



WEBINAR



Top Genesis R&D[®] Food User Q&A's

Presented by **ESHA Research**

Wednesday, September 25, 2019

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



Menu Labeling Practical Applications and Best Practices in Genesis R&D® Foods | October 23, 2019

Genesis R&D® takes the hassle out of complying with the FDA's menu labeling regulations. During this webinar, we will walk you through using the Menu Label Module to evaluate and display calories and nutrition content for your menu items. We will also discuss best practices for meeting the regulatory requirements.

To register or view archived webinars please visit: www.esharesearch.com/news-events/webinars



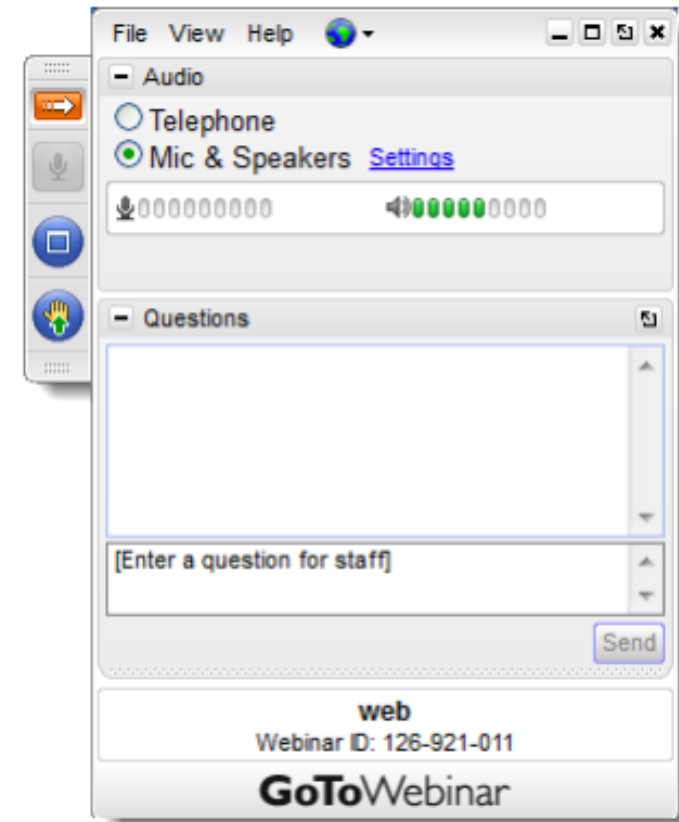
Stay tuned for more!



Please Note!

- ✓ The webinar is being recorded
- ✓ All webinars available on our website
- ✓ Submit your questions in the GoToWebinar control panel

WEBINAR



What we'll cover today

- Top Q&A from Genesis R&D[®] Food users
- Including:
 - Calories reported
 - What do dashes mean
 - How to work with missing data
 - Displaying %DV Protein on Nutrition Facts Label
- And more





Calories: CFR 101.9

(i) Caloric content may be calculated by the following methods. Where either specific or general food factors are used, the factors shall be applied to the actual amount (i.e., before rounding) of food components (e.g., fat, carbohydrate, protein, or ingredients with specific food factors) present per serving.

