Authorized Distributor www.clarksonlab.com Taylor Technologies Testing Products for

industrial &commercial

WATER TREATMENT

TABLE OF contents

K-1690

new products

■ Build your own kits? Need a dedicated space in the plant for water testing? Turn to page 54 for your **carrying case** and **cabinet** options.

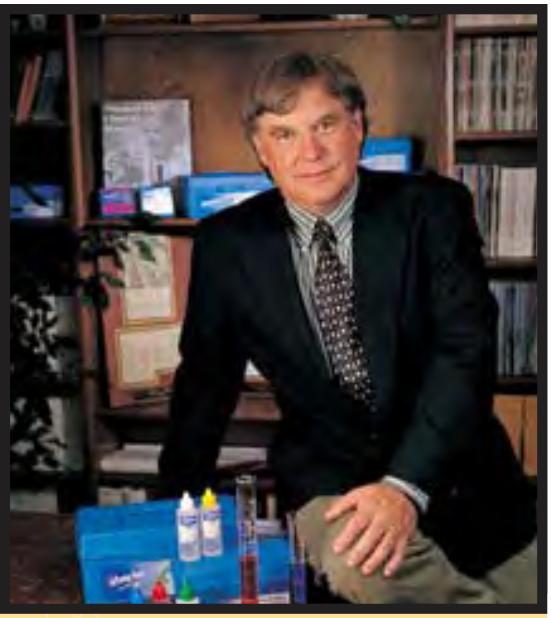
■ Our 8 oz **Demineralizer Bottle** contains an ion-exchange resin that changes color when it needs replenishing. Details on page 39.

■ This **syringe filtration system**, which employs Millipore filter disks, makes it possible to use the more compact Midget™ comparator when testing water with colloidal color or turbidity. See page 52.

■ **Myron L meters** are now available from Taylor. View the TechPro™ Series on page 18.

■ Check out our new **combination kits** configured especially for boiler and cooling water treatment, starting on page 11.

■ **Dip slides from Orion**, described on page 29, indicate light to heavy microbial infection in cooling systems.



our commitment to you

When you specify or use a Taylor product, you can count on its accuracy, stability, and ease of use. You can be assured the chemistry is the result of thorough research and development, and the product has undergone numerous quality control checks before shipment. You can look forward to technical support when you need it from chemists knowledgeable about industrial water treatment.

You can be confident you (or your customer) will receive the items ordered, expertly packed and delivered on time. Your Taylor invoice will be correct. Whenever you have contact with us, you can depend on prompt, informed, courteous service.

If we make a mistake, you can trust us to address it openly and do our best to make things right. We won't be satisfied until you are.

ABOUT taylor

Early on, industrial customers were our target. We helped plant personnel control scaling, corrosion, and biofouling by providing easy-to-use field tests to determine alkalinity, hardness, pH, and other aspects of boiler and cooling water treatment.

Over the past seven decades the company's marketplace has broadened. We've grown to keep pace with changes in society that have brought about an ever-increasing need to monitor water quality— in the workplace, in the natural environment, and at home. From our modern production facilities just north of Baltimore, Taylor Technologies today supplies test kits to water analysts worldwide for many applications. However, the operators of boilers and cooling water systems and the chemical water treatment specialists who serve them remain central to our business focus.

In this highly competitive arena, what accounts for Taylor's longevity? Partly, the answer is simplicity. Wherever uncomplicated, reliable, reasonably priced tests for boiler and cooling water are prized, there exists an opportunity for Taylor. But in large measure, the reason we continue to thrive is the effort we put into making our customers heroes in the eyes of their customers.

Today's water treatment professionals feel pressure to be more productive, responsive, and cost-conscious. It's our goal to help you meet these demands on your workday, not only by giving you dependable test results but also by being a good business partner. Personalized service, toll-free phone lines, 24/7 ordering with our automated attendant, quick turnaround times, drop-shipment capability, and technical assistance from degreed chemists knowledgeable about industrial water treatment are some of the ways we go that "extra mile."

Put us on your team. We'll make you look good.

Paul F. Wooden Jr.

President

Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152-9206

Taylor offers several different tools for analyzing water quality. ■ Color-comparison tests (also referred to as colorimetric tests) are performed with Taylor's trademark Slide™, Long Viewpath™, Midget™, or 2-Standard™ comparators that contain liquid-color standards, or with printed-color standards on laminated cards. This visual method is dependent on the analyst's ability to match the color of the test sample to a color standard. ■ Titration tests involve dispensing reagents from either dropper bottles or burets. They only require the analyst to be able to distinguish a change of color in the treated sample at the endpoint of the reaction, not the colors themselves. ■ Microprocessor-based instruments provide the analyst with a digital readout. Accurate results depend on the operator following maintenance and calibration instructions.

Your options are described more fully below. Please note the color coding employed throughout this catalog to make selecting the appropriate tool easier.

UNSURE WHICH TYPE OF KIT TO CHOOSE FOR YOUR APPLICATION? OUR CUSTOMER SERVICE REPRESENTATIVES ARE TRAINED TO HELP.

color-comparison tests

Comparing a test solution to a liquid-color standard assures greater accuracy in the match than any liquid-to-nonliquid comparison can. In addition, color standards made from extruded plastic and printed paper are more difficult to manufacture with consistent coloration from batch to batch. For these reasons, Taylor's premium colorimetric systems have featured liquid-color standards for 70 years. Prepared from proprietary chemical formulations, the standards are guaranteed never to fade over the lifetime of the instrument, or the defective ampules will be replaced free of charge. Reasonable care (do not drop, leave out in the sun, or let freeze) will ensure many years of service from your investment.

slide™ comparator

This system has three components: the molded-plastic Slide™ comparator itself, which contains nine liquid-color standards guaranteed never to fade; a molded-plastic base, which holds the Slide™ comparator and the vials of sample water; and either three rectangular plastic test cells or three round glass test tubes of specific dimension. The overall system is approximately 10" w x 4" h x 2.25" d.

Each of the color standards is associated with a concentration level of the parameter being tested. A reading is made by sliding the color standards past the treated water sample until a color match appears. Slide™ comparators come in different ranges, corresponding to the conditions most likely encountered in the field. Choose the one whose midpoint value is closest to the target concentration.

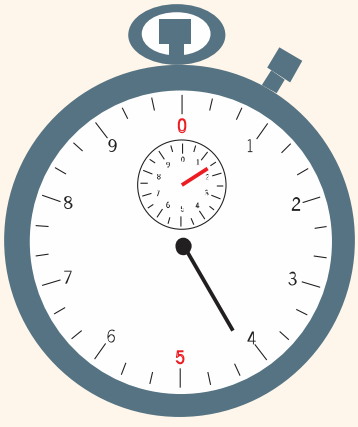
The unique three-cell design of the Slide™ comparator compensates for color and/or turbidity in the sample that would otherwise interfere with proper color matching. For instance, water with a yellowish cast will cause the blue that develops in a cuprizone test for copper to appear green. But, the ampules in the K-1155 copper Slide™ comparator (*shown on page 26*) are all shades of blue. By positioning cells of untreated water behind the color standards on either side of the test sample, all three views will be equally influenced by the yellow color and look greenish. A match is thus possible.

A Slide™ test kit for one parameter consists of the complete comparator system, all necessary reagents, and instructions printed on a special waterproof paper that resists fading and tearing, housed in a durable polypropylene carrying case with handle. Certain combination kits also contain one or more Slide™ tests. The foam inserts for our 9352 Series carrying case (*see page 54*) will accommodate several Slide™ comparators. Replacement reagents and parts are readily available for all kits.

SLIDE™ COMPARATORS ARE DISTINGUISHED BY THREE TEST VIALS AND NINE LIQUID-COLOR STANDARDS. LIQUID-TO-LIQUID COLOR MATCHING IS MORE DEPENDABLE THAN ANY OTHER VISUAL METHOD.

NO. 1 TAYLOR TECHNIQUE TIPS

Analyze samples without delay.



midget™ comparator

Taylor's value-priced Midget™ comparators are the perfect choice for field testing when color and turbidity are not present in the sample, or have been filtered out before the test begins.

Approximately 3.5" w x 3.75" h x 1.75" d, each Midget™ comparator contains eight liquid-color standards cushioned in a molded-plastic block. Because interference from color and/or turbidity is not a problem, only one test cell is necessary. The concentration of a substance is determined by placing the rectangular plastic test cell containing the treated water sample into the cavity at the back of the block and then finding the color match. Test ranges vary, and comparators should be selected based on anticipated levels.

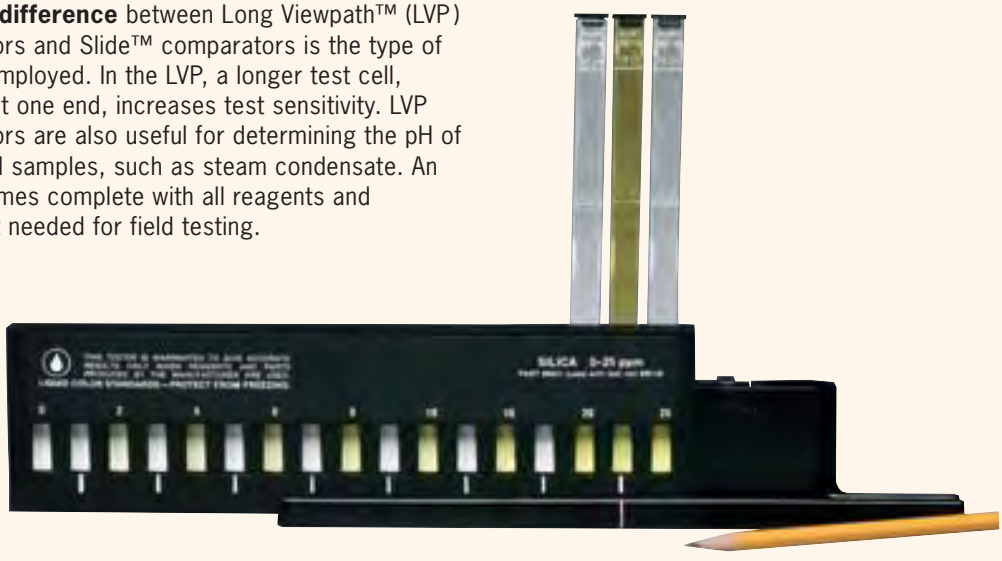
PALMSIZE MIDGET™ COMPARATORS ARE THE ECONOMICAL ALTERNATIVE TO SLIDE™ COMPARATORS WHEN COLOR AND/OR TURBIDITY ARE ABSENT.

A single-parameter Midget™ test kit consists of the comparator and one test cell, all necessary reagents, and instructions printed on our special plastic-impregnated paper, all housed in a compact polypropylene carrying case. Certain combination kits also contain one or more Midget™ tests. The foam inserts for our attaché-type carrying cases (*see pages 54 and 55*) will accommodate multiple Midget™ comparators. Replacement reagents and parts may be ordered for all kits.

long viewpath™ comparator

The only difference between Long Viewpath™ (LVP) comparators and Slide™ comparators is the type of test cell employed. In the LVP, a longer test cell, mirrored at one end, increases test sensitivity. LVP comparators are also useful for determining the pH of unbuffered samples, such as steam condensate. An LVP kit comes complete with all reagents and equipment needed for field testing.

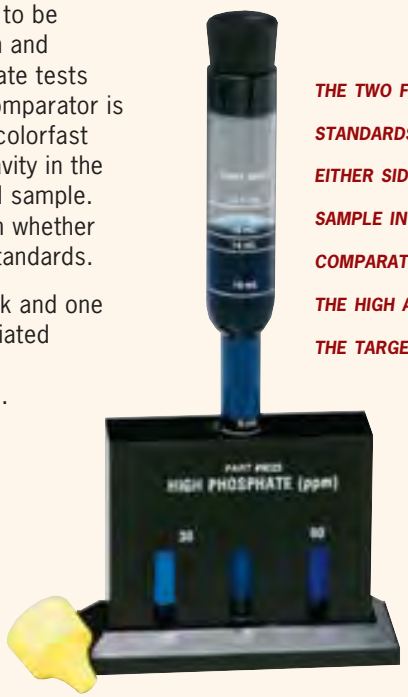
THE LONGER, MIRRORED TEST CELLS OF A LONG VIEWPATH™ COMPARATOR PERMIT THE ANALYST TO DETERMINE LOW-LEVEL CONCENTRATIONS.



2-standard™ comparator

When a chemical treatment only needs to be controlled between an established maximum and minimum concentration—as in orthophosphate tests on boiler water—use of the 2-Standard™ comparator is appropriate. Two glass ampules containing colorfast solutions are mounted on either side of a cavity in the block that holds a test tube with the reacted sample. The developed color is checked to ascertain whether it falls in the range between the two color standards.

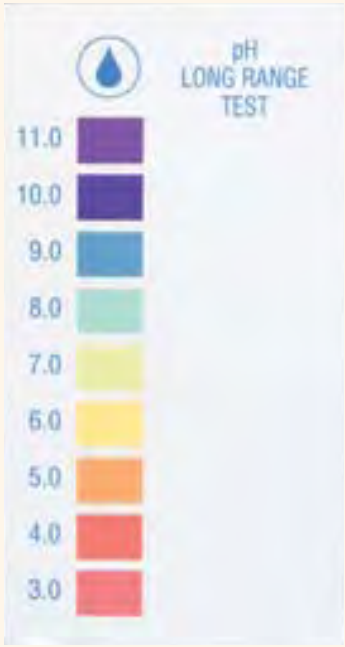
A standard kit contains the comparator block and one test tube, all necessary reagents and associated apparatus, waterproof instructions, and an 11.5" w x 2" h x 5.25" d polypropylene case.



THE TWO FIXED, LIQUID-COLOR STANDARDS POSITIONED ON EITHER SIDE OF THE TEST SAMPLE IN A 2-STANDARD™ COMPARATOR CORRESPOND TO THE HIGH AND LOW VALUES OF THE TARGET CONCENTRATION.

color-card comparator

In the industrial water treatment market, color cards are widely used to test pH. Our low-cost, color-card pH tests are offered singly and in combination with other standard industrial analyses. The easy-to-use color cards are laminated to protect the printed-color standards from water and chemicals.



EACH BATCH OF PRINTED-COLOR STANDARDS IS CHECKED FOR ACCURACY AS PART OF TAYLOR'S QUALITY CONTROL PROGRAM.

titration tests

Many water quality parameters of interest to industrial water treaters, such as hardness and alkalinity, can be monitored with a simple procedure called a titration. In a titration, first a quantity of the water to be analyzed is carefully measured out. Next, a special indicator is added that will change color at the reaction's "endpoint," that is, the moment in the analysis when the reading should be taken. Finally, using either a dropper bottle or a buret, a reagent of known concentration is added incrementally until the color change does take place. (This change—say from pink to colorless—is easy to see, even for those with limited color perception.)

By counting the number of drops added from the dropper bottle or by reading the volume dispensed from the buret, the amount of the unknown parameter in the sample can be calculated.

drop-count titrations

The accuracy of Taylor's drop tests is ±10% or better. Because they are so portable, inexpensive, and fast, drop tests are indispensable for field work. You can choose from 17 different analytes in various equivalencies. Our kits are distinguished by sample tubes with fill marks that are molded (not silk-screened) to ensure consistent volume measurement; dropper tips and pipets manufactured to exacting standards for uniform reagent delivery; waterproof instructions; and durable polypropylene carrying cases.

TAYLOR IS WELL KNOWN IN THE INDUSTRIAL WATER TREATMENT MARKET FOR THE QUALITY CHEMISTRY IN ITS DROP-TEST KITS. THIS TESTING OPTION IS AVAILABLE FOR 17 BOILER/COOLING WATER PARAMETERS.

buret titrations

The accuracy of Taylor's buret titrations is ±2% or better. Taylor offers buret titration reagent packs in various equivalencies for a number of analytes.

Buret titrations are most commonly performed in the laboratory where the setup can be left in place; however, a special carrying case (*see page 55*) may be purchased for transporting this equipment from site to site. The rugged styrene case contains five removable trays for glassware and reagent storage plus four self-zeroing glass stopcock burets with squeeze valves. A lockable steel cabinet (*pictured left*) that holds four buret setups and three shelves' worth of reagents and test equipment is available for field installation.

THE ACCURACY OF A BURET TITRATION CAN BE ACHIEVED OUTSIDE THE LABORATORY BY INSTALLING THIS STURDY METAL CABINET IN THE BOILERHOUSE.

instruments

THESE MICROPROCESSOR-BASED INSTRUMENTS OFFER THE HIGHEST LEVEL OF PERFORMANCE POSSIBLE IN FIELD TESTING, WHEN THEY ARE PROPERLY MAINTAINED AND CALIBRATED REGULARLY.

portable meters

Human factors engineering and today's sensor technology make it possible to determine pH to an accuracy of ±.05 pH units by pressing one key on a handheld meter that weighs not even 12 ounces and then reading a digital display. A new conductivity/TDS meter with the latest in electrode technology is similarly remarkable, promising accuracy of ±1% of full scale in three autoranges at the press of a button. Taylor now offers both technologically advanced instruments, as well as a third to measure pH *and* conductivity/TDS. From the Myron L TechPro™ Series, these tools enable even personnel with minimal technique and knowledge of water chemistry to be successful water analysts.

The pH1 model operates on the principle that a voltage differential between hydrogen ions in the test solution and a captured solution of potassium chloride can be measured with a very high impedance voltmeter circuit. In the pH1, the pH sensor is built into the unit for greater protection and convenience. It is a nonrefillable combination type with a unique porous liquid reference junction. The sensor's one-piece construction, coupled with the generous supply of potassium chloride in its reservoir, means a longer useful life for this instrument than typical two-component construction can provide... and no separate probe to bother about. Temperature compensation is automatic. Automatic shutoff conserves battery life.

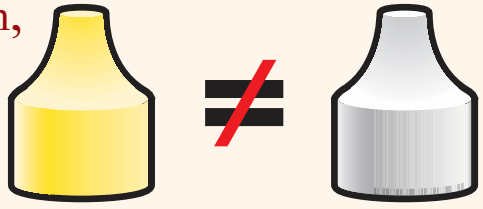
Electrical conductivity indicates solution concentration and ionization of the dissolved material in a test sample. Since temperature greatly affects ionization, conductivity measurements are temperature dependent. Once the effect of temperature is removed, the compensated conductivity becomes a function of the concentration, or TDS. The circuitry employed in the AR1 model for temperature compensation ignores fill level, electrolysis, electrode characteristics, and other obstacles to accuracy faced by lesser meters. The instrument comes pre-set to read conductivity as µS or µmhos. It can be easily changed to read TDS as parts per million NaCl. Like the pH1, temperature compensation in the AR1 is automatic with an accuracy of ±1° C/F. The unit also has an automatic shutoff feature.

The ARH1 model combines all the attributes of the pH1 and AR1 into one instrument.

All three may be purchased in kit form, complete with solutions manufactured by Taylor and a foam-lined, custom-molded polypropylene case.

NO. 2 TAYLOR TECHNIQUE TIPS

To avoid cross-contamination, never switch reagent bottle caps.



The instructions in Taylor test kits are written in simple language anyone can follow. For durability in a wet environment, most are printed on a special plastic-impregnated paper that also resists tearing. All product numbers for the kit's components are clearly identified. A toll-free phone number is provided for technical support and reordering.

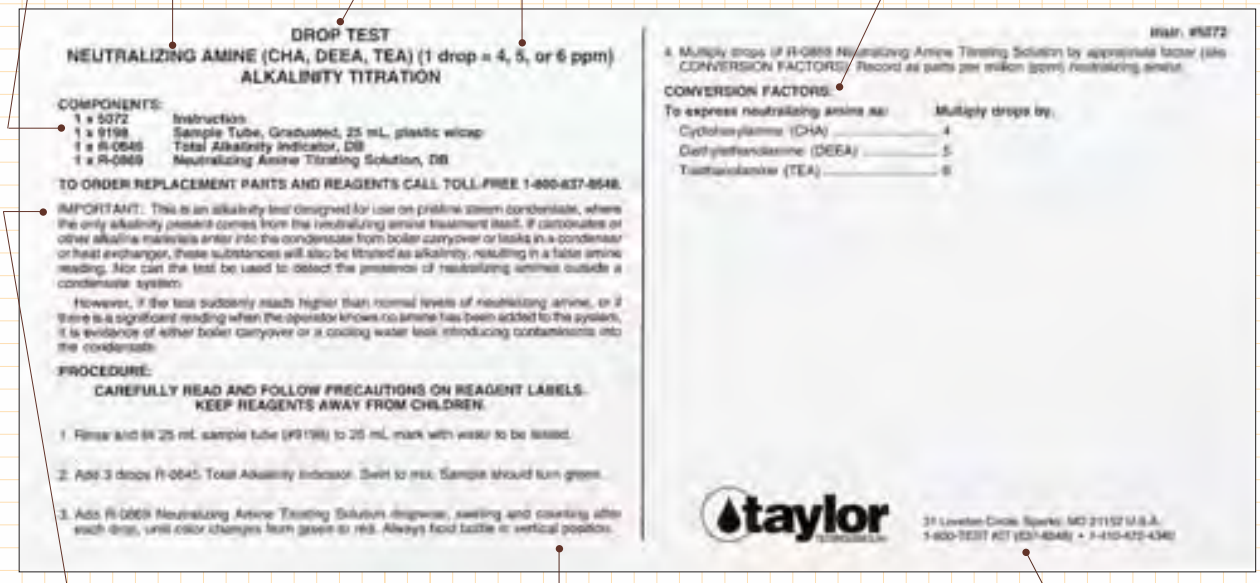
kit contents with part numbers for reordering

test system employed

additional ways to express test results (if applicable)

analyte

test range



DROP TEST
NEUTRALIZING AMINE (CHA, DEEA, TEA) (1 drop = 4, 5, or 6 ppm)
ALKALINITY TITRATION

COMPONENTS:
1 x 5072 Instruction
1 x 9199 Sample Tube, Graduated, 25 mL, plastic w/cap
1 x R-0646 Total Alkalinity Indicator, DB
1 x R-0869 Neutralizing Amine Titrating Solution, DB

TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 1-800-637-8548.

