

**Formal Recommendation**  
**From: National Organic Standards Board (NOSB)**  
**To: the National Organic Program (NOP)**

**Date:** October 25, 2019

**Subject:** Sunset Reviews - Handling 2021

**NOSB Chair:** Harriet Behar

**The NOSB hereby recommends to the NOP the following:**

Rulemaking Action: X

**The NOSB recommends the following sunset substances be renewed:**

**Reference: 7 CFR 205.605 Nonagricultural (Nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

*§205.605(a) Nonsynthetics allowed:*

Acid, Citric  
Acid, Lactic  
Calcium chloride  
Enzymes  
L-Malic acid  
Magnesium sulfate  
Microorganisms  
Perlite  
Potassium iodide  
Yeast

*§205.605(b) Synthetics allowed:*

Activated charcoal  
Ascorbic acid  
Calcium citrate  
Ferrous sulfate  
Hydrogen peroxide  
Nutrient vitamins and minerals  
Peracetic acid  
Potassium citrate  
Potassium phosphate  
Sodium acid pyrophosphate  
Sodium citrate  
Tocopherols

**Reference: 7 CFR 205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”**

Celery powder

Fish oil

Gelatin

Orange pulp, dried

Seaweed, Pacific kombu

Wakame seaweed (*Undaria pinnatifida*)

**The NOSB recommends the following sunset substances be removed from the National List:**

**Reference: 7 CFR 205.605 Nonagricultural (Nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

§205.605(a) *Nonsynthetics allowed:*

Dairy cultures

§205.605(b) *Synthetics allowed:*

Alginic acid

**NOSB Vote:** See below for votes and rationale supporting each recommendation

## Acids – Citric

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Acids (Citric – produced by microbial fermentation of carbohydrate substances; and Lactic).**

**Technical Report:** [1995 TAP - Citric](#); [2015 TR - Citric](#); [1995 TAP - Lactic](#); [2015 TR - Lactic](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Citric acid has GRAS status (Generally Recognized as Safe) by the FDA. Citric acid has many uses in food production. It has a history of safe use in organic foods dating back to 1995. Natural citric acid may be isolated from organically grown fruit but has not been commercially available in the quantities that would be required to service the organic sector. Four certifiers submitted public comment indicating a total of 240 Organic Systems Plans which include citric acid. Two commenters wrote that citric acid should be classified as synthetic unless it is possible to define non-synthetic citric acid by annotation. The TR found citric acid to be non-synthetic since it is processed via fermentation. No new information was brought forward in terms of harm to human health or the environment.

#### **NOSB Vote:**

Motion to remove citric acid based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.605(a) if applicable: NA

Motion by: Lisa de Lima

Seconded by: Scott Rice

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Acids – Lactic

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Acids (Citric – produced by microbial fermentation of carbohydrate substances; and Lactic).**

**Technical Report:** [1995 TAP - Citric](#); [2015 TR - Citric](#); [1995 TAP – Lactic](#); [2015 TR - Lactic](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

## [Subcommittee Review](#)

### **NOSB Review:**

Lactic acid is a “Direct Food Substance Affirmed as Generally Recognized as Safe,” or GRAS, as an antimicrobial agent, curing and pickling agent, flavor enhancer, flavoring agent and adjuvant, pH control agent, and as a solvent and vehicle, with no limitation other than current good manufacturing practice according to FDA regulations at 21 CFR 184.1061. Two commenters commented that lactic acid should be classified as synthetic, due to the material being a product of fermentation. No new information was brought forward in terms of harm to human health or the environment.

### **NOSB Vote:**

Motion to remove lactic acid based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.605(a) if applicable: NA

Motion by: Lisa de Lima

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Calcium chloride

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Calcium chloride.**

**Technical Report:** [1995 TAP](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

## [Subcommittee Review](#)

### **NOSB Review:**

Public comment from trade associations, certifiers and manufacturers were supportive of relisting, noting that it is in use as a buffering agent in fruit preps, in cheese-making, in olive packing, in dairy analogs, as a disinfectant when used in conjunction with chlorine to mitigate effects on plant tissues, and as a tool to mitigate acrylamide in baking applications. Other comments were received from interest groups questioning the purity of commercially available calcium chloride at 6% impurities. The current United States Pharmacopeia **Food Chemicals Codex** (USP FCC) monograph for calcium chloride allows for up to 7% impurities. No context was given for why this is an area of concern. No new information was received by the NOSB supporting removal of this substance.

**NOSB Vote:**

Motion to remove calcium chloride from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Tom Chapman

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Dairy cultures

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Dairy cultures.**

**Technical Report:** [1995 TAP](#); [2014 TR for Ancillary Substances](#)

**Petition(s):** N/A

**Past NOSB Actions:** [05/2003 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

**NOSB Review:**

Dairy cultures are used by organic dairy processors to make yogurt, cheese, cultured sour cream and other fermented milk products. According to the 2014 technical report (TR) on microorganisms, there is widespread international acceptance of microorganisms and dairy cultures. While there is widespread support for the use of dairy cultures, the Handling Committee believes that this listing is now redundant and is covered by the listing for microorganisms. The NOSB received some public comment that would have preferred to keep dairy cultures as a separate listing, but those commenters also agreed that dairy cultures are covered under the microorganism listing. The NOSB voted to remove dairy cultures from the National List, with the knowledge that they are still allowed under the microorganism listing.

