

# Nutrition Labeling Resource

## For Mushroom Growers and Marketers



April 2020

Prepared by:  
Melissa Grzybowski, MS, RD  
Food Consulting Company  
[www.foodlabels.com](http://www.foodlabels.com)

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COMPANY**

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# **Nutrition Labeling Resource For Mushroom Growers and Marketers**

This nutrition labeling resource was developed to provide mushroom growers and marketers an overview of nutrition labeling regulations for Nutrition Facts labels and nutrition marketing claims. This version reflects updates to the Nutrition Facts label as required by FDA in 2016. Labels must be 100% compliant with the new regulations no later than January 1, 2020 (January 1, 2021 for manufacturers with less than \$10 million in annual food sales). This revision replaces the previous nutrition labeling resource information of 2011 and provides a few updates since the 2016 version. Compliance with these regulations is your responsibility.

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## **Nutrition Labeling Resource For Mushroom Growers and Marketers**

Under current FDA rules, nutrition labeling on product packaging for fresh fruits and vegetables – including mushrooms – is voluntary unless a grower or marketer makes nutrition or health benefit claims on the label or in product advertising. Still, even in the absence of claims, many mushroom growers opt to voluntarily include a Nutrition Facts label on the product package to showcase to consumers that mushrooms are low in calories and sodium, free of fat and cholesterol, and a source of important vitamins and nutrients. Consumers consider taste, nutrition, cost, convenience and sustainability when making food purchasing decisions. Nutrition labeling is a way for growers and marketers to address consumers' concerns at the point of sale and to encourage them to purchase nutritious products, such as raw mushrooms.

### **FDA Updates to the Nutrition Facts Label**

The 2016 nutrition label regulations have widespread impact across every product that bears a Nutrition Facts label.

An overview of the changes:

- Revised format highlights Calories and Servings
- Focus on serving sizes that better reflect what people most commonly consume
- New requirement to include Added Sugars with Percent Daily Value (%DV)
- Nutrition Facts Per Package and/or Per Serving for certain package sizes
- Updated Daily Values (DVs) for several nutrients like fat, carbohydrate, sodium, potassium and dietary fiber
- Actual gram amount for calcium, iron, vitamin D and potassium in addition to %DV
- Vitamins A and C are no longer required but can be included as voluntary nutrients
- Calories from Fat is no longer allowed on the Nutrition Facts label
- Revised footnote better explains the %DV for consumers

These changes will impact how the nutrition information appears on mushroom labels. For example, the %DV for fiber and potassium have increased; therefore mushrooms' contribution to the DV will decrease.

## FDA Nutrition Values for Mushrooms

As part of the voluntary labeling program for fresh fruits and vegetables\* FDA has gathered data from many sources, applied statistical analysis, issued a proposed and final rule, accepted industry comments, and published the following dataset for fruit and vegetable nutrition in the [Code of Federal Regulations \(CFR\), Title 21, Part 101, Appendix C](#). The highlighted data below is FDA's published nutrition values for white button mushrooms:

