

GUIDE TO FOOD LABELLING AND ADVERTISING

Chapter 6

The Elements Within the Nutrition Facts Table

Chapter 6

The Elements Within the Nutrition Facts Table

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Chapter 6

The Elements within the Nutrition Facts Table

6.1 Presentation of Information Within the Table [B.01.401, B.01.402, B.01.450(1)]

In the *Food and Drug Regulations*, the tables to B.01.401 and B.01.402 specify the required nomenclature for the information listed in the Nutrition Facts table plus the units of measurement and rounding rules.

B.01.450.(1), in conjunction with Schedule L, prescribes the order in which the listings must appear, as well as dimensions, spacing and the use of upper and lowercase letters and bold type (see Chapter 5 of this *Guide*).

Table 6-1 and Table 6-2, as set out in this section of the *Guide*, are not exact replicas of the two tables in the Food and Drug Regulations [B.01.401 and B.01.402]. Table 6-1 refers to the core nutrition information which is **mandatory** for all Nutrition Facts tables and Table 6-2 refers to all additional information that may **voluntarily** be included, or which must be included in the Nutrition Facts table when triggered by a nutrient content claim. In these tables:

- Column 1 sets out the information in the correct order and also prescribes which terms to use for describing this information. It is a combination of both columns 1 and 2 from the tables set out in the *Food and Drug Regulations*.
- Column 2 sets out the units of measurement required for expressing the information.
- Column 3 sets out the rounding rules for these values/amounts.

This chapter also defines and/or discusses several terms and concepts, including:

- Reference Amounts (Schedule M) 6.2.1
- Serving of Stated Size 6.2.2
- Reasonable Daily Intake (Schedule K) 6.3.1
- Recommended Daily Intake 6.3.2
- Weighted Recommended Nutrient Intake 6.3.3
- Reference Standard 6.3.4
- Daily Value and % Daily Value 6.3.5

6.1.1 Core Nutrition Information

Core Nutrition Information

Table 6-1

(Excerpt from table to B.01.401)

Information (Required Nomenclature in Quotes)	Units	Rounding
<p>1. Serving of stated size</p> <p>"Serving Size (naming the serving size)", "Serving (naming the serving size)" or "Per (naming the serving size)"</p>	<p>(1) (a) in the case of a food that is usually divided into pieces before being consumed (such as cake, pie and pizza), a fraction of the entire food;</p> <p>(b) in the case of a food described in subsection B.01.002A(2), the entire container (see 6.2.3 of this <i>Guide</i> for an explanation); and</p> <p>(c) in all other cases, in a commonly used unit in which the quantity is visibly measurable, such as millilitres, cups, tablespoons or "(naming the unit of food)"</p> <p>(2) The size expressed in accordance with sub item (1) is followed by the size expressed in grams or millilitres, as specified by B.01.002A(1)(b).</p>	<p>(1) The size in metric units: (a) less than 10 g or 10 mL, to the nearest multiple of 0.1 g or 0.1 mL; (b) 10 g or 10 mL or more, to the nearest multiple of 1 g or 1 mL</p> <p>(2) The size when expressed as a fraction is represented by a numerator and a denominator separated by a line.</p> <p>(3) The size shall include the word "assorted" if the information in the Nutrition Facts table of a prepackaged product that contains an assortment of foods is set out as a composite value. i.e. "Per 5 assorted candies (15 g)"</p>
<p>2. Energy value</p> <p>"Calories", "Total Calories" or "Calories, Total"</p>	<p>Calories per serving of stated size</p>	<p>(a) when less than 5 Calories</p> <ul style="list-style-type: none"> • if the product meets the conditions set out in column 2 of item 1 of the table to B.01.513 for the subject "free of energy", set out in column 1, to "0" Calorie, and • in all other cases, to the nearest multiple of 1 Calorie; <p>(b) when 5 to 50 Calories, to the nearest multiple of 5 Calories; and</p> <p>(c) when more than 50 Calories, to the nearest multiple of 10 Calories</p>

Information (Required Nomenclature in Quotes)	Units	Rounding
<p>3. Amount of fat</p> <p>"Fat", "Total Fat" or "Fat, Total"</p>	<p>(1) grams per serving of stated size; and</p> <p>(2) percentage of the daily value per serving of stated size</p>	<p>(1) The amount in grams:</p> <p>(a) when less than 0.5 g if the product meets the conditions set out in column 2 of item 11 of the table following B.01.513 for the subject "free of fat" set out in column 1; and the amounts of saturated fatty acids and trans fatty acids are declared as "0" in the Nutrition Facts table or are omitted from that table in accordance with subsection B.01.401(6) and no other fatty acids are declared in an amount greater than "0", to "0 g"; and in all other cases, to the nearest multiple of 0.1 g;</p> <p>(b) when 0.5 g to 5 g, to the nearest multiple of 0.5 g; and</p> <p>(c) when more than 5 g, to the nearest multiple of 1 g</p> <p>(2) The percentage:</p> <p>(a) when the amount is declared as "0 g", to "0 %"; or</p> <p>(b) in all other cases, to the nearest multiple of 1%</p>
<p>4. Amount of saturated fatty acids</p> <p>"Saturated Fat", "Saturated Fatty Acids", "Saturated" or "Saturates"</p>	<p>grams per serving of stated size</p>	<p>(a) when less than 0.5 g (i) if the product meets the conditions set out in column 2 of item 18 of the table following B.01.513 for the subject "free of saturated fatty acids" set out in column 1 to "0 g"; and (ii) in all other cases, to the nearest multiple of 0.1 g;</p> <p>(b) when 0.5 g to 5 g, to the nearest multiple of 0.5 g; and</p> <p>(c) when more than 5 g, to the nearest multiple of 1 g</p>
<p>5. Amount of trans fatty acids</p> <p>"Trans Fat", "Trans Fatty Acids" or "Trans"</p>	<p>grams per serving of stated size</p>	<p>(a) when less than 0.5 g</p> <ul style="list-style-type: none"> • if the product meets the conditions set out in column 2 of item 22 of the table following B.01.513 for the subject "free of trans fatty acids" set out in column 1 to "0 g"; and • in all other cases, to the nearest multiple of 0.1 g; <p>(b) when 0.5 g to 5 g, to the nearest multiple of 0.5 g; and</p> <p>(c) when more than 5 g, to the nearest multiple of 1 g</p>
<p>6. The sum of saturated fatty acids and trans fatty acids</p> <p>"Saturated Fat + Trans Fat", "Saturated Fatty Acids + Trans Fatty Acids", "Saturated + Trans" or "Saturates + Trans"</p>	<p>percentage of the daily value per serving of stated size</p>	<p>(a) when the amounts of saturated fatty acids and trans fatty acids are declared as "0 g", to "0 %"; and</p> <p>(b) in all other cases, to the nearest multiple of 1%</p>
<p>7. Amount of cholesterol</p> <p>"Cholesterol"</p>	<p>(1) milligrams per serving of stated size; and</p>	<p>(1) The amount in milligrams:</p> <p>(a) if the product meets the conditions set out in column 2 of item 27 of the table following B.01.513 for the subject "free of cholesterol" set out in column 1, to "0 mg"; and</p> <p>(b) in all other cases, to the nearest multiple of 5 mg;</p>

Information (Required Nomenclature in Quotes)	Units	Rounding
	(2) (optional) expressed as a percentage of the daily value per serving of stated size	(2) The percentage (a) when the amount is declared as "0 mg" to "0 %"; and (b) in all other cases, to the nearest multiple of 1%
8. Amount of sodium "Sodium"	(1) milligrams per serving of stated size; and (2) percentage of the daily value per serving of stated size	(1) The amount in milligrams : (a) when less than 5 mg • if the product meets the conditions set out in column 2 of item 31 of the table following B.01.513 for the subject "free of sodium or salt" set out in column 1 to "0 mg", and • in all other cases, to the nearest multiple of 1 mg; (b) when 5 mg to 140 mg , to the nearest multiple of 5 mg; and (c) when greater than 140 mg , to the nearest multiple of 10 mg. (2) The percentage : (a) when the amount is declared as "0 mg" to "0 %"; or (b) in all other cases, to the nearest multiple of 1 %.
9. Amount of carbohydrate "Carbohydrate", "Total Carbohydrate" or "Carbohydrate, Total"	(1) grams per serving of stated size; and (2) percentage of the daily value per serving of stated size	(1) The amount in grams : (a) when less than 0.5 g, to "0 g"; and (b) when 0.5 g or more, to the nearest multiple of 1 g (2) The percentage : (a) when the amount is declared as "0 g", to "0 %"; or (b) in all other cases, to the nearest multiple of 1%
10. Amount of fibre "Fibre", "Fiber", "Dietary Fibre" or "Dietary Fiber"	(1) grams per serving of stated size; and (2) percentage of the daily value per serving of stated size	(1) The amount in grams : (a) when less than 0.5 g, to "0 g"; and (b) when 0.5 g or more, to the nearest multiple of 1 g (2) The percentage : (a) if the amount is declared as "0 g", to "0 %"; or (b) in all other cases, to the nearest multiple of 1%
11. Amount of sugars "Sugars"	grams per serving of stated size	(a) when less than 0.5 g , to "0 g"; and (b) when 0.5 g or more , to the nearest multiple of 1 g
12. Amount of protein "Protein"	grams per serving of stated size	(a) when less than 0.5 g , to the nearest multiple of 0.1 g; and (b) when 0.5 g or more , to the nearest multiple of 1 g
13. Amount of "Vitamin A" or "Vit A" "Vitamin C" or "Vit C" "Calcium" "Iron"	percentage of the daily value per serving of stated size	(a) when less than 2% • if the product contains less than 1% of the daily value per reference amount and per serving of stated size, to "0 %", or • in all other cases, to "2 %"; (b) when 2% to 10% , to the nearest multiple of 2%; (c) when more than 10% to 50% , to the nearest multiple of 5%; and (d) when more than 50% (including values greater than 100%), to the nearest multiple of 10%

6.1.2 Additional Nutrition Information

Additional Nutrition Information

Table 6-2

(Excerpt from table to B.01.402)

Information (Required nomenclature in quotes)	Units	Rounding
<p>1. Servings per container</p> <p>"Servings Per Container" or "(number of units) Per Container"</p>	number of servings	<p>(1) (a) when less than 2, to the nearest multiple of 1; (b) when 2 to 5, to the nearest multiple of 0.5; and (c) when more than 5, to the nearest multiple of 1 (2) If a quantity is rounded off, it shall be preceded by the word "about". (3) If the product is of a random weight, the quantity may be declared as "varied".</p>
<p>2. Energy value</p> <p>"kilojoules" or "kJ"</p>	kilojoules per serving of stated size	to the nearest multiple of 10 kilojoules
<p>3. Energy value from fat</p> <p>"Calories from Fat" or "Calories from Total Fat"</p>	Calories per serving of stated size	<p>(a) when less than 5 Calories (i) if the amount of fat is declared as "0 g" in the Nutrition Facts table, to "0" Calorie, and (ii) in all other cases, to the nearest multiple of 1 Calorie; (b) when 5 Calories to 50 Calories, to the nearest multiple of 5 Calories; and (c) when more than 50 Calories, to the nearest multiple of 10 Calories</p>
<p>4. Energy value from the sum of saturated and <i>trans</i> fatty acids</p> <p>"Calories from Saturated + Trans Fat", "Calories from Saturated + Trans Fatty Acids", "Calories from Saturated + Trans" or "Calories from Saturates + Trans"</p>	Calories per serving of stated size	<p>(a) when less than 5 Calories (i) if the amounts of saturated fatty acids and <i>trans</i> fatty acids are declared as "0 g" in the Nutrition Facts table, to "0" Calorie, and (ii) in all other cases, to the nearest multiple of 1 Calorie; (b) when 5 Calories to 50 Calories, to the nearest multiple of 5 Calories; and (c) when more than 50 Calories, to the nearest multiple of 10 Calories</p>
<p>5. Amount of polyunsaturated fatty acids</p> <p>"Polyunsaturated Fat", "Polyunsaturated Fatty Acids", "Polyunsaturated" or "Polyunsaturates"</p>	grams per serving of stated size	<p>(a) when less than 1 g, to the nearest multiple of 0.1 g; (b) when 1 g to 5 g, to the nearest multiple of 0.5 g; and (c) when more than 5 g, to the nearest multiple of 1 g</p>

