3 — Meal Components

The lunch and breakfast meal patterns for grades K-12 have specific criteria for determining how foods credit toward the food components required for reimbursable meals. This section provides menu planning and crediting guidance for the milk, meat/meat alternates, vegetables, fruits, and grains components.

Creditable Foods

Creditable foods are foods and beverages that count toward the requirements for reimbursable meals in the USDA's Child Nutrition Programs. The USDA considers the following factors when determining if a food credits in school meals:

- nutrient content;
- function in a meal;
- regulations concerning the USDA's Child Nutrition Programs (quantity requirements and definition);
- FDA standards of identity;
- USDA's standards for meat and meat products; and
- administrative policy decisions on the crediting of particular foods.

The websites below include information about the requirements for crediting foods in school nutrition programs.

- Crediting Foods for Grades K-12 in School Nutrition Programs (CSDE): https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs
- Crediting Updates for Child Nutrition Programs: Be in the Know! Webinar Series (USDA): https://www.fns.usda.gov/tn/crediting-updates-child-nutrition-programs-be-know-webinar-series
- CSDE Operational Memoranda for School Nutrition Programs: https://portal.ct.gov/SDE/Lists/Operational-Memoranda-for-School-Nutrition-Programs
- Food Buying Guide for Child Nutrition Programs (USDA): https://www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs

- USDA FNS Instructions for Child Nutrition Programs: https://portal.ct.gov/SDE/Nutrition/FNS-Instructions-for-Child-Nutrition-Programs
- USDA Memo SP 08-2019, CACFP 02-2019 and SFSP 02-2019: Update of Food Crediting in the Child Nutrition Programs: https://www.fns.usda.gov/school-meals/update-food-crediting-child-nutrition-programs
- USDA School Meals Policy Memos: https://www.fns.usda.gov/resources
- USDA Program Legislation and Regulations: https://www.fns.usda.gov/school-meals/program-legislation-regulations

Minimum creditable amounts

Each food component has a minimum amount that credits toward the meal patterns. Foods that contain less than the minimum amounts do not credit toward the meal patterns, but must be counted toward the weekly dietary specifications for school meals.

SFAs must provide the milk component as the full 1-cup serving of fluid milk. When meals include breakfast cereals, SFAs may serve fluid milk as a beverage, on cereal, or both. Crediting milk in amounts less than 1 cup applies only to smoothies. For fruit and vegetable smoothies, the minimum creditable amount of milk is ¼ cup. If the amount of milk in a smoothie is less than 1 cup (the minimum serving for all grade groups), the meal must include additional milk to total 1 cup.

The minimum creditable amounts for the other food components are ⅛ cup for vegetables, ⅛ cup for fruits, ¼ ounce equivalent for grains, and ¼ ounce equivalent for meat/meat alternates. If a food item provides less than the full serving of a component, the menu planner must include additional foods to meet the full-required serving for each grade group. For example, the lunch meal pattern for grades K-5 and 6-8 requires ¾ cup of the vegetables component. If a menu item provides ¼ cup of vegetables, the lunch menu must also include an additional ½ cup of vegetables to provide the full-required daily serving.

Noncreditable Foods

Noncreditable foods are foods and beverages that cannot credit in the USDA's meal patterns. They include foods and beverages in amounts too small to credit (i.e., foods and beverages that do not provide the minimum creditable amount of a meal pattern component) and foods and beverages that do not fit into one of the meal pattern components. Examples include potato chips, pudding, ice cream, gelatin, cream cheese, bacon, condiments (e.g., syrup, jam, ketchup, mustard, mayonnaise, and butter), and water. Table 3-1 lists additional examples of noncreditable foods. This list is not all-inclusive.

SFAs may serve noncreditable foods in addition to the meal components to add variety, help improve acceptability in the meal, and satisfy appetites. Some examples include maple syrup on pancakes, salad dressing on tossed greens, and condiments such as ketchup or mustard on sandwiches and other entrees. However, noncreditable foods offered as part of reimbursable meals for grades K-12 count toward the weekly dietary specifications. They must contain zero trans fat and their inclusion cannot cause the menu to exceed the average weekly limits for calories, saturated fat, and sodium. For information on the dietary specifications for each grade group, see the meal patterns in section 1. For information on planning school meals to meet the dietary specifications, see section 6.

Some noncreditable foods (such as candy, soda, coffee, tea, and sports drinks) cannot be sold in the NSLP and SBP due to federal or state requirements. For more information, see the CSDE's guides, *Guide to Competitive Foods in HFC Public Schools*, *Guide to Competitive Foods in Non-HFC Public Schools*, and *Guide to Competitive Foods in Private Schools and RCCIs;* and visit the CSDE's Competitive Foods in Schools webpage and Beverage Requirements webpage.

To ensure that school meals meet children's nutritional needs, the CSDE encourages SFAs to use discretion when serving noncreditable foods. Noncreditable foods typically contain few nutrients and are higher in added sugars, saturated fats, and sodium. Menu planners should read labels, be aware of the ingredients in foods, and limit the frequency and amount of less nutritious choices. The CSDE's handout, *Noncreditable Foods for Grades K-12 in the NSLP and SBP*, summarizes the requirements for noncreditable foods for grades K-12.

Table 3-1. Examples of noncreditable foods for grades K-12 [1]

Almond milk [2]
Bacon and bacon bits
Banana chips
Bran, e.g., oat bran, wheat bran, corn bran, rice bran, and rye bran
Bread products that are not WGR or enriched
Butter
Candy [3]
Candy-coated popcorn [3]
Chili sauce
Chocolate milk-based drinks, e.g., Yoo-Hoo [3]
Coffee (regular, decaffeinated, and iced) [3]
Condiments, e.g., ketchup, mustard, relish, barbecue sauce
Cranberry cocktail drink [3]
Cream, half and half
Cream cheese
Cream soups, canned, e.g., cream of mushroom, cream of celery, cream of broccoli
Dehydrated vegetables used for seasoning
Drinkable or squeezable yogurt
Eggnog [3]
Egg whites
Frozen yogurt
Fruit drink, fruit beverage, powdered fruit drink mix [3]
Fruit leathers
Fruit punch (not 100 percent juice) [3]
Fruit snacks, e.g., fruit roll-ups, wrinkles, and twists
Gelatin, regular and sugar free
Germ, e.g., wheat germ
Grain products that are not WGR or enriched [3]
Honey
Hot chocolate [3]
Ice cream
Ice cream novelties
Ice milk
Iced coffee [3]
Iced tea [3]
Imitation cheese
Jam
Jelly
Ketchup
Lemonade [3]
Limeade [3]
Maple syrup
Margarine
Marshmallows
Mayonnaise
Milk, reduced fat (2%)
Milk, whole
Mustard
Nectar drinks [3]
Nondairy milk that does not meet the USDA's nutrition standards for fluid milk substitutes [2]
Pickle relish
Popsicles (not 100 percent juice)
Potato chips
Pudding
Pudding pops
Rice milk [2]
Salad dressings
Sherbet
Soda, regular and diet [3]

Table 3-1. Examples of noncreditable foods for grades K-12 [1], *continued*

- Soups, non-vegetable, canned, e.g., beef barley, beef noodle, turkey or chicken noodle, and turkey or chicken rice
- Sour cream
- Soy milk that does not meet the USDA's nutrition standards for fluid milk substitutes [2]
- Sports drinks, regular and diet [3]
- Spreadable fruit
- Syrup
- Tea (regular, herbal, and iced) [3]
- Tofu with less than 5 grams of protein in 2.2 ounces (weight) or ¼ cup (volume)
- Water [4]
- Yogurt or soy yogurt in commercial smoothies

[1] Snack foods sold a la carte must meet the Connecticut Nutrition Standards (which apply to public school districts that participate in the healthy food option of Healthy Food Certification (HFC)) or the USDA's Smart Snacks nutrition standards (which apply to public school districts that do not participate in the healthy food option of HFC, and to private schools and RCCIs).

[2] Milk substitutes must meet the USDA's nutrition standards for fluid milk substitutes. For more information, see the CSDE's handout, *Allowable Milk Substitutes for Children without Disabilities in School Nutrition Programs*.

[3] These competitive foods and beverages cannot be sold to students due to federal or state requirements. For more information, visit the CSDE's Competitive Foods in Schools webpage and Beverage Requirements webpage.

[4] The Healthy Hunger-Free Kids Act (HHFKA) requires that schools make drinking water available to children at no charge where meals are served during the meal service (including the ASP). However, SFAs cannot promote or offer water or any other beverage as an alternative selection to fluid milk throughout the food service area. For more information, see USDA Memo SP 49-2016 and CACFP 18-2016: *Resources for Making Potable Water Available in Schools and Child Care Facilities* and USDA Memo SP 19-2018: *Clarification on the Milk and Water Requirements in the School Meal Programs*.

Milk Component

The meal patterns require a serving of fluid milk at lunch and breakfast. Milk must be pasteurized, meet all state and local requirements, and contain vitamins A and D at levels specified by the FDA.

Serving Size for Milk

Milk credits based on volume (fluid ounces). Table 3-2 summarizes the required servings of the milk component for grades K-12 at lunch and breakfast for five-day and seven-day weeks.

Table 3-2. Required daily and weekly servings of the milk component

Grades	Lunch				Breakfast			
	Five-day week		Seven-day week		Five-day week		Seven-day week	
	Daily	Weekly	Daily	Weekly	Daily	Weekly	Daily	Weekly
K-5	1 cup	5 cups	1 cup	7 cups	1 cup	5 cups	1 cup	7 cups
6-8	1 cup	5 cups	1 cup	7 cups	1 cup	5 cups	1 cup	7 cups
9-12	1 cup	5 cups	1 cup	7 cups	1 cup	5 cups	1 cup	7 cups

Milk Fat Restriction

The allowable types of milk for grades K-12 include low-fat (1%) milk (unflavored or flavored) and fat-free milk (unflavored or flavored). Whole milk and reduced-fat (2%) milk do not credit. They cannot be served as part of reimbursable meals unless a child has a disability that specifically requires whole or reduced-fat milk. These milk substitutions require a medical statement signed by a recognized medical authority. For information on the requirements for modifications to school meals, see the CSDE's guide, *Accommodating Special Diets in School Nutrition Programs,* and visit the CSDE's Special Diets in School Nutrition Programs webpage.

Milk Variety

SFAs must offer at least two different choices of milk fat content or flavor at both lunch and breakfast. Choices may include unflavored low-fat milk, flavored low-fat milk, unflavored fat-free milk, and flavored fat-free milk. These types of milk may also be lactose-reduced, lactose-free, buttermilk, and acidified. For example, a school could choose to offer:

- unflavored low-fat milk and unflavored fat-free milk;
- unflavored low-fat milk, chocolate fat-free milk, and unflavored fat-free milk;
- unflavored low-fat milk, unflavored lactose-free low-fat milk, chocolate fat-free milk, and strawberry fat-free milk; or
- any other combination of fat content and flavors that comply with the USDA's requirements for the milk component.

At least one daily choice must be unflavored low-fat or fat-free milk.

Note: Milk coolers cannot contain any beverages other than milk. SFAs cannot promote or offer water, juice, or any other beverage as an alternative selection to fluid milk throughout the food service area.

Milk variety exemption for RCCIs

RCCIs that are juvenile detention centers or correctional facilities may meet the milk variety requirement over the week, rather than daily, if there are potential legitimate safety concerns about offering different types of milk to students. For example, a RCCI may offer all students flavored fat-free milk on some days of the week and unflavored low-fat milk on other days.

This provision also applies to other RCCIs that can demonstrate operational limitations to separating the grade groups and can show legitimate safety concerns if students are served different portions. To implement this provision, the RCCI must submit a waiver request to the CSDE. For more information, see "Exception for grade groups in correctional facilities" in section 1.

State Requirements for Milk in Public Schools

In addition to meeting the USDA's requirements for the milk component, all milk sold in Connecticut public schools must comply with the state beverage requirements of Section 10-221q of the Connecticut General Statutes (C.G.S.). The state beverage requirements apply to milk sold as part of reimbursable meals and milk sold separately from reimbursable meals, i.e., milk a la carte sales. The state beverage statute does not apply to private schools or RCCIs.

The state beverage statute requires that milk sold to students contains no more than 4 grams of sugars per ounce. Products that meet the federal and state requirements for milk are on list 16 of the CSDE's List of Acceptable Foods and Beverages webpage, which includes brand-specific lists of foods that meet the Connecticut Nutrition Standards and beverages that meet the requirements of the state beverage statute. For more information on the state beverage statute, see the CSDE's Beverage Requirements webpage.

Milk Substitutes for Children without Disabilities

SFAs may choose, but are not required, to offer one or more allowable milk substitutes for children whose special dietary needs do not constitute a disability. The two types of allowable substitutes for children without disabilities include:

- nondairy milk substitutes that meet the USDA's nutrition standards for fluid milk substitutes (see table 3-3); and
- lactose-reduced or lactose-free milk with the appropriate fat content, i.e., low-fat milk (unflavored or flavored) and fat-free milk (unflavored or flavored).

Parents or guardians must submit a written request for a nondairy milk substitute for their child. A medical statement signed by a recognized medical authority is not required. For more information, see the CSDE's handout, *Allowable Milk Substitutes for Children without Disabilities in School Nutrition Programs,* and the CSDE's guide, *Accommodating Special Diets in School Nutrition Programs*.

