

**DEPARTMENT OF LABOR**

**Occupational Safety and Health Administration**

**29 CFR Part 1910**

**Occupational Exposure to Diacetyl and Food Flavorings Containing Diacetyl:  
Announcement of Stakeholder Meeting**

**AGENCY:** Occupational Safety and Health Administration, Labor.

**ACTION:** Announcement of stakeholder meeting.

**SUMMARY:** The Occupational Safety and Health Administration (OSHA) invites interested parties to participate in or observe an informal stakeholder meeting on Occupational Exposure to Diacetyl and Food Flavorings Containing Diacetyl. This meeting is a continuation of OSHA's information collection efforts on Diacetyl and Food Flavorings Containing Diacetyl.

**DATES:** *Stakeholder meeting:* The stakeholder meeting date is, October 17, 2007 from 8:30 a.m. - 4:30 p.m.

If more than 50 stakeholders register for the stakeholder meeting on October 17, 2007, a second meeting will be scheduled for October 18, 2007 from 8:30 a.m. to 4:30 p.m. If the second meeting is needed on October 18, it will follow the same format and requirements as the first meeting and will be held at the same location. OSHA's Contractor Eastern Research Group (ERG) will

communicate with stakeholders by telephone or e-mail if a second meeting is scheduled.

*Notice of intention to attend the stakeholder meeting:* You must submit a notice of intention to attend (i.e., to participate or observe) the stakeholder meeting by October 10, 2007.

**ADDRESSES:** *Stakeholder meeting:* The location for the stakeholder meeting is: Crown Plaza Hotel Washington National Airport, 1480 Crystal Drive, Arlington, Virginia 22202.

*Notices of intention to attend the stakeholder meeting:* OSHA's contractor, ERG, is coordinating the registration, hotel arrangements, and logistics for the meeting. Seating is limited and pre-registration is required. Please include in your notice of intention to attend (i.e., to participate or observe) your full name, affiliation, address, telephone, and e-mail address. You may submit your notice of intention to attend the stakeholder meeting by October 10, 2007 by any of the following methods:

*Electronic:* OSHA encourages you to submit your notice of intention to attend to [meetings@erg.com](mailto:meetings@erg.com) (subject line: Diacetyl Meeting).

*Facsimile:* You may fax your notice of intention to attend to 781-674-2906.

*Telephone:* You may register by phone by calling Eastern Research Group, Inc. at 781-674-7374.

*Regular mail, express delivery, hand delivery, messenger and courier service:*

Submit your notice of intention to attend to Laurie Stamatatos, Eastern Research Group, Inc., 110 Hartwell Avenue, Lexington, MA 02421-3136.

*Instructions:* For further information on the stakeholder meeting and submitting notices of intention to attend (i.e., to participate or observe) the stakeholder meeting, see the “Public Participation” heading in the SUPPLEMENTARY INFORMATION section of this notice.

This document, non-attributed notes from the stakeholder meeting, as well as news releases and other relevant information, will also be available on OSHA’s Webpage at <http://www.osha.gov>.

**FOR FURTHER INFORMATION CONTACT:** Michael Seymour, Director, OSHA, Office of Physical Hazards, Directorate of Standards and Guidance, Room N-3718, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210; telephone (202) 693-1950.

**SUPPLEMENTARY INFORMATION:**

Background

On July 26, 2006, the United Food and Commercial Workers International Union (UFCW) and the International Brotherhood of Teamsters (IBT) petitioned DOL for an Emergency Temporary Standard (ETS) for all employees exposed to diacetyl, a major component in artificial butter flavoring. The petitioners cited evidence from the National Institute for Occupational Safety and Health’s (NIOSH) Health Hazard Evaluations (HHE) showing that some employees

exposed to butter flavorings developed bronchiolitis obliterans, a debilitating and potentially fatal disease of the small airways in the lung. The petitioners also cited experimental evidence showing that inhalation exposure to artificial butter flavoring vapors and diacetyl damaged tissue lining the nose and airways of rats and mice. Diacetyl and a number of other volatile organic compounds are used to manufacture artificial butter food flavorings. These food flavorings are used by various food manufacturers in a multitude of food products including microwave popcorn, certain bakery goods, and some snack foods.