Information (Required nomenclature in quotes)	Units	Rounding
<p>6. Amount of omega-6 polyunsaturated fatty acids</p> <p>(1) If the table includes polyunsaturated fatty acids: "Omega 6" or any listed in (2) below</p> <p>(2) In all other cases "Omega-6 Polyunsaturated Fat", "Omega-6 Polyunsaturated Fatty Acids", "Omega-6 Polyunsaturates" or "Omega-6 Polyunsaturated"</p>	<p>grams per serving of stated size</p>	<p>(a) when less than 1 g, to the nearest multiple of 0.1 g; (b) when 1 g to 5 g, to the nearest multiple of 0.5 g; and (c) when more than 5 g, to the nearest multiple of 1 g</p>
<p>7. Amount of omega-3 polyunsaturated fatty acids</p> <p>(1) If the table includes polyunsaturated fatty acids: "Omega 3" or any listed in (2) below</p> <p>(2) In all other cases "Omega-3 Polyunsaturated Fat", "Omega-3 Polyunsaturated Fatty Acids", "Omega-3 Polyunsaturates" or "Omega-3 Polyunsaturated"</p>	<p>grams per serving of stated size</p>	<p>(a) when less than 1 g, to the nearest multiple of 0.1 g; (b) when 1 g to 5 g, to the nearest multiple of 0.5 g; and (c) when greater than 5 g, to the nearest multiple of 1 g</p>
<p>8. Amount of monounsaturated fatty acids</p> <p>"Monounsaturated Fat", "Monounsaturated Fatty Acids", "Monounsaturates" or "Monounsaturated"</p>	<p>grams per serving of stated size</p>	<p>(a) when less than 1 g, to the nearest multiple of 0.1 g; (b) when 1 g to 5 g, to the nearest multiple of 0.5 g; and (c) when greater than 5 g, to the nearest multiple of 1 g</p>
<p>9. Amount of potassium</p> <p>"Potassium"</p>	<p>(1) milligrams per serving of stated size; and</p>	<p>(1) The amount in milligrams:</p> <p>(a) when less than 5 mg</p> <ul style="list-style-type: none"> • if the product contains less than 5 mg of potassium per reference amount and per serving of stated size, to "0 mg", and • in all other cases, to the nearest multiple of 1 mg; <p>(b) when 5 mg to 140 mg, to the nearest multiple of 5 mg; and</p> <p>(c) when more than 140 mg, to the nearest multiple of 10 mg.</p>

Information (Required nomenclature in quotes)	Units	Rounding
	(2) percentage of the daily value per serving of stated size.	(2) The percentage : (a) when the amount is declared as "0 mg" to "0%"; or (b) in all other cases , to the nearest multiple of 1%.
10. Amount of soluble fibre "Soluble Fibre" or "Soluble Fiber"	grams per serving of stated size	(a) when less than 0.5 g , to "0 g"; and (b) when 0.5 g or more , to the nearest multiple of 1 g
11. Amount of insoluble fibre "Insoluble Fibre" or "Insoluble Fiber"	grams per serving of stated size	(a) when less than 0.5 g , to "0 g"; and (b) when 0.5 g or more , to the nearest multiple of 1 g
12. Amount of sugar alcohol (1) If the food contains only one type of sugar alcohol, "Sugar Alcohol", "Polyol" or "(naming the sugar alcohol)" (2) In all other cases "Sugar Alcohols" or "Polyols"	grams per serving of stated size	(a) when less than 0.5 g , to "0 g"; and (b) when 0.5 g or more , to the nearest multiple of 1 g
13. Amount of starch "Starch"	grams per serving of stated size	(a) when less than 0.5 g , to "0 g"; and (b) when 0.5 g or more , to the nearest multiple of 1 g

Information (Required nomenclature in quotes)	Units	Rounding
<p>14. Amount of: (a) "Vitamin D" or "Vit D" (b) "Vitamin E" or "Vit E" (c) "Vitamin K" or "Vit K" (d) "Thiamine", "Thiamin", "Thiamine (Vitamin B₁)", "Thiamine (Vit B₁)", "Thiamin (Vitamin B₁)" or "Thiamin (Vit B₁)" (e) "Riboflavin", "Riboflavin (Vitamin B₂)" or "Riboflavin (Vit B₂)" (f) "Niacin" (g) "Vitamin B₆" or Vit B₆ (h) "Folate" (i) "Vitamin B₁₂" or "Vit B₁₂" (j) "Biotin" (k) "Pantothenic Acid" or "Pantothenate" (l) "Phosphorus" (m) "Iodide" or "Iodine" (n) "Magnesium" (o) "Zinc" (p) "Selenium" (q) "Copper" (r) "Manganese" (s) "Chromium" (t) "Molybdenum" (u) "Chloride"</p>	<p>percentage of the daily value per serving of stated size</p>	<p>(a) when less than 2% (i) if the product contains less than 1% of the daily value per reference amount and per serving of stated size, to "0 %", and (ii) in all other cases, to the nearest multiple of 2%; (b) when 2% to 10%, to the nearest multiple of 2%; (c) when 10% to 50%, to the nearest multiple of 5%, and (d) when more than 50% to the nearest multiple of 10%</p>

Information	Manner of Declaration (Required Nomenclature in Quotes)																								
<p>15. Basis of the percent daily values</p> <p>An explanation of the basis for calculating the percent daily values declared in the Nutrition Facts table</p>	<p>One of the following four footnotes regarding % <i>Daily Value</i> as set out in Figures 18.1(E) & (F) and Figure 19.1(B) of Schedule L.</p> <p>1) "Percent Daily Values are based on a 2,000 Calorie diet. Your daily values may be higher or lower depending on your Calorie needs:</p> <table style="margin-left: 40px; border-collapse: collapse;"> <tr> <td style="text-align: right;">Calories:</td> <td style="text-align: center;">2,000</td> <td style="text-align: center;">2,500</td> </tr> <tr> <td style="text-align: right;">Total Fat</td> <td style="text-align: center;">Less than 65 g</td> <td style="text-align: center;">80 g</td> </tr> <tr> <td style="text-align: right;">Saturated + <i>Trans</i></td> <td style="text-align: center;">Less than 20 g</td> <td style="text-align: center;">25 g</td> </tr> <tr> <td style="text-align: right;">Cholesterol</td> <td style="text-align: center;">Less than 300 mg</td> <td style="text-align: center;">300 mg</td> </tr> <tr> <td style="text-align: right;">Sodium</td> <td style="text-align: center;">Less than 2,400 mg</td> <td style="text-align: center;">2,400 mg</td> </tr> <tr> <td style="text-align: right;">Potassium</td> <td style="text-align: center;">3,500 mg</td> <td style="text-align: center;">3,500 mg</td> </tr> <tr> <td style="text-align: right;">Total Carbohydrate</td> <td style="text-align: center;">300 g</td> <td style="text-align: center;">375 g</td> </tr> <tr> <td style="text-align: right;">Dietary Fibre</td> <td style="text-align: center;">25 g</td> <td style="text-align: center;">30 g</td> </tr> </table> <p>or</p> <p>2) "Based on a 2,000 Calorie diet."</p> <p>or</p> <p>3) "Percent Daily Values are based on a 2,000 Calorie diet."</p> <p>or</p> <p>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."</p> <p>NOTES:</p> <ul style="list-style-type: none"> • In the version of the footnote that refers to nutrients (i.e., version 1 above), the following apply: <ul style="list-style-type: none"> (a) the daily value for potassium is included only if the amount of potassium is declared in the Nutrition Facts table; and (b) the daily value for cholesterol is included only if the amount of cholesterol is declared in the Nutrition Facts table as a percentage of the daily value per serving of stated size. • Versions 2, 3 and 4 above do not include a reference to nutrients. 	Calories:	2,000	2,500	Total Fat	Less than 65 g	80 g	Saturated + <i>Trans</i>	Less than 20 g	25 g	Cholesterol	Less than 300 mg	300 mg	Sodium	Less than 2,400 mg	2,400 mg	Potassium	3,500 mg	3,500 mg	Total Carbohydrate	300 g	375 g	Dietary Fibre	25 g	30 g
Calories:	2,000	2,500																							
Total Fat	Less than 65 g	80 g																							
Saturated + <i>Trans</i>	Less than 20 g	25 g																							
Cholesterol	Less than 300 mg	300 mg																							
Sodium	Less than 2,400 mg	2,400 mg																							
Potassium	3,500 mg	3,500 mg																							
Total Carbohydrate	300 g	375 g																							
Dietary Fibre	25 g	30 g																							
<p>16. Energy conversion factors</p>	<p>Displayed as: "Calories per gram", "Fat 9", "Carbohydrate 4" and "Protein 4"</p>																								

6.2 Reference Amounts and Serving Size

6.2.1 Reference Amounts

A reference amount is a specific regulated quantity of a type of food usually eaten by an individual at one sitting. Reference amounts, as established by Health Canada, are set out in Schedule M of the *Food and Drug Regulations* [B.01.001] and are provided in Table 6-3 in this chapter. With the exception of prepackaged meals, reference amounts serve as the basis of compositional criteria for nutrient content claims and health claims (discussed in Chapters 7 and 8) [B.01.001, B.01.002A, item 1 to table to B.01.401, and Schedule M]. **They are also used for determining what is a single serving container.**

Unless otherwise noted, the reference amounts are for the ready-to-serve or almost ready-to-serve form of the food and are based on the main intended use of a food (e.g., milk as a beverage and not as an ingredient in recipes or when added to cereal). Where a product requires further preparation (such as the addition of water or other ingredients) and a reference amount has not been established for the unprepared form, the reference amount will be the quantity of the product required to prepare the reference amount of finished product.

Reference amounts refer only to the edible portion of the food and exclude any liquid in which the solid food may be packed or canned, unless the liquid is customarily consumed with the solid food. For example, the reference amounts for olives and feta cheese do not include the brine, only the olives and the cheese, whereas canned fruit packed in fruit juice includes the fruit juice. Pork ribs would not include the bones, only the meat.

6.2.2 Serving of Stated Size

The nutrient information presented in a Nutrition Facts table is based on a specific amount of food (edible portion). The amount is indicated under the Nutrition Facts heading using the phrase “Serving (naming the serving size)”, “Serving Size (naming the serving size)” or “Per (naming the serving size)”.

Serving sizes set out in Table 6-3 of this *Guide* are usually presented as a range. This allows manufacturers some flexibility when determining serving sizes for products of varying density and size, such as cookies or slices of bread. In order not to mislead consumers, the same serving size should be used whenever a serving size is mentioned on the label, e.g., in the Nutrition Facts table, the directions for use, etc. For example, if a box of pudding mix says that it makes 6 servings, the Nutrition Facts table should be based on one-sixth of the box and the directions for use should indicate how to make 6 servings. Common sense should also prevail when determining a serving size, when foods are pre-portioned into units commonly consumed by a person, the serving size should be the unit in question. For instance, 1 burger, 1 steak, 1 cabbage roll, 1 granola bar, etc.

