



WEBINAR



Genesis R&D Working with Serving Sizes

Presented by **ESHA Research**

Wednesday, June 9, 2021

11:00 AM PDT | 1:00 PM CDT | 2:00 PM EDT



ESHA Research

ESHA Research was established in 1981 as one of the very first nutrition software solutions. Today, ESHA's suite of nutritional software products, services, and databases are recognized as the industry's top choice for food and supplement formulation, recipe development, labeling, nutritional analysis, and regulatory compliance.

ESHA Solutions

- Genesis R&D[®] Food Formulation
- Genesis R&D[®] Supplement Formulation
- Food Processor[®] Nutrition & Diet Analysis
- Consulting Services

Our mission is to help remove the complexity of product development and regulatory compliance for the food, beverage, and supplement industries through software, services, and nutritional databases.



Genesis R&D Foods

Genesis R&D Foods, first released in 1991, is designed to help users manage processes, overcome industry challenges, and meet federal requirements. Industry professionals use Genesis R&D for quick and accurate nutrient evaluation, virtual product development, nutrition labeling, and regulatory compliance.

- Product Development
- Formulation Analysis
- Menu Analysis
- Reporting
- Regulatory Compliance





Upcoming Webinars

- July 14, 2021 | *How to Comply with the FASTER Act using Genesis R&D Foods*
- August 11, 2021 | *Using the Moisture Adjustment Feature for Baked Products*
- September 15, 2021 | *Database Organization, Groups vs Attributes*

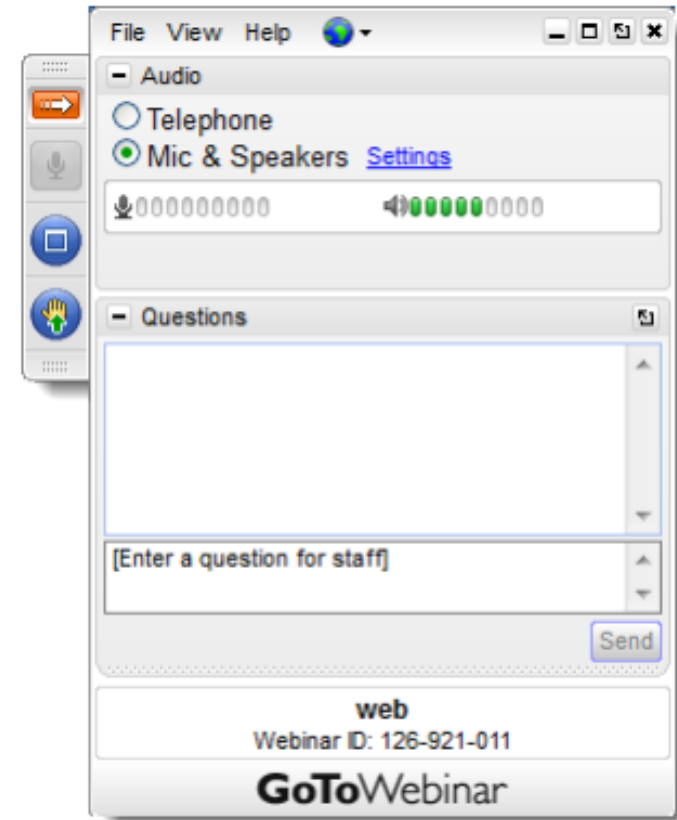
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WEBINAR



What We'll Cover Today



- Overview of the RACC
- Servings on the Nutrition Facts Label
- Volume vs. Weight Measures
- Dual Column Labels
- Servings per Container
- Q&A





Serving Sizes



Nutrition Facts Servings: varied, Serv. size: 1 oz (28g),
Amount per serving: **Calories 110**, Total Fat 9g (12% DV), Saturated



Nutrition Facts
16 servings per container
Serving size 1/16 of Package (28g Mix)

Amount/serving	Mix	Prepared
Calories	90	120
	% DV*	% DV*



Nutrition Facts
6 servings per container
Serving size 1 bagel (113g)

Amount per serving
Calories 240
% Daily Value*



Nutrition Facts
About 3 servings per container
Serving size 12 fl oz (360mL)

Calories	Per serving	per bottle
	180	490
	% Daily Value*	% Daily Value*

Reference Amounts Customarily Consumed (RACC)