Most of the available evidence regarding the development of bronchiolitis obliterans among employees exposed to food flavorings containing diacetyl comes from investigations of the microwave popcorn production industry. Bronchiolitis obliterans was first reported in eight former employees of the same microwave popcorn plant. Subsequent HHEs conducted by NIOSH from 2000-2004 at this and other microwave popcorn facilities uncovered additional employees with fixed airway obstruction disease consistent with bronchiolitis obliterans. Employees who routinely poured butter flavoring into heated, open mixing tanks without respiratory protection or operated packaging equipment in the vicinity of the mixing tanks experienced higher than expected rates of certain respiratory symptoms (e.g., chronic cough, shortness of breath upon exertion, wheezing) and airways obstruction. These employees tended to have the highest exposures to butter flavoring vapors containing diacetyl in the plants. OSHA is not aware of any new cases of serious airways disease consistent with

bronchiolitis obliterans among microwave popcorn manufacturing employees since 2003.

Obstructive airway disease compatible with bronchiolitis obliterans has been recognized in other related work settings. There have been at least fifteen cases of this disease identified in the food flavor manufacturing industry. Job history information indicates that the injured employees blended and mixed powder and/or liquid flavorings, including artificial butter flavorings containing diacetyl. Available exposure monitoring shows that air levels of diacetyl and other butter flavoring chemicals during powdered flavoring production were similar to those measured in the mixing areas of microwave popcorn plants where elevated airways disease was found. Efforts are underway to better understand the extent of flavoring-related airways disease in this industry and the exposure levels during high-risk job operations.

Three cases of severe airways obstruction consistent with bronchiolitis obliterans were identified among a group of 102 production process operators who worked at a diacetyl production plant in the Netherlands. Although exposure monitoring at the plant was limited, the available data indicate that diacetyl air levels during certain production tasks were in the range found during mixing operations in microwave popcorn and diacetyl-containing food flavor manufacture. The injured employees are also known to have been exposed to the butter flavoring compounds, acetoin and acetaldehyde, in addition to diacetyl.

There is little information available on the use of food flavorings containing diacetyl in other workplaces. There are likely to be thousands of worksites where such flavorings are used and OSHA is seeking information on the nature of the flavoring formulations used, the processes in which they are used, the extent there is employee exposure, and the use and effectiveness of control measures. It is likely that at least some, if not many, of these workplaces may be using food flavorings in a fashion similar to that seen in microwave popcorn manufacturing. The available evidence for disease in this industry is sparse.

### Stakeholder Meeting

The stakeholder meeting will be an opportunity for informal discussion and the exchange of data, ideas, and points of view. To make the stakeholder meeting as productive as possible, OSHA requests that interested parties attending the stakeholder meeting be prepared to discuss the following issues relating to occupational exposure to diacetyl and food flavorings containing diacetyl in their respective industries, occupations, or operations:

- Uses of diacetyl and food flavorings containing diacetyl;
- Approaches to exposure assessment;
- Available exposure data;
- Controls (including substitutes) utilized to minimize exposure to diacetyl and food flavorings containing diacetyl; and
- Medical screening and surveillance.

The stakeholder meeting will begin with OSHA's presentation on Agency perspectives related to occupational exposure to diacetyl and food flavorings containing diacetyl followed by stakeholder questions. OSHA will devote the remainder of the meeting to informal discussions on the topics above and related issues. Meeting participants are not expected to prepare and present formal testimony.

#### Public Participation – Submission of Notices of Intention to Attend

You must submit, by October 10, 2007, a notice of intention to attend if you wish to participate in or observe the stakeholder meeting. You may submit your notice of intention to attend the stakeholder meeting (1) electronically, (2) by facsimile, (3) by telephone, or (4) by hard copy.

Notices of intention to attend the stakeholder meeting must include the following information:

- Name and contact information;
- Affiliation (e.g., organization, association), if any;
- Whether you wish to be an active participant or observer; and
- Whether you need any special accommodations in order to attend or participate in a stakeholder meeting.

This document, as well as news releases and other relevant information, also are available at OSHA's Webpage at <http://www.osha.gov>.

**Authority and Signature:**

This notice was prepared under the direction of Edwin G. Foulke, Jr., Assistant Secretary of Labor for Occupational Safety and Health. It is issued under Sections 4 and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 657), and Secretary of Labor's Order No. 5-2007 (72 FR 31160).

Signed at Washington, DC, on this 24th day of September, 2007.

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**Edwin G. Foulke, Jr.,**

*Assistant Secretary of Labor  
for Occupational Safety and Health*

**BILLING CODE: 4510-26-P**