

# Ammonia VACUettes® Kit

**K-1510D/R-1501D:** 0 - 30 & 30 - 300 ppm N  
**K-1510A/R-1501A:** 0 - 60 & 60 - 600 ppm N  
**K-1510B/R-1501B:** 0 - 120 & 120 - 1200 ppm N  
**K-1510C/R-1501C:** 0 - 1000 & 1000 - 10,000 ppm N

## Test Procedure

1. Fill the dilutor snapper cup to the -ml- mark with **distilled water** (fig. 1).
2. Fill the micro-test tube approximately halfway with the sample to be tested (fig. 2).
3. Make sure that the VACUette tip is firmly attached to the ampoule tip.

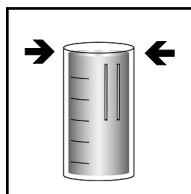


Figure 1

4. Holding the VACUette almost horizontally, touch the tip to the contents of the micro-test tube (fig. 2).

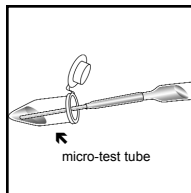


Figure 2

5. **Required for R-1501D only:** Pull the VACUette into a vertical position. A small portion of the collected sample should fall into the sleeve of the VACUette tip (fig. 3).

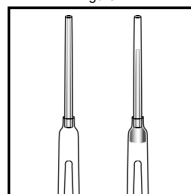


Figure 3

**NOTE:** If none of the sample falls **immediately**, tap lightly on the shoulder of the ampoule.

6. Place the VACUette between the vertical tip guides on the inside of the dilutor snapper cup. Snap the ampoule tip. The ampoule will fill leaving a bubble for mixing (fig. 4).

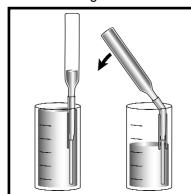


Figure 4

7. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.
8. Dry the ampoule. Obtain a test result **1 minute** after snapping the tip.

9. Obtain a test result using the appropriate comparator.

- a. **Low Range Comparator (fig. 5):** Place the ampoule, flat end first, into the comparator. Hold the comparator up toward a source of light and view from the bottom. Rotate the comparator until the best color match is found.

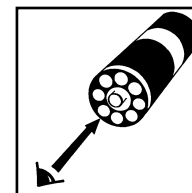


Figure 5

- b. **High Range Comparator (fig. 6):** Place the ampoule between the color standards until the best color match is found.

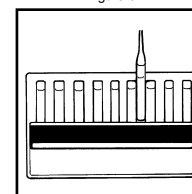


Figure 6

## Test Method

The Ammonia VACUettes®<sup>1</sup> test kit employs direct nesslerization.<sup>2,3</sup> 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. VACUettes is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 4,537,747 & 4,596,780
2. APHA Standard Methods, 18th ed., Method 4500-NH<sub>3</sub> C - 1988
3. ASTM D 1426 - 08, Ammonia Nitrogen in Water, Test Method A

## Safety Information

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

Visit [www.chemetrics.com](http://www.chemetrics.com) to view product demonstration videos.  
Always follow the test procedure above to perform a test.



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