A serving size is based on the food as sold [B.01.022A, D.01.001(2)]. For foods requiring preparation and foods commonly mixed with other ingredients or another food before being eaten (such as pudding mix, soups or breakfast cereal with milk), the serving size in the Nutrition Facts table must be set out for the food as sold and may optionally be set out for the food as prepared. (See 5.7 of this *Guide* for the required format.)

The serving size can be expressed in several ways [table to B.01.401].

- The serving size may be expressed as a fraction of the entire food (for foods usually divided into pieces before consumption, such as 1/8 cake or 1/4 pizza);
- It may be expressed as a single serving, if it meets the criteria described in 6.2.3 below [B.01.002A(2)]; or
- In all other cases, the serving size is expressed in the commonly used unit such as millilitres, cups, tablespoons, pieces, units (e.g., muffin, burger), count (e.g., number of cookies) or other common household measure.

For non-metric declarations, the metric serving size **must follow** the declaration, in brackets, e.g., “per stick (2.7 g)”.

The units for the metric serving size must be **consistent with the units used to declare the net quantity** of the food on the label (unless otherwise noted). This means that a serving must be expressed:

- in **grams** if the net quantity of the food is declared on the label by weight or by count, and
- in **millilitres** if the net quantity is declared by volume [B.01.002A, D.01.001(2)].

There are three **exceptions** to this rule. Although the net quantity of olives, pickles and fruit used for garnish or flavour, such as maraschino cherries, is declared by volume, a serving must be **expressed in grams** [items 78, 149, and 150 in Schedule M].

Usually the **units** used for the serving size are the same as the **units** used for the reference amount (see Schedule M).

Metric values are rounded to the nearest 0.1 for quantities of less than 10 and to the nearest whole number for quantities of 10 or more. These rounding rules are found in the table to B.01.401 and summarized in Table 6-1 in section 6.1 of this chapter.

6.2.3 Single Serving Containers

The **entire** net quantity in the package **is considered to be the serving size** in the following cases:

- (a) The food packaged in the container could reasonably be eaten by one person at a single sitting [B.01.002A(2)(a), D.01.001(3)].

For example, a 600 mL bottle of juice dispensed from a vending machine is normally consumed during a single occasion. Such a bottle is considered a single serving, despite the fact that juice has a 250 mL reference amount and a serving size range of 175 - 250 mL.

- (b) The reference amount of the food is less than 100 g or 100 mL **and** the package contains less than 200% of that reference amount [B.01.002A(2)(b)].

For example, consider a 55 g bag of mixed nuts. The reference amount for mixed nuts is 50 g (item 127, Schedule M; see Table 6-3 in 6.2.4 of this *Guide*). The package contains less than 200% of 50 g (less than 100 g) and therefore, the 55 g bag is considered to be a single serving container, with a serving size of 55 g.

- (c) The reference amount is 100 g or 100 mL or more **and** the package contains 150% or less of that reference amount [B.01.002A(2)(c)].

For example, consider a soft drink in a 500 mL bottle. The reference amount for soft drinks is 355 mL (item 23, Schedule M; see Table 6-3 in 6.2.4 of this *Guide*). Since the bottle contains less than 150% of the 355 mL (150 % of 355 = 532.5 mL) reference amount, the 500 mL bottle is considered to be a single serving container, with a serving size of 500 mL.

6.2.4 Foods for Use in the Manufacture of Other Foods

Note: The information in this subsection does **not** pertain to foods sold at retail, such as large quantities of various ingredients used by consumers for home-baking (e.g., 10 kg bags of flour and sugar). Such products require a Nutrition Facts table based on the appropriate serving size.

Some prepackaged products which are intended solely for use as an ingredient (**not** sold at retail) **do not have to provide the information on the basis of a serving size**.

These include:

- foods used in the manufacture of other prepackaged foods that will eventually be sold to a consumer at the retail level, and
- foods used in the preparation of food by a commercial or industrial enterprise or an institution.

In these cases, written nutrition information must accompany these ingredients and set out the energy value and amounts of other nutrients (expressed in the applicable units) per 100 grams, per 100 millilitres, per gram or per millilitre of the food [B.01.404]. The Nutrition Facts table format is not required. For more information regarding foods intended for further manufacturing, see 5.15 of this *Guide*, Foods for Use in Manufacturing Other Foods.

Reference Amounts [Schedule M] and Serving Sizes
Table 6-3

(Essential to making a nutrient content claim and preparing a Nutrition Facts table)

Item	Product Category	Reference Amount ¹	Serving Size ²
Bakery Products:			
1	Bread, excluding sweet quick-type rolls	50 g	25-70 g (1-2 slices) - sliced 50 g - unsliced
2	Bagels, tea biscuits, scones, rolls, buns, croissants, tortillas, soft bread sticks, soft pretzels and corn bread	55 g	25-100 g
3	Brownies	40 g	30-100 g
4	Cake (heavy weight): 10 g or more per 2.5 cm cube, such as cheese cake, pineapple upside-down, cake with at least 35% of the finished weight as fruit, nuts, or vegetables, or any of these combined	125 g	80-150 g
5	Cake (medium weight): 4 g or more per 2.5 cm cube but less than 10g per 2.5 cm cube, such as cake with or without icing or filling, 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, cupcakes, eclairs, or cream puffs	80 g	50-125 g
6	Cake (light weight): less than 4 g per 2.5 cm cube, such as angel food, chiffon, or sponge cake without icing or filling	55 g	40-80 g
7	Coffee cakes, doughnuts, danishes, sweet rolls, sweet quick-type breads and muffins	55 g	50-100 g
8	Cookies, with or without coating or filling; graham wafers	30 g	30-40 g
9	Crackers, hard bread sticks and melba toast	20 g	15-30 g
10	Dry breads, matzo, and rusks	30 g	15-35 g
11	Flaky type pastries, with or without filling or icing	55 g	50-90 g
12	Toaster pastries	55 g	50-80 g

Item	Product Category	Reference Amount ¹	Serving Size ²
13	Ice cream cones	5 g	3-25 g
14	Croutons	7 g	7-20 g
15	French toast, pancakes, and waffles	75 g	60-110 g prepared (2-4 pancakes)
16	Grain-based bars with filling or partial or full coating	40 g	20-50 g
17	Grain-based bars, without filling or coating	30 g	20-50 g
18	Rice cakes and corn cakes	15 g	10-25 g
19	Pies, tarts, cobblers, turnovers, other pastries	110 g	85-120 g (1/6 of 20 cm diameter pie or 1/8 of 23 cm pie)
20	Pie crust	1/6 of 20 cm crust or 1/8 of 23 cm crust	1/6 of 20 cm pie or 1/8 of 23 cm pie
21	Pizza crust	55 g	30-110 g
22	Taco shell, hard	30 g	20-40 g
Beverages:			
23	Carbonated and non-carbonated beverages, ice tea and wine coolers	355 mL	250-375 mL
24	Sports drinks and water	500 mL	400-600 mL
25	Coffee: regular, instant and specialty, including espresso, café au lait, flavoured and sweetened	175 mL	amount to make 175-250 mL prepared
26	Tea and herbal tea: (a) regular and instant (hot) (b) flavoured and sweetened, prepared from mixes	175 mL 250 mL	amount to make 175-250 mL prepared
27	Cocoa and chocolate beverages (hot)	175 mL	5-15 g dry or amount to make 175-250 mL prepared
Cereals and Other Grain Products:			
28	Hot breakfast cereals, such as oatmeal, or cream of wheat	40 g dry, 250 mL prepared	30-40 g dry, 175-335 mL prepared
29	Ready-to-eat breakfast cereals, puffed and uncoated (less than 20 g per 250 mL)	15 g	10-20 g
30	Ready-to-eat breakfast cereals, puffed and coated, flaked, extruded, without fruit or nuts (20 g to 42 g per 250 mL), very high fibre cereals (with 28 g or more fibre per 100 g)	30 g	20-45 g

Item	Product Category	Reference Amount ¹	Serving Size ²
31	Ready-to-eat breakfast cereals, fruit and nut type, granola (weighing 43 g or more per 250 mL) and biscuit type cereals	55 g	45-80 g (1-2 biscuits)
32	Bran and wheat germ	15 g	10-20 g
33	Flours, including cornmeal	30 g	30-60 g
34	Grains, such as rice or barley	45 g dry 140 g cooked	30-45 g dry, 90-140 g cooked
35	Pastas without sauce	85 g dry 215 g cooked	45-100 g dry, 140-250 g cooked
36	Pastas, dry and ready-to-eat, such as fried canned chow mein noodles	25 g	20-25 g
37	Starch, such as cornstarch, potato starch, tapioca starch or wheat starch	10 g	5-15 g
38	Stuffing	100 g	75-100 g
Dairy Products and Substitutes:			
39	Cheese, including cream cheese and cheese spread, except those listed as a separate item	30 g	15-60 g
40	Cottage cheese	125 g	60-250 g
41	Cheese used as an ingredient, such as dry cottage cheese or ricotta cheese	55 g	25-100 g
42	Hard cheese, grated, such as parmesan or romano	15 g	8-30 g
43	Quark, fresh cheese and fresh dairy desserts	100 g	50-200 g
44	Cream and cream substitute, except those listed as separate item	15 mL	10-30 mL
45	Cream and cream substitute, powder	2 g	2-4 g
46	Cream and cream substitute, aerosol or whipped	15 g	10-30 g
47	Eggnog	125 mL	60-250 mL
48	Milk, evaporated or condensed	15 mL	10-30 mL
49	Plant-based beverages, milk, buttermilk and milk-based drinks, such as chocolate milk	250 mL	125-250 mL
50	Shakes and shake substitutes such as dairy shake mix	250 mL	125-250 mL
51	Sour cream	30 mL	15-60 mL
52	Yogurt	175 g	125-225 g
Desserts:			
53	Ice cream, ice milk, frozen yogurt, sherbet	125 mL	60-250 mL
54	Dairy desserts, frozen, such as cakes, bars, sandwiches or cones	125 mL	60-175 mL

Item	Product Category	Reference Amount ¹	Serving Size ²
55	Non-dairy desserts, frozen, such as flavoured and sweetened ice or pops, frozen fruit juices in bars or cups	75 mL	40-150 mL
56	Sundaes	250 mL	125-250 mL
57	Custard, gelatin and pudding	125 mL	80-140 g pudding, 15 g gelatin dessert (dry), 65-250 mL gelatin dessert prepared
Dessert Toppings and Fillings:			
58	Dessert toppings, such as maple butter and marshmallow cream	30 g	15-30 g
59	Cake frostings and icings	35 g	25-45 g
60	Pie fillings	75 mL	40-150 mL
Egg and Egg Substitutes:			
61	Egg mixtures, such as egg foo young, scrambled eggs, omelets	110 g	50-110 g
62	Eggs	50 g	50-100 g (1-2 eggs)
63	Egg substitutes	50 g	50-100 g
Fats and Oils:			
64	Butter, margarine, shortening, lard	10 g	5-20 g
65	Vegetable oil	10 mL	5-20 mL
66	Butter replacement, powder	2 g	1-3 g
67	Dressings for salad	30 mL	15-30 mL
68	Mayonnaise, sandwich spread and mayonnaise-type dressing	15 mL	8-30 mL
69	Oil, spray type	0.5 g	0.5 g
Marine and Fresh Water Animals:			
70	Canned anchovies, anchovy paste and caviar ³	15 g	15-60 g
71	Marine and fresh water animals with sauce, such as fish with cream sauce or shrimp with lobster sauce	140 g cooked	90-140 g
72	Marine and fresh water animals without sauce, such as plain or fried fish or shellfish, or fish or shellfish cakes, with or without breading or batter	125 g raw 100 g cooked	85-130 g raw, fresh, frozen 60-100 g cooked
73	Marine and fresh water animals, canned ³	55 g	50-100 g
74	Marine and fresh water animals, smoked or pickled, or spreads ³	55 g	50-55 g