IMPORTANT: This is an alkalinity test designed for use on pristine steam condensate, where the only alkalinity present comes from the neutralizing amine treatment itself. If carbonates or other alkaline materials enter into the condensate from boiler carryover or leaks in a condenser or heat exchanger, these substances will also be titrated as alkalinity, resulting in a false amine reading. Nor can the test be used to detect the presence of neutralizing amines outside a condensate system.

However, if the test suddenly reads higher than normal levels of neutralizing amine, or if there is a significant reading when the operator knows no amine has been added to the system, it is evidence of either boiler carryover or a cooling water leak introducing contaminants into the condensate.

PROCEDURE:
CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS.
KEEP REAGENTS AWAY FROM CHILDREN.

1. Rinse and fill 25 mL sample tube (#9199) to 25 mL mark with water to be tested.

2. Add 3 drops R-0646, Total Alkalinity Indicator. Swirl to mix. Sample should turn green.

3. Add R-0869 Neutralizing Amine Titrating Solution dropwise, swirling and counting after each drop, until color changes from green to red. Always hold bottle in vertical position.

Instr. #5072

4. Multiply drops of R-0869 Neutralizing Amine Titrating Solution by appropriate factor (see CONVERSION FACTORS). Record as parts per million (ppm) neutralizing amine.

CONVERSION FACTORS:

To express neutralizing amine as:	Multiply drops by:
Cyclohexylamine (CHA)	4
Diethylethanolamine (DEEA)	5
Triethanolamine (TEA)	6

taylor

3 Loveton Circle, Sparks, MD 21152 U.S.A.
1-800-TEST KIT (837-8548) • 1-410-472-4340

special considerations

concise, step-by-step instructions

contact information

Over the many years we've been doing business with industrial water treaters and power plant personnel, we've seen certain buying patterns emerge as our customers put together portable laboratories from the individual field tests we offer. The following test combinations have been preassembled for you, based on these patterns, as an alternative to building your own specialty kits.

If you do not spot the combination right for your particular testing regimen, please refer to "Test Storage Options" on page 54, "Custom Kits" on page 60, or contact our customer service department at 800-TEST KIT (837-8548) to learn what other options are available.

K-1640

■ An economical solution for the small operator, this kit contains a sample tube and reagents for four basic drop-count titration tests to monitor low-pressure steam boilers. Contents are packaged in a durable 11" w x 6" h x 5" d blue polypropylene carrying case with handle.

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1640	Alkalinity	Drop test	P/T	1 drop = 50 ppm $CaCO_3$	240 at 300 ppm	R-0638 R-0645 R-0736
	Chloride	Drop test	Argentometric	1 drop = 10 ppm Cl^-	144 at 100 ppm	R-0630 R-0638 R-0706 R-0736
	Hardness (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	R-0619 R-0620 R-0683
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	R-0638 R-0699 R-0725

K-1645

■ A combination of four drop-count titrations (same tests as the K-1640 except the alkalinity drop-equivalence is lower) plus a color-card test for pH and an orthophosphate test employing the 2-Standard™ comparator, this best seller comes in a 11" w x 6" h x 5" d blue polypropylene carrying case with handle. All reagents and apparatus needed to perform the tests are provided, including a plastic funnel, filter paper, and a test tube brush.

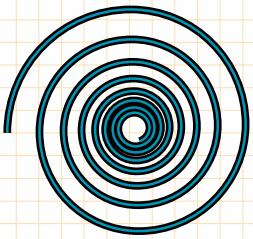
KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1645	Alkalinity	Drop test	P/M and P/T	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	NA	NA	R-0637 R-0638 R-0645 R-0687
	Chloride	Drop test	Argentometric	1 drop = 10 ppm Cl^-	72 at 200 ppm	NA	NA	R-0630 R-0638 R-0687 R-0706
	Hardness (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 10 ppm $CaCO_3$	72 at 200 ppm	NA	NA	R-0619 R-0620 R-0683
	Orthophosphate	2-standard	Stannous chloride	30 and 60 ppm PO_4	12	9025	9021	R-0601 R-0602P
	pH (approx.)	Color card	Long range	3 to 11 (1.0 increments)	288	5425	9017	R-1003U
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	NA	NA	R-0638 R-0699 R-0725

K-1645 variations: *Don't need the chloride or pH tests? Order **K-1645-1**.*
*Only need the alkalinity, chloride, and hardness tests? Order **K-1645-2**.*
*The drop tests for alkalinity, hardness, and sulfite enough? Order **K-1645-3**.*
*Don't want pH and sulfite tests? Order **K-1645-4**.*
*Hardness and pH tests unnecessary? Order **K-1645-5**.*
*Orthophosphate and pH not needed? Order **K-1645-6**.*

K-1645	P/M, P/T ALKALINITY	CHLORIDE	TOTAL HARDNESS	ORTHO-PHOSPHATE	pH	SULFITE
K-1645-1	■		■	■		■
K-1645-2	■	■	■			
K-1645-3	■		■			■
K-1645-4	■	■	■	■		
K-1645-5	■	■		■		■
K-1645-6	■	■	■			■

NO. 3 TAYLOR TECHNIQUE TIPS

Swirl after each drop of titrant to ensure complete mixing.



K-1650

■ The K-1650 contains tests for two key control parameters common to boiler and cooling water, alkalinity and chloride, as well as tests for orthophosphate- and sulfite-based boiler water treatments. Components include the 2-Standard™ comparator for orthophosphate, mixing and sample tubes, filter paper, a plastic funnel, and a test tube brush. The durable blue polypropylene carrying case measures a compact 11" w x 6" h x 5" d.

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1650	Alkalinity	Drop test	P/T	1 drop = 50 ppm $CaCO_3$	240 at 300 ppm	NA	NA	R-0638 R-0645 R-0736
	Chloride	Drop test	Argentometric	1 drop = 10 ppm Cl^-	144 at 100 ppm	NA	NA	R-0630 R-0638 R-0706 R-0736
	Orthophosphate	2-standard	Stannous chloride	30 and 60 ppm PO_4	12	9025	9021	R-0601 R-0602P
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	NA	NA	R-0638 R-0699 R-0725

K-1680

■ This kit offers six popular drop tests for monitoring high-pressure steam boilers and open cooling water systems, including our best-selling CAN method for nitrite, in an 11" w x 6" h x 5" d polypropylene carrying case with handle. All reagents and apparatus needed to perform the tests are provided, including pH test paper for determining phosphonate levels.

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1680	Alkalinity	Drop test	P/T (using HCl)	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	R-0638 R-0645 R-0724
	Chloride	Drop test	Argentometric	1 drop = 10 ppm Cl^-	144 at 100 ppm	R-0630 R-0638 R-0686 R-0706
	Hardness (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	R-0619 R-0620 R-0683
	Nitrite	Drop test	Cerric ammonium nitrate	1 drop = 40 ppm $NaNO_2$	144 at 400 ppm	R-0819 R-0820
	Phosphonate	Drop test	Thorium nitrate/ xylenol orange (uses pH paper 1.8-3.8 for pH adjustment)	1 drop = 1 ppm Aminotri (methylene phosphonic acid)	144 at 10 ppm	R-0686 R-0697 R-0802P R-0803 R-0805
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	R-0638 R-0699 R-0725

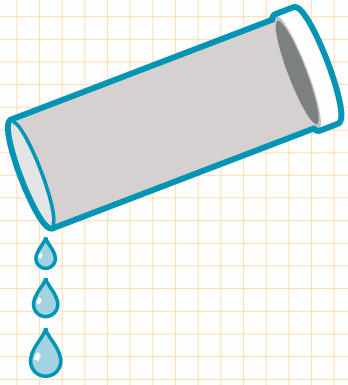
NEW! K-1690

■ New! An upgraded version of the K-1680, the K-1690 also includes a Midget™ comparator for silica and the liquid-powder combination drop test for molybdenum preferred for its stability. The foam-lined, black, high-density polyethylene attaché-type case measures 15.5" w x 13.25" h x 5.5" d. A plastic envelope for your paperwork attaches with Velcro™ to the inside lid.

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1690	Alkalinity	Drop test	P/T (using HCl)	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	NA	NA	R-0638 R-0645 R-0724
	Chloride	Drop test	Argentometric	1 drop = 10 ppm Cl^-	144 at 100 ppm	NA	NA	R-0630 R-0638 R-0686 R-0706
	Hardness (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	NA	NA	R-0619 R-0620 R-0683
	Molybdenum	Drop test	Complexometric (uses powdered indicator for increased stability)	1 drop = 2, 5, 20, or 50 ppm Mo	288 at 10 ppm	NA	NA	R-0890 R-0892 R-0901 R-0900
	Nitrite	Drop test	Cerric ammonium nitrate	1 drop = 40 ppm $NaNO_2$	144 at 400 ppm	NA	NA	R-0819 R-0820
	Phosphonate	Drop test	Thorium nitrate/ xylenol orange (uses pH paper 1.8-3.8)	1 drop = 1 ppm Aminotri (methylene phosphonic acid)	144 at 10 ppm	NA	NA	R-0686 R-0697 R-0802P R-0803 R-0805
	Silica	Midget	Heteropoly blue	5, 10, 15, 20, 25, 30, 40, 50 ppm SiO_2 *By dilution*: 25, 50, 75, 100, 125, 150, 200, 250 ppm SiO_2 *or* 50, 100, 150, 200, 250, 300, 400, 500 ppm SiO_2	50	9257	4025	R-1305Q R-1305U R-1306T R-1306U
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	NA	NA	R-0638 R-0699 R-0725

NO. 4 TAYLOR TECHNIQUE TIPS

Avoid cross-contamination by thoroughly rinsing the sample container between tests.



NEW! K-1691

■ New! This versatile kit holds seven tests appropriate for low-pressure steam boilers and open cooling systems, including the liquid-powder combination drop test for molybdenum preferred for its stability. The pH test employs a color card; the orthophosphate test, the 2-Standard™ comparator. Reagents, testing apparatus, and a plastic envelope for paperwork are housed in a foam-lined, black, high-density polyethylene attaché-type case measuring 15.5" w x 13.25" h x 5.5" d.

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1691	Alkalinity	Drop test	P/M and P/T	1 drop = 10 ppm $CaCO_3$	144 at 100 ppm	NA	NA	R-0637 R-0638 R-0645 R-0687
	Chloride	Drop test	Argentometric	1 drop = 10 ppm Cl^-	72 at 200 ppm	NA	NA	R-0630 R-0638 R-0687 R-0706
	Hardness (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 10 ppm $CaCO_3$	72 at 200 ppm	NA	NA	R-0619 R-0620 R-0683
	Molybdenum	Drop test	Complexometric (uses powdered indicator for increased stability)	1 drop = 2, 5, 20, or 50 ppm Mo	288 at 10 ppm	NA	NA	R-0890 R-0892 R-0900 R-0901
	Orthophosphate	2-standard	Stannous chloride	30 and 60 ppm PO_4	12	9025	9021	R-0601 R-0602P
	pH (approx.)	Color card	Long range	3 to 11 (1.0 increments)	288	5425	9017	R-1003U
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	NA	NA	R-0638 R-0699 R-0725

NEW! K-1646

■ New! Our specialty kit for closed systems, the K-1646 includes drop tests for nitrite and molybdenum as well as a color-matching test for long-range pH with the Midget™ comparator. Everything needed to perform these tests is contained in the compact (11" w x 6" h x 5" d) blue polypropylene carrying case.

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1646	Molybdenum	Drop test	Complexometric (uses powdered indicator for increased stability)	1 drop = 2, 5, 20, or 50 ppm Mo	288 at 10 ppm	NA	NA	R-0890 R-0892 R-0900 R-0901
	Nitrite	Drop test	Permanganate	1 drop = 50 ppm $NaNO_2$	28	NA	NA	R-0733 R-0781
	pH	Midget	Long range	3 to 10 (1.0 increments)	120	9052	4024	R-1003U

IMPROVED!

K-9105

■ Improved! Our top-of-the-line kit for monitoring water quality in high-pressure steam boilers and open cooling systems now offers *twice as many tests* as the original version for a total of 15. The kit includes a syringe filtration system, an 8 oz. demineralizer bottle filled with ion-exchange resin, plus Myron L Company's ARH1 pH/conductivity/TDS meter. The deluxe case projects a professional appearance without sacrificing durability: blow-molded, high-density polyethylene will stand up to the rigors of your busiest day; a new pin hinge means a longer service life. A paper pouch, clip board, and lockable, steel latches are the answer to requests for secure "desk" space. Overall dimensions are 18.5" w x 15.75" h x 8" d. (*Left: Divider flap/document holder not shown.* *See page 55.*)

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-9105	Alkalinity	Drop test	P/M	1 drop = 50 ppm $CaCO_3$	240 at 300 ppm	NA	NA	R-0637 R-0638 R-0736
	Chloride	Drop test	Argentometric	1 drop = 2, 10, or 100 ppm Cl^-	180 at 800 ppm	NA	NA	R-0630 R-0638 R-0686 R-0807
	Conductivity	ARH1 Meter	Electrometric	Range: 0-1999 µS *or* 2-19.90 mS	NA	NA	NA	R-0804-DD R-0868-25C
	Copper	Midget	Cuprizone	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cu	120	9049	4024	R-0860 R-0861
	Hardness (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 10 or 50 ppm $CaCO_3$	144 at 500 ppm	NA	NA	R-0619 R-0620 R-0683
	Hardness (total, trace levels)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 0.5 ppm $CaCO_3$	360 at 2 ppm	NA	NA	R-0620 R-0622 R-0623
	Iron (total)	Midget	TPTZ	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm Fe	60	9051	4024	R-0851 R-0852
	Molybdenum	Drop test	Complexometric (uses powdered indicator for increased stability)	1 drop = 2, 5, 20, or 50 ppm Mo	288 at 10 ppm	NA	NA	R-0890 R-0892 R-0900 R-0901
	Nitrite	Drop test	Permanganate	1 drop = 50 ppm $NaNO_2$	28	NA	NA	R-0733 R-0781
	Orthophosphate	Midget	Stannous chloride	10, 20, 30, 40, 50, 60, 80, 100 ppm PO_4	24	9350	9021	R-0601 R-0602P
	pH	ARH1 Meter	Electrometric	Range: 0-14	NA	NA	NA	R-1099-04 R-1099-07 R-1099-10
	Phosphonate	Drop test	Thorium nitrate/ xylenol orange (uses pH paper 1.8-3.8 for pH adjustment)	1 drop = 1 ppm Aminotri (methylene phosphonic acid)	144 at 10 ppm	NA	NA	R-0686 R-0697 R-0802P R-0803 R-0805
	Silica	Midget	Heteropoly blue	5, 10, 15, 20, 25, 30, 40, 50 ppm SiO_2 *By dilution*: 25, 50, 75, 100, 125, 150, 200, 250 ppm SiO_2 *or* 50, 100, 150, 200, 250, 300, 400, 500 ppm SiO_2	50	9257	4025	R-1305Q R-1305U R-1306T R-1306U
	Sulfite	Drop test	Iodometric	1 drop = 10 ppm Na_2SO_3	288 at 50 ppm	NA	NA	R-0638 R-0699 R-0725
	Total Dissolved Solids	ARH1 Meter	Electrometric	Range: 0-1999 ppm *or* 2-19.90 ppt	NA	NA	NA	R-0804-DD R-0868-25C

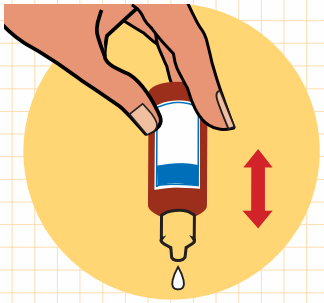
NEW! K-9106

■ New! You asked for it, you got it! Devoted to the needs of field service crews who specialize in cleaning boilers and cooling systems, this portable laboratory contains two drop-count tests, four color-matching tests with Midget™ comparators, a syringe filtration system, and the Myron L ARH1 pH/conductivity/TDS meter. Our best carrying case looks like a briefcase but performs like a tank, protecting the testing equipment inside with a blow-molded, high-density polyethylene shell and water-resistant rigid foam inserts. Only five pounds when empty, it measures 18.5" w x 15.75" h x 8" d. (*Left: Divider flap/document holder not shown.* *See page 55.*)

KIT NUMBER	TEST	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-9106	Alkalinity	Drop test (using H_2SO_4)	P/M and P/T	1 drop = 10 or 50 ppm $CaCO_3$	140 at 100 ppm	NA	NA	R-0637 R-0638 R-0645 R-0687 R-0736
	Chlorine (total)	Midget	OT	5, 25, 50, 75, 100, 150, 200, 250 ppm chlorine	120	9297	4025	R-0604 R-0616
	Conductivity	ARH1 Meter	Electrometric	Range: 0-1999 µS *or* 2-19.90 mS	NA	NA	NA	R-0804-DD R-0868-25C
	Copper	Midget	Cuprizone	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cu	120	9049	4024	R-0860 R-0861
	Iron (total)	Midget	TPTZ	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm Fe	60	9051	4024	R-0851 R-0852
	Orthophosphate	Midget	Stannous chloride	10, 20, 30, 40, 50, 60, 80, 100 ppm PO_4	24	9350	9021	R-0601 R-0602P
	pH	ARH1 Meter	Electrometric	Range: 0-14	NA	NA	NA	R-1099-04 R-1099-07 R-1099-10
	Total Dissolved Solids	ARH1	Electrometric	Range: 0-1999 ppm *or* 2-19.90 ppt	NA	NA	NA	R-0804-DD R-0868-25C
	Zinc	Drop test	Complexometric	1 drop = 0.5 ppm Zn	90 at 8 ppm	NA	NA	R-0627S-10 R-0628-10 R-0839 R-0840 R-0841 R-1003J

NO. 5 TAYLOR TECHNIQUE TIPS

Hold dropper bottles vertically when dispensing reagents, for uniform drop size.



Taylor Technologies is pleased to be able to offer industrial water analysts three new meters from the Myron L Company. The name synonymous with reliability in portable instrumentation, Myron L debuted the TechPro™ Series in 1999. Teamed up with the Taylor reagents you know you can trust, these field instruments will give you an unbeatable return on your investment.

NEW! model pH1

■ The pH1 from Myron L's TechPro™ Series comes in an 11" w x 6" h x 5" d foam-lined carrying case of blue polypropylene, complete with two bottles each of 4.0, 7.0, and 10.0 buffer solution manufactured by Taylor. No separate probe to worry about, automatic temperature compensation, and automatic shutoff help make this pH meter an outstanding value. **Note:** The battery and pH sensor are user-replaceable.

pH1 SPECIFICATIONS	pH	TEMPERATURE
Range	0-14 pH	0-71° C 32-160° F
Resolution	.01 pH	0.1° C/F
Accuracy	±.05 pH	±1.0° C/F
Auto Temperature Compensation	0-71° C 32-160° F	
Power	9V Alkaline Battery (User-replaceable)	
Operating/Storage Temperature	-10-55° C/14-132° F	

*To order **meter only**, use Part No. 6510.*

*To order as a **complete kit** with 2 oz bottles of Taylor pH buffers 4.0, 7.0, and 10.0, plus foam-lined polypropylene carrying case, use Part No. K-6510.*

The pH sensor should never be allowed to dry out. Buffer solutions 4.0, 7.0, and 10.0 are available in 2 oz (codes B and C), 4 oz (code D), 16 oz (code E), 32 oz (code F), and 64 oz (code G) sizes.

NO. 6 TAYLOR TECHNIQUE TIPS

Wipe up spills promptly.

