# What's in a Flavor? A Proposal to Address Consumer Confusion Surrounding Natural Flavoring 

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#### Abstract

Most consumers incorrectly believe that natural flavors are healthier than artificial flavors. This erroneous belief may stem from the Food and Drug Administration's (FDA) definition of a flavor as either natural or artificial in terms of the source of the flavoring ingredients. This definition creates a false dichotomy that masks the fact that natural and artificial flavors are often chemically identical. Both natural and artificial flavors are synthesized in a lab, often involving hundreds of artificial chemical components. Both are then added to foods that are extensively processed, such that they no longer contain enough of the named ingredient to achieve the flavor the food proposes to have without the use of added flavors. Consumer confusion over these terms has sparked hundreds of lawsuits, while the current convoluted regulatory scheme has done little to address consumers' misperceptions.

This Article proposes that the definitional distinction between natural and artificial flavors be removed. This would reduce consumer misconceptions about these terms and create consumer demand for a new signal of high-quality, healthy foods. Sellers may then turn to flavoring their products with whole ingredients to distinguish themselves because this is a costly signal that is not easily replicated by low-quality sellers. The result would benefit consumers through healthier products and greater transparency.


## I. INTRODUCTION

FDA regulations define a flavor as either natural or artificial in terms of the source of the flavoring ingredient. ${ }^{1}$ This focus, however, masks that natural and artificial flavors can be chemically very similar. ${ }^{2}$ Despite this similarity, the majority of consumers prefer natural flavors and seek products labeled with "no artificial flavors." ${ }^{" 3}$ Whereas there has been significant academic literature considering "natural"

[^0]food claims, ${ }^{4}$ there has been fairly little scholarly focus on natural flavors. ${ }^{5}$ This Article demonstrates that FDA's natural flavoring regulations are confusing to consumers, and that, perhaps counterintuitively, the best solution would be to remove the legal distinction between natural and artificial flavors. This will increase consumer skepticism toward the label and encourage sellers to distinguish their products in more meaningful ways that better align with consumer expectations.

Part II provides background on natural food flavors, including the current status of the food flavor industry, the growing preferences of consumers for natural flavors, and the processes used by chemists to flavor foods. This Part also presents FDA's definition of natural flavoring, along with FDA's associated labeling regulations. Part III outlines the legal environment of deceptive labeling suits, including the common preemption issues encountered by plaintiffs. This Part argues that these preemption issues present an insurmountable obstacle for a judicial solution. Part IV explores alternative regulatory proposals, ultimately determining that the best solution is to remove the natural/artificial distinction altogether. Part V concludes.

## II. BACKGROUND

## A. The Food Flavor Industry and Consumer Preferences

Flavor is "the entire range of sensations that we perceive when we eat a food or drink a beverage. ${ }^{" 6}$ Since the 19th century, businesses have been deriving flavor substances to add to foods. ${ }^{7}$ Today, $90 \%$ of the foods consumers purchase from the grocery store contain added flavors. ${ }^{8}$ As a result, the global flavors market is worth billions and is expected to continue to grow. ${ }^{9}$

[^1]A significant driver of this growth is the increased demand by consumers for natural flavors. ${ }^{10}$ Consumers have become increasingly health conscious, and added flavors have not escaped their attention. ${ }^{11}$ Recent surveys show that $62 \%$ of consumers avoid artificial flavors. ${ }^{12}$ Indeed, retailers have successfully been able to charge more for products labeled as not containing any artificial flavors because of consumers' belief that these foods are healthier. ${ }^{13}$ Hoping to capitalize on this, major food producers have promised to eliminate artificial flavors from their foods, including General Mills, Kellogg's, and Nestlé. ${ }^{14}$ Natural flavors now rank as the fourth most common food ingredient in processed food products. ${ }^{15}$ Only salt, water, and sugar are more frequently included. ${ }^{16}$

Also driving demand for the natural flavor label is the concurrent decline in "natural" labels. When FDA chose not to define natural in 1993, ${ }^{17}$ "natural" labels began to rise in popularity. ${ }^{18}$ In 2008, there were over 2,300 new products that contained this label. ${ }^{19}$ However, after a period of substantial litigation, ${ }^{20}$ consumers became skeptical of "natural" claims. ${ }^{21}$ By 2017, the number of new products containing the "all natural" label had fallen more than $50 \%$ compared to five years prior. ${ }^{22}$ A recent consumer survey indicated that $40 \%$ of consumers do not trust the "natural" label. ${ }^{23}$ Sixty-nine percent of consumers instead believe that a "no artificial flavors" label is more important than a "natural" label. ${ }^{24}$ Whether to avoid litigation, consumer distrust, or both, food producers are abandoning the label. ${ }^{25}$

[^2]Although consumers exhibit a clear preference for natural flavors, it is unclear if consumers know why. A quick internet search reveals numerous articles questioning what "natural flavors" really means. ${ }^{26}$ Yet the increased consumer demand for natural flavors persists globally, ${ }^{27}$ demonstrating the strength of the "health halo" effect of using the term "natural." ${ }^{" 28}$ There is minimal pushback to the perceived healthiness of natural flavors, even among retailers that market to sophisticated consumers seeking natural foods. ${ }^{29}$ For example, Trader Joe's touts that it bans artificial flavors and only allows natural flavors, promoting the idea that natural flavors are superior. ${ }^{30}$ So far, only Natural Grocers has listed natural flavors as an ingredient that "might not have been considered problematic" before but "may now be an ingredient of concern or unacceptable. ${ }^{31}$

## B. FDA Definition

Given the strong consumer preference for natural flavors over artificial flavors, one could imagine that there would be a considerable difference between the two. Formally, there is. FDA defines flavors by their source, creating a dichotomy between natural and artificial flavors. ${ }^{32} 21$ C.F.R. § 101.22(a)(3) defines a "natural flavor" as:
the essential oil, oleoresin, essence or extractive, protein hydrolysate, distillate, or any product of roasting, heating or enzymolysis, which contains the flavoring constituents derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible yeast, herb, bark, bud, root, leaf or similar plant material, meat, seafood, poultry, eggs, dairy products, or fermentation products thereof, whose significant function in food is flavoring rather than nutritional.
"Artificial flavor" is defined as the opposite. ${ }^{33}$ There are two important takeaways from these definitions. The first is that the definitions do not focus on defining natural

[^3]flavors in terms of the process used. This is in contrast to the common approach of most other countries, which generally require that a natural flavor has only gone through physical processing, not chemical. ${ }^{34}$ The second is that this definition provides a laundry list of source material, rather than just saying "natural sources" as some other countries do, ${ }^{35}$ because FDA has never actually defined natural. ${ }^{36}$ The end result of FDA's definitions is that there is currently a clear formal difference between natural and artificial flavors that focuses on the source ingredient from which the flavor is derived.

## C. The Flavor Process

The formal FDA definition stands in sharp contrast to the underlying science of flavor production, which reveals little meaningful difference between natural and artificial flavors. The flavor process for most foods includes adding flavors, either natural or artificial, because the foods are not considered flavorful enough through their own intrinsic ingredients. ${ }^{37}$ Unlike true ingredients, added flavors are better described as "essence[s]" without any nutritional value, similar to a fragrance. ${ }^{38}$ Indeed, the companies that produce added flavors often also produce fragrances for cleaning products and perfumes. ${ }^{39}$

There are more than 2,700 flavor chemicals that have been generally recognized as safe by the Flavor and Extract Manufacturers Association. ${ }^{40}$ Exploring one of these flavors as an example will provide an in-depth look at the flavor creation process. This Article considers vanilla flavor because it is the most popular flavor worldwide, ${ }^{41}$ with over 18,000 metric tons of vanilla flavor produced annually, ${ }^{42}$ and presents a common source of consumer confusion evaluated in Part III.
yeast, herb, bark, bud, root, leaf or similar plant material, meat, fish, poultry, eggs, dairy products, or fermentation products thereof').

34 See, e.g., USDA Foreign Agric. Serv., IS1106, Israel Food and Agricultural Import REGULATIONS AND STANDARDS—NARRATIVE (2011), http://apeda.in/agriexchange/IR_Standards/Imp ort_Regulation/Israel.pdf (explaining that Israel requires natural ingredients to not have been chemically changed during the production process); Nicola Aporti \& Cesare Varallo, Natural Claim in China: Overview and Comparison with EU and US, 12 EUR. Food \& Feed L. REV. 2, 4 (2017) (explaining that China defines natural flavoring as substances "obtained from plant and animal source materials through physical method, enzymatic method or microbiological method. Plant and animal materials used in the preparation of natural food flavorings shall be unprocessed, or processed by conventional food preparation technology."); Goodman, supra note 2, at 99 (explaining that the U.K. does not permit natural flavorings to be extracted by chemical process).

35 See, e.g., USDA FOREIGN AGRIC. SERV., supra note 34 (stating that Israel defines natural ingredient as "produced of a food product that is allowed to be called 'Natural").
${ }^{36}$ See Goodman, supra note 2, at 79.
${ }^{37}$ See Kennedy, supra note 8.
38 Jacewicz, supra note 28.
39 See Andrews, supra note 16.
${ }^{40}$ See Erin Quinn \& Chris Young, Center for Public Integrity, Meet the Secret Group That Decides Which Flavors are "Natural", TIME (June 9, 2015), https://time.com/3913232/natural-flavoring-governm ent/.
${ }^{41}$ See Kennedy, supra note 8.
42 See Bomgardner, supra note 14.

