

Taylor's Specialty Test Kits for Pools & Spas (Metals, Phosphate, Salt)

INTRODUCTION

Taylor has a broad line of test kits capable of testing analytes that determine water balance and overall water health. Occasionally, a specialty test kit is needed to troubleshoot specific problems, such as discoloration or algae bloom, that are influenced by source water makeup, environmental factors, and choice of sanitizer.

METALS

Metal in pool and spa water can come from three sources: from the **fill water** itself, as metals occur naturally in ground and surface water; from **treatment products** containing metal, such as copper algacides; or, most commonly, from **corrosion** of the metal piping and equipment or metal objects dropped in the water. Unsightly colored water and stained surfaces are usually the result of excess metal(s) in the water.

Taylor offers several colorimetric kits to measure the concentration of the metals most commonly found in pool and spa water: **copper** and **iron**.

COPPER KITS

K-1730 (This kit is only designed for measuring copper levels in ionizers/mineralizers.)

Color Card comparator for copper; 0.05–1.0 ppm free Cu

K-1738

Midget comparator for copper; 0.2–3.0 ppm Cu

IRON KITS

K-1153

Slide comparator for iron; 0–2.0 ppm Fe

K-1716

Midget comparator for iron; 0–2.0 ppm Fe

COPPER & IRON KIT

K-1264

Midget comparator for copper; 0.2–3.0 ppm Cu

Midget comparator for iron; 0–2.0 ppm Fe



Test for phosphate once a week using the color-matching method in Taylor's K-1106.

PHOSPHATE

Phosphates come from the natural environment (lawn runoff and leaves) and man-made sources (municipal water supply lines treated with an orthophosphate corrosion inhibitor, the chemical breakdown of sweat and urine, from bathing suits washed with certain laundry detergents, and even from some pool chemicals like tile cleaner). If phosphate levels are not kept in check, the algae that feed on phosphate can quickly multiply, turning sparkling-clean pool water into a murky mess that no one wants to swim in. Additionally, the algae will consume the sanitizer in the water, making the problem worse. To prevent these opportunistic, resilient, one-celled algae invaders from thriving, you must remove phosphate, **one of their primary food sources**.

Manufacturers of phosphate removers claim algae can begin to thrive above 125 parts per billion of orthophosphate, the form of phosphate that results from the breakdown of more complex phosphorous compounds. Taylor's **phosphate test kit (K-1106)** measures this elementary "free" form and can detect phosphate levels from 0–6000 parts per billion.

PHOSPHATE KIT

K-1106

Color card comparator for phosphate; 0–1000 ppb PO_4^{3-} , 0–6000 ppb PO_4^{3-}

SALT

Chlorine generators (using sodium chloride) are becoming ever more popular among pool owners because of the convenience of not having to transport, store, and handle chlorine. The promises of less maintenance and lower long-term costs also make this method attractive. Unfortunately, some customers do not regularly test water chemistry once the equipment is installed because they falsely assume that “low” maintenance means “no” maintenance. The salt level does not need to be tested often, but you will need to **manually check** it when the system is first installed and periodically thereafter. Also, automatic digital meters that measure the sodium chlorine level sometimes fail, especially if a salt cell has scaling. A cell that is not functioning properly may result in a false indication of low salt, so confirm the readout with a manual test before adding more. Taylor offers stand-alone salt (sodium chloride) tests as **drop-count titrations** or **test strips**.

SALT KIT

K-1766

Drop test for sodium chloride;
1 drop = 200 ppm NaCl

SALT TEST STRIPS

S-1341

Test strip for sodium chloride;
0–5000 ppm NaCl



Salt test strips should be read in the shade away from direct sunlight.

To prevent water conditions that lead to corrosion or scale, also purchase a test kit capable of monitoring the water chemistry parameters involved in **water balance** (pH, total alkalinity, and calcium hardness).

USER BENEFITS

- **Color Cards are laminated** to protect the printed-color standards from water and chemicals.
- For metals: Slide™ comparators (using nine liquid-color standards molded in impact-resistant plastic) are **designed to compensate for color and turbidity**. Midget™ comparators (using eight liquid-color standards) are the **economical alternative when color and turbidity are not present**.
- **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-2000)**; tests more than a dozen parameters (including **phosphate, iron, copper, and salt**) commonly encountered in pool/spa settings. Testing results can be transferred to a PC database.
- Test kits K-1582 and K-9065 that test for quat/polyquats, which are agents for **algae control**.
- Testing supplies and kit replacement parts (e.g., burets, flasks, test tubes, and test cells).
- Toll-free technical assistance at **800-TEST KIT**.

REPRESENTATIVE TEST PROCEDURE

Reproduced from K-1264 instruction:

COLOR COMPARISON TEST COPPER (0.2-3.0 ppm) & IRON (0-2.0 ppm)

COMPONENTS:

Copper

1 x 3243	Cap, Test Cell (11.5 mL), plastic
1 x 4024	Test Cell, Calibrated (11.5 mL), plastic
2 x 4028	Pipet, Calibrated (0.5 mL) w/ cap, plastic
1 x 9049	Midget Comparator, Copper, Cuprizone, 0.2-3.0 ppm
1 x R-0860-A	Copper Reagent #1*, .75 oz
1 x R-0861-A	Copper Reagent #2**, .75 oz

Iron

1 x 3243	Cap, Test Cell (11.5 mL), plastic
1 x 4024	Test Cell, Calibrated (11.5 mL), plastic
2 x 4028	Pipet, Calibrated (0.5 mL) w/ cap, plastic
1 x 9051	Midget Comparator, Iron, Tripyridyl-s-triazine, 0-2.0 ppm
1 x R-0851-A	Iron Reagent #1***, .75 oz
2 x R-0852-A	Iron Reagent #2, .75 oz

Misc.

1 x 5120	Instruction
1 x 6002	Brush, Test Cell

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.

Copper Test

1. Rinse and fill 11.5 mL test cell (#4024) to mark with water to be tested.
2. Using a 0.5 mL pipet (#4028), add 0.5 mL R-0860 Copper Reagent #1. Cap and mix.
3. Using a separate 0.5 mL pipet, add 0.5 mL R-0861 Copper Reagent #2. Cap and mix.

Instr. #5120

4. Wipe dry and place in comparator (#9049) WITH FROSTED SIDE FACING OPERATOR. WAIT 5 MINUTES.

5. Match color in test cell with a color standard. Record as parts per million (ppm) copper (Cu).

Iron Test

1. Rinse and fill 11.5 mL test cell (#4024) to mark with water to be tested.
2. Using a 0.5 mL pipet (#4028), add 0.5 mL R-0851 Iron Reagent #1. Cap and mix. WAIT 2 MINUTES.
3. Using a separate 0.5 mL pipet, add 1.0 mL (2 x 0.5 mL) R-0852 Iron Reagent #2. Cap and mix.
4. Wipe dry and place in comparator (#9051) WITH FROSTED SIDE FACING OPERATOR.
5. Match color in test cell with a color standard. Record as parts per million (ppm) iron (Fe).

*WARNING: Copper Reagent #1 (R-0860) contains 0.1-5% w/w ammonium hydroxide, a corrosive alkali.

**WARNING: Copper Reagent #2 (R-0861) contains 40-50% w/w isopropanol, a flammable liquid.

***WARNING: Iron Reagent #1 (R-0851) contains 5-10% w/w hydrochloric acid, a corrosive acid.



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