If SFAs choose to offer nondairy milk substitutes, these products must meet the USDA's nutrition standards for fluid milk substitutes. Milk substitutes offered as part of reimbursable meals must also fit within the weekly dietary specifications.

Note: SFAs cannot offer any other beverages as a choice instead of milk, including juice and water. Juice and water are not allowable milk substitutes for children without disabilities.

USDA's nutrition standards for fluid milk substitutes

SFAs that choose to offer a milk substitute as part of reimbursable meals for children without disabilities must use products that meet the USDA's nutrition standards for fluid milk substitutes. SFAs cannot offer any nondairy milk substitutes that do not meet the USDA's nutrition standards. Table 3-3 summarizes these requirements.

SFAs cannot determine if a product meets the USDA's nutrition standards for fluid milk substitutes by reading the product's packaging. The Nutrition Facts label lists only a few of the nine nutrients required by the USDA for allowable fluid milk substitutes. To determine if a

product meets the USDA's nutrition standards, SFAs must obtain documentation from the manufacturer that includes the nutrition information for all nine nutrients.

Table 3-3. USDA's nutrition standards for fluid milk substitutes	
Minimum nutrients per cup (8 fluid ounces)	
Calcium	276 milligrams (mg) or 30% Daily Value (DV) [1]
Protein	8 grams (g)
Vitamin A	500 international units (IU) or 10% DV
Vitamin D	100 IU or 25% DV
Magnesium	24 mg or 6% DV
Phosphorus	222 mg or 20% DV [1]
Potassium	349 mg or 10% DV [1]
Riboflavin	0.44 mg or 25% DV [1]
Vitamin B12	1.1 micrograms (mcg) or 20% DV [1]

[1] The FDA labeling laws require manufacturers to round nutrition values to the nearest 5 percent. The unrounded minimum DV is 27.6% for calcium, 22.2% for phosphorus, 9.97% for potassium, 25.88% for riboflavin, and 18.33% for vitamin B12. Source: *How to Determine if a Soy-Based Beverage Meets the Nutrient Requirements to Qualify as an Authorized Milk Substitute in WIC*, USDA Food and Nutrition Services (FNS) Office of Research, Nutrition, and Analysis (ORNA), 2006.

State requirements for nondairy milk substitutes in public schools

In addition to meeting the USDA's nutrition standards, all nondairy milk substitutes sold as part of reimbursable meals and a la carte in public schools must comply with the state beverage requirements of C.G.S Section 10-221q. The state beverage statute does not apply to private schools or RCCIs.

Under C.G.S Section 10-221q, nondairy milk substitutes may be unflavored or flavored. They cannot contain artificial sweeteners, and cannot exceed:

- 4 grams of sugar per ounce;
- 35 percent of calories from fat; and
- 10 percent of calories from saturated fats.

List 17 of the CSDE's List of Acceptable Foods and Beverages webpage includes milk substitute products that meet the federal and state requirements. For more information on milk substitutes for children without disabilities, see the CSDE's handout, *Allowable Milk Substitutes for Children without Disabilities in School Nutrition Programs,* and the CSDE's guide, *Accommodating Special Diets in School Nutrition Programs*.

Lactose-reduced and lactose-free milk

Children who cannot digest the lactose found in regular milk may be able to drink lactose-free (e.g., Lactaid) or lactose-reduced milk. These types of milk are regular fluid milk that is modified by the addition of lactase enzymes to reduce or eliminate the lactose (milk sugar). Lactose-reduced milk has part of the lactose removed, while lactose-free milk has all of the lactose removed.

Lactose-free and lactose-reduced milk come in a variety of flavors and fat contents. They credit the same as regular milk. SFAs may substitute low-fat or fat-free lactose-reduced or lactose-free milk for regular milk. The CSDE encourages SFAs to make lactose-reduced or lactose-free milk available to children as needed.

In addition to meeting the meal patterns, any lactose-reduced and lactose-free milk served as part of reimbursable meals in public schools must comply with the sugar limit of the state beverage requirements of C.G.S. Section 10-221q. SFAs cannot sell lactose-reduced and lactose-free milk that does not meet the state requirements, either as part of reimbursable meals or a la carte. For more information, see "State Requirements for Milk in Public Schools" in this section.

List 17 of the CSDE's List of Acceptable Foods and Beverages webpage includes lactose-reduced and lactose-free milk that meets the federal and state requirements.

Milk in Prepared Foods

Only fluid milk meets the USDA's definition for milk and the FDA's standard of identity for milk. The NSLP and SBP meal patterns require fluid milk as a beverage. When meals include breakfast cereals, SFAs may serve fluid milk as a beverage, on cereal, or both.

Milk does not credit when cooked in cereals, puddings, cream sauces, or other foods. For example, milk does not credit when used to make quiche or macaroni and cheese.

Foods made from milk (such as cheese, yogurt, and ice cream) cannot credit as the milk component. For information on crediting cheese and yogurt as meat/meat alternates, see the "Meat/Meat Alternates Component" section.

Crediting Milk in Smoothies

Milk served in fruit or vegetable smoothies made on site by the SFA credits as the milk component if it is low-fat milk (unflavored or flavored) or fat-free milk (unflavored or flavored). The minimum creditable amount of milk in a smoothie is ¼ cup. If a smoothie contains less than 1 cup of milk per serving, the menu must include additional milk to meet the full 1-cup requirement for each grade group. **Note:** Crediting milk in amounts less than the full-required 1-cup serving applies only to smoothies.

When reimbursable meals include smoothies, SFAs must also offer a variety of fluid milk on the serving line to meet the USDA's requirement to offer a variety of milk options. For more information, see "Milk Variety" in this section.

Commercial smoothies do not meet the USDA's requirements for fluid milk because they do not comply with the FDA's standard of identity for milk. For more information on crediting smoothies, see "Fruit and Vegetable Smoothies" in the "Fruits Component" section.

Common Compliance Issues with the Milk Component

Meals must comply with the USDA's requirements for the milk component. The list below includes common compliance issues with the milk component, based on the CSDE's Administrative Review of school nutrition programs.

- The SFA does not offer at least two types of milk, one of which is unflavored. This occurs most often when breakfast is served in the classroom. For more information, see "Milk Variety" in this section.

- The SFA offers beverages that are not allowed as milk substitutes, such as juice and water. The only beverages that can substitute for the milk component are lactose-reduced and lactose-free milk and nondairy milk products that meet the USDA's nutrition standards for milk substitutes. For more information, see "Milk Substitutes for Children without Disabilities" in this section.

- The SFA serves water and juice from the milk cooler. SFAs cannot promote or offer water, juice, or any other beverage as an alternative selection to fluid milk throughout the food service area. For more information, see "Milk Variety" in this section.

SFAs must plan the milk component to avoid these compliance issues. For more information, see CSDE Operational Memorandum No. 06-19: *Summary of Federal and State Milk Requirements for the NSLP, SBP, SSO of the NSLP, ASP of the NSLP, and Special Milk Program (SMP),* and the CSDE's handout, *Comparison of Meal Pattern Requirements for the Milk Component in School Nutrition Programs*.

Meat/Meat Alternates Component

The lunch meal pattern requires a serving of the meat/meat alternates component as a main dish, or as a main dish and one other food item. For more information, see "Main Dish Requirement for Lunch" in this section.

The breakfast meal pattern does not require the meat/meat alternates component. However, SFAs may substitute the meat/meat alternates component for the grains component, after offering the minimum daily 1 ounce equivalent of the grains component. For more information, see "Meat/Meat Alternates at Breakfast" in this section.

Meats include cooked lean meat, poultry, fish, and surimi. Meat alternates are foods that provide a similar protein content to meat, such as alternate protein products (APPs), cheese (low-fat recommended), eggs, cooked dry beans or peas (legumes), nuts and seeds and their butters, yogurt, soy yogurt, tofu, and tempeh.

SFAs may credit legumes as the vegetables component or the meat/meat alternates component, but not both in the same meal. For more information, see "Crediting Legumes as Meat/Meat Alternates" in this section and "Crediting Legumes as Vegetables" in the "Vegetables Component" section.

Serving Size for Meat/Meat Alternates

The serving size for the meat/meat alternates component is in ounce equivalents. An ounce equivalent is the amount of food that meets the USDA's requirement for 1 ounce of lean meat or meat alternate. An ounce equivalent is sometimes more than a measured ounce, depending on the food's density and nutrition content.

Table 3-4 summarizes the required servings of the meat/meat alternates component for each grade group at lunch and breakfast for five-day and seven-day weeks.

Table 3-4. Required daily and weekly servings of the meat/meat alternates component

Grades	Ounce Equivalents							
	Lunch				Breakfast [1]			
	Five-day week		Seven-day week		Five-day week		Seven-day week	
	Daily	Weekly [2]	Daily	Weekly [2]	Daily	Weekly [2]	Daily	Weekly [2]
K-5	1	8-10	1	11-14	0	0	0	0
6-8	1	9-10	1	12½-14	0	0	0	0
9-12	2	10-12	2	14-17	0	0	0	0

[1] The SBP meal pattern does not require the meat/meat alternates component. SFAs may substitute the meat/meat alternates component for the grains component, after offering the minimum daily 1 ounce equivalent of the grains component. For more information, see "Meat/Meat Alternates at Breakfast" in this section.

[2] SFAs cannot offer less than the minimum weekly serving of the meat/meat alternates component. The maximum weekly serving is not required, but provides a guide for planning age-appropriate meals that meet the weekly limits for calories, saturated fats, and sodium. For information on planning school meals to meet the dietary specifications, see section 6.

The serving size of the meat/meat alternates component refers to the edible portion of cooked lean meat, poultry, or fish, e.g., cooked lean meat without bone, breading, binders, extenders, or other ingredients. The *Dietary Guidelines for Americans* defines lean meat and poultry as containing less than 10 grams of fat, 4.5 grams or less of saturated fat, and less than 95 milligrams of cholesterol per 100 grams and per labeled serving size.

A 1-ounce equivalent serving of the meat/meat alternates component equals:

- 1 ounce of lean meat, poultry, or fish;
- 1 ounce of cheese (low-fat recommended);
- 2 ounces of cottage or ricotta cheese, cheese food/spread, or cheese substitute (low-fat recommended);
- ¼ cup of cooked beans and peas (legumes), e.g., kidney beans, chick peas (garbanzo beans), lentils, and split peas;
- ½ large egg;

- 2 tablespoons of nut or seed butters, e.g., peanut butter, almond butter, cashew butter, and sunflower seed butter;
- 1 ounce of nuts or seeds, e.g., almonds, Brazil nuts, cashews, filberts, macadamia nuts, peanuts, pecans, pine nuts, pistachios, soy nuts, and walnuts;
- ¼ cup (2.2 ounces) of commercial tofu containing at least 5 grams of protein;
- 1 ounce of tempeh that contains specific ingredients (see "Crediting Tempeh" in this section);
- 3 ounces of surimi;
- ½ cup of yogurt or soy yogurt; and
- 1 ounce of APP that meets the USDA's APP requirements (see "Alternate Protein Products" in this section).

Daily servings of meat/meat alternates

A menu item must provide a minimum of ¼ ounce equivalent of cooked lean meat or meat alternate to credit toward the meat/meat alternates component. At lunch, the meat/meat alternates component cannot be served in more than two food items. For more information, see "Main Dish Requirement for Lunch" in this section.

Meat/meat alternates offered in amounts less than ¼ ounce equivalent are not included in the calculation of the daily and weekly servings of the meat/meat alternates component, but count toward the weekly dietary specifications. They must contain zero trans fat and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. For more information, see "Dietary Specifications" in section 1.

The menu planner must round down the amount of meat/meat alternates to the nearest ¼ ounce equivalent. For example, a 1.7-ounce serving of cooked lean ground beef credits as 1½ ounce equivalents of the meat/meat alternates component, and 5 tablespoons (0.3125 cups) of cooked legumes credit as 4 tablespoons (¼ cup) of the meat/meat alternates component, which equals 1 ounce equivalent.

Weekly servings of meat/meat alternates

SFAs must determine the weekly servings of the meat/meat alternates component at lunch by adding the ounce equivalents of the daily offerings over the week. SFAs must review all choices of meat/meat alternates offered during the week to determine compliance with the minimum weekly requirements.

For grades 9-12, a menu that provides the minimum daily 2 ounce equivalents of meat/meat alternates will meet the minimum weekly requirement at lunch. However, for grades K-5 and 6-8, SFAs must offer more than the minimum daily 1 ounce equivalent of meat/meat alternates on some days because serving the minimum daily amount will not meet the minimum weekly requirements. To meet the minimum weekly amount for grades K-5 and 6-8, the minimum daily amount cannot be less than 1¾ ounce equivalents.

- **Lunch for grades K-5:** The minimum weekly requirement is 8 ounce equivalents for five-day weeks and 11 ounce equivalents for seven-day weeks. SFAs must offer more than 1 ounce equivalent of meat/meat alternates on some days because serving the minimum daily requirement provides only 5 ounce equivalents for five-day weeks and 7 ounce equivalents for seven-day weeks.

- **Lunch for grades 6-8:** The minimum weekly requirement is 9 ounce equivalents for five-day weeks and 12½ ounce equivalents for seven-day weeks. SFAs must offer more than 1 ounce equivalent of meat/meat alternates on some days because serving the minimum daily requirement provides only 5 ounce equivalents for five-day weeks and 7 ounce equivalents for seven-day weeks.

