

# WORKER ALERT:

## Diacetyl and Substitutes

**Diacetyl is a chemical used to add flavor and aroma to food and other products. Workers who breathe diacetyl on the job have become disabled or have died from severe lung disease. Some diacetyl substitutes may also cause harm.\***

### Examples of Flavors That May Contain Diacetyl and Substitutes

- Dairy flavors (e.g., butter, cheese, yogurt flavors).
- “Brown” flavors (e.g., caramel, butterscotch, brown sugar).
- Other flavors (e.g., butter pecan, some fruit flavors).

### Industries and Jobs Using Diacetyl and Substitutes

- Flavor manufacturing plants.
- Plants where flavors containing diacetyl or substitutes are used, such as some makers of snack foods, baked goods, and candy.
- Jobs at or near mixing, weighing, pouring, transferring, or other handling of diacetyl or flavorings containing diacetyl, especially if heated.
- Cleaning and maintenance operations.
- Quality assurance and laboratory jobs.



### Worker Protection

If you work with flavorings containing diacetyl or substitutes for diacetyl, **your employer should:**

- Measure air in your workplace for flavorings exposure, including air in your breathing zone (personal air monitoring).
- Use engineering/work practice controls such as local exhaust ventilation, isolating processes, and restricting access to areas where diacetyl or its substitutes are used.
- Provide personal protective equipment (PPE) such as respirators, goggles, and gloves.
- Provide medical clearance for respirator use and provide

instructions and training in protective equipment care and use.

- Refer workers for medical evaluation for symptoms of coughing, breathing difficulty, or eye irritation.
- Provide training on how you can protect your health.

### Health Effects and Symptoms

- Breathing diacetyl can result in permanent lung damage, including a disabling and potentially fatal lung disease called bronchiolitis obliterans.
- Symptoms of flavoring-related lung disease include ongoing cough and shortness of breath. If you have either of these, ask your employer to send you to a doctor for evaluation.
- Flavorings containing diacetyl may also burn the eyes, cause soreness in the nose and throat, and irritate the skin.

\* Diacetyl substitutes that have not been proven to be safe include diacetyl trimer, 2,3 hexanedione, 2,3 heptanedione, and 2,3 pentanedione.



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