- (A) Using specific **Atwater** factors (*i.e.*, the Atwater method) given in table 13, USDA Handbook No. 74 (slightly revised, 1973),
- (B) Using the general factors of **4, 4, and 9** calories per gram for protein, total carbohydrate, and total fat, respectively, as described in USDA Handbook No. 74 (slightly revised, 1973) pp. 9-11;
- (C) Using the general factors of 4, 4, and 9 calories per gram for protein, total carbohydrate (less the amount of non-digestible carbohydrates and sugar alcohols), and total fat, respectively, as described in USDA Handbook No. 74 (slightly revised, 1973) pp. 9-11. A general factor of 2 calories per gram for **soluble non-digestible carbohydrates** shall be used. The general factors for caloric value of **sugar alcohols** provided in paragraph (c)(1)(i)(F) of this section shall be used;
- (D) Using data for **specific food factors** for particular foods or ingredients approved by the Food and Drug Administration (FDA) and provided in parts 172 or 184 of this chapter, or by other means, as appropriate;
- (E) Using **bomb calorimetry** data subtracting 1.25 calories per gram protein to correct for incomplete digestibility, as described in USDA Handbook No. 74 (slightly revised, 1973) p. 10; or
- (F) Using the following **general factors** for caloric value of **sugar alcohols**: Isomalt—2.0 calories per gram, lactitol—2.0 calories per gram, xylitol—2.4 calories per gram, maltitol—2.1 calories per gram, sorbitol—2.6 calories per gram, hydrogenated starch hydrolysates—3.0 calories per gram, mannitol—1.6 calories per gram, and erythritol—0 calories per gram.



How to Display %DV Protein on Label

- Open Recipe
- View Label
- Edit Label
 - Nutrient Options
 - Protein
 - Enter PDCAAS
 - Show Percent DV Protein

The screenshot shows the 'Edit Label' software interface. The top toolbar includes icons for View Label, Edit Label (selected), Ingredient Stmt, Allergen Stmt, Claims, Barcode, Front of Package, Default Layout, Zoom, Show, and Export. Below the toolbar is the 'Label Settings' panel. On the left, a sidebar lists settings categories: General, Format Options, Nutrient Options (selected), Voluntary Nutrients, Object Properties, Supplement Facts, Supplement Nutrients, and Supplement Dietary Ingredient. The main area displays a list of nutrients with expandable icons. 'Protein' is selected and expanded, showing the following settings:

Setting	Value
Protein is < 1 gram	Round to nearest gram
Protein Quality Score PDCAA	.89
Protein Quality Score PER	
Show Percent DV Protein	<input checked="" type="checkbox"/>
Show "not a significant source of protein" when insignificant	<input type="checkbox"/>



Label with %DV Protein

- View Label
- %DV calculates using the unrounded Protein g
- $(\text{Protein g} \times \text{PDCAAS}) / 50^* \text{ g}$

*for an adult label

Nutrition Facts	
6 servings per container	
Serving size	1 bar (40g)
Amount per serving	
Calories	110
% Daily Value*	
Total Fat 2.5g	3%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 115mg	5%
Total Carbohydrate 14g	5%
Dietary Fiber 2g	7%
Total Sugars 2g	
Includes 1g Added Sugars	2%
Protein 10g	17%
Vitamin D 0mcg	0%
Calcium 62mg	4%
Iron 2mg	10%
Potassium 124mg	2%
<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>	



Dashes - Missing Data

Nutrition Facts	
Serving Size 2/3 Cup	
Servings Per Container About 3	
Amount Per Serving	
Calories 190	Calories from Fat 90
% Daily Value*	
Total Fat 10g	15%
Saturated Fat 6g	30%
Cholesterol 30mg	10%
Sodium 65mg	3%
Total Carbohydrate 25g	8%
Dietary Fiber 1g	4%
Sugars 22g	
Protein 3g	
Vitamin A 8%	• Vitamin C 2%
Calcium 10%	• 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
Saturated 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	

Nutrition Facts	
About 3 servings per container	
Serving size	2/3 Cup
Amount per serving	
Calories	190
% Daily Value*	
Total Fat 10g	13%
Saturated Fat 6g	30%
Cholesterol 30mg	10%
Sodium 65mg	3%
Total Carbohydrate 25g	9%
Dietary Fiber --g	--%
Total Sugars 22g	
Includes 15g Added Sugars	30%
Protein 3g	
Vitamin D 0mcg	0%
Calcium 96mg	8%
Iron 1mg	6%
Potassium 220mg	4%
*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.	
Calories per gram: Fat 9 • Carbohydrate 4 • Protein 4	

Missing Dietary Fiber 2016 displayed here with dashes NOT COMPLIANT

NOTE: If only one of your ingredients reports the required dietary fiber information, only that one ingredient's dietary fiber will appear on the label. This can result in understated label values.

