

Formaldehyde Exposure Control Policy- LEOC.01.CHM.06

(Appendix A of Chemical Hygiene Plan)

<i>Manual:</i>	VUMC Laboratory Environment of Care Manual
<i>Category:</i>	Chemical Safety
<i>Approval Authority:</i>	Laboratory Environment of Care Committee
<i>Revision Date</i>	March 2010
<i>Effective Date:</i>	March 2008

1.0 POLICY/PRINCIPLE

It is the policy of Vanderbilt University Medical Center in coordination with Vanderbilt Environmental Health and Safety (VEHS) and Vanderbilt Occupational Health Clinic (VOHC) to provide the diagnostic laboratories with a safe and healthful work environment.

The Formaldehyde Exposure Control Policy outlines management practices, procedures and control measures implemented by VEHS and is designed to minimize exposures to formaldehyde.

This policy is written in accordance to the Tennessee Occupational Safety and Health Administration's (TOSHA) Formaldehyde Standard as found in 29 CFR 1910.1048.

2.0 SCOPE

This policy applies to all diagnostic clinic faculty, staff and students that are exposed, or potentially exposed to formaldehyde gas, its solution and materials that release formaldehyde at levels that approach or exceed the TOSHA Action Limit, (AL), Permissible Exposure Limit (PEL), or Short Term Exposure Limit (STEL).

This policy does not apply to clinic faculty, staff or students that use formaldehyde containing products less than 4% by volume.

3.0 RESPONSIBILITY

- 3.1 VEHS is responsible for the following:
 - 3.1.1 Identifying at-risk job tasks
 - 3.1.2 Conducting formaldehyde exposure assessments
 - 3.1.3 Evaluating results
 - 3.1.4 Recommending engineering/administrative controls and safe work practices
 - 3.1.5 Providing employee supervisors with exposure monitoring reports
 - 3.1.6 Conducting respirator fit testing, as needed
 - 3.1.7 Collecting and disposing of waste formaldehyde product
 - 3.1.8 Performing training
 - 3.1.9 Recordkeeping

- 3.2 VOHC is responsible for all aspects of the medical surveillance program which include:

- 3.2.1 Developing standard operating procedures for conducting medical surveillance for employees who are
 - exposed to formaldehyde at or above the TOSHA AL/STEL
 - develop signs and symptoms of exposure
 - exposed in emergencies, and
 - new employees prior to assignment to an area where formaldehyde exposure is at or above the TOSHA AL/STEL.
- 3.2.2 Notifying supervisors of the affected departments when medical evaluations are due and schedule appointments with these employees
- 3.2.3 Conducting a medical and work history
- 3.2.4 Conducting a physical exam at initial assignment and for at-risk employees
- 3.2.5 Conducting a medical exam, including laboratory testing (i.e. pulmonary function testing) when deemed necessary by the VOHC.
- 3.2.6 Maintaining medical records
- 3.2.7 Establishing medical removal provisions for employees who report significant health problems associated with formaldehyde exposure.
- 3.3 Supervisors are responsible for the following:
 - 3.3.1 Requesting formaldehyde exposure assessments for employees
 - 3.3.2 Notifying VEHS of unusual conditions or changes in work practices that may increase employee exposures to formaldehyde
 - 3.3.3 Reviewing exposure results with the employee. Reports are signed by both supervisor and employee, documenting the employee's receipt of results.
 - 3.3.4 Providing VEHS a copy of signed reports.
 - 3.3.5 Providing personal protective equipment (PPE) at no cost to the employee
 - 3.3.6 Enrolling employees exposed to formaldehyde above the TOSHA AL or STEL into the VOHC medical surveillance program for formaldehyde
 - 3.3.7 Ensuring employee attendance to annual training
 - 3.3.8 Ensuring that formaldehyde containing materials are properly labeled.
- 3.4 Employees are responsible for the following:
 - 3.4.1 Participating in annual VEHS training
 - 3.4.2 Participating in the VOHC medical surveillance program for formaldehyde, if applicable
 - 3.4.3 Using required PPE, if applicable
 - 3.4.4 Practicing prescribed engineering/administrative control measures or work practices.
 - 3.4.5 Notifying supervisors of unusual conditions or changes in work practices that may increase exposure to formaldehyde.

