For results in grains per gallon (gpg), fill to 14.6 mL mark.

2. Add 5 drops R-0614 Hardness Reagent A. Swirl to mix.

3. Add 1 dipper R-0615 Hardness Reagent B. Swirl until dissolved. Sample will turn red (Fig. 1) if hardness is present.

4. Add R-0806 Hardness Reagent dropwise, swirling and counting after each drop, until color changes from red to blue (Fig. 2).

5. Multiply drops of R-0806 Hardness Reagent by 2. Record as parts per million (ppm) total hardness as calcium carbonate ( $\text{CaCO}_3$ ).

NOTE: For 14.6 mL sample, multiply drops of R-0806 Hardness Reagent by 0.2. Record as grains per gallon (gpg) total hardness as calcium carbonate ( $\text{CaCO}_3$ ).

##### For 1 drop = 10 ppm Calcium Carbonate

1. Rinse and fill 25 mL sample tube (#9198B) to 25 mL mark with water to be tested.

NOTE: For results in grains per gallon (gpg), fill to 14.6 mL mark.

2. Add 5 drops R-0614 Hardness Reagent A. Swirl to mix.

3. Add 1 dipper R-0615 Hardness Reagent B. Swirl until dissolved. Sample will turn red (Fig. 1) if hardness is present.

4. Add R-0683 Hardness Reagent dropwise, swirling and counting after each drop, until color changes from red to blue (Fig. 2).

5. Multiply drops of R-0683 Hardness Reagent by 10. Record as parts per million (ppm) total hardness as calcium carbonate ( $\text{CaCO}_3$ ).

NOTE: For 14.6 mL sample, record drops of R-0683 Hardness Reagent as grains per gallon (gpg) total hardness as calcium carbonate ( $\text{CaCO}_3$ ).



Fig. 1



Fig. 2



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