

Taylor's Test Kits for Food & Beverage Processors

INTRODUCTION

What do fresh-cut vegetable and fruit processors, food, meat, and poultry processors, bakeries and pizza dough makers, canneries, sugar refiners, dairy plants, beverage bottlers, breweries, and even pet food manufacturers have in common? The need to analyze water quality at various points of the production cycle, often as part of their Hazard Analysis and Critical Control Points (HACCP) Program. Indeed, water is arguably the most important production "tool" in any food-processing facility. Taylor testing supplies are commonly used to monitor process water in tanks and flumes, rinse water following equipment/food-surface sanitation, hand dip stations, water in boilers and cooling systems, and wastewater prior to discharge.

If you are in a food or beverage business, or you supply water treatment or sanitizing chemicals to this industry, or you perform regulatory inspections at these operations, Taylor manufactures simple drop-count titrations and color-matching tests for over 35 analytes to meet your water-testing needs.

Other products that may be of interest to you include **standard solutions**, such as pH buffers and conductivity solutions for meter calibrations; **general-use reagents** such as acid starch indicator powder, sulfuric acid, and phenolphthalein indicator; and **labware**, including a resin-filled demineralizer bottle for making deionized water in the field.



Purchasing other manufacturers' products from Taylor, such as these test papers for total chlorine (#6023), can boost your discount level.



The drop-count titration in this FAS-DPD kit, K-1515-C, allows you to measure free and combined chlorine 0–20 ppm (in 0.2 or 0.5 ppm increments) without matching shades of pink. This is a boon for analysts with red-green colorblindness.

In addition, we are an authorized reseller of several popular **Myron L Company portable instruments**, which can be paired with Taylor's calibration solutions (sold separately), as well as Sani-Check and Easicult **bacteria tests**.

Our discount schedule offers significant savings to those whose annual purchases meet established thresholds, so it may be to your organization's advantage to practice "one-stop shopping" with Taylor. If you do not see the product or test range you need in this brochure, please check our comprehensive listings online or call 800-TEST KIT (837-8548). Our customer service staff will be pleased to discuss the possibilities for a **customized test kit or private labeling**, as well as our discount schedule.

ACIDITY

K-1548

Drop test (neutralization to pH 4.5) for **sulfuric acid**; 1 drop = 0.02–1.0 g/100 mL H₂SO₄ (plus conversion factors for phosphoric and sulfamic acids)

AEROBIC BACTERIA

K-1861 (10 tests)

Easicult Combi visual determination test (by Orion); nutrient-supported growth; 10³, 10⁴, 10⁵, 10⁶, 10⁷ total bacteria CFU/mL with yeasts & molds to 10⁶ CFU/mL



the most trusted name in water testing

Taylor Technologies, Inc.
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ISO 9001:2008 Certified

AEROBIC BACTERIA (cont'd)

K-1862 (10 tests)

Easicult TTC visual determination test (by Orion); nutrient-supported growth; 10^3 , 10^4 , 10^5 , 10^6 , 10^7 total bacteria CFU/mL

ALKALINITY

K-1530

Drop test (using H_2SO_4);
1 drop = 10 ppm **total** alkalinity as $CaCO_3$

K-1531

Drop test (using H_2SO_4) for **caustic soda**;
1 drop = 0.1 or 1% caustic alkalinity as NaOH

K-1533PM

Drop test (using H_2SO_4);
1 drop = 10 or 50 ppm **P/M** alkalinity as $CaCO_3$

K-1533PT

Drop test (using H_2SO_4);
1 drop = 10 or 50 ppm **P/T** alkalinity as $CaCO_3$

K-1542

Drop tests for **PET bottlers** measuring **M alkalinity** (using HCl); 1 drop = 10 ppm $CaCO_3$ and **total hardness*** (EDTA titration); 1 drop = 10 ppm $CaCO_3$

BOILER & COOLING SYSTEMS

We offer many choices for testing boiler and cooling waters, from stand-alone tests you can use to create your own custom kit in one of our attaché-style carrying cases to pre-assembled combinations. The K-1645 is our most popular combination kit for small operators.

