

DROP TEST

CALCIUM, MAGNESIUM & TOTAL HARDNESS (1 drop = 10 ppm)

COMPONENTS:

1 x 5774	Instruction
1 x 9198B	Sample Tube, Graduated (25 mL) w/ cap & blue dot, plastic
1 x R-0011P-I	Calcium Indicator Powder, 10 g
1 x R-0619B-C	Hardness Buffer, 2 oz w/ blue cap, DB
1 x R-0620B-I	Hardness Indicator Powder, 10 g w/ blue dot
1 x R-0653-2-C	Calcium Buffer, 2 oz, DB
1 x R-0683-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.

Calcium Hardness Test

1. Rinse and fill 25 mL sample tube (#9198B) to 25 mL mark with water to be tested.
2. Add 10 drops R-0653-2 Calcium Buffer. Swirl to mix.
3. Add 1 level dipper R-0011P Calcium Indicator Powder. Swirl to mix. Sample will turn red (Fig. 1) if calcium 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) calcium hardness as calcium carbonate (CaCO_3).

Total Hardness Test

1. Rinse and fill 25 mL sample tube (#9198B) to 25 mL mark with water to be tested.
2. Add 5 drops R-0619B Hardness Buffer and 1 level dipper R-0620B Hardness Indicator Powder. Swirl to mix. Sample will turn red (Fig. 1) if hardness is present.
3. Add R-0683 Hardness Reagent dropwise, swirling and counting after each drop, until color changes from red to blue (Fig. 2).
4. Multiply drops of R-0683 Hardness Reagent by 10. Record as parts per million (ppm) total hardness as calcium carbonate (CaCO_3).

Magnesium Hardness Test

1. Subtract calcium hardness (CH) from total hardness (TH). Record as parts per million (ppm) magnesium hardness (MH) as calcium carbonate (CaCO_3).
Formula: $\text{TH} - \text{CH} = \text{MH}$.

**Fig. 1****Fig. 2**

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