## 1. A Deep Dive into Vanilla

The vanilla flavor wheel has twenty-nine different characteristics grouped into ten categories: smoky, spicy, botanical, sulfury, sweet, creamy, medicinal, cooked, fatty, and floral. ${ }^{43}$ This wide variety provides flavor chemists with substantial room to innovate and create new, more popular vanilla flavors. Before the $19^{\text {th }}$ century, vanilla was sourced from vanilla bean farms in Madagascar. ${ }^{44}$ In the $19^{\text {th }}$ century, chemists discovered alternative sources of vanillin, which is the main flavor component of vanilla, through synthesizing pine bark, clove oil, and rice bran oil. ${ }^{45}$ In the 1930s, ethyl vanillin, isolated from wood pulp byproduct, became popular in vanilla flavoring. ${ }^{46}$ With one extra carbon atom, ethyl vanillin is two to four times more flavorful than vanillin and generally preferred in blind taste tests. ${ }^{47}$ Forty years later, vanillin was first produced entirely from petrochemicals, but ethyl vanillin remained the dominate source of vanilla flavoring until the 1990s. ${ }^{48}$ At that point, paper manufacturers streamlined their operations and produced less wood pulp waste, which decreased the prevalence of ethyl vanillin. ${ }^{49}$ By 2015, around $85 \%$ of vanillin was synthesized from petrochemicals. ${ }^{50}$ This vanillin is the same chemical isolated from natural vanilla beans, but producers preferred it because it cost only $\$ 10$ per kg of vanillin, compared to $\$ 1,250$ per kg for natural vanillin. ${ }^{51}$

In 2015, Nestlé created a shockwave in the flavor industry when it first announced it would eliminate artificial flavors from its chocolate candy in response to recognized consumer demand for natural foods. ${ }^{52}$ As competitors followed suit, vanilla bean farms, which at that point had been producing less than $1 \%$ of the world's vanilla, could not keep up with rising demand. ${ }^{53}$ Prices for natural vanillin sourced from vanilla beans reached $\$ 11,000$ per kg. ${ }^{54}$ This created a new push for alternative natural vanillin sources. Chemists have employed a bioconversion process using yeast to obtain vanillin from byproducts in rice bran oil and clove oil, but rice bran oil and clove oil are "pricey raw materials" themselves, exceeding the cost of artificial vanillin. ${ }^{55}$

Thus, chemists had to become more creative in their search for natural vanillin. A biotechnology firm developed a method of producing vanillin by feeding glucose to a genetically modified microbe. ${ }^{56}$ This process has the potential to create more vanillin in a shorter time span, but it has not yet been adopted on a wide scale, so it is unclear

[^4]if it is ultimately a cheaper, feasible way to produce natural vanillin. ${ }^{57}$ Another natural source of vanilla flavor was found in castoreum, a secretion from beavers. ${ }^{58}$ Castoreum can replace vanillin because it has a similarly sweet characteristic and is generally recognized as safe, but it is not identical in flavor because the underlying flavor chemical of castoreum is acetanisol, not vanillin. ${ }^{59}$ For this reason and likely many others, ${ }^{60}$ global consumption of castoreum as a natural vanilla flavor source is only 300 pounds annually. ${ }^{61}$

This brief introduction into the science and economics of vanilla flavor demonstrates two important principles. First, chemists have a plethora of sources at their disposal to create the same flavor chemical. A flavor can have several natural sources beyond the real source ingredient of the flavor. Second, regardless of the source, the flavor chemical remains identical. When the flavor chemical changes, such as ethyl vanillin rather than vanillin, the resulting flavor changes. Unlike in the world of added colors where the same color might be produced through different sources, flavors cannot be divorced from their chemical structure. ${ }^{62}$

The implication of these principles is that artificial flavors and natural flavors are very often chemically identical. ${ }^{63}$ Producers opt for artificial flavors because production is often cheaper and of more consistent quality. ${ }^{64}$ Because of the complex processes used to create added flavors, flavors contain hundreds of chemically identified constituents, and non-flavor chemicals ultimately comprise $80-90 \%$ of the flavor. ${ }^{65}$ Indeed, when they differ, artificial flavors actually contain simpler chemical structures and are arguably safer since the components undergo stricter testing. ${ }^{66}$ They also often require less destruction of natural resources. ${ }^{67}$ For example, a natural flavor chemical that simulates coconut is found in the bark of trees grown in Malaysia. ${ }^{68}$ Extracting the chemical destroys these trees. ${ }^{69}$

[^5]
## 2. Revival of "Real" Flavor?

In the modern era of food production, the flavor process is predominantly focused on the choice between adding natural or artificial flavors. ${ }^{70}$ However, a comprehensive discussion of the flavor process should acknowledge the option to simply flavor food by adding real ingredients themselves.

Even though market analysis projects consumer demand for natural flavors to continue to rise throughout the next decade, ${ }^{71}$ there are at least some producers that have decided to abandon natural flavors and transition to using real ingredients for flavor instead. ${ }^{72}$ For example, Spindrift Beverage Co., which produces sparkling water, announced in 2017 that it would replace natural flavors with fruit juice. ${ }^{73}$ Although this decision is costlier and requires stricter quality controls to achieve the same consistent taste, Spindrift explained that this switch was integral to its "commitment to ingredient transparency" and a signal of its higher quality. ${ }^{74}$ This decision has been cited as a reason for Spindrift's surprising challenge to LaCroix's seltzer market dominance. ${ }^{75}$ Thus, in at least some markets, consumers do seem to appreciate increased ingredient transparency and exhibit some uncertainty toward natural flavors. However, very few producers have followed Spindrift's lead, perhaps due to the high costs and minimal consumer demand for a shift away from natural flavors. ${ }^{76}$

## D. FDA Labeling Regulations

In addition to defining natural flavoring, FDA has regulated the use of natural flavoring labels pursuant to 21 U.S.C. § 343(k) of the Federal Food, Drug, and Cosmetic Act (FDCA). ${ }^{77}$ This Article only focuses on the aspects pertinent to the concept of a "characterizing flavor," which is the primary flavor of the food as indicated by the "direct or indirect representations . . . by word, vignette, e.g., depiction of a fruit, or other means" on the product's labeling. ${ }^{78}$ Based on the product's use of flavoring as compared to its characterizing flavor, certain statements are required on the label.

[^6]In general, if the product "contains no artificial flavor which simulates, resembles or reinforces the characterizing flavor," then the label can declare the "usual name of the characterizing flavor, e.g., 'vanilla." ${ }^{\prime 79}$ This allows any natural flavor to be used to simulate the characterizing flavor, regardless of the source ingredient. Only if an artificial flavor is introduced must the label say, "artificial vanilla" or "artificially flavored vanilla., ${ }^{80}$ There are specific instructions in the regulations to ensure that these labels are conspicuous on the product. ${ }^{81}$

This general rule is complicated when characterizing flavors are "commonly expected" to contain an ingredient. ${ }^{82}$ The regulation provides the example of strawberries in strawberry shortcake. If the strawberry flavor in the strawberry shortcake product is simulated by natural flavor derived from strawberries but the product contains little to no actual strawberries, then the product must be labeled "Natural Strawberry Flavored Shortcake." ${ }^{83}$ If the strawberry flavor is simulated by natural flavor derived from an ingredient other than strawberries, then it must be labeled "artificially flavored." ${ }^{44}$ If the strawberry flavor is simulated by natural flavors from strawberries and other ingredients, the food is labeled as being "naturally flavored... with other natural flavor. ${ }^{, 85}$ If the strawberry flavor is created with artificial flavors, then the general rule applies, and the label must declare that the product is artificially flavored. ${ }^{86}$

The striking aspect of these complex regulations is that a product with a flavor that a consumer would commonly expect to indicate the presence of an ingredient can be labeled as "naturally flavored" even when that ingredient is not actually present at all. When one understands that added flavors are scientifically similar to fragrances, this outcome is perhaps not as shocking.

The critical question is whether consumers realize that natural flavors do not have the nutritional value of their namesake ingredient, or if the halo effect of "natural" confuses consumers into thinking there is a health benefit associated with natural flavors. The following analysis of natural flavoring litigation sheds light on this question.

## III. Deceptive Labeling Litigation

The stark contrast between FDA's definition of natural flavors and the underlying scientific process could understandably lead to consumer confusion. Before discussing the recent litigation surrounding natural flavor labeling, it is useful to first outline the relevant statutory law.