4.0 PROCESS

Formaldehyde Exposure Evaluation

- 4.1 Determination of employee formaldehyde exposure

- 4.1.1 VEHS will perform formaldehyde exposure assessments on all tasks having the potential to expose employees to levels of formaldehyde above the TOSHA AL or STEL.
 - 4.1.2 The assessments include air monitoring and observation of work practices and engineering controls typically used for each task.
 - 4.1.3 VEHS provides the supervisor with an exposure monitoring report including laboratory results, administrative/engineering control recommendations, and changes in work practices. The supervisor must share the report with the employee within 15 working days of the assessment.
 - 4.1.4 VEHS will notify the supervisor of the frequency of follow-up sampling, if applicable.
- 4.2 Waste Disposal
- 4.2.1 Formaldehyde containing products are considered hazardous waste and may not be disposed in the sink.
 - 4.2.2 VEHS establishes procedures for waste disposal and collection which can be found at:
www.safety.vanderbilt.edu/resources/hazard.htm
- 4.3 Training
- 4.3.1 VEHS performs formaldehyde training for employees that perform job functions resulting in past exposure above the TOSHA AL or STEL.
 - 4.3.2 VEHS discusses the Formaldehyde Exposure Control Policy, the applicable Material Safety Data Sheets (MSDS), Labeling procedures, waste disposal, emergency procedures and other applicable information relating to the safety and health of the employee.
- 4.4 Recordkeeping
- 4.4.1 VEHS maintains all documents relating to formaldehyde exposure including formaldehyde exposure assessments, air sampling data, respirator fit testing documentation and waste disposal manifests.
 - 4.4.2 VOHC maintains medical records relating to the medical surveillance program.
 - 4.4.3 The supervisor maintains a signed copy of formaldehyde exposure monitoring report in the appropriate personnel file.

5.0 REFERENCES

TOSHA Formaldehyde Standard – 29CFR 1910.1048
VUMC Policy SA 10-10.01 “Safety Program - Environment of Care”
VUMC Policy SA 20-10.05 “Hazardous Waste: Handling & Disposal”
VOHC Standard Operating Procedure, “Occupational Exposure to Formaldehyde”

6.0 ATTACHMENTS

Definitions

- 6.1 Formaldehyde – The chemical substance HCHO, Chemical Abstracts Service Registry 50-00-0. Used in the Clinical Diagnostic Laboratories primarily as a tissue fixative.
- 6.2 Tennessee Occupational Safety and Health Administration (TOSHA) – regulating body that limits the exposure to chemicals including formaldehyde.
- 6.3 TOSHA PEL – Formaldehyde is considered to present an airborne hazard in concentrations above the TOSHA Permissible Exposure Limit (PEL) of 0.75 ppm when exceeded during an 8-hour work shift. This is expressed as a Time Weighted Average (TWA) concentration, which refers to the concentration of the material that has been averaged for the time duration of the sample.
- 6.4 TOSHA STEL – Formaldehyde is considered to present an airborne hazard in concentrations above the TOSHA Short Term Exposure Limit (STEL) of 2.0 ppm when exceeded during a 15-minute period.
- 6.5 TOSHA AL – Concentration of 0.5 ppm of formaldehyde calculated as an 8-hour time-weighted average.
- 6.6 Employee – VUMC Faculty, Staff or Student as referenced in this policy.

7.0 REVIEW AND REVISION HISTORY

Approved Laboratory Environment of Care Committee

Title/Date

Approved March 2008

Title/Date

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Laboratory Environment of Care Committee

Date: November 2008

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