- **Lunch for grades 9-12:** The minimum weekly requirement is 10 ounce equivalents for five-day weeks and 14 ounce equivalents for seven-day weeks. Serving the minimum daily 2 ounce equivalents of meat/meat alternates provides 10 ounce equivalents for five-day weeks and 14 ounce equivalents for seven-day weeks, and meets the minimum weekly requirement.

Menu planners have the flexibility to determine when to offer more than 1 ounce equivalent of the meat/meat alternates component, as long as each meal includes at least the daily minimum. When counting meat/meat alternates toward the daily and weekly requirements, SFAs must round **down** to the nearest ¼ ounce equivalent. For example, 2.2 ounces of grilled chicken breast credits as 2 ounce equivalents of the meat/meat alternates component.

If menus include different serving sizes of the meat/meat alternates component each day or over the week, SFAs must pay careful attention to the combinations of daily choices. For menus with more than one daily choice of meat/meat alternates, SFAs must calculate the weekly total based on the menu item with the **smallest** ounce equivalents of meat/meat alternates offered each day. For example, if the lunch menu for grades 6-8 offers a daily choice of a 1½-ounce equivalent item and a 3-ounce equivalent item, the menu planner must count the 1½-ounce equivalent item toward the minimum weekly total. For more information on meeting the weekly minimums for meat/meat alternates, see "Weekly Grains and Meat/Meat Alternates at Lunch" and "Weekly Grains at Breakfast" in section 4.

Identifying serving sizes for meat/meat alternates

SFAs must use meal identification signage to instruct students on how much food to select from each component daily for a reimbursable meal, based on the planned serving sizes for each grade group. For example, if a high school allows students to select two ½-cup containers of yogurt to meet the minimum daily 2 ounce equivalents of the meat/meat alternates component for grades 9-12, the cafeteria signage must clearly communicate that students are allowed to select two containers of yogurt with each meal. This signage must be at or near the beginning of the serving line and located where the food component is available. For more information, see "Meal Identification Signage" in section 5.

Main Dish Requirement for Lunch

SFAs must serve the daily meat/meat alternates component at lunch in a main dish, or in a main dish and only one other food item. The main dish is generally considered the main food item in the menu, which is complemented by the other food items. For example, a lunch menu for grades 9-12 could provide the daily 2 ounce equivalents of the meat/meat alternates component from a sandwich containing 2 ounces of tuna (2 ounce equivalents), or a half sandwich containing 1 ounce of tuna (1 ounce equivalent) served with ½ cup of yogurt (1 ounce equivalent). SFAs cannot serve the daily meat/meat alternates component for lunch in more than two food items.

The examples below show how a lunch menu could offer two food items to provide the daily 2 ounce equivalents of meat/meat alternates for grades 9-12.

- The lunch menu's entree is a garden salad with ¼ cup of chick peas (1 ounce equivalent) served with ½ cup of lentil soup (1 ounce equivalent).
- The lunch menu's entree is a whole-grain bagel with 2 tablespoons of peanut butter (1 ounce equivalent) served with ½ cup of low-fat yogurt (1 ounce equivalent).

SFAs must consider how these menu-planning decisions affect students' selection of reimbursable meals when implementing OVS. For example, when a lunch menu provides the minimum serving of a component with two food items, students must select both items to credit as the full component for OVS. For more information, see the CSDE's guide, *Offer versus Serve Guide for School Meals*.

Foods that are not a main dish do not credit as the meat/meat alternates component. Examples include soup made with blended soft tofu and muffins made with peanut butter or yogurt. The USDA's intent for this requirement is to ensure that SFAs offer meat/meat alternates in a form that is recognizable to students. The USDA emphasizes the importance of the nutrition education aspect of school nutrition programs, which includes the goal of helping children easily recognize the key food groups that contribute to a healthy meal.

Note: The USDA allows an exception to the main dish requirement for yogurt or soy yogurt blended in fruit or vegetable smoothies. Yogurt and soy yogurt credit as the meat/ meat alternates component when they are served in smoothies made on site by the SFA. Other meat/meat alternates, such as peanut butter, cannot credit when served in smoothies. For more information, see "Fruit and Vegetable Smoothies" in the "Fruits Component" section and "Vegetable Smoothies" in the "Vegetables Component" section.

Meat/Meat Alternates at Breakfast

The breakfast meal pattern does not require the meat/meat alternates component. However, SFAs may choose to offer a food from the meat/meat alternates component in place of the grains component, after offering the minimum daily 1 ounce equivalent of the grains component. For example, a breakfast menu that includes a 1-ounce slice of whole-grain toast (1 ounce equivalent of the grains component) may also include 1 ounce of low-fat cheese (1 ounce equivalent of the meat/meat alternates component), offered as a grain substitution. **Note:** When determining the daily and weekly requirements, meat/meat alternates offered as grain substitutions credit as the grains component.

SFAs cannot serve meat/meat alternates in place of the grains component if the breakfast menu does not include at least 1 ounce equivalent of the grains component. Table 3-5 shows two breakfast menus with meat/meat alternates offered as grain substitutions. Menu 1 meets the SBP meal pattern requirements because it includes 1 ounce equivalent of the grains component (toast). Menu 2 does not meet the SBP meal pattern requirements because it does not include at least 1 ounce equivalent of the grains component.

Table 3-5. Examples of breakfast menus with meat/meat alternate substitutions	
Menu 1 (acceptable) [1] Scrambled eggs (1 egg) Whole-grain toast (1 ounce) Cantaloupe (½ cup) Blueberries (½ cup) Milk choice (1 cup)	**Menu 2 (not acceptable)** [1] Scrambled eggs (1 egg) Cantaloupe (½ cup) Blueberries (½ cup) Milk choice (1 cup)
[1] SFAs may offer a serving of the meat/meat alternates component in place of a serving of the grains component only after offering the minimum daily 1 ounce equivalent of the grains component.	

Meat/meat alternates used as grain substitutions credit on an ounce-per-ounce basis. For example, 1 ounce equivalent of the meat/meat alternates component credits as 1 ounce equivalent of the grains component. For information on the serving sizes for meat/meat alternates, see "Serving Size for Meat/Meat Alternates" in this section.

Options for crediting meat/meat alternates at breakfast

For all grade groups, breakfast must include at least 1 ounce equivalent of the grains component in order to serve a food from the meat/meat alternates component as a substitute for the grains component. SFAs may choose from two options for crediting meat/meat alternates at breakfast.

- **Option 1:** Offer a serving of the meat/meat alternates component in place of a serving of the grains component, and count the meat/meat alternates toward the weekly servings of the grains component. Meat/meat alternates offered in place of the grains component credit as grain food items for OVS.

- **Option 2:** Offer a serving of the meat/meat alternates component as an extra food that does not count toward the weekly servings of the grains component. Meat/meat alternates offered as extra foods do not credit as food items for OVS. For more information, see "Extra Foods" in section 1.

The USDA allows these options to offer additional menu planning flexibility for SFAs. For both options, meat/meat alternates substituted for grains must count toward the weekly

dietary specifications. They must contain zero trans fats and their inclusion cannot cause the breakfast menu to exceed the weekly limits for calories, saturated fats, and sodium. For information on planning school meals to meet the dietary specifications, see section 6.

SFAs must consider how each option affects students' selection of reimbursable meals when implementing OVs. For examples of OVS with these options, see section 3 in the CSDE's guide, *Offer versus Serve Guide for School Meals*.

Crediting Deli Meats, Hot Dogs, and Sausage

SFAs must ensure that a serving of commercial meat products provides the required amount of the meat/meat alternates component. The amount that provides 1 ounce equivalent of the meat/meat alternates component depends on the product's ingredients.

- Products that are **100 percent meat** without added liquids (e.g., water or broth), binders, and extenders credit on an ounce-per-ounce basis (actual serving weight). For example, 1 ounce credits as 1 ounce equivalent of the meat/meat alternates component.

- Products with **added liquids, binders, and extenders** credit based on the percentage of meat in the product formula. A 1-ounce serving of these products does not credit as 1 ounce equivalent of the meat/meat alternates component. For example, one brand of deli meat might require 1.6 ounces to credit as 1 ounce equivalent of the meat/meat alternates component, while another brand might require 2.3 ounces to credit as 1 ounce equivalent of the meat/meat alternates component.

SFAs must obtain appropriate crediting documentation for all meats with added liquids, binders, and extenders. Acceptable documentation includes a CN label or a manufacturer's PFS stating the amount of the meat/meat alternates component contained in one serving of the product. The USDA's Authorized Labels and Manufacturers webpage lists approved CN-labeled products and manufacturers. For more information, see "Child Nutrition (CN) labels" and "Product formulation statements" in section 2.

Liquids, binders, and extenders

Table 3-6 lists examples of ingredients that are binders and extenders. The ingredients statements below show examples of turkey breast products that contain added liquid, binders, and extenders (indicated in italics).

> Ingredients: Turkey breast, *water, modified cornstarch*, contains less than 2% of sodium lactate, salt, sugar, sodium phosphates, *carrageenan*, natural flavor, sodium diacetate, potassium chloride, sodium ascorbate, sodium nitrite, caramel color.

> Ingredients: Turkey breast meat, *turkey broth*, contains 2% or less salt, sugar, *carrageenan*, sodium phosphate, sodium acetate, sodium diacetate, flavoring.

Products with added liquids, binders, and extenders cannot credit as the meat/meat alternates component without a CN label or PFS that indicates the amount of the meat/meat alternates component per serving. Menu planners must review product labels and ingredients to determine if products contain added liquids, binders, and extenders.

Table 3-6. Examples of binders and extenders [1]

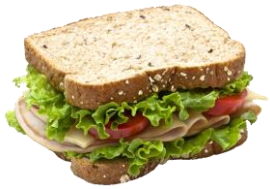
Agar-agar	Dry or dried whey	Reduced minerals
Algin (a mixture of sodium alginate, calcium carbonate and calcium gluconate/lactic acid)	Enzyme (rennet) treated calcium-reduced dried skim milk and calcium lactate	Sodium caseinate
Bread	Gums, vegetable	Soy flour (APP) [2]
Calcium-reduced dried skim milk	Isolated soy protein (APP) [2]	Soy protein concentrate (APP) [2]
Carrageenan	Locust bean gum	Starchy vegetable flour
Carboxymethyl cellulose (cellulose gum)	Methyl cellulose	Tapioca dextrin
Cereal	Modified food starch	Vegetable starch
Dried milk	Reduced lactose whey	Wheat gluten
		Whey
		Whey protein concentrate (APP) [2]
		Xanthan gum

[1] Binders and extenders are defined by the USDA's regulations for the Food Safety and Inspection Service (FSIS) (9 CFR 318.7).

[2] Products may contain these ingredients if they meet the USDA's APP requirements. For more information, see "Crediting Alternate Protein Products" in this section.

For more information, see "Documentation for Commercial Products" in section 2 and the CSDE's handouts, *Crediting Deli Meats in the NSLP and SBP, Crediting Commercial Meat/Meat Alternate Products in the NSLP and SBP*, *CN Labeling Program,* and *Product Formulation Statements*.

Developing recipes for deli meats



Different brands and types of deli meat credit differently. To ensure proper crediting, SFAs should develop standardized recipes for menu items that contain deli meats, such as sandwiches and other entrees. The SFA's standardized recipes should indicate the deli meat's contribution to the meat/meat alternates component based on a specific weight of a specific brand. For ease of portioning, the weight of the deli meat in the recipe should be rounded up to the nearest measure. For example, the recipe should list 1.2 ounces as 1.25 ounces and 1.6 ounces as 1.75 ounces.

If a SFA makes the same food item using different brands of deli meats that credit differently, the standardized recipe should include the specific weight of each brand. For example, if a school makes a turkey sandwich using either ABC brand turkey breast or XYZ brand turkey breast, the standardized recipe should include the required weight of ABC brand and the required weight of XYZ brand. Alternatively, the SFA could develop a separate standardized turkey sandwich recipe for each brand of deli meat.

For information on standardized recipes, see the CSDE's form, *Standardized Recipe Form for School Nutrition Programs*, and "Standardized Recipes" in section 2.

Crediting Alternate Protein Products

APPs are food ingredients that may be used alone or in combination with meat, poultry, or seafood. APPs are processed from soy or other vegetable protein sources. They may be dehydrated granules, particles, or flakes. Some examples include soy flours, soy concentrates, soy isolates, whey protein concentrate, whey protein isolates, and casein. APPs may be used in the dry (nonhydrated), partially hydrated, or fully hydrated form.

AAPs are generally used as part of a formed meat patty or in a vegetarian patty resembling a meat product. Examples of foods with added APPs include beef patties, beef crumbles, pizza topping, meat loaf, meat sauce, taco filling, burritos, and tuna salad. AAPs do not include tofu, surimi, seitan, or tempeh. Processed food items such as vegetarian burgers may contain APP, but the food item itself is not an APP because it contains other ingredients such as seasonings or breading.

If an APP meets the USDA's APP requirements, a 1-ounce serving of APP provides 1 ounce equivalent of the meat/meat alternates component.

USDA Criteria for APPs

APPs must meet the USDA's requirements specified in appendix A of the NSLP regulations (7 CFR 210) and appendix A of the SBP regulations (7 CFR 220). These regulations specify that APPs may credit for part or all the meat/meat alternates requirement only if they meet the three criteria below.

