

CALCULATION METHODS FOR CREDITING GRAINS

Grains must be whole grain-rich (WGR) to meet the meal patterns for the National School Lunch Program (NSLP) and School Breakfast Program (SBP). WGR products contain at least 50 percent whole grains, any other grain ingredients are enriched, and the combined weight of all noncreditable grains cannot exceed 3.99 grams for groups A-G (baked goods) or 6.99 grams for groups H (cereal grains) and I (ready-to-eat breakfast cereals) of the USDA's ounce equivalents chart, *Whole Grain-rich Ounce Equivalents for School Nutrition Programs*. For more information, see the Connecticut State Department of Education's (CSDE) handout, *Criteria for Whole Grain-rich Foods*.

CHOOSING A CALCULATION METHOD

Menu planners have two options for calculating the contribution of grain products toward the USDA meal patterns. Method 1 uses the weights or volumes in the USDA's ounce equivalents chart and method 2 uses the total weight of creditable grains (whole and enriched) in the product. Menu planners can choose to use either calculation method but must document which method is used for each product. This information will be reviewed by the CSDE during the administrative review of the school food authority's (SFA) school nutrition programs.

Menu planners must use method 2 if any of the following criteria apply.

- The manufacturer claims that a product can provide the minimum creditable grains per portion (16 grams for groups A-G or 28 grams for groups H and I) using a serving size that is less than the weights given in the USDA's ounce equivalents chart.
- A product does not fit into one of the nine groups of the USDA's ounce equivalents chart.
- A product is made from scratch on site and the menu planner chooses to calculate the serving size based on grams of creditable grains instead of using ounce equivalents.



The USDA does not require schools to use one method for all grain menu items. Menu planners can choose different methods for evaluating different products. The SFA must maintain documentation that shows how the menu planner determined the crediting information for all grains on the menu. For method 2, menu planners must obtain this information from the manufacturer's product formulation statement (PFS) for all commercial grain products served as part of reimbursable school meals.

When menu planners choose a calculation method for a specific product, the same calculation method must be used each time that same product is on the menu for that grade group. For example, if the menu planner uses method 2 to determine the crediting of a whole-grain bagel at the high school, that same bagel on any high school menu must always be credited using method 2. However, the menu planner can choose to use a different calculation method for the same bagel at middle and elementary schools.

The CSDE strongly recommends choosing one calculation method to be consistent in crediting grain products. This will greatly simplify the SFA's menu planning and documenting compliance with the meal pattern requirements for grains.

SFAs are not required to use these calculation methods if the product has a Child Nutrition (CN) label or the manufacturer provides a PFS indicating the amount of creditable and noncreditable grains provided in one serving. With a CN label or PFS, menu planners can credit the product based on the amount of grains specified by the appropriate documentation. Menu planners should verify the accuracy of any PFS prior to including grain items in reimbursable meals. Schools must keep this documentation on file to verify meal pattern compliance for auditing purposes. For more information on reviewing CN labels and PFS, see the CSDE's [Crediting Foods](#) Web page and handouts, [Child Nutrition \(CN\) Labeling Program](#) and [Product Formulation Statements](#).

The serving size for grains is determined by rounding down all amounts to the nearest $\frac{1}{4}$ ounce equivalent. Menu planners must calculate the total amount of grains before rounding down to the nearest quarter. For example, if a sandwich recipe contains two 0.9-ounce slices of WGR bread, the total amount is 1.8 ounce equivalents, which rounds down to 1.75 ounce equivalents.

CALCULATING GRAINS CONTRIBUTION OF GROUPS A-G (BAKED GOODS)

Schools must use the USDA's ounce equivalents chart to determine serving sizes based on weight. Grain products in groups A-G (baked goods) require 16 grams of creditable grain ingredients (whole or enriched) to credit as 1 ounce equivalent. Menu planners have two options for calculating the ounce equivalents of baked goods.