[^7]
## A. Relevant Statutory Law

Congress passed the FDCA ${ }^{87}$ in 1938, which authorized FDA to ensure food safety and proper labeling. ${ }^{88}$ The FDCA does not provide a private right of action. ${ }^{89}$ As a result, plaintiffs must rely on state law to assert that a product's labeling is misleading. Courts in California and New York are the most popular for food class action litigation. ${ }^{90}$ California has three consumer protection statutes: the Unfair Competition Law, False Advertising Law, and Consumers Legal Remedies Act. ${ }^{91}$ These three statutes have language prohibiting misleading information and deceptive business practices. ${ }^{92}$ In New York, most labeling suits are brought under Section 349 of the New York General Business Law, which provides a cause of action for "an individual consumer who falls victim to misrepresentations made by a seller of consumer goods through false or misleading advertising.,"93

All of these statutes employ a reasonable consumer test to determine if a statement is misleading. ${ }^{94}$ This test requires plaintiffs to show that the deceptive statement could mislead "a significant portion of the consuming public or of targeted consumers, acting reasonably under the circumstances."95 The plaintiffs are not required to prove that they actually relied on the misleading statement or deceptive practices. ${ }^{96}$

## B. Rise of Natural Flavoring Litigation

Using these sources of statutory law, there are potentially numerous different claims plaintiffs might make relating to a seller's labeling of natural flavors. This Article focuses on the recent wave of cases in which the plaintiff claims that the "natural flavor" label implies the presence of a desirable source ingredient, and the label is therefore misleading when that ingredient is absent. ${ }^{97}$ An explosion of these cases occurred after the Second Circuit denied the defendant's motion to dismiss in Mantikas

[^8]v. Kellogg Co. ${ }^{98}$ in 2018. Mantikas thus provides a blueprint for understanding the subsequent natural flavoring cases.

In Mantikas, the plaintiffs claimed that the labeling on Kellogg's Cheez-It crackers violated New York and California consumer protection laws because it was misleading. ${ }^{99}$ The front of the cracker boxes "were conspicuously labeled 'WHOLE GRAIN' and 'MADE WITH WHOLE GRAIN.'" ${ }^{100}$ Although the front panel and Nutrition Facts panel accurately clarified that the box only actually contained five or eight grams of whole grain per serving, the court held that a reasonable consumer could still have been misled by Kellogg's packaging. ${ }^{101}$ The court reiterated the Ninth Circuit's earlier holding in Williams $v$. Gerber Products ${ }^{102}$ that "reasonable consumers should not be expected to look beyond misleading representations on the front of the box to discover the truth from the ingredient list in small print on the side of the box," and extended this to include even information on the front of the box as well. ${ }^{103}$ The court reasoned that the overall impression created by the labeling was that the crackers were predominately whole grain, when in reality the vast majority of the grain was enriched white flour. ${ }^{104}$

Thus, Mantikas established that a statement on the front of the product suggesting the presence of an ingredient can be misleading if that ingredient is actually not prominent in the food, even if other statements on the packaging clarify the product's contents. ${ }^{105}$ The court acknowledged that a different result might be reached when the ingredient "obviously [i]s not the products' primary ingredient," ${ }^{106}$ because then it may be less reasonable to assume that the ingredient should be prominent in the food. For example, the court distinguished a prior case that held that a reasonable consumer would not mistake a label declaring crackers to contain real vegetables to mean that the cracker is predominately made of vegetables, because it is a "fact of life" that crackers are not. ${ }^{107}$

## C. Flavor v. Ingredient Debate

Plaintiffs were quick to cite Mantikas in the natural flavoring realm, but, as discussed below, courts have disagreed whether the case is truly applicable. The decisive factor is whether the court determines that the flavor represents an ingredient

[^9]or a taste. Many of these decisions occur in the context of vanilla flavor, ${ }^{108}$ but there are a wide variety of flavors that could also be thought of as ingredients, such as strawberry, ginger, honey, etc., ${ }^{109}$ that are also commonly the basis of lawsuits. ${ }^{110}$

Sharpe v. A\&W Concentrate Co. presents an example of a court determining that vanilla is an ingredient. ${ }^{111}$ In Sharpe, the plaintiffs argued that the labeling on defendant's soft drinks that said "MADE WITH AGED VANILLA" was misleading under New York consumer protection law. ${ }^{12}$ The plaintiffs demonstrated that $68 \%$ of consumers surveyed believed this statement meant that the vanilla flavor came from vanilla beans. ${ }^{113}$ In reality, the soft drink's vanilla flavoring came from ethyl vanillin, which the court considered to be a "cheap and inferior substitute for real vanilla." ${ }^{114}$ The court easily determined that Mantikas was applicable. The court even went so far as to say that these facts "present[ed] a stronger case of misrepresentation than in Mantikas" because natural vanilla was entirely absent; whereas, in Mantikas there was at least some whole grain in the crackers. ${ }^{115}$ Applying Mantikas, the court held that the "Natural and Artificially Flavored" label on the front of the soft drinks does not cure the consumers' misconception. ${ }^{116}$ The court reasoned that the "Natural and Artificially Flavored" disclosure does not clearly apply to the vanilla flavor, since it could also refer to any of the other flavors in the drinks. ${ }^{117}$

The court rejected the defendants' argument that Mantikas only applies to a food's main ingredient. The court acknowledged that the Second Circuit's predominant ingredient analysis was how it distinguished prior cases. ${ }^{118}$ However, the court reasoned that the overarching principle of Mantikas was to prevent "highly deceptive marketing" around ingredients, and that to read Mantikas narrowly to only apply to primary ingredients "would encourage highly deceptive marketing." 119 The court explained that " $[t]$ here are many scenarios in which a consumer's 'preferred' or 'desired' ingredient may not necessarily be the product's main or predominant ingredient," using the example of chocolate chips in chocolate chip cookies. ${ }^{120}$

[^10]In contrast, the court in Pichardo v. Only What You Need, Inc. held that vanilla refers to a flavor, so Mantikas does not apply. ${ }^{121}$ In Pichardo, the defendant sold a protein drink labeled as "Smooth Vanilla" with a vanilla flower image, but the product contained very little vanillin from vanilla beans. ${ }^{122}$

It may be possible to reconcile these different interpretations of vanilla based on the different factual circumstances of each case. The Pichardo court distinguished its case from the facts of Sharpe by emphasizing that the product's label in Sharpe said it was "made with aged vanilla." ${ }^{123}$ The court in Pichardo stated that both "aged" and "made with" could signal to the consumer that the product contained vanilla flavoring exclusively from vanilla beans. ${ }^{124}$ Without this additional language, "reasonable consumers associate the word 'vanilla' with a flavor, not with an ingredient," according to the court. ${ }^{125}$ Many courts have come to agree with the Pichardo court's analysis. ${ }^{126}$

It is at least questionable whether the statement "made with aged vanilla" is necessarily more misleading than "smooth vanilla" accompanied by a vanilla flower. Both seem to clearly imply that the vanilla flavor comes from its source ingredient, vanilla beans. ${ }^{127}$ The more substantive difference between Pichardo and Sharpe is the courts' attitude toward natural flavoring. The Pichardo court explained that a secondary reason Mantikas did not apply was because the misleading health benefits at issue in Mantikas were not relevant. ${ }^{128}$ The court in Pichardo stated that, unlike whole grain versus white flour, a vanilla product that contains vanilla beans "is not healthier-or materially different in any other way-than a vanilla product that uses vanillin. ${ }^{129}$ The court held that a reasonable consumer's only expectation of a vanilla product is that the product should have "a vanilla taste, and that is exactly what they get." ${ }^{130}$ This description of flavors is in sharp contrast with the Sharpe court. The Sharpe court understood artificial sources of vanilla to be inferior to natural sources, without much explanation why. ${ }^{131}$ These competing assumptions regarding natural

[^11]flavoring likely played a significant role in the courts' interpretation of whether vanilla is best categorized as a flavor or ingredient.

## D. The Role of Preemption

Whether a label on a product refers to a flavor or ingredient not only determines if Mantikas applies, but also affects whether the claim is preempted by federal law. The Nutrition Labeling and Education Act (NLEA) added an express preemption provision to the FDCA that prohibits state law from enforcing any flavoring labeling requirement that differs from 21 U.S.C. § $343(\mathrm{k})$, outlined in Part II. ${ }^{132}$ Thus, courts deciding whether certain flavoring practices are deceptive must first decide if the claim is preempted. If the claim is preempted, the court is unable to decide in favor of the plaintiff's deception claim. ${ }^{133}$ This presents an insurmountable obstacle for courts attempting to resolve consumer confusion in this area.

