

**National Organic Standards Board  
Compliance, Accreditation and Certification  
Proposal  
Calculating Percentage of Organic Ingredients in Multi-ingredient Products**

**February 12, 2013**

**I. INTRODUCTION:**

The purpose of this document is to propose recommendations on determination of percentage organic ingredients in multi-ingredient products in order to assist the NOP in development of guidance for handlers and certifiers.

Consumers expect that labels on multi-ingredient products sold as “100% organic” or “organic” or “made with organic” reflect an accurate determination of percentage organic ingredients, and that all certifiers have uniformly calculated such percentages.

The integrity of USDA organic products in the USA and throughout the world depends on assurances of consistency and uniformity in interpretation and application of the Rule and associated Regulations, especially when calculating percentage organic ingredients.

**II. BACKGROUND:**

The Regulation at 205.302(c), under “Calculating the percentage of organically produced ingredients” states:

“The percentage must be determined by the handler who affixes the label on the consumer package and verified by the certifying agent of the handler. The handler may use information provided by the certified operation in determining the percentage”.

Thus, when an ingredient has been certified to the “organic” category, the supplier of that ingredient must provide information to the handler making the finished product regarding the actual percentage of organic content of that ingredient.

Over the years this has resulted in a wide variety of mechanisms for determining percentage of organic ingredients, and a wide variety of ways of establishing systems which allow verification by auditors and inspectors.

For example, if the supplier does not provide positive information, verified by the certifier, that the organic ingredient contains more than 95% organic content, then many, BUT NOT ALL certifiers will only allow that ingredient to be calculated at 95% organic content.

With limited guidance, a lack of uniformity in procedures has developed. For example some certifiers may permit handlers to include 100% of the weight/volume of certified ingredients as organic, even if the ingredient is a formulated product and includes other permitted substances and may be in fact be anywhere from 95-100% organic. Chocolate chips for example may be certified organic, and contain 96% organic ingredients, plus 4% permitted substances on 205.605/606. A cookie manufacturer may be considering that the entire weight of the chips counts as organic in the final cookie product.

Many certificates list raw agricultural ingredients as “organic” when in fact they should be listed as “100% organic.” This can have a serious impact in calculating percentage organic in a multi-

ingredient product if the handler must, by default, list those raw agricultural ingredients as 95%. Further, some handlers and certifiers may not be accurately examining the water and salt content for exclusion from the percentage calculation.

There is also a wide array of mechanisms in place amongst handlers as to how processing aids as opposed to additives are recorded or, if necessary calculated as part of the ingredient list. Sub-ingredients are often added to multi-ingredient products, such as spice, oil, sugar, flavor or sauce mixes. Such sub-ingredients may be entirely or partially organic in ingredient make up, and the producer of such sub-ingredient mix may provide a Specification sheet listing ingredients and their organic percentages. In other instances no details are provided on sub-ingredients.

When the percentage of organic ingredients as a percentage of all ingredients is calculated to be close to 95% or close to 70% then the issue of correct labeling of that product becomes difficult for the handler and those who must approve or verify. Standard practice is to calculate ingredients as a percentage of *all ingredients*, although the relevant area of the Rule, as cited below, still states the calculation should be as a percentage of *finished product*.

In October, 2001 the NOSB, recommended<sup>1</sup> to change the regulations at § 205.302(a), to replace the phrase “finished product” with “of all ingredients”. The rationale was: Most products lose weight during processing. Dividing the total weight of all combined organic ingredients by the weight of the finished products could easily show that a product contains over 100% organic ingredients. Current practice is to divide the total weight of all combined organic ingredients by the total weight of all ingredients (excluding salt and water). This calculation establishes the total percentage of organic ingredients. The Rule should be changed to correctly calculate the percentage of organic ingredients”.

This regulation change has not yet taken place.

