Diacetyl Jury Verdicts Fuel Continued Flavoring Litigation

By **Jennifer Steinmetz** (June 20, 2023)

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With a bubbling of recent case filings and courtroom activity — including three jury verdicts in favor of plaintiffs in the last 16 months — litigation over flavoring chemicals seems to once again be gaining steam after a dormant period.

And what is clear is that any manufacturer using flavoring chemicals in its business can be a potential target.

In 2016, we wrote a two-part guest article series for Law360 on the evolution of this litigation.[1] This new article focuses on the current regulatory status of diacetyl — one of the most heavily litigated flavoring chemicals — as well as recent flavoring trial trends, and what is on the horizon for flavoring litigation generally.

Current Regulation of Diacetyl

Diacetyl (2,3 butanedione), a yellow liquid alpha-diketone with a strong buttery taste, is naturally present at low concentrations in foods such as butter, cheese, milk, yogurt, wine, beer, vinegar, roasted coffee and citrus juices.

Food and flavor manufacturers have long used synthetic forms of diacetyl to mimic certain tastes in artificial flavorings used to make finished food products. And since the first claims of obstructive lung injury in microwave popcorn plant workers in the early 2000s, flavoring litigation plaintiffs have focused on diacetyl as their key target.[2]

NIOSH and ACGIH

Flavoring litigation plaintiffs generally allege lung disease and other respiratory ailments from exposure to diacetyl and other airborne flavoring chemicals in the workplace.

In 2016, the National Institute for Occupational Safety and Health formalized its draft exposure guidance for diacetyl. NIOSH recommends a recommended exposure limit of 5 parts per billion for diacetyl as a time-weighted average for up to eight hours per day during a 40-hour workweek.[3]

To further protect against effects of short-term diacetyl exposures, NIOSH recommends a short-term exposure limit of 25 ppb for a 15-minute time period.[4]

The American Conference of Governmental Industrial Hygienists, meanwhile, continues to recommend an eight-hour time-weighted average threshold limit value of 10 ppb, and a 15-minute time-weighted average short-term exposure limit of 20 ppb, for workplace exposures to diacetyl.[5]

OSHA

The Occupational Safety and Health Administration still has not set a permissible exposure limit for occupational exposure to diacetyl. It has, however, enacted mandatory directives to inform and protect workers from hazardous chemicals, known as the OSHA hazard

communication standard, found in Title 20 of the Code of Federal Regulations at Section 1910.1200.

OSHA requires a hazard classification for all chemicals produced and imported, and further requires communication of that hazard classification to employers and employees.[5] Guidance for this communication includes:

- Developing and maintaining a written hazard communication policy for the workplace, including lists of hazardous chemicals present;
- Labeling containers of chemicals coming in and out of the workplace;
- Preparing and distributing materials safety data sheets to employees and downstream users; and
- Employee training programs related to hazardous chemicals and protective measures.[6]

According to the hazard communication standard, when assessing a chemical's hazard classification, chemical manufacturers, importers and employers must identify and consider the full range of available scientific literature and other evidence.[7] This hazard information must be visible on chemical container labels, via compliant statements and pictograms.[8]

If significant new information about the hazards of a chemical becomes known, its label must be revised within six months.[9] A safety data sheet — also reflecting current scientific evidence as to the chemical's hazards — must also accompany, or be sent at the time of, each initial shipment, and with the first shipment after any update.[10]

Notably, OSHA does not require testing of a chemical to determine how to classify its hazards.[11]

Important to this litigation, when classifying the hazards of a mixture that is produced or imported, manufacturers and importers may rely on the information provided on the current safety data sheet of the individual ingredient, except where the manufacturer or importer knows, or should know, that the safety data sheet misstates or omits hazard information.[12]

This standard is important because a large focus of the current litigation is on flavor and seasoning mixtures containing diacetyl, as opposed to the raw chemical itself.

The portions of the OSHA hazard communication standard on employee information and training, at Section 1910.1200(h), and on written hazard communication policies, at Section 1910.1200(e), are critical to building a worker knowledge base, and ensuring transparency of workplace hazards.

But any company that uses diacetyl or diacetyl-containing products in the workplace should be familiar with the entirety of OSHA's hazard communication standard, and should heed its mandates.

Generally Recognized as Safe Status

The U.S. Food and Drug Administration continues to support the use of diacetyl as a food

flavoring, despite the litigation and claims surrounding it. The FDA evaluates food ingredients to determine whether they are generally recognized as safe, or GRAS, for ingestion.

Diacetyl was deemed GRAS by FDA in the early 1980s, and is permitted for use as a flavoring agent in foods with no limitation other than what is consistent with good manufacturing practices.[13] That means that use of the chemical should be limited to the amount necessary to achieve its desired effect.