The NLEA preempts the typical consumer claim that a product's labeling is misleading because it does not contain any of the ingredient commonly expected from the characterizing flavor. ${ }^{134}$ For example, in Lam v. General Mills, Inc., the plaintiffs claimed that the defendant's fruit snacks' labeling was deceptive because it said "strawberry natural flavored" but did not contain any real strawberries. ${ }^{135}$ The court held that this claim was preempted because 21 C.F.R. § 101.22(i) permitted the fruit snacks to be labeled as naturally flavored even if the product does not contain real strawberries. ${ }^{136}$ The court acknowledged that "the regulation's logic [wa]s troubling," but was "bound to apply it." ${ }^{137}$ Similarly, the court in Dvora v. General Mills, Inc. expressed reservations, stating that "it is difficult to discount Plaintiff's contention that Defendant marketed its product in part to capitalize on 'current health conscious messages." The court stated that "while one might sincerely hope that such a ploy will not be rewarded in the marketplace," it was required to find the claim preempted. ${ }^{138}$

A plaintiff may avoid preemption, however, if the product's label includes a "made with" statement. As explored in the context of the Sharpe case, a "made with"

[^12]statement can imply the presence of an ingredient, rather than merely a flavor. ${ }^{139}$ The terms of FDA's regulations apply to characterizing flavors, not ingredients. Thus, if the "made with" statement is referring to an ingredient, "a state is not precluded from creating law on that issue. ${ }^{140}$ As a result, the flavor versus ingredient determination can make a significant difference to the outcome of the case. Given this importance, courts have long struggled with how to distinguish characterizing flavors from ingredients when there is a "made with" statement. ${ }^{141}$

Courts have not reached a consensus. For example, the court in Lam held that the plaintiffs' deception claim regarding a "made with real fruit" label on fruit snacks was not preempted. ${ }^{142}$ The "made with" label was near the "strawberry" label, implying that the fruit snacks contained real strawberries when it did not. ${ }^{143}$ In contrast, in Samet v. Procter \& Gamble Co., ${ }^{144}$ the court came to the opposite conclusion faced with nearly identical facts. The plaintiffs claimed that the defendant's fruit snacks labeling was deceptive by stating "made with real fruit" next to pictures of berries, when the only fruit ingredient was apple puree concentrate. ${ }^{145}$ The court held that this claim was expressly preempted by the characterizing flavor regulations. ${ }^{146}$ Courts similarly disagree over other flavors that might also be ingredients, such as ginger ${ }^{147}$ and honey. ${ }^{148}$

As the courts battle over whether certain labels signify ingredients or flavors, ${ }^{149}$ there is a sense in which the entire debate is missing the point. The problem is that producers can imply that a product is healthier when it contains natural flavoring that

[^13]simulates a healthy ingredient because of the health halo effect of the label and consumers' unawareness of the science behind added flavors. "Made with" statements are just the most extreme examples of sellers taking advantage of consumer misperception. The natural flavoring litigation reveals that most consumers, and even some courts, consider natural flavors to possess health benefits akin to real ingredients that artificial flavors do not. In Red v. Kraft Foods, Inc., ${ }^{150}$ the court over a decade ago articulated this fundamental question, " $[i] f$ a 'flavor' claim suggests health benefits . . . are Plaintiffs barred from alleging that it is misleading?" ${ }^{151}$ The current regulatory regime answers yes in many cases, but the resulting consumer confusion and judicial disagreements in application suggest a need for a better answer.

## IV. Potential Solutions

As explored above, preemption places a substantial limit on the courts, therefore a feasible solution will require federal policy change. The goal of any regulatory solution aimed at reducing consumer confusion should be to help consumers understand that neither natural nor artificial flavoring contain any nutritional value. Instead, the presence of any kind of added flavoring is indicative of extensive food processing, ${ }^{152}$ which is generally understood to contribute to an unhealthy diet that significantly increases the risk of obesity, diabetes, and cardiovascular diseases. ${ }^{153}$ FDA regulations should ideally enhance consumers' understanding of this crucial point.

## A. Define Natural

Scholars commonly suggest that if FDA defines natural, consumer confusion will be alleviated. ${ }^{154}$ FDA's current informal policy states that a "natural" label on a product means "nothing artificial or synthetic (including colors regardless of source) is included in, or has been added to, the product that would not normally be expected to be there. ${ }^{י 155}$ This informal policy is only an advisory opinion and not a legal requirement. ${ }^{156}$ One possible solution to the natural flavoring problem could be for

[^14]FDA to formally define "natural" in line with this definition, which would not permit "natural flavors" to be added to "natural" foods. ${ }^{157}$

Under this definition, a product that does not contain the ingredients it advertises could not be labeled as "natural," even though it could be labeled as containing "natural flavors." If consumers properly understood the distinction between these labels, consumers could look to the natural label to provide assurance that the product has not been subject to such extensive processing that the product's characterizing flavor is divorced from its ingredients. Canada provides an example of this approach. ${ }^{158}$ Canada does not allow a food to be labeled as "natural" if the food has "been submitted to processes that have significantly altered their original physical, chemical or biological state. ${ }^{159}$ As a result, Canada does not allow foods with added flavors to be labeled as "natural," even if the flavor itself could be called a "natural flavor." ${ }^{160}$

The problem with this approach is that it does nothing to combat consumer's misconception that natural flavors are superior to artificial flavors. An FDA definition of natural would be unlikely to alleviate consumer confusion about natural flavoring because the mismatch between the reality of flavoring and consumer's expectations of natural flavoring would persist.

The following hypothetical illustrates the point. Imagine a consumer were confronted with two strawberry yogurt products: one is flavored with real strawberries such that it contains no added flavors, and the other is made without any strawberries requiring it to contain added flavors derived from strawberries to achieve a strawberry taste. The former is labeled "Natural Strawberry Yogurt" while the latter is labeled "Natural Strawberry Flavored Yogurt." The crucial distinction is "flavored"; continuing to regulate the presence of "natural" serves only to confuse. Recall that, adding to this confusion, at least some courts would even allow both to be labeled "made with real fruit." ${ }^{161}$

Empirical evidence from organic labeling, which employs a similar tiered structure where certain labels are reserved for more organic foods, reveals that consumers often misunderstand complex labeling regimes. ${ }^{162}$ United States Department of Agriculture (USDA) organic labeling regulations create three categories of labels: "100-percent organic," "organic," and "made with organic ingredients." ${ }^{163}$ Products containing less than $70 \%$ organic ingredients can still identify individual ingredients as organic in the ingredients list. ${ }^{164}$ Although these categories have been in effect since 1990, surveys

[^15]show that consumers continue to misunderstand what these categories mean. ${ }^{165}$ Therefore, it is unlikely that consumers would fare any better with a tiered regulatory scheme for "natural" labels.

Lastly, it is worth noting that this solution is very unlikely. FDA has repeatedly refused to define natural despite acknowledging the potential for consumer confusion for decades. ${ }^{166}$ FDA has provided numerous reasons for failing to define natural. In addition to the difficulty in agreeing upon a workable definition, FDA has also cited resource constraints, other priorities, and anticipated commercial speech doctrine issues. ${ }^{167}$ Given this history, it seems unlikely that FDA will define natural anytime soon. These problems may likely also apply to any proposal that increases regulatory burdens or restricts speech. ${ }^{168}$

## B. Redefine Natural and Artificial Flavoring with a Focus on Process

If defining natural broadly is insufficient to solve the issues with flavoring, the next question is whether a different definition of natural flavoring specifically would be helpful. One such alternative is to define natural and artificial flavoring by the process used to derive the flavor, rather than the source ingredient. For example, the United Kingdom and China require natural flavors to be "processed by traditional preparation technology, through physical methods, enzymatic methods or microorganism methods. ${ }^{1169}$ It is possible that if the process is restricted, it will better align with consumers' expectations that natural flavoring has undergone minimal processing.

However, the focus on processing of the flavoring ingredient distracts from the fact that food products with any kind of added flavors are more processed as a whole, which does have negative health consequences. ${ }^{170}$ There is no clear benefit to minimal processing of the flavoring ingredient itself. Traditional preparation technologies are not necessarily any healthier or safer than synthetic creation. ${ }^{171}$ And regardless of the technologies used, the process to create an added flavor is intensive and does not contain nutritional value. ${ }^{172}$

[^16]This proposed definition of natural flavors would also not resolve consumer confusion regarding flavors that appear to signify health benefits, such as strawberry, ginger, etc. If anything, it might increase consumer confusion by further elevating the perceived legitimacy of natural flavors. Consumers might mistakenly believe that if the flavor has undergone less processing, it might retain more of the health benefits of the source ingredient, similar to unprocessed foods. ${ }^{173}$ Thus, this solution may actually hurt rather than advance the goal of the proposed regulation.

## C. Remove the Natural/Artificial Flavoring Distinction

Because neither defining natural nor altering the natural flavoring definition helps consumers understand the realities of added flavors, it is worth asking whether a dichotomy between natural and artificial flavors should even be preserved at all. If the distinction is not providing value, it should be removed. ${ }^{174}$ Under this proposal, producers would still need to clearly indicate on their labels when their foods are flavored with added flavors rather than characterizing ingredients. However, they would not be required to additionally label those added flavors as either "natural" or "artificial." Just as "natural" currently lacks a formal FDA definition, "natural flavoring" would also not be formally defined.

Because any producer labeling their product with added flavors may also choose to describe those added flavors as "natural," market competition forces would drive most producers to do so. ${ }^{175}$ Consumers are unable to verify whether products do in fact contain natural flavors. Indeed, even if each consumer could watch the flavor's entire production process, it is likely that reasonable consumers would disagree on whether the resulting flavor was "natural." ${ }^{176}$ As a result of the wide prevalence and unfalsifiable nature of the label, consumers would likely disregard the "natural flavoring" label as meaningless. ${ }^{177}$ This is in line with the "natural" label, which has started to decrease in popularity as consumers became skeptical of the claim. ${ }^{178}$

As "natural flavoring" labels lose their value, producers facing market pressure would turn to another signal of quality that cannot be easily replicated. ${ }^{179}$ Advertising that a product is flavored through the use of whole ingredients rather than added flavors is a likely replacement because using real ingredients is more costly and

[^17]indicates higher quality to consumers. ${ }^{180}$ Spindrift, discussed in Part II.C, presents a prime example. In the seltzer market, Spindrift tripled its sales after switching from using natural flavors to real fruit juice. ${ }^{181}$ Seltzer water brands exhibited a lack of transparency, and Spindrift was able to effectively position itself as the brand that used high-quality ingredients. ${ }^{182}$

Although Spindrift's successful strategy suggests higher quality signaling is already possible, this signaling is still rare in the marketplace. ${ }^{183}$ One likely reason is that consumers currently erroneously overvalue "natural flavor" labels and underappreciate the distinction between added flavors and flavoring via whole ingredients. If consumers do not understand the signal, the value of it is reduced while the cost is increased because producers will have to teach consumers in their advertising. ${ }^{184}$ As a result, this quality signaling may not yet be cost-effective for most producers. If the natural and artificial flavor distinction were removed, however, it is likely that more producers would follow in Spindrift's footsteps as the value of the "natural flavor" label reduces.

