

Nutrition Labeling

A food business guide for regulatory compliance

Full Linear Display

Nutrition Facts Serv size: 1 package, Amount per Serving: **Calories** 45, Fat Cal. 10, **Total Fat** 1 g (2% DV), Sat. Fat 1 g (5% DV), **Cholest.** 0 mg (0% DV), **Sodium** 50 mg (2% DV), **Total carb.** 8 g (3% DV), Fiber 1 g (4% DV), Sugars 4 g, **Protein** 1 g, Vitamin A (8% DV), Vitamin C (8% DV), Calcium (0% DV), Iron (2% DV). Percent Daily Values (DV) are based on a 2,000 calorie diet.

Simplified Linear Display

Nutrition Facts Serv size: 3 pieces (6g), Servings: 4, Amount Per Serving: **Calories** 20, **Total Fat** 0g (0% DV), **Sodium** 20mg (1%DV), **Total carb.** 5g (2%DV), **Sugars** 5 g, **Protein** 0g. Percent Daily Values (DV) are based on a 2,000 calorie diet.

Shortened Linear Display

Nutrition Facts Serv size: 1 package, Amount Per Serving: **Calories** 40, **Total Fat** 0g (0%DV), **Sodium** 50 mg (2%DV), **Total carb.** 8g (3%DV), Fiber 1 g (4%DV), Sugars 4 g, **Protein** 1g, Vitamine A (8%DV), Vitamin C (8% DV), Iron (2%DV), Not a significant source of calories from fat, saturated fat, cholesterol, or calcium. Percent Daily Values (DV) are based on a 2,000 calorie diet.

TABLE OF CONTENTS

INTRODUCTION	3
COMPLIANCE DATES	3
EXEMPTIONS	3
USDA EXEMPTIONS	5
SERVING SIZE	5
SERVINGS PER CONTAINER	7
REQUIRED NUTRIENTS	7
VOLUNTARY NUTRIENTS	8
DETERMINATION OF NUTRIENT CONTENT	8
PERCENT DAILY VALUE	8
ROUNDING RULES	9
CONSUMER INFORMATION	10
LABEL ALTERNATIVES VERSUS PACKAGE DIMENSIONS	10
FORMAT ALTERNATIVES	11
PRINTING REQUIREMENTS	11
PLACEMENT OF THE LABEL ON THE PACKAGE	12
CONCLUSION	12
REFERENCES	12
OTHER READING	12
Graphic Enhancements Used by the FDA	13

NUTRITION LABELING

A FOOD BUSINESS GUIDE FOR REGULATORY COMPLIANCE

INTRODUCTION

The Nutrition Labeling and Education Act (NLEA) was passed by Congress in 1990. The legislation is a mandate for food businesses to provide specific food nutrient data on the package label. The mandate is a significant change from voluntary nutrition labeling and is subject to regulatory actions when compliance is not met. As a result of the 1990 NLEA mandate, the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA) issued proposed regulations for public comment in November of 1991. Based on the comments, final regulations were published in the January 6, 1993, issue of the *Federal Register*, with subsequent changes and corrections in the August 18, 1993, *Federal Register* to make the regulations more workable.

Nutrition labeling regulations are the most significant regulatory labeling change in decades since most of the U.S. food industry and foreign exporters of foods into the U.S. must meet the new regulations. An estimated cost of the label transition by industry is in excess of \$3 billion. The label change has an economic impact on the basic process of doing business. This cost factor adds to the significance of the legislation and the new regulations when a food firm implements the requirements. The transition to or the first time adaptation of nutrition labeling should be systematic and completed accurately to avoid compliance problems and minimize unnecessary costs. Therefore, a guide for the food business that streamlines the 2,000+ pages of regulatory preamble and regulations is critical to sustained profitability and compliance. The purpose of this publication is to provide a simplified guide for the preparation of nutrition labels.

COMPLIANCE DATES

The regulations called for a strict time line for the implementation of mandatory nutrition labeling. The first implementation dates were May 8, 1994, for FDA and July 6, 1994, for USDA; however, Public Law 103-261 extended the time for compliance for most

food products until after August 8, 1994. Although the regulations are mandatory, not all food products will be required to exhibit a nutrition label. Therefore, the first step in the overall process is to determine how the regulations apply to the food firm and the food products of the firm by assessing the pertinence of the exemptions to the particular situation.

EXEMPTIONS

The regulations contain various exemptions from the requirements for mandatory nutrition labeling. *The exemptions (with a few exceptions, e.g., bulk foods for further processing) will not apply if a food label makes nutrient content or health claims.* In the absence of claims, and if one or more of the exemptions is applicable, then specific food items, product lines or even the entire business enterprise may not need to implement the labeling change. The exemptions to mandatory nutrition labeling are as follows:

- *Foods of no nutrition significance* – Although almost all foods and beverages contain one or more nutrients at some naturally occurring level, the quantity of the nutrient(s) may be such a small amount in a designated serving size that there is a negligible contribution to the total diet. Examples of these types of foods include non-sweetened coffee or tea and some spices in the dry form. For a food or beverage to meet this exemption, all required nutrients must be at a level that allows a declaration of zero (0) in nutrition labeling, except that total carbohydrate, dietary fiber and protein may declare “*less than 1 gram.*”
- *Infant formula* – Existing regulations for infant formula preempt mandatory nutrition labeling. These products must comply with 21 Code of Federal Regulations (CFR), Part 107.
- *Medical foods* – Food consumed or administered under the supervision of a physician does not require nutrition labeling.
- *Donated foods* – Foods are not sold to the ultimate consumer and, therefore, exempt.

- *Dietary supplements* – Dietary supplements of vitamins and minerals are exempt from §101.9, but must comply with specific nutrition labeling regulations in § 101.36.
- *Individual units in multi-unit package* – Unit packages are exempt as long as the outer wrapping of the multi-unit pack bears the nutrition label and the individual units are not sold separately and are labeled, “This unit not labeled for retail sale” (except when the inner unit contains no labeling at all). Examples are soup mix and popsicles.
- *Foods shipped in bulk form* – The exemption applies to foods shipped as a large quantity (bulk form) when intended for further processing or repacking and not intended for distribution to consumers. A 25-pound back of flour sold at retail requires nutrition labeling. Cookies, candies, etc., that are commercially available for bulk display at retail require nutrition labeling, at least as a counter card, sign or other appropriate means.
- *Custom processed fish and game meat* – These fish and game meats are exempt since the product is not for commercial sale, but rather the personal consumption by the requestor.
- *Raw fruit, vegetables and fish* – Nutrition labeling of raw produce and fish is voluntary and the responsibility of the retailer. The voluntary labeling regulations are covered in 21 CFR Part 101.9(j)(10). Proposed Rule published July 18, 1994, in the *Federal Register*.
- *Restaurant food* – Food sold to restaurants or other food service operations where it is to be served for immediate consumption is exempt.
- *Ready-to-eat foods not for immediate consumption* – This applies to foods prepared onsite and not offered for sale outside that location.
- *Foods not for immediate consumption* – Delis, confectioneries and bakeries which process and prepare ready-to-eat foods onsite for late consumption are exempted from labeling these specific foods. However, if the same food is distributed outside of the deli, bakery or confectionery for retail purchase, the food must bear nutrition labeling.
- *Foods for immediate consumption* – The provision is for restaurants, vending machines, delis, bakeries, lunch wagons, sidewalk carts, mall cookie counters and confectioneries where the food is generally consumed immediately where purchased or while walking away. The exemption also applies to home or office delivery systems, i.e., pizza, where the food is consumed immediately.

- *Small business (FDA)* – A new exemption for low volume food products of small businesses was added by Congress in 1993 as an amendment to the NLEA act. The exemption for low volume food products from small businesses is determined on a product-by-product basis. The basis for this exemption is the average number of full-time equivalent employees, the approximate number of units sold, absence of nutrient content or health claims or other nutrition information, and a written notice to the FDA. The exemption is effective from May 8 of one year to May 7 of the next year. The employment and unit sales are on a descending scale over time for products in commerce before May 8, 1994:

Year Beginning	Units	Employees
5/8/1994	<6000,000	<300
5/8/1995	<400,000	<300
5/8/1996	<200,000	<200
5/8/1997	<100,000	<100

Units are determined on a 12-month period and reflect the retail packaged quantity of unlike foods where the name of the food, its processing or formula reflects a notable difference such as a change in nutrient composition. For new products first introduced into the U.S. market after May 8, 1994, the requirement is less than 100 employees and less than 100,000 units per year. The average number of full-time equivalent employees is based on the total business and includes all types of employees, i.e., office, sales, production, and even contract personnel. The FTE is determined by dividing the total number of salary/wage hours paid by 2,080 hours/year. This provides the appropriate FTE inclusion of part-time and full-time employees.

A very small business with less than 10 FTE employees and less than 10,000 unit sales per year for each of its products is not required to give notice to FDA for that specific product. The format and prescribed information to obtain the exemption is presented in Figure 1 on page 6. FDA Small Business Label Exemption Notice (reproduced from the *Federal Register*, Vol. 59, No. 49, March 14, 1994.)

