

# Taylor's Industrial Test Kits

## INTRODUCTION

An ISO 9001:2008-certified manufacturer, Taylor Technologies has produced reliable, reasonably priced, water-testing supplies for industrial water treaters since 1930. Offerings include test kits and reagents (with private-label options for cases, bottles, and instructions), standard solutions, storage and display selections, labware, and electronic meters.

As any water analyst knows, determining the proper treatment products and dosages begins with accurate test results, and you can count on Taylor, the most trusted name in water testing, to provide the products you need for results you can trust. Below is just a sampling of the many kits available.

## BOILER & COOLING WATER KIT

To prevent corrosion and scale in boiler and cooling water systems, it is essential to analyze both the natural impurities of the source water and the treated water's characteristics. Taylor's combination kits include tests for the analytes most commonly monitored by water treatment professionals.

### K-1645

P/M & P/T alkalinity, chloride, orthophosphate, pH, sulfite, total hardness (includes metal-interference inhibitors)

## CHLORIDE KITS

Chloride is one of the major inorganic anions in water and wastewater. High concentrations of chloride may contribute to corrosion of metal pipes and related structures. A key determination for industrial water treaters, chloride is mainly tested to control blowdown in boilers and bleed-off in cooling systems. Chloride tests are also employed to characterize boiler feedwater and to detect leaks in some types of condensers. Chlorides are determined titrimetrically using either the argentometric or mercuric nitrate method.

### K-1506

Drop test (argentometric method) **for neutral pH waters**;  
1 drop = 10, 25, 50, 100, or 500 ppm  $\text{Cl}^-$

### K-1549

Drop test (argentometric method) for **high pH waters**;  
1 drop = 10, 25, 50, 100, or 500 ppm  $\text{Cl}^-$

### K-1598

Drop test (mercuric nitrate method); 1 drop = 2 or 10 ppm  $\text{Cl}^-$



Taylor's hardness kits feature reagent caps color-coded to the instruction, plus a picture guide to the color transition in the titration (K-1504 pictured).

## CHLORINE KIT

Chlorine is used as a sanitizer, oxidizer, and bleaching agent in many commercial, industrial, and recreational applications. 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 red, as its endpoint is signaled by a distinct change from a color to colorless.

### K-1515-C

Drop test (FAS-DPD with potassium iodide solution);  
1 drop = 0.2 or 0.5 ppm **free** and **combined** chlorine ( $\text{Cl}_2$ )

## HARDNESS KITS

Wherever it occurs, scale reduces operating efficiency and can lead to premature equipment failure; therefore, it is critical to test hardness levels regularly. Taylor offers several test kits for hardness in sensitivities which range from trace-to high-hardness concentrations. All of these kits include metal-interference inhibitors.

### K-1503

Drop test (EDTA titration); 1 drop = 2 or 10 ppm **total** hardness as  $\text{CaCO}_3$

### K-1504

Drop test (EDTA titration); 1 drop = 0.5 ppm **total** hardness as  $\text{CaCO}_3$



*the most trusted name in water testing*

**Taylor Technologies, Inc.**  
410-472-4340  
800-TEST KIT (837-8548)  
[www.taylor technologies.com](http://www.taylor technologies.com)

**ISO 9001:2008 Certified**

## HARDNESS KITS (cont'd)

### K-1505

Drop test (EDTA titration); 1 drop = 2 or 10 ppm **total** hardness as CaCO<sub>3</sub> (uses an odorless buffer)

### K-1514

Drop test (EDTA titration); 1 drop = 2 or 10 ppm **calcium** or **total** hardness as CaCO<sub>3</sub>

## NITRITE KITS

Sodium nitrite-based treatments are commonly used to establish a protective film on ferrous metal surfaces in closed cooling water systems and boilers. Taylor's drop-count titrations for monitoring sodium nitrite use either the permanganate method or the ceric oxidation of nitrite method (commonly called the "CAN" method). In cooling systems treated with glycol antifreeze, the "CAN" method must be used to prevent test interference.

### K-1510

Drop test (ceric oxidation of nitrite method);  
1 drop = 40 ppm NaNO<sub>2</sub>

### K-1563

Drop test (permanganate method using acid sulfate);  
1 drop = 100 ppm NaNO<sub>2</sub>

### K-1565

Drop test (permanganate method using acid sulfate);  
1 drop = 50 ppm NaNO<sub>2</sub>

## USER BENEFITS

- 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.

## REPRESENTATIVE TEST PROCEDURE

Reproduced from K-1504 instruction:

DROP TEST HARDNESS (1 drop = 0.5 ppm)		Instr. #5226
<b>COMPONENTS:</b> 1 x 5226 Instruction 1 x 9198B Sample Tube, Graduated (25 mL) w/ cap & blue dot, plastic 1 x R-0620B-I Hardness Indicator Powder, 10 g w/ blue dot 1 x R-0622-C Trace Hardness Buffer, 2 oz, DB 1 x R-0623-C Trace Hardness Reagent, 2 oz, DB	5. Multiply drops of R-0623 Trace Hardness Reagent by 0.5. Record as parts per million (ppm) hardness as calcium carbonate (CaCO <sub>3</sub> ).	
<b>TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 800-TEST KIT (800-837-8548).</b>		
<b>PROCEDURE:</b> <b>CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS. KEEP REAGENTS AWAY FROM CHILDREN.</b>		<b>Fig. 1</b>
<b>NOTE:</b> When dispensing reagents from dropper bottles, <b>always</b> hold bottle in a vertical position.		<b>Fig. 2</b>
<b>Hardness Test</b> 1. Rinse and fill 25 mL sample tube (#9198B) to 25 mL mark with water to be tested. 2. Add 5 drops R-0622 Trace Hardness Buffer. Swirl to mix. 3. Add 1 level dipper R-0620B Hardness Indicator Powder. Swirl to mix. Sample will turn red (Fig. 1) if hardness is present—proceed to Step 4. Sample will turn blue (Fig. 2) if no hardness is present. 4. Add R-0623 Trace Hardness Reagent dropwise, swirling and counting after each drop, until color changes from red to blue (Fig. 2).		



**taylor**

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- Test kits **come complete** with all necessary reagents and equipment.
- These test kits are practical for both **on- and off-site** testing.
- **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

- **SampleSizer**® for 10/25 mL test volumes (#6190) and **SpeedStir**® magnetic stirrer (#9265) save time for frequent testers.
- A wide array of single- and multiparameter kits featuring color-matching and/or drop-count tests.
- Taylor's **TTi**® **Colorimeter** (M-3000) preprogrammed to test 30+ parameters commonly encountered in commercial and industrial settings. Test results can be transferred to a PC database. Includes lifetime free upgrades, a 5-year warranty, and a lease-to-own option.
- 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**.