Nutrition facts <sup>1</sup> for raw fruits and vegetables edible portion	Cal-ories	Total Fat		Saturated Fat		Trans Fat	Cholesterol		Sodium		Potassium		Total Carbo-hydrate		Dietary Fiber	Sug-ars	Pro-tein	Vita-min A	Vita-min C	Cal-cium	Iron		
		(g)	(%)	(g)	(%)		(mg)	(%)	(mg)	(%)	(mg)	(%)	(g)	(%)								(g)	(%)
Asparagus, 5 spears (93 g/3.3 oz)	20	0	0	0	0	0	0	0	0	0	230	7	4	1	2	8	2	2	10	15	2	2	
Bell pepper, 1 medium (148 g/5.3 oz)	25	0	0	0	0	0	0	0	0	40	2	220	6	6	2	2	8	4	1	4	190	2	4
Broccoli, 1 medium stalk (148 g/5.3 oz)	45	0	0.5	1	0	0	0	0	0	80	3	460	13	8	3	3	12	2	4	6	220	6	6
Carrot, 1 carrot, 7" long, 1 1/4" diameter (78 g/2.8 oz)	30	0	0	0	0	0	0	0	0	60	3	250	7	7	2	2	8	5	1	110	10	2	2
Cauliflower, 1/6 medium head (99 g/3.5 oz)	25	0	0	0	0	0	0	0	0	30	1	270	8	5	2	2	8	2	2	0	100	2	2
Celery, 2 medium stalks (110 g/3.9 oz)	15	0	0	0	0	0	0	0	0	115	5	260	7	4	1	2	8	2	0	10	15	4	2
Cucumber, 1/3 medium (99 g/3.5 oz)	10	0	0	0	0	0	0	0	0	0	0	140	4	2	1	1	4	1	1	4	10	2	2
Green (snap) beans, 3/4 cup cut (83 g/3.0 oz)	20	0	0	0	0	0	0	0	0	0	0	200	6	5	2	3	12	2	1	4	10	4	2
Green cabbage, 1/12 medium head (84 g/3.0 oz)	25	0	0	0	0	0	0	0	0	20	1	190	5	5	2	2	8	3	1	0	70	4	2
Green onion, 1/4 cup chopped (25 g/0.9 oz)	10	0	0	0	0	0	0	0	0	10	0	70	2	2	1	1	4	1	0	2	8	2	2
Iceberg lettuce, 1/6 medium head (89 g/3.2 oz)	10	0	0	0	0	0	0	0	0	10	0	125	4	2	1	1	4	2	1	6	6	2	2
Leaf lettuce, 1 1/2 cups shredded (85 g/3.0 oz)	15	0	0	0	0	0	0	0	0	35	1	170	5	2	1	1	4	1	1	130	6	2	4
Mushrooms, 5 medium (84 g/3.0 oz)	20	0	0	0	0	0	0	0	0	15	0	300	9	3	1	1	4	0	3	0	2	0	2
Onion, 1 medium (148 g/5.3 oz)	45	0	0	0	0	0	0	0	0	5	0	190	5	11	4	3	12	9	1	0	20	4	4
Potato, 1 medium (148 g/5.3 oz)	110	0	0	0	0	0	0	0	0	0	0	620	18	26	9	2	8	1	3	0	45	2	6
Radishes, 7 radishes (85 g/3.0 oz)	10	0	0	0	0	0	0	0	0	55	2	190	5	3	1	1	4	2	0	0	30	2	2
Summer squash, 1/2 medium (98 g/3.5 oz)	20	0	0	0	0	0	0	0	0	0	0	260	7	4	1	2	8	2	1	6	30	2	2
Sweet corn, kernels from 1 medium ear (90 g/3.2 oz)	90	20	2.5	4	0	0	0	0	0	0	0	250	7	18	6	2	8	5	4	2	10	0	2
Sweet Potato, 1 medium, 5" long, 2" diameter (130 g/4.6 oz)	100	0	0	0	0	0	0	0	0	70	3	440	13	23	8	4	16	7	2	120	30	4	4
Tomato, 1 medium (148 g/5.3 oz)	25	0	0	0	0	0	0	0	0	20	1	340	10	5	2	1	4	3	1	20	40	2	4

<sup>1</sup> Raw, edible weight portion. Percent (%) Daily Values are based on a 2,000 calorie diet.

To create FDA-compliant labels, mushroom growers need to keep the following requirements in mind when developing Nutrition Facts labels for their products:

- White button mushrooms– required to use FDA nutrition values ([per 21 CFR 101.45\(4b\)](#)) See sample Nutrition Facts label graphic on page 7 and Appendix B.
- Generic mushrooms (without mention of a specific variety, species or cultivar) - should also use FDA nutrition values.
- Mushrooms that are identified on the front of the package as being distinct from generic mushrooms (for example, “Shiitake Mushrooms”) **may** still use FDA nutrition data with regard to serving size and nutrition values, **OR may** use values other than those from FDA for nutrition labeling (see page 5); **however**, in the case of using other values, all labeling requirements specified in [21 CFR 101.9](#) **must** be followed and the serving size **must** be based on the 85g “reference amount” (per [21 CFR 101.12](#) for all other vegetables without sauce). See sample Nutrition Facts label graphic on page 8 and Appendix B.

\* The voluntary labeling program for fresh fruits and vegetables is codified into regulation at [21 CFR 101.42](#). Guidelines for voluntary labeling under this program are published at [21 CFR 101.45](#).

## Where to Get Other Nutrition Values for Mushrooms When Needed

For products identified as something other than white button mushrooms or generic mushrooms, growers may use nutrient database values, lab-analyzed nutrition values or a combination of the two instead of using FDA's values.

**Nutrient database values** - USDA has published database values for several varieties of mushrooms as shown on the chart in Appendix A. It is acceptable to use these values when developing Nutrition Facts labels for mushrooms that are identified as being distinct from generic mushrooms (for example, "Shiitake Mushrooms"). To prepare the data for the Nutrition Facts label, the food labeler needs to determine the Serving Size representing the household measure (pieces for whole mushrooms, OR cups for sliced, chopped or pieces) closest to the 85g reference amount established by FDA. *Please note that the values from the USDA database are "per 100 grams."*

**Lab-analyzed values** – Another option for determining the nutritional composition of specialty mushrooms is via laboratory analysis. To prepare the data for the Nutrition Facts label, the food labeler needs to determine the Serving Size representing the household measure (pieces for whole mushrooms, OR fractional portion of a cup for sliced, chopped or pieces) closest to the 85g reference amount established by FDA. *Please note that, as with nutrient database values, lab-analyzed values are typically reported "per 100 grams."*