1. The APP is processed so that some portion of the nonprotein constituents of the food is removed. This refers to the manufacturing process for APPs. APPs must be safe and suitable edible products produced from plant or animal sources.

2. The biological quality of the protein in the APP must be at least 80 percent of casein (milk protein), determined by performing a Protein Digestibility Corrected Amino Acid Score (PDCAAS). The PDCAAS is a method of evaluating protein quality.

3. The APP contains at least 18 percent protein by weight when fully hydrated or formulated. "When hydrated or formulated" refers to a dry APP and the amount of water, fat, oil, colors, flavors, or any other substances that have been added.

Menu planners cannot determine if APPs meet the three USDA criteria by reading the product's label. The labeling laws of the USDA's Food Safety Inspection Service (FSIS) and FDA require manufacturers to list product ingredients, but percentage labeling is voluntary. For example, a product may list whey protein concentrate and hydrolyzed soy protein in the ingredients, but will not indicate the percentage of these protein ingredients by weight. For more information, see the USDA's handout, *Questions and Answers on Alternate Protein Products*.

Required documentation for APPs

SFAs must obtain documentation from the manufacturer that the product meets the USDA's APP criteria. Acceptable documentation includes:

- a CN label;
- a PFS from the manufacturer; or
- a signed letter from a company official attesting that the APP meets the USDA's requirements.

The manufacturer's documentation should include information on the percent protein contained in the dry alternate protein product and in the prepared product. For an APP product mix, manufacturers should provide information on the amount by weight of dry

APP in the package, hydration instructions, and instructions on how to combine the mix with meat or other meat alternates.

Without appropriate documentation, SFAs cannot use APPs to credit toward the USDA's meal patterns. Additional guidance on documenting the APP requirements is available in the USDA's *Questions and Answers on Alternate Protein Products*. The CSDE's handout, *Requirements for Alternate Protein Products,* summarizes the requirements for APPs in school nutrition programs.

Crediting Commercial Tofu and Tofu Products

Commercial tofu and tofu products must meet the two criteria below to credit as the meat/meat alternates component.

1. The product must be easily recognizable as a meat substitute. Examples include tofu burgers and tofu sausage.

2. The tofu ingredient must contain at least 5 grams of protein in a 2.2-ounce serving by weight (¼ cup volume equivalent).

The SBP meal pattern does not require the meat/meat alternates component. SFAs may substitute 1 ounce equivalent of the meat/meat alternates component (including tofu) for 1 ounce equivalent of the grains component, after offering the minimum daily 1 ounce equivalent of the grains component.

Commercial tofu

Menu planners must use the Nutrition Facts panel to determine if commercial tofu meets the USDA's protein requirement. A product that contains at least 5 grams of protein in a 2.2-ounce serving by weight provides 1 ounce equivalent of the meat/meat alternates component.

Nutrition Facts

5 servings per container

Serving Size 3 oz. (85 g)

Amount Per Serving	
Calories	**90**
	% Daily Value*
Total Fat 5 g	**8%**
Saturated Fat 0.5g	
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 15 mg	**1%**
Total Carbohydrates 2g	**1%**
Dietary Fiber 0g	**20%**
Sugars 0g	
Including 0g Added Sugars	
Protein 9 g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 150mg	4%

* The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice

Ingredients: filtered water, organic soybeans, nigari (a natural coagulant)

Table 3-7 shows how to calculate compliance with the USDA's protein requirement using the sample Nutrition Facts panel for the tofu product on the right.

Table 3-7. Calculating compliance with the tofu protein requirement			
1. List the grams (g) of protein per serving from the Nutrition Facts label.	A	9	grams
2. List the serving size in ounces (oz) from the Nutrition Facts label.	B	3	ounces
3. Calculate the grams of protein per ounce (divide A by B).	C	3	grams per ounce
4. Calculate the grams of protein in 2.2 ounces (multiply C by 2.2).	D	**6.6**	grams in 2.2 ounces
5. Is the amount in D at least 5 grams? ☑ Yes ☐ No If "yes," the product meets the minimum protein requirement.			

This product contains 6.6 grams of protein in 2.2 ounces, which exceeds the USDA's minimum protein requirement of 5 grams. Therefore, a 2.2-ounce serving of this product provides 1 ounce equivalent of the meat/meat alternates component, if the product also meets the USDA's requirement for being easily recognizable as a meat substitute.

SFAs must maintain product documentation on file for the Administrative Review of school nutrition programs.

Commercial products made with tofu

For commercial tofu products, the tofu ingredient must contain 5 grams of protein in 2.2 ounces to credit as 1 ounce equivalent of the meat/meat alternates component. Menu planners cannot use the Nutrition Facts panel to determine if commercial tofu products meet this requirement. The Nutrition Facts panel shows the amount of protein in the food, not the amount of protein in the tofu ingredient. To credit tofu products in school meals, menu planners must obtain a PFS from the manufacturer that indicates the amount of protein in the product per serving. For more information, see "Product formulation statements" in section 2.

Products made with tofu that are not easily recognized as meat substitutes cannot credit as the meat/meat alternates component, even if they meet the USDA's protein requirement. Examples include tofu blended into a recipe (such as soup or muffins), and tofu that does not represent a meat substitute, e.g., tofu noodles. These foods do not meet the customary and usual function of the meat/meat alternates component. The USDA's intent for this requirement is to ensure that SFAs offer foods from the meat/meat alternates component in a form that is recognizable to students. The USDA emphasizes the importance of the nutrition education aspect of school nutrition programs, which includes the goal of helping children easily recognize the key food groups that contribute to a healthy meal.

The CSDE's handout, *Crediting Tofu and Tofu Products in the NSLP and SBP*, summarizes the requirements for tofu and tofu products in school nutrition programs.

Crediting Cheese

Menu planners should use low-fat or reduced-fat natural cheese whenever possible to help reduce saturated fats in school meals and keep calories within the weekly range for each grade group. Natural cheese is cheese that is produced directly from milk, such as cheddar, Colby, Monterey Jack, mozzarella, Muenster, provolone, Swiss, feta, and brie. Natural cheese also includes pasteurized blended cheese that is made by blending one or more different kinds of natural cheese. Natural cheese does not include pasteurized process cheese such as American cheese, pasteurized process cheese food, pasteurized process cheese spread, and pasteurized process cheese products.

The serving size for cheese depends on the type. A 1-ounce equivalent serving of the meat/meat alternates component equals:

- 1 ounce of natural cheese (e.g., Colby, Monterey Jack, and Swiss) or process cheese (e.g., American); and
- 2 ounces (¼ cup) of cottage or ricotta cheese, cheese food or cheese spread, and cheese substitutes.

To credit in school meals, cheese substitute, cheese food substitute, and cheese spread substitute must meet the FDA's standard of identity for substitute foods and be labeled as "cheese substitute," "cheese food substitute," or "cheese spread substitute." The FDA's standard of identity requires that a cheese substitute is not nutritionally inferior to the standardized cheese for which it is substituting. Imitation cheese and cheese products do not credit as the meat/meat alternates component. When using commercially prepared foods that contain cheese, SFAs must document the serving size with a CN label or PFS. For more

information, see "Child Nutrition (CN)" labels and "Product formulation statements" in section 2.

Crediting Legumes as Meat/Meat Alternates

Legumes include cooked dry beans and peas, such as black beans, black-eyed peas (mature, dry), edamame (soybeans), garbanzo beans (chickpeas), kidney beans, lentils, navy beans, soy beans, split peas, and white beans. SFAs may credit legumes as the vegetables component or the meat/meat alternates component, but not both in the same meal. Menu planners must determine in advance how to credit legumes in a meal.

SFAs may credit legumes as either component in different meals. For example, refried beans may credit as the vegetables component at one lunch and as the meat/meat alternates component at another lunch. If a meal includes two servings of legumes, the SFA may choose to credit one serving as the vegetables component and one serving as the meat/meat alternates component. For example, garbanzo beans in a salad may credit as the vegetables component and kidney beans in chili may credit as the meat/meat alternates component, at the same lunch.

For information on crediting legumes as vegetables, see "Crediting Legumes as Vegetables" in the "Vegetables Component" section.

Serving size for legumes

Legumes credit as the meat/meat alternates component based on volume. A ¼-cup serving (4 tablespoons) of legumes credits as 1 ounce equivalent of the meat/meat alternates component.

The minimum creditable amount of legumes is 1 tablespoon (¼ ounce equivalent). If a menu item contains less than the full serving, the meal must include an additional menu item from the meat/meat alternates component to provide the full serving for each grade group. At lunch, SFAs must serve the meat/meat alternates component as the main dish, or as the main dish and one other food item.

The menu planner must round down the amount of legumes to the nearest ¼ ounce equivalent of the meat/meat alternates component. For example, a recipe that contains 2½ tablespoons (0.625 ounce equivalent) of kidney beans per serving rounds down to 2 tablespoons (0.5 ounce equivalent) of the meat/meat alternates component.

Table 3-8 shows the volume (tablespoons) of legumes that equates to ounce equivalents.

Table 3-8. Serving size for legumes crediting as the meat/meat alternates component [1]	
Volume	**Meal pattern contribution (ounce equivalents)**
8 tablespoons (½ cup)	2
7 tablespoons	1¾
6 tablespoons (⅜ cup)	1½
5 tablespoons	1¼
4 tablespoons (¼ cup)	**1**
3 tablespoons	¾
2 tablespoons (⅛ cup)	½
1 tablespoon (1/16 cup)	¼ (minimum creditable amount)

Crediting roasted or dried legumes as meat/meat alternates

The crediting of roasted or dried legumes as the meat/meat alternates component is the same as nuts and seeds, which credit based on weight (ounces). A 1-ounce serving of roasted or dried legumes provides 1 ounce equivalent of the meat/meat alternates component.

At lunch, roasted or dried legumes (such as roasted soy beans or roasted chick peas) cannot credit for more than half of the meat/meat alternates component. Menu planners must combine roasted or dried legumes with another food from the meat/meat alternates component to meet the full requirement for each grade group. For more information, see "Main Dish Requirement for Lunch" in this section.

For information on crediting roasted or dried legumes as vegetables, see "Crediting Roasted or Dried Legumes as Vegetables" in the "Vegetables Component" section.

Crediting legumes in recipes as meat/meat alternates

A recipe must provide ¼ cup of legumes per serving to credit as 1 ounce equivalent of the meat/meat alternates component. The menu planner determines a recipe's crediting information for the meat/meat alternates component by dividing the total volume (cups) of legumes in the recipe by 0.25, then rounding down to the nearest ¼ ounce equivalent. Table 3-9 shows an example of how to calculate the meat/meat alternates contribution of legumes in a recipe.

For assistance with recipe calculations, use the information on equivalent volume measures in the ICN's *Basics at a Glance Portion Control Poster,* and the decimal equivalents of fractions in the FBG's "Introduction" section.

Table 3-9. Steps for calculating the meat/meat alternates contribution of legumes			
A recipe provides 50 servings and contains 1 gallon and 1 quart of chickpeas. How many ounce equivalents of meat/meat alternates does the recipe provide per serving?			
1. Determine the total cups of legumes in the recipe: Use the ICN's *Basics at a Glance Portion Control Poster* to convert larger measurements to cups. Use the decimal fraction equivalents chart (table 6) in the FBG's "Introduction" section to convert fractions to decimals. 1 gallon (16 cups) plus 1 quart (4 cups) of chickpeas equals 20 cups of chickpeas.	**A**	**20**	cups
2. Number of servings in the recipe:	**B**	**50**	servings
3. Determine the cups of legumes per serving: Divide the total cups of legumes (A) by the number of servings in the recipe (B). 20 cups of chickpeas divided by 50 servings equals 0.4 cup of chickpeas per serving.	**C**	**0.4**	cups per serving
4. Determine the ounce equivalents of meat/meat alternates per serving: Divide the cups of legumes per serving (C) by 0.25 (1 ounce equivalent = ¼ cup (0.25) of legumes). 0.4 cups of chickpeas per serving divided by 0.25 equals 1.6 ounce equivalents of meat/meat alternates.	**D**	**1.6**	ounce equivalents per serving
5. Round down the number in D to the nearest ¼ ounce equivalent. 1.6 ounce equivalents rounds down to 1.5 ounce equivalents of meat/meat alternates.	**E**	**1.5**	ounce equivalents per serving

Menu planning resources for legumes

The recipes and resources below assist SFAs with incorporating legumes into school meals.

- Beans (ICN Child Nutrition Sharing Site): https://theicn.org/cnss/menu-planning/beans/
- Recipes for Healthy Kids Cookbook for Schools (USDA): http://healthymeals.nal.usda.gov/recipes-healthy-kids-cookbooks/recipes-healthy-kids-cookbooks-cookbook-schools
- USDA Recipes for Schools (USDA): https://www.fns.usda.gov/usda-recipes-schools
- What's Cooking? USDA Mixing Bowl (USDA): https://whatscooking.fns.usda.gov/

The CSDE's handout, *Crediting Legumes in the NSLP and SBP*, summarizes the requirements for crediting legumes in school nutrition programs. For additional resources, see "Recipe Resources" in section 2 and the CSDE's webpages, Resources for Child Nutrition Programs and Menu Planning and Food Production.

