Calculation Methods for Grain Servings in the Child and Adult Care Food Program (CACFP)

This guidance applies through September 30, 2019, to meals and snacks served in child care centers, family day care homes, emergency shelters, at-risk afterschool care centers, and adult day care centers that participate in the U.S. Department of Agriculture’s (USDA) CACFP. Effective October 1, 2019, the grains component changes to ounce equivalents. For more information, see the Connecticut State Department of Education’s (CSDE) handout, Whole Grain-rich Ounce Equivalents for the CACFP.

CACFP Crediting Criteria for Grains

To credit as the grains component in the CACFP meal patterns, grain products and recipes must contain a creditable grain (whole grain, enriched grain, bran, or germ) as the primary (greatest) ingredient by weight. Combination foods that contain a grain portion (such as pizza crust in pizza) must contain a creditable grain as the primary grain ingredient by weight, i.e., the greatest ingredient in the grain portion. Ready-to-eat (RTE) breakfast cereals (such as puffed rice cereals, whole grain rounds or flakes, and granola) and instant and regular hot breakfast cereals (such as oatmeal, cream of wheat, and farina) cannot contain more than 6 grams of sugars per dry ounce; and the first ingredient must be a creditable grain or the cereal must be fortified. For more information, see the CSDE’s handouts, How to Identify Creditable Grains in the CACFP, Crediting Whole Grains in the CACFP, Crediting Enriched Grains in the CACFP, and Crediting Breakfast Cereals in the CACFP.

Grain-based desserts

Grain-based desserts cannot credit in the preschool meal patterns, even if they are WGR. Examples of grain-based desserts include brownies, cookies, cakes, cupcakes, coffee cakes, cinnamon streusel quick breads, pie crusts in sweet pies (e.g., apple, coconut, blueberry, and pecan), cinnamon rolls, doughnuts, cereal bars, granola bars, breakfast bars, sweet rolls, pastries, toaster pastries, sweet scones (e.g., blueberry, raisin, and orange cranberry), rice pudding, and sweet bread pudding.

Grain-based desserts do not include graham crackers, animal crackers, muffins, quick breads such as banana bread and zucchini bread (except for cinnamon streusel), cornbread, pancakes, waffles, French toast, savory scones (such as cheese and herb), and pie crusts in entrees such as quiche, meat pies, and chicken pot pie. For more information, see the USDA’s handout, Grain-Based Desserts in the CACFP.

As a best practice, the USDA encourages preschool menus to limit sweet crackers (graham crackers and animal crackers) because of their higher sugar content. The CSDE recommends not serving sweet crackers more than twice per week, between all preschool meals and snacks served to preschoolers.
CACFP Whole Grain-rich (WGR) Criteria

The CACFP meal patterns require at least one serving of whole grain-rich (WGR) grains per day. The USDA’s CACFP Best Practices recommends at least two servings of WGR grains per day. WGR foods include 100 percent whole grains (every grain ingredient is whole grain) and foods that contain a blend of whole (at least 50 percent) and enriched grains.

All WGR foods credit in the CACFP meal patterns, but not all creditable grain foods are WGR. The WGR requirement does not apply to the CACFP meal patterns for infants. For more information, see the CSDE’s handout, Whole Grain-rich Criteria for the CACFP, and USDA Memo CACFP 09-2018: Grain Requirements in the CACFP: Questions and Answers.

Options for Calculating Serving Size

Through September 30, 2019, the grains component is in servings. The amount of a food that provides one serving of the grains component varies because different types of foods contain different amounts of creditable grains. A serving is:

- less than a measured ounce for some grain foods such as pretzels, bread sticks, crackers, bagels, biscuits, bread, rolls, cereal grains;
- equal to a measured ounce for some grain foods such as RTE breakfast cereals; and
- more than a measured ounce for some grain foods such as muffins and pancakes.

CACFP facilities have two options for calculating the CACFP grain servings for commercial grain products and standardized recipes for foods made on site. Method 1 uses the appropriate weight (groups A-G) or volume (groups H-I) in the USDA’s grains serving size chart. Method 2 uses the weight (grams) of all creditable grains in one serving. The method used by the CACFP facility depends on several factors, such as the type of grain product, the grain ingredients, and whether the food is a commercial product or prepared on site by the CACFP facility.

CACFP facilities are not required to use either method if a product has a Child Nutrition (CN) label. CN-labeled products credit based on the stated crediting information for the grains component. Grain products (such as muffins, bagels, and rolls) are not eligible for CN labels, which are available only for main dish entrees that contribute to the meat/meat alternates component. However, CN-labeled products usually include crediting information for grains, vegetables, and fruits that are part of the product. For more information, see the CSDE’s handout, Using Child Nutrition (CN) Labels in the CACFP.