## Nutrients for Nutrition Facts Labeling

Some nutrients are mandatory within the Nutrition Facts label; others are voluntary. Additionally, the nutrient order and nomenclature used are very important. Below is a listing of the nutrients allowed within the Nutrition Facts label. Mandatory nutrients are shown in bold, and the listing is in the order specified by FDA. Nutrients have been revised to reflect 2016 FDA regulations

<b>Calories</b>	Soluble Fiber	Vitamin C	Choline
Calories from Saturated Fat	Insoluble Fiber	Vitamin E	Phosphorus
<b>Total Fat</b>	<b>Total Sugars</b>	Vitamin K	Iodine
<b>Saturated Fat</b>	<b>Added Sugars</b>	Thiamin	Magnesium
<b>Trans Fat</b>	Sugar Alcohol	Riboflavin	Zinc
Polyunsaturated Fat	<b>Protein</b>	Niacin	Selenium
Monounsaturated Fat	<b>Vitamin D</b>	Vitamin B6	Copper
<b>Cholesterol</b>	<b>Calcium</b>	Folate	Manganese
<b>Sodium</b>	<b>Iron</b>	Vitamin B12	Chromium
<b>Total Carbohydrate</b>	<b>Potassium</b>	Biotin	Molybdenum
<b>Dietary Fiber</b>	Vitamin A	Pantothenic Acid	Chloride

### Notes:

*The following voluntary nutrients are present in insignificant amounts in all mushrooms: polyunsaturated fat, monounsaturated fat, soluble fiber, insoluble fiber, sugar alcohol, vitamin K, biotin, iodine, chromium, molybdenum, and chloride. Because they are insignificant for mushrooms, these nutrients were omitted from the Daily Values section on page 6 and the example on page 8.*

## Determining the % Daily Values

FDA has established Daily Values (DV) based on a 2,000 calorie diet. Once the serving size and quantitative nutrient values are determined, then the food labeler must determine the % Daily Values that will be reported on the Nutrition Facts label. This is achieved by dividing the quantitative value by the Daily Value. The FDA-established Daily Values are as follows:

Total Fat, 78g	Iron, 18mg	Vitamin B12, 2.4mcg
Saturated Fat, 20g	Potassium, 4700mg	Pantothenic Acid, 5mg
Cholesterol, 300mg	Vitamin A, 900mcg RAE	Choline, 550mg
Sodium, 2300mg	Vitamin C, 90mg	Phosphorus, 1250mg
Total Carbohydrate, 275g	Vitamin E, 15mg	Magnesium, 420mg
Dietary Fiber, 28g	Thiamin, 1.2mg	Zinc, 11mg
Added Sugars, 50g	Riboflavin, 1.3mg	Selenium, 55mcg
Protein, 50g	Niacin, 16mg NE	Copper, 0.9mg
Vitamin D, 20mcg	Vitamin B6, 1.7mg	Manganese, 2.3mg
Calcium, 1300mg	Folate, 400mcg DFE	

2016 FDA regulations include a revised and much shorter %DV footnote: “The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2000 calories a day is used for general nutrition advice.” The changes in the DVs will also impact nutrition labeling for mushrooms and potentially the ability to make claims. For example, potassium DV increased from 3500mg to 4700mg. Previously, a serving of mushrooms was required to have 350mg potassium to be labeled “good source of potassium”. Now, a serving must contain 470mg of potassium for the same claim.

### Notes:

*There is no established Daily Value for Trans Fat or Total Sugars.*

*% Daily Value for Protein is optional and is typically omitted on fruits and vegetables. If used, the labeler must use a protein digestibility corrected amino acid score (PDCAAS) to correct the protein value before determining the % Daily Value. The Mushroom Council has available Protein Digestibility lab results for Agaricus Bisporus (White) Mushrooms with a PDCAAS = 0.46.*

## The Nutrition Facts Graphic

The Nutrition Facts label is not the platform for your label designer to exercise creative talent! FDA has very specific rules for color, font, size, kerning, leading, weight of lines and outlines for Nutrition Facts labels. It is recommended that you use print-ready Nutrition Facts art provided by a professional food labeler, or consult Code of Federal Regulations at [21 CFR 101.9](#) and [FDA Graphic Examples](#) for graphic specifications.

