



Allowed Ingredients and Processing Aids in Organic Products

Every substance that goes into a certified organic product has to be accounted for, from the headline ingredients on your label to the release agent on a baking tray. Before you can document and verify those substances, you need a clear picture of what counts as an ingredient, what counts as a processing aid, and which nonorganic and synthetic substances the organic rules allow. This article gives you that foundation for the rest of the chapter.



What You'll Learn

- Understand differences between an ingredient and a processing aid, and why the difference matters
- Explain why a nonorganic or synthetic substance can appear on the National List
- Identify the substances that are never allowed, whatever your labeling claim
- Know when to bring an ingredient or processing aid to your certifier for review

Whatever you handle, from a single-ingredient flour to a multi-ingredient sauce, every substance that enters your process has to earn its place in a certified organic product. Some substances are the stars of the recipe; others do quiet work behind the scenes. Organic rules treat these two groups differently, and getting comfortable with that distinction now will make the rest of this chapter—and your conversations with your certifier—much easier.



START WITH THE DEFINITIONS

Since certification operates on precise language, let's look closely at the phrase "ingredients and processing aids."

- **Ingredients** are "any substance used in the preparation of an agricultural product that is still present in the final commercial product as consumed."¹ These are the substances printed on the product's final retail label. Wheat, for example, is an ingredient of bread.
- **Processing aids** are substances added to a food during processing that meet one of the following conditions:²
 - They are removed in some manner before the food is packaged in its final form;
 - They are converted to constituents normally present in the food and do not significantly increase the amount of those constituents beyond what is present naturally; or
 - They are added for a technical or functional effect during processing but are present in the finished food only at insignificant levels, with no technical or functional effect on the finished food itself.

Processing aids normally do not appear on the product's retail label. The nonstick oil sprayed on a baking pan is a typical example.

Example Use of a Processing Aid



The same substance can be either an ingredient or a processing aid, depending on *how* it is used. When carbon dioxide is used as a packaging flush, it is a processing aid, because it is not incorporated into the final retail product. When it is used to add carbonation, it is an ingredient, because it stays in the final product and has a functional effect.

Why the Distinction Matters

Whether a substance is classified as an ingredient or a processing aid determines how it is treated in two places: product composition calculations and the product label. Ingredients appear in the ingredient statement on your retail label, while processing aids normally do not. Ingredients also count toward the organic percentage that decides your product's labeling category, while processing aids are left out of that calculation.^{3,4} So the answer to whether something is an ingredient or processing aid can shape both what your label says and whether your product qualifies as "100 percent organic," "organic," or "made with organic."

? LEARN MORE

Explore these concepts more deeply in [Product Formulation and Calculating Organic Content](#), [Product Composition - 100% Organic, Organic, and Made with Organic](#), and [Labeling Requirements for Products Intended for Human Use](#).

WHAT IS ALLOWED IN ORGANIC PRODUCTS

Certifiers must review and approve all substances used in the manufacture of your organic product. They will require documentation to verify that each ingredient and processing aid is allowed under the USDA organic regulations, and you will obtain much of that information from your suppliers.

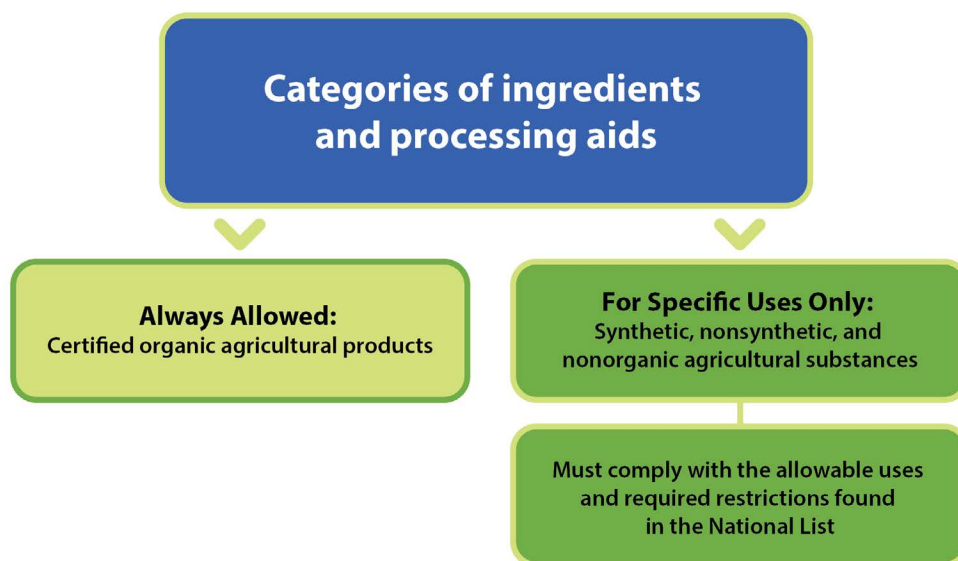
There are two categories of ingredients and processing aids used in organic products intended for human consumption:

- **Organic agricultural products**, which are "any agricultural commodity or product, whether raw or processed, including any commodity or product derived from livestock, that is marketed ... for human or livestock consumption."⁵ These ingredients must be certified organic to count toward your product's organic content.³
- **Specific nonorganic agricultural, synthetic, and nonsynthetic substances**, which may be used for particular reasons. These allowed uses come with conditions the regulations call "restrictions" or "annotations."^{6,7}

Any allowed nonorganic substance you use must follow every restriction that applies to it. These restrictions are detailed in the [National List of Allowed and Prohibited Substances](#) (the National List), a part of the USDA organic regulations that names the specific synthetic, nonsynthetic, and nonorganic ingredients and processing aids allowed, along with the specific reasons and conditions on their use.⁸

? LEARN MORE

For more on vetting the suppliers you buy from, see [Building and Maintaining a Supplier Approval Program](#), and for the documentation your certifier will want, see [Verifying Compliant Ingredients and Processing Aids](#).