Review the Spreadsheet Report

Spreadsheet: Webinar Dietary Fiber

Item Name	Quantity	Measure	Cals (kcal)	Prot (g)	Carb (g)	Fib(16) (g)	Sugar (g)	SugAdd (g)	Fat (g)	SatFat
Webinar Dietary Fiber	1	Serving	217.88	4.79	35.96	0.19	4.35	3.24	5.96	
flour, baking, gluten free	38.1807	Gram	134.15	2.06	30.96	-	0	0	0	
water, distilled	15.2865	Gram	0	0	0	0	0	0	0	
egg, raw	12.8928	Gram	18.44	1.62	0.09	0	0.05	0	1.23	
butter, unsalted	4.8822	Gram	35.01	0.04	0.00	0	0.00	0	3.96	
sugar, white, granulated	3.2469	Gram	12.57	0	3.25	0	3.24	3.24	0	
powdered milk, whole	2.7492	Gram	13.64	0.72	1.06	0	1.06	0	0.73	
yeast, dry, instant, food service	0.6873	Gram	2.65	0.31	0.27	0.19	0	0	0.04	
salt, table	0.6478	Gram	0	0	0	0	0	0	0	
gum, xanthan, web	0.4266	Gram	1.43	0.03	0.33	0	0	0	0.00	
Total	1	Serving	217.88	4.79	35.96	0.19	4.35	3.24	5.96	

Identify missing values (indicated by dashes) and populate the **Ingredient record** to fill in the blanks.

Spreadsheet – Values in Red

Item Name	Quantity	Measure	TransFat (g)	Chol (mg)	Vit D-mcg (mcg)	Calc (mg)	Iron (mg)	Pot (mg)	Sod (mg)
Webinar Sodium Override	1	Serving	0	62.82	0	15.77	1.09	571.53	350.00
salmon, atlantic, wild, baked web	3.12104	Ounce-w...	0	62.82	0	13.27	0.91	555.65	49.55
Webinar Marinade	31.2104	Gram	0	0	0	2.50	0.18	15.87	356.72
soy sauce, tamari	0.022122	Cup	0	0	0	1.27	0.15	13.51	355.90
water, municipal tap	0.08849	Cup	0	0	0	0.63	0	0.21	0.63
sugar, brown	0.17698	Tablespoon	0	0	--	0	0	--	0
ginger, ground	0.044245	Teaspoon	0	0	0	0.09	0.02	1.05	0.02
garlic cloves, fresh	0.08849	Each	0	0	0	0.48	0.00	1.06	0.05
starch, corn	0.17698	Tablespoon	0	0	0	0.03	0.01	0.04	0.13
Moisture Adjustment: Loss	6.00	Percent							
Total	1	Serving	0	62.82	0	15.77	1.09	571.53	350.00

1. Override value manually entered for a nutrient
2. Value calculated using the Nutrient Calculator tool

To view:

- Open Recipe
- Edit Recipe
- Nutrients
- Override column

F5/Nutrient Search

- Search by nutrient content
- Identify foods that report a value (vs. missing data) for a specific nutrient
- Set parameters for searches
- View up to three nutrients per search



Serving Size on the Label

Nutrition Facts	
servings per container	
Serving size	1 slice (50g)
Amount per serving	
Calories	160
% Daily Value*	
Total Fat 6g	8%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 20mg	7%
Sodium 160mg	7%
Total Carbohydrate 26g	8%

Label Settings

General

Format Options

Nutrient Options

Voluntary Nutrients

Object Properties

Supplement Facts

Supplement Nutrients

Supplement Dietary Ingredient

General

Regulation	U.S.
Category	Nutrition Facts (2016)
Label	Adult (Standard Nutrition Facts Panel)
Style	Standard/Vertical
Format	Full
Footnote	Bottom
Serving Size	
English	1 slice
French	
Spanish	
Hide calculated serving size	<input type="checkbox"/>
Serving Size unit of measure	g
Servings Per Container	