NOTE: See <http://vm.cfsan.fda.gov/~dms/sbel.html> for a more current version of this form and instructions for completing it. Ed. 9/2003

- *Small Business (USDA)* – These exemptions pertain to firms with less than 500 employees and which produce less than 100,000 pounds of a product per year. Plants with over 500 employees must label all products. The production volume exemption will be phased in over three years and is determined on a product-by-product basis:

Year Beginning	Pounds of Product
6/6/1994	250,000
6/6/1995	175,000
6/6/1996	100,000

For the purposes of the small business exemption, a food product is defined by USDA as a formulation, not including distinct flavors which do not significantly alter the nutrition profile, sold in any size package. Therefore, hot and mild pork sausage sold in 1, 2 and 5 pound packages would be one product. Volume is determined on a two-year average, based on a company's yearly business calendar. The exemptions will not apply if the product label has nutrition information which makes a nutrition claim (i.e., "97% fat free")

USDA EXEMPTIONS

- ▶ Single ingredient raw meat and poultry products (voluntary labeling is permitted)
- ▶ Products intended for further processing
- ▶ Products not for sale to consumers, i.e., institutional foods
- ▶ Products in packages weighing less than ½ ounce net weight
- ▶ Products custom slaughtered or prepared
- ▶ Products intended for export
- ▶ Ready-to-eat products that are packaged or portioned at a retail store, e.g., deli case items
- ▶ Multi-ingredient products process, portioned or packaged at a retail store, e.g., sausage, meatloaf, smoked hocks, smoked neck bones
- ▶ Gift packages (individual items within the gift package may require labeling if not otherwise exempt)
- ▶ Restaurant food

SERVING SIZE

Under mandatory nutrition labeling, serving size will continue to be specified as part of the format. The

significant change is that the serving size is now based on a reference amount (RA) which is defined in the regulation. The RA is the amount usually consumed and was established using the Nationwide Food Consumption Survey. The prescribed RA's are presented in the tables on 17-26. The first two tables contain RA information on FDA-regulated food categories. The tables on pages 25-26 contain RA information on USDA-regulated categories of ready-to-eat and ready-to-cook red meats, poultry and eggs. On the food label, the serving size is expressed as a household measure close to the RA, followed by the metric equivalent. These tables contain some examples of possible label statements, but the list is not all inclusive. The RA appropriate to the specific product should be found in the tables and then used according to the guidelines to determine the specific serving size for the food product, as packaged. The reference amount of product that requires cooking or the addition of water or other ingredients shall be the amount required to prepare one reference amount of the final product. For example, the reference amount for prepared macaroni and cheese is 1 cup. If a 12-ounce (oz.) package (9 oz. dry macaroni and 3 oz. dry cheese mix) makes 3 cups of prepared macaroni cheese when prepared, then the serving size for the composite unprepared product is "4 oz (112g/visual unit of measure)." The visual unit of measure is a description of 4 oz. of the dry product, for example, "about 2/3 cup macaroni and 2 tbsp dry cheese mix." The guidelines define the rules for using the RA to determine a serving size. The guidelines for serving size determination are as follows:

- **Single serving containers (products packaged and sold individually)**

- If the contents of the package are less than 200 percent of the Reference Amount, the container would be labeled as 1 serving. *Exception:* If the Reference Amount is greater than 100 g or 100 ml and the package contains > 150% but <200% of the RA, the manufacturer may choose to label the product as 1 serving or 2 servings.

Example: The Reference Amount for a soft drink is 240 ml (8 fl oz.). Since a container must hold more than twice the Reference Amount (200 percent of the RA) to call itself 2 servings, a 12-oz. Can (360 ml) would be considered 1 serving. Its nutrient content must be declared on the basis of the entire can.

- If the contents of the package are greater than 200 percent RA and 1 unit can reasonably be consumed at a single eating occasion, the container would be labeled as 1 serving.

Note: Metric equivalent may be eliminated on the labeling of single serving containers.

- **Small discrete units (such as muffins, sliced bread or individual units within a multi-serve pack)**

- Use the number of whole units that most closely approximates the Reference Amount, plus additional rules based on product weight:
 - If a unit weights $\geq 67\%$ but $< 200\%$ of Reference Amount, the serving size is one (1).
 - If a unit weighs $> 50\%$ but $< 67\%$ of Reference Amount, the serving size may be declared as either 1 or 2 units.
 - If a unit weighs $\geq 200\%$ of Reference Amount, the serving size is 1 unit if it can be reasonably consumed at a single eating occasion.
 - If the weight of a unit varies (e.g., *shrimp*): use the number of ounces closest to the Reference Amount, and state the approximate number of units as the visual unit of measure.

Example: The Reference Amount for cookies is 30 g. The label serving size for cookies is the number of cookies that comes closest to weighing 30 g. For a cookie that weighs 13 g, the label serving size would be “2 cookies (26 g).”

- **Large discrete units**

- Use a fractional slice that most closely approximates the Reference Amount, like $\frac{1}{4}$ pizza, $\frac{1}{6}$ cabbage or smaller fractions generated by further division by 2 or 3.
- When the food is an unprepared product that makes one large discrete unit (e.g., cake mix) and the whole package contents are used for preparation, the serving size may be the fractional part of the package.

Example: The Reference Amount for light-weight cake is 55 g. The label serving size for angel food cake is the fractional amount that comes closest to weighing 55 g. For a cake weighing

10 oz. (285 g), the label serving size would be $\frac{1}{5}$ cake (57 g.).

- **Bulk products**

- Use the household measure in cups, tablespoons (tbsp) or teaspoons (tsp) that most closely approximates the Reference Amount ($\frac{1}{2}$ cup, 2 tbsp, etc.). For solid bulk products, (e.g., cheese), ounces may be most appropriate, e.g., “1 oz. (28 g/1 inch cube).”

- **Variety pack with single serving units**

- Use the number of whole units closest to the Reference Amount for each food item. If all units are individually labeled with nutrient information, use a serving size of one (1) unit.

- **Two or more foods packaged for consumption together**

- The serving size declaration is the number of units for the main ingredient plus the proportioned amount for minor ingredients.

Example: 3 oz. dry macaroni (84 g, about $\frac{2}{3}$ cup) and 1 oz. dry cheese mix (28 g, about 2 tbsp.).

Acceptable household measures included, but are not limited to, cups ($\frac{1}{4}$ or $\frac{1}{3}$ cup increments), tablespoons (whole numbers when $< \frac{1}{4}$ cup, and ≥ 2 tablespoons, $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$ tbsp increments when < 2 tbsp but ≥ 1 tbsp.), teaspoon (whole numbers when < 1 tsp but ≥ 1 tsp, or in $\frac{1}{4}$ increments measure when < 1 tsp., slice, piece, fraction or ounce (with a visual unit of measure). The metric designation should milliliters (ml) for fluids and grams (g) for solids. The rounding rule for ml is to use 30 ml multiples if the volume is > 30 ml or in a ml equivalent to a teaspoon (5 ml) or tablespoon (15ml) if the volume is < 30 ml. The rounding rule for grams and milliliters is threefold: to the nearest whole number when > 5 g or ml; to the nearest 0.5 g or ml when the quantity is $M5$ g or ml but > 2 g or ml; or to the nearest 0.1g or ml when the quantity is < 2 g or ml.

For many food products with soluble solids like sugar and salt, an accurate gram weight of the household unit is important since similar products can vary in density due to formula differences. This gram weight per serving is the basis for the presentation of nutrient data on the label. The gram weight is also used for calculating the number of servings per container.

SERVINGS PER CONTAINER

The servings per container must be included within the nutrition label statement except for single serving containers. To determine servings per container, divide the gram weight or the metric fluid measure of a serving into the net contents of the packaged product. When the calculation results are a fractional part of a whole number, the following rounding rules should be used:

- Round to the nearest whole number when the number of servings per container are >5.
- Round to the nearest 0.5 when the number of servings per container are <5 but >2.
- The term “about” should be used to signify rounding, i.e., about 3 servings per container.
- The term “usually” may be used when expressing the number of servings per container for products with natural variations in unit size when the serving size declaration is on a drained solids basis, i.e., pickles, cherries., etc.
- For random weight products, the number of servings per container designation may be listed as “varied.” The typical number of servings per container may be included in parentheses, following the word “varied.”

REQUIRED NUTRIENTS

The new regulations on nutrition labeling requires information on several nutrients. Saturated fat, sugars and dietary fiber are three nutrients that are required under the law. **[Ed. Note: Trans-fatty acids also must be listed under the Total Fat category, with no %DV, per FDA directive issued July 13, 2003. See <http://www.cfsan.fda.gov/~dms/labtr.html> for examples.]**

These nutrients/nutrient facts include:

CALORIES	CALORIES FROM FAT
TOTAL FAT	SATURATED FAT
CHOLESTEROL	SODIUM
DIETARY FIBER	TOTAL CARBOHYDRATE
SUGAR	PROTEIN
VITAMIN A	VITAMIN C
CALCIUM	IRON

Calories, total fat, sodium, total carbohydrate, and protein are the core nutrients and must be specified on all nutrition labels, even when the per serving content is zero. An example of the original and basic nutrition form is shown in Figure 2. The calories and calories from fat are to be formatted without a unit of measure. The total fat, saturated fat,

cholesterol, sodium, total carbohydrate, dietary fiber, sugars and protein are to be designated by the gram (g) or milligram (mg) quantity in one serving. All of these nutrients except sugars and protein must also declare the percent Daily Value (%DV). The two vitamins and two minerals are to be designated only as a percent of Daily Value. Each of the 14 “nutrients” must be presented within the label format in the sequence as presented in Figure 2 unless an exclusionary rule applies. The amount per serving for each “nutrient” should be expressed as a whole number and not a decimal, except for total fat and saturated fat (and mono-unsaturated fat and polyunsaturated fat when declared) below 5 grams. The letter size, spacing, bolding, etc., are discussed further in the Printing Specifications Section.

Nutrition Facts			
Serving Size 1 cup (228g)			
Servings Per Container 2			
Amount Per Serving			
Calories 260		Calories from Fat 120	
		% Daily Value*	
Total Fat 13g			20%
Saturated Fat 5g			25%
Trans Fat 2g			
Cholesterol 30mg			10%
Sodium 660mg			28%
Total Carbohydrate 31g			10%
Dietary Fiber 0g			0%
Sugars 5g			
Protein 5g			
Vitamin A 4%	•	Vitamin C 2%	
Calcium 15%	•	Iron 4%	
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:			
	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
Fat 9	•	Carbohydrate 4	• Protein 4

Figure 2 - Basic Nutrition Label Format - 2003 edition showing new Trans Fat line.

The regulations include language that allows for the listing of permitted voluntary nutrients.

VOLUNTARY NUTRIENTS

Aside from the mandatory nutrients/ nutrition facts, other nutrients can be listed as part of the nutrition label. These nutrients include unsaturated fat, polyunsaturated fat, sugar, alcohol, insoluble fiber and permitted vitamins and minerals. Voluntary nutrient declarations of permitted nutrients must be made within the borders of the NUTRITION FACTS box format. Information about nutrients that do not have an RDI/DRV can be provided outside the nutrition label, listed as stated amounts. Furthermore, voluntary nutrients must be positioned in an indented form when associated with total fat or total carbohydrate, according to the printing and lettering specifications of the regulations. Vitamins and minerals, with the exception of potassium, should be listed below sodium and before total carbohydrate, without indentation, in the basing format. Voluntary nutrients should meet format requirements for the designation of quantity and/or percent of Daily Value.