TechPro™ Series advantages include: ■ Rugged, lightweight ABS casing (7.7" l x 2.7" w x 2.5" h) ■ Internal electrodes for maximum protection ■ Superior resolution 3-1/2 digit liquid crystal display ■ 100 hours/5,000 readings with low battery warning ■ Water-resistant construction (IP64/NEMA 3 rating) ■ Limited one-year warranty from Myron L

NEW!

model AR1

■ The Myron L AR1 for determining conductivity and total dissolved solids readings comes in our 11" w x 6" h x 5" d foam-lined carrying case of blue polypropylene, complete with two 2-oz bottles of conductivity solution (2500 µS) and two 2-oz bottles of DI water. Like the other units in this series, it is water resistant, the electrodes are built in, the instrument is fully temperature compensated, and the battery is user-replaceable. Conductivity and TDS tests have never been easier or faster!

AR1 SPECIFICATIONS	CONDUCTIVITY	TDS	TEMPERATURE
Ranges	0-1999 µS 2-19.99 mS in 3 autoranges	0-1999 ppm 2-19.99 ppt in 3 autoranges	0-71° C 32-160° F
Resolution	0.1 (<200 µS) 1 (<2000 µS) 0.01 (>2 mS)	0.1 (<200 ppm) 1 (<2000 ppm) 0.01 (>2 ppt)	0.1° C/F
Accuracy	±1% of Full Scale		1.0° C/F
Auto Temperature Compensation	0-71° C 32-160° F		
Conductivity or TDS Ratios	NaCl		
Power	9V Alkaline Battery (User-replaceable)		
Operating/Storage Temperature	-10-55° C/14-132° F		

*To order **meter only**, use Part No. 6520.*

*To order as **complete kit** with 2 oz bottles of Taylor Conductivity Solution 2500 µS for calibrations and DI water for rinsing, plus foam-lined polypropylene carrying case, use Part No. K-6520.*

Conductivity Solution 2500 µS (µmhos) is supplied for instrument calibration. Other standard solutions may be purchased separately, including 50 µS, 500 µS, 1000 µS, and 5000 µS. All conductivity solutions are available in 2 oz (code C), 4 oz (code D), and 32 oz (code F) sizes; all, except Conductivity Solution 50 µS, are also available in 64 oz (code G). DI water may be purchased in 2 oz (codes B and C), 16 oz (code E), 32 oz (code F), and 64 oz (code G) sizes.

NEW! model ARH1

This lightweight, handheld instrument for measuring pH and conductivity/TDS from the Myron L Company has many applications in industrial water treatment. The ARH1 from the TechPro™ Series comes in our 11" w x 6" h x 5" d foam-lined carrying case of blue polypropylene, complete with 2 oz bottles of three pH buffer solutions (4.0, 7.0, and 10.0), a 2 oz Conductivity Solution 2500 µS, and a 2 oz bottle of DI water, all manufactured by Taylor. A long-life pH sensor, autoranging for conductivity/TDS, and automatic temperature compensation are some of the features that distinguish this meter from the competition. **Note:** The battery and pH sensor are user-replaceable.

ARH1 SPECIFICATIONS	pH	CONDUCTIVITY	TDS	TEMPERATURE
Ranges	0-14 pH 2-19.99 mS in 3 autoranges	0-1999 µS 2-19.99 ppt in 3 autoranges	0-1999 ppm 32-160° F	0-71° C
Resolution	.01 pH 1 (<2000 µS) 0.01 (>2 mS)	0.1 (<200 µS) 1 (<2000 ppm) 0.01 (>2 ppt)	0.1 (<200 ppm)	0.1° C/F
Accuracy	±.05 pH	±1% of Full Scale		±1.0° C/F
Auto Temperature Compensation	0-71° C 32-160° F	0-71° C 32-160° F		
Conductivity or TDS Ratios		NaCl		
Power	9V Alkaline Battery (User-replaceable)			
Operating/Storage Temperature	-10-55° C/14-132° F			

*To order **meter only**, use Part No. 6530.*

*To order as **complete kit** with 2 oz bottles of Taylor pH buffers 4.0, 7.0, and 10.0; Conductivity Solution 2500 µS; and DI water; plus foam-lined polypropylene carrying case, use Part No. K-6530.*

The pH sensor should never be allowed to dry out. Buffer solutions 4.0, 7.0, and 10.0 are available in 2 oz (codes B and C), 4 oz (code D), 16 oz (code E), 32 oz (code F), and 64 oz (code G) sizes. Conductivity Solution 2500 µS (µmhos) is supplied for instrument calibration. Other standard solutions may be purchased separately, including 50 µS, 500 µS, 1000 µS, and 5000 µS. All conductivity solutions are available in 2 oz (code C), 4 oz (code D), and 32 oz (code F) sizes; all, except Conductivity Solution 50 µS, are also available in 64 oz (code G). DI water may be purchased in 2 oz (codes B and C), 16 oz (code E), 32 oz (code F), and 64 oz (code G) sizes.

NO. 7 TAYLOR TECHNIQUE TIPS

To ensure specified accuracy, any instrument must be checked against chemical standards periodically. To minimize your calibration effort, keep records. If adjustments you are making are minimal for your application, you can check less often.

acidity free mineral

■ The acidity of a water is its quantitative capacity to react with a strong base to a designated pH. Therefore, acidity depends on the endpoint pH or indicator used. Traditionally, fixed endpoints at pH 3.7 (using bromphenol blue indicator) and pH 8.3 (using phenolphthalein indicator) have been used to determine acidity. However, because of its gradual color change from red through grey to green, total alkalinity indicator is often used instead of bromphenol blue. Total alkalinity indicator signals the endpoint of the titration at pH 4.5.

K-1547

While free mineral acidity (from sulfuric, hydrochloric, and phosphoric acids, for instance) is rarely found in raw water, its presence in chemically treated waters must be monitored and controlled to prevent corrosion.

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1547 (muriatic acid)	Drop test	Neutralization to pH 4.5	1 drop = 0.5 g/100 mL HCl	70 at 10 g/100 mL	R-0645 R-0739
K-1548 (sulfuric, phosphoric, or sulfamic acid)	Drop test	Neutralization to pH 4.5	*Variable*: 1 drop = 0.02 - 1.0 g/100 mL H_2SO_4 (conversion factors also supplied for phosphoric and sulfamic acids)	140 at 10 g/100 mL	R-0645 R-0740
K-0428	Buret titration reagent pack	Neutralization to pH 3.7 and pH 8.3	1 mL = 1 mg $CaCO_3$	48 at 10 mg	R-0628-50 R-0638 R-0697 R-1003D
K-0429	Buret titration reagent pack	Neutralization to pH 3.7 and pH 8.3	1 mL = 5 mg $CaCO_3$	48 at 50 mg	R-0628-10 R-0638 R-0697 R-1003D

Free available chlorine in the sample will interfere, but can be removed with sodium thiosulfate 0.1N.

alkalinity

■ Alkalinity is the acid-neutralizing capacity of water. It is a key control parameter for boilers (where, outside of the set operating range, it can lead to corrosion, caustic metal embrittlement, as well as carryover) and cooling water systems (where its effect on chemical treatments employed to inhibit corrosion and scaling is significant). Although many bases, such as borates, phosphates, and silicates, contribute to a water's alkalinity, it is primarily a function of the carbonate, bicarbonate, and hydroxide concentrations.

K-0430

Alkalinity is determined by titration with a standard acid to a designated pH and recorded as either P, M, or T alkalinity. P alkalinity is titrated to an endpoint pH of 8.3 using phenolphthalein as the indicator. M alkalinity is titrated to an endpoint pH of 4.6 using methyl orange as the indicator. And T alkalinity, which uses total alkalinity indicator, is titrated to an endpoint pH of 4.5.


K-1533

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1527	Drop test (using H_2SO_4)	P/T	1 drop = 10 ppm $CaCO_3$	140 at 100 ppm	R-0638 R-0645 R-0687
K-1533	Drop test (using H_2SO_4)	P/M and P/T	1 drop = 10 or 50 ppm $CaCO_3$	140 at 100 ppm	R-0637 R-0638 R-0645 R-0687 R-0736

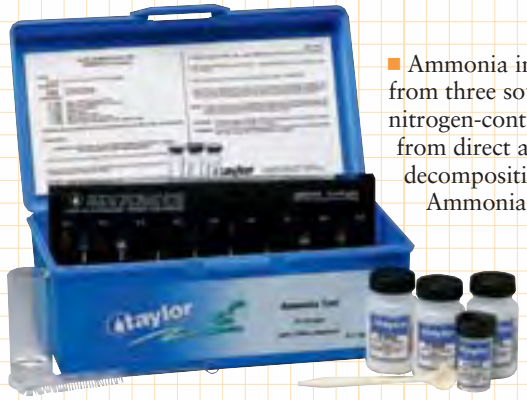
continued

alkalinity continued

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1575	Drop test (using HCl)	P/M and P/T	1 drop = 10 or 50 ppm $CaCO_3$	140 at 100 ppm	R-0637 R-0638 R-0645 R-0724 R-0735
K-1537	Drop test (using HCl)	Caustic (hydroxyl)	1 drop = 10 or 50 ppm $CaCO_3$	140 at 100 ppm	R-0638 R-0711 R-0724 R-0735
K-1530	Drop test (using H_2SO_4)	Total	1 drop = 10 ppm $CaCO_3$	72 at 200 ppm	R-0645 R-0687
K-0430	Buret titration reagent pack (using H_2SO_4)	P/M and P/T	1 mL = 1 mg $CaCO_3$	48 at 10 mg	R-0627S-50 R-0637 R-0638 R-0645
K-0431	Buret titration reagent pack (using H_2SO_4)	P/M and P/T	1 mL = 5 mg $CaCO_3$	48 at 50 mg	R-0627S-10 R-0637 R-0638 R-0645

If sulfuric acid is being added as a pH modifier, it will also alter the P/T alkalinity relationship.

ammonia



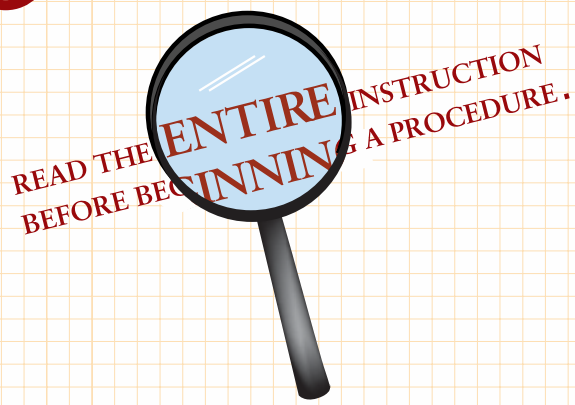
K-1170

■ Ammonia in boiler and cooling water systems commonly comes from three sources: from the microbiological breakdown of nitrogen-containing organic compounds found naturally in water; from direct addition to control condensate pH; or from the decomposition of certain treatment chemicals, such as amines. Ammonia is very aggressive to copper alloys.

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1170	Slide	Salicylate	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9 ppm NH_3	50	9125	4025	R-0938 R-0939

Shipping costs include a charge for special packaging required by carriers.

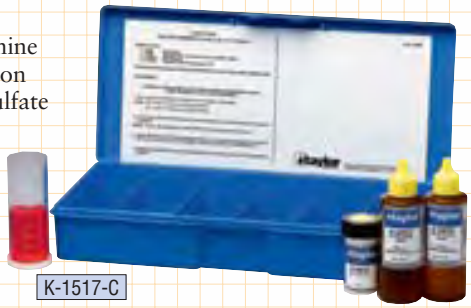
NO. 8 TAYLOR TECHNIQUE TIPS



bromine

K-1241

■ Bromine is an oxidizer that acts as a disinfectant and algaecide in hot and cold water systems. Colorimetric tests use liquid DPD (N,N-diethyl-p-phenylenediamine) to determine bromine concentration. A drop-count titration is also available using ferrous ammonium sulfate and DPD powder.



K-1517-C

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1241 (total)	Slide	DPD/liquid reagents	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm bromine	280	9079	4024	R-0001 R-0002
K-1242 (total)	Slide	DPD/liquid reagents	2.0, 2.5, 3.0, 3.5, 4, 5, 6, 8, 10 ppm bromine	280	9236	4025	R-0001 R-0002
K-1517-C (total)	Drop test	FAS-DPD	1 drop = 0.5 or 1.25 ppm bromine	140 at 5 ppm	NA	NA	R-0870 R-0872

Tests are limited to on-site analysis. Excessively high bromine will bleach out the DPD indicator in color-matching tests; sample should be diluted and the test result multiplied by the appropriate factor. Chlorine, iodine, and oxidized manganese will register as bromine.

carbon dioxide free

■ The primary water treatment concern with carbon dioxide is corrosion of iron. When carbon dioxide dissolves in water, it forms carbonic acid. The increased hydrogen ion concentration resulting from this reaction also promotes the corrosive effects of oxygen. In these tests, free carbon dioxide reacts with sodium carbonate to form sodium bicarbonate. Completion of the reaction is indicated by the characteristic pink color of phenolphthalein indicator at the equivalence pH of 8.3.

K-1507

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1507	Drop test	Sodium carbonate/ phenolphthalein	1 drop = 5 ppm CO_2	288 at 25 ppm	R-0638 R-0697 R-0717
K-0446	Buret titration reagent pack	Sodium carbonate/ phenolphthalein	1 mL = 1 mg CO_2	48 at 10 mg	R-0628-44 R-0638

Free mineral acids, iron, and aluminum will interfere.

chelant

K-1554

■ Chelants, such as ethylenediaminetetraacetic acid (EDTA) and nitrilotriacetic acid (NTA), are used extensively in boiler and cooling waters to prevent scaling caused by calcium, magnesium, iron, and other metals.

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1554 (uncomplexed EDTA)	Drop test	Complexometric	1 drop = 2 ppm EDTA	140 at 20 ppm	R-0619 R-0620 R-0755
K-1544 (uncomplexed and complexed EDTAor NTA)	Drop test	Complexometric	1 drop = 2 or 5 ppm EDTA; 1 drop = 1.3 or 3.3 ppm NTA	140 at 20 ppm EDTA	R-0735 R-0911 R-0912

Extremely high hardness interferes in the K-1544 procedure. Other chelants interfere in both procedures.

chloride

■ 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. In the argentometric method, potassium chromate indicates the endpoint by forming red silver chromate with excess silver ions. In the mercuric nitrate method, diphenylcarbazone indicates the endpoint by formation of a purple complex with excess mercuric ions.

K-1549

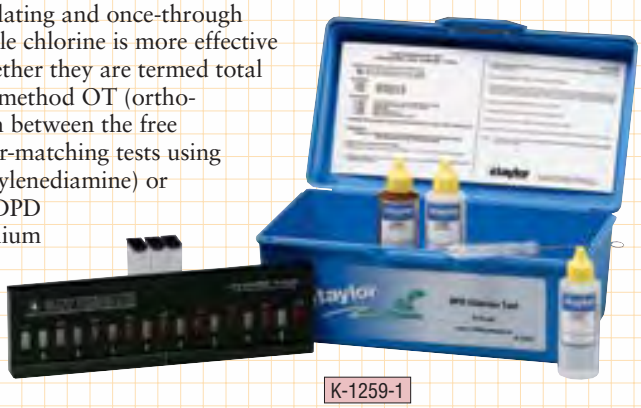
KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1506 (neutral pH waters)	Drop test	Argentometric	1 drop = 10, 25, 50, 100, 500 ppm or 1 gpg Cl^-	180 at 200 ppm	R-0630 R-0706
K-1549 (high pH waters)	Drop test	Argentometric	1 drop = 10, 25, 50, 100, 500 ppm or 1 gpg Cl^-	180 at 200 ppm	R-0630 R-0638 R-0686 R-0706
K-1598	Drop test	Mercuric nitrate	1 drop = 2 or 10 ppm Cl^-	140 at 20 ppm	R-0682 R-0686 R-0845
K-0434	Buret titration reagent pack	Argentometric	1 mL = 0.5 mg Cl^-	48 at 5 mg	R-0629-71 R-0630 R-0638 R-0686
K-0433	Buret titration reagent pack	Argentometric	1 mL = 1 mg Cl^-	48 at 10 mg	R-0629-35 R-0630 R-0638 R-0686
K-0435	Buret titration reagent pack	Argentometric	1 mL = 1 mg $NaCl^-$	48 at 10 mg	R-0629-58 R-0630 R-0638 R-0686

Bromide and iodide titrate as equivalent chloride concentrations. Sulfite interferes but can be removed with hydrogen peroxide. High orthophosphate and iron may interfere.

chlorine

■ An oxidizing biocide, chlorine is used to control slime and algae growth in open-recirculating and once-through cooling systems. Free available chlorine is more effective than combined chlorine; together they are termed total chlorine. The colorimetric method OT (ortho-tolidine) cannot distinguish between the free and combined forms. Color-matching tests using DPD (N,N-diethyl-p-phenylenediamine) or titrations with FAS-DPD (for ferrous ammonium sulfate DPD) can.

K-1515-C



K-1259-1

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1259-1 (free, combined, and total)	Slide	DPD/liquid reagents	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm chlorine	288	9082	4024	R-0001 R-0002 R-0003
K-1289 (free, combined, and total)	Slide	DPD/liquid reagents	1.0, 1.5, 2.0, 2.5, 3.0, 4, 6, 8, 10 ppm chlorine	288	9083	4025	R-0001 R-0002 R-0003
K-1203 (total)	Slide	OT	0.1, 0.2, 0.4, 0.6, 0.8, 1.0, 2.0, 3.0, 4.0 ppm chlorine	240	9085	4024	R-0600
K-1207 (total)	Slide	OT	0.2, 0.5, 1.0, 2, 4, 6, 8, 10, 12 ppm chlorine	240	9088	4025	R-0600
K-1256 (total)	Slide	OT	0, 0.1, 0.3, 0.5, 5, 10, 15, 25, 50 ppm chlorine	120	9087	4024	R-0604 R-0616
K-1151 (total)	Slide	OT	5, 15, 25, 50, 75, 100, 150, 200, 250 ppm chlorine	120	9231	4025	R-0604 R-0616
K-1515-C (free and combined)	Drop test	FAS-DPD/liquid and powder reagents	1 drop = 0.2 or 0.5 ppm chlorine	288 at 1 ppm	NA	NA	R-0003 R-0870 R-0871
K-1580 (total)	Drop test	Iodometric	1 drop = 1 or 10 ppm chlorine	45	NA	NA	R-0636 R-0664 R-0665S R-0700 R-0747
K-0445 (free, combined, and total)	Buret titration reagent pack	FAS-DPD	1 mL = 0.1 mg chlorine	48 at 1 mg	NA	NA	R-0765 R-0870 R-0875
K-0442 (total)	Buret titration reagent pack	Iodometric	1 mL = 0.875 mg chlorine	60 at 7 mg	NA	NA	R-0634-40 R-0636 R-0665S R-0765
K-0441 (total)	Buret titration reagent pack	Iodometric	1 mL = 3.5 mg chlorine	240 at 7 mg	NA	NA	R-0636 R-0665S R-0697 R-0765

Tests are limited to on-site analysis. Excessively high chlorine will bleach out the DPD indicator in color-matching tests; sample should be diluted and the test result multiplied by the appropriate factor. Bromine, iodine, and oxidized manganese will register as chlorine.

NO. 9 TAYLOR TECHNIQUE TIPS

Do not use your finger to cap a sample container.

chlorine dioxide

■ The use of chlorine dioxide as an adjunct or alternative to chlorine is increasing. Chlorine dioxide is used in process cooling waters as well as in some potable water supplies to control taste and odor and to disinfect the water. Its concentration is determined by removing any chlorine interference then titrating with ferrous ammonium sulfate N,N-diethyl-p-phenylenediamine (FAS-DPD).

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1502	Drop test	FAS-DPD	1 drop = 0.2 ppm ClO_2	58 at 5 ppm	R-0813 R-0814 R-0815 R-0870

Oxidized manganese will interfere.

copper

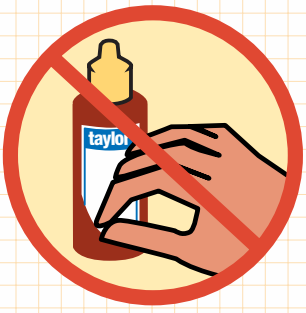
■ Copper is tested as an indication of corrosion of copper and copper-alloy components in the cooling or boiler system. Unchecked, damage can result to the components themselves and as a result of dissolved copper in the system. **Note:** Copper concentrations may be determined using either a Midget™ or Slide™ comparator; however, with a Midget™ the sample should first be filtered with the syringe filtration system, page 52, if colloidal color or turbidity is present.

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1155	Slide	Cuprizone	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cu	120	9094	4024	R-0860 R-0861
K-1738	Midget	Cuprizone	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cu	44	9049	4024	R-0860 R-0861

Iron greater than 1% will interfere.

NO. 10 TAYLOR TECHNIQUE TIPS

Never remove the label from a reagent container.



dissolved oxygen

■ The dissolved oxygen content of industrial waters must be removed to prevent corrosion of iron and steel, particularly in boiler systems where high pressures and temperatures accelerate the destruction. Analysis is performed using the azide modification of the Winkler method, which effectively removes interference caused by nitrite.