Crediting Legume Flour Pasta Products as Meat/Meat Alternates

SFAs may credit pasta products made of 100 percent legume flours (such as chick pea flour or lentil flour) as the meat/meat alternates component. However, the pasta must be offered with additional meat/meat alternates, such as tofu, cheese, or meat. The USDA's intent for this requirement is to ensure that SFAs offer meat/meat alternates in a form that is recognizable to students. The USDA emphasizes the importance of the nutrition education aspect of school nutrition programs, which includes the goal of helping children easily recognize the key food groups that contribute to a healthy meal.

Table 3-10 shows the ounce equivalents contribution for different amounts of 100 percent legume pasta. A ½-cup serving of cooked legume flour pasta credits as 2 ounce equivalents of the meat/meat alternates component. Alternatively, SFAs may credit legume flour pasta using the bean flour yield information on page C-1 of Appendix C of the FBG, or with appropriate documentation on the manufacturer's PFS. For more information, see "Product formulation statements" in section 2 and the USDA's resources, *Sample PFS for Meat/Meat Alternate Products* and *Tips for Evaluating a Manufacturer's PFS*.

Table 3-10. Crediting pasta products made of 100 percent legume flours [1]	
Cups (cooked)	**Ounce equivalents**
½	2
¼	1
⅛	½

Note: Pasta made of 100 percent legumes may also credit as the vegetables component (legumes subgroup), but cannot credit as the legumes subgroups and the meat/meat alternates component in the same meal. For more information, see "100 percent vegetable flours crediting as a vegetable" in the Vegetables section.

The requirements for crediting pasta products made of vegetable flours are summarized in USDA Memo SP 26-2019, CACFP 13-2019 and SFSP 12-2019: *Crediting Pasta Products Made of Vegetable Flour in the Child Nutrition Programs*.

Crediting Dried Meat

Shelf-stable, dried and semi-dried meat, poultry, and seafood (such as jerky or summer sausage) credit as the meat/meat alternates component. The USDA indicates that these products are most useful in meals served off-site, such as during school field trips or picnics. However, SFAs may also credit these products in meals served on site.

Crediting of dried meat, poultry, and seafood products must follow the same crediting principles used for all other products made from meat, poultry, or seafood. SFAs must obtain a CN label or manufacturer's PFS to document the product's meal pattern contribution. The FBG does not include crediting information for dried meat, poultry, or seafood products because industry production standards for these products vary widely.

SFAs must evaluate the dried meat product's PFS to ensure that it complies with the USDA's crediting principles below.

1. The creditable meat ingredient listed on the product's PFS must match or have a similar description as the ingredient listed in the product's ingredients statement. For example, the dried beef stick below lists "Ground beef (not more than 30% fat" as the first ingredient. This product's PFS must also list the crediting information for "Ground beef (not more than 30% fat)."

   Ingredients: *Ground beef (not more than 30% fat)*, water, salt, less than 2% brown sugar, spices, monosodium glutamate, sugar, flavorings, sodium nitrate.

2. The creditable meat ingredient listed on the product's PFS must have a similar description to a food item in the FBG. For the example above, "Ground beef (not more than 30% fat" matches the description for "Beef, Ground, fresh or frozen, Market Style, no more than 30% fat (Like IMPS #136), cooked lean meat" on page 1-17 of the FBG.

3. The creditable amount cannot exceed the finished weight of the product, i.e., the cooked weight ready for serving. For example, a 1-ounce serving of beef jerky cannot credit for more than 1 ounce equivalent.

Ground pork and beef ingredients must include the percent fat because the fat content has a direct correlation to the cooking yield. To credit in Child Nutrition Programs, the fat content of ground beef or ground pork in dried meat products cannot exceed 30 percent. Products that do not indicate the fat percentage do not credit. For example, the dried pork stick below cannot credit as the meat/meal alternates component because the creditable ingredients (pork) does not list the fat percentage, and does not match a description in the FBG.

> Ingredients: *Pork*, cane sugar, garlic (garlic, citric acid, ascorbic acid), contains 2% or less of: Spanish smoked paprika (paprika, rosemary extract), sea salt, natural flavors, sherry wine vinegar, red pepper chili flakes, celery powder, in collagen casing.

For information on CN labels and PFS forms, see "Child Nutrition (CN)" labels and "Product formulation statements" in section 2.

The requirements for crediting dried meat are summarized in USDA Memo SP 21-2019, CACFP 08-2019 and SFSP 07-2019: *Crediting Shelf-Stable, Dried and Semi-Dried Meat, Poultry, and Seafood Products in the Child Nutrition Programs*. For additional guidance on crediting dried meat products, review the USDA's webinar, *Moving Forward: Update on Food Crediting in Child Nutrition Programs with Guidance for Dried Meat Products*.

Crediting Nuts and Seeds

Creditable nuts and seeds include almonds, Brazil nuts, cashews, filberts, macadamia nuts, peanuts, pecans, walnuts, pine nuts, pistachios, and soy nuts. A 1-ounce serving of nuts and seeds credits as 1 ounce equivalent of the meat/meat alternates component. Acorn, chestnut, and coconut cannot credit as the meat/meat alternates component.

Roasted or dried soy beans credit the same as soy nuts. However, fresh soy beans (edamame) credit only as the vegetables component (legumes subgroup). For more information, see "Vegetable Subgroups at Lunch" in the "Vegetables Component" section.

Nuts and seeds at lunch

Nuts and seeds cannot credit for more than half of the meat/meat alternates component at lunch. SFAs must combine nuts and seeds with another food from the meat/meat alternates component to meet the full requirement for each grade group. For example, the lunch meal pattern for grades 9-12 requires 2 ounce equivalents of the meat/meat alternates component. A lunch for this grade group cannot contain more than 1 ounce equivalent of nuts or seeds, and must also include 1 ounce equivalent of another food from the meat/meat alternates component.

Nuts and seeds at breakfast

The SBP meal pattern does not require the meat/meat alternates component. SFAs may substitute 1 ounce equivalent of the meat/meat alternates component (including nuts and seeds) for 1 ounce equivalent of the grains component, after offering the minimum daily 1 ounce equivalent of the grains component. A 1-ounce serving of nuts or seeds offered as a grain substitute credits as 1 ounce equivalent of the grains component. For more information, see "Meat/Meat Alternates at Breakfast" in this section.

Crediting Nut and Seed Butters

Creditable nut and seed butters include almond butter, cashew nut butter, peanut butter, sesame seed butter, soy nut butter, and sunflower seed butter. Reduced-fat peanut butter must meet the FDA's standards of identity for peanut butter (21 CFR 164.150), which requires that products contain at least 90 percent peanuts.

The serving size for nut and seed butters is based on **volume** (tablespoons), not weight (ounces). A serving of 2 tablespoons of nut or seed butter credits as 1 ounce equivalent of the meat/meat alternates component.

Menu planners should consider the appropriateness of the serving size for each grade group. It may be unreasonable to provide the full serving of a nut or seed butter in one menu item, such as a peanut butter sandwich. For example, the lunch meal pattern for grades 9-12 requires 4 tablespoons (¼ cup) of peanut butter, which is a large amount for two slices of bread. The CSDE recommends providing a smaller portion of peanut butter and supplementing with another food from the meat/meat alternates component to provide the full serving. For example, the lunch menu could include:

- a sandwich made with 2 tablespoons of peanut butter (1 ounce equivalent of meat/meat alternates) served with ½ cup of yogurt (1 ounce equivalent of meat/meat alternates); or
- three half-sandwiches (made from three 1-ounce slices of WGR bread) that each contain 4 teaspoons of peanut butter (4 tablespoons total).

Note: If nut and seed butters are portioned by weight instead of volume, SFAs must use the appropriate weight conversion listed in the FBG. A 1-ounce serving (weight) of nut or seed butters does not provide 1 ounce equivalent of the meat/meat alternates component. The FBG indicates that 1.1 ounces (2 tablespoons) of nut or seed butters is required to provide 1 ounce equivalent of the meat/meat alternates component. For more information, see "Volume versus weight" in section 2.

Table 3-11 indicates the tablespoons of nut and seed butters that equate to ounce equivalents of the meat/meat alternates component.

Table 3-11. Serving sizes for nut and seed butters

Meal pattern serving size of meat/meat alternates	Tablespoons [1]	Scoop (disher) size [2]	Weight equivalent [3]
¼ ounce equivalent (minimum creditable amount)	½	Closest is No. 100 (2 teaspoons)	0.275 ounces
½ ounce equivalent	1	Closest is No. 60 (3¼ teaspoons)	0.55 ounces
¾ ounce equivalent	1½	Closest is No. 40 (1⅔ tablespoons)	0.825 ounces
1 ounce equivalent	**2**	**No. 30 (2 tablespoons)**	**1.1 ounces**
1½ ounce equivalents	3	Closest is No. 20 (3⅓ tablespoons)	1.65 ounces
2 ounce equivalents	4	No. 16 (¼ cup)	1.2 ounces

[1] One tablespoon equals 3 teaspoons.
[2] Scoop equivalents are from the ICN's *Basics at a Glance Portion Control Poster*.
[3] Weight equivalents are from the USDA's *Food Buying Guide for Child Nutrition Programs*.

The CSDE's handout, *Crediting Nuts and Seeds in the NSLP and SBP*, summarizes the requirements for crediting nuts and seeds in school nutrition programs.

Crediting Surimi

Surimi is a pasteurized, ready-to-eat, restructured seafood product usually made from pollock (fish). Surimi is available in many forms and shapes, including chunks, shredded, and flaked. It does not require additional preparation. Surimi can be incorporated into a variety of menu items, such as seafood salads, sushi-style rolls, sandwiches, tacos, and ramen.

The amount of fish in surimi varies depending on the manufacturer and product. Surimi could contain as little as one-third seafood ingredient, and could include other creditable food ingredients. A 3-ounce serving of surimi credits as 1 ounce equivalent of the meat/meat alternates component. Table 3-12 shows additional crediting information.

Table 3-12. Crediting surimi seafood [1]

Surimi seafood (ounces)	Meat/meat alternates contribution
6.0	2 ounce equivalents
4.4	1½ ounce equivalents
3.0	1 ounce equivalent
2.0	½ ounce equivalent
1.0	¼ ounce equivalent

[1] The crediting ratio for surimi seafood differs based on portion size due to USDA rounding rules that require rounding down to the nearest ¼ ounce.

To credit surimi seafood differently from the ounce equivalents listed above, SFAs must obtain a CN label or manufacturer's PFS that documents how the crediting is determined. For example, the manufacturer's PFS might document that 1 ounce of a surimi seafood product credits as ½ ounce equivalent of the meat/meat alternates component.

The requirements for crediting surimi are summarized in USDA Memo SP 24-2019, CACFP 11-2019 and SFSP 10-2019: *Crediting Surimi Seafood in the Child Nutrition Programs*. For additional guidance on crediting surimi, review the USDA's webinar, *Additional Meat/Meat Alternate Options for CNPs: Crediting Tempeh and Surimi*.

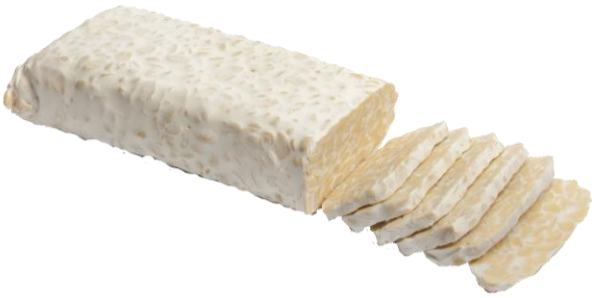
Crediting Tempeh

Tempeh is a highly nutritious fermented soybean cake traditionally made from whole soybeans. Tempeh may be used as a meat alternate in a variety of recipes, including stir-fries, sandwiches, and salads.

A 1-ounce serving of tempeh credits as 1 ounce equivalent of the meat/meat alternates component. This method of crediting applies only to tempeh products whose ingredients are limited to soybeans (or other legumes), water, tempeh culture, and for some varieties, vinegar, seasonings, and herbs. If a tempeh product contains other ingredients, SFAs must obtain a CN label or PFS to document crediting.

Varieties of tempeh that include other creditable foods as ingredients (such as brown rice, sunflower seeds, sesame seeds, flax seed, and vegetables) may also credit as the meat/meat alternates component, grains component, and vegetables component. To credit in school nutrition programs, a product must provide the minimum creditable quantities, i.e., ⅛ cup of vegetables and ¼ ounce equivalent of meat/meat alternates or grains. SFAs must obtain a CN label or manufacturer's PFS to document how much tempeh and other creditable foods these products contain. For more information, see "Documentation for Commercial Products" in section 2.

The requirements for crediting tempeh are summarized in USDA Memo SP 25-2019, CACFP 12-2019 and SFSP 11-2019: *Crediting Tempeh in the Child Nutrition Programs*. For additional guidance on crediting tempeh, review the USDA's webinar, *Additional Meat/Meat Alternate Options for CNPs: Crediting Tempeh and Surimi*.



Crediting Yogurt and Soy Yogurt

Yogurt and soy yogurt credit as the meat/meat alternates component. Yogurt includes plain yogurt, flavored yogurt, and yogurt with added fruit (either blended or on the bottom). Yogurt must meet the FDA's standards of identity for yogurt (21 CFR 131.200), low-fat yogurt (21 CFR 131.203), or nonfat yogurt (21 CFR 131.206).

