

*What to do today to protect worker health and prevent health hazards.*

## What is the hazard?

- Flavoring chemicals and flavoring ingredients inhaled as dusts and vapors may be harmful.
- Flavorings are a mixture of natural and manmade chemicals.
- **Diacetyl**, a yellowish liquid which is a butter flavoring ingredient, has been linked to a serious lung disease called **bronchiolitis obliterans**.
- People who make or work near flavorings in large quantities during the manufacturing and packaging of food are at risk. People who eat food flavorings are not at risk for health problems from diacetyl.

## How do I know there is a hazard?

- Check container labels and Material Safety Data Sheets (MSDS) for **diacetyl** in your products. Diacetyl has the Chemical Abstract Service (CAS) number 431-03-8 and should be listed in Section 2 of the MSDS.
- While diacetyl is one specific flavoring that has been identified as hazardous, other flavorings may also cause health problems.

## Why should I care?

- Diacetyl can cause permanent lung damage and may be fatal.
- Some workers exposed to diacetyl are currently seeking a lung transplant.
- Doctors may not be aware of the work-related hazard of flavorings and may mistakenly attribute the health symptoms listed below to asthma, bronchitis, pneumonia or smoking. This can delay proper treatment for the worker.

## What are the symptoms?

- Persistent cough.
- Shortness of breath.
- Wheezing when you do not have a cold.

## What do I need to do?

<b>Workplace Controls</b>	<ul style="list-style-type: none"> <li>• Consider substitution of less-hazardous flavoring ingredient.</li> <li>• Use closed processes to transfer or add flavorings.</li> <li>• Isolate the mixing room from the packaging areas.</li> <li>• Use local exhaust ventilation where mixing ingredients.</li> </ul>
<b>Work Practices</b>	<ul style="list-style-type: none"> <li>• Cover and seal containers containing flavorings.</li> <li>• Maintain good housekeeping where flavorings are handled.</li> <li>• Establish work practices to limit release of dust and vapors.</li> </ul>
<b>Training</b>	<ul style="list-style-type: none"> <li>• Tell workers about the hazard of flavoring agents.</li> <li>• Tell workers about the symptoms and advise them to report symptoms to their supervisors and doctors.</li> </ul>
<b>Personal Protective Equipment (PPE)</b>	<ul style="list-style-type: none"> <li>• Use gloves and tight fitting goggles for those with potential skin and eye exposure to flavorings.</li> <li>• For high exposure tasks, use NIOSH-approved air purifying respirators with organic vapor cartridges and particulate filters or supplied-air respirators.</li> </ul>

## Where can I get help?

- See NIOSH's alert *Preventing Lung Disease in Workers Who Use or Make Flavorings* at <http://www.cdc.gov/niosh/topics/flavorings>.
- For questions about the hazards of flavorings contact the SHARP Program at the WA State Department of Labor and Industries: 1-888-667-4277.