



Operating Instructions for Glutaraldehyde Monitor Part# 380017-10

Technical Summary

Physical Specifications:

Dimensions	10.5cm x 5.5cm x 0.25cm
Weight	11g
Refrigerated shelf life	1 year
Color Change	pink to violet

Sampling Parameters:

(A) Exposure range for:	
Badge	0.04 - 0.95 ppm x hr
Badge used with color comparator	0.04 - 8.0 ppm x hr
(B) 10 minute sampling time badge	0.075 - 1.5 ppm
Relative humidity range	25% - 85%
Face velocity range	10 - 165 cm/sec
Temperature range	15 - 35°C (59 - 95°F)
Mean coefficient of variation	±6.8
Bias at ambient conditions	1.4%
Light effect - UV (direct sunlight)	no effect
Light effect - visible	no effect

Applications:

The ChromAir glutaraldehyde badge may be used for personnel or area monitoring for exposure times ranging from 10 minutes to 15 minutes. For higher resolution, the ChromAir chlorine badge may be used in conjunction with the ChromAir glutaraldehyde color comparator (384000).

Cross Interferences:

The ChromAir glutaraldehyde monitor is highly selective to glutaraldehyde. Alcohols, ketones and ammonia have no effect on the performance and accuracy of the monitor. Up to 2 ppm formaldehyde shows no effect on the monitor. No other interferences are known.

Introduction:

Glutaraldehyde is a colorless liquid with an irritating odor. It has an odor threshold in the ppb level. Glutaraldehyde may be fatal if inhaled, swallowed or absorbed through the skin. Symptoms of exposure may include burning sensations, headache, coughing, shortness of breath, nausea and vomiting. To the best of our knowledge, toxicological, chemical and physical properties have not been thoroughly studied. OSHA and NIOSH STEL are 0.2 ppm.

Glutaraldehyde is used extensively in the medical field. It is used in hospitals for cold sterilization of medical supplies and instruments. Glutaraldehyde is also used as a disinfectant in urology, endoscopy and dental departments.

Principle of Operation:

The ChromAir passive monitor is a patented direct read autogenic exposimeter. The device is constructed from five cells attached on one side to a flat indicator layer and on the other side to a series of different diffusive resistances. Glutaraldehyde gas diffuses to the cells through the different diffusive resistances and reacts with the indicator layer, producing color change from pink to violet. The color produced on the indicator layer is a direct measure of the exposure dose. Visual color comparison is achieved by observing the formation of the violet threshold color on the individual cell and reading the corresponding exposure dose.

Operating Instructions:

1. Remove the pouch from the refrigerator and allow it to warm to room temperature.
2. Remove the badge from its protective pouch.
3. Enter all pertinent information on the I.D. label before monitoring is started (i.e. name, location, date and start time)
4. For personnel monitoring, attach the badge near the user's breathing zone (i.e. collar) with the front side exposed to the surrounding atmosphere.
5. For area monitoring, attach the badge to a stand and mount in a centralized area with the front side exposed to the surrounding atmosphere.
6. Expose the badge for 10 minutes or 15 minutes.
7. To read the badge, locate the highest level cell with bluish gray threshold color.
8. At the end of the exposure period (10 or 15 minute), return the badge to its original pouch and let stand for 45 minutes at room temperature to allow complete development of color. Read the badge no later than 3 hours after exposure.
9. At the end of the development period, locate the highest level cell with violet threshold color and read the corresponding average concentration from the scale.

Storage:

The ChromAir glutaraldehyde monitor should be refrigerated in its sealed bag at all times.

Benefits:

1. **Accurate Measurements:** The ChromAir glutaraldehyde monitor is designed to react selectively with glutaraldehyde with minimum interference from other substances. The unique design of the monitor minimizes the effects of different humidities, temperatures and air velocities on the accuracy of the measurements.
2. **Applications:** The ChromAir monitor may be used for personnel screening and for area monitoring or area mapping.
3. **Ease of Use:** The ChromAir monitor is a direct read device that gives immediate, on-site results. Use of this device requires minimum training.
4. **Cost Effective:** The ChromAir glutaraldehyde monitor offers the user the most inexpensive air sampling solution available.

AFC International, Inc.

PO Box 894 • DeMotte IN 46310

219-987-6825 • 800-952-3293 • Fax 219-987-6826

www.afintl.com • sales@afintl.com