The required serving size for yogurt is based on volume (cups) or weight (ounces) and is the same for all types, flavors, and fat contents. A ½-cup serving (volume) or 4 ounces (weight) credits as 1 ounce equivalent of the meat/meat alternates component.

Yogurt in smoothies

Yogurt credits as the meat/meat alternates component when served in smoothies made on site by the SFA. Yogurt in commercial smoothies does not credit. For more information on crediting smoothies, see "Fruit and Vegetable Smoothies" in the "Fruits Component" section.

Noncreditable Yogurt

Drinkable or squeezable yogurt and frozen yogurt do not credit in the meal patterns for school nutrition programs. The FDA's definition and standard of identity requires that yogurt must be "coagulated," not liquid. The FDA does not have a standard of identity for frozen yogurt. Yogurt tubes must be fully defrosted before they can be served.

Yogurt served to grades K-12 and preschoolers

The meal patterns for grades K-12 do not limit the amount of sugars in yogurt and soy yogurt. However, the meal patterns for preschoolers (ages 1-4) in the NSLP, SBP, and SSO require that yogurt and soy yogurt cannot contain more than 23 grams of total sugars per 6 ounces (no more than 3.83 grams per ounce).

If SFAs serve the same yogurt or soy yogurt to grades K-12 and preschoolers, these foods must comply with the preschool sugar limit for yogurt. The exception is when SFAs choose to follow the K-5 meal pattern for preschoolers and grades K-5 who eat in the same service area at the same time. For more information, see "Serving the same foods to grades K-12 and preschoolers" and "Preschoolers and grades K-5 eating together" in section 1, and the CSDE's handout, *Crediting Yogurt for Preschoolers in the NSLP, SBP, and ASP*.

For additional guidance on the meal patterns for preschoolers, see the CSDE's *Menu Planning Guide for Preschoolers in the NSLP, SBP, and ASP*. For information on the differences between the two grade groups, see the CSDE's handout, *Comparison of Meal Pattern Requirements for Preschoolers and Grades K-12 in the NSLP and SBP*.

Crediting Meat/Meat Alternates in Commercial Products

SFAs must ensure that commercial products (such as pizza, chicken nuggets, and cheese ravioli) provide the required amount of the meat/meat alternates component for each grade group. For example, to credit commercial chicken nuggets as 2 ounce equivalents of the meat/meat alternates component, the SFA must obtain a CN label or manufacturer's PFS documenting that one serving of the product contains 2 ounces of cooked chicken. Commercial products cannot credit as the meat/meat alternates component without this documentation.

Menu planners cannot determine the amount of the meat/meat alternates component in a commercial product by reading the Nutrition Facts label or ingredients statement. Protein content is not an indicator that a commercial product credits as the meat/meat alternates component because the grams of protein listed on the product's Nutrition Facts label do not correspond to the ounce equivalents of the meat/meat alternates component contained in the product. In addition to protein, meat and meat alternates contain other components such as water, fat, vitamins, and minerals. Protein is also found in varying amounts in other ingredients (such as cereals, grains, and many vegetables) that may be part of a commercial meat or meat alternate product.

The terms "protein" and "meat/meat alternate" are often used interchangeably, but they are not the same. The USDA's meal patterns require a specific amount of the meat/meat alternates component, not a specific amount of protein. The only exceptions are commercial tofu and tofu products, which must contain at least 5 grams of protein in a 2.2-ounce serving by weight. For more information, see "Commercial Tofu and Tofu Products" in this section.

SFAs must maintain a CN label or manufacturer's PFS on file to document the meal pattern contribution of commercial products. For more information, see "Documentation for Commercial Products" in section 2.

The CSDE's handout, *Crediting Commercial Meat/Meat Alternate Products in the NSLP and SBP*, summarizes the requirements for crediting commercial meat/meat alternates in school nutrition programs.

Crediting Combination Entrees

Combination entrees are foods that contain more than one food component, such as tacos, lasagna, and chicken stir-fry. For example, beef lasagna contains the grains component (pasta), the meat/meat alternates component (ground beef and cheese), and the vegetables component (tomato sauce). Combination entrees generally cannot be separated (such as pizza or a burrito) or are not intended to be separated (such as hamburger on a bun or turkey sandwich).

When the components of a combination entree can be separated, SFAs may choose whether to allow students to select the individual food components for OVS. For example, if the menu includes a turkey sandwich on a WGR roll, the SFA could allow students to select only the WGR roll or only the turkey. This option works best with made-to-order foods such as sandwiches from a deli bar. It may not be practical for foods that are already assembled, such as pre-made sandwiches. These menu planning decisions affect students' selection of reimbursable meals when implementing OVS. For more information, see the CSDE's guide, *Offer versus Serve Guide for School Meals*.

For combination foods made on site, SFAs must determine the meat/meat alternates contribution from the school's standardized recipe, using the ingredient yields listed in the FBG. For commercial combination entrees that are processed or contain added ingredients, SFAs must obtain a CN label or manufacturer's PFS stating the amount of the meat/meat alternates component per serving.

For additional guidance on accepting product documentation for the meat/meat alternates component, see "Documentation for Commercial Products" in section 2, the CSDE's handout, *Accepting Processed Product Documentation,* and CSDE Operational Memorandum No. 10-15: *Guidance for Accepting Processed Product Documentation for Meal Pattern Requirements.*

Noncreditable Meat/Meat Alternates

Examples of foods that do not credit as the meat/meat alternates component include, but are not limited to:

- bacon;
- commercial canned soups, e.g., beef barley, beef noodle, turkey or chicken noodle, and turkey or chicken rice;
- cream cheese;
- drinkable yogurt;
- egg whites;
- frozen yogurt;
- imitation cheese;
- products made with tofu that are not easily recognized as meat substitutes;
- sour cream;
- tofu that contains less than 5 grams of protein in 2.2-ounce serving by weight; and
- yogurt or soy yogurt in commercial smoothies.

SFAs should use the FBG to identify foods that credit as the meat/meat alternates component. For more information, see "Determining Food Yields" in section 2.

For more information, see "Noncreditable Foods" at the beginning of this section, the CSDE's handout, *Noncreditable Foods for Grades K-12 in the NSLP and SBP*, and the CSDE's Crediting Foods in School Nutrition Programs webpage.

Common Compliance Issues with the Meat/Meat Alternates Component

Meals must comply with the USDA's requirements for the meat/meat alternates component. The list below includes common compliance issues with the meat/meat alternates component, based on the CSDE's Administrative Review of school nutrition programs.

- The menu planner credits commercial combination foods (such as chicken nuggets and pizza) without a CN label or PFS documentation. Commercial products without this documentation cannot credit in school nutrition programs. For more information, see "Crediting Meat/Meat Alternates in Commercial Products" in this section.

- The menu planner credits deli meats and other meats on an ounce-for-ounce basis, instead of according to the product's CN label or PFS. SFAs must credit meats based on the specified serving weight in the product's CN label or PFS. For more

information, see "Crediting Deli Meats, Hot Dogs, and Sausage" and "Crediting Meat/Meat Alternates in Commercial Products" in this section.

- The menu planner credits nut and seed butters based on weight, instead of volume. SFAs must serve 2 tablespoons of nut or seed butters to credit as 1 ounce equivalent. For more information, see "Crediting Nut and Seed Butters" in this section.

- The menu planner credits regular bacon and cream cheese. These foods are high in fat and low in protein, and do not contribute to the meat/meat alternates component. **Note:** Other types of bacon such as turkey bacon might credit, based on the product's CN label or PFS. For more information, see "Noncreditable Meat/Meat Alternates," "Crediting Deli Meats, Hot Dogs, and Sausage" and "Crediting Meat/Meat Alternates in Commercial Products" in this section.

- The recipe used by the kitchen staff is not the same as the recipe used by the menu planner. Therefore, the meat/meat alternate credits differently. SFAs must maintain accurate standardized recipes on file that reflect the foods being prepared in the kitchen. For more information, see "Standardized Recipes" in section 2.

SFAs must plan the meat/meat alternates component to avoid these compliance issues.

Vegetables Component

The lunch meal pattern requires a daily serving of the vegetables component and weekly servings of the five vegetable subgroups. SFAs may credit legumes as the vegetables component or the meat/meat alternates component, but not both in the same meal. For more information, see "Crediting Legumes as Vegetables" in this section and "Crediting Legumes as Meat/Meat Alternates" in the "Meat/Meat Alternates Component" section.

The breakfast meal pattern does not require the vegetables component. SFAs may substitute vegetables for the fruits component when the breakfast menu meets certain conditions. For more information, see "Vegetables at Breakfast" in this section.

The vegetables component includes fresh, frozen, canned, and rehydrated dried vegetables; and pasteurized full-strength vegetable juice. A serving of cooked vegetables must be drained. Dried vegetables (such as potato flakes) credit when rehydrated only if the product's PFS provides specific documentation on the amount of vegetables per serving. For more information, see "Crediting Canned Vegetables" and "Crediting Dried Vegetables" in this section.

Serving Size for Vegetables

All vegetables credit based on volume (cups) with two exceptions. Raw leafy greens such as lettuce or spinach credit as half the volume served. Tomato paste and tomato puree credit based on the volume as if reconstituted, as indicated in the FBG, i.e., 1 tablespoon of tomato paste or 2 tablespoons of tomato puree credit as ¼ cup of vegetables (red/orange subgroup). Table 3-13 summarizes the required servings of the vegetables component for grades K-12 at lunch and breakfast for five-day and seven-day weeks.

A menu item must provide a minimum of ⅛ cup of vegetables to credit toward part of the vegetables component. If the amount is less than the full serving, the meal must include additional vegetables to meet the full requirement for each grade group. For example, the lunch meal pattern for grades K-5 requires ¾ cup of vegetables. If a menu item provides ¼ cup of vegetables, the lunch must include another menu item with at least ½ cup of vegetables.

Vegetables offered in amounts less than ⅛ cup are not included in the calculation of daily and weekly vegetable requirements, but count toward the weekly dietary specifications. For more information, see "Dietary Specifications" in section 1.

SFAs must ensure that a serving of vegetables contains the appropriate amount for each grade group, using the yields listed in the FBG. When crediting vegetables, the menu planner must round down the amount of vegetables to the nearest ⅛ cup (2 tablespoons). For example, a recipe that provides 2½ tablespoons of corn (0.156 cup) per serving credits as 2 tablespoons (0.125 or ⅛ cup) of the vegetables component.

The menu planner determines the serving size and number of servings needed to meet the vegetables component for each grade group. SFAs may choose to serve one vegetable or a combination of several vegetables to meet the daily lunch requirement. For example, a lunch menu for grades K-5 could meet the minimum daily ¾-cup serving of vegetables with ¾ cup of broccoli, or ½ cup of broccoli and ¼ cup of carrots. These menu planning decisions affect students' selection of reimbursable meals when implementing OVS. The CSDE encourages SFAs to offer all vegetables in ½-cup servings and allow students to choose two servings; this makes it easier for students to choose a reimbursable meal. For more information, see the CSDE's guide, *Offer versus Serve Guide for School Meals*.

Table 3-13. Required daily and weekly servings of the vegetables component

Grades	Lunch				Breakfast [1]			
	Five-day week		Seven-day week		Five-day week		Seven-day week	
	Daily	Weekly [2]	Daily	Weekly [2]	Daily	Weekly	Daily	Weekly
K-5	¾ cup	3¾ cups	¾ cup	5¼ cups	0	0	0	0
6-8	¾ cup	3¾ cups	¾ cup	5¼ cups	0	0	0	0
9-12	1 cup	5 cups	1 cup	7 cups	0	0	0	0

[1] The SBP meal pattern does not require the vegetable component. . Through September 30, 2019, SFAs may substitute vegetables from any subgroup for the fruits component. For more information, see "Vegetables at Breakfast" in this section.

[2] The weekly amounts include minimum servings of five vegetable subgroups: dark green, red/orange, beans and peas (legumes), starchy, and "other." For more information, see the lunch meal patterns in section 1 and "Vegetable Subgroups at Lunch" in this section.

Identifying serving sizes for vegetables

SFAs must use meal identification signage to instruct students on how much food to select from each component daily for a reimbursable meal, based on the planned serving sizes for each grade group. For example, if a high school allows students to select two ½-cup servings of vegetables to meet the minimum daily 1-cup serving for grades 9-12, the cafeteria signage must clearly communicate that students may select up to two servings of vegetables with each meal. This signage must be on the serving line where the vegetable selections are located. For more information, see "Meal Identification Signage" in section 5.

Vegetables at Breakfast

On January 22, 2020, the USDA issued USDA Memo SP 06-2020: *School Breakfast Program: Continuation of the Substitution of Vegetables for Fruit Flexibility*. This memo supersedes the December 20, 2019, deadline in USDA Memo SP 16-2019: *School Breakfast Program: Substitution of Vegetables for Fruit*, and extends the flexibility to offer any vegetables for the fruits component thorough June 30, 2021. SFAs may substitute any vegetables (including potatoes and other starchy vegetables) for the fruits component at any breakfast, without including vegetables from other subgroups in the weekly menu. USDA Memo SP 06-2020 also supersedes the information in CSDE Operational Memorandum 13-19: *Substitution of Vegetables for the Fruits Component in the School Breakfast Program (SBP) for Grades K-12*, dated September 26, 2019.

