

Taylor's Nitrite Test Kits

INTRODUCTION

Sodium nitrite-based treatments are commonly used to establish a **protective film** on ferrous metal surfaces in **closed cooling water systems and boilers**. Cooling water may contain sodium nitrite as high as 1000 ppm, while boiler water may contain up to 1500 ppm.

To reduce treatment program costs, nitrite is often **blended with molybdenum** in closed cooling water systems. Taylor offers a molybdenum test (K-1805 or K-1805P) for monitoring these systems, but users should be aware levels of nitrite over 800 ppm may negatively interfere with the molybdenum test. In these cases, dilute the sample with demineralized water that is molybdenum- and nitrite-free. Alternatively, you can test the nitrite residual instead, using the **K-1563**.

Taylor's drop-count tests for monitoring sodium nitrite use either the permanganate method or the ceric oxidation of nitrite method (commonly called the "CAN" method). **In cooling systems treated with glycol antifreeze, the "CAN" method must be used to prevent test interference.**

NITRITE KITS

K-1510

Drop test (ceric oxidation of nitrite method);
1 drop = 40 ppm NaNO_2

K-1539

Drop test (permanganate method using H_2SO_4);
1 drop = 100 ppm NaNO_2

K-1563

Drop test (permanganate method using acid sulfate);
1 drop = 100 ppm NaNO_2

K-1565

Drop test (permanganate method using acid sulfate);
1 drop = 50 ppm NaNO_2



The drop-count titration in Taylor's K-1510 uses the "CAN" method (ceric oxidation of nitrite) to prevent interference in systems treated with glycol.

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.
- Test kits **come complete** with all necessary reagents and equipment.
- These test kits are practical for both **on- and off-site** testing.
- **Waterproof instructions** are printed on plastic-impregnated paper that resists fading and tearing.
- **Picture guides** to color transitions in the test reassure new users.
- Custom-molded, durable plastic cases provide **safe storage** for all tests.
- **Proven chemistries** are based on *Standard Methods for the Examination of Water and Wastewater*, APHA, Washington, DC, and/or *American Society for Testing and Materials*, ASTM, Philadelphia, PA. Some methods use proprietary chemistry developed by Taylor Technologies.



the most trusted name in water testing

Taylor Technologies, Inc.
410-472-4340
800-TEST KIT (837-8548)
www.taylortechnologies.com

ISO 9001:2008 Certified

ALSO AVAILABLE

- Individual replacement reagents.
- **Combination kit** K-1680 for water treaters, which contains a test for nitrite.
- A wide array of single- and multiparameter kits featuring color-matching and/or drop-count tests.
- Complementary tests for **molybdenum** and **anaerobic bacteria** (nitrite-based closed systems should be tested routinely for anaerobic bacteria contamination).
- 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-1510 instruction:

DROP TEST SODIUM NITRITE (1 drop = 40 ppm)		Instr. #5011
COMPONENTS: 1 x 5011 Instruction 1 x 9198R Sample Tube, Graduated (25 mL) w/ cap & red dot, plastic 1 x R-0819-C Ferrioin Indicator, 2 oz, DB 2 x R-0820-C CAN Solution, 2 oz, DB	4. Multiply drops of R-0820 CAN Solution by 40. Record as parts per million (ppm) sodium nitrite (NaNO_2).	 Fig. 1
TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE 800-TEST KIT (800-837-8548).	NOTE: For results as nitrite (NO_2^-), multiply sodium nitrite (NaNO_2) concentration by 0.67.	
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.		
Sodium Nitrite Test		
1. Rinse and fill 25 mL sample tube (#9198R) to 5 mL mark with cooled (room temperature) water to be tested.		
2. Add 4 drops R-0819 Ferrioin Indicator. Swirl to mix. Sample will turn reddish orange (Fig. 1).		
3. Add R-0820 CAN Solution dropwise, swirling and counting after each drop, until color changes from reddish orange to blue (Fig. 2).		



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