This self-disclosure would also better match consumers' expectations regarding the health benefits of certain flavors because the real ingredient would be present. For example, recalling the facts of Lam, ${ }^{185}$ if consumers purchased strawberry fruit snacks because they believed strawberries were healthy, those fruit snacks would have at least some of the health benefits from strawberries because the snacks achieved their flavor through the use of real strawberries. Of course, there will remain the Mantikas concern that consumers may be misled about the number of strawberries present, but there will at least assuredly be enough strawberries to flavor the food, absent outright fraudulent labeling. ${ }^{186}$ This would go a long way toward aligning flavor labeling with consumer expectations.

One might argue that the current FDA definition of natural and artificial flavor is similar to having no definition at all. The volume of natural flavoring litigation ${ }^{187}$ and the fact that natural flavors are already the fourth most common food ingredient in processed foods ${ }^{188}$ suggests that consumers should already be skeptical of the label if it were following the life cycle of the "natural" label.

However, there are two distinctions between "natural flavoring" and "natural" labels that could explain why confusion over the "natural flavoring" label will not resolve absent this proposal. First, a formal FDA definition exists for "natural

[^18]flavoring," unlike for "natural," which may elevate the status of the "natural flavoring" label to consumers even as the label has become more ubiquitous. Second, because there is a formal definition, it has preemptive force under the NLEA, preventing courts from holding that producers' compliant natural flavor labeling practices are nevertheless deceptive. ${ }^{189}$ Producers may be unwilling to abandon the label absent the threat of class action damages that exists for "natural" labels. ${ }^{190}$

Thus, this proposal to remove the natural versus artificial distinction in flavoring would help reduce consumer emphasis on the types of added flavoring and shift the focus to added flavors versus whole ingredients. Although perhaps unintuitive, less regulation may better clarify the realities of added flavoring to consumers.

One could argue that despite alleviating this source of consumer confusion, the distinction should be maintained for the sake of providing consumers with more information. Even if nutritionally irrelevant, consumers may still want their flavors to come from a natural source. Even though natural and artificial flavoring are often chemically identical, critics of natural flavoring concede that "artificial flavors are still less natural than natural flavors. ${ }^{1191}$ Studies suggest that when consumers believe a product is natural, consumers' entire sensory experience of the product improves, even if there are no other benefits. ${ }^{192}$ Furthermore, caring about natural foods is correlated with eating healthier, less processed foods. ${ }^{193}$ By not regulating information consumers deem relevant, this proposal could be criticized for discouraging consumers trying to make informed decisions.

The response to this critique is two-fold. First, more information is not always valuable. If mandatory product information becomes too detailed, consumers may not recognize what information is the most important or even disregard the information entirely. ${ }^{194}$ Because there is no practical difference between natural and artificial flavors, regulating this distinction may cause consumers to "overreact to less important information" in response to information overload. ${ }^{195}$ Second, consumers will still be encouraged to seek healthy foods, just through the alternative quality signal discussed above. The fact that consumers prefer healthier foods and report better experiences eating foods they believe are natural would encourage sellers to still find ways to distinguish their products through self-disclosure in the absence of a meaningful natural flavor label.

[^19]
## V. Conclusion

The majority of consumers believe that natural flavors are healthier than artificial flavors. ${ }^{196}$ Studies demonstrate that the perceived naturalness of foods is important to consumers around the world and has been for a substantial period of time. ${ }^{197}$ When comparing natural and artificial flavors, it is intuitive that flavors that are at least derived from the source ingredient are more natural than flavors created entirely by scientists. But this comparison is too narrow and distorts the bigger picture. Both natural and artificial flavors are synthesized in a lab, often the result of hundreds of artificial chemical components. ${ }^{198}$ Both are then added to foods that are extensively processed such that they no longer contain enough of the named ingredient to achieve the flavor the food proposes to have without the use of added flavors. Thus, if consumers were fully informed, it is possible that they would avoid both natural and artificial flavors and instead seek foods flavored through real ingredients.

This Article suggested that removing the definitional distinction between natural and artificial flavors would reduce consumer misconceptions about these terms and bridge this informational gap. Without legal support behind the terms, consumers may begin seeing "natural flavors" labels on all sorts of products when there clearly cannot be an accompanying health benefit. This should force consumers to reassess their beliefs about natural flavors and ultimately reduce the value of the natural flavors label. This would create demand for a new signal of high-quality, healthy foods. Producers may respond by discarding "natural flavor" labels and instead advertising that their products are flavored via whole ingredients. This is a costly signal that is not easily replicated by low-quality sellers and has already proven successful in some markets. ${ }^{199}$ This switch would result in healthier products that better align with consumer expectations. The natural flavoring litigation reveals that consumers often mistakenly believe that the product's added natural flavor conveys a health benefit. The presence of real ingredients to flavor the food instead could create these benefits that consumers already expect.

Of course, there is still a potential for fraud and deception even with this proposal. Producers might falsely claim to use real ingredients or exaggerate the amount of the ingredient used, similar to the claim in Mantikas. ${ }^{200}$ Therefore, courts must continue to ensure that producers are not advertising their use of healthy ingredients in a deceptive or misleading manner. If not, there is a risk that consumers find this advertising just as meaningless as natural flavoring.

[^20]
[^0]:    * JD, The University of Chicago Law School, 2022. Many thanks to Professor Omri Ben-Shahar for his helpful guidance and thoughtful feedback. Thank you as well to the Food and Drug Law Institute and the editors of the Food and Drug Law Journal for their invaluable contributions. This Article was originally a paper written to fulfill degree credit requirements while the author was a student.

    121 C.F.R. § 101.22 (2022)
    2 See Matthew J. Goodman, The Natural vs. Natural Flavors Conflict in Food Labeling: A Regulatory Viewpoint, 72 FOOD \& DRUG L.J. 78, 94 (2017).

    3 Tyler Murley \& Edgar Chambers, IV, The Influence of Colorants, Flavorants and Product Identity on Perceptions of Naturalness, 8 Foods 317 (Aug. 4, 2019), https://www.ncbi.nlm.nih.gov/pmc/arti cles/PMC6722695/.

[^1]:    4 See, e.g., Neal Hooker, Christopher T. Simons \& Efthimios Parasidis, Natural Food Claims: Industry Practices, Consumer Expectations, and Class Action Lawsuits, 73 Food \& DrUG L.J. 319 (2018).

    5 Recent scholarship has identified several important issues related to natural flavoring, but it is notable that most of this literature has concluded that the solution lies in more FDA-mandated disclosures in labeling. See Raila Cinda Brejt, JD Candidate, Food Regulation and the Nondisclosure of Ingredients: Ignorance Is Not Always Bliss, 33 Health Law. 38 (2021) (discussing how natural flavoring can disguise substances that are problematic to certain individuals with food sensitivities or medical needs); J.C. Horvath, Note, How Can Better Food Labels Contribute to True Choice?, 13 Minn. J.L. ScI. \& Tech. 359 (2012) (highlighting natural flavoring in an exploration of allergen warnings and front-of-pack labels); Zoe Wolkowitz, Comment, A Recipe for Chaos and Confusion: Consumers, Companies, and Courts Hungry for Improved U.S. Food and Beverage Regulations, 54 UIC J. Marshall L. Rev. 567 (2021) (discussing natural flavoring as part of a broader analysis of FDA's and USDA's labeling regulations); Christy Wyatt, Comment, The Case Against LaCroix: Moving Beyond the Ingredient List in "Natural" Litigation, 89 U. CIN. L. REV. 231 (2020) (contemplating how natural flavoring would be affected by various "natural" definitions).

    6 Flavor Glossary of Terms, Flavor \& Extract MFrs. Ass'n OF THE U.S., https://www.femafla vor.org/flavor-glossary-terms.

    7 The History of Flavors, Flavor \& Extract Mfrs. Ass'n of the U.S., https://www.fem aflavor.org/history-flavors.

    8 C. Rose Kennedy, The Flavor Rundown: Natural vs. Artificial Flavors, HARV. U. Blog (Sept. 21, 2015), http://sitn.hms.harvard.edu/flash/2015/the-flavor-rundown-natural-vs-artificial-flavors/.

    9 Chris Versace \& Lenore Elle Hawkins, World Reimagined: The Food Flavors Market Could Hit Nearly \$20 Billion; Stocks to Watch, NASDAQ (May 3, 2021), https://www.nasdaq.com/articles/world-reimagined\%3A-the-food-flavors-market-could-hit-nearly-\%2420-billion-stocks-to-watch; Global Food Flavors Market, PR NEwSWIRE (July 7, 2020), https://www.prnewswire.com/news-releases/global-food-flavors-market-2019-to-2025---innovative-raw-material-sources-presents-opportunities-301089327.html.