### Nutrition Facts Label for White Button Mushrooms using FDA Nutrition Values

<b>Nutrition Facts</b>	
about 5 servings per container	
<b>Serving size</b>	<b>5 medium (84g/3.0oz)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>20</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 15mg	<b>1%</b>
<b>Total Carbohydrate</b> 3g	<b>1%</b>
Dietary Fiber 1g	<b>3%</b>
Total Sugars 0g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 3g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0.4mg	2%
Potassium 300mg	6%
<small>*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

#### Notes:

*FDA has special rules for Nutrition Facts labeling for fresh fruits, vegetables and fish – including mushrooms. When FDA nutrition values are used, the servings per container line may be omitted if desired. Raw fruits, vegetables and seafood are also exempt from dual column labeling.*

*A tabular Nutrition Facts label layout may be used if there is insufficient vertical space (about 3") for the horizontal layout. For smaller packages, additional options include the use of approved abbreviated nutrient names and the “not a significant source” statement. For more examples of graphic layouts, see [FDA Graphic Examples](#)*

The sample Nutrition Facts label shown below has been expanded to show several voluntary nutrients: Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Pantothenic Acid, Phosphorus, Zinc, Selenium, and Copper.

**Nutrition Facts Label for Sliced  
Light-Exposed White Button Mushrooms  
using USDA Nutrition Values**

<b>Nutrition Facts</b>	
about 4 servings per container	
<b>Serving size</b>	<b>1 cup (85g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>20</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 15mg	<b>1%</b>
<b>Total Carbohydrate</b> 3g	<b>1%</b>
Dietary Fiber 1g	<b>3%</b>
Total Sugars 0g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 3g	
Vitamin D 22.3mcg	110%
Calcium 0mg	0%
Iron 0.4mg	2%
Potassium 300mg	6%
Thiamin 0.07mg	6%
Riboflavin 0.34mg	25%
Niacin 3.1mg	20%
Vitamin B <sub>6</sub> 0.09mg	6%
Folate 15mcg DFE	4%
Pantothenic Acid 1.3mg	25%
Phosphorus 70mg	6%
Zinc 0.4mg	4%
Selenium 8mcg	15%
Copper 0.27mg	30%
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

**Note:**

*This example uses 1 cup (85g) as the Serving Size (compared to 84g shown on the sample Nutrition Facts labels on page 7 for generic mushrooms). The serving size for Nutrition Facts labels for mushrooms identified as being distinct from generic mushrooms must be based on an 85g “reference amount.” (See 3<sup>rd</sup> bullet at bottom of page 4.) FDA guidance available [here](#) gives more information for determining the serving size for non-generic mushrooms.*



## Nutrient Content and Health Benefit Claims

Nutrient content and health benefit claims made on a product label or in advertising must follow all regulations established by FDA, which are published in the Code of Federal Regulations, Title 21, [Parts 101.13](#), [101.14](#), [101.54-69](#), and [101.70-83](#).

Products with label claims face greater scrutiny than those without claims, but growers who have a good understanding of the regulations (or seek consultation from food labeling experts who do) do not need to shy away from communicating nutritional benefits of mushrooms on package labels.

The following is a sampling of **nutrient content claims** and their definitions:

- **Free** means a product's reference amount and labeled serving contains an insignificant amount of total fat, saturated fat, cholesterol, sodium, sugars, or calories. If the product is naturally free of the nutrient, then the labeler must indicate that the food inherently qualifies for the claim (e.g., mushrooms, a fat-free food)  
>> Synonyms: *zero, no, without, trivial source of, negligible source of*
- **Good source** means the reference amount of a product contains 10 to 19% of the Daily Value of a particular nutrient  
>> Synonyms: *contains, provides*
- **Excellent source** means the reference amount of a product contains 20% or more of the Daily Value of a particular nutrient  
>> Synonyms: *high in, rich in*
- **More** means the reference amount of a product contains at least 10% or more of the Daily Value of a nutrient than the reference product  
>> Synonyms for altered products: *fortified, enriched, added, plus*
- **Healthy** for raw fruits and vegetables means that the food contains 3g or less fat, 1g or less saturated fat, 480mg or less sodium and 60mg or less cholesterol per reference amount or labeled serving (whichever is larger). Note, FDA is considering a change to how "healthy" is defined. This definition may be revised in the future.  
>> Synonyms: non specified

**Health claims** are pre-authorized by FDA, must use tightly-controlled wording and must characterize the ability of the nutrient or functional component to reduce the risk of disease or a health-related condition. At this time, there are 17 approved health claims and mushrooms do not qualify for any of them. (Mushrooms do not qualify for the health claim related to calcium, vitamin D, and osteoporosis because they do not contain the qualifying amount of calcium.)

**Structure / function claims** describe the role of a nutrient or functional component in affecting or maintaining normal body structure or function. This type of claim is not pre-approved by FDA, but the grower must have substantiation on file to show that the claim is truthful and not misleading, and be prepared to back up the claim, if challenged. (Structure / function claims can be a useful way for a grower or marketer to highlight the health benefits of vitamin D in light-exposed mushrooms.)

## **Determining Compliance**

FDA regulations establish the allowable variance for random testing of the product vs. what is printed on the label. If FDA decides to verify the accuracy of a nutrition label for a product, the agency will conduct nutrition analysis on a composite sample of 12 packages collected from 12 separate shipping cases. The results of this analysis will be compared to the product label.

