

**Americert International  
NOP Materials Review Policy Manual**



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## Section A. Preliminary Matters & General Provisions

### 1. Definitions:

a. The phrase “NOP regulations” as used in this collection of policies refers to Title 7 Part 205 of the United States Code of Federal Regulations (7 CFR Part 205).

b. The phrase “NOP Guidance” refers to any guidance on a particular issue received formally or informally from the USDA National Organic Program on how to apply the NOP regulations to a specific factual situation. Such guidance may have been published by the NOP in formal guidance such as the NOP Handbook (a compilation of guidance documents, policy memos, and instructions is intended to clarify policies and assist those who own, manage, or certify organic operations with complying with NOP regulations), formal training events, or written communications.

c. The phrase “Recognized Material Review Organization” (frequently abbreviated as MRO), refers to a government agency with legal authority to review agricultural inputs for compliance with NOP requirements (e.g. EPA, CDFA), a USDA NOP accredited certifying agent under the NOP which operates a materials review program which publishes its material review decisions (e.g. WSDA, PCO), or an independent organization which operates an organic materials review program which publishes its material review decisions and which Americert finds enjoys widespread recognition within the accredited certifying agents community as being reliable in its determinations (currently, only OMRI is so recognized by Americert).

d. The terms “synthetic” and “non-synthetic” shall be defined as described in section 205.2 of the NOP regulations and shall be interpreted consistent with NOP Guidance 5033-1.

e. The term “non-agricultural substance” shall be defined as described in section 205.2 of the NOP regulations. Determinations of the status of a particular substance as either a non-agricultural substances or an agricultural substance shall be made in accordance with NOP Guidance 5033-2.

f. If any term used in this collection of policies appears in §205.2 of the NOP regulations, it shall have the meaning described in §205.2 of the NOP regulations.



g. If a term does not appear as a term defined in section in §205.2 of the NOP regulations or other NOP guidance, but is defined by Americert in this collection of policies, it shall have the meaning ascribed to it in this collection of policies.

h. If a term does not appear as a defined term in §205.2 of the NOP regulations, or other NOP guidance, and is not defined by Americert in this collection of policies, it shall have its common definition as described in a commonly accepted dictionary.

### 2. General Procedures:

a. In making material review decisions, Americert will generally accept the material review decisions of recognized Material Review Organizations (MRO), unless Americert identifies a specific reason to question a material review decision made by the MRO.

b. Americert recognizes the following Material Review Organizations:

- *California Dept. of Food and Agriculture* (CDFA) Organic Input Material Program: [https://www.cdfa.ca.gov/is/ffldrs/fertilizer\\_OIM.html](https://www.cdfa.ca.gov/is/ffldrs/fertilizer_OIM.html)
- *Environmental Protection Agency* (EPA): Organic Pesticide Labeling: No master list or database provided. They approve the use of their logo (and variants):  or . With the language “for organic production” or “for organic gardening”. The presence of the logo purports to mean that the pesticide and all its inert ingredients

meet the NOP requirements for use. No master list or database provided, but the validity of labels can be verified by contacting: Chris Pfeifer, [pfeifer.chris@epa.gov](mailto:pfeifer.chris@epa.gov) (Ph: 703-244-7991).

- *Organic Materials Review Institute (OMRI)*: <https://www.omri.org>. Americert has a contract with OMRI to access their materials and to have technical support on material decisions as needed. Contact: Peter Bungum, Senior Technical Coordinator, [peterb@omri.org](mailto:peterb@omri.org) (or [technicalsupport@omri.org](mailto:technicalsupport@omri.org)) (Ph: 541.343.7600 x130).
- *Pennsylvania Certified Organic (PCO)*, a USDA accredited certifying agent that does material reviews and has a contract with Americert for access to their decisions. These resources are downloaded to our internal files. Contact: Hector Nunez, Materials Program Asst. Manager, [hnunez@paorganic.org](mailto:hnunez@paorganic.org) (Ph: (814) 422-0251, ext. 284).
- *Washington State Department of Agriculture (WSDA) Organic Input Material Registration*: A USDA accredited certifying agent which operates a public list of material reviews. <https://agr.wa.gov/departments/organic/input-material-registration>.

c. Material decisions shall be made by Americert for each material listed in an organic operation's system plan, identified as used during inspections, and when an applicant or client requests to use a material.

d. The first step in making a material decision will be to determine if the material in question has already been reviewed by Americert International, or another recognized Materials Review Organization. If so, and if that review is current, Americert will adopt that decision including restrictions, prerequisites, or conditions for use, unless there is reason to question the material decision.

e. A previous determination by Americert International or another recognized Materials Review Organization will be considered current if the Americert review of the material or adoption of the MRO determination was made within the current calendar year. Another MRO's material decision will be considered current if it was listed or published by the MRO within the previous two years and there is no information indicating that the approval has been rescinded.

f. When there is no current previous determination made regarding a material, Americert shall initiate a formal review of that material using the policies and procedures described in this manual.

g. In conducting the formal review, Americert shall determine whether or not the material is an allowed or prohibited synthetic, whether or not the material is an allowed or prohibited non-synthetic, whether or not the material is agricultural or non-agricultural, produced using excluded methods (GMOs), irradiation, or sewage sludge, as appropriate to the material and the proposed use.

h. Americert shall only approve materials which receive a formal review when the material and its proposed use is consistent with the NOP organic regulations and guidance.

i. In making determinations of the synthetic or non-synthetic status of a material, Americert shall use the definition provided in section 205.2 of the regulations, and the NOP's classifications of such materials already made in sections 205.601, 205.603, 205.605 of the NOP organic regulations and in NOP Guidance 5034, 5034-1, 5034-2, or 5034-3. When necessary, Americert shall also use the synthetic/non-synthetic decision tree provided in NOP 5033-1. The review shall also encompass the manufacturing process to account for instances when a material begins as a non-synthetic but becomes, through processing, a synthetic material. Once again, the aforementioned guidance documents including the decision tree from NOP 5033 shall be used where necessary.

j. Where it is necessary to make a determination of the agricultural/non-agricultural status is necessary, Americert shall use the definitions in 205.2 as applicable as well as the NOP's classifications of such materials already made in 205.605, or in guidance documents such as 5033. When necessary, Americert shall also use the agricultural/non-agricultural decision tree provided in NOP 5033-2.

k. Where it is necessary to determine if a material was produced without the use of excluded methods (GMOs), Americert shall use the definition provided in section 205.2 of the regulations. While most determinations regarding the use of excluded methods (GMOs) will be straightforward, where they are not, Americert adopts the determination method used by OMRI, a recognized Materials Review Organization, as described OMRI Generic Materials List-OMRI Standards Manual for NOP Review, Appendix B: Excluded Methods (GMO) Determination Guide.

i. Where it is necessary to make a determination of whether or not a material is produced using irradiation, Americert shall use the definition provided in section 205.10f (f) "ionizing radiation" as well as the definition of the same in 21 CFR 179.26 provided by the FDA. Per the preamble to the Definitions section of the NOP Final Rule, Americert does not consider the use of UV light, microwaves, or X-rays (when used only to monitor for contaminants e.g. metal fragments, stones, etc.) to be prohibited uses of ionizing radiation.

j. Where it is necessary to make a determination of whether or not a material was produced using sewage sludge, Americert shall use the definition provided in section 205.2 of the regulations.

m. For materials undergoing formal review, Americert shall request and review the following, as appropriate:

- The full ingredient list. Note that the label itself cannot function as the full ingredient list of a multi-ingredient product.
- Information on the manufacturing process.
- Information on how the client intends to use the material.
- Documentation that the material is produced without the use of excluded methods, irradiation, or sewage sludge.
- Other information required due to an annotation, restriction, or precondition of use as listed in the NOP organic regulations.

n. All material decisions adopted or made through formal review shall be communicated to the applicant or client in writing as described in this manual.

o. All material decisions adopted or made through formal review shall be recorded in the applicant's or client's file as described in this manual.

p. Where any aspect of the review of a material is permitted to deviate from the general policies in this section, such derogations shall be described in the section specifically covering that material or class of materials elsewhere in this manual.