- U.S. labeling uses the RACC to base serving sizes
 - Product serving might not match the RACC exactly, but serving size should be as close to the RACC as possible
 - Unit size may determine serving size or how many units are closest to the RACC
- RACC is listed by food category and in most cases for ready to serve or almost ready to serve form
- For foods that require preparation (e.g. a dry mix), serving size = the amount needed to make one serving of the RACC
- Serving size on the Nutrition Facts lists a household and a metric amount



Working with the RACC

- Table 1: foods for Infants (0 – 12 months) and Young Children (1 – 3 Years)
- Table 2: for General Food Supply
- See Footnotes

21 CFR 101.12

ECFR CONTENT

Table 2 - Reference Amounts Customarily Consumed Per Eating Occasion: General Food Supply ^{1 2 3}

Product category	Reference amount	Label statement ⁴
Bakery Products:		
Bagels, toaster pastries, muffins (excluding English muffins)	110 g	_ piece(s) (_ g)
Biscuits, croissants, tortillas, soft bread sticks, soft pretzels, corn bread, hush puppies, scones, crumpets, English muffins	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 bagels, toaster pastries, muffins (excluding English muffins)		
Brownies	40 g	_ piece(s) (_ g) for distinct pieces; fractional slice (_) for bulk

Example: 1 bagel (113 g)

Example: 2 slices (56 g)

⁴ The label statements are meant to provide examples of serving size statements that may be used on the label, but the specific wording may be changed as appropriate for individual products. 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, and bar for ice cream bars).** The guidance provided is for the label statement of products in ready-to-serve or almost ready-to-serve form. The guidance does not apply to the products which require further preparation for consumption (e.g., dry mixes, concentrates) unless specifically stated in the product category, reference amount, or label statement column that it is for these forms of the product. For products that require further preparation, manufacturers must determine the label statement following the rules in § 101.9(b) using the reference amount determined according to § 101.12(c).



Volume vs. Weight Measures

- Some foods express serving size in volume
- Some foods express serving size in weight
- Refer to the category and the reference amounts

Product category	Reference amount	Label statement ⁴
Beverages:		
Carbonated and noncarbonated beverages, wine coolers, water	360 mL	12 fl oz (360 mL)
Coffee or tea, flavored and sweetened	360 mL prepared	12 fl oz (360 mL)
Cereals and Other Grain Products:		
Breakfast cereals (hot cereal type), hominy grits	1 cup prepared; 40 g plain dry cereal; 55 g flavored, sweetened 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 or more but less than 43 g per cup; high fiber cereals containing 28 g or more of fiber per 100 g	40 g	_cup(s) (_g)



Household and Metric Measures

Regulations require the serving size be displayed as a common household measure (e.g. cup, teaspoon, piece, slice) next to the metric weight (in grams) or metric volume (in milliliters).

For example: 1 cup (245g) or 12 fl oz (360 mL)

- The **household measure** may be listed as a standard unit (tbsp, cup, fl oz, oz) Or a unit that is descriptive of the food (slice, piece, roll, cookie)
- The **metric unit** relates to the household unit and provides context and consistency



Standard and Descriptive Units

- **For most food items**, Cups, tablespoons, or teaspoons shall be used wherever possible and appropriate (except for beverages, use fl oz)
 - Cups shall be expressed in 1/4-cup or 1/3-cup increments
 - Tablespoons shall be expressed as 1, 1 1/3, 1 1/2, 1 2/3, 2, or 3 tablespoons
 - Teaspoons shall be expressed as 1/8, 1/4, 1/2, 3/4, 1, or 2 teaspoons
 - If cups, tablespoons or teaspoons are not applicable, then use units such as piece, slice, tray, jar
- **For single serving containers**, a description of the container or package is used: can, bottle, box, pouch, etc.
- **For beverages**, a manufacturer may use fluid ounces
- **For composite items**, like dry mix consisting of multiple components, like macaroni and cheese, use the composite weight, and descriptive info in parenthesis: 4 oz (112 g/about 2/3 cup macaroni and 2 tbsp dry cheese mix)
- **For large items usually divided for consumption**, like a whole cake, pie, pizza, use a fraction of the whole
- **If none other applies**, then weight in ounces may be used with a visual reference, e.g. 1 oz (28 g/½ pickle)



Unit Abbreviations and Definitions

If using abbreviations, the following shall be used:

- tbsp for tablespoon
- tsp for teaspoon
- g for gram
- mL for milliliter
- oz for ounce
- fl oz for fluid ounce

For nutrition labeling:

- a teaspoon means 5 milliliters (mL)
- a tablespoon means 15 mL
- a cup means 240 mL
- 1 fl oz means 30 mL
- 1 oz means 28 g

Unit and Serving Size is Clear to Consumers



Would This Be:

- 1 piece?
- 1 each?
- 2 squares?
- 1 bar?
- 1 brownie?