Note: CN-labeled products list the grains component in ounce equivalents, which are not required in the CACFP meal patterns until October 1, 2019. However, CACFP facilities may use CN-labeled products to document compliance with the CACFP WGR requirement, because an ounce equivalent of the grains component is slightly more than the current CACFP serving sizes. For more information, see the CSDE’s handout, Whole Grain-rich Criteria for the CACFP.
Method 1 – weights or volumes

Method 1 determines the CACFP grain servings for commercial grain products using the appropriate weight (groups A-G) or volume (groups H-I) in the USDA’s grains serving size chart. This chart groups foods based on the average grain content of similar products. Through September 30, 2019, the grains component requires ½ serving for ages 1-5; and 1 serving for ages 6-12, ages 6-18 in at-risk afterschool care centers, and adult day care center participants. The minimum creditable amount is ¼ serving. For information on the required serving sizes for groups A-I, see the CSDE’s handout, Serving Sizes for Grains in the CACFP.

- **Groups A-G (baked goods, excluding grain-based desserts):** Baked goods (such as crackers, breads, rolls, taco shells, muffins, waffles, and pancakes) require 14.75 grams of creditable grains to credit as one serving of the grains component and 7.38 grams of creditable grains to credit as ½ serving of the grains component.

- **Group H (cereal grains):** Cereal grains (such as amaranth, barley, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat) require ½ cup cooked or 25 grams dry to credit as one serving of the grains component and ¼ cup cooked or 13 grams (0.5 ounce) dry to credit as ½ serving of the grains component. Dry (uncooked) cereal grains used as an ingredient in a recipe credit the same as groups A-G (14.75 grams of creditable grains credit as one serving of the grains component). For guidance on the crediting and serving size requirements for cooked breakfast cereals, see the CSDE’s handout, Crediting Breakfast Cereals in the CACFP.

- **Group I (ready-to-eat (RTE) breakfast cereals):** RTE breakfast cereals require ¼ cup or ½ ounce (10 grams) for ages 1-2; ¼ cup or ½ ounce (14 grams) for ages 3-5; and ¼ cup or 1 ounce for ages 6-18, and adult day care center participants. If the appropriate volume of cereal weighs less than the weight equivalent, it still credits as one serving. For example, 1 cup of RTE breakfast cereal that weighs 26 grams credits as one serving of the grains component. For guidance on the crediting and serving size requirements for RTE breakfast cereals, see the CSDE’s handout, Crediting Breakfast Cereals in the CACFP.

Method 2 – creditable grains

Method 2 determines the CACFP grain servings for grain products and recipes by calculating the total weight (grams) of creditable grains per serving. A food must contain 14.75 grams of creditable grains to credit as 1 serving of the grains component and 7.38 grams of creditable grains to credit as ½ serving of the grains component.

- For **commercial products,** CACFP facilities must determine the weight of creditable grains from the manufacturer’s product formulation statement (PFS). The weight of creditable grains cannot be determined from the product’s Nutrition Facts label or packaging. For more information, see the CSDE’s handout, Using Product Formulation Statements in the CACFP.

- For **foods made on site,** CACFP facilities must determine the weight of creditable grains from the standardized recipe. For information on standardized recipes, see section 2 of the CSDE’s guides, Meal Pattern Requirements for CACFP Child Care Programs and Meal Pattern...
When Method 2 is Required

CACFP facilities must use method 2 for commercial products, and obtain a PFS from the manufacturer, when the situations below apply.

- **Creditable grain is not first ingredient but product contains multiple creditable grains:** CACFP facilities must use method 2 if a creditable grain is not the first ingredient (excluding water), but the product contains more than one creditable grain. CACFP facilities must obtain a PFS from the manufacturer to document that the combined weight of all creditable grains is more than the weight of the first ingredient (excluding water). For example, the yellow corn flour in the product below is a noncreditable grain because it is not whole grain or enriched. To credit in the CACFP meal patterns, the product’s PFS must document that the combined weight of the two whole grains (whole-wheat flour and rolled oats) is more than the weight of the yellow corn flour.

  Ingredients: Yellow corn flour, whole-wheat flour, sugar, rolled oats, wheat gluten.
  Contains 2% or less of each of the following: honey, salt, oat bran, yeast, molasses.

- **Product contains flour blend of whole and enriched grains:** CACFP facilities must use method 2 if a commercial product contains a flour blend of whole and enriched grains as the first ingredient (excluding water), such as “flour blend (whole-wheat flour, enriched flour),” and the CACFP facility counts the product toward the WGR requirement. A flour blend does not indicate if the whole grain is the greatest ingredient by weight. For example, if the flour blend is 40 percent of the product’s weight (25 percent whole-wheat flour and 15 percent enriched flour) and the first ingredient after the flour blend is sugar (30 percent of the product’s weight), the sugar weighs more than the whole-wheat flour.

  CACFP facilities must obtain a PFS from the manufacturer to document that the weight of the whole grain in a flour blend is more than the first ingredient (excluding water) listed after the flour blend. For example, the PFS for the product below must document that the whole-wheat flour in the flour blend weighs more than the brown sugar.

  Ingredients: Water, flour blend [whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid)], water, brown sugar, corn oil, dough conditioner (soybean oil, vegetable glycerides, soy flakes), yeast, salt, wheat gluten, enzyme.