DETERMINATION OF NUTRIENT CONTENT

The nutrition information for mandatory labeling must be developed on each food product on an as-packaged, per serving basis. The nutrient content can be determined in several ways. The first means of nutrient content determination is analytical analysis of the food product. Random samples of the food should be taken over a time period to provide the best representation of lot-to-lot, between day, between week, and sometimes, between production facility variation. At least 6 to 12 samples should be taken to represent the variables and pooled to create a composite sample for one analysis. To enhance the accuracy of the results, three such composites can be prepared and analyzed. The analyses can be performed using in-house analytical resources or reputable consulting laboratories. Secondly, the compositional data can be developed through the use of databases. In this case, nutrient content is a calculated value, based on the product formula, with corrections for changes in moisture and fat during processing, incorporation of air (aeration) and yield. Computer software systems, consulting firms and industry associations are resources for database analyses.

It is recommended that food processors verify the accuracy of the nutrition information obtained from databases and from laboratory analysis against the actual product composition. This may be accomplished by utilizing quality control analysis of moisture, fat and sodium (or salt) of the product to cross check the data against that obtained. This is

important to compensate for normal production variation.

The food firm whose name is on the packaged food product is liable under the law for the accuracy of nutrition information. Firms processing and co-packing product for another firm would have secondary liability for the accuracy of the information. The regulations define the accuracy of the date for compliance. The rules for assessing compliance are dependent upon whether a nutrient is added or naturally present in the food. The compliance rules are:

- Added nutrients must be present at a level of at least 100% of the declared value.
- Naturally-occurring nutrients must be present at a level of at least 80% of the declared value.
- Calories, total fat, saturated fat, cholesterol, sodium and sugars cannot exceed 120% of the declared value.

The compliance requirements create a situation in which any future ingredient or processing changes could jeopardize the accuracy of the information. Therefore, a mechanism to at least spot-check nutrition data should become an integral part of the **Quality Control (QC)** program.

A simple QC system approach is the routine analysis of moisture, fat and sodium (protein may be appropriate for some foods). If a nutrient is purposefully added to the food, then the QC program should include analysis of the nutrient(s). In all cases, the QC program should include trend analysis and steps for corrective action.

PERCENT DAILY VALUE

The term **Percent Daily Value (%DV)** is an umbrella term used on a nutrition label to represent two sets of reference values for mandatory and voluntary nutrients. Daily values were established by the federal government in reference to a 2,000 calorie diet. The first set of reference values under %DV is *Daily Reference Values (DRV)*. Total fat, saturated fat, cholesterol, total carbohydrate, dietary fiber, sodium, potassium and protein are the nutrients encompassed by DRVs. The base values are for adults and children aged 4 or older. The second set of reference values are *Reference Daily Intakes (RDI)*, which are the same as the former U.S. RDAs. RDIs are established for 19 vitamins or minerals. The Daily Values (DV) for the mandatory nutrients and selected voluntary nutrients are as follows:

DAILY VALUES

FOOD COMPONENT	DAILY VALUE *
Total Fat	65 g **
Saturated Fat	20 g *
Trans Fat (g) (NEW 2003)	[blank]
Cholesterol	300 mg
Sodium	2,400 mg
Potassium	3,500 mg
Total Carbohydrate	300 g *
Dietary Fiber	25 g **
Protein	50 g ***
Vitamin A	5,000 IU
Vitamin C	60 mg
Calcium	1 g
Iron	18 mg
Vitamin D	400 IU
Vitamin E	30 IU
Thiamin	1.5 mg
Riboflavin	1.7 mg
Niacin	20 mg
Vitamin B ₆	2 mg
Folic Acid	0.4 mg
Vitamin B ₁₂	6 mcg
Phosphorus	1 g
Iodine	150 mcg
Magnesium	400 mg
Zinc	15 mg
Copper	2 mg
Biotin	0.3 mg
Pantothenic Acid	10 mg

* Daily Value based on 2,000 calories per day for adults and children over 4

** Based on 11.5 grams per 1,000 calories

*** DRV for protein does not apply to certain populations: RDI for protein has been established for these groups: children 1-4: 16 g; infants under 1 year: 14 g; pregnant women: 60 g; nursing mothers: 65 g.

Except for protein, the calculation of %DV is simple division:

(Quantity nutrient per serving/ DV of nutrient) (100) = %DV
 The %DV for protein is based on PER values [see 21 CFR 101.9 ©)(7)]. In the preparation of a nutrition label, it is important to note that the %DV for sugars and protein are not stated except if a protein claim is made for the product or if the product is for use by infants or children under four (4) years of age, while other nutrients will require this information. There is no daily reference values for sugars (or trans fat), so a percentage would not be given.

ROUNDING RULES

The regulations specify rounding rules which provides for greater consistency and eliminates decimal numbers on the label, except in the case of fat declaration. These rules apply to the analytical values of the various nutrients on an as-packaged and per serving basis. The rounding rules should be used to arrive at the whole number quantity, in grams (g) or milligrams (mg), for each nutrient to be listed on the nutrition label. The rounding rules for the 14 nutrients/nutrition facts are as follows:

Calories

- ▶ To the nearest 5 cal for servings ≤ 50 cal.
- ▶ To the nearest 10 cal for servings > 50 cal.
- ▶ If less than 5 cal = 0.

Calories from Fat

- ▶ To the nearest 5 cal for servings ≤ 50 cal.
- ▶ To the nearest 10 cal for servings > 50 cal.
- ▶ Not required on products with < 0.5 g fat.
- ▶ If less than 5 cal = 0 or can use the standard designation, or the statement “*Not a significant source of calories from fat,*” where the statement would be placed below the vitamin and mineral information.

Total Fat

- ▶ To the nearest 0.5g if total fat is < 5 g.
- ▶ To the nearest 1 g if total fat is ≥ 5 g.
- ▶ If less than 0.5 g = 0.

Saturated Fat

- ▶ To the nearest 0.5 g if saturated fat is < 5 g.
- ▶ To the nearest 1 g if saturated fat is ≥ 5 g.
- ▶ If less than 0.5 g = 0.
- ▶ A statement is not required on foods with < 0.5 g total fat if no claims are made about fat or cholesterol content, and if *calories from saturated fat* is not declared.

Cholesterol

- ▶ To the nearest 5 mg of cholesterol when > 5 mg.
- ▶ Expressed as “*less than 5 mg*” when the content is between 2 to 5 mg.
- ▶ Not required if cholesterol level is M 2 mg and fat, fatty acids or cholesterol claims are not made or expressed as zero.

Sodium

- ▶ To the nearest 5 mg when content ranges from 5 to 140 mg.
- ▶ To the nearest 10 mg when content is > 140 mg.
- ▶ Sodium levels less than 5 mg = 0.

Total Carbohydrate

- ▶ To the nearest 1 g when serving is ≥ 1 g.
- ▶ If less than 1 g, use statement “*Contains less than 1 g*” or “*less than 1 g*”
- ▶ If a serving is < 0.5 g, total carbohydrate = 0

Sugars

- ▶ To the nearest 1 g when serving is ≥ 1 g.
- ▶ If a serving is < 0.5 g, sugars = 0.
- ▶ Not required when sugar content is < 1 g and claims on sugars, sweeteners or sugar alcohol are not made.
- ▶ Indented and positioned below total carbohydrate.

Dietary Fiber

To the nearest 1 g when serving is ≥ 1 g.
If a serving is < 0.5 g, dietary fiber = 0.
Not required when dietary fiber content is < 1 g and claims on dietary fiber are not made or expressed as “*Contains less than 1 g*” or “*less than 1 g*”.
Indented and positioned below total carbohydrate.

Protein

- ▶ Rounded to the nearest gram when protein level is ≥ 1 g.
- ▶ If less than 1 g, but > 0.5 g, the statement “*Contains less than 1 g*” or “*less than 1 g*” is required.
- ▶ If the protein content is < 0.5 g = 0.

Vitamins and Minerals

(Vitamin A, Vitamin C, Calcium, Iron)

- ▶ Expressed on a per serving basis as %DV.
- ▶ If the quantity of a vitamin or mineral is $< 2\%$ VD = 0 and is expressed as 0% or “*Not a significant source of ...*” (Listing the vitamins or minerals omitted) for vitamin A, C and iron, or an asterisk (*) that refers to the statement “*contains less than 2% of the Daily Value of this (these) nutrient (nutrients).*”
- ▶ Round on 2% intervals when a vitamin or mineral is $\leq 10\%$ DV.
- ▶ Round on 5% interval when vitamin or mineral is $> 10\%$ DV but $\leq 50\%$ DV.
- ▶ Round on 10% interval when a vitamin or mineral is $> 50\%$ DV.

Percent Daily Value (% DV)

- ▶ Round to the nearest whole number.
- ▶ To better assure consistency in the data, the Percent Daily Value for all nutrients other than protein can be calculated by dividing the amount of the nutrients declared on the label (i.e., after

rounding) or can be calculated before rounding and then rounded for declaring the label value.

CONSUMER INFORMATION

the mandatory nutrition label also includes some basic consumer information listed on the nutrition label as a footnote. The footnote (refer to Figure 2) is listed just below the nutrient data for vitamins and minerals. The footnote is as follows:

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
Calories:		2,000	2,500
Total Fat	Less than	65 g	80 g
Sat Fat	Less than	20 g	25 g
Cholesterol	Less than	300 mg	300 mg
Sodium	Less than	24,00 mg	2,400 mg
Total Carbohydrate		300 g	375 g
Dietary Fiber		25 g	30 g
Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4			

The “*Calories per gram*” calorie conversion footnote is optional for all labels as per the August 1993 amendments to the regulations. Some of the various displays available to processors allow for the elimination of the larger footnote when the available labeling surface is under 40 square inches of total surface area available to bear labeling. However, all nutrition label displays are required to state that the Percent Daily Value (DV) is based on a 2,000 calorie diet.