- **Method 1 – Weight (Ounce Equivalents):** Divide the serving size of the product by the weight listed in the corresponding group (A-G), then round down to the nearest quarter. If the weight is listed in ounces, divide by ounces. If the weight is listed in grams, divide by grams. This method can only be used if all grains in the product are creditable (whole or enriched) and the combined weight of all noncreditable grains does not exceed 3.99 grams per serving.
- **Method 2 – Creditable Grains:** Divide the total weight (grams) of enriched and whole grains in the product by 16 grams, then round down to the nearest quarter. If the weight is only listed in ounces, multiply by 28.35 to convert to grams. This method requires a PFS from the manufacturer for commercial products and a standardized recipe for school-made products. The combined weight of all noncreditable grains cannot exceed 3.99 grams per serving.

Menu planners can use either calculation method, but some restrictions apply. For more information, see “[Choosing a Calculation Method](#)” on page 1. For a list of noncreditable grains, see the CSDE's handout, [Criteria for Whole Grain-rich Foods](#).

School-made Foods (Groups A-G)

For grain items in groups A-G that are prepared on site from scratch, menu planners must determine the amount of creditable grains per serving by adding the total weight of all creditable grain ingredients (whole and enriched) in the standardized recipe and dividing by the number of servings. If weights are listed in pounds or ounces, they must first be converted to grams. To convert to grams, multiply pounds by 453.6 and ounces by 28.35. If the creditable grains are listed by volume instead of weight, they must first be converted to weight (grams). For more information, see the CSDE's [Menu Planning Guide for School Meals](#).

CALCULATION METHODS FOR CREDITING GRAINS, continued

Commercial Products (Groups A-G)

To determine the amount of creditable grains for commercial products in groups A-G, menu planners must obtain a PFS from the manufacturer stating the gram weight or percentage of all creditable grains in one defined portion, and that the grains being counted toward the stated percentage are whole grain or enriched. Noncreditable grains such as bran, germ and unenriched flour should not be included in the weight or percentage given in the PFS. If the manufacturer will not supply the required documentation, the product cannot be used to meet the grains component.

The chart below shows how to use the two calculation methods to determine the serving size (ounce equivalents) for a product in group C. For this product, each method results in a different serving size. Menu planners can choose to use either method but must document which one is used for each product. This information will be reviewed by the CSDE during the administrative review of the SFA's school nutrition programs.



Table 2-23. Sample Calculation of Creditable Grains for Group C Product

Table 2-23. Sample Calculation of Creditable Grains for Group C Product	
Calculation Method *	Grains Contribution
MINI WHOLE-WHEAT PANCAKES (GROUP C) Serving size (5 pancakes): 1.75 ounces Whole-wheat flour: 16 grams Enriched flour: 14 grams Noncreditable Grains: 0 grams	
<p>METHOD 1 – WEIGHT (OUNCE EQUIVALENTS) Divide the serving size of the product by the weight listed in the corresponding group (A-G) of the USDA's ounce equivalents chart, then round down to the nearest quarter. If the weight is listed in ounces, divide by ounces. If the weight is listed in grams, divide by grams.</p> <p><i>This method can only be used if all grains in the product are creditable (whole or enriched) and the combined weight of all noncreditable grains does not exceed 3.99 grams.</i></p>	<p>Pancakes belong in group C (1 ounce equivalent equals 1.2 ounces):</p> <p style="margin-left: 20px;">1 oz eq = 34 grams or 1.2 ounces $\frac{3}{4}$ oz eq = 26 grams or 0.9 ounce $\frac{1}{2}$ oz eq = 17 grams or 0.6 ounce $\frac{1}{4}$ oz eq = 9 grams or 0.3 ounce</p> <p>The product's serving size of 1.75 ounces divided by the required group C weight of 1.2 ounces equals 1.46 ounce equivalents, which rounds down to 1.25 ounce equivalents of grains.</p> <p>GRAINS CONTRIBUTION: 1.25 ounce equivalents</p>
<p>METHOD 2 – CREDITABLE GRAINS Divide the total weight (grams) of enriched and whole grains in the product by 16 grams, then round down to the nearest quarter.</p> <p><i>This method requires a PFS from the manufacturer for commercial products and a standardized recipe for school-made products. The combined weight of all noncreditable grains cannot exceed 3.99 grams.</i></p>	<p>The total weight of creditable grains in one serving is 30 grams (16 grams of whole grains plus 14 grams of enriched grains):</p> <p style="margin-left: 20px;">30 grams divided by 16 grams equals 1.875 ounce equivalents, which rounds down to 1.75 ounce equivalents of grains.</p> <p>GRAINS CONTRIBUTION: 1.75 ounce equivalents</p>
<p>* Calculations use the USDA ounce equivalents chart, <i>Whole Grain-rich Ounce Equivalents for School Nutrition Programs</i>, which credits grains in groups A-G based on 16 grams per ounce equivalent. Menu planners must use the original product weight (either ounces or grams) for all calculations. If the product label lists both ounces and grams, menu planners can choose to use either one.</p>	