Item	Product Category	Reference Amount ¹	Serving Size ²
Fruits and Fruit Juices:			
75	Fruit, fresh, canned or frozen, except those listed as a separate item	140 g 150 mL canned ³	110-160 g fresh or frozen, 120-150 mL canned
76	Candied or pickled fruit ³	30 g	30-40 g
77	Dried fruit, such as raisins, dates or figs	40 g	30-40 g
78	Fruit for garnish or flavour, such as maraschino cherries ³	4 g	1-3 cherries
79	Fruit relishes	60 mL	50-100 mL
80	Avocado, used as an ingredient	30 g	20-40 g
81	Cranberries, lemons and limes, used as ingredients	55 g	50-100 g
82	Watermelon, cantaloupe, honeydew and other melons	150 g	75-300 g
83	Juices, nectars and fruit drinks represented for use as substitutes for fruit juices	250 mL	175-250 mL
84	Juices, used as ingredients, such as lemon juice or lime juice	5 mL	5-10 mL
Legumes:			
85	Bean curd (tofu) or tempeh ³	85 g	85-100 g
86	Beans, peas and lentils, such as white beans, kidney beans, romano beans, soybeans or chick peas ³	100 g dry, 250 mL cooked or canned	35-100 g dry, 100-250 mL cooked or canned
Meat, Poultry, Their Products and Substitutes⁴:			
87	Pork rinds and bacon	54 g uncooked 15 g cooked	30-80 g uncooked, 10-30 g cooked
88	Beef, pork and poultry breakfast strips	30 g uncooked 15 g cooked	15-60 g uncooked 10-30 g cooked
89	Dried meat and poultry, such as jerky, dried beef or parma ham, as well as sausage products with a water activity of 0.90 or less, such as salami, dried thuringer or cervelat	30 g	15-60 g
90	Luncheon meats such as bologna, blood pudding, minced luncheon roll, liver sausage, mortadella, ham and cheese loaf or headcheese; pâté, sandwich spread, potted meat food product; taco fillings; meat pie fillings and cretons	75 g uncooked, 55 g cooked	35-100 g uncooked, 25-75 g cooked
91	Sausage products, such as linked sausage, Vienna sausage, wieners, breakfast sausage, frankfurters, pork sausage, bratwurst, kielbasa, Polish sausage, summer sausage, smoked sausage, smoked country sausage, pepperoni, knackwurst, thuringer and cervelat	75 g uncooked, 55 g cooked	75-165 g uncooked, 25-115 g cooked
92	Cuts of meat and poultry without sauce, and ready-to-cook cuts, with or without breading or batter, including marinated, tenderized and injected cuts	125 g raw, 100 g cooked	80-130 g raw, 50-100 g cooked

Item	Product Category	Reference Amount ¹	Serving Size ²
93	Patties, cutlettes, chopettes, steakettes, meatballs, sausage meat and ground meat, with or without breading or batter	100 g raw, 60 g cooked	80-130 g raw, 50-100 g cooked
94	Cured meat products such as cured ham, dry cured ham, back bacon, cured pork back, dry cured cappicola, corned beef, pastrami, country ham, cured pork shoulder picnic, cured poultry ham products, smoked meat or pickled meat	85 g raw, 55 g cooked	50-110 g raw, 30-100 g cooked
95	Canned meat and poultry ³	55 g	50-100 g
96	Meat and poultry with sauce, such as meat in barbecue sauce or turkey with gravy, but excluding combination dishes	140 g	90-150 g
Miscellaneous category:			
97	Baking powder, baking soda and pectin	0.6 g	0.5-2 g
98	Baking decorations, such as coloured sugars or sprinkles for cookies	4 g	3-5 g
99	Bread crumbs and batter mixes	30 g	15-60 g
100	Cooking wine	30 mL	15-60 mL
101	Cocoa powder	5 g	5 g
102	Non-alcoholic drink mixers, such as pina colada or daiquiri	250 mL	amount to make 175-280 mL prepared (without ice)
103	Chewing gum	3 g	3-5 g
104	Salad and potato toppers, such as salad crunchies, salad crispins or substitutes for bacon bits	7 g	5-15 g
105	Salt and salt substitute, as well as seasoned salt such as garlic salt	1 g	0.5-1.5 g
106	Spices and herbs	0.5 g	0.5-1.0 g
Combination Dishes:			
107	Measurable with a cup, such as casserole, hash, macaroni and cheese with or without meat, pot pie, spaghetti with sauce, stir fry, meat or poultry casserole, baked or refried beans, wieners and beans, meat chili, chili with beans, creamed chipped beef, beef or poultry ravioli in sauce, beef stroganoff, poultry à la king, Brunswick stew, goulash, stew, ragout or poutine	250 mL	200-375 g or 200-375 mL
108	Not measurable with a cup, such as burritos, egg rolls, enchiladas, pizza, pizza rolls, sausage rolls, pastry rolls, cabbage rolls, quiche, sandwiches, crackers and meat or poultry lunch-type packages, gyros, burger on a bun, frank on a bun, calzones, tacos, pockets stuffed with meat, lasagna, chicken cordon bleu, stuffed vegetables with meat or poultry, shish kabobs, empanadas, fajitas, souvlaki, meat pie or tourtière	140 g without gravy or sauce, 195 g with gravy or sauce	90-300 g including gravy or sauce

Item	Product Category	Reference Amount ¹	Serving Size ²
109	Hors d'oeuvres	50 g	25-100 g
Nuts and Seeds:			
110	Nuts and seeds, not for use as snacks: whole, chopped, sliced, slivered or ground	30 g shelled	30-75 g
111	Butters, pastes and creams, other than peanut butter	30 g	15-45 g
112	Peanut butter	15 g	15-30 g
113	Flours, such as coconut flour	15 g	10-20 g
Potatoes, Sweet Potatoes and Yams:			
114	French fries, hash browns, skins and pancakes	85 g frozen French fries, 70 g prepared	70-110 g
115	Mashed, candied, stuffed, or with sauce	140 g	100-200 g
116	Plain, fresh, canned ³ or frozen	110 g fresh or frozen, 125 g vacuum-packed, 160 g canned	110-150 g
Salads:			
117	Salads, such as egg, fish, shellfish, bean, fruit, vegetable, meat, ham or poultry salad, except those listed as a separate item	100 g	75-150 g
118	Gelatin salad	120 g	100-175 g
119	Pasta or potato salad	140 g	100-200 g
Sauces, Dips, Gravies and Condiments:			
120	Sauces for dipping, such as barbecue, hollandaise, tartar, mustard or sweet and sour sauce	30 mL	15-45 mL
121	Dips, such as legume or dairy-based	30 g	15-45 g
122	Major main entrée sauce, such as spaghetti sauce	125 mL	100-200 mL
123	Minor main entrée sauce such as pizza sauce, pesto sauce, or other sauces used as toppings such as white sauce, cheese sauce, salsa, cocktail sauce or gravy	60 mL	50-100 mL
124	Major condiments, such as ketchup, steak sauce, soy sauce, vinegar, teriyaki sauce or marinades	15 mL	10-20 mL
125	Minor condiments, such as horseradish, hot sauce, mustard, or Worcestershire sauce	5 mL	5-10 mL
Snacks:			
126	Chips, pretzels, popcorn, extruded snacks, grain-based snack mixes and fruit-based snacks, such as fruit chips	50 g	40-60 g
127	Nuts or seeds for use as snacks	50 g shelled	40-60 g

Item	Product Category	Reference Amount ¹	Serving Size ²
128	Meat or poultry snack food sticks	20 g	15-25 g
Soups:			
129	All varieties	250 mL	175-250 mL prepared, 85-125 mL condensed, 15 g dehydrated or dry
Sugars and Sweets:			
130	Candies, including chocolate bars and other chocolate products, except those listed as a separate item	40 g	30-70 g
131	Hard candies, except those listed as a separate item	15 g	15-30 g
132	Baking candies, such as chocolate chips	15 g	10-20 g
133	Breath mints	2 g	1-3 g
134	Roll-type hard candies and mini size hard candies in dispenser packages	5 g	5-10 g
135	Confectioner's or icing sugar	30 g	15-60 g
136	Bread spreads, except those listed as a separate item, honey and molasses	20 g	15-25 g
137	Jams, jellies, marmalades, fruit butters and spreads	15 mL	10-20 mL
138	Marshmallows	30 g	25-50 g
139	Sugars, except those listed as a separate item	4 g	4-5 g
140	Sugar substitute	amount equivalent in sweetness to 4 g sugar	amount equivalent in sweetness to 4-5 g sugar
141	Syrups, including chocolate, maple and corn syrup	30 mL as ingredient, 60 mL other uses	30-60 mL
Vegetables:			
142	Vegetables without sauce, including cream style corn and stewed tomatoes, but not including vegetables without sauce listed as a separate item	85 g fresh or frozen, 125 mL canned ³	70-100 g fresh, frozen
143	Vegetables with sauce	110 g fresh or frozen, 125 mL canned	95-125 g fresh or frozen, 80-175 mL canned
144	Vegetables primarily used for garnish or flavouring, fresh, canned or frozen, but not dried, such as parsley or garlic	4 g	4-5 g
145	Chili pepper and green onion	30 g	25-45 g
146	Seaweed	15 g	10-20 g
147	Lettuce and sprouts	65 g	50-75 g

Item	Product Category	Reference Amount ¹	Serving Size ²
148	Vegetable juice and vegetable drink	250 mL	125-250 mL
149	Olives ³	15 g	3 to 5 olives
150	Pickles ³	30 g	1 dill pickle, 2 mini-dills or gherkins
151	Relish	15 mL	10-20 mL
152	Vegetable pastes, such as tomato paste	30 mL	25-45 mL
153	Vegetable sauce or purée, such as tomato sauce or tomato purée	60 mL	50-75 mL

- 1 Unless otherwise noted, the reference amounts are for the ready-to-serve or almost ready-to-serve form of the food. If not listed separately, the reference amount for the unprepared form, such as dry mixes, concentrates, dough, batter and fresh or frozen pasta, is the amount required to make one reference amount of the prepared form.
- 2 Unless otherwise noted in the Serving Size column, the serving size is for the food-as-sold.
- 3 Excludes any liquid in which the solid food may be packed or canned, unless the liquid is customarily consumed with the solid food.
- 4 Meat and poultry substitutes include extended and simulated meat and poultry products.

6.3 Daily Intake

6.3.1 Reasonable Daily Intake for Various Foods (Schedule K)

Note: "Reasonable Daily Intake" (or Schedule K) should not be confused with "Recommended Daily Intake" (see 6.3.2 of this chapter).

The Reasonable Daily Intake was used to evaluate, for regulatory purposes, the nutritional contribution of specific foods to the diet. Reasonable Daily Intakes were used as the basis for determining the amounts of vitamin and mineral nutrients that may be present in the food when they are added. A food's protein rating is determined from the quality of the protein (i.e. the protein efficiency ratio) and the quantity of protein provided by a Reasonable Daily Intake.

The Reasonable Daily Intake for most foods was considered to be one average serving of the food. However, in the case of foods such as milk, bread or butter, where several servings may be consumed daily, a reasonable intake has been estimated considering the food habits of Canadians.

A "Reasonable Daily Intake" of a food named in column I of Schedule K, is the amount of that food set out in column II.

