

September 7, 2007

The Honorable Elaine L. Chao
Secretary of Labor
U.S. Department of Labor
Room S-2018
200 Constitution Avenue, NW
Washington, DC 20210

Dear Secretary Chao:

The artificial butter flavor chemical diacetyl has caused the deaths of at least three workers and has damaged the lungs of dozens more. Over a year ago, we petitioned the Occupational Safety and Health Administration (OSHA) to issue an emergency standard to protect workers from diacetyl and other dangerous flavoring chemicals.^{1,2} OSHA has failed to respond to this urgent request.

We are writing to bring to your attention to several important developments concerning the serious adverse health risks associated with exposure to diacetyl, and to renew our call for emergency action to protect workers.

Since our previous letter, additional studies have been published in the scientific literature confirming the evidence we provided last year, and some popcorn manufacturers and flavoring companies have taken steps that show they recognize the severity of the problem. OSHA, however, appears to be “missing in action.” Its National Emphasis Program is no substitute for a standard, and it continues to ignore facilities where flavors are manufactured or mixed -- the facilities where most new cases of bronchiolitis obliterans are appearing. It also makes no effort toward protecting diacetyl-exposed workers in other snack food factories. Most important, it fails to define the steps employers must take to protect employees, especially measures necessary to limit workers’ exposure to this hazardous chemical.

An important scientific paper in the most recent issue of the *American Journal of Respiratory and Critical Care Medicine* reported on four cases of severe bronchiolitis obliterans among 103 process operators at a chemical plant at which diacetyl was manufactured.³ This study adds significant information to our understanding of the relationship between diacetyl exposure and a range of adverse respiratory health effects, specifically, levels of exposure known to cause disease.

Accompanying this paper, the editors of the journal published an editorial by Dr. Kathleen Kreiss of the National Institute for Occupational Safety and Health. Dr. Kreiss is one of the nation’s foremost authorities on occupational bronchiolitis obliterans. In her editorial, she

states that “for the association between diacetyl and fixed obstructive lung disease, many criteria for causal inference have been fulfilled.”⁴

In addition, Dr. Kreiss also recently published a review of the literature to date, entitled “Flavoring-related bronchiolitis obliterans,” in which she described the clinical, toxicological and epidemiological states-of-knowledge concerning adverse respiratory effects among workers exposed to food-flavoring agents containing diacetyl. Moreover, her assessment highlights the effectiveness and feasibility of interventions to control workers’ exposure and appropriately notes that “until safe levels of flavoring chemicals are determined, prevention requires substitution, engineering controls, improved work practices and personal protective equipment.”⁵

There is also now evidence that diacetyl causes bronchiolitis obliterans outside the workplace. In July, a physician at one of the leading respiratory disease hospitals in the country notified several regulatory agencies, including OSHA, of a case of bronchiolitis obliterans in a 53-year-old male patient whose exposure to diacetyl comes from consumer use of butter-flavored microwave popcorn.⁶ This sentinel case identified by Dr. Cecile Rose of the National Jewish Medical and Research Center in Denver, Colorado, is critically important because the patient’s exposure to diacetyl appears to be comparable to that of workers employed as quality control technicians who open bags of freshly cooked microwave popcorn. In a previously published study, these workers were at increased risk of airway obstruction and other adverse respiratory effects,^{7,8} suggesting significant impairment to health and functional capacity even from low airborne exposure to diacetyl.

This non-occupational case of diacetyl-caused bronchiolitis obliterans has received wide attention in the media. Several manufacturers of microwave popcorn have announced that they are removing diacetyl from the butter flavor used in their product. This demonstrates industry recognition of the hazard, but lacks a date certain for action and does nothing to protect workers employed by other firms using diacetyl.

Finally, as you know, the House of Representatives is considering legislation that will require OSHA to issue a standard to control workplace diacetyl exposure in the popcorn and flavorings industries. This legislation has the support of the Flavor and Extract Manufacturers Association, the trade group representing companies that make food flavorings.⁹ The workers and the responsible employers in the popcorn and flavorings industries need OSHA’s help. In the absence of an OSHA standard, irresponsible companies who care little about health, safety or the environment will continue to expose their workers to these dangerous chemicals.

The nation needs OSHA to act. OSHA should not wait for or allow more illnesses to occur. We renew our call for OSHA to immediately issue an Emergency Temporary Standard for diacetyl for microwave popcorn and flavoring manufacturing workers, followed by a regulation that will protect all workers exposed to this serious workplace hazard. While some high-profile popcorn manufacturers have vowed to eliminate diacetyl use, there are

thousands of other plants where workers are exposed to diacetyl. Exposure to this deadly chemical must be controlled.

Sincerely,

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REFERENCES

¹ Petition for an Emergency Temporary Standard for Diacetyl, submitted to Secretary of Labor Elaine Chao, July 26, 2006, from the United Food and Commercial Workers International Union and the International Brotherhood of Teamsters.

Available at:

<http://defendingscience.org/upload/Union%20Petition%20to%20CHAO%20on%20Diacetyl%20Signed.pdf>

² Letter to Secretary of Labor Elaine Chao from leading occupational health physicians and scientists, July 26, 2006.

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<http://defendingscience.org/upload/Scientists%20Letter%20to%20OSHA%20on%20Diacetyl07262006.pdf>

³ Van Rooy F, Rooyackers J, et al. Bronchiolitis obliterans syndrome in chemical workers producing diacetyl for food flavors. *Am J Respir Crit Care Med.* 2007; 176: 498-504.

⁴ Kreiss K. Occupational bronchiolitis obliterans masquerading as COPD. *Am J Respir Crit Care Med.* 2007; 176: 427-429.

⁵ Kreiss K. Flavoring-related bronchiolitis obliterans. *Curr Opin Allergy Clin Immunol.* 2007; 7: 162-167.

⁶ Letter from Cecile Rose, MD, National Jewish Medical and Research Center, July 18, 2007.

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⁸ Kanwal R et al. Evaluation of flavorings-related lung disease risk at six microwave popcorn plants. *J Occup Environ Med.* 2006; 48(2): 149-57.

⁹ Flavor and Extract Manufacturers Association. Press Release, Support for H.R. 2693: "Legislation to Assure Workplace Safety in Flavor Manufacturing," June 13, 2007.

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