LABEL ALTERNATIVES VERSUS PACKAGE DIMENSIONS

The vertical format is not required on all products. The regulations allow flexibility for the product package based on the available labeling space. The available labeling surface includes the principal display panel and is not limited to currently labeled areas. Total labeling surface should be determined with the exclusion of flanges and ends (tops and bottoms) of cans, shoulders and necks of bottles or jars, folded flaps, raised areas or depressed areas on the packaging as per current regulations, unless those areas currently provide label information. In some cases, the required nutrition labeling may require a redesign of the graphic information on the package at the expense of logos or other marketing type designs, printing or information which is not

required by labeling law. Knowing the available labeling surface for different package in use by the manufacturer, packer or distributor will allow for an appropriate selection of a label display.

The first rule to apply is the **12 square inch rule**. If the labeling surface is less than or equal to 12 square inches, an address of the firm or a telephone number is required on the package. The suggested wording is “*For nutrition information, call 1-111-123-4567.*” This allows the consumer to write or call for the nutrient information. The firm will need to have the information available to meet consumer requests. The use of the basic labeling format for this support literature is suggested.

If the labeling surface is less than or equal to 40 square inches, then the **40 square inch rule** applies. Under this rule, the vertical format label with footnotes should be used if space is available to accommodate the required information. If there is 40 or less square inches of total surface area available to bear labeling or if there is insufficient continuous vertical space available for a vertical display (approximately 3 inches), a tabular or linear display is allowed (Figures 3, 4 and 5, page 15). A full footnote [21 CFR 101.9(d)(9)] is required whenever the package has more than 40 square inches of space available to bear labeling. A linear display may not be used only if the package shape or size will not accommodate a tabular display. See Figure 6 on page 16.

The amendments to the regulations made August 18, 1993, provide greater flexibility for packages with a labeling surface **greater than 40 square inches**. Under this rule, a package with greater than 40 square inches, but with insufficient vertical space (less than about three inches), can provide the nutrition label in a tabular display (Figure 5).

The determination of a proper display for nutrition labeling should include the above described dimensional rules plus consideration of other alternatives which can be product-specific.

FORMAT ALTERNATIVES

Some food products will not contain “significant” per-serving quantities of all 14 nutrients/nutrition facts. Foods of this type may qualify for label alternatives which can save on label space. The first alternative is the **Shortened Format** (Figure 7). This format style can be used when a non-core nutrient is at an insignificant level. The non-core nutrient(s) at an insignificant level can be omitted from the horizontal listing, but must be referred to in the statement, “*Not a significant source of ...*” The nutrient referral statement is placed below the

information for vitamins and minerals and above the footnotes. The Shortened Format must include the footnotes unless space limitations apply.

The most noteworthy format alternative is the **Simplified Format** (Figure 8, page 16). For USDA, when dry nutrients other than the core nutrients are at insignificant levels, you may use the Simplified Format, which does not require the use of footnotes. For FDA, when seven (7) or more of the 14 nutrients are at an insignificant level, the Simplified Format can be used for a food labels. For FDA and USDA, the core nutrients, calories, total fat, total carbohydrates, protein and sodium must be listed even when the quantity present is zero (0). Non-core nutrients at insignificant levels can be omitted from the label unless a voluntary nutrient or nutrition claim is declared. When voluntary nutrients are declared or claims are made, the insignificant non-core nutrients must at least be declared by the statement, “*Not a significant source of ...*”. All mandatory nutrients occurring at a significant level on a per-serving basis must be declared in the Simplified Format. The Simplified Format does not require the footnote required in 21 CFR 101.9(d)(9) other than the statement, “** Percent Daily Values (DV) are based on a 2,000 calorie diet.*”

Both the Shortened and the Simplified Formats can be printed in the tabular or linear displays when the available labeling area is limited according to the 40 square inch rule or if there is less than about three (3) inches of continuous vertical space (Figure 9).

The regulations allow additional flexibility for the nutrition label to provide both as-packaged and as-prepared information (i.e., cake mixes, raw meat products, breakfast cereals, etc.), aggregate displays (i.e., multi-pack breakfast cereals, etc.), and bilingual information. The “*as prepared*” allowance in the format also requires information on consumer preparation. Other formats may be possible under special circumstances if pre-approved by the FDA.

PRINTING REQUIREMENTS

The regulations are highly specific on the presentation of nutrition labeling. Print size, spacing, bolding and the presence of hairlines and bars must be met to be in compliance. The guidelines as per the January 1993 final rule are listed on the following page.

The August 1993 amendments provided additional clarity to the specifications. The amendments are as follows:

- ▶ The kerning limit of -4 is deleted and replaced with the specification, “*letters should never touch.*”

- ▶ The statement “*Not a significant source of ...*” should be a type size of at least 6 point.
- ▶ All nutrients, mandatory and voluntary, are to be presented within the box.

The specifications for nutrition labels should be provided to the printing firm preparing the labels. Clear communication of printing needs and a review of the proofs will better assure accuracy and regulatory compliance of the final label.

PLACEMENT OF THE LABEL ON THE PACKAGE

Food packaging has three types of display panels as defined by the regulations. The **Principal Display Panel (PDP)** is the package panel that faces the purchaser and communicates what’s in the box, can or jar. The *Alternate Principal Panel* is the same as the PDP, but allows more than one way to position the package on the shelf. The Information Panel is directly to the right of the PDP. The nutrition label should be located on the *Principal Display Panel* or on the *Information Panel* of the package. **[Ed. Note: See the FDA/CFSAN Food Labeling Guide online at <http://vm.cfsan.fda.gov/~dms/flg-toc.html> or the FDA/CFSAN Food Labeling website online at <http://www.cfsan.fda.gov/label.html> .]**

An exception to this placement occurs under the 40 square inch rule, which allows for nutrition label placement on any panel that can be readily seen by consumers. In case of special circumstance, a food company may be able to receive special allowances for label placement, but should write to the Office of Food Labeling (HFS-150), Food and Drug Administration, 200 C Street, SW, Washington DC 20204. In addition, FDA proposed in the *federal Register* of August 18, 1993, to add 21 CFR 101.9(j)(17) to allow foods in packages that have a total surface area to bear labeling of greater than 40 square inches, but whose PDP and information panel cannot accommodate all required information to use any panel that can be readily seen by consumers for the nutrition label.

CONCLUSION

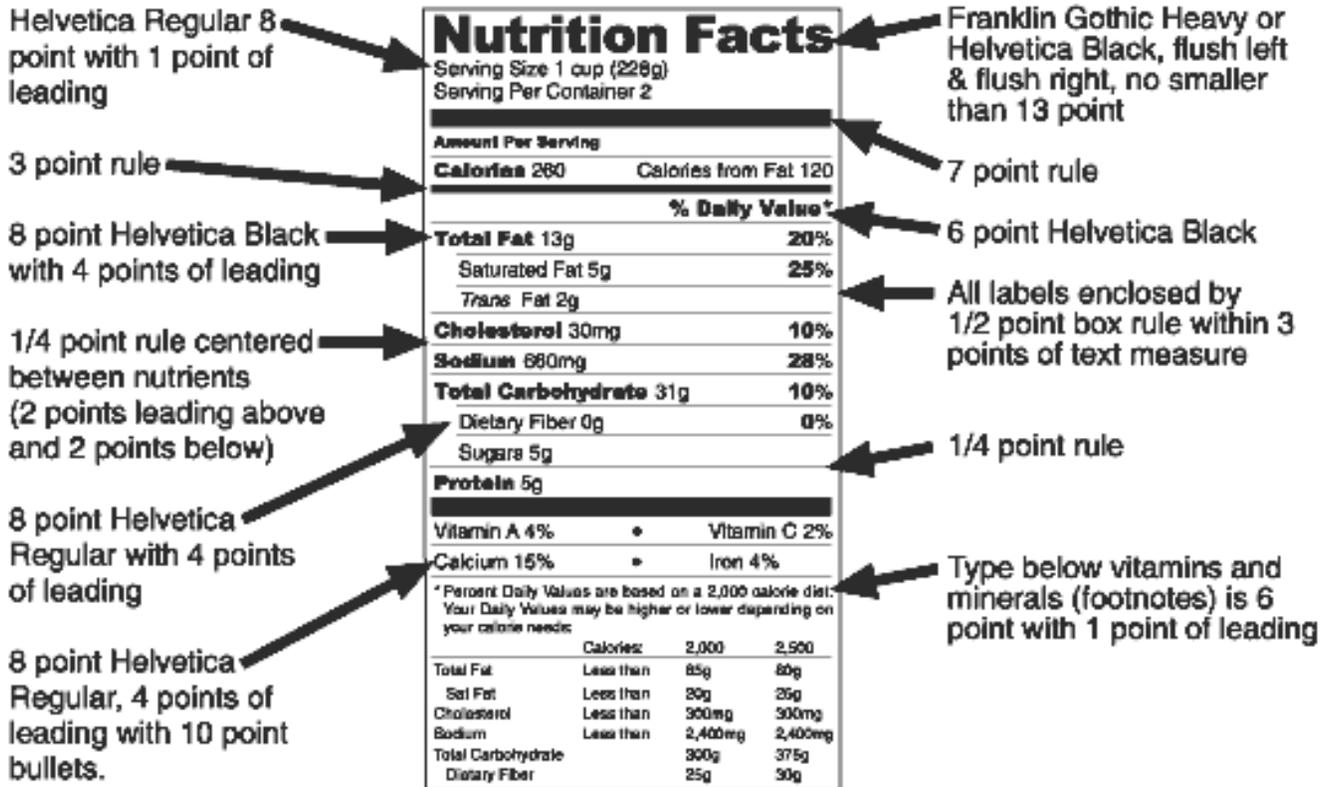
Mandatory Nutrition Labeling will create additional costs for the food processor. The costs should be determined and built into the price of the product. At the same time, mandatory nutrition labeling provides a potential opportunity for increased profitability. The profit opportunity can and will occur if the food business places a renewed focus on yields, moisture loss, fat losses, product consistency and variability trends associated with nutrient changes.

