



AMERICERT INTERNATIONAL

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Guidance re Product Composition Calculations for an “Organic” Label Claim Product
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The purpose of this guidance is to explain some of nuances of calculating the organic composition of products seeking an “Organic” label claim. This guidance does not apply to products seeking a “100% Organic” label claim or a “Made with Organic (Specific Food Groups or Ingredients)” label claim.

Sometimes applicants for organic certification have difficulty in calculating the organic product composition of a product for which they are seeking certification, because there are some non-obvious complexities involved in this calculation. Sometimes applicants believe that their product meets the product composition requirements, only to receive a Notice of Noncompliance indicating that the product does not meet the product composition requirements for an “Organic” product. Usually this is because they have missed some of the nuances of conducting this calculation.

A. Basic Requirements for an “Organic” Label Claim per Section 205.301 of the USDA Regulations

To qualify for an “Organic” label claim, a product must contain (by weight or fluid volume, excluding water and salt) not less than 95 percent organically produced ingredients. Any non-organic ingredients in the product must be specifically allowed in section 205.605 or 205.606. In addition, for any non-organic ingredients, any annotation in 205.605 or 205.606 must be met, and a commercial availability search for organic varieties must be conducted if the ingredient is a natural flavor or is listed in 205.606. Non-organic ingredients cannot comprise more than 5% of weight or fluid volume (excluding water and salt) of the total formulated product.

B. Basic Process for Calculating Organic Content in a Product for Which Certification is Sought

In general, the organic content of a finished product is determined as follows:

1. Total the total weight or fluid volume of all non-water, non-salt ingredients.
2. List the weight of each individual organic ingredient and non-organic ingredient.
3. Determine the contributed organic content of each organic ingredient by, in most cases, multiplying the gross weight of the individual organic ingredient by the following factor based upon the ingredients certified organic label claim:

An ingredient certified as “100% Organic” is entitled to full credit for its organic content. In such cases, the gross weight of the ingredient is factored by 1 (i.e. the gross weight is the same as the net weight of the organic ingredients).

An ingredient certified as “Organic” is only entitled to partial credit for its organic content. In most cases it is only entitled to 95% credit towards organic content. In such cases, the gross weight of the “Organic” ingredient is multiplied by a factor of .95 in determining the net organic content the ingredient contributes towards the total organic content (i.e. 1 pound of an “Organic” ingredient contributes only .95 lbs of organic content).

4. Total the gross weight of all organic and non-organic ingredients.
5. Total the net factored weight of all organic ingredients.
6. Divide the net factored weight of all organic ingredients by the gross weight of all organic and non-organic ingredients.



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For example: An applicant applies for an “Organic” label claim of a popsicle which will consist of “organic” lemon juice, and “100% Organic” strawberry puree, as well as water. The actual batch recipe is as follows:

- 1 gallon (8 lbs) of certified “Organic” lemon juice
- 5 gallons (50 lbs) of certified “100% organic” strawberry puree
- 1 gallon (8 lbs) of water.

To calculate the gross weight of each ingredient, we use the figures listed. We disregard the water.

This yields a gross weight calculation as follows:

- 8 lbs “Organic” Lemon Juice
- 50 lbs “100% Organic” strawberry puree.
- Total Gross Weight: 58 lbs.

Then we calculate the organic content contributed for each ingredient using the factors cited above:

“Organic” Lemon Juice: 8 lbs multiplied by a factor of .95 yields a contribution of net organic content of 7.6 lbs of organic content.

“100% Organic” Strawberry Puree: Since this product is certified “100% Organic” it is entitled to full credit for this ingredient, so the net organic content is the same as its gross weight (i.e.50 lbs).

Accordingly, the total net organic content of the formulation is 57.6 lbs of organic content.

To calculate the total organic content of the finished product we take the net organic content calculated above and divide it by the gross weight of all non-water non-salt ingredients:

$$57.6 / 58 = .9931$$

Take the result of that calculation and times it by 100 to obtain the net percent organic content in the product. In this case, it is 99.31% organic.

This product would qualify for an “Organic” label claim as it contains a minimum of 95% organic content.

Note that if we slightly alter the formula, the product’s total organic content drops merely because of the label claims of the ingredients:

- 8 lbs “100% Organic” Lemon Juice
- 50 lbs “Organic” strawberry puree.
- Total Gross Weight: 58 lbs.

Factored Organic Content: (50 lbs x .95 for “Organic” Strawberry Puree=47.5 lbs net organic content) + (8 lbs x 1 for “100% Organic” Lemon Juice=8 lbs net organic content) = 55.5 lbs net organic content.