K-1658

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1658	Drop test	Winkler-azide modification	1 drop = 0.2 ppm DO	48 at 2 ppm	R-0636 R-0658 R-0660S R-0729 R-0780

Test is limited to on-site analysis. Shipping costs include a charge for special packaging required by carriers.

hardness

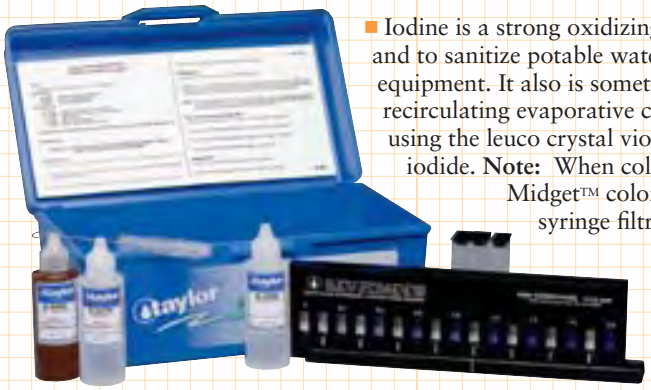
■ Although hardness in water is caused by a variety of polyvalent cations, current practice is to consider calcium and magnesium ions as the principal constituents. The amount of hardness in natural waters and treated waters may vary from several parts per million to over 500 parts per million. Because calcium and magnesium compounds are relatively insoluble in water, they tend to precipitate easily, causing scale and turbidity. Scaling is especially troublesome where heat transfer is involved, such as in boiler feedwater heaters and heat exchangers in cooling systems. Tests are available for calcium, magnesium, and total hardness in sensitivities ranging from trace to high hardness concentrations.

K-1503

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1567 (calcium)	Drop test	EDTA titration	1 drop = 10 ppm $CaCO_3$	72 at 200 ppm	R-0011P R-0653-2 R-0683
K-1514 (calcium and total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 2 or 10 ppm $CaCO_3$	72 at 200 ppm	R-0011P R-0619 R-0620 R-0653-2 R-0683 R-0806
K-1594 (calcium, magnesium, and total)	Drop test	EDTA titration	1 drop = 10 ppm $CaCO_3$	72 at 200 ppm	R-0011P R-0619 R-0620 R-0653-2 R-0683
K-1504 (total, trace levels)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 0.5 ppm $CaCO_3$	360 at 2 ppm	R-0620 R-0622 R-0623
K-1503 (total)	Drop test	EDTA titration (includes inhibitors to prevent metal interference)	1 drop = 2 or 10 ppm $CaCO_3$	72 at 200 ppm	R-0619 R-0620 R-0683 R-0806
K-0432 (calcium, magnesium, and total)	Buret titration reagent pack	EDTA titration	1 mL = 1 mg $CaCO_3$	48 at 10 mg	R-0011P R-0618 R-0619 R-0620 R-0653-2

When hardness levels are in excess of 200 ppm, dilution procedures can be followed.

iodine



■ Iodine is a strong oxidizing halogen that has long been used as a medical disinfectant and to sanitize potable water, swimming pools, and food and beverage processing equipment. It also is sometimes used by water treaters for microbiological control in recirculating evaporative cooling water systems. Higher concentrations are detected using the leuco crystal violet method which can determine both iodine and free iodide. **Note:** When colloidal color or turbidity is present in the sample, the Midget™ color comparator should be used in conjunction with the syringe filtration system, page 52.

K-1199

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1199	Slide	Leuco crystal violet	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.5, 2.0 ppm iodine	130	9103	4024	R-0768 R-0769 R-0770
K-1267	Midget	Leuco crystal violet	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm iodine	105	9037	4024	R-0768 R-0769 R-0770

Oxidized manganese, high iodide, and high chloride will interfere. Shipping costs include a charge for special packaging required by carriers.

iron

■ Iron found in boiler or cooling waters will have come from either the natural source water or the corrosion of iron or steel surfaces in the system; both possibilities must be considered. In solution it exists as ferrous, Fe(II), or ferric, Fe(III). Together they are measured as total iron.

Two colorimetric methods are used to determine iron. In the 1,10-phenanthroline method, total iron is determined by reducing Fe(III) to Fe(II) which then reacts with 1,10-phenanthroline to produce an orange-red complex. The 2,4,6-tripyridyl-s-triazine (TPTZ) method, useful for low iron levels, utilizes the purple complex formed in the reaction of Fe(II) with TPTZ. Once again, Fe(III) is reduced to Fe(II) to give total iron. **Note:** When colloidal color or turbidity is present in the sample, the Midget™ color comparator should be used in conjunction with the syringe filtration system, page 52.

K-1154

K-1716

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1153 (total)	Slide	TPTZ	0, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0, 2.0 ppm Fe	120	9106	4024	R-0851 R-0852
K-1154 (total)	Slide	Phenanthroline	0, 0.5, 1.0, 2.0, 3.0, 4, 6, 8, 10 ppm Fe	58	9246	4024	R-0673 R-0674
K-1716 (total)	Midget	TPTZ	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm Fe	44	9051	4024	R-0851 R-0852
K-1239RC (total)	Midget	Phenanthroline	0, 0.5, 1.0, 2, 4, 6, 8, 10 ppm Fe	30	9050	4024	R-0673 R-0674

High copper, nitrite, and molybdate will interfere in the TPTZ procedure. Nitrite, polyphosphate, and high copper will interfere in the phenanthroline procedure.

NEW! microbial contaminants

■ Biological fouling in cooling systems is caused by bacteria, algae, molds, and yeasts introduced by contaminated water and air. These microbes proliferate in both open-recirculating and once-through systems, adapting quickly to changes in nutrient load, pH, temperature, and available sunlight. The slimes they form lead to inefficient heat transfer and plugging of tubes, and ultimately severe equipment damage from deposits, corrosion, and wood deterioration. The Easicult Combi® system by Orion will indicate slight to heavy microbial infection.

K-1861

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1861 (aerobic bacteria; fungi and yeasts)	Two-sided dip slide	Visual determination	Total bacterial count to 10 million cfu/mL; Fungi and yeasts to 1 million cfu/mL	10	NA

If colony forming units (cfu) exceed limits, sample should be diluted and retested. Dip slide must be incubated. Protect slides from light, drafts, and freezing.

molybdenum

K-1805P

■ Molybdenum-based corrosion inhibitors are used in both boilers and cooling towers. In these aqueous systems, molybdenum combines with oxygen to form molybdate. Molybdate inhibits corrosion of low carbon steel. A drop test is used to determine both low and high concentrations. Results can be expressed as either molybdenum or molybdate.

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1805	Drop test	Complexometric	1 drop = 2, 5, 20, or 50 ppm Mo	288 at 10 ppm	R-0887 R-0890 R-0891 R-0892
K-1805P	Drop test	Complexometric (uses powdered indicator for increased stability)	1 drop = 2, 5, 20, or 50 ppm Mo	288 at 10 ppm	R-0890 R-0892 R-0900 R-0901

The liquid indicator R-0891 in the K-1805 has a limited shelf-life and should be checked against Molybdenum Standard (R-0887) periodically after four months old. A more stable, two-part reagent system replaces R-0891 in the K-1805P. This liquid-powder combination can be made up on a test-by-test basis, or in small quantities. Thiocarbamates and extremely high concentrations of 1-hydroxyethylidene-1,1-diphosphonic acid (HEDP) will interfere in both procedures.

neutralizing amine

Neutralizing amines are used to reduce metal loss in steam condensate systems caused by carbon dioxide corrosion. Cyclohexylamine, diethylethanolamine, and triethanolamine are among the more commonly used neutralizing amines, and can be determined by acid-base titration.

K-1682

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1682	Drop test	Acid-base titration	1 drop = 4 ppm cyclohexylamine; 1 drop = 5 ppm diethylethanolamine; 1 drop = 6 ppm triethanolamine	360 at 20 ppm DEEA	R-0645 R-0869

Carbonates or other alkaline materials from boiler carryover or leaks in a condenser or heat exchanger can interfere with this test.

nitrite

Nitrite-based treatments are commonly used to establish a protective film on ferrous metal surfaces in closed cooling water systems. At high pH levels, nitrite will also protect aluminum and tin surfaces, but it is not an effective corrosion inhibitor for copper or copper alloys. Nitrites can be determined titrimetrically by using either the permanganate or cerric ammonium nitrate (CAN) method.

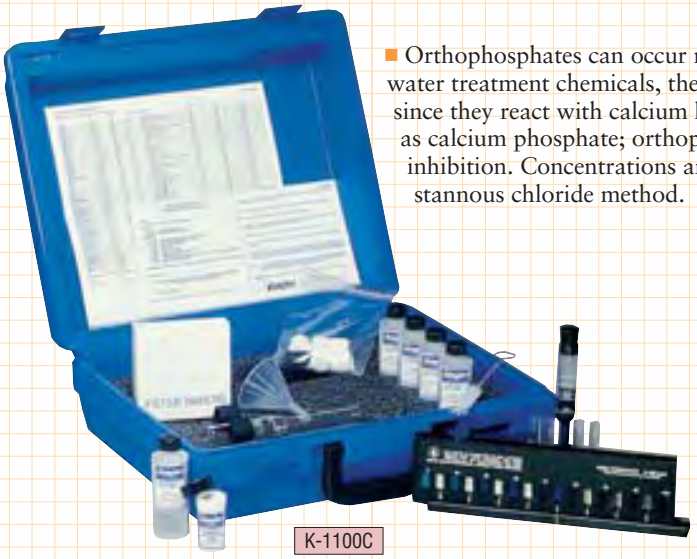
K-1510

K-1563

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	KIT NUMBER	REAGENTS
K-1564	Drop test	Permanganate	1 drop = 25 ppm $NaNO_2$	28	R-0742 R-0781
K-1565	Drop test	Permanganate	1 drop = 50 ppm $NaNO_2$	28	R-0733 R-0781
K-1563	Drop test	Permanganate (using acid sulfate)	1 drop = 100 ppm $NaNO_2$	28	R-0730 R-0781
K-1539	Drop test	Permanganate (using H_2SO_4)	1 drop = 100 ppm $NaNO_2$	57	R-0729 R-0730
K-1510	Drop test	CAN	1 drop = 40 ppm $NaNO_2$	144 at 400 ppm	R-0819 R-0820
K-0443	Buret titration reagent pack	Permanganate	1 mL = 1 mg $NaNO_2$	48 at 10 mg	R-0652-34 R-0781
K-0440	Buret titration reagent pack	Permanganate	1 mL = 3.45 mg $NaNO_2$	55 at 30 mg	R-0652 R-0781

Use the CAN method to test systems containing glycol.

orthophosphate



K-1100C

■ Orthophosphates can occur naturally in water at low levels. In boiler water treatment chemicals, they are primarily added to control scaling, since they react with calcium hardness to form a more fluid sludge, such as calcium phosphate; orthophosphates also provide good corrosion inhibition. Concentrations are determined colorimetrically using the stannous chloride method.

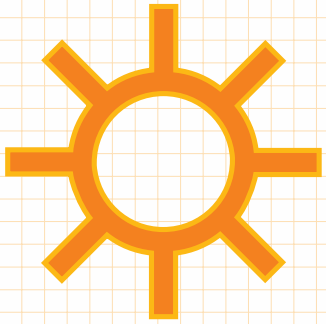
K-1831

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1105 (without case)	Slide	Stannous chloride	0, 2, 4, 6, 8, 10, 15, 20, 25 ppm PO_4	120	9111	4023 & 9021	R-0601 R-0602P
K-1105C (with case)	Slide	Stannous chloride	0, 2, 4, 6, 8, 10, 15, 20, 25 ppm PO_4	75	9111	4023 & 9021	R-0601 R-0602P
K-1100 (without case)	Slide	Stannous chloride	5, 10, 20, 30, 40, 50, 60, 80, 100 ppm PO_4	48	9110	4023 & 9021	R-0601 R-0602P
K-1100C (with case)	Slide	Stannous chloride	5, 10, 20, 30, 40, 50, 60, 80, 100 ppm PO_4	30	9110	4023 & 9021	R-0601 R-0602P
K-1110	Midget	Stannous chloride	0, 0.5, 1.0, 2, 4, 6, 8, 10 ppm PO_4	30	9054	9021	R-0601 R-0602P
K-1109	Midget	Stannous chloride	10, 20, 30, 40, 50, 60, 80, 100 ppm PO_4	12	9350	9021	R-0601 R-0602P
K-1837	2-standard	Stannous chloride	2 and 8 ppm PO_4	30	9027	9021	R-0601 R-0602P
K-1839	2-standard	Stannous chloride	3 and 6 ppm PO_4	30	9307	9021	R-0601 R-0602P
K-1835	2-standard	Stannous chloride	5 and 10 ppm PO_4	12	9029	9021	R-0601 R-0602P
K-1832	2-standard	Stannous chloride	20 and 40 ppm PO_4	12	9026	9021	R-0601 R-0602P
K-1833	2-standard	Stannous chloride	20 and 60 ppm PO_4	12	9028	9021	R-0601 R-0602P
K-1831	2-standard	Stannous chloride	30 and 60 ppm PO_4	12	9025	9021	R-0601 R-0602P
K-1834	2-standard	Stannous chloride	40 and 80 ppm PO_4	12	9030	9021	R-0601 R-0602P

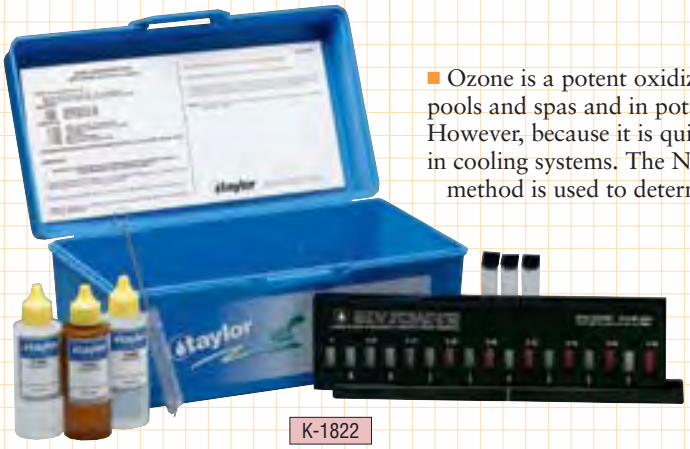
High levels of silica and ferrous iron may interfere. Fluoride and sulfide will interfere.

NO. 11 TAYLOR TECHNIQUE TIPS

Use daylight, or simulated daylight, to read colorimetric tests.



ozone



K-1822

■ Ozone is a potent oxidizer that is used as a disinfectant in swimming pools and spas and in potable water and wastewater treatment. However, because it is quite reactive, it is not widely used as a biocide in cooling systems. The N,N-diethyl-p-phenylenediamine (DPD) method is used to determine ozone.

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1822	Slide	DPD/liquid reagents	0, 0.07, 0.13, 0.20, 0.26, 0.33, 0.40, 0.53, 0.66 ppm ozone	288	9318	4024	R-0001 R-0002 R-0003

Test is limited to on-site analysis. Excessively high ozone will bleach out the DPD indicator in color-matching tests; sample should be diluted and the test result multiplied by the appropriate factor. Bromine, chlorine, iodine, and oxidized manganese will register as ozone.

NO. 12 TAYLOR TECHNIQUE TIPS

PROGRESSION OF A DROP TEST (illustrated with a hardness test)

① In this drop-count titration, indicator is about to be added to a water sample.

② Sample turns a distinct color with addition of indicator.

③ Next, titrant is added drop by drop, and swirled after each addition. The sample shows a mixture of two colors . . .

④ . . . until the moment when the color change is complete. This is called the endpoint of the reaction.

Add one more drop of titrant after the endpoint to be certain the color change is permanent. If the color remains unchanged, do not count this drop.

pH

pH METER KIT ON PAGE 18

pH is a measure of the acidity of water and is defined as the negative logarithm of the hydrogen ion concentration. Because pH significantly affects most biological and chemical processes, it is one of the most important and frequently tested parameters in water chemistry.

Taylor offers comparators that cover ranges throughout the entire pH scale. Slide™ and Midget™ comparators are used for most applications. Long Viewpath™ comparators are particularly useful for measuring the pH of steam condensate, distilled or deionized water, and other unbuffered solutions because a large ratio of water sample to pH indicator is required. This ratio prevents any change in water sample pH which could be caused by addition of the pH indicator.

K-1011-J

K-3232

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1011-B	Slide	Acid meta cresol purple	1.2 to 2.8 (0.2 increments)	240	9060	4023	R-1003B
K-1011-C	Slide	Benzo yellow	2.4 to 4.0 (0.2 increments)	240	9061	4023	R-1003C
K-1011-E	Slide	Bromcresol green	3.8 to 5.4 (0.2 increments)	240	9063	4023	R-1003E
K-1011-F	Slide	Methyl red	4.4 to 6.0 (0.2 increments)	240	9064	4023	R-1003F
K-1011-G	Slide	Chlorphenol red	5.2 to 6.8 (0.2 increments)	240	9065	4023	R-1003G
K-1011-H	Slide	Bromthymol blue	6.0 to 7.6 (0.2 increments)	240	9066	4023	R-1003H
K-1011-J	Slide	Phenol red	6.8 to 8.4 (0.2 increments)	240	9067	4023	R-1003J
K-1011-K	Slide	Cresol red	7.2 to 8.8 (0.2 increments)	240	9068	4023	R-1003K
K-1011-L	Slide	Meta cresol purple	7.6 to 9.2 (0.2 increments)	240	9069	4023	R-1003L
K-1011-M	Slide	Thymol blue	8.0 to 9.6 (0.2 increments)	240	9070	4023	R-1003M
K-1011-N	Slide	Phthalein red	8.6 to 10.2 (0.2 increments)	240	9071	4023	R-1003N
K-1011-O	Slide	Tolyl red	10.0 to 11.6 (0.2 increments)	240	9072	4023	R-1003O
K-1011-P	Slide	Acyl red	10.0 to 11.6 (0.2 increments)	240	9073	4023	R-1003P
K-1011-Q	Slide	Parazo orange	11.0 to 12.6 (0.2 increments)	240	9074	4023	R-1003Q
K-1011-R	Slide	Acyl blue	12.0 to 13.6 (0.2 increments)	240	9075	4023	R-1003R
K-1011-S	Slide	Benzo red	4.4 to 7.6 (0.4 increments)	240	9076	4023	R-1003S
K-1011-T	Slide	Thymol red	8.0 to 11.2 (0.4 increments)	240	9077	4023	R-1003T
K-1011-U	Slide	Long range	3 to 11 (1.0 increments)	240	9078	4023	R-1003U
K-1285-1	Midget	Long range	3 to 10 (1.0 increments)	88	9052	4024	R-1003U
K-1285-2	Midget	Phenol red	6.8 to 8.2 (0.2 increments)	88	9053	4024	R-1003J
K-1285-4	Midget	Bromthymol blue	6.0 to 7.4 (0.2 increments)	88	9036	4024	R-1003H
K-1285-5	Midget	Chlorphenol red	5.2 to 6.6 (0.2 increments)	88	9237	4024	R-1003G
K-1285-6	Midget	Cresol red	7.2 to 8.6 (0.2 increments)	88	9006	4024	R-1003K
K-1285-7	Midget	Thymol blue	8.2 to 9.6 (0.2 increments)	88	9321	4024	R-1003M
K-3232 (condensate pH)	LVP	Bromthymol blue/ metacresol purple	6.0 to 9.2 (0.4 increments)	240	9432	9018	R-1003W
K-3228-B	LVP	Acid meta cresol purple	1.2 to 2.8 (0.2 increments)	240	9060	9018	R-1003B
K-3228-C	LVP	Benzo yellow	2.4 to 4.0 (0.2 increments)	240	9061	9018	R-1003C
K-3228-E	LVP	Bromcresol green	3.8 to 5.4 (0.2 increments)	240	9063	9018	R-1003E
K-3228-F	LVP	Methyl red	4.4 to 6.0 (0.2 increments)	240	9064	9018	R-1003F
K-3228-G	LVP	Chlorphenol red	5.2 to 6.8 (0.2 increments)	240	9065	9018	R-1003G
K-3228-H	LVP	Bromthymol blue	6.0 to 7.6 (0.2 increments)	240	9066	9018	R-1003H
K-3228-J	LVP	Phenol red	6.8 to 8.4 (0.2 increments)	240	9067	9018	R-1003J
K-3228-K	LVP	Cresol red	7.2 to 8.8 (0.2 increments)	240	9068	9018	R-1003K
K-3228-L	LVP	Meta cresol purple	7.6 to 9.2 (0.2 increments)	240	9069	9018	R-1003L
K-3228-M	LVP	Thymol blue	8.0 to 9.6 (0.2 increments)	240	9070	9018	R-1003M
K-3228-N	LVP	Phthalein red	8.6 to 10.2 (0.2 increments)	240	9071	9018	R-1003N
K-3228-O	LVP	Tolyl red	10.0 to 11.6 (0.2 increments)	240	9072	9018	R-1003O

continued

pH continued

K-1592

K-1285-2

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-3228-P	LVP	Acyl red	10.0 to 11.6 (0.2 increments)	240	9073	9018	R-1003P
K-3228-Q	LVP	Parazo orange	11.0 to 12.6 (0.2 increments)	240	9074	9018	R-1003Q
K-3228-R	LVP	Acyl blue	12.0 to 13.6 (0.2 increments)	240	9075	9018	R-1003R
K-3228-S	LVP	Benzo red	4.4 to 7.6 (0.4 increments)	240	9076	9018	R-1003S
K-3228-T	LVP	Thymol red	8.0 to 11.2 (0.4 increments)	240	9077	9018	R-1003T
K-3228-U	LVP	Long range	3 to 11 (1.0 increments)	240	9078	9018	R-1003U
K-1592	Color card	Long range	3 to 11 (1.0 increments)	105	5425	9017	R-1003U
K-1670	Color card	Long range	5 to 9 (1.0 increments)	105	5426	9017	R-1003U

Acyl red comparators should be used instead of tolyl red comparators when calcium salts are present in the water sample.

phosphonate

Phosphonates, or organo-phosphates, are primarily used in boilers and cooling towers to control scaling. They are also sometimes part of pre-cleaning programs for cooling water systems. Aminotri (methylene phosphonic acid) (ATMP) and related phosphonates are determined titrimetrically using thorium nitrate and xylenol orange indicator. A fluoride masking agent is provided to eliminate interference where applicable. Conversion factors for ATMP, Na_5-ATMP, HEDP, K_6HDTMP, DTPMP, and Na_5DTPMP are listed in the test instructions.