### **III. RELEVANT AREAS OF THE RULE:**

NOP Regulation and Policy statements:

#### **§ 205.302 Calculating the percentage of organically produced ingredients.**

(a) The percentage of all organically produced ingredients in an agricultural product sold, labeled, or represented as “100 percent organic,” “organic,” or “made with organic (specified ingredients or food group(s)),” or that include organic ingredients must be calculated by:

(1) Dividing the total net weight (excluding water and salt) of combined organic ingredients at formulation by the total weight (excluding water and salt) of the finished product.

(2) Dividing the fluid volume of all organic ingredients (excluding water and salt) by the fluid volume of the finished product (excluding water and salt) if the product and ingredients are liquid. If the liquid product is identified on the principal display panel or information panel as being reconstituted from concentrates, the calculation should be made on the basis of single-strength concentrations of the ingredients and finished product.

(3) For products containing organically produced ingredients in both solid and liquid form, dividing the combined weight of the solid ingredients and the weight of the liquid

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<sup>1</sup> <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5100161>

ingredients (excluding water and salt) by the total weight (excluding water and salt) of the finished product.

(b) The percentage of all organically produced ingredients in an agricultural product must be rounded down to the nearest whole number.

(c) The percentage must be determined by the handler who affixes the label on the consumer package and verified by the certifying agent of the handler. The handler may use information provided by the certified operation in determining the percentage.

#### § 205.2, Terms Defined:

**Ingredient:** any substance used in the preparation of an agricultural product that is still present in the final commercial product that is consumed

**Processing Aid (NOP definition, based on FDA regulation at 21 CFR 100 (a)(3)(ii) Foods Exempt from Labeling):**

1. A substance that is added to a food during the processing of such food but is removed in some manner from the food before it is packaged in its final form.
2. A substance that is added 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. A substance that is added to a food for its technical or functional effect in the processing but is present in the finished food in insignificant levels and does not have any technical or functional effect on that food.

#### **IV. DISCUSSION:**

In 2012 the CAC subcommittee discussed this issue in detail and issued a discussion document with a request for public comment prior to the Public Meeting in October 2012. The NOSB received a substantial body of public comment with detailed recommendations for change.

These comments came from Accredited Certifying Agencies, non-profit organizations, research groups and trade associations, and they are included in the brief discussion below.

##### **1. Regulatory change:**

There is broad consensus that the standard practice is to divide the total net weight (excluding water and salt) of combined organic ingredients at formulation by the total net weight (excluding water and salt) of all ingredients. Thus a simple change to the Regulation at 205.302 is needed to clarify that the calculation of percentage organic ingredients should be made based on “all ingredients” not “finished product” because most products lose weight during processing.

##### **2. Self-calculating Forms:**

Formulated multi-ingredient NOP-certified products contain organic ingredients that are either single or multiple-ingredient ingredients. Certified handlers adding an organic ingredient to a formulated product need to understand that the ingredient may contain anywhere between 95% and 100% organic ingredients. For a multi-ingredient certified product used as an ingredient in a multi-ingredient product, the actual organic content must be obtained. Otherwise the ingredient should be calculated at either 95% organic or 70% organic depending on how the product is classified on the certificate.

Thus, to ensure uniformity in making these calculations a number of certifiers use self-calculating forms, samples of which were sent to the NOSB. Certifiers provide these forms to handlers, and there is broad consensus that self-calculating tools are very useful, but one standard NOP generated form is not required.

One certifier noted that being able to provide useful and coherent tools for clients was a point of differentiation for a certifier.

A sample template of a self-calculating form could be included on the NOP website to demonstrate inclusion of all ingredients; show how to exclude water and salt, list supplier of ingredient, percentage organic content of each ingredient, percentage in formulation, and the self-calculating column showing actual organic percentage of each ingredient. Such a sample form should show how to list processing aids separately.

### 3. Salt Excluded:

Commenters all agree that the only salt which may be excluded is sodium chloride. Potassium chloride is on the National List as an allowed non-synthetic and should be calculated as a non-organic ingredient.