Reasonable Daily Intake for Various Foods (Schedule K)

Table 6-4

Item No.	Column I Name and Description	Column II Reasonable Daily Intake	
1.	Alimentary Pastes, dry	3 oz.	85 g
2.	Bacon (side), simulated meat product that resembles side bacon, (cooked)	1 oz.	28 g
3.	Beverage Bases and Mixes, Flavoured, for Addition to Milk (ready-to-serve)	16 fl.oz.	454 ml
4.	Bread, 5 slices	5.3 oz.	150 g
5.	Butter	2 oz.	57 g
6.	Buttermilk	30 fl.oz.	852 ml
7.	Cereals, Breakfast or Infant	1 oz.	28 g
8.	Cereals, puffed	0.5 oz.	14 g
9.	Cheese (other than Cottage Cheese)	2 oz.	57 g
10.	Cheese, Cottage	3.5 oz.	100 g
11.	Condensed Milk	15 fl.oz.	426 ml
12.	Cream, whipping	2 oz.	57 g
13.	Egg, yolk-replaced egg	3.5 oz.	100 g
14.	Evaporated Milk, Evaporated Skim Milk, Evaporated Partly Skimmed Milk	30 fl.oz.	852 ml
(reconstituted to original volume)			
15.	Fish, Shell Fish	3.5 oz.	100 g
16.	Fruits, dried	2 oz.	57 g
17.	Fruits, (other than banana, lemon, lime, watermelon)	3.5 oz.	100 g
18.	Fruits, Banana	5.3 oz.	150 g
19.	Fruits, Lemon	1.8 oz.	50 g
20.	Fruits, Lime	1.8 oz.	50 g
21.	Fruits, Watermelon	7 oz.	200 g
22.	Fruit Drinks, Fruit Nectars (ready-to-serve)	4 fl.oz.	114 ml
23.	Fruit Drink Bases, Mixes and Concentrates (ready-to-serve)	4 fl.oz.	114 ml
24.	Fruit Juices (other than lemon juice and lime juice)	4 fl.oz.	114 ml
25.	Fruit Juices, Lemon	1 fl.oz.	28 ml
26.	Fruit Juices, Lime	1 fl.oz.	28 ml
27.	Ice Cream, Ice Milk	3.5 oz.	100 g
28.	Infant Formulas, Prepared (ready-to-serve)	As directed by label	
29.	Instant Breakfast, Ready Breakfast (ready-to-serve)	As directed by label	
30.	Margarine	2 oz.	57 g
31.	Meat Products	3.5 oz.	100 g
32.	Meat Product Extenders	3.5 oz.	100 g
33.	Extended Meat Products	3.5 oz.	100 g
34.	Milk, whole	30 fl.oz.	852 ml
35.	Milk Powder (reconstituted and ready-to-serve)	30 fl.oz.	852 ml
36.	(naming the flavour) Milk	30 fl.oz.	852 ml
37.	Molasses	1.5 oz.	43 g
38.	Nuts	1 oz.	28 g
39.	Peanut Butter	1 oz.	28 g
40.	Poultry Products	3.5 oz.	100 g
41.	Extended Poultry Products	3.5 oz.	100 g
42.	Poultry Product Extenders	3.5 oz.	100 g

Item No.	Column I Name and Description	Column II Reasonable Daily Intake	
43.	Simulated Meat Products excluding a simulated meat product that resembles side bacon	3.5 oz.	100 g
44.	Simulated Poultry Products	3.5 oz.	100 g
45.	Skim Milk, Partly Skimmed Milk	30 fl.oz.	852 ml
46.	(naming the flavour) Skim Milk, (naming the flavour) Partly Skimmed Milk	30 fl.oz.	852 ml
47.	Skim Milk Powder, Partly Skimmed Milk Powder (reconstituted and ready-to-serve)	30 fl.oz.	852 ml
48.	Skim Milk with Added Milk Solids, Partly Skimmed Milk with Added Milk Solids	30 fl.oz.	852 ml
49.	(naming the flavour) Skim Milk with Added Milk Solids, (naming the flavour) Partly Skimmed Milk with Added Milk Solids	30 fl.oz.	852 ml
50.	Soup (ready-to-serve)	7 fl.oz.	200 ml
51.	Sterilized Milk	30 fl.oz.	852 ml
52.	Vegetable Juices	4 fl.oz.	114 ml
53.	Vegetable Drinks	4 fl.oz.	114 ml
54.	Vegetable Drink Concentrates, Mixes and Bases (ready-to-serve)	4 fl.oz.	114 ml
55.	Vegetable (other than baked beans and cooked potatoes)	3.5 oz.	100 g
56.	Vegetables, baked beans	8.5 oz.	250 g
57.	Vegetables, cooked potatoes	7 oz.	200 g
58.	Yeast	0.5 oz.	14 g
59.	Yogurt, plain	5 oz.	150 g

6.3.2 Recommended Daily Intake (RDI)

Note: Recommended Daily Intake should not be confused with Reasonable Daily Intake (Schedule K) (see 6.3.1 of this chapter).

Recommended Daily Intake (RDI) pertains to vitamins and mineral nutrients. It means the amount of a vitamin or mineral nutrient set out in Table I of Divisions 1 and 2 of Part D of the *Food and Drug Regulations* [D.01.001].

In the Nutrition Facts table, the term “Daily Value” is synonymous with “Recommended Daily Intake” for vitamins and mineral nutrients [B.01.001].

The RDI is one of the two reference points upon which the % Daily Value is based. (The other reference point is the “Reference Standard” which pertains to specific nutrients other than vitamins and mineral nutrients. See 6.3.4 in this chapter.)

The RDI’s are also used to set compositional criteria for the nutrient content claims for vitamins and mineral nutrients (see 7.25 of this *Guide*).

Table 6-5 which follows presents the established Recommended Daily Intakes for vitamins and mineral nutrients. Recommended Daily Intakes are given for **two different age groups**: children less than two years of age and persons two years of age or older. When using the table, be sure to use the appropriate column.

Recommended Daily Intake for Vitamins and Mineral Nutrients
Table 6-5

RECOMMENDED DAILY INTAKE [D.01.013, D.02.006]			
Vitamin or Mineral Nutrient	Units	Persons 2 years of age or older	Infants and children less than 2 years old
Vitamin A	RE ^a	1000	400
Vitamin D	µg ^b	5	10
Vitamin E	mg ^c	10	3
Vitamin C	mg	60	20
Thiamin, Thiamine or Vitamin B ₁	mg	1.3	0.45
Riboflavin or Vitamin B ₂	mg	1.6	0.55
Niacin	NE ^d	23	8
Vitamin B ₆	mg	1.8	0.7
Folacin or Folate	µg	220	65
Vitamin B ₁₂	µg	2	0.3
Pantothenic Acid or Pantothenate	mg	7	2
Vitamin K	µg	80	30
Biotin	µg	30	8
Calcium	mg	1100	500
Phosphorus	mg	1100	500
Magnesium	mg	250	55
Iron	mg	14	7
Zinc	mg	9	4
Iodide	µg	160	55
Selenium	µg	50	15
Copper	mg	2	0.5
Manganese	mg	2	1.2
Chromium	µg	120	12
Molybdenum	µg	75	15
Chloride	mg	3400	1000

^a RE = retinol equivalents

^b µg = micrograms

^c mg = milligrams

^d NE = niacin equivalents

6.3.3 Weighted Recommended Nutrient Intake

Weighted Recommended Nutrient Intakes (WRNI) became part of the *Food and Drug Regulations* in 1996. They are considered to represent the nutritional needs of the total population because they are weighted according to the age and sex distribution of the Canadian population

The Weighted Recommended Nutrient Intake is used to determine whether a food provides a sufficient amount of a nutrient to qualify for a health claim pertaining to:

- sodium, potassium and hypertension [item 1 (b) in column 2 of the table following B.01.603], and
- saturated fat, *trans* fat, and heart disease [item 3 (b) in column 2 of the table following B.01.603]; and

Weighted Recommended Nutrient Intakes for Vitamins and Mineral Nutrients
Table 6-6

Weighted Recommended Nutrient Intake [D.01.013, D.02.006]			
Item	Column I Vitamin	Column II Units	Column III Amount
1.	Biotin	µg	90
2.	Folacin	µg	195
3.	Niacin	NE	16
4.	Pantothenic Acid	mg	5.0
5.	Riboflavin	mg	1.2
6.	Thiamine	mg	1.0
7.	Vitamin A	RE	870
8.	Vitamin B ₆	mg	1.0
9.	Vitamin B ₁₂	µg	1.0
10.	Vitamin C	mg	34
11.	Vitamin D	µg	3.0
12.	Vitamin E	mg	7.0
Item	Column I Mineral Nutrient	Column II Units	Column III Amount
1.	Calcium	mg	780
2.	Iodide	µg	155
3.	Iron	mg	10
4.	Phosphorus	mg	885
5.	Magnesium	mg	210
6.	Zinc	mg	10

^a RE = retinol equivalents

^b µg = micrograms

^c mg = milligrams

^d NE = niacin equivalents

6.3.4 Reference Standards [B.01.001, table to B.01.001.1(2)]

Reference Standards pertain to the amount of specific nutrients (other than vitamins and mineral nutrients), set out in the table to B.01.001.1(2) of the *Food and Drug Regulations*.

In the Nutrition Facts table, the term “Daily Value” is synonymous with “Reference Standard” for these nutrients.

The **Reference Standards** form one of the two reference points upon which the % Daily Value is based. (The other reference point is the “Recommended Daily Intake” which pertains to vitamins and mineral nutrients, as discussed above in 6.3.2 of this chapter.)

The Reference Standards are reproduced in Table 6-7.

**Reference Standards
 Table 6-7**

Column 1 Nutrient	Column 2 Amount
Fat	65 g
The sum of saturated fatty acids and <i>trans</i> fatty acids	20 g
Cholesterol	300 mg
Carbohydrate	300 g
Fibre	25 g
Sodium	2400 mg
Potassium	3500 mg

6.3.5 Daily Value and % Daily Value

The **Daily Value** is the reference point upon which the % Daily Value is based. The Daily Value is equivalent to either the **Recommended Daily Intake** (for vitamins and minerals) or the **Reference Standard** (for other nutrients) [B.01.001] (See 6.3.2 and 6.3.4 of this chapter).

The % Daily Value of the nutrient in one serving, rounded as indicated in the tables in 6.1 and 6.2 of this *Guide*, is declared in the Nutrition Facts table. It is calculated as:

$$\% \text{ Daily Value} = \text{Amount of nutrient per serving} \div \text{Daily value of nutrient} \times 100$$

For nutrients present in a food in quantities greater than 100 percent of the Daily Value, the true percentage must be declared (e.g., 110% DV), taking into account the rounding rules.

The following example indicates how to calculate the % Daily Value of vitamins, fat and the sum of saturated fatty acids and *trans* fatty acids using the Recommended Daily Intake for the vitamins and the Reference Amounts for the remaining nutrients.