## Section B. Crop and Soil Inputs

### 1. Fertilizers and Soil Amendments:

a. Definition: A single or blended substance containing one or more recognized plant nutrient(s) which is used primarily for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth. May also provide a soil conditioning function. May be applied to the soil or foliarly. Ref: §205.2  
Example(s): micronutrients, raw manure, compost.

b. Review Criteria:

- Must have complete ingredients for review. For multi-ingredient manufactured products the ingredient list on the label is not sufficient.
- Must have current product label for review.
- Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
- Synthetic ingredients are allowed if listed at §205.601(j) and meet applicable annotations.
- Microorganism ingredients, microbial ingredients and citric acid must be non-GMO.
- Must not contain sewage sludge (biosolids).
- Operator must not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

Ref: §205.105(a); 205.105(b); 205.105(e); 205.2; 205.203(c); 205.203(d); 205.203(e); 205.601(j); 205.602

c. Sodium Nitrate/Chilean Nitrate: Generally, Americert will approve the use of sodium nitrate as a fertilizer only where one of the following applies:

The sodium nitrate used by the operation represents no more than 20% of the total nitrogen requirement for the crop, or; The operation undertakes practices to prevent contamination of crops, soil, and waterways with excessive sodium or nitrogen from sodium nitrate.

An applicant or certified operation must disclose under which of the above options it demonstrates compliance with section 205.203's requirements to prevent contamination of crops, soil, and waterways when using highly soluble sodium nitrate using practices such as limiting sodium nitrate to 20% of nitrogen applied or through the use of practices such as applying only under plastic mulch, incorporation into soil rather than broadcasting, precision application at plant base, crop rotation and cover crops not using sodium nitrate, only applying in response to identified deficiency, monitoring soil sodium levels, use of features to prevent run off (e.g. terraces, ditches, swales), etc.

Ref: §205.105(b); 205.602(g); NOP Notice 12-1; 205.200; 205.203(d)(e); 205.400(f)

d. Compost: Compost must be reviewed, even when it comes from a certified organic operation or is produced on farm. This includes mushroom compost purchased from certified organic mushroom houses.

All feedstock and other ingredients must comply with review criteria for fertilizers and soil amendments, except compost may also contain feedstock approved at §205.601(c).

Compost that contains only plant materials and no animal materials is permitted for use without restriction, even if it does not meet the compost requirements at §205.203(c)(2).

If compost contains animal materials (raw manure, dehydrated manure, or livestock mortalities), Americert must review the compost manufacturing process, including type of composting system (windrow, static aerated etc.), initial C:N ratio, mixing procedure, documentation of temperatures reached and time the temperatures were maintained, turning frequency, and start/end dates. Compost that is produced in accordance with the following criteria may be used without restriction:

- Compost with an initial C:N ratio between 25:1 and 40:1 and produced in windrows must maintain temperatures between 131-170F for 15 days during which time the materials must be turned a minimum of 5 times.
- Compost with an initial C:N ratio between 25:1 and 40:1 and produced in a static aerated pile or in-vessel must maintain temperatures between 130-170F for 3 days.
- Compost produced on an organic operation wherein the compost pile is mixed to ensure that all of the feedstock heats to the minimum of 131F (55C) for a minimum of three days. Monitoring must be documented in accordance with §205.203(c) and verified during the site visit.

Compost that contains any animal materials and does not meet the above criteria must comply with the policy on raw manure.

Americert may request additional information deemed necessary to evaluate compliance with the regulations (§§ 205.201(a)(1) and 205.201(a)(6)), including but not limited to the results of bioassay testing or other quality assurance testing from the compost supplier or results of any on-farm bioassay testing.

Operator must not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

Ref: §205.203(c)(2); 205.601(c); NOP Guidance 5021

#### e. Compost Tea and Extract:

All ingredients must meet review criteria for fertilizers and soil amendments.

Compost used to produce compost tea or extract must comply with the policy on compost.

Compost tea or compost extracts that contain animal materials (e.g. raw manure) are not allowed for the production of edible seed sprouts.

Operator must not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

Testing for pathogens is not required. Good Agricultural Practices (GAP) are encouraged when using compost tea or extracts on crops for human consumption.

Ref: §205.203(c)(2); NOP Guidance 5021

f. High Nitrogen Liquid Fertilizers: Liquid fertilizers with nitrogen analysis greater than 3% are considered High Nitrogen Liquid Fertilizers (HNLF) and are prohibited unless reviewed and approved by an Americert recognized Materials Review Organization, in accordance with NOP 5012. Americert will not review high nitrogen liquid fertilizers that are not reviewed and approved by an Americert recognized Materials Review Organization, in

accordance with NOP 5012, including the requirement for the MRO to conduct onsite inspections of the manufacturer.

Ref: NOP Guidance 5012

g. Manure - Dehydrated or Processed: Dehydrated (processed) manure that is produced in accordance with the following criteria may be used without restriction: Must be treated so that all portions of the product, without causing combustion, reach a minimum temperature of either 150F (66C) for at least 1 hour or 165F (74C), and are dried to a maximum moisture level of 12%, or an equivalent heating and drying process could be used. In determining the acceptability of an equivalent process, processed manure products should not contain more than  $1 \times 10^3$  (1,000) MPN (Most Probable Number) fecal coliform per gram of processed manure sampled and not contain more than 3 MPN Salmonella per 4 gram sample of processed manure.

Input materials that contain dehydrated manure must comply with the review criteria for fertilizers and soil amendments.

Ref: NOP Guidance 5006

h. Manure-Raw:

Raw manure may be applied to land used for crops not intended for human consumption without restriction.

If raw manure is applied to land used for crops intended for human consumption, the manure must be incorporated into the soil not less 90 days prior to the harvest of a product whose edible portion does not have direct contact with the soil, or incorporated into the soil not less than 120 days prior to the harvest of a product whose edible portion has direct contact with the soil.

If raw manure is applied in a foliar fashion, operator must wait 120 days to harvest after application if raw manure has direct contact with the edible portion of the crop, or 90 days to harvest after application if raw manure does not have direct contact with the edible portion of the crop.

If raw manure is used as an ingredient in potting mixes or greenhouse media, the number of days to harvest should be counted from the date when the seed is planted into the potting mix.

The source or origin of manure is not restricted, provided that the raw manure does not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

Input materials that contain raw manure must comply with the review criteria for fertilizers and soil amendments.

Ref: §205.203(c)(1)

i. Microbials and Microorganisms in Crop Production:

Microbials, microorganisms, fermentation products, enzymes, and citric acid must not be produced using excluded methods (i.e. non-GMO). Must not contain additional prohibited ingredients (e.g. fortified with synthetic plant nutrients or synthetic dyes).

May not be cultured on sewage sludge.

Synthetic growth media not approved for use as plant or soil amendments at § 205.601 must not be present in the formulated product.

j. Micronutrients in Crop Production: Allowed micronutrients include soluble boron products and sulfates, carbonates, oxides, or silicates of zinc, copper, iron, manganese, molybdenum, selenium, and cobalt. Micronutrients made from nitrates or chlorides are not allowed. Micronutrients must not be used as a defoliant,



herbicide, or desiccant. Input materials that contain micronutrients must comply with the review criteria for fertilizers and soil amendments.

When using synthetic micronutrients as plant or soil amendments in organic crop production, deficiency of each micronutrient must be documented. Americert may accept the following documentation for micronutrient deficiency:

- Micronutrient deficiency may be documented by testing. Testing may include soil, tissue, or sap tests for the specific micronutrient and comparing test results with adequate or desired levels of the micronutrient for a particular crop or soil type.
- Americert may accept justification of a micronutrient deficiency from an independent scientific source (e.g. extension agent, agronomist, academic publications) that utilize testing as supporting evidence for their conclusions. Examples may include: a report showing that representative testing methods demonstrate a systemic deficiency across a particular region, or that particular soil conditions contribute to deficiencies of specific micronutrients, or that particular visual indicators of the plant are indicative of a deficiency in a specific micronutrient.
- Americert may perform residue testing of soil to verify compliance with 205.203(d) which requires operators to not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

If using pre-formulated bagged potting mixes or greenhouse media for production of transplants or planting stock and the mix contain synthetic micronutrients, operators are not required to submit documentation regarding micronutrient deficiencies. If mixing on-farm or if additional synthetic micronutrients are added to a pre-mixed product, the operator must provide documentation that shows usage rates are at or below recommended rates and include justification for the use of any additional synthetic micronutrients.

Ref: §205.601(j)(6)

k. Minerals in Crop Production: Minerals from natural origin that have not undergone synthetic processing or contain prohibited additives are allowed, unless otherwise prohibited or restricted at §205.602. Input materials containing minerals must meet the review criteria for fertilizers and soil amendments.

Ref: §205.203(d)(2); 205.203(d)(3)

l. Spent Mushroom Substrate in Crop Production: Spent mushroom substrate is not required to be sourced from an organic mushroom house.