In addition to the nutrition values displayed on the label, FDA also monitors compliance with established nutrient content claims, other health benefit claims, nutrition facts formatting, ingredient labeling, product naming, net weight declaration, overall label layout and text size/positioning.

In all cases, every aspect of the label must be truthful and not misleading; otherwise the product is said to be misbranded.

## **Consequences of Non-Compliance**

If FDA determines the label values are not compliant, or if the product is misbranded or misleading in another way (such as invalid claims, incorrect serving size or incorrect formatting), the agency will most likely issue a written warning that asks for a response within 15 days. These warning letters are a matter of public record, FDA publishes them on the Internet, and they can carry the potential for significant negative press. FDA may also levy fines, seize product or force a recall.

*Remember, compliance with the nutrition labeling regulations is the responsibility of the firm who carries the signature line on the product.*

## Nutrition Labeling Checklist for Mushroom Growers

All answers should be YES. If you check NO or are unsure about any of the items on the checklist, you may wish to consult with a food label expert to ensure that your labels are 100% FDA compliant.

No.	Item	YES	NO
1	If my package contains white button mushrooms or is labeled simply as “mushrooms” does the Nutrition Facts label (NFL) contain the required FDA values shown in <a href="#">21 CFR 101.9 Appendix C</a> reflected in the new 2016 NFL format?		
2	If the nutrition values on my label are not consistent with FDA values for mushrooms, does my label include the name of the variety, species or cultivar within the product identity on the front of the package?		
3	If the product identity on my package is something other than “mushrooms” or “white button mushrooms” and if I have used values other than those published by FDA for mushrooms, do I have data to support the values I am using?		
4	Have vitamin declarations been adjusted to account for storage or other degradation issues so that the values shown on the package reflect what’s in the package for the entire duration of the shelf life?		
5	Does my Nutrition Facts label meet FDA’s graphic requirements shown in <a href="#">21 CFR 101.9</a> and <a href="#">FDA Graphic Examples</a> ?		
6	Does my Nutrition Facts label include the Daily Values footnote (revised version as noted on page 6)?		
7	Does the Serving Size shown on my Nutrition Facts label include a household measure showing the number of mushrooms (for whole mushrooms) OR fractional portion of a cup (for sliced, chopped or pieces) that comply with FDA regulations?		
8	Does the Serving Size shown on my Nutrition Facts label follow FDA’s Reference Amounts Customarily Consumed and represent the whole number of pieces or fractional portion of a cup nearest 85 grams?		
9	If the Servings Per Container line is used, does it work together with the Serving Size line and make sense in the context of the declared net weight shown on the front of the package?		
10	Have the values shown in the Nutrition Facts label been rounded per FDA rules?		
11	If my label contains any nutrition or health benefit claims, am I certain that they meet regulatory requirements?		
12	If claims are made about a nutrient that is ordinarily voluntary (for example, Riboflavin), does my Nutrition Facts label include the required listing for that nutrient?		

## Web Links Included in This Resource

Nutrition Facts for Raw Fruits and Vegetables, 21 CFR 101 Appendix C

<https://www.ecfr.gov/graphics/pdfs/er17au06.008.pdf>

Nutrition labeling of raw fruit, vegetables, and fish, 21 CFR 101.42

[http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101\\_142&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101_142&rgn=div8)

Guidelines for the voluntary nutrition labeling of raw fruits, vegetables, and fish, 21 CFR 101.45

[http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101\\_145&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101_145&rgn=div8)

Nutrition labeling of food, 21 CFR 101.9

[http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101\\_19&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101_19&rgn=div8)

Reference amounts customarily consumed per eating occasion, 21 CFR 101.12

[http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101\\_112&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101_112&rgn=div8)

USDA's FoodData Central

<http://www.ars.usda.gov/Services/docs.htm?docid=8964>

Graphic Enhancements Used by the FDA – Resources for Industry

<http://www.fda.gov/downloads/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/UCM513883.pdf>

Guidance for Industry: Guidelines for Determining Metric Equivalents of Household Measures

<https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-guidelines-determining-metric-equivalents-household-measures>

Nutrient content claims – general principles, 21 CFR 101.13

[http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101\\_113&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101_113&rgn=div8)

Health claims: general requirements, 21 CFR 101.14

[http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101\\_114&rgn=div8](http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=se21.2.101_114&rgn=div8)

Specific Requirements for Nutrient Content Claims, 21 CFR 101.54-69

<http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=sp21.2.101.d&rgn=div6>

Specific Requirements for Health Claims, 21 CFR 101.70-83

<http://www.ecfr.gov/cgi-bin/text-idx?SID=cc31ffb98fe4c00655fc0138a670653&mc=true&node=sp21.2.101.e&rgn=div6>

## Appendix A: USDA Values for Select Mushrooms per 100g

Values of "0" represent insignificant amounts for that nutrient. Values of "--" represent no data available for that nutrient.

