



Formaldehyde Vapor Monitor Badge

Description:

The VaporBadge sampling involves no liquid and no mechanical pumps. The vapor sample diffuses through a porous membrane and is collected on a specially prepared 2,4-DNPH coated high-purity silica gel adsorbent. Workers can clip the badge near the breathing zone to measure personal exposure or it can be placed in a room to measure area concentration. Record stop time and end time. Mail the badge to ACS Lab in the envelope provided. The analysis reports are available by email within 48 hours after the samples have been received.

Sampling Strategy:

The method used for sampling will be determined by the exact application and requires the judgment of an experienced industrial hygienists. For OSHA law enforcement, the badge should be worn on the collar of a worker's shirt for a full work shift (circa 8 h). For a short term measurement, workers should wear the badge for 15 minutes when the concentration of formaldehyde is considered to be the highest. Indoor air quality is easily measured by placing the badge at breathing level for 24 h.

Shelf Life:

The shelf life of a badge in an unopened pouch is 6 months.

Exposed Badge Holding Time:

The badges should be analyzed within 2 weeks of exposure.

Storage Conditions:

No special storage is required. Refrigeration will extend shelf life. It is best to store away from sources of formaldehyde vapor.

Reference Methods:

NIOSH Method 2016, modified for use with a diffusive sampler.

Accreditation:

Advanced Chemical Sensors is accredited by American Industrial Hygiene Association (AIHA). We participate in AIHA's PAT (proficiency analytical testing) program for both solvents and diffusive badges.



Interfering Factors:

There are no known interfering factors. Blank samples are run to confirm the background of the batch of badges being used for the test. Media and solvent blanks are always run to confirm that all substances measured are from the customer site.

Effect of Environmental Conditions:

The effect of humidity on the performance of the F-50 badge has been explored and found to have no measurable effect in the range of 30%-92% RH. Increases in temperature from 24°C up to 37°C are found to have less than a 10% effect for each 10°C increase in the temperature.

Overall System Accuracy:

16% at 0.75 ppm for 8 hours
20% at 2.0 ppm for 15 minutes

Independent Validation:

Mitsubishi Chemical Lab under the supervision of the Japanese Government validated the accuracy of ACS badge in 1999 and 2001.