REFERENCES

- Federal Register*, Vol. 58, No. 3, Wednesday, January 6, 1993
- Federal Register*, Vol. 58, No. 158, Wednesday, August 18, 1993
- Federal Register*, Vol. 59, No. 51, Wednesday, March 14, 1994

OTHER READING

- What’s on a Label?* UGA Extension Publication No. 982, prepared by George A. Schuler, P.T. Tybor, A. Estes Reynolds and William C. Hurst, Extension Food Scientists.
- Quality Control: A Model Program for the Food Industry.* UGA Extension Publication No. 997, prepared by Tybor, A. Estes Reynolds, William C. Hurst and George A. Schuler, Extension Food Scientists.
- Food Product Development – Making Profits Grow.* UGA Extension Publication No. 1024, prepared by P.T. Tybor and A. Estes Reynolds, Extension Food Scientists.
- Getting Started in the Specialty Food Business.* UGA Extension Publication No. 1051, prepared by William C. Hurst, A. Estes Reynolds, George A. Schuler, and P.T. Tybor, Extension Food Scientists.



Graphic Enhancements Used by the FDA*

A. Overall

1. Nutrition Facts Label is boxed with all black or one color type printed on a white or neutral ground.

B. Typeface and Size

1. The "Nutrition Facts" label uses 6 point or larger type. Letters should never touch. [Aug. 1993 amendment].
2. Key nutrients and their % Daily Value are set in 8 point bold type with % symbol set in 8 point regular type.
3. "Nutrition Facts" header is set in heavy or bold type, no smaller than 13 point, and kerned to fit the width of the label from left margin to right margin.
4. "Serving Size" and "Servings per Container" are set in 8 point regular with 1 point of leading.
5. The table labels (for example, "Amount per Serving") are set in 6 point bold.
6. Absolute measures of nutrient content (for example, "1 g") and nutrient subgroups are set in 8 point regular with 4 points of leading.

7. Vitamins and minerals are set in 8 point regular, with 4 points of leading.
8. All type that appears under vitamins and minerals is set in 6 point regular with 1 point of leading.

C. Rules

1. A 7 point rule (line) separates large groupings as shown in example. A 3 point rule separates calorie information from the nutrient information.
2. A hairline rule or 1/4 point rule separates individual nutrients, as shown in the example above. Descenders should not touch the rule. The top half of the label (nutrient information) has 2 points of leading between the type and the rules, the bottom half of the label (footnotes) has 1 point of leading between the type and the rules.

D. Box

1. All labels are enclosed by a 1/2 point box rule within 3 points of text measure.

* Graphic from FDA/CFSAN's *Examples of Revised Nutrition Facts Panel Listing Trans Fat*, issued July 9, 2003. <http://www.cfsan.fda.gov/~dms/labtr.html>

Nutrition Facts		*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
Serving Size 1 cup (228g)		Calories: 2,000 2,500	
Servings Per Container 2			
Amount Per Serving			
Calories 260		Calories from Fat 120	
		% Daily Value*	
Total Fat 13g			20%
Saturated Fat 5g			25%
Cholesterol 30mg			10%
Sodium 660mg			28%
Total Carbohydrate 31g			10%
Dietary Fiber 0g			0%
Sugars 5g			
Protein 5g			
Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4			
Vitamin A 4%	•	Vitamin C 2%	
Calcium 15%	•	Iron 4%	

Figure 3. Footnote to Side

Nutrition Facts	Amount/serving	%DV*	Amount/serving	%DV*
Serving Size 1/3 cup (56g) Servings about 3 Calories 90 Fat Cal. 20	Total Fat 2g	3%	Total Carb. 0g	0%
	Sat. Fat 1g	5%	Fiber 0g	0%
	Trans Fat 0.5g		Sugars 0g	
	Cholest. 10mg	3%	Protein 17g	
	Sodium 200mg	8%		
	*Percent Daily Values (DV) are based on a 2,000 calorie diet			
	Vitamin A 0% • Vitamin C 0% • Calcium 0% • Iron 6%			

Figure 4. Tabular Display

Nutrition Facts	Amount/serving	% Daily Value*	Amount/serving	% Daily Value*	* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs: Calories: 2,000 2,500	
Serving Size 2 slices (56g) Servings per container 10 Calories 140 Calories from Fat 15	Total Fat 1.5g	2%	Total Carbohydrate 26g	9%		Total Fat Less than 65g 80g
	Saturated Fat 0.5g	3%	Dietary Fiber 2g	8%	Sat Fat Less than 20g 25g	
	Trans Fat 0.5g		Sugars 1g		Cholesterol Less than 300mg 300mg	
	Cholesterol 0mg	0%	Protein 4g		Sodium Less than 2,400mg 2,400mg	
	Sodium 280mg	12%			Total Carbohydrate 300g 375g	
	* Percent Daily Values (DV) are based on a 2,000 calorie diet					Dietary Fiber 25g 30g
	Vitamin A 0% • Vitamin C 0% • Calcium 6% • Iron 6%					
	Thiamin 15% • Riboflavin 8% • Niacin 10%					

Figure 5. Tabular Display on package with more than 40 square inches of surface area available to bear labeling (sliced bread).

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
INFANT AND TODDLER FOODS** ^{1,2,3,4}

Product Category	Reference Amount	Label Statement ⁵
Cereals, dry instant	15 g	_____ cup (_____ g)
Cereals, prepared, ready-to-serve	110 g	_____ cup(s) (_____ g)
Other cereal and grain products, dry ready-to-eat, e.g., ready-to-eat cereals, cookies, teething biscuits and toasts.	7 g for infants and 20 g for toddlers for ready-to-eat cereals; 7 g for all others	_____ cup(s) (_____ g) for ready-to-eat cereals; _____ piece(s) (_____ g) for others
Dinners, desserts, fruits, vegetables or soups, dry mix.	15 g	_____ tbsp(s) (_____ g); _____ cup(s) (_____ ml)
Dinners, desserts, fruits, vegetables or soups, ready-to-serve, junior type.	110 g	_____ cup(s) (_____ g); _____ cup(s) (_____ ml)
Dinners, desserts, fruits, vegetables or soups, ready-to-serve, strained type	60 g	_____ cup(s) (_____ g); _____ cup(s) (_____ ml)
Dinners, stews or soups for toddlers, ready-to-serve.	170 g	_____ cup(s) (_____ g); _____ cup(s) (_____ ml)
Fruits for toddlers, ready-to-serve	125 g	_____ cup(s) (_____ g)
Vegetables for toddlers, ready-to-serve	70 g	_____ cup(s) (_____ g)
Eggs/egg yolks, ready-to-serve	55 g	_____ cup(s) (_____ g)
Juices, all varieties	120 ml	4 fl oz (120 ml)

¹These values represent the amount of food customarily consumed per eating occasion and were primarily derived from the 1977-1978 and the 1987-1988 Nationwide Food Consumption Surveys conducted by the U.S. Department of Agriculture.

²Unless otherwise noted in the Reference amount column, the reference amounts are for the ready-to-serve or almost ready-to-serve form of the product (i.e., head and serve, brown and serve). If not listed separately, the reference amount for the unprepared form (e.g., dry cereal) is the amount required to make the reference amount of the prepared form. Prepared means prepared for consumption (e.g., cooked).

³Manufacturers are required to convert the reference amount to the label serving size in a household measure most appropriate to their specific product using the procedures in 21 CFR 101.9(b).

⁴Copies of the list of products for each product category are available from the Office of Nutritional Products, Labeling, and Dietary Supplements, Division of Nutrition Programs and Labeling, Center for Food Safety and Applied Nutrition, Food and Drug Administration, 5100 Paint Branch Parkway, College Park, MD 20740, (Tel) 301-436-2373.

⁵The label statements are meant to provide guidance to manufacturers on the presentation of serving size information on the label, but they are not required. The term "piece" is used as a generic description of a discrete unit. Manufacturers should use the description of a unit that is most appropriate for the specific product (e.g., sandwich for sandwiches, cookie for cookies, bar for frozen novelties).

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY ^{1,2,3,4}**

Product Category	Reference Amount	Label Statement ⁵
Bakery Products:		
Biscuits, croissants, bagels, tortillas, soft bread sticks, soft pretzels, corn bread, hush puppies	55 g	___ piece(s) (___ g)
Breads (excluding sweet quick type), rolls	50 g	___ piece(s) (___ g) for sliced bread and distinct pieces (e.g., rolls); 2 oz (56 g/___ inch slice) for unsliced bread
Bread sticks – see crackers		
Toaster pastries – see coffee cakes		
Brownies	40 g	___ piece(s) (___ g) for distinct pieces; fractional slice (___ g) for bulk
Cakes, heavy weight (cheese cake, pineapple upside-down cake, fruit, nut and vegetable cakes with less than 35% of finished weight as fruit, nuts or vegetables or any of these combined) ⁶	125 g	___ piece(s) (___ g) for distinct pieces (e.g., sliced or individually packaged products); ___ fractional slice (___ g) for large discrete units
Cakes, medium weight (chemically leavened cake with or without icing or filling, except those classified as light-weight cake; fruit, nut and vegetable cake with less than 35% of the finished weight as fruit, nuts or vegetables or any of these combined; light weight cake with icing, Boston cream pie; cupcake; éclair; cream puff). ⁷	80 g	___ piece(s) (___ g) for distinct pieces (e.g., cupcake); ___ fractional slice (___ g) for large discrete units
Cakes, light-weight (angel food, chiffon or sponge cake without icing or filling). ⁸	55 g	___ piece(s) (___ g) for distinct pieces (e.g., sliced or individually packaged products); ___ fractional slice (___ g) for large discrete units
Coffee cakes, crumb cakes, doughnuts, Danish, sweet rolls, sweet quick-type breads, muffins, toaster pastries.	55 g	___ piece(s) (___ g) for sliced bread and distinct pieces (e.g., doughnut); 2 oz (56 g/visual unit of measure) for bulk products (e.g., unsliced bread).
Cookies	30 g	___ piece(s) (___ g)
Crackers that are usually not used as snack, Melba toast, hard bread sticks, ice cream cones. ⁹	15 g	___ piece(s) (___ g)
Crackers that are usually used as snacks	30 g	___ piece(s) (___ g)
Croutons	7 g	___ tbsp(s) (___ g); ___ cup(s) (___ g); ___ piece(s) (___ g) for large pieces
French toast, pancakes, variety mixes	110 g prepared for french toast and pancakes; 4 g dry mix for variety mixes	___ piece(s) (___ g); ___ cup(s) (___ g) for dry milk
Grain-based bars with or without filling or coating; e.g., breakfast bars, granola bars, rice cereal bars	40 g	___ piece(s) (___ g)
Ice cream cones – see crackers		
Pies, cobblers, fruit crisps, turnovers, other pastries	125 g	___ piece(s) (___ g) for distinct pieces; ___ fractional slice (___ g) for large discrete units
Pie crust	1/6 of 8-inch crust; 1/8 of 9-inch crust	1/6 of 8-inch crust (___ g); 1/8 of 9-inch crust (___ g)
Pizza crust	55 g	___ fractional slice (___ g)
Taco shells, hard	30 g	___ shell(s) (___ g)
Waffles	85 g	___ piece(s) (___ g)