K-1583

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1583	Drop test	Thorium nitrate/ xylenol orange (uses pH paper 1.8-3.8 for pH adjustment)	1 drop = 1 ppm ATMP	140 at 10 ppm	R-0686 R-0697 R-0802P R-0803 R-0805
K-1583CR	Drop test	Thorium nitrate/ xylenol orange (uses congo red paper for pH adjustment)	1 drop = 1 ppm ATMP	140 at 10 ppm	R-0686 R-0697 R-0802P R-0803 R-0805
K-0444	Buret titration reagent pack	Thorium nitrate/ xylenol orange (uses pH paper 1.8-3.8 for pH adjustment)	1 mL = 6 ppm ATMP	144 at 20 ppm	R-0686 R-0697 R-0802P R-0805 R-0880

Iron causes negative interference; orthophosphate and polyphosphate cause positive interference. Kits contain pH papers for adjusting sample pH to achieve accurate, consistent results.

polyphosphate

■ Polyphosphates (also known as condensed phosphates) are widely employed in once-through and open-recirculating cooling water systems, municipal distribution systems, and potable water systems to inhibit corrosion and reduce the loss in head caused by tuberculation, and to reduce mineral deposition. Analysis involves acid hydrolysis at boiling-water temperature, which converts polyphosphate to orthophosphate. The resulting orthophosphate is then determined colorimetrically using the stannous chloride method.

K-1108HTR

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1108 (w/o case or heat source)	Slide	Acid hydrolysis/ stannous chloride	0, 2, 4, 6, 8, 10, 15, 20, 25 ppm PO_4	96	9111	4023 & 9021	R-0601 R-0602P R-0640 R-0641
K-1108C (with case; w/o heat source)	Slide	Acid hydrolysis/ stannous chloride	0, 2, 4, 6, 8, 10, 15, 20, 25 ppm PO_4	24	9111	4023 & 9021	R-0601 R-0602P R-0640 R-0641
K-1108HTR (w/o case; with immersion heater)	Slide	Acid hydrolysis/ stannous chloride	0, 2, 4, 6, 8, 10, 15, 20, 25 ppm PO_4	96	9111	4023 & 9021	R-0601 R-0602P R-0640 R-0641

High levels of silica and ferrous iron may interfere. Fluoride and sulfide will interfere. A glassware handling charge applies to K-1108 and K-1108HTR.

quaternary ammonium compound (QAC) /Polyquat

■ QAC products are used for microbiological control in open-recirculating cooling water systems as alternatives to chlorine. They are non-oxidizing and have surface-active properties. Determination is based upon direct neutralization of the quat or polyquat.

K-1582

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-9065 (QAC and polyquat)	Drop test	Direct neutralization	1 drop = 1.25 ppm QAC, 0.5 ppm polyquat	60 at 30 ppm QAC *or* 60 at 12 ppm polyquat	R-0638 R-0736 R-0881 R-0950 R-0951
K-1582 (high QAC and polyquat)	Drop test	Direct neutralization	1 drop = 10 or 25 ppm QAC, 3.5 or 9 ppm polyquat	60 at 240 ppm QAC *or* 60 at 84 ppm polyquat	R-0638 R-0736 R-0881 R-0884 R-0950

Method cannot distinguish between various QAC or polyquat compounds. Equivalences for compounds other than those listed in the instructions must be determined by titration with a known standard.

silica

■ The silica content of natural water is commonly in the 1 to 30 ppm range, although concentrations of 50 to 100 ppm in well waters are not unusual. In operating systems, silica scale appears as a dense, glassy material that is very difficult to remove. Concentrations above recommended levels in boiler feedwater can lead to scale formation in the boiler itself; even more problematic in high-pressure boilers is silica that volatilizes into the steam system only to redeposit on turbine blades. In cooling towers, silica is generally kept below 150 ppm to prevent silica and silicate scales. Silica can be determined colorimetrically by either the heteropoly blue or molybdosilicate method.

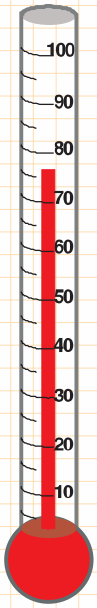
K-3231

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1272	Slide	Heteropoly blue	0, 5, 10, 15, 20, 25, 30, 40, 50 ppm SiO_2 *By dilution:* 0, 25, 50, 75, 100, 125, 150, 200, 250 ppm SiO_2 *or* 0, 50, 100, 150, 200, 250, 300, 400, 500 ppm SiO_2	50	9264	4023	R-1305Q R-1305U R-1306T R-1306U
K-1273	Midget	Heteropoly blue	5, 10, 15, 20, 25, 30, 40, 50 ppm SiO_2 *By dilution:* 25, 50, 75, 100, 125, 150, 200, 250 ppm SiO_2 *or* 50, 100, 150, 200, 250, 300, 400, 500 ppm SiO_2	50	9257	4025	R-1305Q R-1305U R-1306T R-1306U
K-3231	LVP	Molybdosilicate	0, 2, 4, 6, 8, 10, 15, 20, 25 ppm SiO_2	96	9431	9018	R-1305U R-1306T R-1306U

High levels of sulfide, tannin, and iron will interfere. ***Important:*** *Swirl to mix completely and wait, as instructed, between steps to ensure proper results.*

NO. 13 TAYLOR TECHNIQUE TIPS

Bring hot water samples to room temperature promptly before analyzing.



sulfite

■ Dissolved oxygen in boiler feedwater is highly corrosive. To prevent pitting, sulfite is used as an oxygen scavenger, frequently in combination with mechanical deaeration. Iodometric titration is the most popular field method for determining sulfite. A colorimetric analysis, based on reacting sulfite with a standard quantity of iodine and measuring the amount of decolorization, is also available.

K-1529

K-0438

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	COMPARATOR NUMBER	CELL NUMBER	REAGENTS
K-1122	Slide	Iodine decolorization	0, 5, 10, 15, 20, 25, 30, 40, 50 ppm SO_3	120	9112	4023	R-0616 R-0617
K-1529	Drop test	Iodometric	1 drop = 2 or 10 ppm Na_2SO_3	288 at 50 ppm	NA	NA	R-0638 R-0699 R-0725 R-0808
K-0438	Buret titration reagent pack	Iodometric	1 mL = 0.5 mg SO_3	48 at 5 mg	NA	NA	R-0633-80 R-0638 R-0725
K-0437	Buret titration reagent pack	Iodometric	1 mL = 1.0 mg SO_3	96 at 5 mg	NA	NA	R-0633-40 R-0638 R-0725
K-0439	Buret titration reagent pack	Iodometric	1 mL = 0.5 mg Na_2SO_3	48 at 5 mg	NA	NA	R-0633-126 R-0638 R-0725
K-0436	Buret titration reagent pack	Iodometric	1 mL = 1.0 mg Na_2SO_3	96 at 5 mg	NA	NA	R-0617 R-0638 R-0725

Test is limited to on-site analysis. Sulfide and ferrous iron cause positive interference; copper and nitrite cause negative interference.

zinc

■ Zinc is used in certain cooling-water chemical treatment combinations to inhibit corrosion. Zinc in industrial waters may also result from the corrosion of galvanized pipe or the dezincification of brass. Its concentration may be determined with a drop test that shows a blue-to-orange color change at the endpoint.

K-1511

KIT NUMBER	SYSTEM	METHOD/CHEMISTRY	STANDARDS/EQUIVALENCE	NUMBER OF TESTS	REAGENTS
K-1511	Drop test	Complexometric	1 drop = 0.5 ppm Zn	90 at 8 ppm	R-0627S-10 R-0628-10 R-0839 R-0840 R-0841 R-1003J

Copper and iron cause positive interference. Strong chelants cause negative interference.

alphanumeric cross-reference listing

When our chemists develop new tests, or improve existing ones, they consider the accuracy and precision required, reagent stability, possible interferences, ease of use, worker safety, environmental impact, preferences of the water treatment industry, shipping restrictions, and economics before finalizing their design. Once in production, chemical quality is checked at multiple points, from arrival of the raw materials to shipment of the packaged product. Therefore, you can use our reagents with confidence, knowing they have been formulated for real-world applications from high-quality (mostly ACS-grade) raw chemicals under stringent quality-control procedures.

If you are presently making your own reagents, replacing some or all of these with Taylor reagents will spare you not only the preparation time but also the headaches of purchasing, housekeeping, reporting, and disposal associated with this practice.

Most Taylor reagents will remain fresh for at least one year when stored under proper environmental conditions. (An exception is Molybdenum Indicator Solution, R-0891.) As with other perishables, prolonged exposure to very hot or freezing conditions, extreme temperature fluctuation, air, moisture, or direct sunlight will diminish the shelf life of most chemicals. Upon receipt, all reagents should be dated and then rotated through inventory to ensure accurate test results.

Should you ever have a concern about the quality of a reagent, your customer service representative will need to know the lot code (located in the lower righthand corner of the back of the reagent label) when you call.

Most reagents are available in several sizes, as indicated by the letter codes at the end of the reagent number. Frequently, you have a choice of purchasing an exact replacement for your kit or a larger quantity that can be repoured for a savings in the cost-per-test. Please call 800-TEST KIT (837-8548) if you need assistance in locating the product best suited to your needs.

If you know the name of the reagent you need, you can find the associated product number from the alphabetized listing below. Once you have identified the reagent number, turn to the numeric listing beginning on page 41 to find your quantity options.

REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.
Acetic Acid 1:9	R-1305H	Bleach Reagent #2 (liquid)	R-0665
Acid Cresol Red Indicator	R-1003A	Bleach Reagent #3	R-0666
Acid Meta Cresol Purple Indicator	R-1003B	Bromcresol Green Indicator	R-1003E
Acid Reagent	R-0801	Bromcresol Purple Indicator	R-1003V
Acid Solution	R-0942	Bromine Water	R-1305X
Acid Starch Indicator Powder	R-0725	Bromphenol Blue Indicator	R-1003D
Acid Sulfate	R-0781	Bromthymol Blue Indicator	R-1003H
Activated Charcoal	R-0727	Brucine Reagent	R-0609
Acyl Blue Indicator	R-1003R	Buffer Solution	R-0825
Acyl Red Indicator	R-1003P	Buffer Solution pH 2.0	R-1099-02
Alizarin Red Reagent	R-1305V	Buffer Solution pH 3.0	R-1099-03
Alkaline Iodide Azide Reagent	R-0660S	Buffer Solution pH 4.0	R-1099-04
Aluminum Buffer	R-0936	Buffer Solution pH 5.0	R-1099-05
Aluminum Hydroxide	R-1306R	Buffer Solution pH 6.0	R-1099-06
Aluminum Indicator	R-0937	Buffer Solution pH 7.0	R-1099-07
Ammonium Hydroxide Concentrated	R-0661	Buffer Solution pH 7.4	R-1306S
Ammonium Molybdate 11.4%	R-0796	Buffer Solution pH 8.0	R-1099-08
Ammonium Molybdate Solution	R-1305P	Buffer Solution pH 9.0	R-1099-09
Ammonium Persulfate	R-1305O	Buffer Solution pH 10.0	R-1099-10
Amperometric Acetate Buffer	R-7052	Buffer Solution pH 11.0	R-1099-11
Amperometric Iodide Solution	R-0773	Buffer Solution pH 12.0	R-1099-12
Amperometric Phosphate Buffer	R-7054	CAN Solution	R-0820
Ascorbic Acid Powder	R-0690	Calcium Buffer	R-0653
Ascorbic Acid Powder	R-0935	Calcium Buffer	R-0653-2
BTB/MCP Indicator	R-1003W	Calcium Chloride Solution BOD	R-0793
Barium Chloride Solution 10%	R-0646	Calcium Chloride Standard .02N	R-0670
Barium Chloride Solution 20%	R-0711	Calcium Indicator Liquid	R-0011L
Barium Chloride Solution 30%	R-0720	Calcium Indicator Powder	R-0011P
Benzo Red Indicator	R-1003S	Caustic Solution	R-0940
Benzo Yellow Indicator	R-1003C	Causticity Reagent #1	R-0756
Bleach Reagent #1	R-0664	Causticity Reagent #2	R-0757
Bleach Reagent #2 (crystals)	R-0665S	Chloramine-T Powder	R-0949

continued

alphanumeric listing continued

REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.
Chloride Reagent	R-0682	Hydrochloric Acid 3N	R-0737
Chlorine Reagent #2	R-0604	Hydrochloric Acid Concentrated	R-0616
Chloroform	R-0651	Hydrochloric Acid N/10	R-0627H-10
Chlorphenol Red Indicator	R-1003G	Hydrochloric Acid N/30	R-0899
Chromate Indicator	R-0630	Hydrochloric Acid N/50	R-0760
Citrate Buffer	R-0905	Hydrochloric Acid Reagent	R-0709
Citric Acid Reagent	R-0767	Hydroxylamine Reagent	R-1306E
Color Development Solution	R-0941	Iodide Azide Powder	R-0659
Complexing Reagent	R-0950	Iodide Iodate N/10	R-0633-10
Conductivity Neutralizing Solution	R-7022	Iodide Iodate N/40	R-0633-40
Conductivity Solution 50 µS/µmhos	R-0868-50	Iodide Iodate N/63	R-0617
Conductivity Solution 500 µS/µmhos	R-0868-5C	Iodide Iodate N/80	R-0633-80
Conductivity Solution 1000 µS/µmhos	R-0868-1K	Iodide Iodate N/126	R-0633-126
Conductivity Solution 2500 µS/µmhos	R-0868-25C	Iodide Iodate Reagent	R-0699
Conductivity Solution 5000 µS/µmhos	R-0868-5K	Iodide Iodate Reagent	R-0808
Copper Buffer	R-0642	Iodide Iodate Reagent	R-0817
Copper Reagent #1	R-0860	Iodide Solution	R-0772
Copper Reagent #2	R-0861	Iodine Buffer	R-0769
Cresol Red Indicator	R-1003K	Iodine Indicator	R-0768
NEW! Cyanurate Powder	R-0939	Iodine Solution .0282N	R-0635-35
Demineralizer Bottle	R-0804-DD	Iodine Solution N/10	R-0635-10
DI Water	R-0833	Iodine Solution N/40	R-0635-40
DPD Powder	R-0870	Iron #1	R-0965
DPD Reagent #1	R-0001	Iron #2	R-0966
DPD Reagent #2	R-0002	Iron Reagent #1	R-0851
DPD Reagent #3	R-0003	Iron Reagent #2	R-0852
DPD Tablet #1	R-0843	Isopropyl Alcohol	R-0762
DPD Tablet #3	R-0844	KHP Standard COD	R-0838
Dilute Ammonia 1:1	R-1305Y	Lead Buffer	R-0771
Dilute Ammonia 1:5	R-1305R	Lead Reagent	R-0766
Dilute Ammonia 1:9	R-1305W	Long Range Indicator	R-1003U
Dilute Hydrochloric Acid	R-1305J	Magnesium Chloride Reagent	R-0755
Dimethylglyoxime Reagent	R-1305Z	Magnesium Chloride Reagent	R-0877
Diphenylcarbazide Powder	R-0625	Magnesium Sulfate BOD	R-0791
Diphenylcarbazide Reagent	R-0626	Manganous Sulfate Powder	R-0657
Dithizone Indicator Powder	R-0826P	Manganous Sulfate Solution	R-0658
EDTA Solution	R-0814	Mercuric Chloride Saturated	R-1306L
EDTA Standard Solution 0.005M	R-7035	Mercuric Nitrate Titrating Reagent	R-0865
FAS Titrant 0.25M	R-0816	Mercuric Nitrate Titrating Solution	R-0845
FAS Titrating Solution	R-0815	Mercuric Sulfate	R-0827
FAS-DPD Titrating Reagent (bromine)	R-0872	Meta Cresol Purple Indicator	R-1003L
FAS-DPD Titrating Reagent (chlorine)	R-0871	Methyl Orange Indicator	R-0637
FAS-DPD Titrating Reagent (chlorine)	R-0875	Methyl Red Indicator	R-1003F
Ferric Chloride Solution BOD	R-0790	Methylene Blue 0.1%	R-0650
Ferroin Indicator	R-0819	Midget Iron Reagent #1	R-0673
Fluoride Masking Agent	R-0805	Midget Iron Reagent #2	R-0674
Fluoride Standard 1 ppm	R-0676-1	Molybdate Concentrate	R-0601C
Gallic Acid	R-7046	Molybdate Reagent	R-0601
Glycine Solution	R-0813	Molybdenum Buffer Solution	R-0890
Hardness Buffer	R-0619	Molybdenum Indicator Powder	R-0900
Hardness Buffer	R-0775	Molybdenum Indicator Solution	R-0891
Hardness Indicator Powder	R-0620	Molybdenum Indicator Solvent	R-0901
Hardness Reagent	R-0683	Molybdenum Standard 20 ppm	R-0887
Hardness Reagent	R-0806	Molybdenum Titrating Solution	R-0892
Hardness Reagent .0025M	R-0684	Molybdenum Titrating Solution	R-0889
Hardness Reagent .01M	R-0618	NED Powder	R-0923
Hydrochloric Acid .12N	R-0724	NTA Buffer Solution	R-0878
Hydrochloric Acid .6N	R-0735	NTA Cosolvent Solution	R-0879
Hydrochloric Acid 1N	R-0738	Nessler Reagent	R-1305C
Hydrochloric Acid 1.28N	R-0655H-1	Neutralizing Amines Titrating Solution	R-0869
Hydrochloric Acid 2.5N	R-0655H-2	Neutralizing Solution (Conductivity)	R-7022