When we calculate the total organic content of the product (55.5 lbs net organic content divided by 58 lbs gross weight of all non-salt non-water ingredients) we see that this product’s total organic composition has dropped: $55.5/58=95.68\%$ organic.



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C. The Most Common Error: Assigning a 100% credit for the organic content of an “Organic” ingredient.

The most common error is assigning an ingredient with only an “Organic” label claim full credit for its organic content. A typical situation is as follows:

Formulation:

“Organic” Lemon Juice 50 lbs

“Organic” Strawberry Puree 50 lbs

Non-Organic Xanthan Gum 1 lb

Gross Weight of All Ingredients: 101 lbs

Factored Organic Ingredients: “Organic” Lemon Juice (50 lbs x .95=47.5), “Organic” Strawberry Puree (50 lbs x .95=47.5). Total Net Organic Contribution= 95 lbs organic content.

When the total organic content as a percentage is calculated ($95/101=.9405$) we see that the total organic content is 94.05% (no rounding up) organic and that this product would not meet the “Organic” label claim as it does not contain 95% organic ingredients.

In fact, as a matter of math, you can never have a product meet the “Organic” label claim if it consists solely of “Organic” ingredients and any amount of a non-organic ingredient. If a product is seeking an “Organic” label claim, and contains any non-organic ingredients, it will have to contain some “100% Organic” ingredients (enough to boost the final product’s total percentage of all organic content to 95%) to meet the product composition requirements.

D. Advanced Product Composition Issues for an “Organic” Label Claim:

An Exception for Certain “Organic” Ingredients

Hopefully, the foregoing has made the issues with calculating the percentage of organic content in a formulated product a little more clear. Please do not read the following section unless you feel like you have a firm understanding of the foregoing sections. We are about to make it a little more complicated.

There are some situations where an ingredient with an “Organic” label claim can be given full credit for its weight towards the total organic content of the product. This is true only when the total formulated product is seeking an “Organic” label claim. Ingredients in an “Organic” product which can be given 100% credit for its organic content (i.e. be treated as if it was certified “100% Organic” for the purposes of calculating the total organic content) are ingredients which meet one of the following criteria:

1. The certified “organic” ingredient is a raw, unprocessed agricultural crop. It is common for certifying agents to certify raw unprocessed crops which come off of farms as “Organic” rather than “100% Organic”. When the ingredient is a raw unprocessed crop (e.g. fresh blueberries) it may be given 100% credit for its organic content even though it is not certified as “100% Organic”.
2. The certified “Organic” ingredient consists of a single ingredient which contains no non-organic ingredients (e.g. organic lemon juice which has no other ingredients).



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To document that the ingredient falls into the exception described in section 1 above, no particular additional documentation is needed as long as it is obvious that the ingredient is indeed a raw unprocessed agricultural crop which is certified as “Organic”.

To document that the ingredient falls into the exception described in section 2 above, specific documentation must be obtained and provided which states that the certified organic ingredient contains no non-organic ingredients or sub-ingredients. This can be a statement from the supplier, the certifying agent of the supplier, or a COA or product specification can meet this requirement if it clearly establishes the point.

In such circumstances, for a product seeking an “Organic” label claim, a product which is certified “Organic” can nonetheless be given 100% credit for its organic content by weight.

An Exception for Specific Confirmation of Percent Organic Content of an Ingredient

Because a product with an “Organic” label claim can in fact contain anywhere between 95% and 100% organic content, there may be cases where the certifying agent for the supplier is able to confirm the exact organic content of a product with an “Organic” label claim. If such documentation is obtained, then you may use the exact verified organic content of that ingredient in calculating the ingredient’s contribution of organic content to the final product. For instance, in our examples earlier, we considered “Organic” lemon juice to contain 95% organic content. If the certifying agent for the lemon juice provided documentation that the organic lemon juice consisted of organic lemon juice with added non-organic citric acid, and that the total organic content was 99% organic, then when determining the factor by which the gross weight of the ingredient should be multiplied to determine the net organic content, one would use the 99% figure as follows:

Formulation:

“Organic” Lemon Juice (with specific documentation that the organic content is 99% organic) 50 lbs

“Organic” Strawberry Puree 50 lbs

Non-Organic Xanthan Gum 1 lb

Gross Weight of All Ingredients: 101 lbs

Factored Organic Ingredients: “Organic” Lemon Juice (50 lbs x .99=49.5), “Organic” Strawberry Puree (50 lbs x .95=47.5). Total Net Organic Contribution= 97 lbs organic content.

When the total organic content as a percentage is calculated ($97/101=.9603$) we see that the total organic content is 96.03% (no rounding up) organic and that this product would meet the “Organic” label claim as it does contain at least 95% organic ingredients.