[^2]:    ${ }^{10}$ Global Food Flavors Market, supra note 9.
    11 Nielsen, How America Will Eat (2019), https://www.nielsen.com/us/en/insights/report/2019/h ow-america-will-eat/.

    12 Murley \& Chambers, supra note 3.
    13 See Nielsen, supra note 11.
    14 See Melody M. Bomgardner, The Problem with Vanilla, ScI. AM. (Sept. 14, 2016), https://www.scientificamerican.com/article/the-problem-with-vanilla/; Press Release, Nestlé USA, Nestlé USA to Remove Artificial Flavors and FDA-Certified Colors (Feb. 17, 2015), https://www.nestleusa.c om/media/pressreleases/removing-artificial-flavors-and-fda-certified-colors [hereinafter Nestlé USA Press Release]; General Mills, Global Responsibility 2016106 (2016), https://globalresponsib ility.generalmills.com/2016/images/General_Mills-Global_Responsibility_2016.pdf.

    15 See Goodman, supra note 2, at 80.
    ${ }^{16}$ See David Andrews, Synthetic Ingredients in Natural Flavors and Natural Flavors in Artificial Flavors, Env'т WORKING GRP., http://www.ewg.org/foodscores/content/natural-vs-artificial-flavors (last visited Mar. 26, 2021).

    17 See Food Labeling: Nutrient Content Claims, General Principles, Petitions, Definition of Terms; Definitions of Nutrient Content Claims for the Fat, Fatty Acid, and Cholesterol Content of Food, 58 Fed. Reg. 2302, 2407 (Jan. 6, 1993).

    18 See Natural Claims: The Case for Clarity, FONA INT’L (Jan. 18, 2018), https://www.fona.co $\mathrm{m} /$ articles/2018/01/natural-claims-the-case-for-clarity.
    ${ }^{19}$ See id.
    20 See generally Nicole E. Negowetti, Defining Natural Foods: The Search for a Natural Law, 26 Regent U. L. Rev. 329 (2013).

    21 See Natural Claims, supra note 18.
    22 See id.
    ${ }^{23}$ See id.
    24 See id.; Murley \& Chambers, supra note 3.
    25 See Natural Claims, supra note 18; Negowetti, supra note 20, at 365.

[^3]:    ${ }^{26}$ See, e.g., Casey Seidenberg, What Does "Natural Flavors" Really Mean?, WASH. Post (July 25, 2017), https://www.washingtonpost.com/lifestyle/wellness/what-does-natural-flavors-really-mean/2017/0 7/24/eccdc47e-67f7-11e7-a1d7-9a32c91c6f40_story.html.

    27 See Global Food and Beverage Flavors Market, Forecast to 2030, GlOBENEWSWIRE (Aug. 11, 2020), https://www.globenewswire.com/news-release/2020/08/11/2076799/0/en/Global-Food-and-Bevera ge-Flavors-Market-Forecast-to-2030.html.

    28 See, e.g., Natalie Jacewicz, Is "Natural Flavor" Healthier Than "Artificial Flavor"?, NPR (Nov. 3, 2017), https://www.npr.org/sections/thesalt/2017/11/03/560048780/is-natural-flavor-healthier-than-artif icial-flavor; Goodman, supra note 2, at 79.
    ${ }^{29}$ See, e.g., Banned Ingredients \& Ingredient Watchlists, MOM's Organic Mкт., https://moms organicmarket.com/banned-ingredients-and-ingredient-watchlists/ (last visited Aug. 4, 2022) (banning artificial flavors); see also Negowetti, supra note 20, at 360 (listing grocery chains that prohibit artificial flavors in their "natural" products).

    30 See Product FAQs, Trader Joe's, https://www.traderjoes.com/home/FAQ/product-faqs (last visited Aug. 4, 2022) (stating that "[w]hen you see our name on a label, you can be assured that the product contains: . . . NO artificial flavors" and "[w]e use only 'natural flavors' in our products").
    ${ }^{31}$ Grandmothered \& Limited Ingredients, NAT. GROCERS, https://www.naturalgrocers.com/grand mothered-limited-ingredients (last visited Aug. 4, 2022); see also Monica Watrous, What's Inside Natural Flavors?, FOOD BUS. NEWS (Dec. 3, 2020), https://www.foodbusinessnews.net/articles/17385-whats-inside-natural-flavors.

    3221 C.F.R. § 101.22.
    33 See 21 C.F.R. § 101.22(a)(1) (defining artificial flavors as "any substance, the function of which is to impart flavor, which is not derived from a spice, fruit or fruit juice, vegetable or vegetable juice, edible

[^4]:    ${ }^{43}$ See id.
    44 See id.
    45 See id.
    ${ }^{46}$ See Kennedy, supra note 8.
    47 See id.
    48 See Bomgardner, supra note 14.
    49 See id.
    ${ }^{50}$ See id.
    ${ }^{51}$ See id.
    52 See id.; Nestlé USA Press Release, supra note 14.
    53 See Bomgardner, supra note 14.
    54 See id.
    55 See id.
    56 See id.

[^5]:    57 See id.
    58 See Goodman, supra note 2, at 95 .
    59 See Kennedy, supra note 8. Castoreum is permitted for use as a flavor in food under 21 C.F.R. § 182.50.
    ${ }^{60}$ To name one obvious reason, consumers were disgusted by the idea that castoreum could be used to flavor the foods they consume. See Wendee Nicole, Secret Ingredients: Who Knows What's in Your Food?, 121 EnV't HEALTH PERSP. 126, 126-27 (2013).
    ${ }^{61}$ See Kennedy, supra note 8.
    62 See Gary Reineccius, What Is the Difference Between Artificial and Natural Flavors? Sci. Am. (2002), https://www.scientificamerican.com/article/what-is-the-difference-be-2002-07-29/.
    ${ }^{63}$ See Andrews, supra note 16.
    ${ }^{64}$ Food Ingredient \& Colors, U.S. Food \& DrUG Admin. (Apr. 2010), https://www.fda.gov /files/food/published/Food-Ingredients-and-Colors-\%28PDF\%29.pdf.

    65 See Goodman, supra note 2, at 93-94.
    66 See Andrews, supra note 16. FDA states that both natural and artificial flavors "are subject to the same strict safety standards." See Food Ingredient \& Colors, supra note 64, at 7 (emphasis added).

    67 See Reineccius, supra note 62.
    68 Id.
    ${ }^{69}$ Id.

[^6]:    70 See, e.g., Bomgardner, supra note 14.
    ${ }^{71}$ See Global Food and Beverage Flavors Market, Forecast to 2030, supra note 27.
    72 See Watrous, supra note 31.
    73 See Rachel Sugar, How We Stopped Counting Calories and Learned to Love Spindrift, Vox (July 19, 2019), https://www.vox.com/the-goods/2019/7/29/8911334/spindrift-lacroix-seltzer-calories-chemical s-sparkling-water.
    ${ }^{74}$ See Watrous, supra note 31; see also Kacey Culliney, Buddha Teas CEO: Natural Flavor Labeling Laws Should Tighten, Food NAVIGATOR-USA (Nov. 14, 2018), https://www.foodnavigator-usa.com/A rticle/2018/11/14/Buddha-Teas-CEO-Natural-flavor-labeling-laws-should-tighten (describing how Buddha Teas also eschews natural flavors in favor of real ingredients for similar reasons).

    75 See Sugar, supra note 7373 (explaining that LaCroix had been declared "the winner of 'the seltzer wars'" with $30 \%$ market share, but then faced multiple lawsuits related to its use of natural flavors that significantly hurt sales).
    ${ }^{76}$ See Flavoring with Real Food, ERIN BAKER's (June 25, 2019), https://erinbakers.com/blogs/ news/flavoring-with-real-food (another example of a producer advertising its commitment to flavor its food with ingredients rather than added flavoring).

    77 See 21 C.F.R. § 101.22(i).
    ${ }^{78}$ See id.

[^7]:    79 See 21 C.F.R. § 101.22(i)(1).
    ${ }^{80}$ See 21 C.F.R. § 101.22(i)(2).
    ${ }^{81}$ See generally 21 C.F.R. § 101.22(i).
    82 See 21 C.F.R. § 101.22(i)(1)(i).
    ${ }^{83}$ See id. Technically, the product could also be labeled "Strawberry Flavored Shortcake." The "natural" label is discretionary, while the "flavored" label is mandatory. In practice, it seems unlikely a manufacturer would forgo the opportunity to use the natural label.
    ${ }^{84}$ See 21 C.F.R. § 101.22(i)(1)(ii).
    85 See 21 C.F.R. § 101.22(i)(1)(iii).
    ${ }^{86}$ See 21 C.F.R. § 101.22(i)(2).

