Flavorings and Food Production Fact Sheet

Assessing and Controlling Exposures in Flavoring Manufacturing and Food Production

This information sheet provides an overview of the flavorings and flavored food project planned by the Centers for Disease Control and Prevention (CDC)/National Institute for Occupational Safety and Health (NIOSH).

Background

- Cases of severe obstructive lung disease have been reported in workers in the flavoring manufacturing and food production industries.
- The development of exposure control guidance is critical to help reduce the risk of flavoring-related obstructive lung disease.
- NIOSH has begun to study exposure and pursue an engineering, solution-based research approach to reduce occupational exposures.

Purpose

The purpose of the study is to characterize workplace exposures and engineering controls to diacetyl and other flavoring chemicals in both flavoring and food production facilities. This study will not assess health effects of exposure to flavoring chemicals.

The specific objectives of this project are to:
- document current manufacturing processes and chemicals used in these industries;
- characterize worker exposures;
- evaluate work practices and procedures which affect exposure potential; and,
- document and evaluate engineering controls.

Who can participate?

Manufacturers of flavorings and food products who use diacetyl and other chemicals identified as a high priority by the Flavoring and Extract Manufacturers Association (acetaldehyde, benzaldehyde, furfural, acetoin, acetic acid, butyric acid, etc). Specifically, workers who are involved in the production and use of these flavoring chemicals will be asked to participate. Companies who have installed or are considering the implementation of engineering controls to reduce exposures can also work with NIOSH engineers to develop and evaluate exposure mitigation options.
Since companies that participate in this research will undergo a sampling survey to measure airborne flavoring chemicals and dusts, sampling results will provide companies with a better understanding of exposures occurring in their facility. These results will provide the company with important information to help in prioritizing the need for exposure controls. NIOSH engineers can also provide recommendations to reduce exposure and evaluate controls following installation. A report of the findings will be sent to each company that participates in the study.

What is required of participating companies?

Following the initial meeting and walkthrough, NIOSH researchers will visit each facility once or twice to conduct a survey for flavoring chemical exposure and an evaluation of engineering controls. Each survey will typically take three to five days. These surveys will involve placing several pieces of sampling equipment near a source of potential exposure. Workers involved in key production tasks may be asked to wear sampling pumps. The exposure assessment and engineering control evaluations may be able to be scheduled concurrently or on subsequent visits depending on facility needs.

Use of the data

The data collected in the study will be used to determine the extent of worker exposure to diacetyl and other flavoring chemicals. In addition, the effectiveness of exposure controls can be evaluated and recommendations made to improve worker protection. A report will be issued to the company summarizing the results of the sampling and engineering control evaluations. Participating workers may also receive a copy of the reports, if requested. There are federal laws and regulations that provide protection for proprietary and trade secret information for the participating companies.

For more information

To learn more about this study, contact:

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