All ingredients in spent mushroom substrate must meet the review criteria for fertilizers and soil amendments. If mushroom soil or spent mushroom substrate contains animal materials (e.g. raw manure), operator must follow raw manure restriction unless it is composted in accordance with the policy on compost.

The use of spent mushroom substrate must not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

Ref: §205.203(d)(2); 205.203(d)(3)

m. Mushroom Substrate: All ingredients in mushroom substrate must meet the review criteria for fertilizers and soil amendments.

n. Potting Mixes and Greenhouse Media: All ingredients in potting mixes and greenhouse media must meet the review criteria for fertilizers and soil amendments. If using pre-formulated bagged potting mixes or greenhouse media that contain synthetic micronutrients, operators are not required to submit documentation regarding

micronutrient deficiencies. If mixing on-farm or if additional synthetic micronutrients are added to a pre-mixed product, the operator must provide documentation that shows usage rates are at or below recommended rates and include justification for the use of any additional synthetic micronutrients.

o. Vermicompost / Worm Castings: Worm castings are considered a non-synthetic material and are not considered to be raw manure. Americert must review vermicomposting procedure including type of composting system, production methodology, moisture levels, and start/end dates.

Vermicompost production that is produced in accordance with the following criteria may be used without restriction:

Aerobicity is maintained by regular additions of thin layers of organic matter at 1-3 day intervals, moisture is maintained at 70-90%, duration of vermicomposting is at least 12 months for outdoor windrow, 4 months for indoor container systems, 4 months for angled wedge systems, or 60 days for continuous flow reactors.

Vermicompost that contains only plant material and no animal materials (e.g. raw manure) maybe used without restriction, and does not need to meet additional vermicompost production requirements.

Vermicompost containing animal materials that meets the vermicompost production requirements may be used without restriction.

Vermicompost that contains animal materials that does not meet vermicompost production requirements must comply with the policy on raw manure.

Ref: §205.203(c)(2); 205.601(c); NOP Guidance 5021

p. Inoculants: Inoculants, depending on use, may be soil amendments or crop production aids. When inoculants are applied to soil, growing media, seeds, planting stock, or plants they must meet all the review criteria for fertilizers and soil amendments. It is emphasized that the review must include proof that all ingredients are non-GMO including the inoculant itself.

## **2. Crop Production Aids:**

a. Definition: Material used in the production of crops that does not provide recognizable plant nutrient, soil conditioning, or crop protection function. Examples include seed inoculants, irrigation line cleaners, etc.

### b. Review Criteria:

- Must have complete ingredients for review.
- Must have current product label for review.
- Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
- Synthetic ingredients are allowed if listed at §205.601 and meet applicable annotations.
- Microbial ingredients and citric acid must be non-GMO.
- Must not contain sewage sludge (biosolids).
- Operator must not contribute to contamination of crops, soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances.

Ref: §205.105(a); 205.105(b); 205.105(e); 205.203(c); 205.203(e); 205.601; 205.602

c. Algicides, Disinfectants, and Sanitizers: Synthetic materials that are allowed as algicides, disinfectants, and sanitizers in organic crop production are included on the National List of Allowed and Prohibited Substances (National List) at 7 CFR §205.601(a). Substances listed at §205.601(a) may be used by organic crop operations only in accordance with the allowances on the National List.

In addition, pesticide products, including algicides, disinfectants, and sanitizers, used in the United States must be registered (licensed) by EPA, unless the product is exempt from registration under FIFRA 25(b) criteria. Under EPA authority, pesticide use must be consistent with use directions contained on the label or labeling.

This means that in order to comply with both the EPA and USDA organic regulations, pesticide products containing any substance listed at §205.601(a) as an active ingredient must be registered with the EPA and labeled as an algicide, disinfectant, or sanitizer when it is intended for use as an algicide, disinfectant, or sanitizer.

The use of an algicide, disinfectant, or sanitizer for a technical or functional effect *within* a product formulation, when the final product is not labeled as an algicide, disinfectant or sanitizer, is not consistent with the allowance of materials listed at §205.601(a) of the National List. (Except that this policy does not affect the use of inert ingredients that are otherwise permitted in pesticide products at § 205.601(m) of the National List.) For example, a formulated fertilizer may not contain an ingredient intended to act as an algicide within the fertilizer unless that ingredient is a non-synthetic not prohibited at §205.602 or a synthetic ingredient allowed as a fertilizer at §205.601.

Ref: §205.601(a); 205.601(m); NOP Memo 13-3

d. Chlorine used in Crop Production: Information on the specific form of chlorine in a material is required. Allowable forms of chlorine include calcium hypochlorite, chlorine dioxide, sodium hypochlorite and hypochlorous acid generated by electrolyzed water. Elemental chlorine (e.g. chlorine gas) is not an allowed form of chlorine and shall not be approved for use in contact with crop, soil, or water having contact with soil or crops.

EPA registered chlorine products containing only approved chlorine active ingredients are permitted. Other non-chlorine ingredients in chlorine formulation must be reviewed and meet the review criteria for crop production aids if EPA registration cannot be confirmed.

For pre-harvest use, residual chlorine levels in the water in direct crop contact or as water from cleaning irrigation systems applied to soil must not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act (SDWA), except that chlorine products may be used in edible sprout production according to EPA label directions. The maximum residual disinfectant limit under the Safe Drinking Water Act is 4 mg/L (4 ppm) expressed as chlorine, 0.8 mg/L (0.8 ppm) when expressed as chlorine dioxide.

For post-harvest use, water used in direct crop contact may contain chlorine materials at levels approved by the FDA or the EPA for such purpose (i.e. greater than SDWA limits). However, if chlorine levels in the water exceed SDWA limits, the operator must rinse the crop with potable water (i.e. not greater than SDWA limits).

Potassium hypochlorite is a chlorine material listed in section 205.601(a)(2) as an algicide, disinfectant, or sanitizer (including for irrigation system cleaning) and specifically listed as allowed "for use in water for irrigation purposes". The ACA training in 2022 for this annotation noted however, that potassium hypochlorite would not be allowed for use in edible sprout production.

Ref: §205.601(a)(2); NOP Guidance 5026; Policy Memo 15-4

e. Foam Markers: Foam markers when used in spraying must meet the review criteria for production aids.

f. Forage and Silage Treatments: Non-synthetic materials are allowed unless otherwise prohibited or restricted on the National List. Synthetic materials are allowed only if listed on the National List for the specific intended use.

May contain feed additives at 205.603(d) provided that the product is labeled for silage or forage treatment purposes. Microbials must be non-GMO. Agricultural ingredients are not required to be organic.

Ref: §205.237(a)

**g. Grafting Materials:** All ingredients in grafting materials such as paints, tapes, waxes and other sealants must comply with the review criteria for crop production aids. Grafting equipment, such as clips and bands, is allowed. Additional review by Americert is not necessary for equipment.

Ref: §205.601

**h. Irrigation Line Cleaners and Water Additives:** All ingredients in irrigation water line cleaners and water additives must comply with the review criteria for crop production aids. Chlorine may be used in accordance with the policy on chlorine in crop production. Citric acid must be non-GMO. Information on the specific form of chlorine in a chlorine material is required. Allowable forms of chlorine include calcium hypochlorite, chlorine dioxide, sodium hypochlorite and hypochlorous acid generated by electrolyzed water. Elemental chlorine (e.g. chlorine gas) is not an allowed form of chlorine and shall not be approved for use in contact with crop, soil, or water having contact with soil or crops. See page 11, Section B(2)(d) for further restrictions and requirements on chlorine use including allowed levels of permitted chlorine materials in water.

Ref: §205.601(a)

**i. Seed Treatments:** All ingredients in seed treatments (including inoculants and pelleting agents) must meet the review criteria for crop production aids. Sanitizers must meet the review criteria for crop production aids. Also see the policy on chlorine used in crop production. Pesticides or fungicides must meet the review criteria for invertebrate pest or disease control.

Ref: §205.601

### **3. Vertebrate Pest Control:**

**a. Definition:** Material used for vertebrate pest control. May be applied to the soil or to the foliage of plants, unless restrictions apply otherwise. Example(s): deer or mole deterrent, rodent bait.

**b. Review Criteria:**

- Must have complete ingredients for review.
- Must have current product label for review.
- Must have EPA Registration Number for review, if registered.
- Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
- Synthetic ingredients are allowed if listed at §205.601(d) or §205.601(g) and meet applicable annotations.
- May include inert ingredients in accordance with the policy on inert ingredients in pest, weed, and disease control materials.
- Operator must document the use of preventative, mechanical, physical, and other pest management practices in the Organic System Plan.