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY ^{1,2,3,4} – *continued***

Product Category	Reference Amount	Label Statement ⁵
Beverages:		
Carbonated and non-carbonated beverages, wine coolers, water.	240 ml	8 fl oz (240 ml)
Coffee or tea, flavored and sweetened	240 ml prepared	8 fl oz (240 ml)
Cereal & Other Grain Products:		
Breakfast cereals (hot cereal type), hominy grits	1 cup prepared; 40 g plain dry cereal; 55 g flavored, sweetened dry cereal	___ cup(s) (___ g)
Breakfast cereals, ready-to-eat, weighing less than 20 g per cup, e.g., plain puffed cereal grains	15 g	___ cup(s) (___ g)
Breakfast cereals, ready-to-eat, weighing 20 g, but less than 43 g per cup; high fiber cereals containing 28 g or more of fiber per 100 g	30 g	___ cup(s) (___ g)
Breakfast cereals, ready-to-eat, weighing 43 g or more per cup; biscuit types.	55 g	___ piece(s) (___ g) for large distinct pieces (e.g., biscuit type)
Bran or wheat germ	15 g	___ tbsp(s) (___ g); ___ cup(s) (___ g)
Flours or cornmeal	30 g	___ tbsp(s) (___ g); ___ cup(s) (___ g)
Grains, e.g., rice, barley, plain	140 g prepared; 45 g dry	___ cup(s) (___ g)
Pastas, plain	140 g prepared; 55 g dry	___ cup(s) (___ g); ___ piece(s) (___ g) for large pieces (e.g., large shells or lasagna noodles, or 2 oz (56 g/visual unit of measure) for dry bulk products (e.g., spaghetti)
Pastas, dry, ready-to-eat (e.g., fried canned chow mein noodles)	25 g	___ cup(s) (___ g)
Starches (e.g., cornstarch, potato starch, tapioca, etc.)	10 g	___ tbsp(s) (___ g)
Stuffing	100 g	___ cup(s) (___ g)
Dairy Products and Substitutes:		
Cheese, cottage	110 g	___ cup(s) (___ g)
Cheese used primarily as ingredients (e.g., dry cottage cheese, ricotta cheese)	55 g	___ cup(s) (___ g)
Cheese, grated hard (e.g., Parmesan, Romano)	5 g	___ tbsp(s) (___ g)
Cheese, all others, except those listed as separate categories – includes cream cheese and cheese spread.	55 g	___ piece(s) (___ g) for distinct pieces; ___ tbsp(s) (___ g) for cream cheese & cheese spread; 1 oz (28 g/visual unit of measure) bulk.
Cheese sauce – see Sauce category		
Cream or cream substitutes, fluid	15 ml	1 tbsp (16 ml)
Cream or cream substitutes, powder	2 g	___ tsp(s) (___ g)
Cream, half & half	30 l	2 tbsp (30 ml)
Eggnog	120 ml	½ cup (120 ml); 4 fl oz (120 ml)
Milk, condensed, undiluted	30 ml	2 tbsp (30 ml)
Milk, evaporated, undiluted	30 ml	2 tbsp (30 ml)
Milk, milk-based drinks (e.g., instant breakfast, meal replacement, cocoa)	240 ml	1 cup (240 ml); 8 fl oz (240 ml)
Shakes or shake substitutes (e.g., dairy shake mixes, fruit frost mixes)	240 ml	1 cup (240 ml), 8 fl oz (240 ml)
Sour cream	30 g	___ tbsp(s) (___ g)
Yogurt	225 g	___ cup(s) (___ g)

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY ^{1,2,3,4} – *continued***

Product Category	Reference Amount	Label Statement ⁵
Desserts:		
Ice cream, ice milk, frozen yogurt, sherbet: all types, bulk and novelties (e.g., bars, sandwiches, cones)	½ cup – includes the volume for coatings and wafers for the novelty type varieties	___ piece(s) (___ g) for individually wrapped or packaged products; ½ cup (___ g) for others.
Frozen flavored and sweetened ice and pops, frozen fruit juices: all types, bulk and novelties (e.g., bars, cups)	85 g	___ piece(s) (___ g) for individually wrapped or packaged products; ½ cup (___ g) for others.
Sundae	1 cup	1 cup(s) (___ g)
Custards, gelatin or pudding	½ cup	___ piece(s) (___ g) for distinct unit (e.g., individually packaged products); ½ cup (___ g) for bulk.
Dessert Toppings & Fillings:		
Cake frostings or icings	35 g	___ tbsp(s) (___ g)
Other dessert toppings (e.g., fruits, syrups, spreads, marshmallow cream, nuts, dairy and non-dairy whipped toppings)	2 tbsp	2 tbsp (___ g); 2 tbsp (30 ml)
Pie fillings	65 g	___ cup(s) (___ g)
Egg & Egg Substitutes:		
Egg mixtures (e.g., egg foo young, scrambled eggs, omelets)	110 g	___ piece(s) (___ g) for discrete pieces; ___ cup(s) (___ g)
Eggs (all sizes)	50 g	1 large, medium, etc., (___ g)
Egg substitutes	An amount to make 1 large (50 g) egg	___ cup(s) (___ g); ___ cup(s) (___ ml)
Fats & Oils:		
Butter, margarine, oil, shortening	1 tbsp	1 tbsp (___ g); 1 tbsp (15 ml)
Butter replacement, powder	2 g	___ tsp(s) (___ g)
Dressings for salads	30 g	___ tbsp(s) (___ g); ___ tbsp(s) (___ ml)
Mayonnaise, sandwich spreads, mayonnaise-type dressings	15 g	___ tbsp(s) (___ g)
Spray types	0.25 g	About ___ seconds spray (___ g)
Fish, Shellfish, Game Meats¹⁰, and Meat or Poultry Substitutes:		
Bacon substitutes, canned anchovies ¹¹ , anchovy pastes, caviar	15 g	___ piece(s) (___ g) for discrete pieces; ___ tbsp(s) (___ g) for others
Dried (e.g., jerky)	30 g	___ piece(s) (___ g)
Entrees with sauce (e.g., fish with cream sauce, shrimp with lobster sauce)	140 g cooked	___ cup(s) (___ g); 5 oz (140 g/visual unit of measure) if not measurable by cup
Entrees without sauce (e.g., plain or fried fish and shellfish, fish and shellfish cake)	85 g cooked; 110 g uncooked ¹²	___ piece(s) (___ g) for discrete pieces; ___ cup(s) (___ g); ___ oz (___ g/ visual unit of measure) if not measurable by cup ¹³
Fish, shellfish or game meat ¹⁰ , canned ¹¹	55 g	___ piece(s) (___ g) for discrete pieces; ___ cup(s) (___ g) ; 2 oz (56 g/ ___ pieces) for products that naturally vary in size (e.g., sardines)
Substitute for luncheon meat, meat spreads, Canadian bacon, sausages and frankfurters	55 g	___ piece(s) (___ g) for discrete pieces (e.g., slices, links); ___ cup(s) (___ g); 2 oz (56 g/visual unit of measure) for non-discrete bulk product.
Smoked or pickled ¹¹ fish, shellfish or game meat ¹⁰ , fish or shellfish spread	55 g	___ piece(s) (___ g) for discrete pieces (e.g., slices, links); ___ cup(s) (___ g); 2 oz (56 g/visual unit of measure) for non-discrete bulk product.
Substitutes for bacon bits – see Miscellaneous category		

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY ^{1,2,3,4} – *continued***

