# Ammonia VACUettes®
# 0 - 30 & 30 - 300 ppm

## Test Procedure

1. Fill the dilutor snapper cup to the **top edge** with **ammonia free water**.
2. Fill the micro-test tube aproximately halfway with **your sample** (fig 1).
3. Make sure that the VACUette tip is firmly attached to the ampoule tip.
4. Holding the VACUette almost horizontally, touch the tip to the contents of the micro-test tube (fig 1).

   **NOTE**: The capillary tip will fill completely with sample.
5. Pull the VACUette into a vertical position. A small portion of the collected sample should fall into the sleeve of the VACUette tip (fig 2).

   **NOTE**: If none of the sample falls, a light tap near the shoulder of the ampoule will accomplish this.
6. Place the VACUette in the dilutor snapper cup and snap the tip (fig 3). The ampoule will fill leaving a bubble to facilitate mixing.
7. Mix the contents of the ampoule by inverting it several times, allowing the bubble to travel from end to end. Dry the exterior of the ampoule and wait **1 minute** for color development.
8. Use the appropriate comparator to determine the level of ammonia-nitrogen ($NH_3$-N) in the sample. If the color of the VACUette ampoule is between two color standards, a concentration estimate can be made.

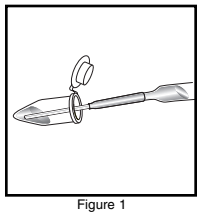
Figure 1

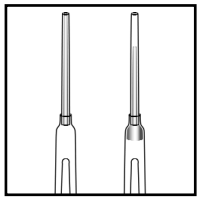
Figure 2

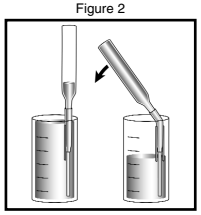
Figure 3

a. Place the ampoule, flat end downward into the center tube of the low range comparator. Direct the top of the comparator up toward a source of light while viewing from the bottom. Rotate the comparator until the color standard below the ampoule shows the closest match (fig 4).


Figure 4

b. Hold the high range comparator in a nearly horizontal position while standing directly beneath a source of light. Place the ampoule between the color standards moving it from left to right along the comparator until the best color match is found (fig 5).

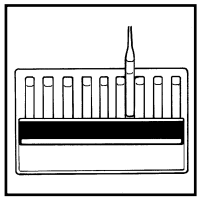
Figure 5

## Test Method

The Ammonia VACUettes®[1] test method employs direct nesslerization.[2,3] This method is applicable to drinking water, clean surface water, and good quality nitrified wastewater effluent. 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, as well as iron, sulfide, calcium and magnesium, may cause turbidity and affect the test results.

1. VACUettes is a registered trademark of CHEMetrics, Inc. U.S. Patent Nos. 4,537,747 & 4,596,780
2. APHA Standard Methods, 18th ed., p. 4-78, method 4500-$NH_3$ C (1992)
3. ASTM D 1426 - 03, Ammonia Nitrogen in Water, Test Method A

## Safety Information

Read MSDS before performing this test procedure. Wear safety glasses.

| Reorder Information | Cat. No. |
|---|---|
| ***Test Kit**, complete* | *K-1510D* |
| ***Refill**, 30 VACUette ampoules* | *R-1501D* |
| ***Dilutor Snapper Cup**, 25 mL, package of six* | *A-0018* |
| ***Micro-Test Tube**, package of ten* | *A-0015* |
| ***Comparator**, 0-30 ppm* | *C-1501D* |
| ***Comparator**, 30-300 ppm* | *C-1510D* |

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