Ref: §205.105(a); 205.105(b); 205.105(e); 205.206; 205.601(d); 205.601(g); 205.601(m); 205.602

### **4. Invertebrate Pest Control:**

**a. Definition:** Material used for invertebrate/insect pest control. May be applied to the soil or foliarly unless restrictions apply otherwise. Example(s): insecticidal soaps, horticultural oils, pheromones.

**b. Review Criteria:**

- Must have complete ingredients for review.
- Must have current product label for review.

- Must have EPA Registration Number for review, if registered.
  - Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
  - Synthetic ingredients are allowed if listed at §205.601(e), §205.601(f), or §205.601(h), and meet applicable annotations.
  - May include inert ingredients in accordance with the policy on inert ingredients in pest, weed, and disease control materials.
  - Operator must document the use of preventative, mechanical, physical, and other pest management practices in the Organic System Plan.
- Ref: §205.105(a); 205.105(b); 205.105(e); 205.206; 205.601(e); 205.601(f); 205.601(h); 205.601(m); 205.602

c. Adjuvants in Pest, Weed, and Disease Control Materials: All ingredients in a stand-alone agricultural spray adjuvant product must meet the review criteria for inert ingredients in pest, weed, and disease control materials, and are only allowed for use with active ingredients that meet the review criteria for invertebrate pest, weed, or disease control.

Ref: §205.601(m)

d. Biological Controls: Beneficial insects and nematodes are considered non-synthetic materials and are allowed. Agricultural carriers are not required to be organic.

Ref: §205.105(b)

e. EPA Registration Numbers: If a pesticide product is EPA registered “For Organic Production,” Americert can allow all products with this EPA registration number as pesticides.

Ref: NOP 3012: Material Review Interim Instruction

f. Horticultural Oils: Petroleum Based Narrow Range oils are permitted as dormant, suffocating, and summer oil for the purposes of plant disease and insect control, provided that substance meets definition: Petroleum derivatives, predominantly of paraffinic and naphthenic fractions with 50 percent boiling point between 415 and 440 °F. Aromatic petroleum solvents including benzene, naphthalene, toluene, and xylene are prohibited. Non-synthetic forms are also allowed (must be animal (e.g., fish) or plant derived).

Ref: §205.601(e)(7), §205.601(i)(7)

g. Inert Ingredients in Pest, Weed, and Disease Control Materials: Pest, weed, and disease control materials may include inert ingredients in combination with allowed active ingredients, provided that the inert ingredients meet one of the following criteria:

- Non-synthetic substance not prohibited or restricted at §205.602
  - Synthetic substance classified by the EPA as an Inert of Minimal Concern (EPA List 4 A or B) minus the revoked ingredients.
  - Synthetic substance classified by the EPA as an Inert of Unknown Toxicity (EPA List 3): only for inert ingredients in passive pheromone dispensers.
- Ref: §205.105(a); 205.105(b); 205.601(m); NOP Guidance 5008

h. Pheromones: All pheromones as active ingredients are allowed. Inert ingredients must comply with the policy on inert ingredients in pest, weed, and disease control materials. Input materials that contain pheromones must comply with the review criteria for invertebrate pest control.

Ref: §205.601(f); 205.601(m)

i. Soap-based Insecticides: All ingredients in soap-based insecticides must meet the review criteria for pest control. Active ingredient must be based on potassium or ammonium salts of fatty acids.

Ref: §205.206(e); 205.601(e)

j. Sticky Traps and Barriers: Sticky traps and barriers that do not contain prohibited pesticides or other prohibited materials are allowed. The adhesive glue used to capture the insects does not contact organic crops and is allowed.

Ref: §205.601(e)(9)

## 5. Disease Control:

**a. Definition:** Material used for disease control. May be applied to the soil or to the foliage of plants unless restrictions apply otherwise. Example(s): fungicides.

### **b. Review Criteria:**

- Must have complete ingredients for review.
- Must have current product label for review.
- Must have EPA Registration Number for review, if registered.
- Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
- Synthetic ingredients are allowed if listed at §205.601(i) and meet applicable annotations.
- May include synthetic inert ingredients in accordance with the policy on inert ingredients in pest, weed, and disease control materials.
- Operator must document the use of preventative, mechanical, physical, and other disease management practices in the Organic System Plan.

Ref: §205.105(a); 205.105(b); 205.105(e); 205.206; 205.601(i); 205.601(m); 205.602

## 6. Weed Control:

**a. Definition:** Material used for weed control. May be applied to the soil or to the foliage of plants unless restrictions apply otherwise. Examples: herbicides, mulch, tobacco sucker controls.

### **b. Review Criteria:**

- Must have complete ingredients for review.
- Must have current product label for review.
- Must have EPA Registration Number for review, if registered.
- Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
- Synthetic ingredients are allowed if listed at §205.601(b) and meet applicable annotations.
- May include synthetic inert ingredients in accordance with the policy on inert ingredients in pest, weed, and disease control materials.
- Operator must document the use of preventative, mechanical, physical, and other weed management practices in the Organic System Plan.

Ref: §205.105(a); 205.105(b); 205.105(e); 205.206; 205.601(b); 205.601(m); 205.602

**c. Biodegradable Mulch:** Biodegradable biobased mulch films as defined in §205.2 are allowed for weed control, provided that they are produced without organisms or feedstock derived from excluded methods. Brand-name materials must be reviewed to evaluate if the product complies with the criteria in the definition and restrictions in the listing of biodegradable biobased mulch film. Products should be reviewed to verify that all of the polymer feedstocks are biobased. Pigments and processing aids are not considered feedstocks. ASTM International defines biobased as organic material in which carbon is derived from a renewable resource via biological processes. Biobased materials include all plant and animal mass derived from carbon dioxide recently fixed via photosynthesis, per definition of a renewable resource. Biobased feedstocks are composed of biological products or renewable agricultural or forestry materials. Biodegradable mulch film that contains non-biobased synthetic polymer feedstocks, such as petrochemical resins, does not comply with the USDA organic regulations.

The use of approved biodegradable biobased mulch film must comply with other parts of the organic regulations that require production practices that maintain or improve soil quality and other environmental conditions

(§205.200 and §205.203). Operators will need to take appropriate actions to ensure complete degradation of the mulch film, which maybe site-specific and may be impacted by a number of factors including climate, soil type, pH, soil microbial activity, irrigation, and other production practices. Operations that allow mulch film to accumulate in the soil or otherwise allow the mulch film to negatively impact soil or water quality will be subject to a noncompliance.

Ref: §205.2; 205.601(b)(2)(iii); NOP Policy Memo 15-1

d. Plastic Mulch, Landscape Cloth, Ground Cover: Plastic and other synthetic mulches and covers (petroleum-based other than polyvinyl chloride (PVC)) are allowed for weed control, provided that they are removed from the field at the end of the growing or harvest season. For perennial crops harvested over more than one season, synthetic plastic mulch may be used provided it is removed before it breaks down or degrades. The operator must monitor perennial systems and remove it before it breaks down or degrades.

Ref: §205.2, §205.206(c)(6), §205.601(b)(2)(ii), NOP Policy Memo 15-1, NOP 5034-1

e. Soap-based Herbicides:

All ingredients in soap-based herbicides must meet the review criteria for weed control.

Active ingredient must be based on potassium or ammonium salts of fatty acids.

Soap-based herbicides are only allowed for use in farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops and may not be used in organic production areas (fields).

## **7. Plant Growth Regulators:**

a. Definition: A plant growth regulator is any substance or mixture of substances intended, through physiological action, for accelerating or retarding the rate of growth or rate of maturation, or for otherwise altering the behavior of plants or the produce thereof, but shall not include substances to the extent that they are intended as plant nutrients, trace elements, nutritional chemicals, plant inoculants, and soil amendments. Also, the term “plant regulator” shall not be required to include any of such of those nutrient mixtures or soil amendments as are commonly known as vitamin-hormone horticultural products, intended for improvement, maintenance, survival, health, and propagation of plants, and as are not for pest destruction and are nontoxic, nonpoisonous in the undiluted packaged concentration.

b. Review Criteria:

- Must have complete ingredients for review.
- Must have current product label for review.
- Must have EPA Registration Number for review, if registered.
- Non-synthetic ingredients are allowed unless prohibited or restricted at §205.602.
- Synthetic ingredients are allowed if listed at §205.601(k).
- May include synthetic inert ingredients in accordance with the policy on inert ingredients in pest, weed, and disease control materials.
- Operator must document the use of preventative, mechanical, physical, and other pest management practices in the Organic System Plan.