Product Category	Reference Amount	Label Statement ⁵
Fruits and Fruit Juices:		
Candied or pickled ¹¹	30 g	___ piece(s) (___ g)
Dehydrated fruits – see Snacks category		
Dried	40 g	___ piece(s) (___ g) for large pieces (e.g., dates, figs, prunes); ___ cup(s) (___ g) for small pieces (e.g., raisins)
Fruits for garnish or flavor (e.g., maraschino cherries ¹¹)	4 g	1 cherry (___ g)
Fruit relishes (e.g., cranberry sauce, cranberry relish)	70 g	___ cup(s) (___ g)
Fruits used primarily as ingredients (e.g., avocado)	30 g	See footnote 13
Fruits used primarily as ingredients, others (e.g., cranberries, lemon, lime)	55 g	___ piece(s) (___ g) for large fruits; ___ cup(s) (___ g) for small fruits measurable by cup ¹³
Watermelon	280 g	See footnote 13
All other fruits (except those listed in separate categories, fresh, canned or frozen)	140 g	___ piece(s) (___ g) for large pieces (e.g., strawberries, prunes, apricots, etc.); ___ cup(s) (___ g) for small pieces (e.g., blueberries, raspberries, etc.) ¹³
Juices, nectars, fruit drinks	240 ml	8 fl oz (240 ml)
Juices used as ingredients (e.g., lemon juice, lime juice)	5 ml	1 tsp (5 ml)
Legumes:		
Bean cake (tofu) ¹¹ , tempeh	85 g	___ piece(s) (___ g) for discrete pieces; 3 oz (85 g/visual unit of measure) for bulk products.
Beans, plain or in sauce	130 g for beans in sauce or canned in liquid and refried beans, prepared; 90 g for others, prepared; 35g dry	___ cup(s) (___ g)
Miscellaneous Category:		
Baking powder, baking soda, pectin	1 g	___ tsp(s) (___ g)
Baking decorations (e.g., colored sugars and sprinkles for cookies, cake decorations)	1 tsp or 4 g if not measurable by teaspoon	___ piece(s) (___ g) for discrete pieces; 1 tsp (___ g)
Batter mixes, bread crumbs	30 g	___ tbsp(s) (___ g); ___ cups (___ g)
Cooking wine	30 ml	2 tbsp (30 ml)
Drink mixers (without alcohol)	Amount to make 240 ml drink without ice	___ fl oz (___ ml)
Chewing gum ³	3 g	___ piece(s) (___ g)
Meat, poultry and fish coating mixes, dry; seasoning mixes, dry (e.g., chili seasoning mix, pasta salad seasoning mix)	Amount to make one reference amount of final dish	___ tsp(s) (___ g); ___ tbsp(s) (___ g)
Salad and potato toppers (e.g., salad crunchies, salad crispins, substitutes for bacon bits)	7 g	___ tbsp(s) (___ g)
Salt, salt substitutes, seasoning salts (e.g., garlic salt)	1 g	___ tsp(s) (___ g); ___ piece(s) (___ g) for discrete pieces (e.g., individually packaged products)
Spices, herbs (other than dietary supplements)	¼ tsp or 0.5 g if not measurable by teaspoon	¼ tsp (___ g); ___ piece(s) (___ g) if not measurable by teaspoon (e.g., bay leaf)

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY ^{1,2,3,4} – *continued***

Product Category	Reference Amount	Label Statement ⁵
Mixed Dishes:		
Measurable with cup (e.g., casseroles, hash, macaroni and cheese, pot pies, spaghetti with sauce, stews, etc.)	1 cup	1 cup (___ g)
Not measurable with cup (e.g., burritos, eggrolls, enchiladas, pizza, pizza rolls, quiche, all types of sandwiches)	140 g (add 55 g for products with gravy or sauce topping, e.g., enchilada with cheese sauce, crepe with white sauce. ¹⁴)	___ piece(s) (___ g) for discrete pieces; ___ fractional slice (___ g) for large discrete units
Nuts and Seeds:		
Nuts, seeds and mixtures, all types: sliced, chopped, slivered and whole	30 g	___ piece(s) (___ g) for large pieces (e.g., unshelled nuts); ___ tbsp(s) (___ g); ___ cup(s) (___ g) for small pieces (e.g., peanuts, sunflower seeds)
Nut and seed butters, pastes or creams	2 tbsp	2 tbsp (___ g)
Coconut, nut and seed flowers	15 g	___ tbsp(s) (___ g); ___ cup (___ g)
Potatoes and Sweet Potatoes/Yams:		
French fries, hash browns, skins or pancakes	70 g prepared; 85 g for frozen, unprepared french fries	___ tbsp(s) (___ g); ___ cup (___ g)
Mashed, candied, stuffed or with sauce	140 g	___ piece(s) (___ g) for discrete pieces (e.g., stuffed potato); ___ cup(s) (___ g)
Plain, fresh, canned or frozen	110 for fresh or frozen, 125 g for vacuum packed; 160 g for canned in liquid	___ piece(s) (___ g) for discrete pieces; ___ cup(s) (___ g) for sliced or chopped products
Salads:		
Gelatin salad	120 g	___ cup(s) (___ g)
Pasta or potato salad	140 g	___ cup(s) (___ g)
All other salads (e.g., egg, fish, shellfish, bean, fruit or vegetable)	100 g	___ cup(s) (___ g)
Sauces, Dips, Gravies and Condiments:		
Barbecue sauce, hollandaise sauces for dipping (e.g., mustard sauce, sweet and sour sauce), all dips (e.g., bean dips, dairy-based dips, salsa)	2 tbsp	2 tbsp (___ g); 2 tbsp (30 ml)
Major main entree sauces (e.g., spaghetti sauce)	125 g	___ cup(s) (___ g); ___ cup(s) (___ ml)
Minor main entree sauces (e.g., pizza sauce, pesto sauce); other sauces used as toppings (e.g., gravy, white sauce, cheese sauce); cocktail sauce	¼ cup	¼ cup (___ g); ¼ cup (60 ml)
Major condiments (e.g., catsup, steak sauce, soy sauce, vinegar, teriyaki sauce, marinades)	1 tbsp	1 tbsp (___ g); 1 tbsp (15 ml)
Minor condiments (e.g., horseradish, hot sauces; mustards, Worcestershire sauce)	1 tsp	1 tsp (___ g); 1 tsp (5 ml)
Snacks:		
All varieties, chips, pretzels, popcorn, extruded snacks, fruit-based snacks (e.g., fruit chips), grain-based snack mixes	30 g	___ cup(s) (___ g) for small pieces (e.g., popcorn); ___ piece(s) (___ g) for large pieces (e.g., large pretzels, pressed dried fruit sheet); 1 oz (28 g/visual unit of measure) for bulk products (e.g., potato chips)

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY ^{1,2,3,4} – *continued***

Product Category	Reference Amount	Label Statement ⁵
Soups:		
All varieties	245 g	___ cup(s) (___ g); ___ cup(s) (___ ml)
Sugars and Sweets:		
Baking candies (e.g., chips)	15 g	___ pieces(s) (___ g) for large pieces; ___ tbsp(s) (___ g) for small pieces; ½ oz 14 g/visual unit of measure) for bulk products
Hard candies, breath mints	2 g	___ pieces(s) (___ g)
Hard candies, roll-type, mini-size in dispenser packages	5 g	___ piece(s) (___ g)
Hard candies, others	15 g	___ piece(s) (___ g) for “mini” size candies measurable by tablespoon; ½ oz (14 g/visual unit of measure) for bulk products
All other candies	40 g	___ piece(s) (___ g); 1 ½ oz (42 g/visual unit of measure) for bulk products
Confectioner’s sugar	30 g	___ cup(s) (___ g)
Honey, jams, jellies, fruit butter, molasses	1 tbsp	1 tbsp (___ g); 1 tbsp (15 ml)
Marshmallows	30 g	___ cup(s) (___ g) for small pieces; ___ piece(s) (___ g) for large pieces
Sugar	4 g	___ tsp(s) (___ g); ___ piece(s) (___ g) for discrete pieces (e.g., sugar cubes, individually packaged products)
Sugar substitutes	An amount equivalent to one reference amount for sugar in sweetness	___ tsp(s) (___ g) for solids; ___ drop(s) (___ g) for liquid; ___ piece(s) (___ g) (e.g., individually packaged products)
Syrups	30 ml for syrups used primarily as an ingredient (e.g., light or dark corn syrup; 60 ml for all others	2 tbsp (30 ml) for syrups used primarily as an ingredient; ¼ cup (60 ml) for all others
Vegetables:		
Vegetables primarily used for garnish or flavor (e.g., pimento, parsley, etc.)	4 g	___ piece(s) (___ g); ___ tbsp(s) (___ g) for chopped products
Chili pepper, green onion	30 g	___ piece(s) (___ g) ¹³ ; ___ tbsp(s) (___ g); ___ cup(s) (___ g) for sliced or chopped products
All other vegetables, without sauce: fresh, canned or frozen	85 g for fresh or frozen; 95 g for vacuum packed; 130 g for canned in liquid, cream-style corn, canned or stewed tomatoes, pumpkin or winter squash	___ piece(s) (___ g) for large pieces (e.g., brussel sprouts); ___ cup(s) (___ g) for small pieces (e.g., cut corn, green peas); 3 oz (84 g/ visual unit of measure) if not measurable by cup ¹³
All other vegetables with sauce: fresh, canned or frozen	110 g	___ piece(s) (___ g) for large pieces (e.g., brussel sprouts); ___ cup(s) (___ g) for small pieces (e.g., cut corn, green peas); 4 oz (112 g/ visual unit of measure) if not measurable by cup
Vegetable juice	240 ml	8 fl oz (240 ml)
Olives ¹¹	15 g	___ piece(s) (___ g); ___ tbsp(s) (___ g) for sliced products
Pickles, all types ¹¹	30 g	1 oz (28 g/visual unit of measure)
Pickle relishes	15 g	___ tbsp(s) (___ g)
Vegetable pastes (e.g., tomato paste)	30 g	___ tbsp(s) (___ g)
Vegetable sauces or purees (e.g., tomato sauce, tomato puree)	60 g	___ cup(s) (___ g); ___ cup(s) (___ ml)

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
GENERAL FOOD SUPPLY^{1,2,3,4} – *continued***

FOOTNOTES:

- 1 These values represent the amount of food customarily consumed per eating occasion and were primarily derived from the 1977-1978 and the 1987-1988 Nationwide Food Consumption Surveys conducted by the U.S. Department of Agriculture.
- 2 Unless otherwise noted in the Reference amount column, the reference amounts are for the ready-to-serve or almost ready-to-serve form of the product (i.e., head and serve, brown and serve). If not listed separately, the reference amount for the unprepared form (e.g., dry cereal) is the amount required to make the reference amount of the prepared form. Prepared means prepared for consumption (e.g., cooked).
- 3 Manufacturers are required to convert the reference amount to the label serving size in a household measure most appropriate to their specific product using the procedures in 21 CFR 101.9(b).
- 4 Copies of the list of products for each product category are available from the Office of Nutritional Products, Labeling, and Dietary Supplements, Division of Nutrition Programs and Labeling, Center for Food Safety and Applied Nutrition, Food and Drug Administration, 5100 Paint Branch Parkway, College Park, MD 20740, (Tel) 301-436-2373.
- 5 The label statements are meant to provide guidance to manufacturers on the presentation of serving size information on the label, but they are not required. The term "piece" is used as a generic description of a discrete unit. Manufacturers should use the description of a unit that is most appropriate for the specific product (e.g., sandwich for sandwiches, cookie for cookies, bar for frozen novelties).
- 6 Includes cakes that weigh 10 g or more per cubic inch.
- 7 Includes cakes that weigh 4 g or more per cubic inch, but less than 10 g per cubic inch
- 8 Includes cakes that weigh less than 4 g per cubic inch.
- 9 Label serving size for ice cream cones and eggs of all sizes will be 1 unit. Label serving size of all chewing gums that weigh more than the reference amount that can reasonably be consumed at a single eating occasion will be 1 unit.
- 10 Animal products not covered under the federal Meat Inspection Act or the Poultry Products Inspection Act, such as flesh products from deer, bison, rabbit, quail, wild turkey, geese, ostrich, etc.
- 11 If packed or canned in liquid, the reference amount is for the drained solids, except for products in which both the solids and liquids are customarily consumed (e.g., canned chopped clam in juice).
- 12 The reference amount for the uncooked form does not apply to raw fish in 21 CFR 101.45 or the single ingredient products that consist of fish or game meat as provided for in 21 CFR 101.9(b)(j)(11).
- 13 For raw fruit, vegetables and fish, manufacturers should follow the label statement for the serving size specified in Appendices A and B to the regulation entitled, "Food Labeling: Guidelines for Voluntary Nutrition Labeling," and "Identification of the 20 Most Frequently Consumed raw Fruits, Vegetables and Fish; Definition of Substantial Compliance, Correction" (56 FR 60880 as amended 57 FR 8174 March 6, 1992).
- 14 Pizza sauce is part of the pizza and is not considered to be sauce topping.