**NOSB Vote:**

Motion to remove dairy cultures from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Steve Ela

Seconded by: Scott Rice

Yes: 13 No: 0 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion Passed

## Enzymes

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Enzymes—must be derived from edible, nontoxic plants, nonpathogenic fungi, or nonpathogenic bacteria.**

**Technical Report:** 1995 TAP; [1996 TAP](#); [2011 TR](#); [2015 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2011 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Enzymes are naturally occurring proteins that act as highly efficient catalysts in biochemical reactions. They are used to carry out naturally occurring biological processes that are useful in the processing of food products or ingredients. Fermentation produced chymosin (FPC) rennet is derived from genetically modified organisms and is not allowed in organic agriculture.

Public comments widely favored relisting of enzymes and numerous examples were listed of their use in organic handling. One group did object to the review of enzymes as a class noting that this broad review was insufficient to address classification and adherence to all OFPA criteria. They noted that enzymes should be classified as synthetic unless annotated to define those that have not undergone synthetic chemical change.

#### **NOSB Vote:**

Motion to remove enzymes from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Steve Ela

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## L-Malic acid

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **L-malic acid (CAS # 97-67-6).**

**Technical Report:** [2003 TR](#); [2019 TR](#)

**Petition(s):** [L-Malic Acid 11/01/02](#)

**Past NOSB Actions:** [05/2003 sunset recommendation](#); [11/2009 sunset recommendation](#)

**Recent Regulatory Background:** Added to National List 09/11/06 ([71 FR 53299](#))

Renewed 08/03/2011 ([76 FR 46595](#)); Renewed 09/12/16 ([81 FR 8821](#))

**Sunset Date:** 9/12/2021

### [Subcommittee Review](#)

#### **NOSB Review:**

L-malic acid occurs naturally in many fruits and vegetables, including apples and cherries and can be obtained by enzymatic conversion of fumaric acid and by fermentation of glucose and other carbohydrates. It is not economical to extract L-malic acid from natural foodstuffs such as apple juice. A number of certifiers noted that L-malic acid appears on the organic system plans of their certified operations and is still widely used.

It is clear to the Subcommittee that this material should be reclassified and placed on 205.605(b) to reflect that the commercially available sources are a product of a synthetic manufacturing process. This reclassification cannot be completed via sunset review, so the subcommittee is proposing to relist this material and address the reclassification as a separate work plan item for consideration at a future meeting.

#### **NOSB Vote:**

Motion to remove L-malic acid from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Scott Rice

Seconded by: Tom Chapman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Magnesium sulfate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed. **Magnesium sulfate, nonsynthetic sources only.**

**Technical Report:**[1995 TAP](#); [2011 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2011 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Magnesium sulfate has a wide variety of uses in food processing and personal care products. It is used as a firming agent in the production of tofu. A common name for magnesium sulfate is Epsom salt. Calcium sulfate and magnesium chloride were noted as alternatives to magnesium sulfate in tofu production. Most

comments on magnesium sulfate were to relist it as a synthetic on the crops and livestock sections of the National List. There were no specific comments either for or against this listing on 205.605 (a).

**NOSB Vote:**

Motion to remove magnesium sulfate from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Scott Rice

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Microorganisms

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Microorganisms—any food grade bacteria, fungi, and other microorganism.**

**Technical Report:** [2003 TAP](#); [2014 TR](#); [2015 Ancillary Substances](#)

**Petition(s):** [2002 petition](#)

**Past NOSB Actions:** [09/2002 minutes and vote](#); [11/2009 sunset recommendation](#)

**Recent Regulatory Background:** Added to National List with annotation 09/11/06 ([71 FR 53299](#))

Renewed 08/03/2011 ([76 FR 46595](#)); Renewed 09/12/16 ([81 FR 8821](#))

**Sunset Date** 9/12/2021

### [Subcommittee Review](#)

**NOSB Review:**

Microorganisms used in organic handling include those that are used as probiotics, for fermentation, and bacteriophages used for food safety. Public comments noted that microorganisms are essential to organic handling and there was widespread support for their relisting. Additional comments suggested combining the dairy culture listing with the microorganism listing since dairy cultures are microorganisms.

There were several comments about the definition of microorganisms. The definition is critical for microorganisms in use currently, and can be used to determine whether additional organisms, such as unicellular algae, should be considered microorganisms. They also include products of fermentation that have been isolated from the fermentation organisms, including glycerin, gellan gum, L-malic acid, and others. We assume that the listing does not cover the last group, but that those organisms and their manufacture should be evaluated in the course of evaluating their products that are on the National List (NL). If the listing is intended to cover the group of killed microbial products, then the evaluation should include algae as well as the other organisms addressed in the technical review. These comments did not suggest that microorganisms should be delisted, but rather that additional attention needs to be paid to this particular listing and the definitions associated with it.