Ref: §205.601(k)

## Section C. Post-Harvest Materials:

1. Definition: Material used on an organic agricultural commodity after it has been harvested and before processing.

2. Review Criteria:

- Must have complete ingredients for review.
- Must have current product label for review.
- Materials specifically listed at §205.601 for post-harvest use or §205.605 for post-harvest use are allowed and must meet applicable annotations.
- Substances allowed for use in handling in § 205.605 of the National List, with no specific use restrictions that prevent post-harvest use, may be used in post-harvest handling of raw agricultural products.
- Non-synthetic materials not prohibited (or restricted) by section 205. 602.
- Inert ingredients in post-harvest pest control materials must either be allowed at §205.601(m) or a nonsynthetic substance not restricted or prohibited at §205.602.
- Used on organic agricultural commodities post harvest and prior to processing of the commodity.

3. Cleaning and Sanitizing Activities: If the material is used in the context of cleaning and sanitizing whole fruits and vegetables in their raw form prior to further processing the material will not affect the 100% organic status of the agricultural product.

4. Food Processing Operations: If the material is used in context of a processing organic system plan and has contact with the fruit once cut, peeled, or otherwise processed, the material is considered a processing aid and must meet the review criteria for a non-organic ingredients and processing aids.

5. Other Examples:

NOP 5023 (Post Harvest Handling) provides the following *examples* of permitted (sometimes with restrictions) post-harvest handling substances allowed in contact with unprocessed organic agricultural commodities:

- Non-synthetic substances not prohibited or restricted by 205602: diatomaceous earth (pest control in grain bins), pyrethrum, bacillus thuringiensis, clove oil (for sprout inhibition in potatoes)
- 205.601: lignin sulfonate & sodium silicate (as floating agents)
- 205.605: ethylene (for tropical fruit ripening), chlorine (with restrictions), peracetic acid, carbon dioxide, nitrogen gas, ozone

NOP 5023 also provides the following *examples* of post harvest materials not allowed in contact with organic products post-harvest including in contact with unprocessed organic agricultural commodities:

- 205.601-copper sulfate, narrow range oils, elemental sulfur, insecticidal soaps , synthetic ethanol, isopropyl alcohol, boric acid



When there is any doubt about a material to be review for post harvest use please refer to the decision tree in Appendix B of NOP 5023.

## Section D. Processing

### 1. Non-Organic Ingredients and Processing Aids:

#### a. Definition:

A non-organic ingredient is a material that is used in the preparation of an organic product that is still present in the final commercial product as consumed.

A processing aid is:

- (1) Substance added to food during processing but is removed in some manner from the food before it is packaged in its finished form;
- (2) substance added to food during processing, is converted into constituents normally present in the food, and does not significantly increase the amount of the constituents naturally found in the food; and
- (3) substance added to food for technical or functional effect in the processing but is present in the finished food at insignificant levels and does not have any technical or functional effect in that food. (§205.2)

Example(s): salt, yeast, baking soda, colors, flavors, filtering aids, ripening hormones, leavening agents, egg washes and defoamers

#### b. Review Criteria:

- The review criteria for non-organic ingredients and processing aids is dependent on the labeling category of the final processed product.
- Must not use volatile synthetic solvents or other synthetic processing aids not allowed under §205.605 in products labeled “100% organic” or “organic”.
- FDA direct and secondary direct food additives are subject to review as processing aids. FDA indirect food additives (e.g. sub-ingredients in packaging materials) are considered outside the scope of Americert material review.

Used in processing of “100% organic” products:

- All ingredients and processing aids must be certified organic.

Used in processing of “organic” products

- Non-agricultural ingredients and processing aids must be allowed on §205.605 and meet applicable annotations.
  - Agricultural ingredients and processing aids must be allowed on §205.606 and meet applicable annotations.
- Operator must demonstrate commercial unavailability of organic form.
- Must be produced without the use of excluded methods, sewage sludge, or ionizing radiation. Written verification is considered valid for 3 years after signing.

Used in processing of “made with organic” products

- Non-agricultural ingredients and processing aids must be allowed on §205.605 and meet applicable annotations.
  - Agricultural ingredients and processing aids are not required to be organic.
  - Must be produced without excluded methods, sewage sludge, or ionizing radiation.
  - Non-organic agricultural ingredients may be produced without regard to §205.301(f)(4)-(7):
- (4) Be processed using processing aids not approved on the National List of Allowed and Prohibited Substances in subpart G of this part: Except, That, products labeled as “100 percent organic,” if processed, must be processed using organically produced processing aids;
- (5) Contain sulfites, nitrates, or nitrites added during the production or handling process, Except, that, wine containing added sulfites may be labeled “made with organic grapes”;
- (6) Be produced using non-organic ingredients when organic ingredients are available; or
- (7) Include organic and non-organic forms of the same ingredient.

Ref: §205.105; 205.270; 205.301; 205.605; 205.606

c. Ancillary (“Other”) Ingredients in Handling Materials:

Must comply with applicable annotations as listed at §205.605 or §205.606.

Not required to be organic unless specified by the annotation.

Ancillary (“Other”) ingredients that are mentioned in petition, technical report, and/or NOSB recommendation and not prohibited or restricted by an annotation are considered to have been reviewed and allowed by the NOSB when the material was added to the National List.

Ancillary (“Other”) ingredients in a material on §205.605(a) that are not mentioned in petition, technical report, and/or NOSB recommendation and not addressed in the annotation must be non-synthetic, unless otherwise indicated by Americert policy.

Ancillary (“Other”) ingredients in a material on §205.605(b) or §205.606 that are not mentioned in petition, technical report, and/or NOSB recommendation and not addressed in the annotation must be non-synthetic or synthetic listed on §205.605(b), unless otherwise indicated by Americert policy.

Ancillary (“Other”) ingredients in salt (sodium chloride) must be non-synthetic or synthetic listed on §205.605(b).

Ref: §205.105(c), 205.105(d), 205.605, 205.606

d. Casings: Casing must be organic or on the National List, either at 205.606 (casings from processed intestines) or 605(b) (cellulose for regenerative casing). Hard plastic or metal molds are considered equipment instead of processing aid, and operator must take measures to prevent contamination of organic food.

Ref: §205.605(b), §205.606

e. Cheese Wax: Americert must confirm the function and intended use of cheese wax with the operator or manufacturer:

Cheese wax that is edible and intended to be consumed is considered an ingredient and must be organic or comply with the review criteria on non-organic ingredients and processing aids.

Cheese wax that is intended to be removed by the handler is considered a processing aid and must comply with the review criteria on non-organic ingredients and processing aids.

Cheese wax that is intended to be removed by the consumer prior to consumption is considering a packaging material and must not contain fungicides, preservatives or fumigants (per 205.272). Sub-ingredients of packaging are considered by FDA to be indirect food additives and are considered outside of the scope of Americert material review.

f. Chlorine Used in Egg Breaking Facilities: When chlorine sanitizers are used on the shells of eggs that are further processed ("breaker eggs"), the NOP defers to the USDA Food Safety and Inspection Service (FSIS) requirement. The FSIS regulations require that immediately prior to breaking, all shell eggs shall be spray rinsed with potable water containing an approved sanitizer of not less than 100 parts per million (ppm) nor more than 200 ppm of available chlorine, or its equivalent. The FSIS regulations further specify that the eggs must be sufficiently dry before breaking, but do not provide for a rinse with potable water.

Ref: §205.605(b); NOP Memo 14-2

g. Chlorine Used in Processing and Handling: Information on the form of chlorine is required. Allowable forms of chlorine include calcium hypochlorite, chlorine dioxide, sodium hypochlorite and hypochlorous acid generated by electrolyzed water. Elemental chlorine (e.g. chlorine gas) is not an allowed form of chlorine in contact with organic products and shall not be approved for contact use. EPA registered chlorine products containing only approved chlorine active ingredients are permitted. Other non-chlorine products in chlorine formulations must be on the National List as cleaners or sanitizers and meet applicable annotations if EPA registration cannot be confirmed.

Chlorine products used only as a food contact surface cleaner, with no direct contact with organic products, where use is followed by a water rinse, may contain synthetic materials not listed in the National List but may not have direct contact with organic products and use must be followed by a water rinse.