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
MEAT** ^{1,2,3,4,5}

Product Category	Reference Amount	Reference Amount
	Ready-to-Serve	Ready-to-Cook
Egg mixtures (e.g., western style omelet, souffle, egg foo yung)	110 g	n/a
Lard, margarine, shortening	1 tbsp	n/a
Salad and potato toppers (e.g., bacon bits)	7 g	n/a
Bacon (e.g., bacon, beef breakfast strips, pork breakfast strips, pork rinds)	15 g	54 g bacon; 30 g breakfast strips
Dried (e.g., jerky, dried beef, Parma ham sausage product with a moisture/protein ratio of less than 2:1; pepperoni)	30 g	n/a
Snacks (e.g., meat snack food sticks)	30 g	n/a
Luncheon meat, bologna, Canadian style bacon, pork pattie crumbles, beef pattie crumbles, blood pudding, luncheon loaf, old fashioned loaf, barlinger, bangers, minced luncheon roll, thuringer, liver sausage, mortadella, uncured sausage (franks), ham and cheese loaf, pickle and pimento loaf, scrapple, souse, head cheese, pizza loaf, olive loaf, paté, deviled ham, sandwich spread, teawurst, cervelat, Lebanon bologna, potted meat food product, taco fillings, meat pie fillings	55 g	n/a
Linked meat sausage products, Vienna sausage, frankfurters, pork sausage, imitation frankfurters, bratwurst, kielbasa, Polish sausage, summer sausage, mettwurst, smoked country sausage., smoked sausage, smoked or pickled meat, pickled pigs feet	55 g	n/a 75 g uncooked sausage
Dry cured ham, country ham, dry cured cappicola	55 g	55 g
Entrees without sauce, cuts of meat including marinated, tenderized, injected cuts of meat, beef patty, corn dog, croquettes, fritters, cured ham, corned beef, pastrami, pork shoulder picnic, meatballs, pureed adult foods	55 g	n/a
Canned meats, canned beef, canned pork ⁴	55 g	n/a
Entrees with sauce, barbecued meats in sauce	140 g	n/a
Mixed dishes NOT measurable with a cup (e.g., burrito, egg roll, enchilada, pizza, pizza roll, quiche); ⁵ all types of sandwiches, crackers and meat lunch-type packages, gyro, stromboli, burger on a bun, frank on a bun, calzone, taco, pockets stuffed with meat, foldovers, stuffed vegetables with meat, shish kabobs, empanada	140 g (plus 55 g for products with sauce topping)	n/a
Mixed dishes measurable with a cup (e.g., meat casserole, macaroni and cheese with meat, pot pie, spaghetti with sauce, meat chili, chili with beans, meat hash, creamed chipped beef, beef ravioli in sauce, beef stroganoff, Brunswick stew, goulash, meat stew, ragout, meat lasagna, meat-filled pasta)	1 cup	n/a
Salads – pasta or potato, potato salad with bacon, macaroni and meat salad	140 g	n/a
Salads – all other meat, salads, ham salad	100 g	n/a
Soups – all varieties	245 g	n/a
Major main entree type sauce (e.g., spaghetti sauce with meat, spaghetti sauce with meatballs)	125 g	n/a
Minor main entree sauce (e.g., pizza sauce with meat, gravy)	¼ cup	n/a
Seasoning mixes, dry, bases, extracts, dried broths and stock/juice, freeze-dried trail mix products with meat		
As reconstituted: Amount to make one Reference Amount of the final dish: e.g., Gravy Major main entree type sauce Soup Entree measurable with a cup	¼ cup 125 g 245 g 1 cup	

1 These values represent the amount of food customarily consumed per eating occasion and were primarily derived from the 1977-1978 and the 1987-1988 Nationwide Food Consumption Surveys conducted by the U.S. Department of Agriculture.

2 Manufacturers are required to convert the reference amount to the label serving size in a household measure most appropriate to their specific product using the procedures established by regulation.

3 Examples listed under Product Category are not all -inclusive or exclusive. Examples are provided to assist manufacturers in identifying appropriate product Reference Amount.

4 If packed or canned in liquid, the reference amount is for the drained solids.

5 Pizza sauce is part of the pizza and is not considered to be sauce topping.

**REFERENCE AMOUNTS CUSTOMARILY CONSUMED PER EATING OCCASION:
POULTRY** ^{1,2,3,4,5}

Product Category	Reference Amount	Reference Amount
	Ready-to-Serve	Ready-to-Cook
Egg mixtures (e.g., western style omelet, souffle, egg foo yung with poultry)	110 g	n/a
Salad and potato toppers (e.g., poultry bacon bits)	7 g	n/a
Bacon (e.g., poultry breakfast strips)	15 g	26 g bacon; 18 g breakfast strips
Dried (e.g., poultry jerky, dried poultry, poultry sausage products with a moisture/protein ratio of less than 2:1)	30 g	n/a
Snacks (e.g., poultry snack food sticks)	30 g	n/a
Luncheon products, poultry bologna, poultry Canadian style bacon, poultry crumbles, poultry luncheon loaf, potted poultry products, poultry taco fillings	55 g	n/a
Linked poultry sausage products, poultry franks, poultry Polish sausage, smoked or pickled poultry meat, poultry smoked sausage	55 g	n/a 69 g uncooked sausage
Entrees without sauce, poultry cuts ready-to-cook, poultry cuts, including marinated, tenderized, injected cuts of poultry, poultry corn dog, poultry croquettes, poultry fritters, cured poultry ham products, pureed adult foods	85 g	106 g
Canned poultry, canned chicken, canned turkey ⁴	55 g	n/a
Entrees with sauce, turkey and gravy	140 g	n/a
Mixed dishes NOT measurable with a cup ⁵ (e.g., poultry burrito, poultry enchilada, poultry pizza, poultry quiche); all types of poultry sandwiches, crackers and poultry lunch-type packages, poultry gyro, poultry stromboli, poultry burger on a bun, poultry frank on a bun, poultry taco, chicken cordon bleu, poultry calzone, stuffed vegetables with poultry, poultry kabobs.	140 g (plus 55 g for products with sauce topping)	n/a
Mixed dishes measurable with a cup (e.g., poultry casserole, macaroni and cheese with poultry, poultry pot pie, poultry spaghetti with sauce, poultry chili, poultry chili with beans, poultry hash, creamed dried poultry, poultry ravioli in sauce, poultry a la king, poultry stew, poultry goulash, poultry lasagna, poultry-filled pasta)	1 cup	n/a
Salads – pasta or potato, potato salad with poultry, macaroni and poultry salad	140 g	n/a
Salads – all other poultry salads, chicken salad, turkey salad	100 g	n/a
Soups – all varieties	245 g	n/a
Major main entree type sauce (e.g., spaghetti sauce with poultry)	125 g	n/a
Minor main entree sauce (e.g., pizza sauce with poultry, poultry gravy)	¼ cup	n/a
Seasoning mixes, dry, bases, extracts, dried broths and stock/juice, freeze-dried trail mix products with meat		
As reconstituted: Amount to make one Reference Amount of the final dish: e.g., Gravy Major main entree type sauce Soup Entree measurable with a cup	¼ cup 125 g 245 g 1 cup	

- 1 These values represent the amount of food customarily consumed per eating occasion and were primarily derived from the 1977-1978 and the 1987-1988 Nationwide Food Consumption Surveys conducted by the U.S. Department of Agriculture.
- 2 Manufacturers are required to convert the reference amount to the label serving size in a household measure most appropriate to their specific product using the procedures established by regulation.
- 3 Examples listed under Product Category are not all -inclusive or exclusive. Examples are provided to assist manufacturers in identifying appropriate product Reference Amount.
- 4 If packed or canned in liquid, the reference amount is for the drained solids.
- 5 Pizza sauce is part of the pizza and is not considered to be sauce topping.



When you have a question ...
Call or visit your local office
of the University of Georgia's
Cooperative Extension Service,
College of Agricultural and
Environmental Sciences.

You'll find a friendly, well-trained staff
ready to help you with information, advice
and free publications covering agriculture
and natural resources, home economics, 4-H
and youth development, and resource
development.

PUTTING KNOWLEDGE TO WORK

**PREPARED BY P.T. TYBOR AND A. ESTES REYNOLDS,
EXTENSION FOOD SCIENTISTS**

The Cooperative Extension Service, The University of Georgia College of Agricultural and Environmental Sciences offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or handicap status.

AN EQUAL OPPORTUNITY EMPLOYER
Food Science & Technology

Bulletin 1119

Reprinted October 1996

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, the University of Georgia College of Agricultural and Environmental Sciences and the U.S. Department of Agriculture cooperating.

Gale A. Buchanan, Dean and Director