Method 2 is not required if a product contains a flour blend of only whole grains, such as “flour blend (whole-wheat flour, whole-grain oats),” or if the CACFP facility does not count the product toward the WGR requirement. A product that lists a flour blend of creditable grains as the first ingredient (or lists water as the first ingredient and a flour blend as the second ingredient) credits as the grains component in the CACFP meal patterns.
• **Product is combination food:** CACFP facilities must use method 2 for commercial combination foods that contain a grain portion from groups A-I of the USDA’s grains serving size chart (effective through September 30, 2019), such as pizza crust in pizza, noodles in lasagna, and baked chicken coated with bread crumbs or crushed cereal flakes. SFAs must obtain a PFS from the manufacturer that documents the amount of creditable grains in the grain portion of the product.

• **Manufacturer claims higher credit:** CACFP facilities must use method 2 if the manufacturer claims that a commercial product can provide the minimum creditable grains using a serving that is less than the required weight or volume for that product’s group in the USDA’s grains serving size chart (effective through September 30, 2019). CACFP facilities must obtain a PFS that clarifies all credited ingredients and demonstrates how the product provides that credit according to the USDA’s regulations, guidance, or policy. For more information, see CSDE’s handouts, *Using Product Formulation Statements in the CACFP* and *Accepting Processed Product Documentation in the CACFP*.

• **Product not listed in USDA’s grains serving size chart:** CACFP facilities must use method 2 if a commercial product does not belong to one of the nine groups listed in the USDA’s grains serving size chart (effective through September 30, 2019). CACFP facilities must obtain a PFS from the manufacturer that documents the amount of creditable grains in one serving of the product.

For all situations described above, the manufacturer’s PFS must state:

- the gram weight or percentage of all creditable grains in one defined portion; and
- that the grains being counted toward the stated weight or percentage are creditable (whole, enriched, bran, and germ). The weight or percentage listed in the PFS cannot include noncreditable grains such as yellow corn flour, unenriched flour, oat fiber, and corn fiber and grain derivatives such as wheat starch and modified food starch. For information on noncreditable grains in the CACFP, see the CSDE’s handout, *Whole Grain-rich Criteria for the CACFP*.

CACFP facilities should verify the accuracy of the manufacturer’s PFS prior to including the grain product in reimbursable meals. CACFP facilities must maintain all crediting documentation on file. The CSDE will review this information during the Administrative Review of the CACFP. If the manufacturer will not supply the required documentation, CACFP facilities cannot use the product to credit as the grains component in CACFP meals and snacks.

**Grain Crediting Worksheets**

The CSDE’s crediting worksheets help menu planners evaluate grain-based foods for compliance with the CACFP crediting, WGR, and serving size requirements for the grains component. The child care worksheets are available in the “Documents/Forms” section of the CSDE’s Crediting Foods in CACFP Child Care Programs webpage. The adult day care center crediting worksheets are available in the “Documents/Forms” section of the CSDE’s Crediting Foods in CACFP Adult Day Care Centers webpage.
Sample Calculations for Commercial Products

Tables 1-4 show sample calculations using methods 1 and 2 to determine the CACFP grain serving size for commercial products through September 30, 2019. CACFP facilities should use the weight (ounces or grams) of one serving from the product’s Nutrition Facts label or manufacturer’s PFS. If the product lists ounces and grams, CACFP facilities may choose to use either one.

- **Groups A-G (baked goods, excluding grain-based desserts) for ages 1-5**: The CACFP meal patterns for ages 1-5 require ½ serving of the grains component, which equals 7.38 grams of creditable grains for groups A-G. Table 1 shows sample calculations for ages 1-5 using methods 1 and 2 for a commercial product in group C.

- **Groups A-G (baked goods, excluding grain-based desserts) for ages 6-18 and adult day care center participants**: The CACFP meal patterns for these ages require 1 serving of the grains component, which equals 14.75 grams of creditable grains for groups A-G. Table 2 shows sample calculations for ages 6-18 and adult day care center participants using methods 1 and 2 for a commercial product in group C.

- **Group H (cereal grains) for ages 1-5**: The CACFP meal patterns for ages 1-5 require ½ serving of the grains component, which equals 13 grams of creditable grains for group H. Table 3 shows sample calculations for ages 1-5 using methods 1 and 2 for a commercial product in group C. The serving size for group H is typically based on the cooked volume (¼ cup), but CACFP facilities may choose to determine the serving size by weight.

- **Groups H (cereal grains) for ages 6-18 and adult day care center participants**: The CACFP meal patterns for these ages require 1 serving of the grains component, which equals 25 grams of creditable grains for group H. Table 4 shows sample calculations for ages 6-18 and adult day care center participants using methods 1 and 2 for a commercial product in group H. The serving size for group H is typically based on the cooked volume (¼ cup), but CACFP facilities may choose to determine the serving size by weight.

A menu item must provide a minimum of ¼ serving of the grains component to credit toward the CACFP meal patterns. If the amount of the grains component is less than the full serving required by the CACFP meal patterns, the CACFP facility must serve additional grains to provide the full requirement for each age group.