GRAS status may be achieved either through the FDA's voluntary GRAS notification program, or through a properly conducted GRAS determination made by a private party.[14] The Flavor and Extract Manufacturers Association, or FEMA — the flavoring industry's principal trade group — works with the FDA to assist in a determination of GRAS status for flavoring ingredients.[15]

This is done through a FEMA expert panel, usually consisting of six to eight leading scientists who are independent of FEMA and the flavoring industry.[16] The expert panel reviews the literature, and provides the FDA with scientific support for all FEMA-determined GRAS flavor ingredients.[17] This allows the agency to include the information in its databases, and to challenge any GRAS determinations that it wishes.[18]

Notably, FEMA continues to designate diacetyl as one of 27 high-priority flavoring chemicals.[19] According to FEMA, each of these 27 chemicals may pose a respiratory hazard in the workplace, and "merits a higher degree of attention," including consideration of work practice controls, engineering controls and personal protective equipment.[20]

FEMA also recommends the below warning for any container of: (1) pure diacetyl; (2) compounded flavors or natural flavoring complexes that contain diacetyl in concentrations greater than 1%; and (3) compounded flavors containing diacetyl, if they will be heated during processing:

> WARNING — This flavor may pose an inhalation hazard if improperly handled. Please contact your workplace safety officer before opening and handling, and read the MSDS. Handling of this flavor that results in inhalation of fumes, especially if the flavor is heated, may cause severe adverse health effects.[21]

Given the number of industries, and employees, that continue to use hazardous chemicals like diacetyl in their products, minding the mandates of government and industry groups will go a long way toward protecting workers — and insulating companies from litigation.

Recent Trials: No More Quick Resolution

For many years, flavoring litigation saw a dearth of jury trials. The pandemic undoubtedly had an effect on this downturn, but a few other factors likely pushed cases toward settlement.

With large clusters of workers involved in each lawsuit — often tallying more than a dozen individual plaintiffs — the idea of taking one of these cases through jury trial is understandably daunting for a plaintiffs lawyer. The presentation could become rather unwieldy with multiple plaintiffs attempting to prove their claims at once.

This is particularly true where the plaintiffs worked at the same plant over different periods of time, held different job titles, worked at various locations within the facility and made

different products than their co-workers. Settling early may be a way to streamline and simplify a logistically complicated case.

Moreover, in multiplaintiff lawsuits, defendants will typically advocate for separate trials, which is more costly in both time and money. From the perspective of plaintiffs counsel, that alone might make settlement more attractive.

Also, with the expansion of defendants to those outside the traditional butter flavor and microwave popcorn industries, plaintiffs attorneys may perhaps be skeptical of risking certain unknowns before a jury. A settlement gives assurances that a jury trial does not. Dollars in the coffer can also provide easy funding for the next tentacle of this expansive litigation.

Whatever the reasons may be, it appears the tide may be turning away from quick resolutions. Since the beginning of 2022, three flavoring cases have gone to trial — all with plaintiff verdicts.

In February 2022, the Wisconsin Circuit Court awarded a Wisconsin coffee worker $5.3 million against a diacetyl supplier, in Nickey Moncel v. Flavor Development Corp. — the first diacetyl lawsuit involving a coffee roasting facility.[22]

In August 2022, Pamela Duff Mundy v. Mane Inc., a case filed in the Ohio Court of Common Pleas on behalf of three injured plant workers against their Ohio employer, resulted in a jury award of $410,000 in compensatory damages and $4 million in punitive damages.[23]

This verdict is notable in light of the heightened threshold for suing an employer in intentional tort — particularly under the strict standards of Ohio law. Cases in flavoring litigation typically involve the employer as a third-party subpoena respondent, asked to produce employment files, purchase records, batch data, sales invoices and similar materials.

Finally, in March of this year, four plaintiffs in St. Louis City Circuit Court secured a $2 million verdict against a diacetyl distributor who was able to successfully convince the jury that punitive damages were not warranted, in Hutchins and Gill v. Elan Chemical Co. Inc.[24]

What Comes Next

If we have learned anything from flavoring litigation thus far, we know there is more to come. Microwave popcorn plants and butter flavors are no longer the primary focus.

The snack food and candy industries have been an ongoing source of referral for worker lawsuits, and we expect that will persist. Creative plaintiffs attorneys will continue to search for their next target — casting a wider net across a range of flavor ingredients, and the companies who use them.

We expect the catalogue of flavors to further diversify beyond butter to others like cinnamon sugar, butterscotch, cheese, ranch and barbecue sauce. And while liquid flavors have traditionally been the focus of this litigation from the beginning, plaintiffs also claim exposure to powder — i.e., seasonings — and spray forms.

