

Issue 8

June 2011

Phenol filters prove very effective in filtering out interferences

PPM Technology have recently conducted an experiment which identified interference factors that can affect Formaldehyde sensor readings.

Interference factors differ from sensor to sensor, and with each sensor's use over its lifetime. This table below is a guideline. It is important that you do not attempt to calibrate with cross-interfering gases.

Ozone causes formaldehyde to be broken down into carbon dioxide, water and oxygen; therefore, in ozone rich environments, formaldehyde levels can be reduced.

Phenol Filters are extremely efficient at removing phenol from the sample, along with some other alcohols and aldehydes. Note that Phenol Filters reduce the concentration of formaldehyde by around 15% so should only be used in conditions where there are suspected interferences and the instrument should be calibrated with the Phenol Filter in place.

Compound	Equivalent to 1ppm reading	Filter Efficiency	Notes
ACETALDEHYDE	12ppm	60%	
ETHANOL	24ppm	45%	
FORMALDEHYDE	1ppm	15%	
FORMIC ACID	26ppm	100%	Removed by filter.
GLUTERALDEHYDE	7ppm	70%	
METHANOL	60ppm	30%	
PHENOL	7ppm	100%	Removed by filter.
RESORCINOL	250ppm	100%	Removed by filter.

A wide range of suspected interfering gases have been tested, including (NH₃, CO, CO₂, NO₂, Acetone & Isobutylene), and the table shows only those which caused interference below LEL levels at 25°C. Unless noted otherwise all responses are linear.
Compiled by PPM technology Ltd. for Formaldemeter sensor, May 2011.

U.S. adds formaldehyde to list of carcinogens.

The US government has added formaldehyde to a list of known carcinogens. The report prepared for the Secretary of the Department of Health and Human Services (HHS), contained warnings from scientists that people with higher exposure to formaldehyde were more at risk for nasopharyngeal cancer, myeloid leukemia and other cancers.

"There is now sufficient evidence from studies in humans to show that individuals with higher measures of exposure to formaldehyde are at increased risk for certain types of rare cancers" the Report on Carcinogens said.

News report - <http://www.reuters.com/article/2011/06/11/us-usa-health-cancer-idUSTRE75A0KN20110611>

If you have any relevant stories, including any recent or upcoming exhibitions, application stories or customer testimonials that you want to be included in the next newsletter please feel free to contact us:

gevans@ppm-technology.com

IAQ Lecture Series

Over the past 30 months Dr Ken Wai of Hinds International has delivered a series of talks relating to Indoor Air Quality (IAQ) to various academic, professional, commercial & government bodies, topics discussed are listed below: -

- I. Scientific and Systematic Management of IAQ (for Building Service professionals).
- II. The Importance of a standard for IAQ.
- III. In harmony with nature.
- IV. Building Management of the 21st Century.
- V. Give meaning to IAQ management.
- VI. Introduction to the Hinds IAQ Profile Monitoring System.
- VII. Automatic IAQ Profile monitoring systems.
- VIII. Automatic and continuous monitoring of IAQ.
- IX. Problem solving in IAQ Management.



The last two of the above lectures were delivered last week in a seminar specifically for the front line workers in the Electrical & Mechanical Service Department of the HKSAR Government. It is hoped these lectures will raise awareness of IAQ issues and ensure professionals are aware of the benefits offered by a continuous monitoring system.

OSHA releases a new IAQ guidance document for commercial and institutional buildings.

The US Occupational Safety and Health Administration (OSHA) have just released the "Indoor Air Quality in Commercial and Institutional Buildings" booklet.

This guidance document provides practical recommendations that aim to prevent or minimize IAQ problems in commercial and institutional buildings, and help resolve such problems quickly if they do arise. The document provides flexible guidance to employers to help them keep their buildings free of pollutants and conditions that lead to poor IAQ. It also provides information on good IAQ management, including control of airborne pollutants, introduction and distribution of adequate make-up air, and maintenance of an acceptable temperature and humidity.

Full Booklet - <http://www.osha.gov/Publications/3430indoor-air-quality-sm.pdf>

Climate Change, the Indoor Environment and Health.

The Institute of Medicine report warns that the effort to counter climate change has spurred a shift to untested new materials and building retrofits that could limit and alter the air flow inside buildings. The report says this may concentrate indoor pollutants.

"America is in the midst of a large experiment in which weatherization efforts, retrofits, and other initiatives that affect air exchange between the indoor and outdoor environments are taking place and new building materials and consumer products are being introduced indoors with relatively little consideration as to how they might affect the health of occupants," said a statement from John Spengler, the chairman of the committee that wrote the report.

News item - <http://www.foxnews.com/politics/2011/06/08/green-buildings-hazardous-to-health-report-cites-risks-weatherization/>

Full report - http://books.nap.edu/openbook.php?record_id=13115&page=R1

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Please read our article 'Continuous Monitoring of Multiple IAQ Parameters' recently published by PPM in the 'International Environmental Technology' publication - [Article](#)

PPM and Hinds welcome new interns.

PPM Technology have taken on an intern for a period of 10 weeks as part of the Go Wales Placement scheme. Chris Roberts is a Medical Sciences undergraduate student at the University of Glamorgan, his role during the placement is Quality Assurance Administrator, and he will initially be looking at our documentation and manuals to ensure all information is correct and up-to-date.

Hinds International of Hong Kong are also taking on 2 interns in the coming months; they will look at market possibilities and trends within the heating ventilation and air conditioning (HVAC) industry, and will also seek to interpret and diagnose IAQ profiles.

Formaldemeter *htV-m* vs *htV*

A table comparing the features and performances of the Formaldemeter htv and htv-m is attached to the newsletter e-mail.

PPM to initiate internal environmental standards.

We will begin a drive to become more environmentally friendly in our procedures and actions. Members of the PPM team will have responsibility for their actions in an attempt to reduce wastage. We will also regularly monitor energy use, we aim to reduce our energy consumption by following simple environmental procedures such as switching electrical equipment off when not in use and only using equipment when necessary.

Formaldemeter *htV-m* damaged in transit.



A recent htV-m kit sent by PPM to was severely damaged in transit. We always take care to pack our items carefully and safely to minimize the risk of damage.



However, on this occasion it wasn't enough to protect the instrument as shown in the images. **We highly recommend anyone receiving our goods take out insurance if they organise their own couriers.**

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