# Ammonia VACUettes® Kit

## K-1420D/R-1402D

0 - 125 & 0 - 2500 ppm N

## 0 - 125 ppm Test Procedure

1. Place a VACUette tip firmly on to the ampoule tip (set aside for use in Step 6).
2. Fill the micro-test tube approximately halfway with the sample to be tested (set aside for use in Step 6).
3. Fill the dilutor snapper cup to the -ml- mark with **distilled water**. Fig. 1
4. Add solutions to the dilutor snapper cup in the following order. Fig. 2
   6 drops S-1404 Stabilizer
   6 drops S-1405 Catalyzer (green)
   6 drops S-1406 Activator (blue)

**Perform steps 5 - 8 within 20 seconds.**

5. Cap the dilutor snapper cup and shake it gently to mix the contents.
6. Holding the VACUette almost horizontally, touch the tip to the contents of the micro-test tube. Fig. 3
   **NOTE**: The capillary tip will fill completely with sample.
7. Pull the VACUette into a vertical position. A small portion of the collected sample should fall into the sleeve of the VACUette tip. Fig. 4
   **NOTE**: If none of the sample falls **immediately,** tap lightly on the shoulder of the ampoule.
8. Place the VACUette between the vertical tip guides on the inside of the dilutor snapper cup and snap the ampoule tip. Fig. 5
   **NOTE**: The ampoule will fill leaving a bubble for mixing.

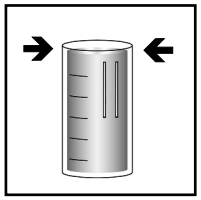

Figure 1

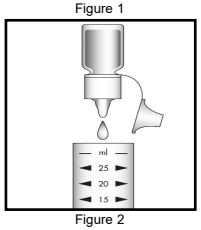


Figure 2

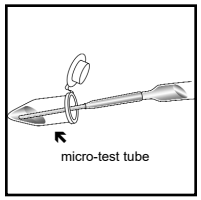


Figure 3

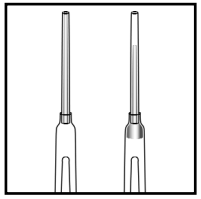

Figure 4

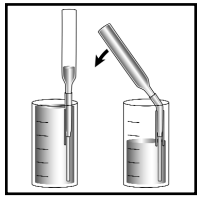

Figure 5

9. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
10. Dry the ampoule. Obtain a test result **5 minutes** after snapping the tip.
11. Obtain a test result by placing the ampoule between the color standards until the best color match is found. Fig. 6

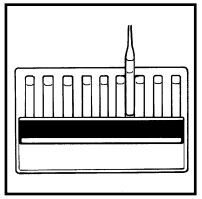

Figure 6

**NOTE**: Use the concentration scale on the comparator label that corresponds to the range of the test procedure being used.

## 0 - 2500 ppm Test Procedure

1. Using the syringe provided, obtain **1.0 mL** of the sample to be tested and dispense it into the empty sample cup (cup with no vertical tip guides).
2. Dilute the contents of the sample cup to the **20 mL** mark with distilled water.
3. Perform the 0 - 125 ppm Test Procedure, using this diluted sample in Step 2.

## Test Method

The Ammonia VACUettes®[1] test kit employs the Hydroxybenzyl alcohol (HBA) chemistry.[2] Free ammonia reacts with hypochlorite to form monochloramine. Monochloramine reacts with HBA, in the presence of sodium nitro-ferricyanide, to form a green colored complex. This test method measures the sum of free ammonia and monochloramine. High levels of ammonia can produce false low or off color test results. Dilute the sample if the ammonia concentration is suspected to significantly exceed the test range.

1. VACUettes is a registered trademark of AquaPhoenix Scientific, LLC U.S. Patent Nos. 4,537,747 & 4,596,780
2. Krom, Michael D., Spectrophotometric Determination of Ammonia: A study of a Modified Berthelot Reduction Using Salicylate and Dichloroisocyanurate, *The Analyst*, V105 pp. 305-316, 1980.

## Safety Information

Read SDS before performing this test procedure. Wear safety glasses and protective gloves.

CHEMetrics®
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