CACFP facilities may use the CSDE’s worksheet, *Child Care Worksheet 1: Crediting Commercial Grains in the CACFP* to determine a commercial product’s compliance with the CACFP crediting and WGR requirements, and calculate the CACFP serving size. For more information, see “Crediting Worksheets for Grains” on page 5.
### Calculation Methods for Grain Servings in the CACFP

#### Table 1. Calculating CACFP grain servings for ages 1-5 for commercial products in groups A-G

<table>
<thead>
<tr>
<th>WGR mini whole-wheat pancakes ¹</th>
<th>Creditable grains per serving (from product’s PFS):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer’s serving size:</td>
<td>Whole-wheat flour: 16 grams</td>
</tr>
<tr>
<td>5 pancakes (49 grams)</td>
<td>Enriched flour: 14 grams</td>
</tr>
<tr>
<td>Group C (USDA’s grains serving size chart):</td>
<td>Noncreditable Grains: 0 grams</td>
</tr>
<tr>
<td>1 serving = 31 grams or 1.1 ounces</td>
<td></td>
</tr>
<tr>
<td>½ serving (ages 1-5) = 16 grams or 0.6 ounce</td>
<td></td>
</tr>
</tbody>
</table>

**Method 1 – weight**

1. List the weight (grams) of manufacturer’s serving size from the product’s Nutrition Facts label or PFS (1 ounce = 28.35 grams).

   1A. 49 grams per manufacturer’s serving

2. List the required weight for ½ grain serving for the product’s group (A-G) in the USDA’s grains serving size chart. ²

   1B. 16 grams per CACFP ½ grain serving

3. Determine the ½ grain servings in one serving of the product: Divide 1A by 1B.

   1C. 3.06 CACFP ½ grain servings per manufacturer’s serving

4. Round down the number in 1C to the nearest quarter (¼). For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.

   1D. 3 CACFP ½ grain servings per manufacturer’s serving (rounded) ³

**Method 2 – creditable grains ⁴**

1. List the total weight (grams) of whole and enriched grains in one serving from the product’s PFS (1 ounce = 28.35 grams).

   2A. 30 grams per manufacturer’s serving

   16 grams of whole-wheat flour + 14 grams of enriched flour = 30 grams of creditable grains.

2. Determine the ½ grain servings in one serving of the product: Divide 2A by 7.38 (7.38 grams of creditable grains = ½ grain serving).

   2B. 4.07 CACFP ½ grain servings per manufacturer’s serving

3. Round down the number in 2B to the nearest quarter (¼). For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.

   2C. 4 CACFP ½ grain servings per manufacturer’s serving (rounded) ³

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¹ This product is WGR because the whole-wheat flour (16 grams) weighs more than the enriched flour (14 grams), and the product does not contain any noncreditable grains. For more information, see the CSDE’s handout, *Whole Grain-rich Criteria for the CACFP.*

² Calculations use the appropriate product weight for groups A-G, which require 7.38 grams of creditable grains to provide ½ serving of the grains component (the minimum serving size for ages 1-5). For more information, see the CSDE’s handout, *Serving Sizes for Grains in the CACFP.*

³ Each method results in different grain servings for this product. For some products, each method results in the same grain servings. CACFP facilities may use either method 1 or 2, but must document how the crediting information was obtained. For more information, see “Choosing a Calculation Method” on page 11.

⁴ Method 2 requires a manufacturer’s PFS for commercial products and a standardized recipe for foods made on site by the CACFP facility. For more information, see the CSDE’s handouts, *Using Product Formulation Statements in the CACFP* and *Standardized Recipe Form for the CACFP.*
Table 2. Calculating CACFP grain servings for ages 6-18 and adult day care center participants for commercial products in group H

WGR mini whole-wheat pancakes

Manufacturer’s serving size:
5 pancakes (49 grams)

Group C (USDA’s grains serving size chart):
1 serving = 31 grams or 1.1 ounces
½ serving (ages 1-5) = 16 grams or 0.6 ounce

<table>
<thead>
<tr>
<th>Method 1 – weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. List the weight (grams) of manufacturer’s serving size from the product’s Nutrition Facts label or PFS (1 ounce = 28.35 grams).</td>
</tr>
<tr>
<td>1A 49 grams per manufacturer’s serving</td>
</tr>
<tr>
<td>2. List the required weight for 1 grain serving for the product’s group (A-G) in the USDA’s grains serving size chart.</td>
</tr>
<tr>
<td>1B 16 grams per CACFP grain serving</td>
</tr>
<tr>
<td>3. Determine the ½ grain servings in one serving of the product: Divide 1A by 1B.</td>
</tr>
<tr>
<td>1C 3.06 CACFP grain servings per manufacturer’s serving</td>
</tr>
<tr>
<td>4. Round down the number in 1C to the nearest quarter (¼). For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.</td>
</tr>
<tr>
<td>1D 3 CACFP grain servings per manufacturer’s serving (rounded)</td>
</tr>
</tbody>
</table>

Method 2 – creditable grains

1. List the total weight (grams) of whole and enriched grains in one serving from the product’s PFS (1 ounce = 28.35 grams).