K-1645

Alkalinity: drop test (using H_2SO_4);
1 drop = 10 ppm **P/M** or **P/T** alkalinity as $CaCO_3$



Chloride: drop test (argentometric);
1 drop = 10 ppm Cl^-

Hardness: drop test (EDTA titration);
1 drop = 10 ppm **total hardness*** as $CaCO_3$

Orthophosphate: color comparison (using stannous chloride) with 2-Standard comparator; 30 & 60 ppm PO_4

pH: color comparison (long range) with Color Card comparator; 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0 pH units

Sulfite: drop test (iodometric) for **sodium sulfite**; 1 drop = 10 ppm Na_2SO_3

This 8 oz. resin-filled bottle (R-0804-DD) makes deionized water in the field.



The K-1645 Boiler & Cooling System combo kit is an economical choice for small operators.

CAUSTIC - see Alkalinity CHLORIDE

K-1506

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

CHLORINE

The selection below represents a diverse sample only. Our **FAS-DPD** kits are especially popular with food processors. The **bleach kit** is appropriate for testing the undiluted strength of bulk deliveries.

K-1401

Color comparison (using OT) with Midget comparator;
5, 25, 50, 75, 100, 150, 200, 250 ppm **total** chlorine (Cl_2)

K-1515-C

Drop test (using FAS-DPD); 1 drop = 0.2 or 0.5 ppm **free** or **combined** chlorine (Cl_2); can be used to test up to 20 ppm with a 10 mL sample

K-1579

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

K-1768-2

Color comparison (using DPD) with Midget comparator;
1.5, 2.0, 2.5, 3.0, 4.0, 6, 8, 10 ppm **free** or **total** chlorine (Cl_2) and **combined** chlorine by subtraction

COPPER

K-1738

Color comparison (using cuprizone) with Midget comparator; 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cu

HARDNESS

K-1505

Drop test (EDTA titration); 1 drop = 2 or 10 ppm **total hardness*** as CaCO_3 (uses an odorless buffer)

K-1594

Drop test (EDTA titration); 1 drop = 10 ppm **calcium** or **total hardness*** as CaCO_3 and **magnesium** hardness by subtraction

HYDROGEN PEROXIDE

K-1825 (2 oz.), K-1826 (.75 oz.)

Drop test (iodometric); 1 drop = 5 ppm H_2O_2

IRON

K-1716

Color comparison (using tripyridyl-s-triazine) with Midget comparator; 0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm Fe

OZONE

K-1822

Color comparison (using DPD) with Slide comparator; 0, 0.07, 0.13, 0.20, 0.26, 0.33, 0.40, 0.53, 0.66 ppm O_3

PERACETIC ACID

K-1546

Drop test (iodometric); 0–1000 ppm PAA

pH

M-6556

Myron L ULTRAPEN PT2; 0–14 pH units (also measures temperature)

PHOSPHONATE

K-1583

Drop test (using thorium nitrate/xylenol orange); 1 drop = 1 ppm ATMP (aminotri(methylenephosphonic acid)) plus conversion factors for five ATMP-related phosphonates; (uses pH test paper 1.8–3.8)

QAC/POLYQUATS

K-1582

Drop test (direct neutralization) for **high** QAC (quaternary ammonium compounds) and polyquat levels;

1 drop = 10 or 25 ppm QAC/

1 drop = 3.5 or 9 ppm polyquat



Use the K-1582 to ensure quaternary ammonium-based equipment/facility sanitizers do not exceed 200 ppm if you want to avoid a water rinse.

QAC/POLYQUATS (cont'd)

K-9065

Drop test (direct neutralization) for **low** QAC (quaternary ammonium compounds) and polyquat levels; 1 drop = 1.25 ppm QAC/1 drop = 0.5 ppm polyquat

SILICA

K-1272

Color comparison (heteropoly blue) with Slide comparator; 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