[^8]:    87 Federal Food, Drug, and Cosmetic Act, Pub. L. No. 75-717, 52 Stat. 1040 (1938).
    88 Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 393(b)(2)(A) (2011).
    ${ }^{89}$ See, e.g., Negowetti, supra note 20, at 330.
    90 See Anthony J. Anscombe, Jury Still Out on the 'Food Court': An Examination of Food Law Class Actions and the Popularity of the Northern District of California, Bloomberg L. (July 1, 2013), https://news.bloomberglaw.com/product-liability-and-toxics-law/jury-still-out-on-the-food-court-an-examination-of-food-law-class-actions-and-the-popularity-of-the-northern-district-of-california (explaining California's popularity as a result of geography and plaintiff-friendly law on issues of standing and class certification); Cary Silverman, James Muehlberger \& Adriana Paris, The Food Court: Developments in Litigation Targeting Food and Beverage Marketing, U.S. CHAMBER INST. LEGAL REFORM (Aug. 2021), https://instituteforlegalreform.com/wp-content/uploads/2021/07/Food-Litigation-Update_we b.pdf (describing the recent rise in food class action cases in New York).
    ${ }^{91}$ See Lauren E. Handel, A Practitioner's Guide to Defending Natural Food Labeling Litigation, 7 Ky. J. EQ. Ag. \& NAT'L Res. L. 255, 265 (2014).

    92 See id.
    93 See id. at 266 (citing Small v. Lorillard Tobacco Co., Inc., 720 N.E.2d 892, 897 (N.Y. 1999)).
    94 See id.; Williams v. Gerber Prod. Co., 552 F.3d 934, 938 (9th Cir. 2008); Fink v. Time Warner Cable, 714 F.3d 739, 741 (2d Cir. 2013).
    ${ }^{95}$ Lavie v. Proctor \& Gamble Co., 105 Cal. App. 4th 496, 508 (2003); Fink, 714 F.3d at 741.
    96 See Stutman v. Chem. Bank, 731 N.E.2d 608, 612 (N.Y. 2000); Fitzpatrick v. Gen. Mills, Inc. 635 F.3d 1279, 1282-83 (11th Cir. 2011); Stewart v. Kodiak Cakes, LLC, 537 F. Supp. 3d 1103, 1144 (S.D. Cal. 2021).
    ${ }^{97}$ See, e.g., Sharpe v. A\&W Concentrate Co., 481 F. Supp. 3d 94 (E.D.N.Y. 2020).

[^9]:    98 Mantikas v. Kellogg Co., 910 F.3d 633 (2d Cir. 2018).
    99 See id. at 634.
    ${ }^{100}$ Id. at 636.
    ${ }^{101}$ See id. at 637.
    102 Williams v. Gerber Prod. Co., 552 F.3d 934, 939 (9th Cir. 2008).
    ${ }^{103}$ Mantikas, 910 F.3d at 637 (citing Williams, 552 F.3d at 939); see also Bell v. Publix Super Markets, Inc., 982 F.3d 468, 477 (7th Cir. 2020) (adopting the same approach to misleading front of the box statements as the Second and Ninth Circuits).

    104 See Mantikas, 910 F.3d at 637.
    ${ }^{105}$ See id.
    106 Id. at 638.
    ${ }^{107}$ Id. (quoting Red v. Kraft Foods, Inc., No. CV 10-1028-GWAGRx, 2012 WL 5504011, at *2 (C.D. Cal. Oct. 25, 2012)).

[^10]:    108 Vanilla litigation in the Southern District of New York became so prevalent in 2020 that courts even refer to these cases as the "SDNY Vanilla Cases." See Cruz v. D.F. Stauffer Biscuit Co., Inc., No.20-CV-2402(PGG)(JLC), 2021 WL 5119395, at *5 (S.D.N.Y. Nov. 4, 2021).

    109 Indeed, it is hard to imagine a flavor that could not also be an ingredient-perhaps only flavors that are synthetic, such that there is no real ingredient that could be a natural source for that flavor, e.g., blue raspberry. The fact that a food with such a flavor could still potentially be labeled as "naturally flavored" is emblematic of the confusion created by FDA's definition of natural flavoring.
    ${ }^{110}$ See infra notes 154147-55.
    ${ }^{111}$ Sharpe v. A\&W Concentrate Co., 481 F. Supp. 3d 94, 103 (E.D.N.Y. 2020).
    112 See id. at 96.
    113 Id. at 98.
    114 Id.
    115 Id. at 102.
    ${ }^{116}$ See id.
    117 See id. at 102-03.
    118 See id. at 103 (citing Mantikas v. Kellogg Co., 910 F.3d 633, 638 (2d Cir. 2018)).
    119 Id. at 104.
    ${ }^{120}$ Id.

[^11]:    ${ }^{121}$ Pichardo v. Only What You Need Inc., No. 20-CV-493 (VEC), 2020 WL 6323775, at *4 (S.D.N.Y. Oct. 27, 2020).

    122 See id. at *1 (the facts do not make clear whether the product was flavored with primarily artificial vanillin or natural vanillin that just did not come from vanilla beans).
    ${ }^{123}$ See id. at *5
    124 Id.
    125 Id.
    126 See Cruz v. D.F. Stauffer Biscuit Co., No. 20-CV-2402(PGG)(JLC), 2021 WL 5119395, at *5 (S.D.N.Y. Nov. 4, 2021) (collecting cases); see also Tropp v. Prairie Farms Dairy, Inc., 20-CV-1035-JDP, 2021 WL 5416639, at *5 (W.D. Wis. Nov. 19, 2021) ("The consistent conclusion of these courts is that the word 'vanilla' on a label conveys what the product tastes like, not why it tastes that way or what the source of the flavor is.").

    127 See Budhani v. Monster Energy Co., 527 F. Supp. 3d 667, 679 (S.D.N.Y. 2021) ("[A] large image of a vanilla flower immediately below the words 'Vanilla Cream,' convey[s] that the flavor of vanilla comes at least in part from the bean that is attached to the flower and that the Product contains some amount of extract from a vanilla bean.").

    128 Pichardo, 2020 WL 6323775, at *4.
    129 Id.
    ${ }^{130}$ Id.
    ${ }^{131}$ Sharpe v. A\&W Concentrate Co., 481 F. Supp. 3d 94, 98 (E.D.N.Y. 2020).

[^12]:    132 Nutrition Labeling and Education Act of 1990, Pub. L. No. 101-535, §6(a), 104 Stat. 2353.
    133 See, e.g., Dvora v. Gen. Mills, Inc., CV 11-1074-GW PLAX, 2011 WL 1897349 (C.D. Cal. May $16,2011)$.

    134 See, e.g., Viggiano v. Hansen Nat. Corp., 944 F. Supp. 2d 877, 888 (C.D. Cal. 2013). This is assuming, of course, that the product complies with the NLEA regulations. If the product's labeling violates FDA's regulations, the plaintiffs' claims would not be preempted. See, e.g., Silva v. Unique Bev. Co., LLC, No. 3:17-CV-00391-HZ, 2017 WL 2642286, at *6 (D. Or. June 15, 2017) ("Because Defendant's Cascade Ice beverage product label violates FDA's implementing regulations, plaintiff's UTPA claims are not expressly preempted by the NLEA."); Ivie v. Kraft Foods Glob., Inc., No. C-12-02554-RMW, 2013 WL 685372 , at *8 (N.D. Cal. Feb. 25, 2013) ("Courts in this district generally find express preemption under the FDCA only when: (1) the FDA requirements with respect to a particular food label or package [are] clear; and (2) the product label or package at issue [are in] compliance with that policy, such that plaintiff necessarily seeks to enforce requirements in excess of what the FDCA, NLEA, and the implementing regulations require.").
    ${ }^{135}$ Lam v. Gen. Mills, Inc., 859 F. Supp. 2d 1097, 1101-02 (N.D. Cal. 2012).
    136 See id. at 1103.
    ${ }^{137}$ Id. at 1102. The plaintiff did not allege in the complaint that the fruit snacks contained artificial flavoring, so the court did not consider that aspect of the regulation.

    138 Id.

[^13]:    ${ }^{139}$ Sharpe v. A\&W Concentrate Co., 481 F. Supp. 3d 94, 103 (E.D.N.Y. 2020).
    ${ }^{140}$ Fitzhenry-Russell v. Dr. Pepper Snapple Group, Inc., No. 17-CV-00564 NC, 2017 WL 4224723, at *9 (N.D. Cal. Sept. 22, 2017).
    ${ }^{141}$ See, e.g., Red v. Kraft Foods, Inc., 754 F. Supp. 2d 1137, 1143 (C.D. Cal. 2010).
    ${ }^{142}$ Lam v. Gen. Mills, Inc., 859 F. Supp. 2d 1097, 1104 (N.D. Cal. 2012).
    143 Id.
    144 Samet v. Procter \& Gamble, No. 5:12-CV-01891 PSG, 2013 WL 3124647 (N.D. Cal. June 18, 2013), recons. on other grounds, Samet v. Procter \& Gamble, No 5:12-CV-01891 PSG 2015 WL 5012828 (N.D. Cal. Aug. 24, 2015).

