Classification of Unique Materials

1. Purpose

This instruction clarifies how materials that are the result of naturally occurring biological processes, separation and extraction, and burning and combustion are classified under the National Organic Program (NOP) regulations National List of Allowed and Prohibited Substances (National List), starting at 7 CFR 205.600.

2. **OCal Regulations,** Title 3 California Code of Regulations (3 CCR)

3 CCR § 10203. Crop nutrient practice standard.

3 CCR § 10105. Allowed and prohibited substances and methods in OCal production.

3. Background

3.1. The organic industry typically uses the words “material” and “substance” interchangeably. Therefore, “substance” and “material” are synonymous and used interchangeably throughout this document.

3.2. National List § 205.601 and § 205.602 are incorporated into the OCal regulations under 3 CCR § 10105.

a. Substances may be classified as nonsynthetic (natural) or synthetic.

b. § 205.601 lists synthetic substances allowed in OCal production.

c. § 205.602 lists nonsynthetic (natural) substances prohibited in OCal production.

d. The NOP, the National Organic Standards Board (NOSB), USDA-accredited certifying agents, and material evaluation programs conduct substance classifications to determine (1) whether a substance is allowed or prohibited in organic production, (2) whether the substance needs to be considered for the National List, and (3) where on the National List the substance should be placed. More information regarding the National List can be found on the NOP website or in the NOP Handbook.

4. Policy

4.1. Products of naturally occurring biological processes

Products of naturally occurring biological processes, such as fermentation and composting, are considered natural and nonsynthetic. Examples of nonsynthetic materials produced from naturally occurring biological processes include vinegar, citric acid, compost, gibberellic acid, and spinosad. Additional examples are provided in Table 1 of OCal 5033-1, Decision Tree for Classification of Materials.

4.2. Separation and extraction of materials (not ingredients)

Some materials (not ingredients) used in nonmanufactured OCal cannabis production are produced using separation and extraction techniques. Separation and extraction methods used to create substances for use in OCal production may include, but are not limited to, distillation, solvent extraction, acid-base extraction, and physical or mechanical methods (e.g., filtration, crushing, centrifugation, or gravity separation).

For purposes of classifying a separated or extracted material as synthetic or nonsynthetic, a material may be classified as nonsynthetic (natural) if the extraction or separation technique results in a material that meets all of the following criteria:

a. At the end of the extraction process, the material has not been transformed into a different substance via chemical change;

b. The material has not been altered into a form that does not occur in nature; and

c. Any synthetic materials used to separate, isolate, or extract the substance have been removed from the final substance (e.g., via evaporation, distillation, precipitation, or other means) such that they have no technical or functional effect in the final product.

4.3. Burning or combustion

Burning of biological matter (e.g., plant or animal material) is considered a natural process and the product is classified as nonsynthetic (natural). For example, ash from manure burning is considered a nonsynthetic substance, though it is prohibited at § 205.602 of the National List. The use of other types of ash must comply with the soil fertility and crop nutrient management practice standard in OCal regulation § 10203.

For purposes of classification of materials, pyrolysis (i.e., high temperature decomposition of substances in the absence of oxygen) may be treated as equivalent to burning or combustion.

The products of heating or burning non-biological matter (e.g., minerals) to cause a chemical reaction are classified as synthetic. For example, limestone (calcium carbonate, $CaCO_3$) heated to release carbon dioxide and produce quicklime (calcium oxide, CaO) is classified as a synthetic process.

Materials which are chemically changed due to allowed processing methods (e.g., cooking, baking, etc.) do not result in classification of the processed agricultural product as synthetic.

5. Resources

OCal Program Handbook

OCal 3012 Material Review. Describes the criteria and process registered certifying agents must follow when approving substances for use in OCal production.

OCal 5033-1 Decision Tree for Classification of Materials. Describes the procedure used to classify input materials for OCal cannabis production as nonsynthetic (natural) or synthetic.

OCal 5034 Materials for Use in OCal Cannabis Production. Catalogues and describes resources that help to determine whether an input material is allowed for use in OCal production.

OCal 5034-1 List of Materials for OCal Cannabis Production. An illustrative list of allowed nonsynthetic (natural) and synthetic materials for OCal cannabis production.

OCal 5034-2 List of Materials Prohibited for Use in OCal Cannabis Production. An illustrative list of synthetic materials prohibited for use in OCal cannabis production.

6. References

National Organic Program Regulations, Title 7 Code of Federal Regulations (7 CFR part 205)

7 CFR § 205.601. Synthetic Substances Allowed for Use in Organic Crop Production.

7 CFR § 205.602. Nonsynthetic Substances Prohibited for Use in Organic Crop Production.

National Organic Standards Board - Background

April 29, 2011 NOSB recommendation on the classification of materials.

May 24, 2010 NOSB recommendation on the classification of materials.

November 5, 2009 NOSB recommendation on the classification of materials.

August 27, 2005 NOSB recommendation on the review of synthetic and non-synthetic substances.

NOP Memorandum to the National Organic Standards Board, Request for Clarification of “Other Ingredients” in Processed Organic Products, (https://www.ams.usda.gov/sites/default/files/media/NOSB%20Memo%20Request%20for%20Clarification%20of%20Other%20Ingredients.pdf), November 23, 2011.