

DROP TEST

CHLORINE BLEACH (1 drop = 10 or 100 ppm/0.05% or 0.5%)

Instr. #5000

COMPONENTS:

1 x 4026	Dipper Spoon, 2 g, plastic, white
1 x 5000	Instruction
1 x 6045	Syringe, 3 mL
1 x 9009	Pipet, Calibrated (0.5 & 1.0 mL) w/ yellow cap, plastic
1 x 9198Y	Sample Tube, Graduated (25 mL) w/ cap and yellow dot, plastic
1 x R-0636-C	Starch Indicator Solution, 2 oz, DB
1 x R-0664-C	Bleach Reagent #1, 2 oz
1 x R-0665S-II	Bleach Reagent #2 (crystals), 50 g
1 x R-0666-C	Bleach Reagent #3, 2 oz, DB
1 x R-0700-C	Thiosulfate 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.

Chlorine Bleach Test

For Bleach Solutions (10-1000 ppm)

1. Select sample size.

NOTE: For 1 drop = 10 ppm, use 25 mL sample.
For 1 drop = 100 ppm, use 2.5 mL sample.

- Using 3 mL syringe (#6045) or 25 mL sample tube (#9198Y), add desired sample size (Step 1) to 25 mL sample tube (#9198Y). Dilute 2.5 mL sample to 10 mL mark with distilled, deionized, or tap water.
- Using 1.0 mL pipet (#9009), add 1 pipetful (as much as can be drawn up with the bulb) R-0664 Bleach Reagent #1. Swirl to mix.
- Using 2 g dipper spoon (#4026), add 1 level dipper R-0665S Bleach Reagent #2. Swirl until dissolved. Sample will turn deep yellow (Fig. 1) or brown (Fig. 2) if chlorine is present.
- Add R-0700 Thiosulfate Reagent dropwise, swirling and counting after each drop, until color changes from deep yellow or brown to pale yellow (Fig. 3).
- Add 10 drops R-0636 Starch Indicator Solution. Swirl to mix. Sample will turn blue (Fig. 4).
- Continue adding R-0700 Thiosulfate Reagent dropwise, swirling and counting after each drop, until color changes from blue to colorless.
- Multiply total drops of R-0700 Thiosulfate Reagent (Steps 5 & 7) by desired equivalence factor (Step 1). Record as parts per million (ppm) available chlorine (Cl_2).



Fig. 1



Fig. 2



Fig. 3

(OVER)

DROP TEST

CHLORINE BLEACH (1 drop = 10 or 100 ppm/0.05% or 0.5%)

Instr. #5000

For Bleach Solutions (0.1%-15%)

1. Select sample size.

NOTE: For 1 drop = 0.05%, use 5 mL sample.

For 1 drop = 0.5%, use 0.5 mL sample.

2. Using 3 mL syringe (#6045), add desired sample size (Step 1) to 25 mL sample tube (#9198Y). Dilute to 10 mL mark with distilled, deionized, or tap water.
3. Using 1.0 mL pipet (#9009), add 1 pipetful (as much as can be drawn up with the bulb) R-0664 Bleach Reagent #1. Swirl to mix.
4. Using 2 g dipper spoon (#4026), add 1 level dipper R-0665S Bleach Reagent #2. Swirl until dissolved. Sample will turn deep yellow (Fig. 1) or brown (Fig. 2) if chlorine is present.
5. Add R-0666 Bleach Reagent #3 dropwise, swirling and counting after each drop, until color changes from deep yellow or brown to colorless.
6. Multiply total drops of R-0666 Bleach Reagent #3 (Step 5) by desired equivalence factor (Step 1). Record as percent (%) available chlorine (Cl_2).

NOTE: Chlorine concentration is determined as grams per 100 mL (g/100 mL). For less concentrated solutions (less than 5%), this is approximately equal to percent (%). For concentrated solutions (equal to or greater than 5%), divide answer in Step 6 by the specific gravity. Record as actual percent available chlorine (Cl_2).

For example: If 15% available chlorine is calculated in Step 6 and the specific gravity is 1.3, actual percent available chlorine is 11.5% by weight.



Fig. 4



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