Serving Size \neq RACC

- What do you do when your portion, unit, or container size is significantly different from the RACC?
 - Unit weighs $\leq 50\%$ of RACC: serving = number of units closest to RACC
 - $>50\%$ to $<67\%$ of RACC: serving = 1 or 2 units
 - 67% to $<200\%$ of RACC: serving = 1 unit
 - 200% to 300% of RACC: serving = closest to RACC
 - Dual column label required
 - 1st column shows RACC based serving size
 - 2nd column shows the entire unit or container





Dual Column Requirements

Unit: *If a unit weighs at least 200 percent and up to and including 300 percent of the applicable reference amount, the serving size shall be the amount that approximates the reference amount. In addition to providing a column within the Nutrition Facts label that lists the quantitative amounts and percent Daily Values per serving size, the manufacturer shall provide a column within the Nutrition Facts label that lists the quantitative amounts and percent Daily Values per individual unit. The first column would be based on the serving size for the product and the second column would be based on the individual unit.*

Nutrition Facts			
12 servings per container		1/2 cookie (35g)	
Serving size			
Calories	Per serving 140	1 cookie 320	
	% Daily Value*	% Daily Value*	
Total Fat	6g 8%	14g 18%	

Example:

- Cookie RACC = 30g
- 1 cookie weighs 70g
- = 233% of RACC

Result:

- Serving size = portion closest to RACC;
- Dual column required

Container: *Products that are packaged and sold individually and that contain at least 200 percent and up to and including 300 percent of the applicable reference amount must provide an additional column within the Nutrition Facts label that lists the quantitative amounts and percent Daily Values for the entire package, as well as a column listing the quantitative amounts and percent Daily Values for a serving that is less than the entire package (i.e., the serving size derived from the reference amount). The first column would be based on the serving size for the product and the second column would be based on the entire contents of the package.*

Nutrition Facts			
2 servings per container		1 cup (255g)	
Serving size			
Calories	Per serving 220	Per container 440	
	% DV*	% DV*	
Total Fat	5g 6%	10g 13%	

Example:

- Soup RACC = 245g
- 1 cup weighs 255g
- Container weighs 510g = 208% of RACC

Result:

- Serving size = portion closest to RACC;
- Dual column required



Dual Column Exemptions

Does not apply to:

- Products that meet requirements to use tabular or linear label format
- Voluntarily labeled products: fruits, vegetables, seafood
- Products that already provide an additional column
 - Bears label with “as packaged” and “as prepared” columns
 - Bears label with columns for more than one age group
 - Popcorn with two columns; unpopped and popped information
 - Varied weight products – servings per container varies, so containing 200% to 300% of RACC wouldn't be consistent



Servings Per Container

- Servings per Container based on serving size and net contents of container
- Rounded to the nearest whole number
 - Except when number of servings is between 2 and 5
 - Between 2 and 5, then round to the nearest 0.5 serving
 - Rounding between 2 and 5 should be indicated by “about”, e.g., “about 2 servings” or “about 3.5 servings”
 - Varied – random weight products that vary in size, e.g., cheese

Nutrition Facts

12 servings per container

Serving size 2 slices (43g)

Nutrition Facts

about 3.5 servings per container

Serving size 3 cookies (30g)

Nutrition Facts

varied servings per container

Serving size 1 oz (28g)



Genesis R&D Training

Genesis R&D Foods Professional + FDA Regulations

This 2-day training session covers the fundamentals of the Genesis R&D Food program with a primary focus on FDA regulations: creating ingredients and composite ingredients, building recipes/formulas, nutrition analysis, moisture loss, reporting, labeling, best practices, and much more. In addition, this session covers a comprehensive FDA regulatory review.

Genesis R&D Foods Advanced Training

The 1-day Advanced session builds upon the skills learned in the Professional training and offers deeper learning on topics including PDCAAS, International Food Labeling, Advanced Label Settings, and more.

Session Options:

- 3-day Combined Professional + Advanced Training
- 2-day Professional Training
- 1-day Advanced Training (Prerequisite: Professional Training)

Date	Training Session Title
June 22-24, 2021	Genesis R&D Foods Professional and/or Advanced
July 20-22, 2021	Genesis R&D Foods Professional and/or Advanced
Sept. 21-23, 2021	Genesis R&D Foods Professional and/or Advanced

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QUESTIONS?



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