

Determination of Ozone Concentration in the Presence of Chlorine Using CHEMetrics® Ozone Test Kits (DPD Chemistry) Cat. Nos. K-7423 and K-7404

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Determining Ozone in the Presence of Chlorine

Chlorine causes a false positive interference (develops color) with colorimetric ozone tests that employ the DPD chemistry. CHEMetrics, Inc. has developed a procedure to correct for chlorine interference with our Ozone Vacu-vials® Test Kit, Cat. No. K-7423, and Ozone CHEMets® Test Kit, Cat. No. K-7404.

CHEMetrics has confirmed experimentally that the addition of a controlled amount of a glycine solution (Cat. No. A-2700) to the sample will destroy the ozone and allow for the accurate determination of ozone concentration by difference. This protocol can be used in samples containing up to 2 ppm chlorine.

Test Procedure Using K-7423 Vacu-vials® Kit

1. Add 5 drops of A-2700* Neutralizer Solution to the empty sample cup.
2. Fill the sample cup to the 25 mL mark with the sample to be tested. Stir to mix the contents of the cup. Wait 2 minutes.
3. Add 5 drops of A-7400 Activator Solution to the sample cup. Stir to mix the contents of the cup.
4. Immediately place the Vacu-vial ampoule, tip first, into the sample cup. Snap the tip. Invert the ampoule several times, allowing the bubble to travel from end to end. Dry the ampoule.
5. Wait 1 minute after snapping the ampoule tip, then use this ampoule to set zero on your photometer.

6. Using a second ampoule, analyze the sample according to the K-7423 Vacu-vials test kit instructions.
7. Obtain a test result with the photometer that was zeroed with the ampoule generated in steps 1-5.

Test Procedure Using K-7404 CHEMets® Kit

- A. Analyze the sample according to the K-7404 CHEMets kit instructions. Record the test result.
- B. Add 5 drops of A-2700 Neutralizer Solution to the empty sample cup.
- C. Fill the sample cup to the 25 mL mark with the sample to be tested. Stir to mix the contents of the cup. Wait 2 minutes.
- D. Add 5 drops of A-7400 Activator Solution to the sample cup. Stir to mix the contents of the cup.
- E. Immediately place the CHEMet ampoule, tip first, into the sample cup. Snap the tip. Invert the ampoule several times, allowing the bubble to travel from end to end.
- F. Obtain a test result 1 minute after snapping the tip.
- G. Subtract the test result obtained in Step F from the test result obtained in Step A to determine the ozone concentration of the sample.

**A-2700 must be purchased separately.*