continued

alphanumeric listing continued

REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.
Nitric Acid 1:1	R-1305M	Sodium Carbonate .24N	R-0810
Nitrite Reagent A	R-1307E	Sodium Carbonate N/10	R-0716
Nitrite Reagent B	R-1307F	Sodium Carbonate N/22	R-0934
ODA Indicator	R-0784	Sodium Carbonate N/50	R-0632-50
Orthotolidine	R-0600	Sodium Carbonate Reagent	R-0717
Oxone Reagent	R-0770	Sodium Hydroxide N/10	R-0628-10
PAO .00564 N	R-0842-177	Sodium Hydroxide N/44	R-0628-44
PAO N/40	R-0842-40	Sodium Hydroxide N/50	R-0628-50
PAO Reagent	R-0846	Sodium Hydroxide Reagent	R-0739
Parazo Orange Indicator	R-1003Q	Sodium Hydroxide Reagent	R-0740
Periodate Powder	R-0906	Sodium Sulfite 22.4%	R-0795
Permanganate N/10	R-0652	Sodium Thiosulfate	R-0747
Permanganate N/34	R-0652-34	Sodium Thiosulfate 2%	R-7008
Permanganate N/5	R-1305L	Sodium Thiosulfate 10%	R-7061
Permanganate Reagent	R-0730	Stabilizing Solution BOD	R-0812
Permanganate Reagent	R-0733	Standard Alkali	R-0723
Permanganate Reagent	R-0742	Standard Alkali 10N	R-0647
Permanganate Reagent	R-0886	Standard Alkali N	R-0656
pH Indicator Solution (Phenol Red)	R-1003J	Stannous Chloride Concentrate	R-0602
Phenanthroline Reagent	R-1306G	Stannous Chloride Powder	R-0602P
Phenol Red Tablet	R-0848	Starch Indicator Solution	R-0636
Phenol Solution	R-0956	Sulfamic Acid	R-0837
Phenolphthalein Indicator	R-0638	Sulfamic Acid Powder	R-0726
Phenolphthalein Indicator 0.1%	R-0898	Sulfanilamide Powder	R-0921
Phenolphthalein Indicator 1%	R-0638S	Sulfanilamide Powder	R-0924
Phosphate Buffer	R-0792	Sulfide Reagent #1	R-0961
Phthalein Red Indicator	R-1003N	Sulfide Reagent #2	R-0962
Potassium Chloride Saturated	R-0685	Sulfide Reagent #3	R-0963
Potassium Chloride Solution	R-0605	Sulfide Reagent A	R-0745
Potassium Dichromate .0417M	R-0829	Sulfide Reagent B	R-0746
Potassium Iodide Crystals	R-0765	Sulfuric Acid	R-0896
Pyrazolone Powder	R-0948	Sulfuric Acid .12N	R-0687
Pyridine	R-0947	Sulfuric Acid .2N	R-0688
QAC Titrating Solution	R-0883	Sulfuric Acid .24N	R-0811
QAC Titrating Solution	R-0951	Sulfuric Acid .6N	R-0736
QAC Titrating Solution (high)	R-0884	Sulfuric Acid N	R-0686
Reversion Acid	R-0640	Sulfuric Acid 1.28N	R-0655S-1
Reversion Neutralizer	R-0641	Sulfuric Acid 2.5N	R-0655S-2
Rochelle Salt Solution	R-0897	Sulfuric Acid 50%	R-0729
SPADNS Reagent	R-0836	Sulfuric Acid Concentrated	R-0608
Salicylate Powder	R-0938	Sulfuric Acid N/10	R-0627S-10
Silica Reagent #1	R-1306T	Sulfuric Acid N/50	R-0627S-50
Silica Reagent #2	R-1306U	Sulfuric Acid Reagent	R-0691
Silica Reagent #3	R-1305U	Sulfuric Acid Solution	R-0689
Silica Reagent #4	R-1305Q	T-N Dilution Water BOD	R-0818
Silica Standard 10 ppm	R-7031	TDS Resin	R-0809
Silver Nitrate 0.54N	R-0629	Thiocarbamate Reagent	R-0643
Silver Nitrate 2%	R-1305N	Thiocyanate Reagent	R-1305K
Silver Nitrate N/7.1	R-0692	Thiosulfate N	R-0824
Silver Nitrate N/10	R-0698	Thiosulfate N/10	R-0697
Silver Nitrate N/35.5	R-0629-35	Thiosulfate N/40	R-0634-40
Silver Nitrate N/50	R-0629-50	Thiosulfate Reagent	R-0700
Silver Nitrate N/58.4	R-0629-58	Thiosulfate Reagent	R-0774
Silver Nitrate N/71	R-0629-71	Thiosulfate Reagent	R-0778
Silver Nitrate Reagent	R-0706	Thiosulfate Reagent	R-0780
Silver Nitrate Reagent	R-0718	Thiosulfate Reagent	R-0783
Silver Nitrate Reagent	R-0741	Thiosulfate Reagent	R-0794
Silver Nitrate Reagent	R-0807	Thiosulfate Reagent	R-0885
Silver Sulfuric Acid Reagent	R-0828	Thiosulfate Reagent	R-0782
Soap Solution N/50	R-0631	Thiosulfate Reagent	R-0789
Sodium Acetate Solution	R-1306F	Thymol Blue Indicator	R-1003M

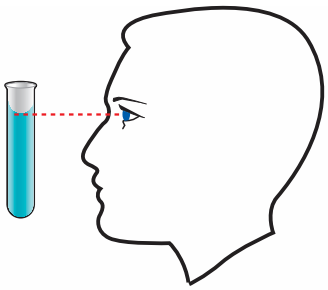
continued

alphanumeric listing continued

REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.
Thymol Red Indicator	R-1003T	Total Hardness Reagent	R-0854
Thymolphthalein Indicator	R-0672	Trace Hardness Buffer	R-0622
Titrating Solution	R-0803	Trace Hardness Reagent	R-0623
Titrating Solution	R-0823	XO Indicator Powder	R-0802P
Titrating Solution	R-0880	Zero Powder	R-0603
Toluidine Blue O Indicator	R-0881	Zinc Powder	R-0922
Tolyl Red Indicator	R-10030	Zinc Reagent #1	R-0839
Total Alkalinity Indicator	R-0645	Zinc Reagent #2	R-0840
Total Chelant Indicator Powder	R-0911	Zinc Reagent #3	R-0841
Total Chelant Titrating Solution	R-0912	Zinc Sulfate Solution	R-1305A

NO. 14 TAYLOR TECHNIQUE TIPS

Measure volumes carefully, reading the meniscus at the lowest point of the curve.



numeric listing of reagents

REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION
R-0001-A	DPD Reagent #1	R-0011P-J	Calcium Indicator Powder
R-0001-A-24		R-0011P-K	
R-0001-A144		R-0600-A	Orthotolidine
R-0001-C		R-0600-A-DB	
R-0001-C-12		R-0600-ADB24	
R-0002-A	DPD Reagent #2	R-0600-C	
R-0002-A-24		R-0600-C-DB	
R-0002-A144		R-0600-E	
R-0002-C		R-0600-F	
R-0002-C-12		R-0600-G †	
R-0003-A	DPD Reagent #3	R-0600-G4†	
R-0003-A-24		R-0601-C	Molybdate Reagent
R-0003-A144		R-0601-C-DB	
R-0003-C		R-0601-E	
R-0003-C-12		R-0601-F	
R-0011L-A	Calcium Indicator Liquid	R-0601-G †	
R-0011L-A-24		R-0601-G4†	
R-0011L-C		R-0601C-E	Molybdate Concentrate
R-0011L-C-12		R-0601C-G	
R-0011L-E		R-0602-C	Stannous Chloride Concentrate
R-0011P-I	Calcium Indicator Powder	R-0602-E*	
R-0011P-II		R-0602P-I	Stannous Chloride Powder

continued

REAGENT NO. EXPLANATION

- ***A*** = *.75 oz (22 mL)*
- ***A-24*** = *.75 oz (24-Pack)*
- ***A144*** = *.75 oz (144-Pack)*
- ***B*** = *2 oz (60 mL, Wide-Mouth)*
- ***C*** = *2 oz (60 mL)*
- ***C-12*** = *2 oz (12-Pack)*
- ***D*** = *4 oz*
- ***DB*** = *Dropper Bottle*
- ***E*** = *16 oz*
- ***F*** = *32 oz*
- ***G*** = *gal*
- ***G4*** = *gal (4-Pack)*
- ***H*** = *25 g*
- ***I*** = *10 g*
- ***II*** = *50 g*
- ***J*** = *.25 lb*
- ***K*** = *1 lb*
- ***Z*** = *1,000-Pack*
- ***Z-10*** = *10,000-Pack*
- ***Z-50*** = *50,000-Pack*

*†**No UPS** and requires special packaging or has shipping restrictions that may involve additional shipping/handling charges. Contact customer service department at 800-TEST KIT for more information.*

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numeric listing continued

REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION
R-0602P-J	Stannous Chloride Powder	R-0629-50-G†	Silver Nitrate N/50
R-0602P-K		R-0629-58-E	Silver Nitrate N/58.4
R-0603-II	Zero Powder	R-0629-58-F	
R-0604-C	Chlorine Reagent #2	R-0629-58-G†	
R-0604-E		R-0629-71-E	Silver Nitrate N/71
R-0604-F		R-0629-71-F	
R-0605-C	Potassium Chloride Solution	R-0629-71-G†	
R-0608-C	Sulfuric Acid Concentrated	R-0630-A	Chromate Indicator
R-0608-E*		R-0630-C	
R-0609-C*	Brucine Reagent	R-0630-E	
R-0609-E*		R-0630-F	
R-0616-C	Hydrochloric Acid Concentrated	R-0630-G	
R-0616-E*		R-0630-G4	
R-0617-C	Iodide Iodate N/63	R-0631-A*	Soap Solution N/50
R-0617-E		R-0631-E*	
R-0617-F		R-0631-F†	
R-0617-G		R-0631-G†	
R-0617-G4		R-0632-50-E	Sodium Carbonate N/50
R-0618-E	Hardness Reagent .01M	R-0632-50-G	
R-0618-F		R-0633-10-E	Iodide Iodate N/10
R-0618-G		R-0633-10-G	
R-0618-G4		R-0633-40-E	Iodide Iodate N/40
R-0619-C	Hardness Buffer	R-0633-40-F	
R-0619-E		R-0633-40-G	
R-0620-I	Hardness Indicator Powder	R-0633-80-E	Iodide Iodate N/80
R-0620-J		R-0633-80-F	
R-0620-K		R-0633-80-G	
R-0622-C	Trace Hardness Buffer	R-0633-80-G4	
R-0622-E		R-0633-126-E	Iodide Iodate N/126
R-0623-C	Trace Hardness Reagent	R-0633-126-F	
R-0623-E		R-0633-126-G	
R-0625-I	Diphenylcarbazide Powder	R-0634-40-E	Thiosulfate N/40
R-0626-C*	Diphenylcarbazide Reagent	R-0634-40-F	
R-0626-E*		R-0634-40-G	
R-0627H-10-E	Hydrochloric Acid N/10	R-0635-10-E*	Iodine Solution N/10
R-0627H-10-G†		R-0635-10-G*	
R-0627S-10-C	Sulfuric Acid N/10	R-0635-35-F*	Iodine Solution .0282N
R-0627S-10-E		R-0635-40-E*	Iodine Solution N/40
R-0627S-10-F		R-0635-40-F*	
R-0627S-10-G†		R-0636-C	Starch Indicator Solution
R-0627S-10G4†		R-0636-E	
R-0627S-50-E	Sulfuric Acid N/50	R-0636-F	
R-0627S-50-F		R-0636-G	
R-0627S-50-G		R-0636-G4	
R-0627S-50G4		R-0637-C	Methyl Orange Indicator
R-0628-10-C	Sodium Hydroxide N/10	R-0637-E	
R-0628-10-E		R-0637-F	
R-0628-10-F		R-0637-G	
R-0628-10-G		R-0638-A	Phenolphthalein Indicator
R-0628-20-G	Sodium Hydroxide N/20	R-0638-C	
R-0628-44-E	Sodium Hydroxide N/44	R-0638-E	
R-0628-44-F		R-0638-F	
R-0628-50-E	Sodium Hydroxide N/50	R-0638-G*	
R-0628-50-F		R-0638-G4*	
R-0628-50-G		R-0638S-E	Phenolphthalein Indicator 1%
R-0629-C	Silver Nitrate 0.54N	R-0638S-F	
R-0629-35-E	Silver Nitrate N/35.5	R-0640-C	Reversion Acid
R-0629-35-F		R-0640-E	
R-0629-35-G†		R-0640-G†	
R-0629-35-G4†		R-0641-C	Reversion Neutralizer
R-0629-50-E	Silver Nitrate N/50	R-0641-E*	
R-0629-50-F		R-0641-F*	

continued

numeric listing continued

REAGENT NO.	REAGENT DESCRIPTION
R-0642-A	Copper Buffer
R-0642-D	
R-0642-E	
R-0643-A	Thiocarbamate Reagent
R-0643-D	
R-0643-E	
R-0643-F	
R-0645-C	Total Alkalinity Indicator
R-0645-E	
R-0645-F	
R-0645-G	
R-0645-G4	
R-0646-E	Barium Chloride Solution 10%
R-0646-F	
R-0646-G	
R-0647-C	Standard Alkali 10N
R-0647-C-DB	
R-0647-E*	
R-0650-E	Methylene Blue 0.1%
R-0650-G	
R-0651-C*	Chloroform
R-0651-E*	
R-0652-E	Permanganate N/10
R-0652-34-E	Permanganate N/34
R-0653-C*	Calcium Buffer
R-0653-E*	
R-0653-2-A	Calcium Buffer
R-0653-2-C	
R-0653-2-E*	
R-0655H-1-F	Hydrochloric Acid 1.28N
R-0655H-2-F	Hydrochloric Acid 2.5N
R-0655S-1-F	Sulfuric Acid 1.28N
R-0655S-1-G†	
R-0655S-2-G†	Sulfuric Acid 2.5N
R-0656-F	Standard Alkali N
R-0657-I*	Manganous Sulfate Powder
R-0658-C*	Manganous Sulfate Solution
R-0658-E*	
R-0659-I*	Iodide Azide Powder
R-0660S-C	Alkaline Iodide Azide Reagent
R-0660S-E*	
R-0661-E*	Ammonium Hydroxide Concentrated
R-0664-C	Bleach Reagent #1
R-0664-C-DB	
R-0664-E	
R-0665-C	Bleach Reagent #2 (liquid)
R-0665-E*	
R-0665S-II	Bleach Reagent #2 (crystals)
R-0666-C	Bleach Reagent #3
R-0666-E	
R-0670-E	Calcium Chloride Standard .02N
R-0672-E	Thymolphthalein Indicator
R-0672-G*	
R-0673-C	Midget Iron Reagent #1
R-0673-E*	
R-0674-C	Midget Iron Reagent #2
R-0674-E	
R-0676-1-F	Fluoride Standard 1 ppm
R-0682-C	Chloride Reagent
R-0683-C	Hardness Reagent
R-0683-E	
R-0683-F	
R-0683-G†	Hardness Reagent
R-0683-G4†	
R-0684-C	Hardness Reagent .0025M
R-0684-E	
R-0685-E	Potassium Chloride Saturated
R-0686-C	Sulfuric Acid N
R-0686-E	
R-0686-F	
R-0686-G †	
R-0686-G4†	
R-0687-C	Sulfuric Acid .12N
R-0687-E	
R-0687-F	
R-0687-G†	
R-0687-G4†	
R-0688-F	Sulfuric Acid .2N
R-0688-G†	
R-0689-C	Sulfuric Acid Solution
R-0690-I	Ascorbic Acid Powder
R-0691-C	Sulfuric Acid Reagent
R-0691-E	
R-0692-E	Silver Nitrate N/7.1
R-0692-F	
R-0697-C	Thiosulfate N/10
R-0697-E	
R-0697-F	
R-0697-G	
R-0697-G4	
R-0698-C	Silver Nitrate N/10
R-0698-E	
R-0698-F	
R-0698-G†	
R-0699-C	Iodide Iodate Reagent
R-0699-E	
R-0699-F	
R-0699-G	
R-0700-C	Thiosulfate Reagent
R-0700-E	
R-0706-C	Silver Nitrate Reagent
R-0706-E	
R-0706-F	
R-0709-C	Hydrochloric Acid Reagent
R-0709-E	
R-0711-C	Barium Chloride Solution 20%
R-0711-E	
R-0711-F	
R-0716-C	Sodium Carbonate N/10
R-0717-C	Sodium Carbonate Reagent
R-0718-C	Silver Nitrate Reagent
R-0718-E	
R-0720-C	Barium Chloride Solution 30%
R-0720-E	
R-0723-C	Standard Alkali
R-0724-C	Hydrochloric Acid .12N
R-0724-E	
R-0724-F	
R-0724-G†	
R-0725-I	Acid Starch Indicator Powder
R-0725-J	
R-0725-K	
R-0726-J	Sulfamic Acid Powder
R-0727	Activated Charcoal (30 g)

continued

REAGENT NO. EXPLANATION

- ***A*** *= .75 oz (22 mL)*
- ***A-24*** *= .75 oz (24-Pack)*
- ***A144*** *= .75 oz (144-Pack)*
- ***B*** *= 2 oz (60 mL, Wide-Mouth)*
- ***C*** *= 2 oz (60 mL)*
- ***C-12*** *= 2 oz (12-Pack)*
- ***D*** *= 4 oz*
- ***DB*** *= Dropper Bottle*
- ***E*** *= 16 oz*
- ***F*** *= 32 oz*
- ***G*** *= gal*
- ***G4*** *= gal (4-Pack)*
- ***H*** *= 25 g*
- ***I*** *= 10 g*
- ***II*** *= 50 g*
- ***J*** *= .25 lb*
- ***K*** *= 1 lb*
- ***Z*** *= 1,000-Pack*
- ***Z-10*** *= 10,000-Pack*
- ***Z-50*** *= 50,000-Pack*

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numeric listing continued

REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION
R-0729-C	Sulfuric Acid 50%	R-0781-II	Acid Sulfate
R-0729-C-DB		R-0781-J	
R-0729-E*		R-0781-K	
R-0730-C	Permanganate Reagent	R-0782-C	Thiosulfate Reagent
R-0730-E		R-0783-C	Thiosulfate Reagent
R-0730-F		R-0783-E	
R-0730-G†		R-0784-C	ODA Indicator
R-0733-C	Permanganate Reagent	R-0784-E	
R-0733-E		R-0789-C	Thiosulfate Reagent
R-0733-F		R-0790-C	Ferric Chloride Solution BOD
R-0735-C	Hydrochloric Acid .6N	R-0790-E	
R-0735-E		R-0791-C	Magnesium Sulfate BOD
R-0735-F		R-0791-E	
R-0736-C	Sulfuric Acid .6N	R-0792-C	Phosphate Buffer
R-0736-E		R-0792-E	
R-0736-F		R-0793-C	Calcium Chloride Solution BOD
R-0737-C	Hydrochloric Acid 3N	R-0793-E	
R-0737-F		R-0794-E	Thiosulfate Reagent
R-0737-G†		R-0795-F	Sodium Sulfite 22.4%
R-0738-C	Hydrochloric Acid 1N	R-0796-F	Ammonium Molybdate 11.4%
R-0738-E		R-0801-C*	Acid Reagent
R-0738-F		R-0801-E*	
R-0739-C	Sodium Hydroxide Reagent	R-0802P-I	XO Indicator Powder
R-0739-E		R-0802P-J	
R-0740-C	Sodium Hydroxide Reagent	R-0802P-K	
R-0741-C	Silver Nitrate Reagent	R-0803-C	Titrating Solution
R-0741-E		R-0803-E	
R-0742-C	Permanganate Reagent	R-0803-F	
R-0742-E		R-0803-G	
R-0745-C	Sulfide Reagent A	R-0804-DD	Demineralizer Bottle (8 oz) NEW!
R-0745-E*		R-0805-C	Fluoride Masking Agent
R-0746-C	Sulfide Reagent B	R-0805-E	
R-0747-C	Sodium Thiosulfate	R-0806-C	Hardness Reagent
R-0755-C	Magnesium Chloride Reagent	R-0806-E	
R-0755-E		R-0806-F	
R-0756-G	Causticity Reagent #1	R-0806-G	
R-0757-G	Causticity Reagent #2	R-0807-C	Silver Nitrate Reagent
R-0760-F	Hydrochloric Acid N/50	R-0807-E	
R-0760-G		R-0808-C	Iodide Iodate Reagent
R-0762-C	Isopropyl Alcohol	R-0808-E	
R-0765-I	Potassium Iodide Crystals	R-0808-F	
R-0765-II		R-0808-G	
R-0765-J		R-0809-II	TDS Resin
R-0765-K		R-0810-C	Sodium Carbonate .24N
R-0766-C*	Lead Reagent	R-0810-E	
R-0767-C	Citric Acid Reagent	R-0811-C	Sulfuric Acid .24N
R-0768-C*	Iodine Indicator	R-0811-E	
R-0768-E*		R-0812-E	Stabilizing Solution BOD
R-0769-C	Iodine Buffer	R-0812-G	
R-0769-E		R-0813-C	Glycine Solution
R-0770-C	Oxone Reagent	R-0814-C	EDTA Solution
R-0771-C	Lead Buffer	R-0815-C	FAS Titrating Solution
R-0772-C	Iodide Solution	R-0816-E	FAS Titrant 0.25M
R-0772-E		R-0817-C	Iodide Iodate Reagent
R-0773-E*	Amperometric Iodide Solution	R-0817-E	
R-0774-C	Thiosulfate Reagent	R-0818-F	T-N Dilution Water BOD
R-0774-E		R-0819-A	Ferroin Indicator
R-0775-E	Hardness Buffer	R-0819-C	
R-0778-C	Thiosulfate Reagent	R-0819-E	
R-0778-E		R-0820-C	CAN Solution
R-0780-C	Thiosulfate Reagent	R-0820-E	
R-0780-E		R-0820-F	