**NOSB Vote:**

Motion to remove microorganisms from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Steve Ela



Seconded by: Lisa de Lima

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Perlite

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Perlite—for use only as a filter aid in food processing.**

**Technical Report:** [1996 TAP](#)

**Petition(s):** N/A

**Past NOSB Actions:** [09/1996 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Perlite is used as a filter aid in food processing, such as filtration of juices, beer, wine, and vegetable oils. The listing of perlite has been consistently supported by the NOSB and organic stakeholders. There is some concern with the potential human health hazard of inhalation of fine silica dust when using this material. Personal protective equipment such as a dust mask can minimize this risk. Several certifiers noted its presence on the organic system plans of operations they certify.

#### **NOSB Vote:**

Motion to remove perlite from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Scott Rice

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Potassium iodide

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Potassium iodide.**

**Technical Report:** [1995 TAP](#); [2011 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2011 Formal recommendation by the NOSB](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))  
**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Potassium iodide is used as a form of iodine in trace mineral supplements. Iodine is an essential component of the thyroid hormones that regulate basal metabolism.

Public comment was received about its use in infant formula and in fortified foods. No new information was received by the NOSB supporting removal of this substance.

#### **NOSB Vote:**

Motion to remove potassium iodide from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Tom Chapman

Seconded by: Scott Rice

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Yeast

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(a) Nonsynthetics allowed: **Yeast—When used as food or a fermentation agent, yeast must be organic if its end use is for human consumption; nonorganic yeast may be used when equivalent organic yeast is not commercially available. Growth on petrochemical substrate and sulfite waste liquor is prohibited. For smoked yeast, nonsynthetic smoke flavoring process must be documented.**

**Technical Report:** [1995 TAP \(Smoked Yeast\)](#); [1995 TAP \(Baker’s Yeast\)](#); [2014 TR](#)

**Petition(s):** [2006 Petition](#); [2010 Petition Supplement](#); [2010 Petition memo](#)

**Past NOSB Actions:** [10/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [3/2007 NOSB committee recommendation](#); [10/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Yeast is a microorganism that is commonly used for fermentation, baking, food flavors, adding nutritional value and providing health benefits. Yeasts are in kingdom Fungi and are single celled eukaryotic organisms. Public comment was overwhelmingly in favor of relisting of yeasts as annotated. Commenters noted that since yeast is commonly not available in organic form necessary for certain flavors, yeasts are not always available in the quantities needed, and that organic yeast quality can vary, the annotation and listing should remain as is.

**NOSB Vote:**

Motion to remove yeast from §205.605(a) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Steve Ela

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

**§205.605(b) Synthetics allowed:****Activated charcoal**

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: **Activated charcoal (CAS #s 7440-44-0; 64365-11-3)—only from vegetative sources; for use only as a filtering aid.**

**Technical Report:** [2002 TAP](#)

**Petition(s):** [2002 petition](#)

**Past NOSB Actions:** [09/2002 sunset recommendation](#) ; [11/2009 sunset recommendation](#).

**Regulatory Background:**

Added to National List with annotation 9/11/06 ([71 FR 53299](#)); Renewed 8/03/2011 ([76 FR 46595](#));

Renewed 09/12/16 ([81 FR 8821](#))

**Sunset Date:** 9/12/2021

**[Subcommittee Review](#)****NOSB Review:**

Activated charcoal has minimal impact on human health and the environment. It may cause respiratory problems for those who handle it, especially as the particle size decreases. Its use in processing doesn't generally have an effect or chemical interaction in the agroecosystem. The greatest impact of activated charcoal from vegetative sources is the removal of organic matter from the system.

During the first round of comments in the spring, several food manufacturers noted the use of this product, with at least one stating they have not identified a suitable non-synthetic alternative. One organization wishes to see its use limited to filtration of water and limit the available forms to those made via steam activation.

**NOSB Vote:**

Motion to remove activated charcoal from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): N/A

Motion by: Scott Rice

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Alginic Acid

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

Reference: 205.605(b) Synthetics allowed: **Alginic acid (CAS #9005-32-7).**

Technical Report: [2015 TR](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2010 sunset recommendation](#); [10/2015 sunset recommendation](#); [10/2015 formal recommendation \(reclassification\)](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#)); Proposed rule 1/17/2018 ([83 FR 2498](#)); Reclassified effective 01/28/2019 ([83 FR 66559](#))

Sunset Date: 01/28/2024

### [Subcommittee Review](#)

#### NOSB Review:

Alginic acid is used in the food industry as an emulsifier, emulsifier salt, formulation aid, stabilizer, and thickener for soups and soup mixes. FDA limits the use of alginic acid to soups and soup mixes. During the public comment period the board received no comments from manufacturers citing their use of alginic acid and there were no reports from certifiers of the material being included in any Organic Systems Plans. The NOSB has voted to delist this material since it is not essential, nor used, in organic handling. The 2015 TR cites possible hydrocolloids alternatives including agar agar, carrageenan, gellan gum and xanthan gum.