    145 Samet, 2013 WL 3124647 at *6.
    146 See id.
    ${ }^{147}$ Compare Fitzhenry-Russell v. Dr. Pepper Snapple Group, Inc., 17-CV-00564 NC, 2017 WL 4224723, at *9 (N.D. Cal. Sept. 22, 2017) (holding that "made with real ginger" refers to the ingredient, not the flavor) with Red v. Kraft Foods, Inc., 754 F. Supp. 2d 1137, 1143 (C.D. Cal. 2010) (stating that "made with real ginger \& molasses" "arguably refers to characterizing flavor").
    ${ }^{148}$ Compare Red v. Kraft Foods, Inc., 754 F. Supp. 2d 1137,1143 (C.D. Cal. 2010) ("[T] he prominent image of flowing honey are intended to convey the message that Honey Maid Graham Crackers are primarily sweetened with honey and not that they are 'honey flavored."') and Campbell v. Whole Foods Mkt. Grp., Inc., 516 F. Supp. 3d 370, 385 (S.D.N.Y. 2021) ("[E]ven if 'honey' were intended solely as a reference to the flavor of the Product, a reasonable consumer could expect that the source of the honey flavor was actual honey-an ingredient.") with Lima v. Post Consumer Brands, LLC, No. 1:18-CV-12100ADB, 2019 WL 3802885, at *6 (D. Mass. Aug. 13, 2019) (finding that honey is a flavor, not a sweetener).

    149 As the courts are quickly forming a consensus that vanilla is best considered a flavor rather than an ingredient, plaintiffs have responded by searching for ways to distinguish their claim from the vanilla cases on the facts of the specific labeling or packaging. This results in the same debates had in the vanilla context being rehashed over and over in new cases. See, e.g., Cruz v. D.F. Stauffer Biscuit Co., Inc., No.20-CV-2402(PGG)(JLC), 2021 WL 5119395, at *6 (S.D.N.Y. Nov. 4, 2021) (holding that the Product's packaging and labeling of lemon suggests it is a flavor, as in the SDNY Vanilla Cases, rather than an ingredient, as in Campbell).

[^14]:    ${ }^{150}$ Red, 754 F. Supp. 2d at 1137.
    ${ }^{151}$ Id. at 1143.
    152 Michael J. Gibney, Ultra-Processed Foods: Definitions and Policy Issues, 3 Current Dev. NUTRITION 1, 3 (2019), https://academic.oup.com/cdn/article/3/2/nzy077/5097779.

    153 Barry M. Popkin, Simon Barquera, Camila Corvalan, Karen J. Hofman, Carlos Monteiro, Shu Wen Ng, Elizabeth C. Swart \& Lindsey Smith Taillie, Towards Unified and Impactful Policies to Reduce Ultra-Processed Food Consumption and Promote Healthier Eating, 9 The Lancet 462, 462-63 (2021).

    154 See, e.g., Parasidis, supra note 4, at 358; Negowetti, supra note 20; supra note 4. But see Omri Ben-Shahar, The Better Way to Regulate "Natural" Food, ForBES (Sept. 9, 2016), https://www.forbes.com/ sites/omribenshahar/2016/09/09/the-better-way-to-regulate-natural-food/\#26fbd77753c3.

    155 Use of the Term "Natural" in the Labeling of Human Food Products; Request for Information and Comments, 80 Fed. Reg. 69905, 69906 (Nov. 12, 2015) (explaining that FDA "longstanding policy" has been that "natural" means "that nothing artificial or synthetic (including colors regardless of source) is included in, or has been added to, the product that would not normally be expected to be there").
    ${ }^{156}$ See 21 C.F.R. § 10.85(d), (j) (2014).

[^15]:    157 This is not the inevitable result of a formal "natural" definition, but it is certainly a possibility that scholars have contemplated. For a detailed discussion of how potential "natural" definitions could interact with natural flavoring, see Goodman, supra note 2, at 97-101.
    ${ }^{158}$ Id. at 94.
    159 Method of Production Claims on Food Labels, CANADIAN Food Inspection Agency (Mar. 8, 2019), https://inspection.canada.ca/eng/1297964599443/1297965645317 (follow "Search Inspection.ca nada.ca" and search "Method of Production Claims on Food Labels").
    ${ }^{160}$ See id.
    ${ }^{161}$ See supra Part III.C.
    162 Christine A. Green, The Cost of Low-Price Organics: How Corporate Organics Have Weakened Organic Food Production Standards, 59 Ala. L. Rev. 799, 807-08 (2008).

    163 See generally 7 C.F.R. §§ 205.301-04 (2015).
    164 See 7 C.F.R. § 205.305 (2014).

[^16]:    165 See Organic Research, Promotion, and Information Order, 82 Fed. Reg. 5746-01, 5757 (Jan. 18, 2017); Rita-Marie Cain Reid, Alternative Organic: Legal Issues in Marketing Uncertified Organic Products, 73 Food \& Drug L.J. 570, 589 (2018); Erin Toomey, Note, How Organic Is Organic? Do the USDA's Organic Food Production Act and National Organic Program Regulations Need an Overhaul?, 19 Drake J. Agric. L. 127, 132 (2014).

    166 See Parasidis, supra note 4, at 358.
    167 See id.; Letter from Leslie Kux, Assistant Comm'r for Policy, U.S. Food \& Drug Admin., to Judges Yvonne Gonzalez Rogers, Jeffrey S. White \& Kevin McNulty (Jan. 6, 2014), https://www.foodpolitics.c om/wp-content/uploads/Letter-from-FDA-Declining-Intervention.pdf.
    ${ }^{168}$ For a discussion of the First Amendment issues posed by defining "natural," see Parasidis, supra note 4.
    ${ }^{169}$ Nicola Aporti \& Cesare Varallo, Natural Claim in China: Overview and Comparison with EU and US, 12 Eur. Food \& Feed L. Rev. 2, 3 (2017); see also The Flavourings in Food Regulations 1992, § 5 (Gr. Brit.), https://www.legislation.gov.uk/uksi/1992/1971/made (Sept. 13, 1992) (requiring that natural flavoring be produced "by physical processes, enzymatic or microbiological processes or processes normally used in preparing food for human consumption").

    170 See Popkin et al., supra note 153, at 462-63.
    171 See supra Part II.C.
    172 See id.

[^17]:    173 See, e.g., Amy Richter \& Jamie Smith, How Do Processed Foods Affect Your Health?, Med. News TODAY (updated Jan. 17, 2023), https://www.medicalnewstoday.com/articles/318630.

    174 This is an adaptation of a similar approach suggested to regulate "natural" food products. See BenShahar, supra note 154.

    175 See Elise Golan, Fred Kuchler \& Lorraine Mitchell, U.S. Dep’t of Agric., Economics of Food Labeling, Agricultural Economic Report No. 793, 8 (2000), https://www.ers.usda.gov/we bdocs/publications/41203/18885_aer793.pdf? $\mathrm{v}=0$ (discussing how competition between firms "results in explicit claims for all positive aspects of products").

    176 See, e.g., Negowetti, supra note 20, at 347 (explaining that consumers lack a uniform definition of "natural").
    ${ }^{177}$ Golan et al., supra note 175, at 8-15 (explaining that labels without enforced standards are ineffective).

    178 See supra Part II.A.
    179 For a discussion of quality-signaling theory in the context of food labeling, see Julie A. Caswell \& Eliza M. Mojduszka, Using Informational Labeling to Influence the Market for Quality in Food Products, 78 Am. J. Ag. Econ. 1248, 1249-51 (1996).

[^18]:    180 See supra Part II.A.
    181 See Sugar, supra note 73.
    182 See supra Part II.C.2.
    ${ }^{183}$ See supra Part II.C.2.
    ${ }^{184}$ For example, Erin Baker's, another company that commits to not using added flavors, has a blog post dedicated to explaining natural and artificial flavors to inform consumers of the value of its signal. See Flavoring with Real Food, supra note 76.
    ${ }^{185}$ See Lam v. Gen. Mills Inc., 859 F. Supp. 2d 1097 (N.D. Cal. 2012).
    ${ }^{186}$ See Mantikas v. Kellogg Co., 910 F.3d 633, 638 (2d Cir. 2018).
    ${ }^{187}$ Helenka B. Mietka \& Valerie E. Ross, To Bean or Not to Bean: How Developments in Vanilla Flavoring Disputes Reveal Larger Trends in Mislabeling Cases, ArentFox Shiff (May 10, 2022), https://www.afslaw.com/perspectives/product-liability-mass-torts-blog/bean-or-not-bean-how-developments-vanilla-flavoring (stating that there were over 200 flavoring cases over the last three years about vanilla alone).
    ${ }^{188}$ See supra Part II.A.

[^19]:    189 See supra Part III.D.
    190 See supra Part II.A.
    ${ }^{191}$ See Goodman, supra note 2, at 94.
    192 See Sergio Román, Luis Manuel Sánchez-Siles \& Michael Siegrist, The Importance of Food Naturalness for Consumers: Results of a Systematic Review, 67 Trends Food Sci. \& Tech. 44, 50 (2017), https://www.sciencedirect.com/science/article/pii/ S092422441730122X.

    193 See id. at 49
    194 GOLAN ET AL., supra note 175 , at $14-15$; see generally OMRI BEN-ShaHAR \& CARL E. Schneider, More Than You Wanted to Know: The Failure of Mandated Disclosure 94-106 (Princeton Univ. Press 2014).

    195 GOLAN ET AL., supra note 175, at 15.

[^20]:    196 See supra Part II.A.
    197 See Román et al., supra note 192.
    198 See supra Part II.C.
    199 See supra Part II.C.
    ${ }^{200}$ See supra Part III.B.