CALCULATING GRAINS CONTRIBUTION OF GROUPS H-I (CEREALS)

Grain products in groups H and I of the USDA's ounce equivalents chart credit differently from grain products in groups A-G. Grain products in groups H and I require 28 grams of creditable grain ingredients (whole or enriched) to credit as 1 ounce equivalent. Menu planners must offer either the volume or weight listed to credit as 1 ounce equivalent.

- **Group H:** Cereal grains in group H are generally served cooked and water is added in preparation. They credit based on the cooked volume equivalent, e.g., ½ cup of pasta, rice, or cereal grains such as oatmeal and quinoa credit as 1 ounce equivalent.
- **Group I:** Ready-to-eat breakfast cereals in group I require 28 grams or 1 ounce of product to credit as 1 ounce equivalent. The ounce equivalent volumes are 1 cup of flakes or rounds, 1 ¼ cups of puffed cereal, and ¼ cup of granola. Menu planners can credit breakfast cereals based on either volume (cups) or weight (grams). If the appropriate volume of cereal weighs less than 28 grams, it credits as 1 ounce equivalent. For example, 1 cup of whole-grain cereal flakes that weighs 26 grams credits as 1 ounce equivalent of grains.



Menu planners have two options for calculating the ounce equivalents of grain products in groups H and I.

- **Method 1 – Weight (Ounce Equivalents):** Divide the serving size of the product by the weight listed in the corresponding group (H or I), then round down to the nearest quarter. If the weight is listed in ounces, divide by ounces. If the weight is listed in grams, divide by grams. This method can only be used if all grains in the product are creditable and the combined weight of all noncreditable grains does not exceed 6.99 grams per serving.
- **Method 2 – Creditable Grains:** Divide the total weight (grams) of enriched and whole grains in the product by 28 grams, then round down to the nearest quarter. Groups H and I are not typically credited using creditable grains, but menu planners can choose to use this method. However, volume or weight (method 1) is preferred. This method requires a manufacturer's PFS for commercial products and a standardized recipe for school-made products. The combined weight of all noncreditable grains cannot exceed 6.99 grams per serving.

Menu planners can use either calculation method, but some restrictions apply. For more information, see “[Choosing a Calculation Method](#)” on page 1. For a list of noncreditable grains, see the CSDE's handout, *Criteria for Whole Grain-rich Foods*.

School-made Foods (Groups H-I)

For grain items in groups H and I that are prepared on site from scratch, the amount of creditable grains per serving is determined by adding the total weight of all creditable grain ingredients (whole and enriched) in the standardized recipe and dividing by the number of servings. If weights are listed in pounds or ounces, they must first be converted to grams. To convert to grams, multiply pounds by 453.6 and ounces by 28.35. If the creditable grains are listed by volume instead of weight, they must first be converted to weight (grams).

CALCULATION METHODS FOR CREDITING GRAINS, continued

Commercial Products (Groups H and I)

To determine the creditable grains of commercial products in groups H and I, menu planners must obtain a PFS from the manufacturer stating:

- the gram weight or percentage of all creditable grains in one defined portion; and
- that the grains being counted toward the stated percentage are whole grain or enriched. Noncreditable grains such as bran, germ, and unenriched flour should not be included in the weight or percentage given in the manufacturer’s documentation.

If the manufacturer will not supply the required documentation, schools cannot use the product to meet the grains component.

The chart below shows how to use each method to determine the serving size (ounce equivalents) for a product in group H. For this product, each method results in the same serving size. Menu planners can choose to use either method but must document which one is used for each product. This information will be reviewed by the CSDE during the administrative review of the SFA’s school nutrition programs.