#### NOSB Vote:

Motion to remove alginic acid based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.605(b) if applicable: Essentiality

Motion by: Lisa de Lima

Seconded by: Harriet Behar

Yes: 13 No: 0 Abstain: 0 Absent: 1 Recuse: 0

Outcome: Motion Passed

## Ascorbic acid

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

Reference: 205.605(b) Synthetics allowed: **Ascorbic acid.**

Technical Report: [1995 TAP](#); *2019 TR pending (to be posted at <https://www.ams.usda.gov/rules-regulations/organic/national-list/a>)*

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Ascorbic acid is used as a dietary supplement and nutrient, flavor ingredient, used in meat and meat containing products, curing and pickling, in flour to improve baking quality, as an antioxidant in fats and oils, and a wide variety of other food processing uses. It is also used in frozen and pre-cut fruits as an antioxidant. Industrially produced L-ascorbic acid is widely used in the feed, food, and pharmaceutical sector as a nutritional supplement and preservative, making use of its antioxidative properties. Ascorbic acid is often added to processed foods for nutritional purposes and is one of the most common sources of Vitamin C, which provides many important biological functions.

However, its addition as a nutritional fortifier also provides preservative properties. The preservative nature of the compound is derived from its reducing nature, through which it reacts with oxidized species (including radicals and molecular oxygen) to prevent enzymatic browning and food spoilage.

Public comment from a juice products trade group supported its relisting. Other comments noted its necessity for flavoring food products, as a pH adjustor for protein coagulation such as in protein processing and cheese production, color stabilization in fruit juice, and as an antioxidant and vitamin C source. Several certifiers noted its widespread presence in the organic system plans of the operations they certify. One interest group noted the predominant use of ascorbic acid is to fortify processed foods to pre-processing vitamin C levels. They further noted it is primarily used as a synthetic antioxidant and preservative and should be removed from the National List.

#### **NOSB Vote:**

Motion to remove ascorbic acid from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Scott Rice

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Calcium citrate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: Calcium citrate.

**Technical Report:** [1995 TAP](#); [2015 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [10/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [4/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

[Subcommittee Review](#)

**NOSB Review:**

Calcium citrate is used as an ingredient in dietary supplements, can be used as a sequestrant, buffer, antioxidant, firming agent, acidity regulator (in jams and jellies, soft drinks and wines), as a raising agent and an emulsifying salt. It is also used for its chelating properties to remove scale from boilers, evaporators and other processing equipment. Calcium citrate is widely used in cosmetic and personal care products for many of these same functions.

The TR cited the versatility of citric acid and its salts as the reason why no alternative practices could be used to substitute for all functions they provide. Additionally, there are no nonsynthetic sources or alternatives for the citrate salts.

Public comment was supportive. No new information was brought forward in terms of harm to human health or the environment.

**NOSB Vote:**

Motion to remove calcium citrate based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.605(b) if applicable: NA

Motion by: Lisa de Lima

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Ferrous sulfate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: **Ferrous sulfate—for iron enrichment or fortification of foods when required by regulation or recommended (independent organization).**

**Technical Report:** [1995 TAP](#); [2015 TR](#) Nutrient Vitamins and Minerals

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [10/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

[Subcommittee Review](#)

**NOSB Review:**

Ferrous sulfate is commonly added to flours and cereal products to make an optional enriched claim and often found in baked products and infant snacks (oat cereal, teething biscuits, etc.). Iron is an essential component of hemoglobin, enzymes involved in energy metabolism, and other enzymes.

Comments were received in support of this listing from industry, noting its use in infant formulas. There was some support for removing this listing as redundant to the Nutrient Vitamins and Minerals listing but there was also opposition to the group listing of vitamins and minerals. No new information was received by the NOSB supporting removal of this substance.

**NOSB Vote:**

Motion to remove ferrous sulfate from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Tom Chapman

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Hydrogen peroxide

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: **Hydrogen peroxide.**

**Technical Report:** N/A ([2015 TR Crops](#))

**Petition(s):** N/A

**Past NOSB Actions:** [10/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

**NOSB Review:**

Hydrogen Peroxide (CAS# 7722-84-1) is a weak acid but also a strong oxidizer which makes it an effective microbial pesticide for organic handling purposes. It is used as a disinfectant and sanitizer and also for post-harvest treatment of produce.

Hydrogen peroxide (HP) continues to receive strong support by the organic community and has been consistently relisted on the National List. Oral and written comments showed uniform support for relisting this essential and relatively safe material. When used appropriately HP should not have adverse impacts on human health and the environment.