   16 grams of whole-wheat flour + 14 grams of enriched flour = 30 grams of creditable grains.

   \[
   1A \quad 30 \text{ grams per manufacturer’s serving}
   \]

2. Determine the grain servings in one serving of the product: Divide 2A by 25 (25 grams of creditable grains = 1 grain serving).

   \[
   2B \quad 4.07 \text{ CACFP grain servings per manufacturer’s serving}
   \]

3. Round down the number in 2B to the nearest quarter (¼). For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.

   \[
   2C \quad 4 \text{ CACFP grain servings per manufacturer’s serving (rounded)}
   \]

This product is WGR because the whole-wheat flour (15 grams) weighs more than the enriched flour (14 grams), and the product does not contain any noncreditable grains. For more information, see the CSDE’s handout, Whole Grain-rich Criteria for the CACFP.

Calculations use the weight for group H, which requires ½ cup cooked or 25 grams dry to provide one serving of the grains component (the minimum serving size for ages 6-18 and adult day care center participants). For more information, see the CSDE’s handout, Serving Sizes for Grains in the CACFP. The serving size for group H is typically based on the cooked volume (½ cup), but CACFP facilities may choose to determine the serving size by weight.

Each method results in different grain servings for this product. For some products, each method results in the same grain servings. CACFP facilities may use either method 1 or 2, but must document how the crediting information was obtained. For more information, see “Choosing a Calculation Method” on page 11.

Method 2 requires a manufacturer’s PFS for commercial products and a standardized recipe for foods made on site by the CACFP facility. For more information, see the CSDE’s handouts, Using Product Formulation Statements in the CACFP and Standardized Recipe Form for the CACFP.
Choosing a Calculation Method

Calculation methods 1 and 2 may result in different grain servings for the same product, or may result in the same grain servings for a product. CACFP facilities may choose to use either method for evaluating different grain products, but must maintain documentation that shows how the crediting information was determined for each grain product on the menu.

When using method 2 for commercial products, CACFP facilities must obtain a PFS from the manufacturer that documents the weight of all creditable grains per serving. When using method 2 for foods made on site, CACFP facilities must have a standardized recipe that lists the weight of all creditable grains. If the recipe is not standardized and only lists grain ingredients in volume, the CACFP facility must calculate the weight equivalent (grams) of each grain ingredient. For more information, see “Calculation for Recipes Listing Volume of Grain Ingredients” on page 12.

When CACFP facilities choose a calculation method for a specific product, that same calculation method must be used each time that same product is on the menu for that same age group. For example, if the CACFP facility uses method 2 to determine the crediting of a whole-grain bagel for CACFP menus, that same bagel on any CACFP menu must always be credited using method 2.

The CSDE strongly recommends choosing one calculation method for consistent crediting. This simplifies menu planning and assists CACFP facilities with documenting compliance with the CACFP meal pattern requirements for the grains component.

Sample Calculations for Foods Made on Site

CACFP facilities must have a standardized recipe on file to document the meal pattern contribution of foods prepared on site, such as breads, rolls, muffins, pizza dough, and pancakes. CACFP facilities must determine the CACFP grain servings in one serving of the standardized recipe by using the appropriate weight or volume in the USDA’s grains serving size chart (method 1) or the weight of creditable grains per serving (method 2). The CSDE encourages CACFP facilities to use method 2 for grains made on site because it provides more accurate crediting information. For information on standardized recipes, see section 2 of the CSDE’s guides, Meal Pattern Requirements for CACFP Child Care Programs and Meal Pattern Requirements for CACFP Adult Day Care Centers, and the CSDE’s handout, Standardized Recipe Form for the CACFP.

CACFP facilities do not need to calculate the CACFP grain servings for foods prepared from the USDA’s recipes for Child Nutrition Programs. These standardized recipes specify meal pattern crediting information, including the ounce equivalents of the grains component. For links to the USDA’s recipes, see the CSDE’s Menu Planning for Child Nutrition Programs webpage. Note: Ounce equivalents are not required in the CACFP until October 1, 2019. However, CACFP facilities may use ounce equivalents prior to this date because an ounce equivalent of the grains component is slightly more than the current CACFP serving sizes. For more information, see the CSDE’s handout, Whole Grain-rich Ounce Equivalents for the CACFP.

Using method 1 (weights) for foods made on site

The weights in groups A-G of the USDA’s grains serving size chart can be used to determine the CACFP grain servings for foods made on site, if the recipe indicates the weight of the prepared
serving after cooking or baking. Since standardized recipes do not typically provide this information, CACFP facilities must calculate the average weight per serving by weighing at least four samples of the cooked product. For more information, see the CSDE’s handout, *Yield Study Data Form*.

