

# Ozone Trace Vacu-vials® Kit

**K-7463: 0.10 - 0.75 ppm**

## Instrument Set-up

For the Ozone 3 SAM, refer to the Ozone 3 SAM instruction card.

For Spectrophotometers capable of accepting a 22.5 mm diameter round cell, follow the manufacturer's specifications to set the wavelength to 600 nm and use the reagent blank ampoule to zero the instrument.

## Generating Reagent Blank

A fresh reagent blank must be generated for each series of tests performed and with each new lot number of Ozone Trace Vacu-vials. Use a reagent blank ampoule from the same lot as the test Ozone Trace Vacu-vials.

To generate the reagent blank ampoule, perform **Steps # 1-3** of the test procedure as outlined below using **distilled water** in place of sample in **Step # 1**.

The resulting ampoule is the reagent blank ampoule (see Instrument Set-up).

## Test Procedure

1. Fill a beaker to the 40 mL mark with the sample to be tested, being careful to minimize turbulence.  
**NOTE:** OZONE loss from sample occurs easily and rapidly. Dipping and pouring operations should occur with as little agitation as possible.
2. Place the Trace Vacu-vial ampoule in the beaker. Snap the tip by pressing the ampoule against the side of the cup. The ampoule will fill, leaving a small bubble to facilitate mixing.
3. Mix the contents of the ampoule by inverting it several times, allowing the bubble to travel from end to end. Dry the ampoule and wait **1 minute** for color development.
4. Read the Trace Vacu-vial ampoule in your photometer. If applicable, use the calibration table to obtain test results in ppm (mg/Liter) ozone. Accuracy may be compromised if test results are outside the stated test range.

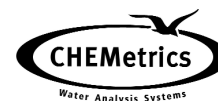
## Test Method

The Ozone Trace Vacu-vials®<sup>1</sup> test kit employs the indigo chemistry.<sup>2,3</sup> Indigo trisulfonate reagent reacts quantitatively with ozone, bleaching the blue color in direct proportion to the amount of ozone present. Malonic acid is included in the ampoule to prevent interference from up to 2 ppm chlorine.

1. Vacu-vials is a registered trademark of CHEMetrics, Inc. U.S. Patent No. 3,364,038.
2. Bader, H. and Hoigne, J. "Determination of Ozone in Water by the Indigo Method," Water Research Vol. 15, 449-456, 1981.
3. APHA Standard Methods, 20<sup>th</sup> ed., p 4-137, method 4500-O<sub>3</sub> B (1998)

## Safety Information

Read MSDS before performing this test. Wear safety glasses and disposable gloves.



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