Water used in direct food contact (including flume water to transport fruits and vegetables, wash water in produce lines, egg or carcass washing) may contain chlorine materials at levels approved by the FDA or the EPA for such purpose. Rinsing with potable water that does not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act (SDWA), or with a sanitizer approved for food contact must immediately follow this permitted use, except if used on breaker eggs (see separate policy). Operators must monitor the chlorine level of the final rinse water, the point at which the water last contacts the organic product. The level of chlorine in the final rinse water must meet limits as set forth by the SDWA. The maximum residual disinfectant limit under the Safe Drinking Water Act is 4 mg/L (4 ppm) expressed as chlorine, 0.8 mg/L (0.8 ppm) when expressed as chlorine dioxide.

Chlorine levels in water used as an ingredient in organic food must not exceed the SDWA limits.

Chlorine materials may be used up to maximum labeled rates for disinfecting and sanitizing food contact surfaces and equipment. Rinsing is not required unless mandated by the label use directions. If chlorine is used at higher levels than the SDWA limits, food contact surfaces must be allowed to drain and dry thoroughly.

Ref: §205.605(b); NOP Guidance 5026, Policy Memo 15-4

h. Colors in Processed Foods:

Colors must be certified organic if commercially available. If organic color is not commercially available, non-organic color that meets the following criteria is allowed:

Must be listed at §205.606(d) and meet applicable annotations.

Must be derived from agricultural products.

Must not be produced using synthetic solvents and carrier systems or any artificial preservative.

Must be produced without the use of excluded methods, sewage sludge, or ionizing radiation.

Ancillary ("Other") ingredients must be non-synthetic.

Ref: §205.301(f); 205.205.606(d)

i. Egg Shell Washes and Defoamers:

All ingredients in egg shell washes and defoamers must meet the review criteria for processing aids.

See related policies on cleaners and sanitizers used in direct food contact and chlorine used in processing and handling.

j. Enzymes in Processed Food: Animal enzymes, including Rennet - animal derived; Catalase - bovine liver; Animal lipase; Pancreatin; Pepsin; and Trypsin, are permitted for use as ingredients in or on processed products labeled as "organic" or "made with organic (specified ingredients or food group(s))"

Other non-animal enzymes must be derived from edible, nontoxic plants, nonpathogenic fungi, or nonpathogenic bacteria. The organism or microorganisms used to produce the enzyme must be non-GMO.

Ancillary ("Other") ingredients are considered to have been reviewed and approved by NOSB, and are allowed without further review.

Ref: §205.605(a)

k. Filters: A filter may be considered equipment if it is not added to the product and only acts as a physical barrier. A filter that meets these criteria and is food grade is considered outside the scope of material review and would be considered allowed.

Filters that are added to a product or otherwise interact with the product would be considered filtering aids (i.e. processing aids) and all ingredients must meet the review criteria for Non-Organic Ingredients and Processing Aids.

Ref: §205.2, §205.301(f)(4)

l. Flavors in Processed Food:

Certified operations may use non-organic flavors as ingredients in certified "organic" and "made with organic..." products, provided that the non-organic flavor meets the following review criteria:

- May be used in certified organic products only if equivalent organically produced flavors are not commercially available.
- Must meet the FDA definition of natural flavor and only be formulated/used for flavoring purposes.
- Must be from a non-synthetic source and produced without synthetic solvents or carrier systems or any synthetic preservatives.
- Must be produced without the use of excluded methods, sewage sludge, or ionizing radiation.
- Ancillary ("Other") ingredients (excluding extraction solvents, carrier systems, or preservatives) must be non-synthetic or synthetic listed at 205.605(b) and meet applicable annotations.

Ref: §205.605(b); NOP Policy Memo 11-1

m. Hemp Ingredients Allowed in Processed Products:

In ingestible products (including food and dietary supplements but excluding livestock feed):

- Hulled hemp seeds, hemp seed protein, and hemp seed oil are GRAS and are permitted in certified organic food / ingestible products.
- Hemp is permitted for use in products intended to be smoked.

In topical products:

- All hemp products are permitted for use in certified organic products not intended for ingestion.

n. Ion Exchange Media: Ion exchange technology is permitted for use in organic processing, provided that any nonagricultural substances used in the ion-exchange process, including resins, membranes, and recharging materials, meet the review criteria for Non-Organic Ingredients and Processing Aids.

o. Microorganisms in Processed Products: Microorganisms (any food grade bacteria, fungi, and other microorganism) used in processed products must not be produced using excluded methods (i.e. non-GMO, no irradiation, no sewage sludge).

Ancillary substances identified for use in microorganisms by the National Organics Standards Board, including anti-caking agents, carriers, preservatives, stabilizers, cryoprotectants, and substrates are allowed as part of the microorganism product and are not required to be reviewed. These include: magnesium stearate, calcium silicate, silicon dioxide, lactose, maltodextrin, sucrose, dextrose, potato starch, non-GMO soy oil, rice protein, grain (rice, wheat, corn, barley) flour, milk, autolyzed yeast, inulin, cornstarch, micro-crystalline cellulose, propylene glycol, stearic acid, dicalcium phosphate, sodium benzoate, potassium sorbate, ascorbic acid, liquid nitrogen, magnesium

sulfate, dimethyl sulfoxide, sodium aspartate, mannitol, sorbitol, brewed black tea and sugar, and soy. Agricultural ancillary ingredients listed above are not required to be certified organic.

Ref: §205.105, 205.605(a), National Organic Standards Board Handling Subcommittee Proposal: Ancillary Substances Permitted in Microorganisms

p. Nutrient Vitamins and Minerals in Processed Food:

Nutrient vitamins and minerals listed at 21 CFR 104.20, Nutritional Quality Guidelines For Foods, are allowed. Must document no use of excluded methods, ionizing radiation, or sewage sludge.

Ancillary ("Other") ingredients are considered to have been reviewed and approved by NOSB, and are allowed without further review.

Current List:

Vitamin D

Calcium

Iron

Potassium

Vitamin A

Vitamin C

Vitamin E

Vitamin K

Thiamin

Riboflavin

Niacin

Vitamin B6

Folate 6

Vitamin B12

Biotin

Pantothenic acid

Phosphorus

Iodine

Magnesium

Zinc

Selenium

Copper

Manganese

Chromium

Molybdenum

Chloride

Choline

Protein

Ref: §205.605(b)

q. Packaging Materials and Storage Containers: Packaging materials must not contain fumigants, preservatives or fungicides. Sub-ingredients of packaging (e.g. starch as anti-tack agent) are considered by FDA to be indirect food additives and are considered outside of the scope of material review.

The re-use of any bag or container that has been in contact with any substance in such a manner as to compromise the organic integrity of any organically produced product or ingredient placed in those containers is prohibited, unless such reusable bag or container has been thoroughly cleaned and poses no risk of contact of the organically produced product or ingredient with the substance used.

Ref: §205.272(b)(1)

r. Saponification Agents used in Body Care Products: Saponification agents (including potassium hydroxide and sodium hydroxide) used in the making of soap are considered ingredients. When labeling products produced with saponified oil, the ingredient statement of the further processed product must include the ingredients used to produce the saponified oil. As an option, the saponified organic oil may be stated on the ingredient statement followed by a parenthetical statement (e.g. saponified organic oils (organic coconut oil, potassium hydroxide)). Listing the saponified oils without listing the saponification agent is not sufficient.

Ref: §205.605(b)

s. Verification of Ingredients (VOI):

Americert requires verification that the following non-organic food ingredients and processing aids (colors, flavors, vitamins) listed at §205.605(a) are produced and handled without genetic modification, ionizing radiation, and sewage sludge:

Acids

Animal enzymes

Carrageenan

Dairy cultures

Enzymes

Flavors

Gellan gum

Glucono delta-lactone

L-Malic acid

Microorganisms

Tartaric acid

Waxes

Yeast

Americert requires verification that the following non-organic food ingredients and processing aids (colors, flavors, vitamins) listed at §205.605(b) are produced and handled without genetic modification, ionizing radiation, and sewage sludge:

Alginates

Ascorbic acid

Cellulose

Glycerides

Glycerin

Potassium Acid Tartrate

Xanthan gum

Americert requires verification that all non-organic agricultural ingredients, either listed at §205.606 or used in a “made with organic...” product are produced and handled without genetic modification, ionizing radiation, and sewage sludge.

Ref. §205.105(e)-(g)

t. Yeast in Processed Food:

Allowable forms of yeast include autolysate, bakers, brewers, nutritional, and smoked yeast.

When used as food or a fermentation agent in products labeled “organic”, yeast must be organic if its end use is for human consumption, except that nonorganic yeast may be used when organic yeast is not commercially available. Nonorganic yeast must be produced and handled without excluded methods, ionizing radiation, and sewage sludge.

Growth on petrochemical substrate and sulfite waste liquor is prohibited.

Must document non-synthetic smoke flavoring process for smoked yeast.