Prior to USDA Memo SP 16-2019, the USDA SBP regulations (7 CFR 220.8 (c)) allowed SFAs to substitute vegetables from the dark green, red/orange, beans and peas (legumes), or "other" vegetable subgroups for the fruits component at any time. However, SFAs could not offer starchy vegetables unless the weekly breakfast menu also included at least 2 cups of nonstarchy vegetables.

Note: On March 18, 2019, USDA Memo SP 16-2019 indicated that SFAs could substitute any vegetables (including starchy vegetables) for the required 1 cup of the fruits component through September 30, 2019. The CSDE provided guidance on this requirement in CSDE Operational Memorandum 13-19: *Substitution of Vegetables for the Fruits Component in the School Breakfast Program (SBP) for Grades K-12*. On December 3, 3019, the USDA notified state agencies that the short-term continuing resolution that funds federal agencies, *Further Continuing Appropriations Act, 2020, and Further Health Extenders Act of 2019* (P.L. 116-69), enacted November 21, 2019, extended this flexibility through December 20, 2019. On January 22, 2020, USDA Memo SP 06-2020, which superseded the December 20, 2019, deadline in USDA Memo SP 16-2019, and extended the flexibility to offer any vegetables for the fruits component thorough June 30, 2021.

Vegetable Subgroups at Lunch

The lunch meal pattern requires weekly servings of five vegetable subgroups based on the recommendations of the *Dietary Guidelines for Americans* and the vegetables group in Choose MyPlate. The five subgroups include:

- **dark green** such as bok choy, broccoli, collard greens, dark green leafy lettuce, kale, mesclun, mustard greens, romaine lettuce, spinach, turnip greens, and watercress;
- **red/orange** such as acorn squash, butternut squash, carrots, pumpkin, tomatoes, tomato juice, and sweet potatoes;
- **beans/peas (legumes)** such as black beans, black-eyed peas (mature, dry), garbanzo beans (chickpeas), kidney beans, lentils, navy beans, soy beans, split peas, and white beans;
- **starchy** such as black-eyed peas (not dry), corn, cassava, green bananas, green peas, green lima beans, whole hominy (canned, drained), jicama, parsnips, plantains, taro, water chestnuts, and white potatoes; and
- **other**, a distinct grouping of food items classified by the *Dietary Guidelines for Americans*, including all other vegetables such as artichokes, asparagus, avocado, cooked bean sprouts (raw sprouts cannot be served for food safety reasons), beets, Brussels sprouts, cabbage, cauliflower, celery, cucumbers, eggplant, green beans, green peppers, iceberg lettuce, mushrooms, okra, onions, turnips, wax beans, and zucchini. SFAs may meet the "other" vegetables requirement with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups but not the starchy subgroup.

SFAs may offer the vegetable subgroups in any order and amount throughout the week, as long as the lunch menu meets the minimum weekly requirements. There is no daily requirement for the specific vegetable subgroups. SFAs may choose to break up the subgroup requirements throughout the week and offer the same vegetable subgroup several different times during the week if:

- the weekly menu meets the full vegetable subgroup requirements; and
- each day's lunch includes the minimum serving of vegetables.

For example, for a five-day menu, SFAs can meet the weekly ½-cup requirement for legumes by offering a black bean salsa on Monday that provides ¼ cup of beans and a bean burrito on Thursday that provides ¼ cup of beans. The menu must also include additional vegetable

servings so that each meal meets the minimum daily vegetables for each grade group (¾ cup for grades K-5 and 6-8, and 1 cup for grades 9-12).

Note: All students must have access to the appropriate quantities of all vegetable subgroups each week. If a school has multiple serving lines, each serving line must offer all vegetable subgroups on a weekly basis. For more information, see "Avoiding Vegetable Subgroup Conflicts" in this section.

Table 3-14 lists commonly eaten vegetables in each vegetable subgroup. For guidance and examples of how to use the FBG to determine purchasing and crediting information for vegetables, see chapter 2 of the USDA's guide, *Menu Planner for School Meals*.

Table 3-14. Vegetable subgroups

Dark Green: fresh, frozen, and canned

- Arugula
- Beet greens
- Bok choy
- Broccoli
- Broccoli rabe (rapini)
- Broccolini
- Butterhead lettuce (boston, bibb)
- Chicory
- Cilantro
- Collard greens
- Endive
- Escarole Fiddle heads
- Grape leaves
- Kale
- Mesclun
- Mustard greens
- Parsley
- Spinach
- Swiss chard
- Red leaf lettuce
- Romaine lettuce
- Turnip greens
- Watercress

Red/orange: fresh, frozen, and canned

- Acorn squash
- Butternut squash
- Carrots (orange only)
- Cherry peppers
- Hubbard squash
- Orange peppers
- Pimientos
- Pumpkin
- Red chili peppers
- Red peppers
- Salsa (all vegetables)
- Spaghetti squash
- Sweet potatoes/yams
- Tomatoes
- Tomato juice
- Winter squash

Beans and peas (legumes): canned, frozen, or cooked from dry [1]

- Black beans
- Black-eyed peas (mature, dry)
- Cowpeas
- Edamame
- Fava beans
- Garbanzo beans (chickpeas)
- Great northern beans
- Kidney beans
- Lentils
- Lima beans, (mature, dry)
- Mung beans
- Navy beans
- Pink beans
- Pinto beans
- Red beans
- Refried beans
- Soy beans (mature, dry)
- Split peas
- White beans

[1] The legumes subgroup refers to dry mature beans, lentils, and split peas. It does not include green peas, green lima beans, wax beans, and green (string) beans.

Table 3-14. Vegetable subgroups, *continued*

Starchy: fresh, frozen, and canned

- Black-eyed peas, fresh (not dry)
- Corn
- Cassava
- Cowpeas, fresh (not dry)
- Field peas, fresh (not dry)
- Green bananas
- Green peas
- Hominy (whole, canned, drained),
- Jicama
- Lima beans, green (not dry)
- Parsnips
- Pigeon peas, fresh (not dry)
- Plantains
- Potatoes
- Poi
- Taro
- Water chestnuts
- Yautia (tannier)

Other: fresh, frozen, and canned

- Artichokes
- Asparagus
- Avocado
- Bamboo shoots
- Bean sprouts, cooked only (for food safety), e.g., alfalfa, mung
- Beans, green and yellow
- Beets
- Breadfruit
- Brussels sprouts
- Cabbage (green, red, celery, napa)
- Cactus (nopales)
- Cauliflower
- Celeriac
- Celery
- Chayote (mirliton)
- Chives
- Cucumbers
- Daikon (oriental radish)
- Eggplant
- Fennel
- Garlic
- Green chili peppers
- Green onions (scallions)
- Green peppers
- Horseradish
- Iceberg lettuce
- Kohlrabi
- Leeks
- Mushrooms
- Okra
- Olives
- Pepperoncini
- Pickles (cucumber)
- Purple peppers
- Radishes
- Rhubarb
- Rutabagas
- Shallots
- Sauerkraut
- Seaweed
- Snap peas
- Snow peas
- Spaghetti squash
- Tomatillo
- Turnips
- Wax beans
- Yellow peppers
- Yellow summer squash
- Zucchini squash
- Onions (white, yellow, red)
- Peas in pod, e.g., snap peas, snow peas

Additional Vegetables

In addition to the five subgroups, the lunch meal pattern includes another category of "additional" vegetables that are required to meet the minimum weekly amounts of vegetables for each grade group. The serving sizes for the five subgroups do not add up to the total weekly vegetables requirement for lunch. The additional vegetables category makes up the difference.

Table 3-15 shows the weekly lunch meal pattern requirements for the vegetable subgroups and the amount of additional vegetables needed for each grade group. For example, the vegetable subgroups in the five-day meal pattern for grades K-5 and 6-8 add up to 2¾ cups per week. Since both grade groups require 3¾ cups of vegetables per week, SFAs must provide 1 cup of additional vegetables to meet the minimum weekly total. These additional vegetables can come from any of the five subgroups.

Table 3-15. Weekly meal pattern requirements for vegetables at lunch

Vegetables (cups)	Five-day week		Seven-day week	
	Grades K-5 and 6-8	Grades 9-12	Grades K-5 and 6-8	Grades 9-12
Dark green	½	½	½	½
Red/orange	¾	1¼	¾	1¼
Beans/peas (legumes)	½	½	½	½
Starchy	½	½	½	½
Other	½	¾	½	¾
Subtotal	**2¾**	**3½**	**2¾**	**3½**
Additional vegetables required for weekly total [1]	**1**	**1½**	**2½**	**3½**
Total vegetables (weekly)	**3¾**	**5**	**5¼**	**7**

[1] Additional vegetables can come from any of the five subgroups (dark green, red/orange, legumes, starchy, and other).

Ensuring Compliance with the Vegetable Subgroups

SFAs must ensure that lunch menus offer students access to the required amounts of the vegetable subgroups each week. The guidance below helps SFAs meet this requirement.

Offering vegetable subgroups on multiple serving lines

When SFAs have multiple serving lines or offer a variety of meals, the USDA requires that all food components must be available to all students on every serving line, in at least the minimum required amounts. For example, when schools have multiple serving lines with different menu items, each serving line must offer all of the vegetable subgroups during the week and provide the minimum weekly servings of the grains and meat/meat alternates components.

For the purposes of meeting the NLSP meal pattern requirements, menu planners should think of each serving line as its own entity. The daily and weekly requirements must be in place for each serving line. The following example shows how this requirement applies to the weekly vegetable subgroups.

A school has three different lunch lines, including a hot lunch line, a deli line, and a grill line. Monday's hot lunch menu features baked beans (legumes subgroup) as the daily vegetables. To meet the weekly vegetable subgroups requirement, baked beans (or another vegetable from the same vegetable subgroup) must also be available on the other two serving lines. For example, Monday's menu for the deli line and grill line must include baked beans or another legume, such as garbanzo beans or lentils.

It is not acceptable for the SFA to post signs on the deli line and grill line directing students to select the vegetable subgroup choice from a **different** serving line. Each serving line must offer the full meal, including all vegetable subgroups on a weekly basis.

A best practice to ensure that school lunch menus meet the weekly vegetable subgroups is for each serving line to offer a daily vegetable subgroup "rainbow" tray that contains a vegetable from each subgroup, such as carrots (red/orange), broccoli (dark green), corn (starchy), cucumbers (other), and marinated chickpeas (legumes). Offering a daily rainbow tray on each serving line meets the NSLP meal pattern requirements for the weekly vegetable subgroups.

Offering vegetable subgroups on one serving line with multiple lunch choices

When SFAs offer a variety of meals on the same serving line, the USDA requires that all food components must be available to all students for every lunch, in at least the minimum required amounts. Each lunch choice on the serving line must offer students access to the same daily

vegetable subgroups, unless that subgroup is offered again later in the week or the school offers a daily rainbow tray.

For example, a school offers a hot lunch choice and cold lunch choice on the same lunch line. Tuesday's menu offers corn (starchy subgroup) as the daily vegetables component for the hot lunch menu and baby carrots (red/orange subgroup) as the daily vegetables component for the cold lunch menu. If the cold lunch menu does not offer corn (or another starchy vegetable) later in the week, it must offer corn (or another starchy vegetable) on Tuesday. Otherwise, the students selecting cold lunch on Tuesday do not have access to all of the required weekly vegetable subgroups.

Note: As with multiple serving lines, offering a daily rainbow tray is a best practice to meet the NSLP meal pattern requirements for the weekly vegetable subgroups.

Avoiding vegetable subgroup conflicts

School menus must meet the vegetable subgroup requirements on a weekly basis. The vegetable subgroup requirements do not apply to each individual day. Menu planners may choose what combinations of vegetable subgroups to offer each day. Each subgroup must be available to all students in at least the minimum quantities during the week.

The lunch menu cannot require students to choose one subgroup over another on a single day if these subgroups are not offered again during the week. If the daily lunch menu requires students to choose between two different subgroups, there is a vegetable subgroup conflict. To resolve this conflict, the SFA must make these subgroups available for student selection on another day that week. Table 3-16 shows an example of a vegetable subgroup conflict.

Table 3-16. Example of vegetable subgroup conflict

Entree item (student chooses one)	Portion size	Subgroup contribution
Chili con carne with beans	1 cup (contains ½ cup of kidney beans)	½ cup of legumes
Chicken Caesar salad	2 cups of romaine lettuce 2 ounce equivalents of grilled chicken	1 cup of dark green vegetables [1]

[1] Raw leafy greens credit as half the volume served, e.g., 1 cup of romaine lettuce credits as ½ cup of the vegetables component (dark green subgroup).

In this example, the menu offers a choice of two entrees with different vegetable subgroups on the same day. The dark green vegetable subgroup is offered in one entree item (romaine lettuce in the chicken Caesar salad) and the beans/peas subgroup is offered in another entree item (kidney beans in the chili con carne). Since students may choose only one entree, this menu has a vegetable subgroup conflict. To resolve this conflict, the menu must provide another opportunity later in the week for students to select either dark green vegetables or legumes. The menu will meet the vegetable subgroup requirement if:

- the SFA serves a legume and a dark green vegetable on another day (not as part of the entree); or
- the SFA chooses to credit the kidney beans (legumes) as the meat/meat alternates component and serves legumes on another day as the vegetables component.