Standard practice is to require any additives, such as anti-caking agents, added to the salt to be on the National List at 205.605 or 205.606. If salt containing an additive on the National List is added to a certified product the additive cannot be excluded. Therefore the product may not be labeled as 100% organic.

### 4. Water Excluded:

Commenters provided considerable discussion, and raised numerous questions on this complex issue.

In August 2002 the NOP issued a policy memo addressing the exclusion of water when calculating percentage organic ingredients in multi-ingredient food products. This information is incorporated in the NOP Handbook as Policy Memo 11-9.<sup>2</sup> This memo includes reference to 21CFR 131-169 for food and 21CFR 101.30 for vegetable and fruit juices. Several major certifiers find that the FDA is out of date in addressing water content in standardized foods.

Several commenters noted that the lack of a standard of identity for many standardized foods is an impediment to consistency and accuracy in calculating water to be excluded. There is a need for clarification and detailed guidance from the NOP on this topic.

### 5. Processed single ingredients:

A specification sheet for a product such as “organic” olive oil could be of great assistance to the organic baker making a multi-ingredient product, but this is often not available.

### 6. Multi-ingredient ingredients:

Several commenters expressed frustration at how to calculate percentage organic when adding a purchased multi-ingredient ingredient, such as chocolate chips to a product and suggested that a specification sheet be provided if requested by handler.

### 7. Organic label versus organic content:

There were a number of comments related to the fact that the issue of organic **content** contribution versus organic **labeling** claim creates confusion and leads to a lack of consistency in interpretation when formulating multi-ingredient products.

Organic operations want their crops and ingredients to be in the 100% organic category on certificates so that buyers calculate their content at 100% in finished products. If certifiers had clear permission to assume 100% organic content for single-ingredient ingredients and crop

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<sup>2</sup> <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5088954>

ingredients in the “organic” category this would remove some of the inconsistencies.

Very few products actually make the 100% organic claim on the retail label.

As noted by the range of comments received by the NOSB there is a lack of consistency in determining organic percentages for ingredients treated with processing aids. Often single ingredients such as flour, oil or sugar or crop ingredients such as apples do not meet the 100% organic category due to permitted, but non-organic processing aids (filtration materials in the case of oil, wash water in the case of apples) They will be listed on an organic certificate by the certifier as “organic”. However common sense tells you that they may contribute more than 95% organic content to the finished product formula.

The organic content of a product is based on the percentage of organic ingredients. The use of non-organic processing aids prevents a product being labeled as 100% organic but the product contains 100% organic **Ingredients** and can be calculated as such when determining an organic percentage. For Example: Pear Juice Concentrate may be formulated using 100% organic pears, NOP-compliant non-organic enzymes as processing aid, and NOP-compliant non-organic Diatomaceous Earth as a filter aid. For calculation purposes however the pear juice should be calculated at 100% organic in the formulation because all of the ingredients are 100% organic.

#### 8. Raw Agricultural Ingredients:

The lack of a statement of specific percentage of organic content on either the organic certificate or product specification sheet, if one is available, requires additional work for both the certifier and handler. The inclusion of such information on the certificate would be helpful.

Single raw crop ingredients such as carrots or pears, can be listed as “100% organic” on the Certificate (or attached addendum list) issued by the certifier to the Handler. In many cases however the Certificate and attached list simply states “organic”. Thus, when making a multi-ingredient product, those ingredients listed as “organic” on their certificates must be calculated at the default 95% organic calculation. While there may be some instances where a raw crop has been changed, such as adding a wax coating to a cucumber, all commenters agreed that it is reasonable to assume that a single raw crop ingredient should be considered 100% organic for content.

The recommendations following reflect the public comments received prior to the Public Meeting and presented at the Public Meeting.

