

**Public Comments on the Nomination
of Butter Flavorings and Its
Ingredients, esp. Diacetyl & Acetoin**

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House Bill HR 2693

Introduced June 13, 2007

by Rep. Lynn Woolsey of California

- Directs OSHA to issue an interim final standard within 90 days regulating worker exposure to diacetyl.
- Describes the health risk faced by workers exposed to diacetyl as “an emergency”
- States that “[t]here is compelling evidence that diacetyl presents a grave danger and significant risk of life-threatening illness to exposed employees.”

Studies of occupationally-exposed workers strongly implicate diacetyl

- Diacetyl was the predominant compound found in the artificial butter flavoring and the indoor air of the Jasper, Missouri plant.
- As cumulative exposure to diacetyl increased, incidence of airway obstruction and abnormal results on spirometry also increased, demonstrating a clear dose-response relationship.*
- Reports of three bronchiolitis obliterans cases among former workers of a chemical plant manufacturing diacetyl narrow the disease's potential cause.**

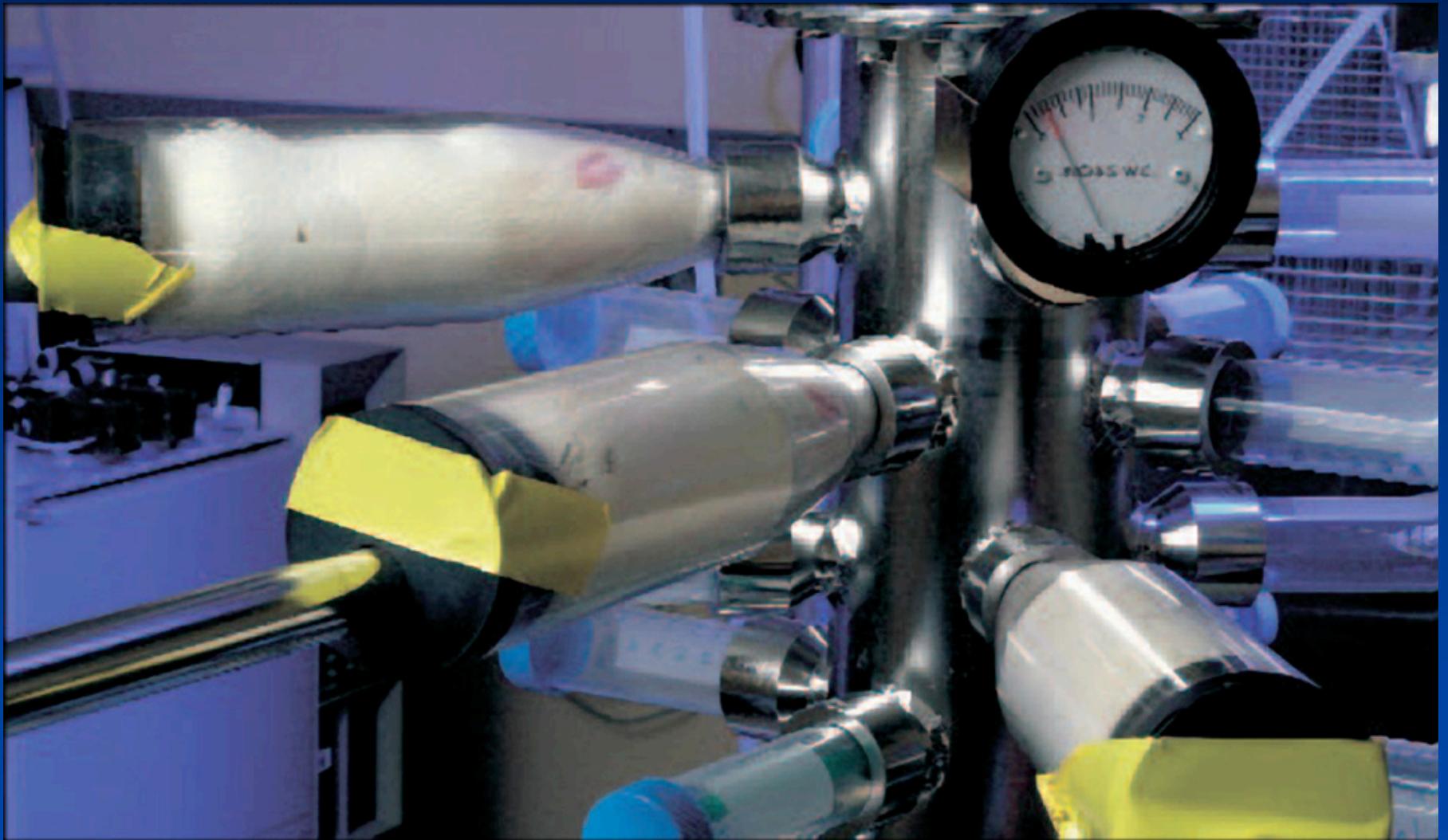
*Kreiss, K. et al. Clinical bronchiolitis obliterans in workers at a microwave-popcorn plant. *N Engl J Med.* 2002; 347(5):330-338.

**van Rooy F, Houba R, Zaat V, et al. A case series of bronchiolitis obliterans syndrome in workers at a diacetyl production plant. *Eur Respir J.* 2006; 28:462s.

Controlling exposure to diacetyl will also reduce exposure to other airborne contaminants

- NIOSH scientists reported that the lowest TWA concentration of diacetyl in the air of six microwave popcorn plants evaluated was 0.2 ppm.
- Since this was in an area with an affected worker, NIOSH concluded that worker exposures to diacetyl should be maintained below these levels.
- Diacetyl was the predominant VOC found in the air of these plants, maintaining exposure to diacetyl at this very low level will also effectively control exposure to other VOCs that may be contributing to the observed effects.

Nose-only Inhalation Exposure



May M. Breathtaking research. Environ Health Perspect 2000;108:A168-9