SULFITE

K-1529

Drop test (iodometric) for **sodium sulfite**; 1 drop = 2 or 10 ppm Na_2SO_3

TOTAL DISSOLVED SOLIDS

M-6540

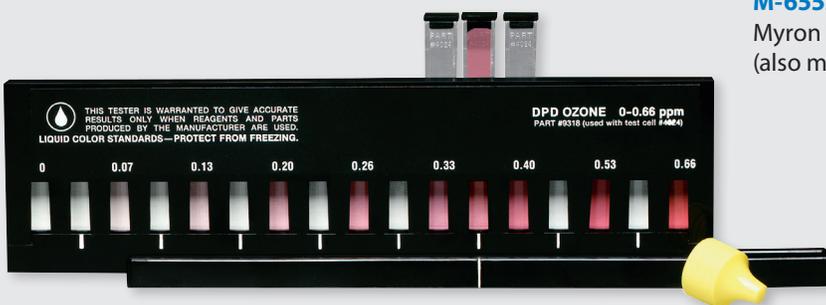
Myron L 512T5 meter; 0–5000 ppm TDS as CaCO_3

M-6542

Myron L PoolMeter 512T5D; 0–5000 ppm TDS (also measures salinity)

M-6555

Myron L ULTRAPEN PT1; 0–10,000 μS or ppm TDS as CaCO_3 (also measures salinity and temperature)



Taylor's liquid-color standards are guaranteed never to fade or the defective ampules will be replaced free of charge. (Shown: Slide™ comparator [from kit K-1822] for ozone 0–0.66 ppm.)

* includes inhibitors to prevent metal interference

USER BENEFITS

- Titrations do not require the ability to match colors, only the ability to see the **permanent color change** at the end-point of the reaction. These drop tests are practical for both **on- and off-site** testing.
- Slide™ comparators (using nine liquid-color standards molded in impact-resistant plastic) are **designed to compensate for color and turbidity** in the sample. Midget™ comparators (using eight liquid-color standards) are the **economical alternative when color and turbidity are not present**.
- 2-Standard™ comparators (using two liquid-color standards) **monitor a parameter between an established minimum and maximum**.
- **Color Card comparators are laminated** to protect the printed-color standards from water and chemicals.
- **Waterproof instructions** are printed on plastic-impregnated paper that resists fading and tearing.
- **Color coding** of reagent caps to instructions helps prevent mishaps.
- **Picture guides** to color transitions in the test reassure new users.
- Custom-molded, durable plastic cases provide **safe storage** for all tests.
- **Proven chemistries** are based on *Standard Methods for the Examination of Water and Wastewater*, APHA, Washington, DC, and/or *American Society for Testing and Materials*, ASTM, Philadelphia, PA. Some methods use proprietary chemistry developed by Taylor Technologies.

ALSO AVAILABLE

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

REPRESENTATIVE TEST PROCEDURE

Reproduced from K-1515-C instruction:

DROP TEST		Instr. #5216
FREE & COMBINED CHLORINE (1 drop = 0.2 or 0.5 ppm)		
COMPONENTS: 1 x 5216 Instruction 1 x 9198Y Sample Tube, Graduated (25 mL) w/ cap & yellow dot, plastic 1 x R-0003-C DPD Reagent #3, 2 oz, DB 1 x R-0870-I DPD Powder, 10 g 1 x R-0871-C FAS-DPD Titrating Reagent (chlorine), 2 oz, DB	<ol style="list-style-type: none">3. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless.4. Multiply drops in Step 3 by drop equivalence (Step 1). Record as parts per million (ppm) free chlorine (Cl₂).5. Add 5 drops R-0003 DPD Reagent #3. Swirl to mix. Sample will turn pink (Fig. 1) if combined chlorine is present.6. Add R-0871 FAS-DPD Titrating Reagent (chlorine) dropwise, swirling and counting after each drop, until color changes from pink to colorless.7. Multiply drops in Step 6 by drop equivalence (Step 1). Record as parts per million (ppm) combined chlorine (Cl₂).	
TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 800-TEST KIT (800-837-8548).		
PROCEDURE: CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS. KEEP REAGENTS AWAY FROM CHILDREN.		
NOTE: When dispensing reagents from dropper bottles, always hold bottle in a vertical position.		
Free & Combined Chlorine Tests		
1. Rinse and fill sample tube (#9198Y) to desired mark with water to be tested.		
NOTE: For 1 drop = 0.2 ppm, use 25 mL sample. For 1 drop = 0.5 ppm, use 10 mL sample.		
2. Add 2 dippers R-0870 DPD Powder. Swirl until dissolved. Sample will turn pink (Fig. 1) if free chlorine is present.		
NOTE: If pink color disappears, add R-0870 DPD Powder until color turns pink.		



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