**NOSB Vote:**

Motion to remove hydrogen peroxide from 205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Asa Bradman

Seconded by: Steve Ela

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Nutrient vitamins and minerals

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: **Nutrient vitamins and minerals, in accordance with 21 CFR 104.20, Nutritional Quality Guidelines For Foods.**

**Technical Report:** [1995 TAP - Minerals](#); [1995 TAP - Vitamins](#); [2015 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [10/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [03/2011 Handling Subcommittee Proposal](#); [04/2011 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Nutrient Vitamins and Minerals are used to recreate or add nutritional content to foods. Sometimes this nutritional content is added due to public health guidance (e.g. Iron in cereal to combat iron anemia), to mimic analog products (calcium fortification of non-dairy milks, fortification of infant formulas), to make up nutrients lost in processing (Vitamin A in skim milk) or for product marketing purposes (enriched flours). Overall there was strong support of this listing from industry and trade associations – noting the use of materials for reasons such as compliance with the law, to compete with conventional product, due to consumer expectations, or to make products for specific markets like infant food or enteral feeding products. Concern was also raised over allowing the fortification of food in instances not required by law, and lastly about the categorical listing allowing for the continued usage of individual substances that had been reviewed but not recommended by the NOSB.

Some commenters wanted more restrictions, and some wanted a wide interpretation. Most certifiers thought the accuracy of the citations needed improvement, and it needed to be clearly enforceable. Others are seeking a more restricted listing. Any annotation changes would need to be completed separate from this sunset review.

#### **NOSB Vote:**

Motion to remove nutrient vitamins and minerals from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Tom Chapman

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed



## Peracetic acid

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: Peracetic acid/Peroxyacetic acid (CAS # 79-21-0)—for use in wash and/or rinse water according to FDA limitations. For use as a sanitizer on food contact surfaces.

**Technical Report:** [2000 TAP](#); [2016 TR](#)

**Petition(s):** [2008 Petition](#)

**Past NOSB Actions:** [11/2000 sunset recommendation](#); [04/2004 NODB meeting summary](#); [11/2009 NOSB formal recommendation](#)

**Recent Regulatory Background:** Added to National List with annotation 9/11/06 ([71 FR 53299](#)); Renewed 8/03/2011 ([76 FR 46595](#)); Renewed 09/12/16 ([81 FR 8821](#))

**Sunset Date:** 9/12/2021

### [Subcommittee Review](#)

#### **NOSB Review:**

Peracetic acid (CAS # 79-21-0) is currently allowed for use in organic handling in wash water and rinse water, including during post-harvest handling, to disinfect organically produced agricultural products according to FDA limitations, and to sanitize food contact surfaces, including dairy-processing equipment and food-processing equipment and utensils. It is an important sanitizer used in organic handling. There has been strong support for continued availability of this material.

#### **NOSB Vote:**

Motion to remove peracetic acid from 205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Asa Bradman

Seconded by: Steve Ela

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Potassium citrate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: Potassium citrate.

**Technical Report:** [1995 TAP](#); [2015 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

**NOSB Review:**

Potassium citrate is an antioxidant, acidulant, pH control, flavoring agent, sequestrant, emulsifying salt, stabilizer, and as a dispersant in flavor or color additives. Commonly used in biscuits, baby food, soup mixes, soft drinks, and fermented meat products. It is also used to wash processing equipment to remove off flavors. Potassium citrate is used to replaced sodium citrate whenever a low sodium content is desired.

Public comment was supportive and mentioned wide uses in organic processing, and it offers an advantage over sodium citrate in that it does not add additional sodium to the product.

No new information was brought forward in terms of harm to human health or the environment.

**NOSB Vote:**

Motion to remove potassium citrate based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.605(b) if applicable: NA

Motion by: Lisa de Lima

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Potassium phosphate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: **Potassium phosphate—for use only in agricultural products labeled “made with organic (specific ingredients or food group(s)),” prohibited in agricultural products labeled “organic”.**

**Technical Report:** [1995 TAP](#), [2016 TR](#)

**Petition(s):** N/A

**Past NOSB Actions:** [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

**NOSB Review:**

Potassium phosphate can be used as a pH control in milk and dairy products, to make acidified milk products and in milk protein stabilization. It can also be used as a nutritional additive for a source of potassium and as a nutrient in yeast. Potassium phosphate can also be used in prepared meat applications and liquid eggs. It is only approved for use in “made with organic” labeled products.

Comment from a certifier noted at least 2 operations were using potassium phosphate for fortification purposes. Comments were also received from an industry trade association about the various possible uses of phosphates and responses to the long-term exposure risks to human health of phosphate products in general. There was some support for removing this listing as redundant to the Nutrient Vitamins and

Minerals listing but there was also opposition to the group listing of vitamins and minerals. No new information was received by the NOSB supporting removal of this substance.