			Mandatory Nutrients																			
NBD No.	Common Name	Scientific Name	Calories	Total Fat	Sat Fat	Trans Fat	Cholest	Sodium	Total Carb	Fiber	Total Sugars	Added Sugars	Protein	Vitamin D	Calcium	Iron	Potassium					
			(kcal)	(g)	(g)	(g)	(mg)	(mg)	(g)	(g)	(g)	(g)	(g)	(mcg)	(mg)	(mg)	(mg)					
11239	Chanterelle	<i>Cantharellus californicus</i> or <i>Cantharellus cibarius</i>	32	0.53	--	0	--	9	6.86	3.8	1.16	--	1.49	5.3	15	3.47	506					
11266	Crimini	<i>Agaricus bisporus</i>	22	0.1	0.01	0	0	6	4.3	0.6	1.72	--	2.5	0.1	18	0.4	448					
	Crimini, Exposed to																					
11936	UV Light	<i>Agaricus bisporus</i>	22	0.1	0.01	0	0	6	4.3	0.6	1.72	--	2.5	31.9	18	0.4	448					
11950	Enoki	<i>Flammulina velutipes</i>	37	0.29	0.02	0	0	3	7.81	2.7	0.22	--	2.66	0.1	0	1.15	359					
11993	Maitake	<i>Grifola frondosa</i>	31	0.19	0.03	0	0	1	6.97	2.7	2.07	--	1.94	28.1	1	0.3	204					
11240	Morel	<i>Morchella esculenta</i>	31	0.57	0.06	0	--	21	5.1	2.8	0.6	--	3.12	5.1	43	12.18	411					
11987	Oyster	<i>Pleurotus ostreatus</i>	33	0.41	0.06	0	0	18	6.09	2.3	1.11	--	3.31	0.7	3	1.33	420					
11265	Portobella	<i>Agaricus bisporus</i>	22	0.35	0.06	0	0	9	3.87	1.3	2.5	--	2.11	0.3	3	0.31	364					
	Portobella, Exposed to																					
11998	UV Light	<i>Agaricus bisporus</i>	22	0.35	0.06	0	0	9	3.87	1.3	2.5	--	2.11	28.4	3	0.31	364					
11238	Shiitake	<i>Lentinus edodes</i>	34	0.49	--	0	--	9	6.79	2.5	2.38	--	2.24	0.4	2	0.41	304					
			Voluntary Nutrients																			
NBD No.	Common Name	Scientific Name	Vitamin A	Vitamin C	Vitamin E	Thiamin	Riboflavin	Niacin	Vitamin B6	Folate	Vitamin B12	Pantothenic Acid	Choline	Phosphorus	Magnesium	Zinc	Selenium	Copper	Manganese			
			(mcg RAE)	(mg)	(mg)	(mg)	(mg)	(mg NE)	(mg)	(mcg DFE)	(mcg)	(mg)	(mg)	(mg)	(mg)	(mg)	(mcg)	(mg)	(mg)			
11239	Chanterelle	<i>Cantharellus californicus</i> or <i>Cantharellus cibarius</i>	--	--	--	0.01	0.22	4.08	0.04	2	--	1.08	--	57	13	0.71	2.2	0.35	0.29			
11266	Crimini	<i>Agaricus bisporus</i>	0	0	0.01	0.09	0.49	3.8	0.11	25	0.1	1.5	22.1	120	9	1.1	26	0.5	0.14			
	Crimini, Exposed to																					
11936	UV Light	<i>Agaricus bisporus</i>	0	0	0.01	0.09	0.49	3.8	0.11	28	0.1	1.5	22.1	120	9	1.1	26	0.5	0.14			
11950	Enoki	<i>Flammulina velutipes</i>	--	0	0.01	0.22	0.2	7.03	0.1	48	0	1.35	47.7	105	16	0.65	2.2	0.11	0.07			
11993	Maitake	<i>Grifola frondosa</i>	0	0	0.01	0.15	0.24	6.59	0.06	21	0	0.27	51.1	74	10	0.75	2.2	0.25	0.06			
11240	Morel	<i>Morchella esculenta</i>	0	--	--	0.07	0.2	2.25	0.14	9	--	0.44	--	194	19	2.03	2.2	0.62	0.59			
11987	Oyster	<i>Pleurotus ostreatus</i>	2	0	0	0.12	0.35	4.96	0.11	38	0	1.29	48.7	120	18	0.77	2.6	0.24	0.11			
11265	Portobella	<i>Agaricus bisporus</i>	0	0	0.02	0.06	0.13	4.49	0.15	28	0.05	1.14	21.2	108	--	0.53	18.6	0.29	0.07			
	Portobella, Exposed to																					
11998	UV Light	<i>Agaricus bisporus</i>	0	0	0.02	0.06	0.13	4.49	0.15	28	0.05	1.14	21.2	108	10	0.53	18.6	0.29	0.07			
11238	Shiitake	<i>Lentinus edodes</i>	--	--	--	0.01	0.22	3.88	0.29	13	--	1.5	--	112	20	1.03	5.7	0.14	0.23			

