



Decision Tree for Classification of Materials as Synthetic or Nonsynthetic

1. Purpose

This instruction provides a method for classifying input materials for OCal cannabis production as nonsynthetic (natural) or synthetic under the National Organic Program (NOP) regulations' National List of Allowed and Prohibited Substances (starting at 7 CFR 205.600, National List). Sections 205.601 and 205.602 are ~~incorporated into~~ **cited in** the OCal regulations at 3 CCR § 10105.

2. ~~Ocal #~~Regulations, Title 3 California Code of Regulations (3 CCR)

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

3. Procedure

Start with a substance and ask yourself the following questions.

Question 1. Is the substance manufactured, produced, or extracted from a natural source?

Answer = Yes
Manufactured or Produced
Go to question 2b

Answer = Yes
Extracted
Go to question 2

Answer = No
The substance is
SYNTHETIC
You are finished. Stop here

Question 2. At the end of the extraction process, does the substance meet all of the following criteria?

- The material has not been transformed into a different substance via chemical change;
- The material has not been altered into a form that does not occur in nature; and

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.

Answer = Yes
Go to question 2b

Answer = No
The substance is SYNTHETIC.
You are finished. Stop here

Question 2b. Has the substance undergone a chemical change so that it's chemically or structurally different than how it naturally occurs in the source material?



Answer = Yes
Go to question 3

Answer = No.
The substance is
NONSYNTHETIC (NATURAL)
~~You are finished. Stop here~~

Question 3. Is the chemical change created by a naturally occurring biological process, such as composting, fermentation, or enzymatic digestion; or by heating or burning biological matter?

Answer = Yes
The substance is NONSYNTHETIC
(NATURAL)
~~You are finished. Stop here~~

Answer = No
The substance is SYNTHETIC
~~You are finished. Stop here~~

4. Classification eExamples of aAgricultural iInputs

Ash (burned wood)

Nonsynthetic ◦ Substance is created by burning biological matter.

Calcium carbonate (limestone)

Nonsynthetic ◦ Substance is produced from a natural source (mined mineral) and does not undergo chemical change.

Calcium oxide (quicklime)

Synthetic ◦ Substance is produced from a natural source (mined mineral), but undergoes chemical change caused by heating the mineral.

~~Calcium oxide (quicklime)
Synthetic ◦ Substance is produced from a natural source (mined mineral), but undergoes chemical change caused by heating the mineral.~~

Citric acid

Nonsynthetic ◦ Substance is created from a naturally occurring biological process (microbial fermentation of carbohydrate substances).

Gibberellic acid

Nonsynthetic ◦ Substance is extracted from a natural source without further chemical change.

Liquid fish products – pH

adjusted with phosphoric acid
Synthetic ◦ Substance is derived from a natural source but is treated with synthetic acids for pH adjustment.

Molasses

Nonsynthetic ◦ Substance is derived from a natural source and chemical change is due to heating or naturally occurring biological processes.

Newspaper

Synthetic ◦ Substance is manufactured via a chemical process.

Raw manure

Nonsynthetic ◦ Substance is from a natural source and used without further processing

Rosemary oil

Nonsynthetic ◦ Substance is extracted from a natural source



5. More Classification Resources

OCAL Program Handbook

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

OCAL 5033 Classification of Unique Materials. *Clarifies how materials that are the result of naturally occurring biological processes, separation and extraction, and burning and combustion are classified.*

~~OCAL 5033-2 Definitions of Terms Used in Classification.~~

OCAL 5034 Classification of Materials. *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.

OCAL 5033-1 Decision Tree for Classification of Materials, April ~~6, 2020-23, 2021~~



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 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%20Cl arification%20of%20Other%20Ingredients.pdf>), November 23, 2011;