**Using method 2 (creditable grains) for foods made on site**

Standardized recipes list measurements for grain ingredients in weight (pounds and ounces) and volume (e.g., cups and quarts). CACFP facilities must use the recipe’s weight measurements to determine the CACFP grain servings. For assistance with recipe calculations, such as converting fractions to decimals, review the Institute for Child Nutrition’s (ICN) *Basics at a Glance Portion Control Poster* and the decimal equivalents of fractions in the “Introduction” section of the USDA’s *Food Buying Guide for Child Nutrition Programs*.

- **Calculation for recipes listing weight of grain ingredients**: Table 5 shows how to use method 2 to calculate the CACFP grain servings for a standardized recipe that lists grain ingredients in weight (pounds and ounces). To credit as 1 serving of the grains component, a recipe serving must contain 14.75 grams of creditable grains. To credit as ½ serving of the grains component, a recipe serving must contain 7.38 grams of creditable grains.

  CACFP facilities may use the CSDE’s worksheet, *Child Care Worksheet 5: Crediting Quantity Recipes for Grains in the CACFP* to determine a standardized recipe’s compliance with the CACFP crediting and WGR requirements, and calculate the CACFP serving size. For more information, see “Crediting Worksheets for Grains” on page 5.

- **Calculation for recipes listing volume of grain ingredients**: Recipes that are not standardized usually list grain ingredients only in volume (e.g., cups and quarts) instead of weight (pounds and ounces). To determine the CACFP grain servings in the recipe, CACFP facilities must convert volume to weight (grams). SFAs can use any of the methods below to convert the cups of grain ingredients to grams.

  - Use the manufacturer’s serving size information on the Nutrition Facts label for the grain ingredient. For example, if the Nutrition Facts labels states that ¼ cup of enriched flour is 30 grams, then 1 cup weighs 120 grams.
  
  - Search the USDA’s *National Nutrient Database for Standard Reference* for grain ingredients, such as whole-wheat flour or yellow corn meal. Enter “1” in the field for the cup measurement and the database will provide the weight of 1 cup.

  - Use volume equivalent charts that list the weight of 1 cup of grain ingredients (see table 6).

  - Determine the average weight of 1 cup of the grain ingredient by measuring and weighing several samples. For more information, see the CSDE’s *Yield Study Form*.

  Table 7 shows how to use method 2 to calculate the CACFP grain servings for a non-standardized recipe that lists grain ingredients in volume (cups). A recipe serving must
contain 14.75 grams of creditable grains to credit as 1 serving of the grains component, and 7.38 grams of creditable grains to credit as ½ serving of the grains component. CACFP facilities may use the CSDE’s worksheet, *Child Care Worksheet 4: Crediting Family-size Recipes for Grains in the CACFP*, to determine a non-standardized recipe’s compliance with the CACFP crediting and WGR requirements, and calculate the CACFP serving size. For more information, see “Crediting Worksheets for Grains” on page 5.

### Table 5. Calculating CACFP grain servings for recipes listing ingredients in weight

<table>
<thead>
<tr>
<th>WGR standardized recipe for multi-grain bread ¹</th>
<th>Grain ingredients:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield: 100 servings</td>
<td>Whole-wheat flour: 8 ounces (0.5 pound)</td>
</tr>
<tr>
<td>Serving size: 1 piece</td>
<td>Rolled oats: 1 pound 2 ounces (1.125 pounds)</td>
</tr>
<tr>
<td></td>
<td>Enriched flour: 1 pound</td>
</tr>
<tr>
<td></td>
<td>Enriched Cornmeal: 8 ounces (0.5 pound)</td>
</tr>
</tbody>
</table>

1. Determine the total weight (pounds) of all creditable grains in the recipe (16 ounces = 1 pound). Convert fractions to decimals, e.g., 1 ¾ pounds equals 1.75 pounds.

   1.625 pounds of whole grains (whole-wheat flour and rolled oats) + 1.5 pounds of enriched grains (enriched flour and enriched cornmeal) = 3.125 pounds of creditable grains

2. Determine the total grams of creditable grains in the recipe: Multiply A by 453.6 (1 pound = 453.6 grams).

   B 1417.5 grams of creditable grains

3. List the number of servings in the recipe.

   C 100 servings per recipe

4. Determine the grams of creditable grains per recipe serving: Divide B by C.

   D 14.175 grams of creditable grains per recipe serving

5. Determine the CACFP grain servings per recipe serving: Divide D by 14.75 (14.75 grams of creditable grains = 1 grain serving). ²

6. Round down the number in E to the nearest quarter (¼). For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.

   E 0.96 CACFP grain servings
   F 0.75 CACFP grain servings ²

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¹ This recipe is WGR because the combined weight (1.625 pounds) of all whole grains (whole-wheat flour and rolled oats) is more than the combined weight (1.5 pounds) of all enriched grains (enriched flour and enriched cornmeal). For more information, see the CSDE’s handout, *Whole Grain-rich Criteria for the CACFP*.