125 g of condensed tomato soup contains:

- 72 RE vitamin A
- 70 mg vitamin C
- 0.09 mg thiamine
- 15 µg folate
- 1.5 g total fat
- 0.7 g saturated fat + *trans* fat (consisting of 0.4 g saturated fat and 0.3 g *trans* fat)

To express these quantities as a percentage of the Daily Value, divide each nutrient by the Recommended Daily Intake (RDI) or by the Reference Standard, as applicable for that nutrient (from Tables 6-5 in 6.3.2 and 6-7 in 6.3.4 of this *Guide*) and multiply by 100. Note that the figures are rounded as specified in Table 6-1 (and Table 6-2 for optional nutrients) in 6.1 of this *Guide*. The percent Daily Value is calculated using

the absolute amount after rounding. (Note: since this is not a food intended solely for children less than two years of age, use the RDI in the column “Persons 2 years of age or older”):

- **For Vitamin A:** $72 / 1000 \times 100 = 7.2\%$
Rounded to 8% as per the rounding rules in item 13 in Table 6-1 in this chapter.
- **For Vitamin C:** $70 / 60 \times 100 = 116.7\%$
Rounded to 120% as per the rounding rules in item 13 in Table 6-1 in this chapter.
- **For Thiamine:** $0.09 / 1.3 \times 100 = 6.9\%$
Rounded to 6% as per the rounding rules in item 14 in Table 6-2 in this chapter.
- **For Folate:** $15 / 220 \times 100 = 6.8\%$
Rounded to 6% as per the rounding rules in item 14 in Table 6-2 in this chapter.
- **For Total Fat:** $1.5 / 65 \times 100 = 2.3\%$
Rounded to 2% as per the rounding rules in item 3 in Table 6-2 in this chapter.
- **For Saturated Fat + Trans Fat:** $0.7 / 20 \times 100 = 3.5\%$
Rounded to 4% as per the rounding rules in item 3 in Table 6-2 in this chapter.

6.4 Energy

The **energy value** of food means the amount of energy made available to a person’s body when the constituents of the food, including protein, fat, carbohydrate and alcohol, are metabolized following ingestion of the food [B.01.001].

In nutrition, energy is measured using “Calories”. This unit is equivalent to the “kilocalorie” or 1,000 calories used in chemistry. The term “Calories” must be used in prescribed nutrient content claims and in the Nutrition Facts table. In other situations, either variation may be used as it is common practice in nutrition to use “Calories” and “calories” interchangeably.

The energy value of foods should be calculated by the Atwater method, using specific factors from the latest revisions of *USDA Agriculture Handbook No. 8: Composition of Foods* (1984). Details of their derivation are outlined in A.L. Merrill and B.K. Watt, *Energy Value of Foods – Basis and Derivation, USDA Handbook 74* (1955). The following **average** factors may be used in place of the specific factors provided that the energy values are in reasonable agreement with the more accurate values determined according to Merrill and Watt.

Average Energy Content of Nutrients
Table 6-8

Nutrient	Cal/g	kJ/g
Protein	4	17
Fat	9	37
Carbohydrate*	4	17
Alcohol	7	29

* The energy value for the total carbohydrate content may be less than 4 Cal/g if the carbohydrate includes sugar alcohols, polydextrose and/or dietary fibre (see 6.4.2 of this chapter).

6.4.1 Converting Calories to Kilojoules

To convert Calories to kilojoules, use the following formula: **1 Calorie = 4.184 kilojoules**

Calculation Example – Oatmeal
Table 6-9

Calculate the energy content of 250 mL of cooked oatmeal using **specific energy factors**:

Nutrient	Amount in g	Specific Energy Factors for Oatmeal Cal/g	Calories
Protein	3	x 3.46	= 10.38
Fat	1	x 8.37	= 8.37
Carbohydrate	13	x 4.12	= 53.56

Total energy = 72.31 Cal
 Rounded = **70 Cal**
 Converted to kilojoules: 72.31 Cal x 4.184 = 302.5 kJ
 Rounded = **300 kJ**

Calculation Example – Macaroni and Cheese
Table 6-10

Calculate the energy of 250 mL of macaroni and cheese using the **average energy values**:

Nutrient	Amount in g	Average Energy Values Cal/g	Calories
Protein	18	x 4	= 72
Fat	23	x 9	= 207
Carbohydrate	42	x 4	= 168

Total energy = **447 Cal**

Converted to kilojoules: 447 Cal x 4.184 = 1870.25 kJ

Rounded = 1870 kJ

6.4.2 Energy Values of Sugar Alcohols, Polydextrose, Glycerol and Fructooligosaccharide

Energy Values of Sugar Alcohols, Polydextrose, Glycerol and Fructooligosaccharide
Table 6-11

Energy Source	Energy Values (Cal/g)*
Isomalt	2
Lactitol	2
Maltitol	3.0
Mannitol	1.6
Sorbitol	2.6
Xylitol	3.0**
Erythritol	0.2
Polydextrose	1
Glycerol	4.32
Fructooligosaccharide	2

* Values from the Bureau of Nutritional Sciences, Health Products and Food Branch, Health Canada.
** The value for xylitol is subject to change.

6.4.3 Energy Value of Dietary Fibre

It is unacceptable to subtract the weight of dietary fibre from the weight of carbohydrate prior to applying the “factor of 4” when you do not have an accurate energy value for a specific source(s) of fibre in a food.

A value of less than 4 Cal (17 kJ) per gram may be used for the dietary fibre content if a specific energy value is available for the fibre source.

Energy Value of Bran

When calculating the energy value for the dietary fibre portion of the total carbohydrate content, an energy value of 0.6 Cal (2.5 kJ) may be used for the dietary fibre of wheat bran. The energy value of wheat bran itself is 2.4 Cal (10 kJ).

Energy Value of Inulin

An energy value of 2.2 Cal (9.2 kJ) per gram should be used for inulin.

6.5 Fat and Fatty Acids: Saturates, *Trans*, Polyunsaturates, Omega-6 Polyunsaturates, Omega-3 Polyunsaturates, Monounsaturates [B.01.001, B.01.001.1(1)]

“**Fat**” is defined as total lipid fatty acids expressed as triglycerides.

“**Saturated fatty acids**” are defined as all fatty acids that contain no double bonds.

“***Trans* fatty acids**” are unsaturated fatty acids that contain one or more isolated or non-conjugated double bonds in a *trans*-configuration.

“**Monounsaturated fatty acids**” are *cis*-monounsaturated fatty acids.

“**Omega-6 polyunsaturated fatty acids**” means:

- i) 9-*cis*, 12-*cis* octadecadienoic acid or linoleic acid,
- ii) 6-*cis*, 9-*cis*, 12-*cis* octadecatrienoic acid,
- iii) 8-*cis*, 11-*cis*, 14-*cis* eicosatrienoic acid or di-homo- γ -linolenic acid,
- iv) 5-*cis*, 8-*cis*, 11-*cis*, 14-*cis* eicosatetraenoic acid or arachidonic acid,
- v) 7-*cis*, 10-*cis*, 13-*cis*, 16-*cis* docosatetraenoic acid, or
- vi) 4-*cis*, 7-*cis*, 10-*cis*, 13-*cis*, 16-*cis* docosapentaenoic acid.

“**Omega-3 polyunsaturated fatty acids**” means:

- i) 9-*cis*, 12-*cis*, 15-*cis* octadecatrienoic acid or α -linolenic acid,
- ii) 8-*cis*, 11-*cis*, 14-*cis*, 17-*cis* eicosatetraenoic acid,
- iii) 5-*cis*, 8-*cis*, 11-*cis*, 14-*cis*, 17-*cis* eicosapentaenoic acid or EPA,
- iv) 7-*cis*, 10-*cis*, 13-*cis*, 16-*cis*, 19-*cis* docosapentaenoic acid or
- v) 4-*cis*, 7-*cis*, 10-*cis*, 13-*cis*, 16-*cis*, 19-*cis* docosahexaenoic acid or DHA.

“**Polyunsaturated fatty acids**” are *cis*-methylene interrupted polyunsaturated fatty acids.

6.6 Sodium

Sodium content is based upon the total sodium present in the food regardless of the origin of the nutrient. Unlike most other mineral nutrients, sodium does not have a Recommended Daily Intake. Calculation of the % Daily Value is based on the Reference Standard value of 2400 mg [table to B.01.001.1(2)].

6.7 Potassium

Like sodium, potassium content is based upon the total potassium present in the food and does not have a Recommended Daily Intake. The % Daily Value is calculated by using the Reference Standard of 3500 mg [table to B.01.001.1(2)].

6.8 Carbohydrates

For labelling purposes, the total amount of declared carbohydrates must include sugars (e.g., monosaccharides such as glucose, and disaccharides such as sucrose), starch, dietary fibre, sugar alcohols (e.g., isomalt, lactitol, maltitol, maltitol syrup, mannitol, sorbitol, sorbitol syrup, xylitol, erythritol), glycerol and polydextrose.

The amount of carbohydrate may be determined by subtracting the content of protein, fat, ash and moisture from the weight of the product.

6.8.1 Dietary Fibre

“**Dietary fibre** are the endogenous components of plant material in the diet which are resistant to digestion by enzymes produced by humans. They are predominantly non-starch polysaccharides and lignin and may include, in addition, associated substances” (Health and Welfare Canada, 1985). There are two types of fibre: soluble, which will dissolve in water, and insoluble, which will not dissolve in water. The total fibre content of most plant foods consists of both types in varying amounts.

Some sources of insoluble fibre include wheat bran, some vegetables and whole grains. Some sources of soluble fibre include oats, barley, nuts, seeds, beans, lentils, and some fruits and vegetables.

The amount of dietary fibre is one of the 13 core nutrients that must be declared in the Nutrition Facts table [item 10 of the table to B.01.401]. The amount of both soluble fibre and insoluble fibre may be separately declared as additional information [item 10 and 11 in the table to B.01.402].

Novel fibre (or a novel fibre source) is a food that has been manufactured to be a source of dietary fibre, and:

- (a) has not traditionally been used for human consumption to any significant extent; or
- (b) has been chemically processed (e.g., oxidized) or physically processed (e.g., very finely ground) so as to modify the properties of the fibre; or
- (c) has been highly concentrated from its plant source.

This definition was recommended by the Expert Advisory Committee on Dietary Fibre, 1985, reporting to Health Canada.

The **safety** of novel fibre sources must be established before they may be used as **ingredients** in foods. As well, the physiological **efficacy** of novel fibre sources as dietary fibre must be established before they may be claimed to be a source of dietary fibre in foods. If the novel fibre source has **not** been tested for

efficacy, it is considered an unproven novel fibre. If safe, it may be used in foods but it cannot be claimed to be a source of dietary fibre.

If a novel fibre source has been reviewed by the Health Products and Food Branch of Health Canada and found acceptable, either as an ingredient only (safety demonstrated) or as a dietary fibre source (safety and efficacy demonstrated), the manufacturer will receive a "letter of no objection". The letter will indicate any restriction on the use of the novel fibre source. These "letters of no objection" are specific to the brand of the fibre source that was reviewed, unless otherwise specified.

Manufacturers who are considering the use of novel fibre sources and require further guidance are advised to contact the Health Products and Food Branch, Health Canada.

In the case of ingredients manufactured to be sources of dietary fibre, such as novel fibre sources, the **common name of the fibre ingredient in the list of ingredients** should include:

- the **name** of the plant which is the origin of the fibre; and
- the **specific part** of that plant.

The term "**fibre**" may be included as part of the common name, if appropriate (e.g., the product is 90 percent fibre).

The amount of **dietary fibre from novel fibre sources must not be included as part of the total dietary fibre declaration** in the Nutrition Facts table **unless**:

- proof of efficacy as dietary fibre in the same type of food has been shown through clinical testing to the satisfaction of the Health Canada, and
- a letter of no objection has been issued by Health Canada. *Reference:* Health Canada's Food Directorate Guideline No. 9, "Guideline Concerning the Safety and Physiological Effects of Novel Fibre Sources and Food Products Containing Them," revised November, 1994. See the following website: http://www.hc-sc.gc.ca/food-aliment/ns-sc/ne-en/nq-qn/e_dietary_fibre.html

All novel fibre foods must be reviewed by Health Canada in order for them to be considered a fibre source. This includes novel fibres which may have already been considered acceptable as a food or food ingredient, but which have not been previously promoted as a source of fibre, have not been traditionally used at higher levels and/or have not been used or added for the previously approved purpose.