## Appendix B: Sample Nutrition Facts for Select Mushrooms

### Sample Nutrition Facts for Crimini Mushrooms Sliced, 8 oz Package

<b>Nutrition Facts</b>	
about 2.5 servings per container	
<b>Serving size</b>	<b>1 cup (87g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>20</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 5mg	<b>0%</b>
<b>Total Carbohydrate</b> 4g	<b>1%</b>
Dietary Fiber 1g	<b>4%</b>
Total Sugars 1g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 2g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 20mg	8%
Thiamin 1.08mg	6%
Riboflavin 0.43mg	35%
Niacin 4.1mg	25%
Vitamin B <sub>6</sub> 0.1mg	6%
Folate 20mcg DFE	6%
Pantothenic Acid 1.3mg	25%
Phosphorus 100mg	8%
Zinc 1mg	10%
Selenium 23mcg	40%
Copper 0.44mg	50%
Manganese 0.12mg	6%
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Example claims:  
Mushrooms – a low calorie food  
Mushrooms – a fat free food  
Mushrooms – a saturated fat free food  
Mushrooms – a cholesterol free food  
Mushrooms – a very low sodium food  
Mushrooms – a sugar free food  
High in Riboflavin, Niacin, Pantothenic Acid, Selenium and Copper

### Sample Nutrition Facts

### Sample Nutrition Facts for Portabella Mushrooms Whole, 12 oz Package

<b>Nutrition Facts</b>	
about 4 servings per container	
<b>Serving size</b>	<b>1 mushroom (84g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>20</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 10mg	<b>0%</b>
<b>Total Carbohydrate</b> 3g	<b>1%</b>
Dietary Fiber 1g	<b>4%</b>
Total Sugars 2g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 2g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 140mg	6%
Thiamin 0.05mg	4%
Riboflavin 0.11mg	8%
Niacin 7.3mg	25%
Vitamin B <sub>6</sub> 0.12mg	8%
Folate 25mcg DFE	6%
Pantothenic Acid 1mg	20%
Phosphorus 90mg	8%
Selenium 16mcg	30%
Copper 0.24mg	25%
Manganese 0.06mg	2%
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Example claims:  
Mushrooms – a low calorie food  
Mushrooms – a fat free food  
Mushrooms – a saturated fat free food  
Mushrooms – a cholesterol free food  
Mushrooms – a very low sodium food  
Mushrooms – a sugar free food  
High in Niacin, Pantothenic Acid, Selenium and Copper

### Sample Nutrition Facts

**for Shiitake Mushrooms  
Whole, 1 Pound Package**

<b>Nutrition Facts</b>	
about 6 servings per container	
<b>Serving size 4 mushrooms (76g)</b>	
<b>Amount per serving</b>	
<b>Calories</b>	<b>25</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 5mg	<b>0%</b>
<b>Total Carbohydrate</b> 5g	<b>2%</b>
Dietary Fiber 2g	<b>7%</b>
Total Sugars 2g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 2g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 230mg	4%
Riboflavin 0.16mg	10%
Niacin 3.1mg	20%
Vitamin B6 0.22mg	15%
Folate 10mcg DFE	2%
Pantothenic Acid 1.1mg	20%
Phosphorus 90mg	8%
Zinc 0.8mg	8%
Selenium 4mcg	8%
Copper 0.11mg	10%
Manganese 0.17mg	8%
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Example claims:

- Mushrooms – a low calorie food
- Mushrooms – a fat free food
- Mushrooms – a saturated fat free food
- Mushrooms – a cholesterol free food
- Mushrooms – a very low sodium food
- Mushrooms – a sugar free food
- High in Niacin and Pantothenic Acid
- Good source of Riboflavin, Vitamin B6, and Copper

**for Oyster Mushrooms  
Whole, 1 Pound Package**

<b>Nutrition Facts</b>	
about 5 servings per container	
<b>Serving size 6 mushrooms (90g)</b>	
<b>Amount per serving</b>	
<b>Calories</b>	<b>30</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 15mg	<b>1%</b>
<b>Total Carbohydrate</b> 5g	<b>2%</b>
Dietary Fiber 2g	<b>7%</b>
Total Sugars 1g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 3g	
Vitamin D 0.6mcg	4%
Calcium 0mg	0%
Iron 1.2mg	6%
Potassium 380mg	8%
Thiamin 0.11mg	10%
Riboflavin 0.31mg	25%
Niacin 5.1mg	30%
Vitamin B6 0.1mg	6%
Folate 35mcg DFE	8%
Pantothenic Acid 1.2mg	25%
Phosphorus 110mg	8%
Magnesium 15mg	4%
Zinc 0.7mg	6%
Selenium 2mcg	4%
Copper 0.22mg	25%
Manganese 0.1mg	4%
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