continued

numeric listing continued

REAGENT NO.	REAGENT DESCRIPTION
R-0820-G†	CAN Solution
R-0823-C	Titrating Solution
R-0823-E	
R-0823-G	
R-0824-C	Thiosulfate N
R-0824-E	
R-0824-G	
R-0825-C	Buffer Solution
R-0826P-I	Dithizone Indicator Powder
R-0827-I*	Mercuric Sulfate
R-0827-J*	
R-0828-E*	Silver Sulfuric Acid Reagent
R-0829-E	Potassium Dichromate .0417M
R-0833-B	DI Water
R-0833-C	
R-0833-C	
R-0833-E	
R-0833-F	
R-0833-G	
R-0836-E*	SPADNS Reagent
R-0837-I	Sulfamic Acid
R-0837-J	
R-0838-E	KHP Standard COD
R-0839-C	Zinc Reagent #1
R-0839-E	
R-0840-I	Zinc Reagent #2
R-0840-J	
R-0841-C	Zinc Reagent #3
R-0841-E	
R-0842-40-F	PAO N/40
R-0842-177-E	PAO .00564 N
R-0842-177-F	
R-0843-Z	DPD Tablet #1
R-0843-Z-10	
R-0844-Z	DPD Tablet #3
R-0845-C	Mercuric Nitrate Titrating Solution
R-0846-C	PAO Reagent
R-0846-E	
R-0848-Z	Phenol Red Tablet
R-0851-A	Iron Reagent #1
R-0851-C	
R-0851-E	
R-0852-A	Iron Reagent #2
R-0852-C	
R-0852-E	
R-0854-A	Total Hardness Reagent
R-0854-C	
R-0854-E	
R-0860-A	Copper Reagent #1
R-0860-C	
R-0860-E	
R-0861-A	Copper Reagent #2
R-0861-C	
R-0861-E	
R-0865-C	Mercuric Nitrate Titrating Reagent
R-0868-1K-C	Conductivity Solution 1000 µS/µmhos
R-0868-1K-D	
R-0868-1K-F*	
R-0868-1K-G*	
R-0868-5C-C	Conductivity Solution 500 µS/µmhos
R-0868-5C-D	
R-0868-5C-F*	
R-0868-5C-G*	Conductivity Solution 500 µS/µmhos
R-0868-5K-C	Conductivity Solution 5000 µS/µmhos
R-0868-5K-D	
R-0868-5K-F*	
R-0868-5K-G*	
R-0868-25C-B	Conductivity Solution 2500 µS/µmhos
R-0868-25C-C	
R-0868-25C-D	
R-0868-25C-F*	
R-0868-25C-G*	
R-0868-50-C	Conductivity Solution 50 µS/µmhos
R-0868-50-D	
R-0868-50-F*	
R-0869-C	Neutralizing Amines Titrating Solution
R-0870-I	DPD Powder
R-0870-I-12	
R-0870-J	
R-0870-K	
R-0871-A	FAS-DPD Titrating Reagent (chlorine)
R-0871-A-24	
R-0871-C	
R-0871-C-12	
R-0871-E	
R-0871-F	
R-0872-A	FAS-DPD Titrating Reagent (bromine)
R-0872-A-24	
R-0872-C	
R-0872-C-12	
R-0875-E*	FAS-DPD Titrating Reagent (chlorine)
R-0877-C	Magnesium Chloride Reagent
R-0877-E	
R-0878-C	NTA Buffer Solution
R-0878-E	
R-0879-C	NTA Cosolvent Solution
R-0879-F	
R-0880-E	Titrating Solution
R-0881-A	Toluidine Blue O Indicator
R-0881-C	
R-0881-E	
R-0883-C	QAC Titrating Solution
R-0883-E	
R-0884-C	QAC Titrating Solution (high)
R-0884-C-12	
R-0885-C	Thiosulfate Reagent
R-0886-C	Permanganate Reagent
R-0887-C	Molybdenum Standard 20 ppm
R-0887-C-12	
R-0889-F	Molybdenum Titrating Solution
R-0889-G	
R-0890-C	Molybdenum Buffer Solution
R-0890-C-12	
R-0890-E*	
R-0890-G†	
R-0891-C	Molybdenum Indicator Solution
R-0891-C-12	
R-0891-E*	
R-0891-G†	
R-0892-C	Molybdenum Titrating Solution
R-0892-C-12	
R-0892-E	
R-0892-G	
R-0896-C	Sulfuric Acid

continued

REAGENT NO. EXPLANATION

- ***A*** *= .75 oz (22 mL)*
- ***A-24*** *= .75 oz (24-Pack)*
- ***A144*** *= .75 oz (144-Pack)*
- ***B*** *= 2 oz (60 mL, Wide-Mouth)*
- ***C*** *= 2 oz (60 mL)*
- ***C-12*** *= 2 oz (12-Pack)*
- ***D*** *= 4 oz*
- ***DB*** *= Dropper Bottle*
- ***E*** *= 16 oz*
- ***F*** *= 32 oz*
- ***G*** *= gal*
- ***G4*** *= gal (4-Pack)*
- ***H*** *= 25 g*
- ***I*** *= 10 g*
- ***II*** *= 50 g*
- ***J*** *= .25 lb*
- ***K*** *= 1 lb*
- ***Z*** *= 1,000-Pack*
- ***Z-10*** *= 10,000-Pack*
- ***Z-50*** *= 50,000-Pack*

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numeric listing continued

REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION
R-0897-C	Rochelle Salt Solution	R-1003H-G	Bromthymol Blue Indicator
R-0898-F	Phenolphthalein Indicator 0.1%	R-1003J-A	pH Indicator Solution (Phenol Red)
R-0899-G	Hydrochloric Acid N/30	R-1003J-C	
R-0900-I	Molybdenum Indicator Powder	R-1003J-C-12	
R-0900-I-12		R-1003J-D	
R-0901-C	Molybdenum Indicator Solvent	R-1003J-E	
R-0901-C-12		R-1003J-F	
R-0905-C	Citrate Buffer	R-1003J-G	
R-0906-I	Periodate Powder	R-1003J-G4	
R-0911-I	Total Chelant Indicator Powder	R-1003K-A	Cresol Red Indicator
R-0912-C	Total Chelant Titrating Solution	R-1003K-C	
R-0921-I	Sulfanilamide Powder	R-1003K-E	
R-0922-H†	Zinc Powder	R-1003K-F	
R-0923-I	NED Powder	R-1003K-G	
R-0924-I	Sulfanilamide Powder	R-1003L-A	Meta Cresol Purple Indicator
R-0934-F	Sodium Carbonate N/22	R-1003L-C	
R-0934-G		R-1003L-E	
R-0935-I	Ascorbic Acid Powder	R-1003L-F	
R-0936-C	Aluminum Buffer	R-1003M-A	Thymol Blue Indicator
R-0937-C	Aluminum Indicator	R-1003M-C	
R-0938-H*	Salicylate Powder	R-1003M-E	
R-0939-I	Cyanurate Powder	R-1003N-C	Phthalein Red Indicator
R-0940-C	Caustic Solution	R-1003N-E*	
R-0941-C	Color Development Solution	R-1003N-F*	
R-0942-C	Acid Solution	R-1003O-A	Tolyl Red Indicator
R-0947-C*	Pyridine	R-1003O-C	
R-0948-I	Pyrazolone Powder	R-1003O-E	
R-0949-H	Chloramine-T Powder	R-1003P-C	Acyl Red Indicator
R-0950-C	Complexing Reagent	R-1003P-E	
R-0950-E		R-1003P-F	
R-0951-C	QAC Titrating Solution	R-1003Q-C	Parazo Orange Indicator
R-0951-E		R-1003Q-E	
R-0955-I	DBDMH Powder	R-1003Q-F	
R-0956-C	Phenol Solution	R-1003R-C	Acyl Blue Indicator
R-0961-C	Sulfide Reagent #1	R-1003R-E	
R-0961-C-DB		R-1003S-C	Benzo Red Indicator
R-0962-C-DB	Sulfide Reagent #2	R-1003S-E	
R-0963-C	Sulfide Reagent #3	R-1003T-C	Thymol Red Indicator
R-0963-C-DB		R-1003T-E*	
R-0965-I	Iron #1	R-1003T-F*	
R-0966-C	Iron #2	R-1003U-A	Long Range Indicator
R-1003A-C	Acid Cresol Red Indicator	R-1003U-A-DB	
R-1003A-E		R-1003U-C	
R-1003B-C	Acid Meta Cresol Purple Indicator	R-1003U-C-DB	
R-1003B-E		R-1003U-E	
R-1003C-C	Benzo Yellow Indicator	R-1003U-F	
R-1003C-E		R-1003U-G*	
R-1003D-C	Bromphenol Blue Indicator	R-1003V-E	Bromcresol Purple Indicator
R-1003D-E		R-1003W-C	BTB/MCP Indicator
R-1003E-C	Bromcresol Green Indicator	R-1099-02-E	Buffer Solution pH 2.0
R-1003E-E		R-1099-03-E	Buffer Solution pH 3.0
R-1003E-F		R-1099-04-B	Buffer Solution pH 4.0
R-1003F-C	Methyl Red Indicator	R-1099-04-C	
R-1003F-E		R-1099-04-D	
R-1003F-F		R-1099-04-E	
R-1003G-A	Chlorphenol Red Indicator	R-1099-04-F	
R-1003G-C		R-1099-04-G	
R-1003G-E		R-1099-05-E	Buffer Solution pH 5.0
R-1003H-A	Bromthymol Blue Indicator	R-1099-06-E	Buffer Solution pH 6.0
R-1003H-C		R-1099-06-F	
R-1003H-E		R-1099-07-B	Buffer Solution pH 7.0
R-1003H-F		R-1099-07-C	

continued

numeric listing continued

REAGENT NO.	REAGENT DESCRIPTION	REAGENT NO.	REAGENT DESCRIPTION
R-1099-07-D	Buffer Solution pH 7.0	R-1305U-C-DB	Silica Reagent #3
R-1099-07-E		R-1305U-E	
R-1099-07-F		R-1305V-C	Alizarin Red Reagent
R-1099-07-G		R-1305V-E	
R-1099-08-E	Buffer Solution pH 8.0	R-1305W-C	Dilute Ammonia 1:9
R-1099-08-F		R-1305W-E	
R-1099-09-E	Buffer Solution pH 9.0	R-1305X-E*	Bromine Water
R-1099-09-F		R-1305Y-C	Dilute Ammonia 1:1
R-1099-09-G		R-1305Z-C	Dimethylglyoxime Reagent
R-1099-10-B	Buffer Solution pH 10.0	R-1305Z-E	
R-1099-10-C		R-1306E-C	Hydroxylamine Reagent
R-1099-10-D		R-1306E-E	
R-1099-10-E		R-1306F-F	Sodium Acetate Solution
R-1099-10-F		R-1306G-C	Phenanthroline Reagent
R-1099-10-G		R-1306G-E	
R-1099-11-E	Buffer Solution pH 11.0	R-1306G-F	
R-1099-11-F		R-1306L-C*	Mercuric Chloride Saturated
R-1099-12-F	Buffer Solution pH 12.0	R-1306R-C	Aluminum Hydroxide
R-1305A-C	Zinc Sulfate Solution	R-1306S-E	Buffer Solution pH 7.4
R-1305A-E		R-1306T-C	Silica Reagent #1
R-1305C-C*	Nessler Reagent	R-1306T-C-DB	
R-1305C-E*		R-1306T-E	
R-1305H-D	Acetic Acid 1:9	R-1306T-F	
R-1305H-E		R-1306T-G†	
R-1305J-C	Dilute Hydrochloric Acid	R-1306U-C	Silica Reagent #2
R-1305J-D		R-1306U-C-DB	
R-1305J-E		R-1306U-E	
R-1305J-F		R-1306U-F	
R-1305J-G†		R-1306U-G	
R-1305K-C	Thiocyanate Reagent	R-1307E-C	Nitrite Reagent A
R-1305K-C-DB		R-1307E-C-DB	
R-1305K-D		R-1307E-E*	
R-1305K-E		R-1307F-C	Nitrite Reagent B
R-1305K-F		R-1307F-C-DB	
R-1305K-G		R-1307F-E*	
R-1305L-C	Permanganate N/5	R-7008-G	Sodium Thiosulfate 2%
R-1305L-E		R-7022-C	Conductivity Neutralizing Solution
R-1305L-F		R-7022-E	
R-1305M-C	Nitric Acid 1:1	R-7022-G*	
R-1305M-E*		R-7031-G	Silica Standard 10 ppm
R-1305N-E	Silver Nitrate 2%	R-7035-F	EDTA Standard Solution 0.005M
R-1305O-II	Ammonium Persulfate	R-7046-J	Gallic Acid
R-1305O-K		R-7046-K	
R-1305P-E	Ammonium Molybdate Solution	R-7052-F	Amperometric Acetate Buffer
R-1305Q-I	Silica Reagent #4	R-7052-G†	
R-1305Q-II		R-7054-E	Amperometric Phosphate Buffer
R-1305Q-J		R-7054-F	
R-1305R-D	Dilute Ammonia 1:5	R-7054-G	
R-1305R-E		R-7061-C	Sodium Thiosulfate 10%
R-1305U-C	Silica Reagent #3		

NO. 15 TAYLOR TECHNIQUE TIPS

Water must be sampled at a representative location for meaningful results.

REAGENT NO. EXPLANATION

- ***A*** = .75 oz (22 mL)
- ***A-24*** = .75 oz (24-Pack)
- ***A144*** = .75 oz (144-Pack)
- ***B*** = 2 oz (60 mL, Wide-Mouth)
- ***C*** = 2 oz (60 mL)
- ***C-12*** = 2 oz (12-Pack)
- ***D*** = 4 oz
- ***DB*** = Dropper Bottle
- ***E*** = 16 oz
- ***F*** = 32 oz
- ***G*** = gal
- ***G4*** = gal (4-Pack)
- ***H*** = 25 g
- ***I*** = 10 g
- ***II*** = 50 g
- ***J*** = .25 lb
- ***K*** = 1 lb
- ***Z*** = 1,000-Pack
- ***Z-10*** = 10,000-Pack
- ***Z-50*** = 50,000-Pack

†***No UPS*** *and requires special packaging or has shipping restrictions that may involve additional shipping/handling charges. Contact customer service department at 800-TEST KIT for more information.*

**Requires special packaging or has shipping restrictions that may involve additional shipping/handling charges. Contact customer service department at 800-TEST KIT for more information.*

For your convenience, we stock many items for water analysis besides our own kits and reagents. These include a wide selection of general-use glass- and plasticware, as well as replacements for all components found in our boiler and cooling water kits. Please inquire if you do not see what you need here; items are added to inventory throughout the year, or we may be able to refer you to a supplier if it is not available in-house.

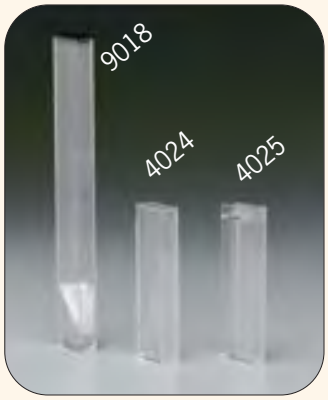
bottles, jars, and vials*

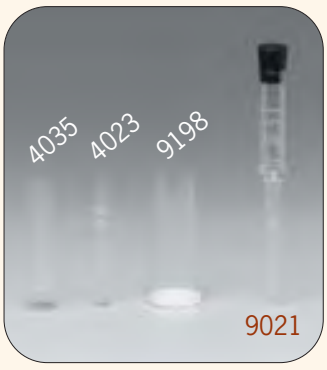
PART DESCRIPTION	PART NO.
Bottle, .5 oz, glass, amber (use 2268, 2270)	2205
Bottle, .75 oz, poly, amber (use 2263, 2270, 2300)	2147
Bottle, .75 oz, poly, natural (use 2263, 2270, 2300)	2146
Bottle, 2 oz, glass, amber (use 2344)	2239
Bottle, 2 oz, glass, flint (use 2344)	2233
Bottle, 2 oz, poly, amber (use 2263, 2270, 2300)	2241
Bottle, 2 oz, poly, natural (use 2263, 2270, 2300)	2242
Bottle, 4 oz, glass, amber (use 2277)	2244
Bottle, 4 oz, poly, natural (use 2278, 2313)	2246
Bottle, 16 oz, glass, amber (use 2139, 2350)	2247
Bottle, 16 oz, poly, amber (use 2282)	2249
Bottle, 16 oz, poly, natural (use 2282)	2251
Bottle, 32 oz, glass, amber (use 2285, 2351)	2252
Bottle, 32 oz, poly, amber (use 2282)	2253
Bottle, 32 oz, poly, natural (use 2282)	2254
Bottle, 500 mL, glass w/ glass stopper	2215
Bottle, BOD, 300 mL, glass w/ glass stopper	2214
Bottle, Calibrated 10 & 50 mL, 2 oz, glass w/ cap	9174
Bottle, Calibrated 44 mL, 4 oz, glass, amber (use 2277)	2245
Bottle, Dilution Water, 32 oz, plastic w/ dispenser cap	9280
Bottle, 1 gal, glass, amber (use 2142)	2255
Bottle, 1 gal, poly, amber (use 2142)	2256
Bottle, 1 gal, poly, natural (use 2142)	2257
Bottle, Calibrated 25 mL, 2 oz (wide-mouth), glass w/ poly stopper	9181
Bottle, Calibrated 50 mL, 2 oz (wide-mouth), glass w/ glass stopper	9269
Bottle, Graduated, 50 mL (5 mL div.), 2 oz, glass w/ POLY-SEAL™ cap	9222
Bottle, Graduated, 50 mL (5 mL div.), 2 oz, glass w/ foil-lined cap	9177
Bottle, Graduated, 100 mL (10 mL div.), 4 oz, glass w/ foil-lined cap	9223
Jar, 60 cc, poly, natural (wide-mouth) (use 2285)	2291
Jar, 120 cc, poly, natural (wide-mouth) (use 2286)	2292
Jar, 250 cc, poly, natural (wide-mouth) (use 2287)	2293
Jar, 500 cc, poly, natural (wide-mouth) (use 2288)	2294
Jar, 950 cc, poly, natural (wide-mouth) (use 2288)	2295
Vial, 10 g, plastic (use 9192)	2303
Vial, Graduated, 30 mL, 10 dram, glass w/ cap	2306

* *Purchase caps separately unless otherwise noted.*

caps and tips

PART DESCRIPTION	PART NO.
Cap, 18 mm, black w/ liner (for 2146, 2147, 2205, 2241, 2242)	2270
Cap, 18 mm Dispenser, white (for 2146, 2147, 2241, 2242)	2269
Cap, 18 mm Dropper Bottle, natural (for 2146, 2147, 2241, 2242)	2263
Cap, 18 mm POLY-SEAL™, black (for 2205)	2268
Cap, 20 mm POLY-SEAL™, black (for 2233, 2239)	2344
Cap, 22 mm POLY-SEAL™, black (for 2244)	2277
Cap, 24 mm, black (for 2246)	2278
Cap, 24 mm Dispenser, white (for 2246)	2313
Cap, 28 mm, black (for 2247)	2139
Cap, 28 mm, black w/ liner (for 2249, 2251, 2253, 2254)	2282
Cap, 28 mm Dispenser, white (for 2249, 2251, 2253, 2254)	2280
Cap, 28 mm Hole, white (for burets) (for 2249, 2251, 2253, 2254)	2281
Cap, 28 mm POLY-SEAL™, black (for 2247)	2350
Cap, 33 mm POLY-SEAL™, black (for 2252)	2351
Cap, 33 mm, black (for 2252, 2291)	2285
Cap, 38 mm, black (for 2292)	2286
Cap, 38 mm, black w/ liner (for 2256, 2257)	2142
Cap, 45 mm, black (for 2293)	2287
Cap, 53 mm, black (for 2294, 2295)	2288
Cap, Test Cell, 5 mL, square, plastic (for 9017)	3235
Cap, Test Cell, 5 mL, rectangular, plastic (for 4025)	3267
Cap, Test Cell, 11.5 mL, rectangular, plastic (for 4024, 9018)	3243
Cap & Dipper, plastic, black (for 2303)	9192
Tip, 18 mm, natural (for 2146, 2147, 2241, 2242)	2300
Tip, 18 mm dispenser, natural (for 2146, 2147, 2241, 2242)	2450





cells and tubes

PART DESCRIPTION	PART NO.
Sample Tube, Calibrated 5 mL, plastic	4035
Sample Tube, Graduated, 25 mL, plastic w/ cap	9198
Sample Tube, Graduated, 50 mL, plastic w/ cap	9188
Test Cell, Calibrated 5 mL, plastic (for 3267)	4025
Test Cell, Calibrated 5 mL, square, plastic w/ cap	9017
Test Cell, Calibrated 11.5 mL, plastic (for 3243)	4024
Test Cell, LVP (Long Viewpath), Cal. 5, 10, & 15 cm, plastic w/ cap	9018
Test Tube, Calibrated 1.67 & 5 mL, glass	9261
Test Tube, Calibrated 5 mL, glass	4023
Test Tube, Calibrated 5 mL, glass w/ cap	9020
Test Tubes, Calibrated 5 mL, glass, 6-pack	4023-6
Test Tube, Mixing, Cal. 5, 10, 14, 15, 17.5 mL, glass w/ stopper	9021
Test Tubes, Mixing, Cal. 5, 10, 14, 15,17.5 mL, glass w/ stopper, 6-pack	9021-6