**NOSB Vote:**

Motion to remove potassium phosphate from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Tom Chapman

Seconded by: Steve Ela

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Sodium acid pyrophosphate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

**Reference:** 205.605(b) Synthetics allowed: **Sodium acid pyrophosphate (CAS # 7758-16-9)—for use only as a leavening agent.**

**Technical Report:** [2001 TAP](#) (Sodium Phosphates); [2010 TR](#); [2016 TR](#)

**Petition(s):** [10/2002 petition](#); [03/2007 petition for expand use](#)

**Past NOSB Actions:** [05/2003 sunset recommendation](#); [11/2009 sunset recommendation](#); [04/2011 sunset recommendation](#)

**Regulatory Background:** Added to National List 09/12/06 ([71 FR 53299](#)); Renewed 8/03/2011 ([76 FR 46595](#)); Renewed 09/12/16 ([81 FR 8821](#))

**Sunset Date:** 9/12/2021

### [Subcommittee Review](#)

**NOSB Review:**

This listing limits its use as a leavening agent. Sodium acid pyrophosphate is used as a leavening agent in baked goods, where it reacts with baking soda (sodium bicarbonate) to liberate carbon dioxide, ‘leavening’ the dough and creating the desired ‘airy’ texture that consumers expect of baked goods such as cakes and cookies.

A number of food manufacturers and trade groups noted the essentiality of this material as it is the only chemical leavener available to the baking sector.

**NOSB Vote:**

Motion to remove sodium acid pyrophosphate from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Scott Rice

Seconded by: Steve Ela

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Sodium citrate

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

Reference: 205.605(b) Synthetics allowed: **Sodium citrate.**

Technical Report: [1995 TAP](#); [2015 TR](#)

Petition(s): N/A

Past NOSB Actions: [04/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [10/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

Sunset Date: 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Uses include: Acidulant, pH control, flavoring agent, sequestrant, and buffering agent as well as an emulsifier in dairy products to keep fats from separating, and in cheese making where it allows the cheeses to melt without becoming greasy.

Public comment was supportive. It’s also found in Organic System Plans (OSPs) used for meat processing and in manufacturing dietary supplements and personal care products. No new information was brought forward in terms of harm to human health or the environment.

#### **NOSB Vote:**

Motion to remove sodium citrate based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.605(b) if applicable: NA

Motion by: Lisa de Lima

Seconded by: Harriet Behar

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

Outcome: Motion failed

## Tocopherols

**§205.605 Nonagricultural (nonorganic) substances allowed as ingredients in or on processed products labeled as “organic” or “made with organic (specified ingredients or food group(s)).”**

Reference: 205.605(b) Synthetics allowed: **Tocopherols—derived from vegetable oil when rosemary extracts are not a suitable alternative.**

Technical Report: [1995 TAP](#); [2015 limited scope TR](#)

Petition(s): N/A

Past NOSB Actions: [10/1995 NOSB minutes and vote](#); [11/2005 sunset recommendation](#); [04/2011 sunset recommendation](#); [10/2015 NOSB Final Review](#); [09/2016 Handling Subcommittee proposal additional listing of Tocopherol](#)

Recent Regulatory Background: Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

Sunset Date: 3/15/2022

## [Subcommittee Review](#)

### **NOSB Review:**

Synthetic tocopherols are currently permitted for use in organic agriculture handling/processing as an antioxidant ingredient in foods (2015 TR). Tocopherols are added to foods to help prevent oxidation of the fatty acids present in the lipid components of the food. The NOSB has consistently relisted this material due to its essentiality for many processed food products. However, there has been extensive discussion about the need for synthetically derived tocopherols. Public comment has historically been divided on the relisting due to concerns that the material's primary use is as a preservative and therefore inconsistent with organic production. Tocopherols are one of the main sources of Vitamin E. No major impacts on human health or the environment are likely.

### **NOSB Vote:**

Motion to remove tocopherols from §205.605(b) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Asa Bradman

Seconded by: Steve Ela

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## **Reference: 7 CFR §205.606**

### **Celery powder**

**§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as "organic."**

**Reference:** 205.606(c) Celery powder.

**Technical Report:** N/A

**Petition(s):** [2007 Petition](#)

**Past NOSB Actions:** [03/2007 NOSB recommendation](#); [04/2010 sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

## [Subcommittee Review](#)

### **NOSB Review:**

In the organic sector, celery powder is used in a variety of processed meat products (hot dogs, bacon, ham, corned beef, pastrami, pepperoni, salami, etc.) to provide "cured" meat attributes without using prohibited nitrites. Celery powder is naturally high in nitrates that are converted to nitrites during fermentation by a lactic acid culture.

Concerns were raised about the direct dependence on a conventionally grown agricultural product in

organic trade and concomitant impacts on human health and the environment. Particular concerns have been raised about the possibility of enhanced use of nitrate fertilizers to “supercharge” the product used for celery powder manufacture.

In lieu of a technical report, a celery powder expert panel was convened for the April 2019 NOSB meeting. Experts spoke to key questions addressing nitrate safety, organic celery powder production, processing and manufacture of celery powder, progress toward organically sources celery or other substrates that could be used process organic meats, and the scale of the organic processed meat industry.