- Edit Label settings
- Serving Size - text field
- Gram weight pulls through from Recipe serving size

Working with a Wide Label

- If the information on the label is crowded
- Click and drag to widen label
- Change Print Set-up to Landscape orientation

Nutrition Facts		Amount/serving / Cantidad/ración	% Daily Value* / % Valor Diario*	Nutrition Facts		Amount/serving / Cantidad/ración	% Daily Value* / % Valor Diario*
Datos de Nutrición		Total Fat / Grasa Total 4g	5%	Total Carbohydrate / Carbohidrato Total 22g		8%	
21 servings per container 21 Raciones por Envase		Saturated Fat / Grasa Saturada 0.5g	3%	Dietary Fiber / Fibra Dietética 2g		7%	
Serving size 1 oz (28g) Tamaño por Ración 1 oz (28g)		Trans Fat / Grasa Trans 0g		Total Sugars / Azúcares Total 15g			
Calories / Calorías 120		Cholesterol / Colesterol 0mg	0%	Includes 8g Added Sugars / Incluye 8g Azúcares Añadidos			
per serving / Por porción		Sodium / Sodio 85mg	4%	Protein / Proteínas 1g			
		Vitamin D / Vitamina D 0mcg 0% • Calcium / Calcio 5mg 0% • Iron / Hierro 1mg 6%					
		Potassium / Potasio 62mg 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.					
		*El porcentaje de Valor Diario indica la cantidad de un nutriente en una porción de alimento contribuye a una dieta diaria. 2,000 calorías al día se utiliza para el consejo general de la nutrición.					

Single Ingredient Added Sugars Label

Label Settings

General	Italicize Trans fat	<input type="checkbox"/>
Format Options	Use the 2018 Draft Guidance for Nutrient Rounding	<input type="checkbox"/>
Nutrient Options	Hide %DV Footnote	<input type="checkbox"/>
Voluntary Nutrients	Hide Quantitative Values	<input type="checkbox"/>
Object Properties	Show Insignificant Footnote	<input type="checkbox"/>
Supplement Facts	<input checked="" type="checkbox"/> Added Sugars	
Supplement Nutrients	<input type="checkbox"/> Show Palatability Symbol and Statement	<input type="checkbox"/>
Supplement Dietary Ingredient	Palatability Statement Text	<input type="text"/>
	Show Single Ingredient Symbol and Footnote	<input checked="" type="checkbox"/>

Show Single Ingredient Symbol and Footnote
Packaging for single ingredient sugars (such as sugar, honey, maple syrup) can use this option.

Nutrition Facts	
8 servings per container	
Serving size	1 tbsp (21g)
Amount per serving	
Calories	60
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium	0%
Total Carbohydrate 17g	6%
Dietary Fiber 0g	0%
Total Sugars 17g	34%†
Protein 0g	0%
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 0mg	0%

*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 1,000 calories a day is used for general nutrition advice.

†One serving adds 17g of sugar to your diet and represents 34% of the Daily Value for Added Sugars.

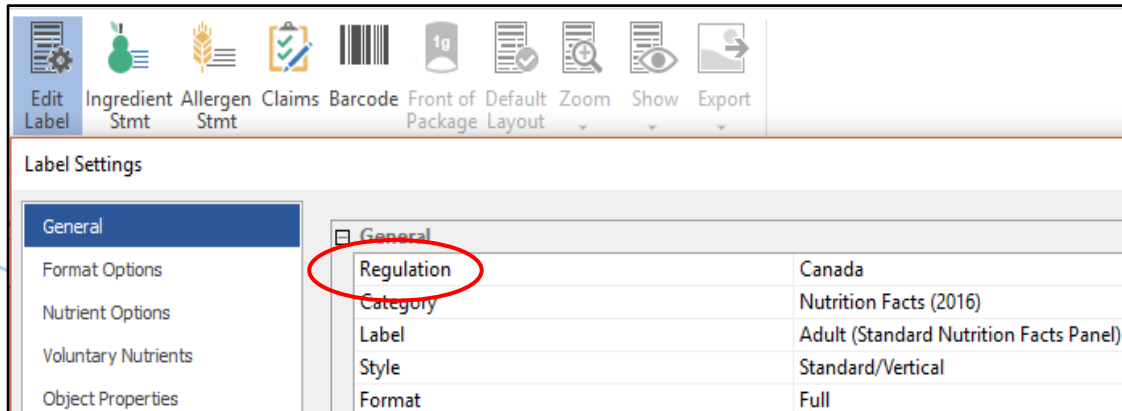
“Added Sugars” text removed.
%DV remains as is.