Table 2-24. Sample Calculation of Creditable Grains for Group H Product

Table 2-24. Sample Calculation of Creditable Grains for Group H Product	
WHOLE-GRAIN RICH PASTA (GROUP H) Serving size: 32 grams (½ cup cooked) Whole-wheat flour: 15 grams Enriched flour: 14 grams Noncreditable Grains: 0 grams	
Calculation Method *	Grains Contribution
<p>METHOD 1 (OUNCE EQUIVALENTS)</p> <p>Divide the serving size of the product by the corresponding weight listed in group H or I of the USDA’s ounce equivalents chart, then round down to the nearest quarter. If the weight is listed in ounces, divide by ounces. If the weight is listed in grams, divide by grams.</p> <p><i>This method can only be used if all grains in the product are creditable (whole or enriched) and the combined weight of all noncreditable grains does not exceed 6.99 grams per serving.</i></p>	<p>Pasta belongs in group H:</p> <p style="padding-left: 20px;">1 oz eq = ½ cup cooked or 1 ounce (28 grams) dry</p> <p>The serving size of 32 grams of dry pasta divided by the required group H weight of 28 grams equals 1.14 ounce equivalents, which rounds down to 1 ounce equivalent.</p> <p>GRAINS CONTRIBUTION: 1 ounce equivalent</p>
<p>METHOD 2 (CREDITABLE GRAINS)</p> <p>Divide the total weight (grams) of enriched and whole grains in the product by 28 grams, then round down to the nearest quarter. Groups H and I are not typically credited using creditable grains, but menu planners can choose to use this method.</p> <p><i>This method requires a PFS from the manufacturer for commercial products and a standardized recipe for school-made products. The combined weight of all noncreditable grains cannot exceed 6.99 grams per serving.</i></p>	<p>The total weight of creditable grains in one serving is 29 grams (15 grams of whole grains plus 14 grams of enriched grains):</p> <p style="padding-left: 20px;">29 grams divided by 28 grams equals 1.04 ounce equivalents, which rounds down to 1 ounce equivalent.</p> <p>GRAINS CONTRIBUTION: 1 ounce equivalent</p>
<p>* Calculations use the USDA ounce equivalents chart, <i>Whole Grain-rich Ounce Equivalents for School Nutrition Programs</i>, which credits grains in groups H and I based on 28 grams per ounce equivalent. Menu planners must use the original product weight (either ounces or grams) for all calculations. If the product label lists both ounces and grams, menu planners can choose to use either one.</p>	

RESOURCES

Child Nutrition (CN) Labeling Program:
www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/cnlabel.pdf

Crediting Enriched Grains:
www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/enrichedgrains.pdf

Crediting Foods (CSDE Web Page):
www.sde.ct.gov/sde/cwp/view.asp?a=2626&q=333796

Criteria for Whole Grain-rich Foods:
www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/wgrcriteria.pdf

Food Buying Guide for School Meal Programs:
www.fns.usda.gov/tn/food-buying-guide-school-meal-programs

Identifying Whole Grains:
www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/identifyingwg.pdf

Menu Planning Guide for School Meals:
www.sde.ct.gov/sde/cwp/view.asp?a=2626&q=334320

Product Formulation Statements:
www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/pfs.pdf

USDA Product Formulation Statement for Documenting Grains in School Meals Required Beginning SY 2013-2014:
www.fns.usda.gov/cnd/cnlabeling/PFSgrains13-14.pdf

Whole Grain Resource for the National School Lunch and School Breakfast Programs:
www.fns.usda.gov/sites/default/files/wholegrainresource.pdf

Whole Grain-rich Ounce Equivalents for School Nutrition Programs:
www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/grainsozeq.pdf



For more information, see the Connecticut State Department of Education's (CSDE) [Menu Planning Guide for School Meals](#) and [Meal Patterns](#) and [Crediting Foods](#) Web pages or contact the [school nutrition programs](#) staff in the CSDE Bureau of Health/Nutrition, Family Services and Adult Education, 25 Industrial Park Road, Middletown, CT 06457.

This handout is available at www.sde.ct.gov/sde/lib/sde/pdf/deps/nutrition/nslp/crediting/graincalc.pdf.

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- (1) mail: U.S. Department of Agriculture
Office of the Assistant Secretary for Civil Rights
1400 Independence Avenue, SW
Washington, D.C. 20250-9410;
- (2) fax: (202) 690-7442; or
- (3) email: program.intake@usda.gov.

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