Overall, trade and industry members of the organic community supported relisting of celery powder at §205.606, with the caveat that more research is needed to produce a viable organic alternative. Given the importance of the organic processed meat industry, public and NOSB comments encouraged the USDA to fund additional research to develop organic alternatives to conventionally produced celery powder.

**NOSB Vote:**

Motion to remove celery powder from the National List at §205.606(c) based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Asa Bradman

Seconded by: Scott Rice

Yes: 1 No:11 Abstain: 1 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Fish oil

**§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”**

**Reference:** 205.606(e) **Fish oil (Fatty acid CAS #'s: 10417-94-4, and 25167-62-8)—stabilized with organic ingredients or only with ingredients on the National List, §§205.605 and 205.606.**

**Technical Report:** [2015 TR](#)

**Petition(s):** [2007 Petition](#)

**Past NOSB Actions:** [03/2007 sunset recommendation](#); [04/2010 sunset recommendation](#) ; [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

**NOSB Review:**

The NOP does not presently have production standards for aquaculture, therefore organic fish cannot be commercially available as organic.

Fish oil is used in organic processing and handling as an ingredient to increase the content of omega-3 fatty acids - primarily, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) - in foods to benefit human health by contributing to healthy brain development and reducing risks of cardiovascular disease, diabetes, inflammation, atherosclerosis (Chang et al., 2009; Lee et al., 2014).

Public comment indicated there was no mandatory standard for fish oil purity limits but that the GOED, a trade association representing the 85-90% of the fish oil industry, requires members to comply with a monograph for fish oils. As of this review limits were as follows:

- PCBs: Maximum 0.09 mg/kg
- PCDDs and PCDFs: Maximum 1.75 pg WHO-PCDD/F-TEQ/g
- Dioxin-like PCBs: Maximum 3 pg WHO-TEQ/g
- Total Dioxins, Furans and dioxin-like PCBs: Maximum 3 pg WHO-TEQ/g
- Lead (Pb): Less than 0.05 mg/kg
- Cadmium (Cd): Less than 0.1 mg/kg
- Mercury (Hg): Less than 0.1 mg/kg
- In-organic Arsenic (As): Less than 0.1 mg/kg<sup>1</sup>

Support was received from organic dairies and industry that speak to the consumer demand for omega-3 enriched products and having an opportunity to compete with conventional products that market themselves similarly. Opposition was received from several interest groups who questioned the environmental impact from overfishing, human health impact from heavy metal exposure, and compatibility due to its usage as a supplement.

Support was received from several commenters, including the GOED trade association, for annotations that further address conservation concerns. The NOSB has submitted a separate work agenda request on this topic, however, annotation changes are handled separately from sunset reviews.

**NOSB Vote:**

Motion to remove fish oil from §205.606 of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Tom Chapman

Seconded by: Scott Rice

Yes: 0 No: 11 Abstain: 2 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Gelatin

**§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”**

**Reference:** 205.606(g) **Gelatin (CAS # 9000-70-8).**

**Technical Report:** [2002 TAP](#); [2019 TR Gelatin, collagen gel, and casings](#)

**Petition(s):** [2001 Petition](#) ; [2007 Petition](#)

---

<sup>1</sup> <https://goedomega3.com/storage/app/media/Governance%20docs/goedmonograph-2019-03-01-r.pdf>.

**Past NOSB Actions:** [05/2002 NOSB Recommendation](#); [05/2007 Recommendation to add to the national list](#); [04/2010 NOSB sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**

Gelatin is used in a wide range of products as a clarification or fining agent in teas, juice, and wine, as a stabilizer, texturizer, thickener, and in capsules. It may either be an ingredient or a processing aid in candies (gummy bears), desserts (puddings, jello, marshmallows), dairy products (yogurt, sour cream, ice cream), cereals and cosmetics.

Several commenters said that the organic meat market has not sufficiently reached the “magnitude of mass” needed to produce organic gelatin and that the industry is currently working on the supply chain for future development of the organic gelatin market. However, detailed information about what the barriers are to organic gelatin development were not specified. The NOSB hopes that at the next sunset review, the barriers to production of organic gelatin will no longer be present.

#### **NOSB Vote:**

Motion to remove gelatin from §205.606(f) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Harriet Behar

Seconded by: Asa Bradman

Yes: 0 No: 13 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

### Orange pulp, dried

**§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”**

**Reference:** 205.606(n) **Orange pulp, dried.**

**Technical Report:** N/A

**Petition(s):** [2008 Petition](#)

**Past NOSB Actions:** [11/2008 NOSB recommendation for addition to the National List](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Added to NL effective 03/15/2012 ([77 FR 8089](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

### [Subcommittee Review](#)

#### **NOSB Review:**



Dried orange pulp is a fiber with about 33.3% soluble fiber and 34.9% insoluble fiber. It is used as a moisture retention agent and fat substitute in baked goods, pastas, salad dressing, confectionary, processed cheese spreads, beverages, meat products and frozen foods.