### V. RECOMMENDATIONS:

#### 1. Proposed Regulatory Change

The CACS proposes a change to the regulations at 205.302(a) as follows with proposed deletions with strike through and additions in bold italics:

#### **§ 205.302 Calculating the percentage of organically produced ingredients.**

(a) The percentage of all organically produced ingredients in an agricultural product sold, labeled, or represented as “100 percent organic,” “organic,” or “made with organic (specified ingredients or food group(s)),” or that include organic ingredients must be calculated by:

(1) Dividing the total net weight (excluding water and salt) of combined organic

ingredients at formulation by the total weight (excluding water and salt) of the finished product all ***ingredients***.

(2) Dividing the fluid volume of all organic ingredients (excluding water and salt) by the fluid volume of ***all ingredients*** the finished product (excluding water and salt) if the product and ingredients are liquid. If the liquid product is identified on the principal display panel or information panel as being reconstituted from concentrates, the calculation should be made on the basis of single-strength concentrations of ***all*** the ingredients. ~~and finished product~~.

(3) For products containing organically produced ingredients in both solid and liquid form, dividing the combined weight of the solid ingredients and the weight of the liquid ingredients (excluding water and salt) by the total weight (excluding water and salt) of ***all ingredients*** the finished product.

(b) The percentage of all organically produced ingredients in an agricultural product must be rounded down to the nearest whole number.

## **2. Self-Calculating forms**

Section 205.302 (c) states:

(c) The percentage must be determined by the handler who affixes the label on the consumer package and verified by the certifying agent of the handler. The handler may use information provided by the certified operation in determining the percentage.

The CACS proposes that handlers utilize a self-calculating form of their own, or utilize a form provided by their certifier so that a uniform method of calculation is clearly established.

## **3. Salt Excluded.**

The CACS proposes that the only salt excluded from the calculation is sodium chloride.

Potassium chloride, listed on 205.605 and any item on the National List such as magnesium chloride or magnesium sulfate used as an ingredient shall be counted in the organic content calculation.

## **4. Water Excluded**

Water is excluded from the percentage calculation.

The CACS proposes extensive, detailed and clear NOP guidance to drive consistency among handlers and certifiers to determine how much water should be excluded from certain multi-ingredient formulations that include such ingredients as chicken soup, soy "milk", almond "milk", fruit juice, vegetable juice, or ready to drink teas.

## **5. Processed Single Ingredients.**

Handlers or certifiers may request specification sheets from manufacturers of processed single ingredients if they desire more verification that the ingredient was not processed in a way that there would be remaining non-organic components in the single ingredient product. Examples of such ingredients include oil, flour, sugar, and syrup.

## **6. Multi-ingredient ingredients;**

For multi-ingredient ingredients, such as chocolate chips, where as much as 5% of the ingredients may be non-organic, the certifier must provide documentation of claims that the

organic content is beyond 95% if requested by another handler or certifier.

**7. Organic Label versus Organic Content:**

As specified in 205.302, the organic content or percentage of a product is based on the percentage of organic ingredients. Sanitizers and processing aids are not ingredients; therefore they should not impact the organic percentage of a product. The use of a non-organic processing aid prevents the single ingredient product from being labeled as 100% organic, but the product continues to contain 100% organic ingredients and can be calculated as such when it is calculated into a multi-ingredient organic product

**8. Raw agricultural and Single-ingredient ingredients** can be assumed by handlers, manufacturers and certifiers to contribute 100% organic content in a multi-ingredient formulation, even if they are listed as “organic” on a certificate, except where it is clear that the ingredient is significantly different from the raw condition.

**9. NOP Guidance**

The NOSB recommends that the NOP establish and maintain an easily accessible website with examples of how to calculate percentage organic ingredients in multi-ingredient products, and related topics such as how to determine when a processing aid becomes an ingredient in calculation, and how to determine excluded water.

Motion to accept and forward to the full Board the proposal on Calculating % of organic ingredients in multi-ingredient products as amended

**Subcommittee Vote:**

Moved: Jean Richardson      Second: Joe Dickson

Yes: 7    No: 0    Absent: 1    Abstain: 0    Recusal: 0