



NATIONAL INSTITUTE FOR  
OCCUPATIONAL HEALTH

Division of the National Health Laboratory Service

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Dear colleagues,

Research Committee invites students and researchers who wish to participate in its Biennial Research Day 2024, planned for **28 November 2024**, to submit abstracts related to occupational and environmental health. Topics that can be included are listed below:

Communicable diseases	Non communicable diseases including mental health	Air quality
Health and safety in the workplace	Exposures and health outcomes	Use of AI/ new technology in the workplace
Surveillance	Toxicology	Immunology
Microbiology	Occupational Hygiene	Pathology
Biochemistry		

The abstract must be submitted by **16 September 2024**, and feedback will be shared by **30 September 2024**.

The Research Day is CPD accredited and presenters obtain double points.

Please email your abstract submission to [research.relations@nioh.ac.za](mailto:research.relations@nioh.ac.za).

For enquiries, please email the Research Committee at [research.relations@nioh.ac.za](mailto:research.relations@nioh.ac.za).

Please adhere to the abstract guidelines (attached).

We look forward to your submissions and engaging with you at the NIOH Research Day.

Feel free to share this information with your network or colleagues who may benefit from attending. Students and early career researchers are encouraged to submit.

**Registration is free for all.**

Prof. Nisha Naicker  
Research Committee Chair  
National Institute for Occupational Health  
National Health Laboratory Service

## CPD ACCREDITED NIOH RESEARCH DAY – 2024

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### ABSTRACT SUBMISSION

Kindly refer to the guidelines below.

Topics may include any aspect of Occupational and Environmental Health as well as laboratory based studies (similar to the example abstract included here).

**E-mail your abstract to: [Research.Relations@nioh.ac.za](mailto:Research.Relations@nioh.ac.za) before 30<sup>th</sup> September 2024.**

Indicate in your email whether you'd prefer an **oral presentation** or a **poster presentation**. Poster presentations will be in electronic format and will be have a pre-recorded voice over) made available to delegates via the online platform; and a short time will be allocated in the program for you to answer questions. More details will follow after your abstract has been accepted.

#### **Abstract Guidelines:**

- Font Arial should be used.
- Single spacing
- Abstract is limited to **300 words** (this does not include the title, author's names and institutions).
- Abstract title: Font size 14 pt, bold.
- Authors: Font size 12 pt, bold+italic. Please provide authors' full first and last names, and underline the presenting author.
- Affiliations: Font size 12 pt, italic, denoted by numbers in superscript (<sup>1, 2, 3</sup>) after each author's last name. Please indicate your Section at NIOH.
- Please provide the email address to which all the correspondence should be addressed.
- Abstract text: Font size 12 pt; should cover a brief introduction, main objectives, methods, results and discussion.

**Feel free to use the example below (copy-paste your information):**

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# **Title: Quantification of Airborne Formaldehyde in an occupational setting: a cross-sectional study**

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## **Abstract:**

### Introduction

Although formaldehyde is used extensively in many industries such as agriculture, construction, manufacturing, embalming and pathology, and beauty, it can harm those who work with it. The extent of harm depends on the level of exposure, and the level of exposure depends on the dose and duration, as well as the type of work undertaken. All workplaces in South Africa that use formaldehyde are required, by law, to adhere to the requirements set by the Regulations for Hazardous Chemical Agents. The regulations include biomonitoring of staff working with any hazardous chemical agent. There are several approved methods for formaldehyde analysis for exposure monitoring available from literature, to enable workplace adherence to guidelines on safe handling and exposure monitoring. However, laboratory testing within South Africa which is often necessary as part of medical surveillance, is hampered by the lack of accredited testing facilities.

Therefore, this research project aimed to quantify airborne formaldehyde in an occupational setting using a validated analytical method.

### Methods

Multiple air samples were collected from three laboratory clerks and two office based medical scientists in a sample receiving department (SRD) using personal air sampling pumps. Two workers from a laboratory outside of the SRD served as the control group.

### Results and Discussion

The results showed, (1) a significant difference in airborne formaldehyde concentrations between the two working spaces and, (2) compared with both the medical scientists (0.0519 mg/m<sup>3</sup> – 3L and 0.0940 mg/m<sup>3</sup> – 15L) and control group (0.0284 mg/m<sup>3</sup> – 3L and 0.0296 mg/m<sup>3</sup> – 15L) laboratory clerks were exposed to the highest concentration of formaldehyde (0.1124 mg/m<sup>3</sup> – 3L and 0.2929 mg/m<sup>3</sup> – 15L) with a maximum above the WHO 50<sup>th</sup> percentile (0.18 mg/m<sup>3</sup>) odour detection threshold,.

### Conclusion

Due to the small population size and short duration of the study, no definitive conclusion can be made on the formaldehyde exposure in the SRD. However, it is strongly recommended that the laboratory clerks use appropriate personal protective equipment and make use of a fume hood to minimize their exposure when handling samples containing formaldehyde.