Example claims:

- Mushrooms – a low calorie food
- Mushrooms – a fat free food
- Mushrooms – a saturated fat free food
- Mushrooms – a cholesterol free food
- Mushrooms – a very low sodium food
- Mushrooms – a sugar free food
- High in Riboflavin, Niacin, Pantothenic Acid and Copper
- Good source of Thiamin

**Sample Nutrition Facts for White Button Mushrooms using FDA Nutrition Values, 1 Pound Package**

<b>Nutrition Facts</b>	
about 5 servings per container	
<b>Serving size 5 medium (84g/3.0oz)</b>	
<b>Amount per serving</b>	
<b>Calories</b>	<b>20</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 15mg	<b>1%</b>
<b>Total Carbohydrate</b> 3g	<b>1%</b>
Dietary Fiber 1g	<b>3%</b>
Total Sugars 0g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 3g	
Vitamin D 0mcg	<b>0%</b>
Calcium 0mg	<b>0%</b>
Iron 0.4mg	<b>2%</b>
Potassium 300mg	<b>6%</b>
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

- Example claims:  
Mushrooms – a low calorie food  
Mushrooms – a fat free food  
Mushrooms – a saturated fat free food  
Mushrooms – a cholesterol free food  
Mushrooms – a very low sodium food  
Mushrooms – a sugar free food

**Sample Nutrition Facts for Sliced Light-Exposed White Button Mushrooms, 12 oz Package**

<b>Nutrition Facts</b>	
about 4 servings per container	
<b>Serving size 1 cup (85g)</b>	
<b>Amount per serving</b>	
<b>Calories</b>	<b>20</b>
	<b>% Daily Value*</b>
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 15mg	<b>1%</b>
<b>Total Carbohydrate</b> 3g	<b>1%</b>
Dietary Fiber 1g	<b>3%</b>
Total Sugars 0g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 3g	
Vitamin D 22.3mcg	<b>110%</b>
Calcium 0mg	<b>0%</b>
Iron 0.4mg	<b>2%</b>
Potassium 300mg	<b>6%</b>
Thiamin 0.07mg	<b>6%</b>
Riboflavin 0.34mg	<b>25%</b>
Niacin 3.1mg	<b>20%</b>
Vitamin B <sub>6</sub> 0.09mg	<b>6%</b>
Folate 15mcg DFE	<b>4%</b>
Pantothenic Acid 1.3mg	<b>25%</b>
Phosphorus 70mg	<b>6%</b>
Zinc 0.4mg	<b>4%</b>
Selenium 8mcg	<b>15%</b>
Copper 0.27mg	<b>30%</b>
*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	

- Example claims:  
Mushrooms – a low calorie food  
Mushrooms – a fat free food  
Mushrooms – a saturated fat free food  
Mushrooms – a cholesterol free food  
Mushrooms – a very low sodium food  
Mushrooms – a sugar free food  
High in Vitamin D, Riboflavin, Niacin, Pantothenic Acid, and Copper  
Good source of Selenium



**Sample Nutrition Facts for Diced  
Maitake Mushrooms, 1 Pound Package**

<b>Nutrition Facts</b>	
about 5 servings per container	
<b>Serving size</b>	<b>1 1/4 cup (88g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>25</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 0g	<b>0%</b>
Saturated Fat 0g	<b>0%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 15mg	<b>1%</b>
<b>Total Carbohydrate</b> 6g	<b>2%</b>
Dietary Fiber 2g	<b>5%</b>
Total Sugars 0g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 2g	
Vitamin D 24.6mcg	120%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 310mg	6%
Thiamin 0.13mg	10%
Riboflavin 0.21mg	15%
Niacin 6.3mg	40%
Vitamin B <sub>6</sub> 0.05mg	2%
Folate 20mcg DFE	4%
Pantothenic Acid 0.2mg	4%
Phosphorus 60mg	6%
Magnesium 10mg	2%
Zinc 0.7mg	6%
Selenium 2mcg	4%
Copper 0.22mg	25%
Manganese 0.05mg	2%
Choline 40mg	8%

\*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

**Example claims:**

- Mushrooms – a low calorie food
- Mushrooms – a fat free food
- Mushrooms – a saturated fat free food
- Mushrooms – a cholesterol free food
- Mushrooms – a very low sodium food
- Mushrooms – a sugar free food
- High in Vitamin D, Niacin and Copper
- Good source of Thiamin and Riboflavin