Some examples of **novel fibres not currently recognized as food ingredients or fibre sources** include:

- fibre that has not traditionally been used for human consumption to any significant extent, such as cane sugar stalks, cocoa bean hulls, oat hulls, mucopolysaccharides (e.g., chitin) from shells of shellfish, and wheat straw;
- fibre that has been chemically processed, (e.g., oxidized), or physically processed (e.g., very finely ground), so as to modify the properties of the fibre, such as bleached oat hulls, finely ground wheat bran, bleached pea hulls (seed coats), and bleached wheat straw; and
- fibre that has been highly concentrated from its plant source, such as beta-glucans from barley and oats.

Examples of **food additives not currently recognized as fibre sources or ingredients** include:

- pectin
- carrageenan
- guar gum
- methylcellulose, carboxymethylcellulose, microcrystalline cellulose, etc.
- wood cellulose (powdered cellulose) [Use is currently allowed under an Interim Marketing Authorization.]

Dietary Fibre – Summary of Sources, Acceptability and Labelling
Table 6-12

(Source: Health Products and Food Branch (HPFB) of Health Canada. revised October 2002, subject to change)

Name of Fibre (see note a)	Ingredient Name	Classification of Ingredient as Fibre Source		Acceptable Ingredient?	Fibre Labelling: Regular Foods (see note c) Include amount in dietary fibre label declaration? Claim permitted? - see items 41, 42, 43, 44 of table following B.01.513	Fibre Labelling: Meal Replacements (see note d)	
		Traditional	Novel			Include amount in dietary fibre label declaration?	Claim Permitted Including "Source of Fibre"?
Apple pomace <i>Treetop</i> brand	Apple pomace powder		✓	Yes	No	No	No
Barley Beta-Glucan Concentrate, BBG Concentrate, Barley Balance (Parrhelm Foods)	Sieved barley meal	✓		Yes	Yes	Yes	Yes
Corn bran by traditional milling (less than/equal to 65% total fibre)	Corn bran	✓		Yes	Yes	Yes	No
Corn bran at greater than 65% total fibre GPC corn bran (Grain Processing Corporation)	Corn bran		✓	Yes	Yes in bakery products, snacks, cereal, and pastas. Maximum level permitted in high fibre cereal is 46.7%	No	No
Mustard bran	Mustard bran		✓	Yes but only in condimental amounts	No	No	No
Oat bran ≥ 13% total dietary fibre, ≥ 30% of fibre as soluble fibre, and ≤ 12% moisture	Oat bran	✓		Yes	Yes	No	No

Name of Fibre (see note a)	Ingredient Name	Classification of Ingredient as Fibre Source		Acceptable Ingredient?	Fibre Labelling: Regular Foods (see note c) Include amount in dietary fibre label declaration? Claim permitted? - see items 41, 42, 43, 44 of table following B.01.513	Fibre Labelling: Meal Replacements (see note d)	
		Traditional	Novel			Include amount in dietary fibre label declaration?	Claim Permitted Including "Source of Fibre"?
Oat hulls - ground, bleached <i>Canadian Harvest® Oat Fiber 300-58 (Opta® Food Ingredients)</i>	Oat hull fibre		✓	Yes in grain and bakery products at levels that provide a source of fibre (see note b) and in bar-type meal replacements	Yes	Yes	No
Oat Hull, (Grain Millers Inc.)	Oat hull fibre BCS-30		✓	Yes in bakery products, cereals, snacks and spice mixtures at levels ranging from 10-30%	Yes	No	No
Oat Hull - ground bleached <i>Vitacel HF301CA (J. Rettenmaier USA LLP)</i>	Oat hull fibre		✓	Yes in nutritional bars and bar- type meal replacement, bakery products and grain blends at levels ranging from 4.0-15%	Yes	Yes	Yes
Standard inulin from chicory root (obtained by hot water extraction, no organic solvents and/or enzymes used)	Chicory root inulin	✓		Yes	Yes but only if meeting the specifications indicated in note e	Yes	Yes
Inulin from Jerusalem artichoke tuber (Fructanex - NEX- XUS Distribution)	Inulin from Jerusalem artichoke tuber	✓		Yes	Yes	Yes	Yes
Pea Hull Fibres <i>Hi Fi Lite & Centara (Nutri-Pea Limited) Exlite Coarse (Parrheim Foods) Ground pea hull fibre (Best Cooking Pulses)</i>	Ground pea hull fibre		✓	Yes	Yes but only in bakery products and cereals *Centara and BPC may also be used in meat products where a filler/binder is permitted	No	No

Name of Fibre (see note a)	Ingredient Name	Classification of Ingredient as Fibre Source		Acceptable Ingredient?	Fibre Labelling: Regular Foods (see note c) Include amount in dietary fibre label declaration? Claim permitted? - see items 41, 42, 43, 44 of table following B.01.513	Fibre Labelling: Meal Replacements (see note d)	
		Traditional	Novel			Include amount in dietary fibre label declaration?	Claim Permitted Including "Source of Fibre"?
Psyllium seed husk (meeting the specifications indicated in note f)	Ground psyllium fibre	✓		Yes	Yes	Yes	Yes
Rice bran <i>Fiberice</i> (Farmers Rice Cooperative)	Rice bran		✓	Yes	No	No	No
Soy cotyledon <i>Fibrim</i> 300, 1000, 1010, 1250, 1250, 1255, 1450, and 2000 by Protein Technologies International	Ground soy cotyledon fibre		✓	Yes	Yes	No	No
Sugar beet fibre, <i>Fibrex</i> (Delta Fibre Foods) (> 0.125 mm)	Ground sugar beet fibre		✓	Yes	Yes but only in bakery products at less than or equal to 7%	No	No
Wheat bran, coarse (>0.75 mm)	Wheat bran	✓		Yes	Yes Claim for regularity if a reasonable daily intake provides 7 g of fibre from coarse wheat bran	Yes	Yes if a serving contains 7 g of fibre from coarse wheat bran
Wheat bran, medium (0.5 - 0.75 mm)	Wheat bran	✓		Yes	Yes	Yes	No
Wheat bran, fine (<0.5 mm)	Wheat bran		✓	Yes	No	No	No
Wheat, starch-reduced <i>Fibrotein</i> Mohawk Oil (mean PS= 0.6 mm)	Starch-reduced wheat		✓	Yes	Yes "as is" or in baked products such as bread, muffins, cookies and in low temperature extrusion breakfast cereals	No	No
Whole foods: fruits, vegetables, traditionally-milled cereals (including rare grains acceptable for food use e.g. quinoa), legumes, nuts, seeds (including flaxseed), etc.	e.g. carrots, beans	✓		Yes	Yes but must not be finely ground	Yes but must not be finely ground	No

Notes:

a) Figures in "Name of Fibre Column" refer to mean particle size as measured by the method of Mongeau, R. and R. Brassard, *Cereal Chemistry* 59 (5):413-417, 1982.

- b) Oat hull fibre has not been approved for use as a bulking agent for use in calorie reduction, i.e., a claim for calorie reduction is not acceptable on a product to which oat hull fibre has been added.
- c) Dietary fibre from novel fibre sources may not be calculated and declared in the Nutrition Facts table of a food unless proof of efficacy as dietary fibre in the same type of food has been shown through clinical testing to the satisfaction of Health Products and Food Branch and a letter of no objection has been issued. (Food Directorate Guideline No. 9, "Guideline Concerning the Safety and Physiological Effects of Novel Fibre Sources and Food Products Containing Them", revised November 1994, see http://www.hc-sc.gc.ca/food-aliment/ns-sc/nc-en/nq-qn/e_dietary_fibre.html)
- d) Dietary fibre from novel fibre sources may not be calculated and declared in the Nutrition Facts table, regardless of their status in "Regular Foods" unless proof of efficacy as dietary fibre in the context of the meal replacement has been shown through clinical testing to the satisfaction of Health Products and Food Branch and a letter of no objection has been issued. (Policy Respecting Dietary Fibre in Meal Replacements, Health Products and Food Branch, September 1993.)
- e) Specifications for standard inulin from chicory root (dwb): Appearance: white powder; Total fiber: 90% up to >98% (AOAC 997.08 or AOAC 999.03 method); Sugars: 5-11%; Max 2% if desugared; Degree of polymerization (DP) range: 2-60 (2-44 for late harvest); Average DP: 7-14; Molecules with DP < 10: 30-36%, up to 59% for late harvest; Molecules with DP < 20: 63-71% (up to 88% for late harvest); Molecules with DP = 20: 29-37% (min 12% for late harvest).
- f) Psyllium seed husk manufacture: Mechanical process (if fumigated, it should be done in compliance with Division 15 FDR; Purity: $\geq 95\%$; Total fiber: $\geq 80\%$; Protein: $\leq 3\%$; Light extraneous matter: $\leq 4.5\%$; Heavy extraneous matter: $\leq 0.5\%$; Combined extraneous matter: $\leq 4.9\%$; Fiber analysis using method of Lee et al., 1995 (Determination of soluble and insoluble dietary fibre in psyllium-containing cereal products, J AOAC Int, 78(3), 724-729, 1995).
- Recommended warning statements on label** - For psyllium-containing products: "Psyllium may cause allergic reaction in some individuals"; For psyllium as fiber supplement: "Avoid inhalation"; For products containing psyllium carry-over: "May contain psyllium"; For products containing dry or incompletely hydrated psyllium husk, in *Directions for Use* section, indicate necessity to consume the product with enough fluid in order to avoid throat obstruction.

Dietary Fibre Analysis

The amount of total dietary fibre may be determined by one of the following analytical methods; by appropriate methods found in the most recent edition of Official Methods of Analysis of AOAC International (see www.aoac.org); or by equivalent methods:

- a) Mongeau, R. and R. Brassard, *Enzymatic gravimetric determination in foods of dietary fibre as the sum of insoluble and soluble fibre fractions: summary of collaborative study*. JAOAC Int. 76:923-925, 1993. (AOAC method #992.16. A detailed version is available from Health Products and Food Branch, Health Canada, under the following identification: HPB-FC-12.)
- b) Prosky, L., Asp, N-G, Furda, I., DeVries, J.W., Schweizer, T.F. and B.F. Harland, *Determination of total dietary fibre in foods and food products: collaborative study*. JAOAC 68, 677(1985); 69, 259(1986). (AOAC method #985.29. The method of Prosky *et al.* will overestimate the fibre content of dried legumes other than soybeans, unless the samples are analysed uncooked or after autoclaving.)
- c) Englyst, H., M.E. Quigley, G.J. Hudson and J.H. Cummings, *Determination of dietary fibre as non-starch polysaccharides by gas-liquid chromatography*. Analyst 117:1707-1714, 1992. (This method plus permanganate lignin produces results comparable to methods a) and b) although in some cases the results are lower in spite of the permanganate lignin addition.)

6.8.2 Sugars

“Sugars” means all monosaccharides and disaccharides [B.01.001].

6.8.3 Sugar Alcohols

Sugar alcohols include isomalt, lactitol, maltitol, maltitol syrup, mannitol, sorbitol, sorbitol syrup, xylitol and erythritol. Declarations of sugar alcohol content should not include the amount of water present in maltitol syrup and sorbitol syrup.

6.8.4 Starch

The declaration for starch does not include dietary fibre. Starch may be analysed directly, or calculated by difference. If analysed directly, the carbohydrate components may not necessarily add up to 100%.

6.9 Protein

The protein rating of a food is based on the protein content in a Reasonable Daily Intake of that food as per Schedule K in Part D of the *Food and Drug Regulations*. (Also see Table 6-4 and 6.3.1 earlier in this chapter.)

Protein Rating is calculated by multiplying the **quantity** of protein present in a Reasonable Daily Intake of the food by the **quality** of the protein, which is the Protein Efficiency Ratio (PER) of the food.

$$\text{Protein Rating} = \text{Protein in a Reasonable Daily Intake} \times \text{Protein Efficiency Ratio (PER)}$$

Established PER's are listed in Table 6-13. Those not already established must be determined through rat feeding studies.

