Ammonia Vacu-vials® Kit

K-1503: 0 - 7.00 ppm N (Prog. # 15)
K-1523: 0 - 14.0 ppm N (Prog. # 16)

Instrument Set-up

For CHEMetrics photometers, follow the **Setup and Measurement Procedures** in the operator's manual.

For spectrophotometers, follow the manufacturer's instructions to set the wavelength to 430 nm and to zero the instrument using the ZERO ampoule supplied.

Non-Seawater Test Procedure

1. Fill the sample cup to the 25 mL mark with the sample to be tested (fig. 1).
2. Add 2 drops of A-1500 Stabilizer Solution (fig. 2). Stir to mix the contents of the cup.
3. Place the Vacu-vial ampoule, tip first, into the sample cup. Snap the tip. The ampoule will fill leaving a bubble for mixing (fig. 3).
4. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
5. Dry the ampoule and wait **2 minutes** for color development.
6. Insert the Vacu-vial ampoule into the photometer, flat end first, and obtain a reading in ppm (mg/Liter) ammonia-nitrogen (NH_3-N).

NOTE: **If using a spectrophotometer** that is not pre-calibrated for CHEMetrics products, then use the **equation below** or the **Concentration Calculator** found under the Support tab at *www.chemetrics.com*.

K-1503: ppm = 7.16 (abs) - 0.16
K-1523: ppm = 16.39 (abs) - 0.50

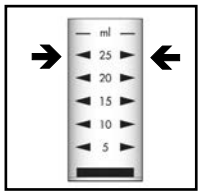

Figure 1


Figure 2

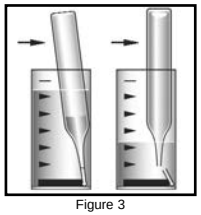
Figure 3

Seawater Test Procedure

1. Using the syringe, add 1.0 mL of A-1501 Stabilizer Solution to the sample cup.
2. Fill the sample cup to the 25 mL mark with the seawater sample to be tested (fig. 1).
3. Perform the Test Procedure above, beginning with Step 3.

Test Method

The Ammonia Vacu-vials®[1] test kit employs direct nesslerization.[2,3] In a strongly alkaline solution, ammonia reacts with Nessler Reagent (K_2HgI_4) to produce a yellow-colored complex in direct proportion to the ammonia concentration.

This method is applicable to drinking water, clean surface water, good quality nitrified wastewater effluent and seawater. Other types of samples may require a preliminary distillation step. Ketones, alcohols, and aldehydes may cause off-color test results. Glycine and hydrazine will cause high test results. Aromatic and aliphatic amines, iron, sulfide, calcium and magnesium may cause turbidity.

1. Vacu-vials is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 3,634,038
2. APHA Standard Methods, 18th ed., Method 4500-NH_3 C - 1988
3. ASTM D 1426 - 08, Ammonia Nitrogen in Water, Test Method A

Safety Information

Read SDS (available at www.chemetrics.com) before performing this test procedure. Wear safety glasses and protective gloves.

Visit www.chemetrics.com to view product demonstration videos.
Always follow the test procedure above to perform a test.

CHEMetrics
Simplicity in Water Analysis

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