A substance earns a place on the National List for a few reasons, including that it is:⁹

- Necessary or essential because an organic alternative is not available,
- Not harmful to human health or the environment, and
- Compatible with organic handling, as judged under National Organic Standards Board criteria.

Nonsynthetic substances are derived from mineral, plant, or animal matter and do not undergo a synthetic process during manufacture or processing.¹⁰ Examples on the National List include mined substances such as calcium carbonate, calcium sulfate, and diatomaceous earth, along with cultured substances such as enzymes, microorganisms, natural flavors, and yeast. You will find the allowed nonsynthetic substances in [§205.605\(a\)](#) of the National List along with any annotations for their use.⁶ Your certifier may ask for extra verification that the specific substance that you use is nonsynthetic.

Synthetic substances are formulated or manufactured by a chemical process, or by a process that chemically changes a substance.¹¹ Examples on the National List include ammonium bicarbonate, ascorbic acid, carbon dioxide, nutrient vitamins and minerals, and tocopherols. For some synthetic substances, the source or manufacturing method determines whether it is allowed. Citric acid, for instance, may be used only when it is produced by microbial fermentation. The allowed synthetic substances are listed in [§205.605\(b\)](#) of the National List along with any annotations for their use.⁷

Nonorganic agricultural products are raw or processed agricultural commodities produced outside the organic program. Examples include casings from animal intestines and substances derived from conventional agricultural ingredients, such as colors, cornstarch, gelatin, and pectin. The allowed nonorganic agricultural products, along with any annotations for their use, are listed in [§205.606](#).⁷

WATCH OUT

The “made with organic” labeling category works a little differently and can contain nonorganic agricultural ingredients that are not on the National List,¹² covered in [Product Composition - 100% Organic, Organic, and Made with Organic](#). Livestock feed also follows different composition rules,¹³ covered in [Livestock Feed Composition and Product Formulation](#).

USING SUBSTANCES ON THE NATIONAL LIST

Once a substance is on the National List, a few rules govern how it may be used:¹⁴

- Synthetic and nonsynthetic nonagricultural substances may be used as ingredients or processing aids when their listed restrictions are met.
- Nonorganic agricultural ingredients may be used in or on organic products only when an organic version is not commercially available and any listed restrictions are met.
- The quantity of the above ingredients and processing aids is restricted depending on the product composition category that the product falls within.³

Every nonorganic ingredient must be produced without ionizing radiation, sewage sludge, or other excluded methods such as genetic modification.¹⁵

Seeing a substance on the National List does not, by itself, mean the specific version you source is cleared for your use. The exact source, form, and use still have to be checked against the listing’s conditions, and reviewed and approved by your certifier to verify that the specific version of the substance is allowed for use in organic processing.

“Make sure that you’re sourcing from organic [suppliers]. Make sure that anything that you do is approved by your organic certifier.... Every single product you create in every single size has to be approved by your organic certifier.”

Jill Brockman-Cummings
Mill Manager
Janie’s Mill

Some allowed nonorganic substances come with a commercial availability requirement.^{7,14} For those substances, you must search for an organic source before using a nonorganic or nonsynthetic version, and you must document that search. If no organic option exists in a suitable form, quantity, or quality, your certifier may approve the nonorganic substance. The point of the rule is to grow the organic market for these substances over time.

LEARN MORE

For a deeper dive, see [Commercial Availability Requirement for Nonorganic Ingredients and Processing Aids](#).

CONCLUSION

Every substance in your product carries a category, a governing set of requirements, and a defined place in your certifier's review process. Once you have a working command of the ingredient versus processing aid distinction, and know how to navigate the National List, you have the tools to evaluate any substance before it enters your process. If a substance's category isn't clear, resolve it with your certifier in advance; approval after the fact isn't a fallback.

ACTION ITEMS

- List every ingredient and processing aid in each product.
- Classify each substance as an ingredient or a processing aid.
- Flag every nonorganic or synthetic substance for closer review.
- Confirm required substances appear on the National List.
- Submit all material inputs to your certifier before use.



SOURCES CITED

1. USDA National Organic Program, 7 CFR §205.2 (Information panel).
2. USDA National Organic Program, 7 CFR §205.2 (Processing aid).
3. USDA National Organic Program, 7 CFR §205.301.
4. USDA National Organic Program, 7 CFR §205.302.
5. USDA National Organic Program, 7 CFR §205.2 (Agricultural product).
6. USDA National Organic Program, 7 CFR §205.605.
7. USDA National Organic Program, 7 CFR §205.606.
8. U.S. Department of Agriculture, Agricultural Marketing Service. *National List of Allowed and Prohibited Substances*. Retrieved from <https://www.ams.usda.gov/rules-regulations/national-list-allowed-and-prohibited-substances>
9. USDA National Organic Program, 7 CFR §205.600(b).
10. USDA National Organic Program, 7 CFR §205.2 (Nonsynthetic (Natural)).
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12. USDA National Organic Program, 7 CFR §205.301(c).
13. USDA National Organic Program, 7 CFR §205.301(e).
14. USDA National Organic Program, 7 CFR §205.270(b).
15. USDA National Organic Program, 7 CFR §205.105.

DIG DEEPER

1. Organic Materials Review Institute. Retrieved from <https://www.omri.org>
2. U.S. Department of Agriculture, Agricultural Marketing Service. *NOP Petitioned Substances Index*. Retrieved from <https://www.ams.usda.gov/rules-regulations/organic/petitioned-substances>



United States Department of Agriculture
Agricultural Marketing Service
National Organic Program