Added Sugars footnote
(with dagger) set inside
Nutrition Facts panel.

Dagger symbol (†) used
after %DV to refer
consumers to footnote.



Canadian Label



- Canadian Labeling Module is available to create compliant Canadian Nutrition Facts Tables
- 2003 and 2016 format options
- In Genesis R&D, access in Edit Label settings
- Contact ESHA Sales Team to add the module to your license

Nutrition Facts		
Valeur nutritive		
Per 2 slices (79 g) pour 2 tranches (79 g)		
Per Container 8 par contenant 8		
Calories 130		% Daily Value*
		% valeur quotidienne*
Fat / Lipides 0.4 g		1 %
Saturated / saturés 0.1 g + Trans / trans 0 g		1 %
Carbohydrate / Glucides 28 g		
Fibre / Fibres 1 g		4 %
Sugars / Sucres 4 g		4 %
Protein / Protéines 4 g		
Cholesterol / Cholestérol 0 mg		
Sodium 1 mg		1 %
Potassium 1750 mg		37 %
Calcium 10 mg		1 %
Iron / Fer 1.5 mg		8 %
*5% or less is a little , 15% or more is a lot		
*5% ou moins c'est peu , 15% ou plus c'est beaucoup		



Allulose – FDA Draft Guidance

FDA draft guidance published in April 2019

FDA intends to exercise enforcement discretion allowing manufacturers to:

- Exclude allulose from the amount declared in Total Sugars and Added Sugars
- Use 0.4 Calories per gram of allulose when calculating the Calories from allulose in a serving of a product

Allulose will continue to count and be declared as Total Carbohydrates for labeling purposes



Nutrient Conversions – FDA Guidance

- FDA final guidance published August 2019
 - Suggests the conversion factors to be used when calculating one unit from another
 - Provides examples of the conversions
- Folate: mcg to mcg DFE
 - Niacin: mg to mg NE
 - Vitamin A: IU to mcg RAE
 - Vitamin D: IU to mcg
 - Vitamin E: IU to mg a-toco



Account Management

- Contact ESHA Sales when you have had a change in personnel
sales@esha.com
- Provide your updated contacts and e-mail addresses
- Let us know what questions you have about your license



Genesis R&D Training

Genesis R&D Training | October 8-10, 2019 | Oak Brook, IL

Genesis R&D Training | November 5-7, 2019 | Oak Brook, IL

Professional, *and/or* Advanced training session. The first two days cover the fundamentals of the Genesis R&D Food program: creating ingredients, building recipes/formulas, nutrition analysis and reporting, labeling, and best practices. In addition, you can attend a third day of Advanced instruction, or just attend the Advanced session as a single day. Advanced training presents more complex scenarios and more comprehensive regulatory issues.

Genesis R&D Training: Professional + Menu Label | December 4-5, 2019 | MicroTek, Miami, FL

Instruction covers the fundamentals of the Genesis R&D Food program: creating ingredients, building recipes/formulas, nutrition analysis and reporting, labeling, and best practices. In addition, the class includes direction and discussion on the 2018 Menu Labeling requirements and Menu Label features in Genesis R&D.

See the Full Schedule: <https://www.asha.com/news-events/training-schedule/>

QUESTIONS?



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