

## Formaldehyde VACUettes® Kit

- K-4605D/R-4605D:** 0 - 30 & 30 - 300 ppm  
**K-4605A/R-4605A:** 0 - 60 & 60 - 600 ppm  
**K-4605B/R-4605B:** 0 - 120 & 120 - 1200 ppm  
**K-4605C/R-4605C:** 0 - 1200 & 1200 - 12,000 ppm

### Safety Information

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

### Test Procedure

1. Add 7 drops of A-4201 Activator Solution to the empty dilutor snapper cup (fig. 1).
2. Fill the dilutor snapper cup to the -ml- mark with **distilled water** (fig. 2).
3. Add 5 drops of A-4202 Activator Solution to the dilutor snapper cup (fig. 1). Cap the cup and shake it to mix the contents well.
4. Fill the micro-test tube approximately halfway with the sample to be tested (fig. 3).
5. Make sure that the VACUette tip is firmly attached to the ampoule tip.
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. **Required for R-4605D 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. 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. Snap the ampoule tip. The ampoule will fill leaving a bubble for mixing (fig. 5).
9. To mix the ampoule, invert it several times, allowing the bubble to travel from end to end.

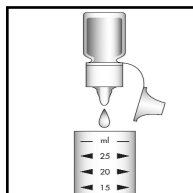


Figure 1

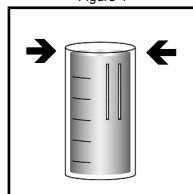


Figure 2

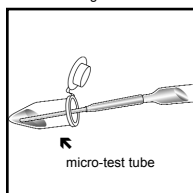


Figure 3

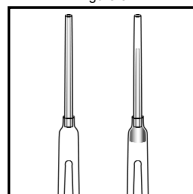


Figure 4

10. Dry the ampoule and wait **12 minutes** for color development.
11. Obtain a test result using the appropriate comparator.
  - a. **Low Range Comparator (fig. 6):** 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.
  - b. **High Range Comparator (fig. 7):** Place the ampoule between the color standards until the best color match is found.

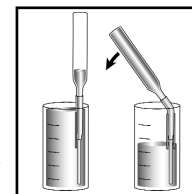


Figure 5

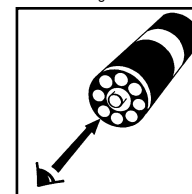


Figure 6

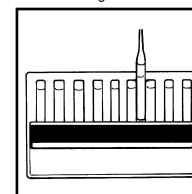


Figure 7

### Activator Solution Preparation

Fill the A-4201 Activator Solution bottle to the shoulder with distilled water or add 15 mL of distilled water. Add 10 drops of A-4202 Activator Solution. Cap the bottle and shake it until the chemical dissolves completely. Label the bottle with a **6 month** expiration date.

### Sample Temperature

This test method is somewhat temperature dependent. For best results, samples should be less than 40°C.

### Test Method

The Formaldehyde VACUettes®<sup>1</sup> test kit employs the Purpald®<sup>2</sup> chemistry. In a highly alkaline solution, and in conjunction with an oxidizing agent, formaldehyde reacts with Purpald to form a purple colored complex in direct proportion to the formaldehyde concentration.

Certain aldehydes and alcohols will cause high test results.

1. VACUettes is a registered trademark of CHEMetrics, Inc. U.S. Patent Nos. 4,537,747 & 4,596,780
2. Purpald is a registered trademark of Aldrich Chemical Company. The reagent methodology was developed by Aldrich Chemical Company.

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



Simplicity in Water Analysis

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