Ref: §205.605(a)

## 2. Boiler Chemicals:

a. Definition: Materials used in boiler systems to protect steam generating pipes and equipment from corrosion.

### b. Review Criteria:

The review criteria for boiler chemicals are dependent on how the steam from the boiler will be used.

- Must have complete active ingredients and MSDS for review.

Steam used with No Food Contact (i.e. closed system): Any material is allowed.

Steam used in Direct Food Contact:

- Active ingredients must either be allowed on the National List at §205.605 and meet applicable annotations, or be classified as non-volatile. Refer to the Physical Properties section of MSDS for volatility and solubility information. If the chemical is soluble in water, then it may be considered a volatile material.

- If material contains non-volatile ingredients, the operator must document methods used to ensure that material does not carry over into the steam. Proper maintenance of boiler is required, and records of maintenance should be available for inspectors.

- Use of steam traps and filters with a minimum of 10 microns may be used to remove mechanical carryover.

Steam used for Package Sterilization: Active ingredients must be allowed on the National List at §205.605 for package sterilization.

Ref: §205.272(a); 205.605

c. Non-Volatile Boiler Chemicals: Steam from non-volatile boiler chemicals is allowed in direct food contact if material does not carry over into steam. Non-volatile boiler chemicals must be used in a manner that prevents carryover into the steam. Injection of non-volatile boiler chemicals into the steam header is not permitted unless the operator can demonstrate that the product does not end up in the steam. Operators must regularly maintain boilers to prevent malfunctioning.

d. Boiler Chemical Volatility: A boiler chemical product may consist of several different chemical ingredients. The volatility of each ingredient must be determined separately. If one of the ingredients is volatile and it is not listed at 205.605, the product must be restricted to closed boiler systems only. If all of the ingredients are non-volatile, the product may be given the non-volatile boiler chemical restriction. The exception is chemicals used for package sterilization only. Boiler product materials are only allowed for package sterilization if listed at 205.605 for that use. To determine volatility: Boiler chemical ingredients may fall into the following categories, which may be used to determine volatility:

o Oxygen scavengers are considered non-volatile. The most commonly used oxygen scavengers are sodium sulfite, bisulfite, metabisulfite, sulfide, or sulfonate and potassium sulfite or bisulfite.

o Filming amines are considered volatile. The most commonly found filming amine is octadecylamine.

o Neutralizing amines are considered volatile. Common examples of neutralizing amines are morpholine, cyclohexylamine, diethylamino ethanol, methylpropylamine, and hydrazine.

o Acrylamides/Polymers are considered non-volatile. The exception is trisodium nitrilotriacetate, which is considered to be volatile.

o Phosphates are considered to be non-volatile. Commonly found phosphates are mono, di, and tri-sodium phosphate or sodium polyphosphate.

o Chelating agents are considered non-volatile. The most commonly used chelating agent is ethylenediamide tetra-acetic acid (EDTA).

- If the type of additive cannot be determined or another type of additive is used, obtain an MSDS for that additive to determine volatility.

- If the volatility of a boiler chemical additive cannot be determined using an MSDS or there is uncertainty, contact the manufacturer. The manufacturer may be able to provide a letter classifying the chemical as volatile or non-volatile. If uncertainty still exists, restrict the boiler chemical to closed boiler systems only.

### **3. Cleaners and Sanitizers Used in Direct Food Contact (Antimicrobials):**

#### a. Definitions:

Sanitizers are chemical or physical agents that reduce microorganism contamination levels present on inanimate environmental surfaces; sanitizers are generally not followed by a water rinse.

Antimicrobials are substances used to preserve food by preventing growth of microorganisms and subsequent spoilage, including fungistats, mold and rope inhibitors, and the effects listed by the National Academy of Sciences/National Research Council under “preservatives.”

Disinfectants are agents that help eliminate undesirable microorganisms from contaminated inanimate environmental surfaces. Disinfecting a surface will “kill” the microscopic organisms as claimed on the label of a particular product. EPA defines as “Antimicrobial Pesticide”, also referred to as “Sterilizers”.

Examples(s) food contact sanitizers, carcass washes, egg washes.

#### b. Review Criteria:

- Must have complete ingredients for review.

- Must have current product label with EPA Registration Number for review or FDA Approval Number (e.g. for carcass washes), as applicable.

- Label must allow for direct food contact. If the label does not have any specific use instructions (generic labels usually don't), the product can still be allowed so long as all ingredients are approved.

- All ingredients must be allowed on the National List as cleaners or sanitizers and meet applicable annotations.

- Chlorine may be used in accordance with the policy on chlorine used in processing and handling.

- If used in context of processing organic system plan, food contact sanitizers are considered processing aids and are not eligible for “100% organic” label category.

- If used in context of crop organic system plan, food contact sanitizers are not considered processing aids and will not affect the 100% organic status of the raw agricultural product.

Ref: §205.105; 205.270; 205.272(a); 205.301; 205.605; 205.606

#### c. Reverse Osmosis: Reverse Osmosis Technology is allowed as a water treatment.

#### d. Ultra Violet (UV) Light: Ultra Violet (UV) light is considered non-ionizing radiation and is allowed as a disinfectant or sanitizer.



## Section E. Facility Materials

### 1. Cleaners and Sanitizers Used on Equipment / Food Contact Surfaces:

#### a. Definitions:

Cleaners are materials used to remove dirt, filth, or foreign matter from equipment and food contact surfaces that are generally followed with a clean (potable) water rinse.

Sanitizers are chemical or physical agents that reduce microorganism contamination levels present on inanimate environmental surfaces; sanitizers are generally not followed by a water rinse.

Example(s): CIP cleaners, dish soap, bleach

#### b. Review Criteria:

To be used without a water rinse:

- Must have complete ingredients for review.
- Must have current product label with EPA Registration Number for review, if available. Label must allow for use without a water rinse. If the label does not have any specific use instructions (generic labels usually don't), the product can still be allowed so long as all ingredients are approved.
- All ingredients must be allowed on the National List and meet applicable annotations.
- Chlorine may be used in accordance with the policy on chlorine.

To be used with a water rinse:

- Must have complete active ingredients or MSDS for review.
- Active ingredients do not have to be allowed on the National List, but must be classified as non-persistent. (Quaternary Ammonium Compounds are persistent; see separate policy)
- Must be followed by an intervening event such as a hot water rinse or documented purge of product, so that the substance is not in contact with organic products.
- Cleaners used on food contact surfaces or equipment are not considered processing aids and will not affect the 100% organic status of agricultural products.

Ref: §205.105; 205.272(a); 205.605

c. Hand Sanitizers: Hand sanitizers are not regulated under the NOP and are considered outside the scope of material review. Operators must implement measures to protect organic products from contact with hand sanitizers.

Ref: §205.272(a)

d. Quaternary Ammonium Compounds: Quaternary Ammonium Compounds (QACs or Quats) are prohibited for use in direct contact with organic products or livestock. Quats are also prohibited for use in indirect contact with organic products unless used according to an Americert approved residue testing protocol. Operator must demonstrate that residues do not contact organic product. Residue testing results must verify no quat residue. Residue testing protocol, cleaning log, and test results must be documented.

One of the following testing methods may be approved:

1) Verification of no quat residue present on all contact surfaces using a low-ion test strip prior to each organic run. Procedures and test results must be documented

or

2) A standard operating procedure proven to reliably verify that no quat residue is present may replace the need to test prior to every organic production run. The procedure must specify the specific steps that are taken to ensure residues are not present, which may include necessary pressure, temperature, quantity, and timing of the rinse as found in the initial no residue test result. Procedure must include monitoring and periodic residue testing to ensure continued efficacy, which must be documented.

## **2. Facility Pest Management Materials:**

a. Definition: Materials used to control vertebrate or invertebrate pests in an organic facility, including greenhouses, barns, and buildings.

Example(s): sticky traps, fumigants, rodenticides, insecticides

### b. Review Criteria:

- Must have complete active ingredients or MSDS for review.
- Must have current product label for review.
- Must have EPA Registration Number for review.
- Use must comply with the facility pest control hierarchy described in §205.271 for organic production and storage facilities.
- Label directions must be followed.
  
- Additional requirements for non-synthetic or synthetic substance consistent with the National List (§205.271(c)):
  - o Active ingredients must be allowed on the National List without any restrictions preventing use for pest control.
  - o Inert ingredients are not reviewed in materials that do not have plant, animal, or food contact. Operator must document location, application manner, and method of contamination prevention in Organic System Plan.
  - o Synergist ingredients are active ingredients and must be allowed on the National List without any restrictions preventing use for pest control. Note that the common synergist piperonyl butoxide, a derivative of a plant extract, was classified as a synthetic substance and as an active ingredient is prohibited in organic production and handling. As a result, any substance containing piperonyl butoxide is cannot be classified as a (205.271(c)) Pest Control measure, but instead is a §205.271(d) measure.
  