² Through September 30, 2019, the CACFP meal patterns require ½ serving of the grains component for ages 1-5; and 1 serving for ages 6-12, ages 6-18 in at-risk afterschool care centers, and adult day care center participants.
### Table 6. Weights of 1 cup of commonly used grain ingredients

<table>
<thead>
<tr>
<th>Food item</th>
<th>Grams per cup</th>
<th>Food item</th>
<th>Grams per cup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barley, flour or meal ¹</td>
<td>148</td>
<td>Commeal, enriched, uncooked, yellow, whole grain ¹</td>
<td>122</td>
</tr>
<tr>
<td>Barley, hulled ¹</td>
<td>184</td>
<td>Cracker crumbs, graham, crushed ¹</td>
<td>84</td>
</tr>
<tr>
<td>Barley, pearled, uncooked ¹</td>
<td>200</td>
<td>Cracker crumbs, snack, standard snack-type, regular, crushed ⁵</td>
<td>52</td>
</tr>
<tr>
<td>Barley, pearled, cooked ¹</td>
<td>157</td>
<td>Flour, buckwheat, whole grain ¹</td>
<td>120</td>
</tr>
<tr>
<td>Bread crumbs, dry, grated, plain ¹</td>
<td>108</td>
<td>Flour, corn, whole grain, yellow ¹</td>
<td>117</td>
</tr>
<tr>
<td>Bread crumbs, plain, dry, grated, seasoned ¹</td>
<td>120</td>
<td>Flour, rice, brown ¹</td>
<td>158</td>
</tr>
<tr>
<td>Bread crumbs, plain soft, white ¹</td>
<td>45</td>
<td>Flour, rice, white ¹</td>
<td>158</td>
</tr>
<tr>
<td>Bulgur, uncooked ¹</td>
<td>140</td>
<td>Flour, rye, dark ¹</td>
<td>128</td>
</tr>
<tr>
<td>Bulgur, cooked ¹</td>
<td>182</td>
<td>Flour, rye, light ¹</td>
<td>102</td>
</tr>
<tr>
<td>Cereal, General Mills Cheerios ²</td>
<td>28</td>
<td>Flour, wheat, white, all-purpose enriched, bleached ¹</td>
<td>125</td>
</tr>
<tr>
<td>Cereal, General Mills Corn Chex ²</td>
<td>31</td>
<td>Flour, wheat, white, all-purpose enriched, unbleached ¹</td>
<td>125</td>
</tr>
<tr>
<td>Cereal, General Mills Rice Chex ²</td>
<td>27</td>
<td>Flour, wheat, white, bread, enriched ¹</td>
<td>137</td>
</tr>
<tr>
<td>Cereal, General Mills Wheat Chex ²</td>
<td>47</td>
<td>Flour, wheat, white, cake, enriched, unsifted, dipped ¹</td>
<td>137</td>
</tr>
<tr>
<td>Cereal, General Mills Wheaties ²</td>
<td>36</td>
<td>Flour, wheat, white, self-rising, enriched ¹</td>
<td>125</td>
</tr>
<tr>
<td>Cereal, Kellogg's All-Bran Bran Buds ³</td>
<td>90</td>
<td>Flour, wheat, whole grain ¹</td>
<td>120</td>
</tr>
<tr>
<td>Cereal, Kellogg's All-Bran Original ³</td>
<td>62</td>
<td>Wheat germ, uncooked, plain ¹</td>
<td>88</td>
</tr>
<tr>
<td>Cereal, Kellogg's Corn Flakes crumbs ³</td>
<td>88</td>
<td>Wheat germ, toasted, plain ¹</td>
<td>115</td>
</tr>
<tr>
<td>Cereal, Kellogg's Corn Flakes, whole ³</td>
<td>28</td>
<td>Oat bran, raw ¹</td>
<td>94</td>
</tr>
<tr>
<td>Cereal, Kellogg's Rice Krispies ³</td>
<td>26</td>
<td>Oat bran, cooked ¹</td>
<td>219</td>
</tr>
<tr>
<td>Cereal, Quaker Puffed Rice ⁴</td>
<td>14</td>
<td>Oats, rolled, quick, uncooked ¹</td>
<td>81</td>
</tr>
<tr>
<td>Cereal, Quaker Puffed Wheat ⁴</td>
<td>28</td>
<td>Oats, rolled, regular, uncooked ¹</td>
<td>81</td>
</tr>
<tr>
<td>Commeal, enriched, uncooked, yellow, degerminated ¹</td>
<td>157</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ The use of brand-name products is solely for clarification regarding serving sizes and does not constitute approval or endorsement by the CSDE or the USDA. The actual weight of 1 cup may be more or less than the weights in this chart, depending on the measuring method used, e.g., stirred or unstirred, sifted or unsifted, spooned or dipped, and coarsely or finely crushed. For the most accurate conversion of volume to weight, calculate the average weight of 1 cup of the ingredient by measuring and weighing several samples. For more information, see the CSDE’s Yield Study Form.