comparators

PART DESCRIPTION	PART NO.
2-Standard, Orthophosphate (high), 20 & 40 ppm	9026
2-Standard, Orthophosphate (high), 20 & 60 ppm	9028
2-Standard, Orthophosphate (high), 30 & 60 ppm	9025
2-Standard, Orthophosphate (high), 40 & 80 ppm	9030
2-Standard, Orthophosphate (high), 5 & 10 ppm	9029
2-Standard, Orthophosphate (low), 2 & 8 ppm	9027
2-Standard, Orthophosphate (low), 3 & 6 ppm	9307
Midget, Copper, 0.2-3.0 ppm	9049
Midget, Iodine/Iodide, 0-2.0 ppm	9037
Midget, Iron, 0-10 ppm	9050
Midget, Iron, 0-2.0 ppm	9051
Midget, Orthophosphate (high), 10-100 ppm	9350
Midget, Orthophosphate (low), 0-10 ppm	9054
Midget, pH (bromthymol blue), 6.0-7.4	9036
Midget, pH (chlorphenol red), 5.2-6.6	9237
Midget, pH (cresol red), 7.2-8.6	9006
Midget, pH (long range), 3.0-10.0	9052
Midget, pH (phenol red), 6.8-8.2	9053
Midget, pH (thymol blue), 8.2-9.6	9321
Midget, Silica, 5-50 ppm	9257
Slide, Ammonia, 0.1-0.9 ppm	9125
Slide, Bromine DPD, 0-3.0 ppm	9079
Slide, Bromine DPD, 2.0-10 ppm	9236
Slide, Chlorine DPD, 0-3.0 ppm	9082
Slide, Chlorine DPD, 1.0-10 ppm	9083
Slide, Chlorine OT, 0-50 ppm	9087
Slide, Chlorine OT, 0.1-4.0 ppm	9085
Slide, Chlorine OT, 0.2-12 ppm	9088
Slide, Chlorine OT, 5-250 ppm	9231
Slide, Copper, 0-3.0 ppm	9094
Slide, Iodine/Iodide, 0-2.0 ppm	9103
Slide, Iron, 0-10 ppm	9246
Slide, Iron, 0-2.0 ppm	9106
Slide, Orthophosphate (high), 5-100 ppm	9110
Slide, Orthophosphate (low), 0-25 ppm	9111
Slide, Ozone DPD, 0-0.66 ppm	9318
Slide, pH (acid meta cresol purple), 1.2-2.8	9060
Slide, pH (acyl blue), 12.0-13.6	9075
Slide, pH (acyl red), 10.0-11.6	9073
Slide, pH (benzo red), 4.4-7.6	9076
Slide, pH (benzo yellow), 2.4-4.0	9061
Slide, pH (bromcresol green), 3.8-5.4	9063
Slide, pH (bromthymol blue), 6.0-7.6	9066
Slide, pH (chlorphenol red), 5.2-6.8	9065
Slide, pH (cresol red), 7.2-8.8	9068
Slide, pH (long range), 3.0-11.0	9078
Slide, pH (meta cresol purple), 7.6-9.2	9069
Slide, pH (methyl red), 4.4-6.0	9064
Slide, pH (parazo orange), 11.0-12.6	9074
Slide, pH (phenol red), 6.8-8.4	9067
Slide, pH (phthalein red), 8.6-10.2	9071
Slide, pH (thymol blue), 8.0-9.6	9070
Slide, pH (thymol red), 8.0-11.2	9077
Slide, pH (tolyl red), 10.0-11.6	9072
Slide, Silica, 0-50 ppm	9264
Slide, Sulfite, 0-50 ppm	9112
Slide (LVP), pH (condensate), 6.0-9.2	9432*
Slide (LVP), Silica, 0-25 ppm	9431

9025

9094

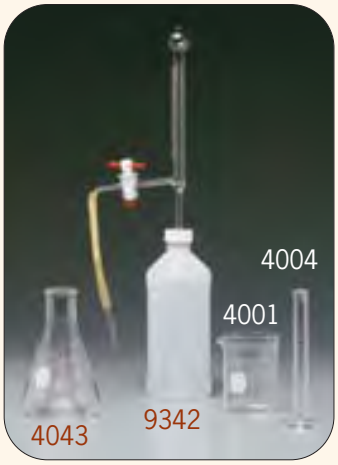
9053

* *Additional LVP comparators for pH listed on pages 33-34.*

dippers and pipets

PART DESCRIPTION	PART NO.
Dipper, 2 g, plastic	4026
Dipper, 8.5 cm, plastic	4044
Pipet, Calibrated 0.5 mL, plastic (eye dropper)	4075
Pipet, Calibrated 0.5 mL, plastic (eye dropper) w/ cap	4028
Pipet, Calibrated 0.5 & 1.0 mL, plastic (eye dropper)	4029
Pipet, Calibrated 0.5 & 1.0 mL, plastic (eye dropper) w/ cap	4030
Pipet, Calibrated 2.5 mL, glass w/ bulb	9013
Pipet, Graduated, 2 mL (0.5 mL div.), plastic (110 mm long)	4072
Pipet, Graduated, 2 mL (0.5 mL div.), plastic (110 mm long) w/ cap	4077
Pipet, Graduated, 2 mL (0.5 mL div.), plastic (160 mm long)	4073
Pipet, Graduated, 2 mL (0.5 mL div.), plastic (160 mm long) w/ cap	4074
Pipet, Graduated, 3 mL (0.5 mL div.), plastic (eye dropper)	4078
Pipet, Volumetric, Calibrated 5 mL, glass	4080

glassware



PART DESCRIPTION	PART NO.
Beaker, 50 mL, glass	4000
Beaker, 150 mL, glass	4001
Buret, Pinchcock, 25 mL, glass	9326
Buret, Stopcock, 10 mL (0.1 mL div.), glass	9342
Buret, Stopcock, 10 mL (0.1 mL div.) & 500 ppm (5 ppm div.), glass	9343
Buret, Stopcock, 25 mL, glass	9341
Cylinder, Graduated, 10 mL (0.2 mL div.), glass	4004
Cylinder, Graduated, 25 mL (0.5 mL div.), glass	4066
Cylinder, Graduated, 50 mL (1.0 mL div.), glass	4005
Cylinder, Graduated, 58.3 mL, glass	4006
Cylinder, Graduated, 100 mL (1 mL div.), glass	4007
Cylinder, Graduated, 500 mL (5 mL div.), plastic	4061
Flask, 125 mL, 24/40 joint, glass	4064
Flask, Erlenmeyer, 50 mL, glass	4065
Flask, Erlenmeyer, 125 mL, glass	4043
Flask, Erlenmeyer, 250 mL, glass	4008
Glassware Pack, Wall-Mount Cabinet	K-9780-GP
Pipet, Graduated, 1 mL (0.1 mL div.), glass	4010
Pipet, Graduated, 5 mL (0.1 mL div.), glass	4014
Pipet, Graduated, 10 mL (0.1 mL div.), glass	4011

NO. 16 TAYLOR TECHNIQUE TIPS

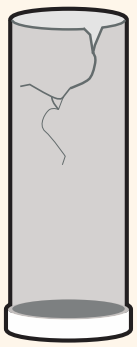
Wash hands frequently during the workday to avoid staining and cross-contamination of tests.

miscellaneous

PART DESCRIPTION	PART NO.	
Ampule, Midget Comparator, Color Standard	9209	
Ampule, Midget Comparator, Distilled Water	9207	
Ampule, Slide Comparator, Color Standard	9210	
Ampule, Slide Comparator, Distilled Water	9208	
Base, Slide, Enslow (for test cells)	9189	
Base, Slide, pH (for test tubes)	9190	
Brush, Cell Cleaner	6002	
Brush, LVP (Long Viewpath)	6000	
Brush, Test Tube	6003	
Bulb, Pipet, 1.0 mL, rubber	6126	
Clamp, Buret, Single	6056	
Dish, Evaporating, 250 mL, porcelain	6008	
Filter Disk, Millipore, 0.45 µm, 100/box	6261	NEW!
Filter Disk, Millipore, 5 µm, 100/box	6248	NEW!
Filter Holder, Millipore, 25 mm	6249	NEW!
Filter Paper, #617, 9.0 cm, 50/box	6010	
Filter Paper, #610, 9.0 cm, 100/box	6009	
Filter Paper, #617, 12.5 cm, 50/box	6012	
Filter Paper, #610, 12.5 cm, 100/box	6011	
Funnel, 58 mm, plastic	4027	
Heater, Immersion, 80 watt	6180	
Hose, Buret, .25" dia. x 6', rubber	9291	
Hose, Buret, .375" dia. x 10" rubber w/ bead & tip, glass	9289	
Lamp, Dalite™	9195	
Lamp, LVP (Long Viewpath)	9196	

NO. 17 TAYLOR TECHNIQUE TIPS

Replace damaged kit components and lost instructions.



miscellaneous listing continued

PART DESCRIPTION		PART NO.
Light Bulb, 8 watt, fluorescent (for K-9780)		6187
Light Bulb, 25 watt (for 9195, 9196)		3020
Light Filter, glass (for 9195, 9196)		3208
Stand, Buret		6054
Stirring Rods, 5", plastic, 6-pack		4086-6
Stirring Rod, 6", glass		4015
Stirring Rod, 10", plastic		4085
Stirring Rod, 18", plastic		4042
Stopper, Buret, rubber		6024
Stopper, Test Tube, Calibrated 5 mL, rubber		6021
Stopper, Test Tube, Mixing, rubber		6022
Syringe Filter Body, 60 mL, plastic		6247
Test Paper, Chlorine, 10-200 ppm		6034
Test Paper, Congo Red		6016
Test Paper, ColorpHast, pH, 6.5-10.0	NEW!	6254
Test Paper, ColorpHast, pH, 0-14	NEW!	6255
Test Paper, pH, 1-14		6018
Test Paper, pH, 1.8-3.8		9315
Test Paper, pH, 3-8		6030
Test Paper, pH, 6-8		6019
Test Paper, pH, 9-12		6031
Thermometer, Armored, -10° - 110° C		6097
Titration Pack, Buret, w/ 1 stopcock buret		K-0401
Titration Pack, Buret, w/ 2 stopcock burets		K-0403

NO. 18 TAYLOR TECHNIQUE TIPS

Do not substitute reagents or sample containers from different manufacturers.

Perhaps you haven't seen the test combinations you need here in our catalog and would like to assemble a customized kit instead. Maybe you need dedicated workspace for water testing in the boilerhouse or elsewhere in the plant. Or possibly you're simply looking to replace a carrying case that's seen better days. We can help.

NEW! 9352 series

THE 9352 FEATURES CASING AND PIN HINGES OF HIGH-DENSITY POLYETHYLENE FOR A LONG USEFUL LIFE.

The 9352 Series consists of our best carrying case, a divider flap/document holder, and your choice of rigid foam inserts for the top and base compartments. The attaché-type black polyethylene case projects a professional appearance while keeping your testing equipment organized and protected. It's stain and scratch resistant, wipes clean, and won't dent. The nickel-plated steel latches lock for security. Only 5 pounds when empty, the case measures 18.5" w x 15.75" h x 8" d. Build your own portable laboratory from the following components:

NO.	PART DESCRIPTION
9352	Deluxe carrying case with divider flap/document holder only (*choose top and base inserts from below*)
9600	Replacement divider flap/document holder (*pictured page 55*)
9352-1T	Top foam insert, uncut
9352-2T	Top foam insert, partially precut for typical labware (*pictured page 55*)
9352-3T	Top foam insert, precut to hold Myron L TechPro™ meter and four solutions, syringe filtration system, demineralizer bottle, and more (*pictured page 17*)
9352-1B	Base foam insert, uncut
9352-2B	Base foam insert, precut for 63 2-oz reagents (*pictured page 55*)
9352-3B	Base foam insert, precut for six Midget™ comparators, syringe filtration system, and 42 2-oz reagents
9352-4B	Base foam insert, precut for five Slide™ comparators and 45 2-oz reagents (*pictured page 2*)
9352-5B	Base foam insert, precut for six Midget™ comparators and 48 2-oz reagents (*pictured page 16*)

*RIGID FOAM INSERTS MADE OF CLOSED-CELL, WATER-RESISTANT POLYETHYLENE CAN BE MODIFIED EASILY WITH A SHARP KNIFE. CONFIGURATION SHOWN IS THE **9352-2T** AND **9352-2B**; WHITE AREAS INDICATE WHERE FOAM IS PRECUT. (THE DIVIDER FLAP/DOCUMENT HOLDER HAS BEEN REMOVED FOR UNOBSTRUCTED VIEWING.)*

CASE CONTENTS ARE SECURED BY A REMOVABLE DIVIDER THAT DOUBLES AS A DOCUMENT HOLDER. ON ONE SIDE, A CLIPBOARD; ON THE OTHER, A ROOMY VINYL POUCH.

9360 case

This mid-size, value-priced model closely resembles a black briefcase. Blow-molded of durable high-density polyethylene, the 9360 features a pin hinge, plastic latches, and a folding handle. Overall dimensions are 15.5" w x 13.25" h x 5.5" d. A rigid foam insert for the base compartment can be cut with a sharp knife to your desired configuration. Test instructions and paperwork stay neat in the plastic document envelope which attaches with Velcro™ to the inside of the lid. (*This case is pictured on pages 14 and 15 with test kits K-1690 and K-1691.*)

NO.	PART DESCRIPTION
9360	7350 carrying case, base foam insert (*uncut*), and document envelope
7350	Carrying case only, no foam insert or document envelope
9354	Base foam insert, uncut

K-9348

The perfect answer to field-testing operations that require buret accuracy, the K-9348 consists of a 20" w x 23" h x 10" d high-impact styrene case containing four 10 mL self-zeroing stopcock burets, two 125 mL Erlenmeyer flasks, one 50 mL graduated cyclinder, and five foam-lined, removable trays for glassware and reagent storage.

*ORDER TITRATION REAGENT PACKS SEPARATELY TO STOCK THE **K-9348** PORTABLE TITRATION SETUP.*

economy cases

Keep your water testing equipment neatly organized in our custom-molded blue polypropylene cases. Choose from:

PART DESCRIPTION	NO.
Case, Slide Comparator, Non-ribbed, 11" w x 6" h x 5" d, w/ handle	7012
Case, Slide Comparator, Ribbed, 11" w x 6" h x 5" d, w/ handle	7009
Case, Midget, 4" w x 3.25" h x 4" d	7004
Case, Dual Midget, 7.75" w x 4.5" h x 3.75" d	7058
Case, Drop Test, Non-ribbed, 11.5" w x 5.25" h x 2" d	7061
Case, Drop Test, Ribbed, 11.5" w x 5.25" h x 2" d	7060
Case, Mini Multipurpose, 4.25" w x 3.75" h x 1.5" d	7008
Case, Multipurpose, 11" w x 6" h x 5" d, w/ handle	7064

OUR BLUE POLYPROPYLENE CASES ARE LIGHTWEIGHT YET TOUGH, AND COMPACT ENOUGH TO NEST. ANY TEST KIT CASE PICTURED IN THIS CATALOG MAY BE PURCHASED WITHOUT REAGENTS. (SHOWN: CASE 7012.)

IMPROVED!

K-9780 cabinet

A GLASSWARE PACK FOR THE WALL-MOUNT CABINET (K-9780-GP) IS AVAILABLE SEPARATELY.

Dedicated space for water testing is valued by both plant operators and full-service contract water treaters alike. If you're lab-less, here's a solution: our lockable Wall-Mount Cabinet (part no. K-9780) constructed of 20-gauge steel with a white, baked enamel finish. Closed, its exterior dimensions measure 30" w x 20" h x 10" d; fold down the lower door to gain an additional 2+ square feet of work surface. The K-9780 holds four buret setups plus three shelves' worth of reagents and test equipment. A built-in Dalite™ lamp provides proper illumination for water testing.

THE CABINET'S BUILT-IN DALITE™ LAMP, WHICH SIMULATES NATURAL LIGHT, MAKES IT EASY TO SEE COLOR CHANGES DURING TITRATIONS AND WILL NOT DISTORT COLOR-MATCHING TEST RESULTS LIKE FLUORESCENT AND INCANDESCENT LIGHTS DO.

domestic ordering and shipping

Order from Authorized Distributor www.clarksonlab.com and get a 20% discount with a $100 minimum purchase

Taylor Technologies, Inc.
31 Loveton Circle
Sparks, MD 21152-9206

Clarkson Laboratory & Supply Inc
350 Trousdale Drive Chula Vista Ca. Hours 8:30am - 4:00pm M-F pst
Phone: 619-425-1932 Fax: 619-425-7917 E-mail: sales@clarksonlab.com

Customer service representatives are available to assist you personally from 8:00 A.M. to 5:00 P.M. (Eastern Time), Monday through Friday. In the U.S., you can call us toll-free at 800-TEST KIT (837-8548). You may also record a message for us outside our normal business hours by using this toll-free number.

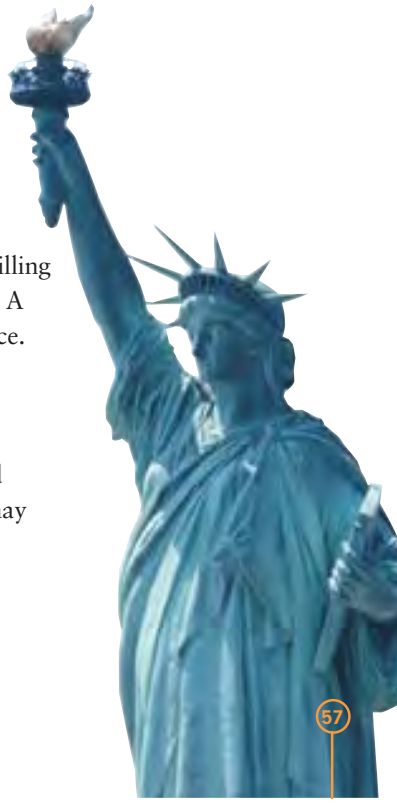
You may fax your correspondence anytime to 410-771-4291.

In addition, you can reach all departments during normal business hours (8:00 A.M. to 4:45 P.M. Eastern Time) by calling 410-472-4340.

If you already have an account with Taylor, please have your account number ready when calling customer service. Knowing the part number (or product description), size, and quantity desired will help speed your transaction. Because customer service representatives are trained to repeat all phone orders to assure correct information, it is not necessary to send written confirmation. Should you choose to send them, confirming orders must be clearly marked as such to prevent duplicate shipments.

If you have not established open terms with us, we accept VISA® and MasterCard®, C.O.D., and check-in-advance orders. Use our Credit Application and Account Profile Questionnaire to open an account.

Upon request, a field-quality (8-½" x 11") Material Safety Data Sheet (MSDS) will be included for any chemical product in an order. File-quality MSDSs are available by mail upon request. Faxed information will be provided in emergencies.



terms of sale

All sales are F.O.B. Sparks, Maryland. Payment of invoices is net 30 days for customers with open billing accounts. Prices in our Price List are shown in U.S. dollars and are subject to change without notice. A handling charge—maximum $7.50 at this printing—is added to orders totaling less than $25 list price.

shipping

We maintain an extensive inventory to expedite shipments, so that most domestic orders are shipped within three to five business days from placement. However, some reagents are made to order and may require additional turnaround time. Please discuss time-sensitive orders with your customer service representative. In emergencies, we may be able to alter our production schedule to accommodate a rush order. All rush orders are assessed a $25 special-handling charge.

Taylor will determine the fastest and most economical means of shipping an order—within prevailing shipping regulations—unless a carrier is specified. Most orders are shipped via United Parcel Service (UPS). UPS imposes restrictions and special charges for transporting hazardous materials. And, since shipping regulations prevent packing most hazardous materials together, the order may require several cartons. Special packaging to meet transportation standards may also increase the shipping charge. "Dangerous goods" charges may apply if the order is requested to be sent via Federal Express or Airborne Express. Ask your customer service representative to explain the shipping charges associated with your order.

note: Taylor cannot assume responsibility for freezing conditions. It is the purchaser's responsibility to request heated or "protect from freezing" service with motor-freight. Additional fees may apply.

return policy

It is essential to check the order immediately upon arrival. Contact our customer service department if there is a problem. Please refer to the Taylor Order Number on the packing slip. Exchanges or credits are considered within 30 days of shipment of the merchandise. Items returned must be in salable condition.

Taylor will issue a Return Authorization (RA) Number to the buyer and forward a shipping label with instructions for returning the merchandise within the 30-day time limit. Questions about repackaging the order should be directed to Taylor's Traffic Manager at 410-472-4340. Returns without proper documentation will be refused. Customer service will advise if a 20% restocking charge applies to the return.

If any part of the order has been damaged by the carrier, retain the original carton and packing materials and immediately contact the carrier for an inspection. (As a courtesy, we can do this for you when the carrier is UPS.) If needed, Taylor will assist you by filling a new order while your claim is being processed.

note: Unless reagents were shipped in error by Taylor or compromised before shipping, they cannot be returned for credit. You will need to know the lot number, located in the lower righthand corner of the label, to apply for a credit.

NO. 19 TAYLOR TECHNIQUE TIPS

For correct drop size, eliminate static buildup on the dropper bottle tip by wiping with a clean, damp paper towel.