There were no commenters who listed orange pulp, dried, as an ingredient in their products nor any certifiers who listed it in their review of materials in organic products. However, orange peel and orange pulp were listed as ingredients in organic products. During the Spring 2019 public subcommittee discussion, the Handling Subcommittee noted that this listing also has a patent which may limit its use in organic products. Other commenters requested that the Board consider the use of conventional pesticides in conventional orange production that may leave residue in the final product of orange pulp, dried. The Handling Subcommittee voted to remove this item from the National List because orange pulp dried does not seem to be necessary for or consistent with organic handling (failing OFPA criteria at 7 U.S.C. § 6517(c)(ii)–(iii)), and alternatives exist (failing OFPA criteria at § 6518(m)(6)). There is sufficient supply of organic oranges to produce dried orange pulp, and those wishing to purchase this product organically could work with manufacturers to source organic raw material.

At the in-person NOSB fall meeting, the petitioner for this material provided verbal comment, and stated that they wished to continue the listing of this product. They do have customers who wish to continue the use of this nonorganic product in their organically labeled foods. During questioning from the board, the petitioner clarified the supply of organic oranges are located about an hour too far away from their processing facility, to use their patented process and make their dried orange pulp. Numerous NOSB members felt that the use of this material is very small, and in the future, the distance issues and other barriers may be overcome, choosing to allow it to remain on the list. A decisive vote is 2/3 of the NOSB members present. This threshold was not reached in the vote, therefore the motion to remove orange pulp from 205.606 failed.

**NOSB Vote:**

Motion to remove orange pulp, dried from §205.606(n) of the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): Not necessary for, or consistent with, organic handling and alternatives exist (§§ 6517 and 6518)

Motion by: Harriet Behar

Seconded by: Asa Bradman

Yes: 7 No: 5 Abstain: 0 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Seaweed, Pacific kombu

**§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”**

**Reference:** 205.606(r) **Seaweed, Pacific kombu.**

**Technical Report:** [2016 TR](#) (Marine Plants & Algae)

**Petition(s):** [2007 Petition](#)

**Past NOSB Actions:** [05/2008 NOSB recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Added to NL effective 03/15/12 ([77 FR 8089](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 03/15/2022

## [Subcommittee Review](#)

### **NOSB Review:**

Marine plants (seaweed) and algae are included on the National List in several sections and allowed for use in organic production and handling on §205.601(j)(1), §205.605 (a) and (b), §205.606(d). Currently, Kombu is used as an ingredient to make stock for instant miso soup and Yuzu Ponzu. Kombu is integral to the preparation of many Japanese traditional foods such as stock.

As a marine material, use of Kombu seaweed is part of an ongoing discussion focused on environmental concerns about the harvesting and use of marine algae and related materials and whether standards preventing overharvesting are needed to protect ocean environments. No written or oral comments were submitted by users of Kombu seaweed. There are other types of seaweed that are certified as organic, and it was unclear why this seaweed has not been certified as organic by any harvesters/sellers.

### **NOSB Vote:**

Motion to remove seaweed, Pacific kombu from the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Asa Bradman

Seconded by: Steve Ela

Yes: 3 No: 9 Abstain: 1 Absent: 1 Recuse: 0

**Outcome:** Motion failed

## Wakame seaweed

**§205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as “organic.”**

**Reference:** 205.606(v) **Wakame seaweed (*Undaria pinnatifida*).**

**Technical Report:** [2016 TR](#) (Marine Plants & Algae)

**Petition(s):** [2007 Petition](#)

**Past NOSB Actions:** [04/2007 NOSB recommendation](#); [04/2010 NOSB sunset recommendation](#); [10/2015 NOSB Final Review](#)

**Recent Regulatory Background:** Sunset renewal notice published 06/06/12 ([77 FR 33290](#)); Renewed 03/15/2017 ([82 FR 14420](#))

**Sunset Date:** 3/15/2022

## [Subcommittee Review](#)

### **NOSB Review:**

Wakame seaweed is used as an acidulant, pH control, flavoring agent, sequestrant, emulsifier, and buffering agent. Marine plants (seaweed) and algae are included on the National List in several sections and allowed for use in organic production and handling on §205.601(j)(1), §205.605 (a) and (b), §205.606(d). Wakame seaweed is a traditional accompaniment to Miso Soup in Japanese cuisine.

As a marine material, use of Wakame seaweed is part of an ongoing discussion focused on environmental

concerns about the harvesting and use of marine algae and related materials and whether standards preventing overharvesting are needed to protect ocean environments. A few commenters stated they used nonorganic Wakame seaweed in their organically labeled products. There are other types of seaweed that are certified as organic, and it was unclear why this seaweed has not been certified as organic by any harvesters/sellers.

**NOSB Vote:**

Motion to remove seaweed, wakame (*Undaria pinnatifida*) from the National List based on the following criteria in the Organic Foods Production Act (OFPA) and/or 7 CFR 205.600(b): NA

Motion by: Asa Bradman

Seconded by: Steve Ela

Yes: 3 No: 9 Abstain: 1 Absent: 1 Recuse: 0

**Outcome:** Motion failed