⁵ Quaker Cereals: [www.quakeroats.com/products.aspx](http://www.quakeroats.com/products.aspx)
### Table 7. Calculating CACFP grain servings for recipes listing ingredients in volume

<table>
<thead>
<tr>
<th>Grain ingredient</th>
<th>Measure</th>
<th>Grams per cup</th>
<th>Weight (grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-wheat flour</td>
<td>2 cups</td>
<td>120</td>
<td>240.00 grams</td>
</tr>
<tr>
<td>Rolled oats</td>
<td>¼ cup</td>
<td>81</td>
<td>60.75 grams</td>
</tr>
<tr>
<td>All-purpose enriched flour</td>
<td>2 cups</td>
<td>125</td>
<td>250.00 grams</td>
</tr>
<tr>
<td>Enriched cornmeal</td>
<td>¼ cup</td>
<td>138</td>
<td>34.50 grams</td>
</tr>
</tbody>
</table>

**Total weight of creditable grains:** 585.25 grams

1. **Determine the total weight (grams) of all creditable grains in the recipe.**
   
   300.75 grams of whole grains (whole-wheat flour and rolled oats) + 284.5 grams of enriched grains (all-purpose enriched flour and enriched cornmeal) = 585.25 grams of creditable grains

2. **List the number of servings in the recipe.**

3. **Determine the grams of creditable grains per recipe serving:**
   
   Divide A by B.

4. **Determine the CACFP grain servings per recipe serving:**
   
   Divide D by 14.75 (14.75 grams of creditable grains = 1 grain serving).  

5. **Round down the number in D to the nearest quarter (¼).** For example, 1.49 and 1.27 round down to 1.25 and 1.24 rounds down to 1.

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1. This recipe is WGR because the combined weight (300.75 grams) of all whole grains (whole-wheat flour and rolled oats) is more than the combined weight (284.5 grams) of all enriched grains (all-purpose enriched flour and enriched cornmeal), and the recipe does not contain any noncreditable grains. For guidance on identifying WGR foods for grades K-12, see the CSDE’s handout, *Whole Grain-rich Criteria for Grades K-12 in the NSLP and SBP.*

2. The grams per cup are from the USDA’s *National Nutrient Database for Standard Reference.*

3. Through September 30, 2019, the CACFP meal patterns require ½ serving of the grains component for ages 1-5; and 1 serving for ages 6-12, ages 6-18 in at-risk afterschool care centers, and adult day care center participants.
Resources

Basics at a Glance Portion Control Poster (Institute of Child Nutrition):
https://theicn.org/icn-resources-a-z/basics-at-a-glance/

Child Care Worksheet 1: Crediting Commercial Grain in the CACFP (CSDE):
https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CACFPCredit1.xlsx

Child Care Worksheet 2: Crediting Ready-to-eat Breakfast Cereals in the CACFP (CSDE):
https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CACFPCredit2.xlsx

Child Care Worksheet 3: Crediting Cooked Breakfast Cereals in the CACFP (CSDE):
https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CACFPCredit3.xlsx

Child Care Worksheet 4: Crediting Family-size Recipes for Grains in the CACFP (CSDE):
http://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CACFPCredit4.xlsx

Child Care Worksheet 5: Crediting Quantity Recipes for Grains in the CACFP
http://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CACFPCredit5.xlsx

Crediting Breakfast Cereals in the CACFP (CSDE):
https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CreditCerealsCACFP.pdf

Crediting Enriched Grains in the CACFP (CSDE):
https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CreditEnrichedCACFP.pdf

Crediting Foods in CACFP Adult Day Care Centers (CSDE webpage):

Crediting Foods in CACFP Child Care Programs (CSDE webpage):


Food Buying Guide for Child Nutrition Programs (USDA):

Grain-Based Desserts in the CACFP (USDA):
https://fns-prod.azureedge.net/sites/default/files/tn/CACFPGrainBasedDesserts.pdf


Meal Patterns for CACFP Adult Day Care Centers (CSDE webpage):
https://portal.ct.gov/SDE/Nutrition/Meal-Patterns-CACFP-Adult-Centers

Meal Patterns for CACFP Child Care Programs (CSDE webpage):
https://portal.ct.gov/SDE/Nutrition/Meal-Patterns-CACFP-Child-Care-Programs


Product Formulation Statement for Grains (USDA):
Calculation Methods for Grain Servings in the CACFP

*Sample Completed Product Formulation Statement for Grains (USDA):*

*Serving Sizes for Grains in the CACFP (October 1, 2017, through September 30, 2019):*

*Standardized Recipe Form for the CACFP (CSDE):*
  https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/StdRecipeCACFP.doc


*USDA Memo CACFP 16-2017: Grain-Based Desserts in the Child and Adult Care Food Program:*

*Using Child Nutrition (CN) Labels in the CACFP (CSDE):*
  https://portal.ct.gov/-/media/SDE/Nutrition/CACFP/Crediting/CNlabelCACFP.pdf

*Using Product Formulation Statements in the CACFP (CSDE):*

*Whole Grain-rich Criteria for the CACFP (CSDE):*

*Whole Grain-rich Ounce Equivalents for the CACFP (Effective October 1, 2019) (CSDE):*

*Yield Study Form (CSDE):*
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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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