We will keep an eye on recently filed lawsuits against e-cigarette and coffee manufacturers, as they reveal a new twist to the traditional model. The allegations against e-cigarette

manufacturers involve facets not yet seen in flavoring litigation — including claims of false advertising, breach of warranty, conspiracy and the like.

Attorneys representing e-cigarette smokers allege that diacetyl contributes to vaping addiction, which they claim causes seizures, cognitive impairments, balance problems, mood disorder and permanent brain damage. The damage awards sought are therefore quite extensive.

The claims against coffee roasting facilities are yet another creative way to fold a new industry into the litigation — and the Wisconsin verdict above shows that these cases do resonate with a jury. NIOSH has investigated several coffee roasting plants in recent years, to ensure that the air quality is safe for breathing.[25]

Most at risk are employees who work with flavored coffee products that contain added diacetyl. But there is still an exposure risk for those who grind and package unflavored roasted beans, and even for those who work in storage areas.[26]

Any coffee plant using diacetyl or other potentially hazardous flavor chemicals should consider requesting a governmental or private air quality assessment. If air sampling identifies concentrations of diacetyl above NIOSH recommended exposure limits, steps should be taken to lower exposure.

Employees may need to wear appropriate fit-tested respirators until workplace interventions are established and air concentrations reduced. Additionally, a medical surveillance program that includes health questionnaires and breathing tests — e.g., spirometry — may be indicated to screen for respiratory symptoms or abnormalities in employees.

The bottom line: Every manufacturer using flavors in its business — even those in an industry not yet targeted by this litigation — should consider taking an accounting of potentially harmful chemicals to which its workers could be exposed. This includes an analysis of individual recipes for finished products sold by the company. It also involves tracking ingredients purchased from upstream suppliers.

Any use of diacetyl — even in a de minimis amount — should be flagged and investigated further, consistent with the above regulatory guidance and legal review. The same is true for any other chemical on FEMA's high-priority list.

By gaining a thorough awareness of the specific flavoring chemicals used in its own manufacturing process, an employer is one step closer to protecting both workers and downstream consumers — and one step further from litigation.

Correction: A previous version of this article omitted one of the plaintiffs' names in the caption for Hutchins and Gill v. Elan Chemical Co. Inc. This error has been corrected.

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[1] https://www.law360.com/articles/829286/the-evolution-of-diacetyl-related-litigation-part-1; https://www.law360.com/articles/829289/the-evolution-of-diacetyl-related-litigation-part-2.

[2] While diacetyl remains the primary focus of flavoring litigation, an increasing number of alternative flavor chemicals (e.g., 2,3 pentanedione, 2,3 hexanedione, and acetoin) are now included in almost every filed suit.

[3] NIOSH Criteria for a Recommended Standard: Occupational Exposure to Diacetyl and 2,3-Pentanedione. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Cincinnati, OH: National Institute for Occupational Safety and Health, DHHS, NIOSH; (2016) Publication No. 2016-111; see also https://www.cdc.gov/niosh/topics/flavorings/limits.html.

[4] Id.

[5] https://www.cdc.gov/niosh/topics/flavorings/limits.html.

[5] 29 CFR 1910.1200.

[6] Id.

[7] 29 CFR 1910.1200(d)(2).

[8] 29 CFR 1910.1200(f).

[9] 29 CFR 1910.1200(f)(11).

[10] 29 CFR 1910.1200(g)(6).

[11] 29 CFR 1910.1200(d)(2).

[12] 29 CFR 1910.1200(d)(3)(ii).

[13] 21 CFR 184.1278(c).

[14] The Flavor and Extract Manufacturers Association of the United States: About FEMA GRAS Program, at https://femaflavor.org/gras.

[15] Id.

[16] Id.

[17] Id.

[18] Id.

[19] The Flavor and Extract Manufacturers Association of the United States: Respiratory Health and Safety in the Flavor Manufacturing Workplace (2012 Update), April 2012, at 15; see also prior version (August 2004), at 5.

[20] Id.

[21] Id., at 6.

[22] Nickey Moncel v. Flavor Development Corp., Case No. 2017CV006330 (Wisconsin Circuit Court).

[23] Pamela Duff Mundy, Administrator of the Estate of James Melvin Duff (Deceased) v. Mane Inc., Case No. 17CV90268 (Ohio Court of Common Pleas).

[24] Hutchins and Gill v. Elan Chemical Co. Inc., 1722-CC01186 (St. Louis City Circuit Court).

[25] NIOSH Health Hazard Evaluations,
at https://www.cdc.gov/niosh/topics/flavorings/hhe-report.html.

[26] Id.