- Additional requirements for synthetic substance not on the National List (§205.271(d)):
  - o Must receive prior approval from Americert.
  - o Must prevent contact of the organically produced products or ingredients with the substance used.

Ref: §205.271; 205.601-605; NOP 5023

## **3. Source Water Treatments:**

a. Definition: Materials that are used in or on water or sources as a disinfectant.

Example: Chlorine shock of wells, water tanks, or irrigation water.

### b. Review Criteria:

- Active ingredients must be allowed on the National List as cleaners or sanitizers and meet applicable annotations.
- Label directions must be followed, if applicable.
- If shocking a well with chlorine (one-time introduction of a strong chlorine solution into the entire water distribution system), a standard procedure for disinfecting well water must be obtained and followed (may include flushing all lines and/or turning on all faucets after a period of time and letting them run until chlorine smell dissipates).
- Inert ingredients are not reviewed unless material is continuously injected and water is ultimately used for crop irrigation or livestock drinking water. Continuous injections to source water must be reviewed according to the criteria for how the water will ultimately be used.
- If chlorine is used and the water comes into contact with organic production areas, crops, or organic products, the water, at the point of discharge or contact with soil, crops, or organic products, must meet the applicable chlorine restriction on residual chlorine levels.
- Elemental chlorine, such as chlorine gas, is not a permitted form of chlorine used in water that will be used in contact with soil, crops, or organic products, unless at the point of discharge or contact, residual chlorine is undetectable and hence has no contact with soil, crops, or organic products.

Ref: §205.272(a); 205.601-605

c. Water Softeners: Water softeners are considered outside of scope and are allowed without review when they do not use any inputs intended to remain in the water.

## Section F. Maintenance of Material Decision Records

**1. When Records Made:** Records will be made when a material decision is made, which may be at any of the following stages:

- During initial pre-inspection review of a first time application/OSP from an operation
- During initial pre-inspection review of a an application/OSP update or renewal from a renewing operation
- During post-inspection final review of an inspection report for a first time or renewing operation
- At other times when a certified operation or a first time applicant requests to add the use of a material to their operation's OSP

**2. Records Made During Initial Review:** Material reviews shall be conducted using the procedure described in section A(2) of this manual.

- When the material review shows that the material is subject to a current previous determination as defined in section A(2)(d)-(e), Americert shall record in the Special Instructions created for the inspector (which is shared with the operation and also saved in their client file) the following: The product name, the manufacturer, its status (allowed, allowed with restrictions, etc.), the authority for the status determination, and the date on which the current previous determination was made, any restrictions on use, and any special instructions related to the material that the inspector is to review during the onsite inspection. Here is an example of a material that was reviewed and found to be subject to a previous current determination earlier in the year on 02/01/22 by reviewing the materials OMRI listing:

Product Name:	Manufacturer:	Status:	Restrictions:	SPECIAL INSTRUCTION
01-YS	02YS Corportation	Allowed with Restrictions (OMRI 020122)	Allowed when used with an approved pesticide or disease control product.	Confirm used only as an adjuvant with pesticides.

- When the material review shows that the material is not subject to a current previous determination as defined in section A(2)(d)-(e), either because it has never been reviewed or the determination is no longer current, Americert shall conduct a formal review using the procedure described in section A(2)(f)-(p). In such instances, Americert shall:

- o Save in the operation's client file all of the documentation received and reviewed to make the determination.
- o Save in the operation's client file a formal decision regarding the material which records the date the decision was made, who made the decision, the status assigned to the material, and any applicable restrictions on the use of the material.
- o Note in the Special Instructions created for the inspector (which is shared with the operation and also saved in their client file) the following: The product name, the manufacturer, its status (allowed, allowed with restrictions, etc.), the authority for the status determination, and the date on which the current previous determination was made, any restrictions on use, and any special instructions related to the material that the inspector is to review during the onsite inspection. For example:

Product Name:	Manufacturer:	Status:	Restrictions:	SPECIAL INSTRUCTION
Soft Rock Phosphate	Soda Springs Phosphate II LLC	Allowed (AI 011922)	None.	None.

			Allowed.	
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In cases where the material is determined to be prohibited, rather than issue Special Instructions, Americert shall issue a Request for More Information to determine if the material has been used, or Notice of Noncompliance, as warranted by the situation.

**3. Records Made During Post-Inspection Review:**

When the inspection shows that a material not reviewed during the initial review has been used or is intended for use, Americert shall review the material in the post-inspection review.

Such reviews shall be conducted using the procedure described in section A(2) of this manual.

- When the material review shows that the material is subject to a current previous determination as defined in section A(2)(d)-(e), Americert shall record in the Approved Input List which accompanies the certification announcement (which is shared with the operation and also saved in their client file) the following: The product name, the manufacturer, its status (allowed, allowed with restrictions, etc.), the authority for the status determination, and the date on which the current previous determination was made and any restrictions on use. Here is an example of a material that was reviewed and found to be subject to a previous current determination earlier in the year on 02/01/22 by reviewing the materials OMRI listing:

Product Name:	Manufacturer:	Status:	Restrictions:
01-YS	02YS Corpotation	Allowed with Restrictions (OMRI 020122)	Allowed when used with an approved pesticide or disease control product.

- When the material review shows that the material is not subject to a current previous determination as defined in section A(2)(d)-(e), either because it has never been reviewed or the determination is no longer current, Americert shall conduct a formal review using the procedure described in section A(2)(f)-(p). In such instances, Americert shall:

- o Save in the operation’s client file all of the documentation received and reviewed to make the determination.
- o Save in the operation’s client file a formal decision regarding the material which records the date the decision was made, who made the decision, the status assigned to the material, and any applicable restrictions on the use of the material.
- o Record in the Approved Input List which accompanies the certification announcement (which is shared with the operation and also saved in their client file) the following: The product name, the manufacturer, its status (allowed, allowed with restrictions, etc.), the authority for the status determination, and the date on which the current previous determination was made and any restrictions on use. Here is an example of a material that was reviewed in a new formal review by Americert on 01/19/22:

Product Name:	Manufacturer:	Status:	Restrictions:	SPECIAL INSTRUCTION
Soft Rock Phosphate	Soda Springs Phosphate II LLC	Allowed (AI 011922)	None. Allowed.	None.

In cases where the material is determined to be prohibited, rather than include the material in an Approved Inputs List issued with the certification announcement, Americert shall issue a Request for More Information to determine if the material has been used, or Notice of Noncompliance or other adverse action as warranted by the situation.

**4. Records Made During Ad Hoc Review:** When an operation requests a specific determination of whether or not a material is allowed, but not during the initial review or the post-inspection final review, Americert shall review the material in an ad hoc review.

Such reviews shall be conducted using the procedure described in section A(2) of this manual.

- When the material review shows that the material is subject to a current previous determination as defined in section A(2)(d)-(e), Americert shall send a response to the operation sharing the determination, including: The product name, the manufacturer, its status (allowed, allowed with restrictions, etc.), the authority for the status determination, and the date on which the current previous determination was made and any restrictions on use. Typically this is sent by email. The email shall be saved to the client's file.

- When the material review shows that the material is not subject to a current previous determination as defined in section A(2)(d)-(e), either because it has never been reviewed or the determination is no longer current, Americert shall conduct a formal review using the procedure described in section A(2)(f)-(p). In such instances, Americert shall:

- o Save in the operation's client file all of the documentation received and reviewed to make the determination.

- o Draft and send a response to the operation sharing the determination, including: The product name, the manufacturer, its status (allowed, allowed with restrictions, etc.), the authority for the status determination, and the date on which the current previous determination was made and any restrictions on use. Typically this is sent via email by the person making the determination. The email shall be saved to the client's file.

In cases where the material is determined to be prohibited, Americert may also issue a Request for More Information to determine if the material has been used, or Notice of Noncompliance or other adverse action as warranted by the situation.

5. Optional Archive Spreadsheet: Americert may create and maintain a spreadsheet to record the most common materials encountered as an aid to reviewing past determinations and their currentness. However, this is not a mandatory requirement, and a failure to record a material on the archive spreadsheet is not a violation of the policies in this manual. The official record of material reviews and decisions is maintained in the individual client files as described in this section.