Taylor's Chlorine Test Kits

INTRODUCTION

Chlorine is used as a sanitizer, oxidizer, and bleaching agent in many commercial, industrial, and recreational applications. Colorimetric methods employ either N,N-diethyl-p-phenylenediamine (**DPD**) for testing free and total chlorine or orthotolidine (**OT**) for determining total chlorine only. Titrations use either the ferrous ammonium sulfate (**FAS-DPD**) method or the iodometric method for testing free and combined chlorine. The FAS-DPD method is popular with people who have difficulty matching shades of pink, as its endpoint is signaled by a distinct change from a color to color*less*.

Combined chlorine (CC) can be determined by subtracting the free chlorine (FC) reading from the total chlorine (TC) reading: TC - FC = CC.

We also offer **chlorine tests in combination kits,** such as chlorine and pH. Please call us for more information.

Note: These tests are limited to on-site analysis. High chlorine, usually over 10 ppm, may partially or totally bleach out DPD indicator and may turn OT indicator dark brown; if this happens, the sample should be diluted and the test result multiplied by the appropriate factor. Bromine, iodine, and oxidized manganese will register as chlorine.

CHLORINE KITS

K-1141
Slide comparator (using **OT**); 0.2–12 ppm total chlorine (Cl_2)

K-1231
Midget comparator (using **OT**); 0–1.0 ppm total chlorine (Cl_2)

K-1234
Midget comparator (using **DPD tablet**); 0.2–3.0 ppm free and total chlorine (Cl_2)

K-1259-1
Slide comparator (using **DPD**); 0–3.0 ppm free and total chlorine (Cl_2)

K-1289
Slide comparator (using **DPD**); 1.0–10 ppm free and total chlorine (Cl_2)

K-1401
Midget comparator (using **OT**); 5–250 ppm total chlorine (Cl_2)

The K-1768 employs liquid-to-liquid color comparison for more accurate readings.

K-1515-C
Drop test (using **FAS-DPD** with potassium iodide solution); 1 drop = 0.2 or 0.5 ppm free and combined chlorine (Cl_2)

K-1516
Drop test (using **FAS-DPD** with potassium iodide crystals); 1 drop = 0.2 or 0.5 ppm free and combined chlorine (Cl_2)

K-1579 (bleach test)
Drop test (**iodometric**); 1 drop = 10 or 100 ppm/0.05 or 0.5% available chlorine (Cl_2)

K-1768
Midget comparator (using **DPD**); 0.2–3.0 ppm free and total chlorine (Cl_2)

K-1768-2
Midget comparator (using **DPD**); 1.5–10 ppm free and total chlorine (Cl_2)

K-9022
Drop test (**iodometric**); 1 drop = 1 ppm total chlorine (Cl_2)

K-9047
Midget comparator (using **DPD**); 0.1–2.0 ppm free and total chlorine (Cl_2)

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Taylor Technologies, Inc.
410-472-4340
800-TEST KIT (837-8548)
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ISO 9001:2008 Certified

USER BENEFITS

- Slide™ comparators (using nine liquid-color standards molded in impact-resistant plastic) are **designed to compensate for color and turbidity.** Midget™ comparators (using eight liquid-color standards) are the **economical alternative when color and turbidity are not present.**
- Titrations do not require the ability to match colors, only the ability to see the **permanent color change** at the end-point of the reaction.
- Test kits **come complete** with all necessary reagents and equipment.
- **Waterproof instructions** are printed on plastic-impregnated paper that resists fading and tearing.
- **Picture guides** to color transitions in the test reassure new users.
- Custom-molded, durable plastic cases provide **safe storage** for all tests.
- **Proven chemistries** are based on *Standard Methods for the Examination of Water and Wastewater,* APHA, Washington, DC, and/or *American Society for Testing and Materials,* ASTM, Philadelphia, PA. Some methods use proprietary chemistry developed by Taylor Technologies.

ALSO AVAILABLE

- Two combination kits that include a chlorine test specifically configured for commercial laundries (K-1615 and K-1616).
- Tests for **other sanitizers/oxidizers** such as bromine, hydrogen peroxide, and ozone.
- A wide array of single- and multiparameter kits featuring color-matching and/or drop-count tests.
- Taylor's TTi® Colorimeter (M-3000); test 30+ parameters commonly encountered in commercial and industrial settings and transfer results to a PC database.
- Myron L Company portable instruments and calibration solutions (sold separately in reagent packs).
- Testing supplies and kit replacement parts (e.g., burets, flasks, test tubes, and test cells).
- **Video demonstrations** for new users posted on our website.
- Toll-free technical assistance at **800-TEST KIT.**

REPRESENTATIVE TEST PROCEDURE

Reproduced from K-1515-C instruction:

DROP TEST
FREE & COMBINED CHLORINE (1 drop = 0.2 or 0.5 ppm)

Instr. #5216

COMPONENTS:

1 x 5216	Instruction
1 x 9198Y	Sample Tube, Graduated (25 mL) w/ cap & yellow dot, plastic
1 x R-0003-C	DPD Reagent #3, 2 oz, DB
1 x R-0870-I	DPD Powder, 10 g
1 x R-0871-C	FAS-DPD Titrating Reagent (chlorine), 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.

Free & Combined Chlorine Tests

1. Rinse and fill sample tube (#9198Y) to desired mark with water to be tested (Fig. 1).

NOTE: For 1 drop = 0.2 ppm, use 25 mL sample.
For 1 drop = 0.5 ppm, use 10 mL sample.

2. Add 2 dippers R-0870 DPD Powder. Swirl until dissolved. Sample will turn pink (Fig. 2) if free chlorine is present.

NOTE: If pink color disappears, add R-0870 DPD Powder until color turns pink.

3. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless.
4. Multiply drops in Step 3 by drop equivalence (Step 1). Record as parts per million (ppm) free chlorine.
5. Add 5 drops R-0003 DPD Reagent #3. Swirl to mix. Sample will turn pink if combined chlorine is present.
6. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless.
7. Multiply drops in Step 6 by drop equivalence (Step 1). Record as ppm combined chlorine.


Fig. 1


Fig. 2

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