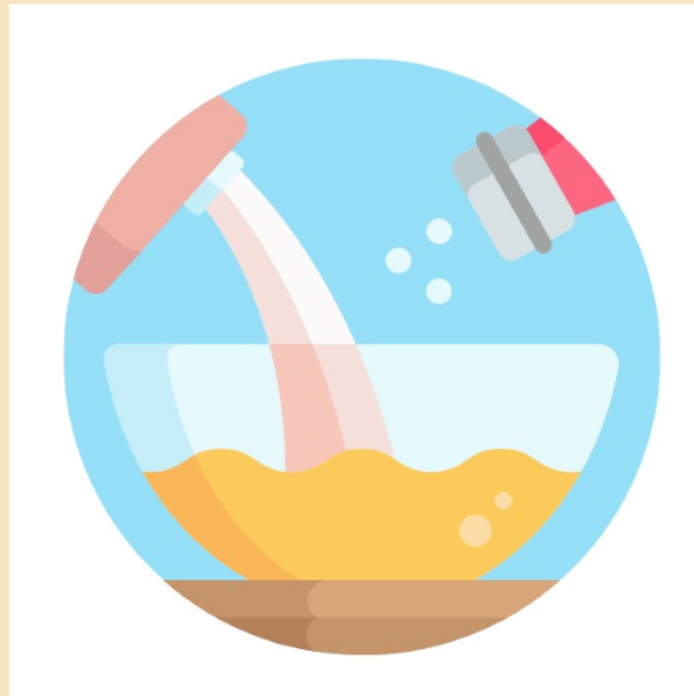


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## Natural Flavorings – Are They Really Natural?



In this article we will discuss:

1. What is actually allowed in natural flavorings
2. Differences between natural flavorings and artificial flavorings
3. Labeling requirements for natural ingredients
4. Health considerations of the ingredients in natural flavorings

As microscopic colitis (MC) patients, we learn to carefully check the labels on all commercially processed foods that we buy before we put them into our shopping cart. It tends to be a monotonous chore, but it has to be done if we intend to minimize the risk of a reaction. Unfortunately, what should be a simple task, is made so much more difficult by all the ambiguous terms used on most labels. Similar to “doctor speak”, the terminology used on most labels seems to be unnecessarily complex, seemingly for the specific purpose of intentionally confusing or misleading consumers.



### Natural flavorings are ubiquitous

It seems that the term “natural flavor”, or “natural flavorings” appear on the label of almost every item we pick up in the supermarket, and it's a term that most of us find confusing. Actually, it's the fourth most common ingredient on labels, despite seeming to be more prevalent. It's a carefully chosen combination of words to impart an impression of wholesomeness, healthfulness, and nutritional

benefits.

### Unfortunately, they don't live up to that impression.

Despite the perceived attributes of these terms, an in-depth analysis of natural flavorings reveals that they are often derived from ingredients that would not be considered to be wholesome, healthful,

or nutritionally beneficial by most of us. While a few natural flavorings that actually meet these qualifications may exist, it's more common to discover that they are created from many sources that are definitely not natural. And there don't appear to be any natural flavorings in existence that provide any nutritional benefits, at all. Natural flavorings exist solely for the purpose of making foods seem more appealing.

**Government regulations specify allowable food ingredients.**

In the United States, for example, labeling regulations for food and pharmaceutical items are dictated and enforced by the Food and Drug Administration (FDA).

The official definition of a natural flavoring, according to the FDA, can be found in the regulations under:<sup>1</sup>

*TITLE 21--FOOD AND DRUGS*

*CHAPTER I--FOOD AND DRUG ADMINISTRATION*

*DEPARTMENT OF HEALTH AND HUMAN SERVICES*

*SUBCHAPTER E - ANIMAL DRUGS, FEEDS, AND RELATED PRODUCTS*

*PART 501 -- ANIMAL FOOD LABELING*

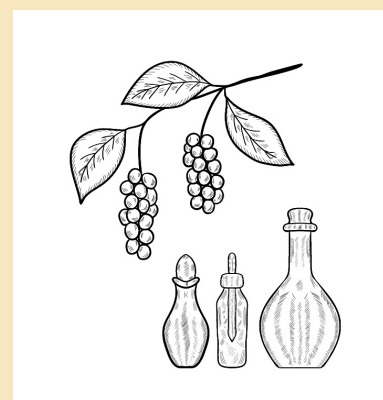
*Subpart B - Specific Animal Food Labeling Requirements*

*Sec. 501.22 Animal foods; labeling of spices, flavorings, colorings, and chemical preservatives.*

*In paragraph (3):*

*“(3) The term natural flavor or natural flavoring means 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. Natural flavors, include the natural essence or extractives obtained from plants listed in subpart A of part 582 of this chapter, and the substances listed in § 172.510 of this chapter.”*

Basically, the FDA defines natural flavors as food additives that derive their aroma, or flavor from plant or animal sources. These sources can include not only derivatives of items that are normally eaten, but they can also include derivatives of roots, leaves, bark, feathers, hooves, or most other plant or animal parts. These source materials are usually fermented, or otherwise chemically processed in a laboratory in various ways, in order to obtain the desired flavor.