6.9.1 Calculating Protein Ratings

Example – Calculating the Protein Rating of White Bread

% Protein = 8.4

Reasonable Daily Intake = 150 g (5 slices)

Protein in a Reasonable Daily Intake = $0.084 \times 150 \text{ g} = 12.6 \text{ g}$

PER = 1.0

Protein Rating = $12.6 \times 1.0 = 12.6$

Example – Calculating the Protein Rating of Whole Egg

% Protein = 12.8

Reasonable Daily Intake = 100 g (2 eggs)

Protein in a Reasonable Daily Intake = $0.128 \times 100 \text{ g} = 12.8$

PER = 3.1

Protein Rating = $12.8 \times 3.1 = 39.68$

Protein Efficiency Ratios
Table 6-13

Food	Protein Efficiency Ratio (PER) ^{1,2}
Almonds	0.4
Barley	1.7
Beans, navy (dry)	1.2
Beef or veal, muscle	2.7
Beef salami	2.6
Beef stew	1.8
Bologna	2.1
Bread, white	1
Bulgur wheat	1.4
Casein	2.5
Cheese, cheddar	2.5
Chicken frankfurters	2.1
Chick peas, cooked	1.6
Corn, whole	1.4
Dried whey	2.6
Egg white	3
Egg, whole	3.1
Fish (see also tuna)	2.7
Gelatin or hydrolysed collagen	0
Kidney beans	1.1
Kidney, beef	2.7
Lentils, cooked	0.3
Liver, beef	2.7
Macaroni & cheese	2.1

Food	Protein Efficiency Ratio (PER) ^{1,2}
Milk	2.5
Muscle Meats (bison, lamb, etc)	2.7
Oats, rolled	1.8
Pea flour	1.2
Peanuts	1.7
Pinto beans	0.5
Pork, ham	2.7
Pork, tenderloin	2.7
Poultry	2.7
Rice	1.5
Rice-wheat gluten	0.2
Rye	1.3
Sausage	1.7
Shellfish	2.7
Soybeans, heated	2.3
Soy protein	2
Sunflower seed	1.2
Wheat, whole	0.8
White flour	0.7
Wieners	2.1

- Notes:
1. The official method for determining the protein efficiency ratio is from Health Canada's Health Protection Branch Method FO-1, October 15, 1981.
 2. Revised as per January 24, 1996 Health Canada, Nutrition Evaluation Division document, "Guidance for Protein Quality Evaluation of Foods".

6.10 Vitamins and Mineral Nutrients

Declarations of vitamins and mineral nutrients in the Nutrition Facts table are based on the combined total of both the naturally occurring nutrient content and any added nutrient content of a food. Vitamins and mineral nutrients are declared as percentages of the Daily Value per serving of stated size.

Only those vitamins and mineral nutrients which are included in Tables 6-1 and 6-2 of this chapter are permitted to be included in the Nutrition Facts table.

6.10.1 Vitamin A

Vitamin A is measured using Retinol Equivalents (RE). The contribution of both retinol and beta-carotene is used to determine the total vitamin A content of a specific food.

Vitamin A can be calculated from its content of retinol and beta-carotene and its derivatives, based on the following formula:

$$\text{total vitamin A (RE)} = \mu\text{g of retinol} + (\mu\text{g of beta-carotene} \div 6)$$

International Units (IU) were formerly used to express the vitamin A content of a food. To convert International Units (IU) of vitamin A into Retinol Equivalents, the following formulae are used:

$$\text{IU retinol} \div 3.33 = \text{RE}$$

$$\text{IU beta-carotene} \div 10 = \text{RE}$$

The following table may be used to convert IU of retinol and IU of beta-carotene to RE

**Conversion Table for IU of Retinol and IU of Beta-carotene to RE
Table 6-14**

Conversion Table for IU of Retinol and IU of Beta-carotene to RE		
IU of retinol	=	RE = IU of beta-carotene
5.010015020e+59		1.53045608e+53
		1.50300450601e+73

**Conversion Table for RE to % Daily Value (DV) for Vitamin A
Table 6-15**

Conversion Table for RE to % DV for Vitamin A		
RE	% DV ≥ 2 years of age*	% DV < 2 years of age**
1.530456076e+53	2.44681010102e+34	4.81015202525e+37

* Rounding rules have been applied to these figures. The Recommended Daily Intake of vitamin A for persons of two years of age and older is 1000 RE.

** Rounding rules have been applied to these figures. The Recommended Daily Intake of vitamin A for persons less than two years of age is 400 RE.

6.10.2 Vitamin D

Vitamin D is measured in micrograms (μg). It was formerly expressed in International Units (IU).

The amount of vitamin D may be calculated based on the following relationship:

$$1 \mu\text{g of either ergocalciferol (vitamin D}_2\text{) or cholecalciferol (vitamin D}_3\text{)} = 40 \text{ IU vitamin D}$$

The following table contains IU of vitamin D converted to μg , along with a calculation of the % Daily Value of vitamin D for adults and children.

Conversion Table for Vitamin D
Table 6-16

Conversion Table for Vitamin D			
IU	μg	% DV ≥ 2 years of age*	% DV < 2 years of age**
4.10e+21	0.10	2	2
	0.25	6	2
	0.50	10	6
	0.75	15	8
	1.00	20	10
	1.25	25	15
	1.50	30	15
	1.75	35	20
	2.00	40	20
	2.25	45	25
	2.50	50	25

* Rounding rules have been applied to these figures. The Recommended Daily Intake of vitamin D for persons two years of age or older is 5 μg .

** Rounding rules have been applied to these figures. The Recommended Daily Intake of vitamin D for persons less than two years of age is 10 μg .

6.10.3 Vitamin E

The amount of vitamin E is based on the content of d-alpha-tocopherol expressed in milligrams. Alpha-tocopherol occurs naturally (*d*-alpha tocopherol or *RRR*-alpha tocopherol¹) or can be added as the synthetic form (*dl*-alpha-tocopherol or *all racemic* alpha-tocopherol²). In addition, esterified forms (acetates, succinates, of alpha-tocopherol) are used to increase the stability of the vitamin.

Vitamin E (mg) is calculated on the basis of the following:

- 1 mg *d*-alpha-tocopherol = 1 mg Vitamin E
- 1 mg *dl*-alpha-tocopherol = 0.74 mg Vitamin E

Vitamin E was formerly expressed in International Units (IU). IUs are still used in D.01.010 and D.01.011 of the *Food and Drug Regulations*, controlling the level of Vitamin E that may be added to foods. IUs are calculated on the basis of the following:

$$1 \text{ IU Vitamin E} = 0.67 \text{ mg Vitamin E}$$

The following table gives conversions of IU of vitamin E converted to mg, along with a calculation of the % of the Daily Value of vitamin E for adults and children.

¹ *d*-alpha-tocopherol = *RRR* - α -tocopherol = natural vitamin E

² *dl*-alpha-tocopherol = *all rac*-(racemic) α -tocopherol = synthetic vitamin E

Conversion Table for Vitamin E
Table 6-17

Conversion Table for Vitamin E			
IU	mg	% Daily Value (DV) ≥ 2 years of age*	% Daily Value (DV) < 2 years of age**
0.25	.17	2	6.10203540607e+37
0.5	.34	4	
1.0	.67	6	
1.5	1.0	10	
2.0	1.3	15	
2.5	1.7	15	
3.0	2.0	20	
3.5	2.3	25	
4.0	2.7	25	
4.5	3.0	30	
5.0	3.4	35	
5.5	3.7	35	
6.0	4.0	40	
6.5	4.4	45	
7.0	4.7	45	
7.5	5.0	50	

* Rounding rules have been applied to these figures. The Recommended Daily Intake of vitamin E for persons of two years of age or older is 10 mg.

** Rounding rules have been applied to these figures. The Recommended Daily Intake of vitamin E for persons less than two years of age is 3 mg.

6.10.4 Vitamin C

The amount of vitamin C is based on the content of L-ascorbic acid and L-dehydroascorbic acid and their derivatives, calculated in milligram equivalents of L-ascorbic acid and expressed in milligrams.

6.10.5 Thiamine

The amount of thiamine and its derivatives is based on the content of thiamine expressed in milligrams.

6.10.6 Riboflavin

The amount of riboflavin and its derivatives is based on the content of riboflavin expressed in milligrams.

6.10.7 Niacin

Although previously expressed in milligrams (mg), niacin is now determined in Niacin Equivalents (NE). The conversion formula is as follows:

$$\text{NE} = \text{mg niacin and/or nicotinic acid} + \text{mg tryptophan} \div 60$$

The content of tryptophan in a food can be estimated if the protein content of the food is known. Tryptophan constitutes 1.5 percent of egg protein, 1.3 percent of protein from milk, meat, poultry or fish, and 1.1 percent of the protein from mixed and other sources.

Calculation Example – % of the RDI of niacin in a mixed protein source

A 60 g serving of food contains 4.26 mg of niacin and 7.5 g of protein from a mixed source:

- NE from niacin alone = 4.26 NE
- Calculate the amount of tryptophan (which is 1.1% of the protein)
 $1.1\% \times 7.5 \text{ g protein} = 0.082 \text{ g tryptophan} = 82 \text{ mg}$
- Using the conversion formula above, divide mg of tryptophan by 60
 $\frac{82 \text{ mg}}{60 \text{ mg}} = 1.36 \text{ NE}$
- Add niacin equivalents from the niacin and the tryptophan
 $4.26 \text{ NE} + 1.36 \text{ NE} = 5.62 \text{ NE}$
- Calculate the % of the Recommended Daily Intake of niacin (adults = 23 NE)
 $\frac{5.62 \text{ NE}}{23 \text{ NE}} \times 100\% = 24\% \text{ RDI}$
- Round the % of the Recommended Daily Intake as per the table to B.01.401 to arrive at the % Daily Value for declaration in the Nutrition Facts table
 $24\% \text{ RDI} = 25\% \text{ Daily Value (rounded)}$

6.10.8 Vitamin B₆

The amount of vitamin B₆ is based on the content of pyridoxine, pyridoxal and pyridoxamine and their derivatives, calculated in milligram equivalents of pyridoxine and expressed as milligrams.

6.10.9 Folacin or Folate

The amount of folacin or folate is based on the content of folic acid (pteroylmonoglutamic acid) and related compounds exhibiting the biological activity of folic acid, calculated in microgram equivalents of folic acid and expressed in micrograms.

The terminology required to be used in the label declaration is “Folate” [item 14(h) of column 2 of the table to B.01.402].

6.10.10 Vitamin B₁₂

The amount of vitamin B₁₂ is based on the content of cyanocobalamin and related compounds exhibiting the biological activity of cyanocobalamin, calculated in microgram equivalents of cyanocobalamin and expressed in micrograms.

6.10.11 Pantothenic Acid or Pantothenate

The amount of pantothenic acid or pantothenate is based on the content of *d*-pantothenic acid and expressed in milligrams. Although pantothenate is also known by other names, e.g., vitamin B₅, it must only be declared as “Pantothenate” or “Pantothenic Acid” [item 14(k) of the table to B.01.402].

6.11 Compliance Test to Assess the Accuracy of Nutrient Values (for Nutrition Labelling, Nutrient Content Claims and Health Claims)

See the following Web site for the document *Nutrition Labelling Compliance Test: Nutrition Labelling, Nutrient Content Claims and Health Claims: CFIA Compliance Test to Assess the Accuracy of Nutrient Values* :

www.inspection.gc.ca/english/fssa/labeti/nutricon/nutricone.shtml