**By contrast, artificial flavors are created by combining synthetic chemicals.**

Artificial flavors are based on man-made chemicals that yield a desired flavor in the finished product. In other words, artificial flavors are developed in a laboratory, using chemicals that are not normally derived from plant or animal sources, to

develop a specific flavor that may (or may not) resemble a natural flavor. Normally, artificial flavors are developed to duplicate natural flavors, and in many cases they have a very similar, or almost identical chemical composition, when compared with the equivalent

natural flavoring.

### **Natural flavorings usually have complex formulations.**

Natural flavors are rarely made of just one ingredient. Rather, they usually contain many ingredients. Some contain over 100 ingredients. The taste, or flavor of a food is usually determined by volatile chemicals. Why would this be so? Because about 80 to 90% of our sense of taste is determined by our sense of smell (Andrews, n.d.).<sup>2</sup> And natural flavors are usually not based on the ingredients that we would expect to see them based on. A good example of this is McDonald's "natural beef flavor". According to their own description, it's actually made from wheat and milk derivatives (Andrews, n.d.).

### **But are natural flavorings and artificial flavorings actually different?**

Maybe not. As is usually the case in situations of this sort, the devil is in the details. According to Senior scientist David Andrews, in reference to natural flavorings, "these mixtures contain chemicals that have other functions. Solvents, emulsifiers, flavor modifiers and preservatives often make up 80 to 90 percent of the mixture." (Andrews, n.d.). This means that 80 to 90% of the volume of artificial flavorings is usually something other than natural ingredients. So the distinction between natural and artificial flavorings doesn't appear to be much of a distinction, after all, when we consider the details (that are usually hidden in the fine print, if they appear at all).

### **Organically produced foods have much stricter labeling requirements.**

Natural flavors must actually be derived from natural plant or animal sources, when used in organically labeled foods. But as pointed out above, unfortunately, for foods that are not organically labeled, natural flavors can also be based on many legal, although definitely unnatural, additives, such as preservatives, solvents, and other additives that most people would rather not be eating, if possible, especially those of us who have digestive issues.



### **Source details of flavorings are not required to be revealed on labels.**

Although FDA regulations require that all food processors must include a list of all the ingredients that are present in significant quantities in their products on the labels, flavor manufacturers are not required to reveal the details of their ingredients. That leaves them with a huge degree of freedom to use controversial items. Consequently, it's not surprising that flavor manufacturers sometimes use ingredients that are derived from various industrial chemicals that are listed by the FDA as generally recognized as safe (GRAS) under sections 201(s) and 409 of the Federal Food, Drug, and Cosmetic Act.<sup>3</sup>

*"Under sections 201(s) and 409 of the Act, and FDA's implementing regulations in 21 CFR 570.3 and 21 CFR 570.30, the use of a food additive may be GRAS either through scientific procedures or, for a substance used in food before 1958, through experience based on common use in food."*

### **Are all of these FDA approved ingredients actually safe?**

Many of us would argue that some of these chemical ingredients

should not be allowed in food intended for human consumption. Note the year in which food additives (as of that date) were grandfathered — 1958. In 1958, many chemicals known today to be very undesirable, and even dangerous for the general welfare of animals, birds, or human health, were still legal, including DDT, 2,4,5-T (known as agent orange when combined with 2,4-D), and many other chemicals that have been outlawed since then. This is not to imply that chemicals such as agent orange can be legally used in food today, but derivatives of many chemicals that were generally recognized as safe back in those days, are no longer considered to be safe by many authorities, in light of discoveries that have been made since then.

**In certain situations, the FDA classifies natural additives as artificial.**

To further muddy the waters, the FDA requires a natural flavor to be labeled as an artificial flavor if it's added to a food in order to add a new taste, rather than to enhance a flavor that's normally present in that food. While this labeling law may be technically correct, it certainly adds to the confusion, and helps to support the argument that there is basically very little difference between natural and artificial additives.

### Summary

**Many (probably most) natural flavorings contain significant amounts (80 to 90%) of ingredients that are definitely not natural, such as solvents, emulsifiers, flavor modifiers, and preservatives. Apparently, the only way to avoid these unnatural ingredients (if natural flavorings is on the label), is to buy organically labeled foods. Foods with organic labels can only contain natural flavorings that are actually derived exclusively from natural ingredients.**

**In general, natural flavorings may be safe for most people, but for individuals who happen to have certain chemical sensitivities such as solvents or preservatives, clearly, they may be health risks.**

### References

1. CFR - Code of Federal Regulations Title 21. (2022, January 06). U.S. Food & Drug Administration. U.S Department of Health & Human Services. Retrieved from <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?fr=501.22>
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3. U.S. Food & Drug. (2016, October 17). Generally Recognized as Safe (GRAS) Notification Program. Retrieved from <https://www.fda.gov/animal-veterinary/animal-food-feeds/generally-recognized-safe-gras-notification-program>