SFAs should review all lunch menus to ensure that each serving line offers the minimum weekly amount of each vegetable subgroup. For more information, see "Vegetable Subgroups at Lunch" in this section.

Vegetable subgroup substitutions

SFAs must train school food service staff on how to make appropriate substitutions within each vegetable subgroup. Substitutions must be from the **same** vegetable subgroup, unless the SFA offers a daily rainbow tray that contains all five subgroups. For example, if the kitchen runs out of broccoli, school food service staff must substitute another vegetable from the dark green vegetables subgroup. If the SFA does not offer all vegetable subgroups each day, a vegetable substitution from a different subgroup could cause the menu to be noncompliant with the weekly vegetable subgroups requirement.

Menu Planning Tips for Vegetable Subgroups

The simplest strategy to ensure that menus meet the weekly vegetable subgroups requirement is to develop a vegetable subgroup cycle menu. SFAs may offer the weekly vegetable subgroup choices in a variety of ways, such as:

- one choice from a different vegetable subgroup each day;
- more than one choice from a different vegetable subgroup each day;
- one choice from each of the five subgroups every day;
- more than one choice from each of the five subgroups every day.

SFAs may also choose to offer the same foods from a particular subgroup each week. For example, the red/orange subgroup could be carrots and sweet potatoes every week. However, the USDA encourages schools to include a variety of choices from the vegetable subgroups for best nutrition.

The following examples show how SFAs could develop a vegetable subgroup cycle menu that meets the weekly vegetable subgroups. Table 3-17 shows a sample cycle menu that includes two daily choices from a different subgroup each day. SFAs could also decide to offer only one daily choice or more than one daily choice. Another option is to allow the kitchen manager the flexibility to select the daily vegetable choice or choices for that day's specified subgroup. This allows for more flexibility based on the planned menu items and the cost, seasonality and availability of the vegetables within the daily subgroup.

The disadvantages of serving vegetables from only one subgroup each day include less variety and less colorful meals. Since colorful meals are more attractive and eye appealing to students, SFAs may want to offer choices from at least two different vegetable subgroups each day.

	Table 3-17. Sample cycle menu 1: Daily vegetable subgroups				
	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Dark green	Red/orange	Legumes	Starchy	Other
	Broccoli Red leaf lettuce	Carrots Sweet potato	Chick peas Edamame	Corn Peas	Cucumbers Green beans
Week 2	Red/orange	Legumes	Starchy	Other	Dark green
	Orange peppers Butternut squash	Lentils Kidney beans	Water chestnuts Red potatoes	Cauliflower Cabbage	Spinach Romaine lettuce
Week 3	Legumes	Starchy	Other	Dark green	Red/orange
	Split peas Black beans	Corn Potatoes	Celery Green peppers	Boston lettuce Kale	Acorn squash Tomatoes
Week 4	Starchy	Other	Dark green	Red/orange	Legumes
	Peas Lima beans	Beets Zucchini	Broccoli Mesclun	Carrots Tomatoes	Split peas Navy beans

Table 3-18 shows a sample cycle menu that includes choices from all five subgroups every day. SFAs could choose to do this in a variety of ways that include some or all of the following:

- allowing students to self-serve from a vegetable bar, if a salad bar unit is available;
- allowing students to self-serve from vegetable "rainbow trays" on the serving line that contain pre-portioned vegetables from each subgroup; and
- serving hot vegetable choices to students from the lunch lines.

SFAs can include all required subgroups every day or throughout the week if all students have access to each vegetable subgroup on a weekly basis. These options provide extensive variety and more colorful and attractive meals.

As with the previous example, SFAs could also decide to offer only one daily choice or more than one daily choice, and allow the kitchen manager the flexibility to select the daily vegetable choice or choices.

Table 3-18. Sample cycle menu 2: daily Vegetable bar or rainbow trays

Vegetable subgroup	Monday	Tuesday	Wednesday	Thursday	Friday
Dark green	Broccoli Red leaf lettuce	Spinach Romaine lettuce	Boston lettuce Kale	Broccoli Mesclun	Bok choy Green leaf lettuce
Red/ orange	Carrots Sweet potato	Orange peppers Butternut squash	Acorn squash Tomatoes	Carrots Tomatoes	Red peppers Sweet potato
Legumes	Chick peas Edamame	Lentils Kidney beans	Split peas Navy beans	Split peas Black beans	Garbanzo beans Kidney beans
Starchy	Corn Peas	Water chestnuts Red potatoes	Jicama Potatoes	Peas Lima beans	Plantains Cassava
Other	Cucumbers Green beans	Cauliflower Cabbage	Celery Green peppers	Beets Zucchini	Snow peas Summer squash

Crediting Canned Vegetables

A serving of cooked vegetables must be drained. For example, a serving of canned corn cannot include the water in which it is packed, and a serving of baked beans cannot include the sauce in which it is packed.

Many canned vegetables are high in sodium. To help school menus comply with the weekly sodium limits, menu planners should read product labels and purchase varieties of canned vegetables that are lower in sodium. For information on the dietary specifications for sodium, see "Limiting Sodium" in section 6.

Crediting Raw Leafy Greens

Raw leafy greens credit as half the volume served. For example, ½ cup of raw leafy greens credits as ¼ cup of the vegetables component. Examples of raw leafy greens include kale, greens (e.g., beet, collard, mustard, and turnip), spinach, arugula, and lettuce such as iceberg, romaine, Boston, Bibb, red leaf, and spring mix.

Cooked leafy greens (such as spinach and kale) and roasted or dried leafy greens (such as roasted kale) credit based on the volume served. For example, ½ cup of cooked spinach or roasted kale credits as ½ cup of the vegetables component (dark green subgroup).

Crediting Vegetable Juice

Vegetable juice must be pasteurized 100 percent full-strength vegetable juice or a combination of vegetable and fruit juices. It can be fresh, frozen, or made from concentrate. The name of the full-strength fruit juice on the label must include one of the following terms: "juice," "full-strength juice," "100 percent juice," "reconstituted juice," or "juice from concentrate." The statements "natural" and "organic" do not indicate that a juice is full strength.

At lunch, vegetable juice credits toward the vegetable subgroups based on the type of vegetables it contains. For example, tomato juice credits toward the red/orange subgroup. The crediting of juice blends containing two or more different vegetable juices depends on whether the vegetables are from the same or different subgroups.

- **Same subgroup:** Full-strength vegetable juice blends that contain vegetables from the same subgroup contribute toward that vegetable subgroup. For example, a full-strength carrot/tomato vegetable juice blend credits toward the red/orange subgroup because both vegetables are from the red/orange vegetable subgroup.

- **Different subgroup:** Vegetable juice blends containing vegetables from more than one subgroup contribute to the "other" vegetable subgroup. For example, a full-strength vegetable juice blend containing carrots (red/orange), spinach (dark green), tomato (red/orange), and watercress (dark green) credits toward the "other" subgroup.

Vegetable and fruit juice blends credit if they are a combination of full-strength vegetable juices or full-strength vegetable and fruit juices. For information on crediting vegetable and fruit juice blends, see "Juice Blends" in the "Fruits Component" section.

The *Dietary Guidelines for Americans* recommends serving whole vegetables more often than juice. Vegetable juice is often high in sodium and does not provide the same nutritional benefits as whole vegetables.

Weekly limit for vegetable juice

Vegetable juice cannot exceed half of the weekly amount of vegetables offered at lunch. Vegetable juice together with fruit juice (including fruit/vegetable juice blends) cannot exceed half of the weekly amount (cups) of fruits offered at breakfast. For more information, see "Weekly Juice Limits at Lunch" and "Weekly Juice Limits at Breakfast" in section 4.

Crediting Legumes as Vegetables

SFAs may credit legumes as the vegetables component or the meat/meat alternates component, but not both in the same meal. SFAs must determine in advance how to credit legumes in a meal. For information on crediting legumes as the meat/meat alternates component, see "Crediting Legumes as Meat/Meat Alternates" in the "Meat/Meat Alternates Component" section.

Legumes credit as the vegetables component based on the volume (cups) served. For example, ½ cup of kidney beans credits as ½ cup of the legumes subgroup. A menu item must provide at least ⅛ cup of legumes to credit toward part of the vegetables component. If the amount is less than the full serving, the meal must include additional vegetables to meet the full serving for each grade group. For more information, see "Serving Size for Vegetables" in this section.

A serving of legumes must contain the minimum required amount of beans, excluding other ingredients such as sauce and pork fat. For example, a ½-cup serving of baked beans that contains ⅛ cup of sauce and pork fat credits as only ⅜ cup of the vegetables component. For more information, see "Vegetables with Added Ingredients" in this section.

Note: Peanuts are legumes that credit only as the meat/meat alternates component. For more information, see "Nuts and Seeds" in the "Meat/Meat Alternates" section.

Crediting roasted or dried legumes as vegetables

Roasted or dried legumes, such as chick peas and soy beans, credit as the legumes subgroup based on the volume (cups) served. For example, ¼ cup of roasted or dried legumes credits as ¼ cup of the legumes subgroup. Menu planners may credit roasted or dried legumes toward the minimum weekly ½-cup requirement of legumes for all grades at lunch.

The USDA recommends that SFAs use discretion when offering snack-type legumes (such as individually wrapped soy nuts) as part of reimbursable meals, due to their perception as snack foods. While these types of products credit in school meals, they may be better suited for meals served off site, such as bagged lunches for field trips.

For information on crediting roasted or dried legumes as the meat/meat alternates component, see "Crediting Roasted or Dried Legumes as Meat/Meat Alternates" in the "Meat/Meat Alternates Component" section.

Crediting legumes in recipes as vegetables

A recipe must provide at least ⅛ cup of legumes per serving to credit toward the vegetables component. The menu planner determines a recipe's crediting information for the vegetables component by dividing the total volume (cups) of beans in the recipe by the number of servings, then rounding down to the nearest ⅛ cup. Table 3-19 shows an example of how to calculate the vegetable contribution of legumes in a recipe.

For assistance with recipe calculations, menu planners can use the information on equivalent volume measures in the ICN's *Basics at a Glance Portion Control Poster,* and the decimal fraction equivalents chart (table 6) in the FBG's "Introduction" section. For resources on legumes, see "Menu planning resource for legumes" under "Meat/Meat Alternates" in section 3.

Table 3-19. Calculating the vegetable contribution of legumes in a recipe

A recipe provides 50 servings and contains 1 gallon and 1 quart of chickpeas. How many cups of vegetables (legumes subgroup) does the recipe provide per serving?

1. Determine the total cups of legumes in the recipe: Use the ICN's *Basics at a Glance Portion Control Poster* to convert larger measurements to cups. Use the decimal fraction equivalents chart (table 6) in the FBG's "Introduction" section to convert fractions to decimals.

   1 gallon (16 cups) plus 1 quart (4 cups) of chickpeas equals 20 cups of chickpeas.

A	20	cups

2. Number of servings in the recipe:

B	50	servings

3. Determine the cups of legumes per serving: Divide the total cups of legumes (A) by the number of servings in the recipe (B).

   20 cups of chickpeas divided by 50 servings equals 0.4 cup of chickpeas per serving.

C	0.4	cups per serving *

* **Note:** If the decimal amount for the cups of legumes per serving (C) converts to an **even multiple of ⅛ cup**, such as 0.5 (½) cup, 0.25 (¼) cup, or 0.125 (⅛) cup, this is the final meal pattern contribution for the legumes subgroup of the vegetables component. **Do not complete steps 4 and 5**.

4. Determine the number of ⅛-cup servings (minimum creditable amount) of legumes in one recipe serving: Divide the cups of legumes per serving (C) by 0.125.

   0.4 cup of chickpeas per serving divided by 0.125 equals 3.2 servings of ⅛ cup.

D	3.2	servings of ⅛ cup

5. Round down the number in D to nearest ⅛-cup serving.

   3.2 servings round down to 3 servings of ⅛ cup (or ⅜ cup).

E	3	servings of ⅛ cup

Meal pattern contribution: ⅜ cup of the legumes subgroup

Crediting Vegetables in Combination Foods

SFAs must ensure that combination foods made with vegetables provide the amount of vegetables being credited toward the meal patterns. Vegetables in combination foods credit based on the volume (cups) of vegetables per serving, excluding added ingredients such as other creditable food components (e.g., grains and meat/meat alternates) and noncreditable ingredients such as mayonnaise and salad dressing. Examples of combination foods with vegetables include pizza, lasagna, vegetable egg rolls, hummus, and bean burritos.

SFAs must maintain documentation on the amount of vegetables in one serving of a combination food. For commercially prepared foods, SFAs must obtain a CN label (if the vegetables are part of a main dish entree that contributes to the meat/meat alternates component) or a PFS stating the specific contribution of all vegetables. SFAs must check the manufacturer's crediting information on the PFS for accuracy prior to including the item in reimbursable meals.

Vegetables alone are ineligible 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 other components (such as grains, vegetables, and fruits) that are part of the product. For example, a CN label for cheese pizza may indicate the contribution of the tomato sauce (vegetables component) and crust (grains component), in addition to the cheese (meat/meat alternates component). For more information, see "Documentation for Commercial Products" in section 2.

SFAs must have standardized recipes on file for vegetables prepared on site with added ingredients. Recipes are not required for vegetables without added ingredients, e.g., whole or cut-up fresh vegetables, canned vegetables, and frozen vegetables. SFAs must determine the meal pattern contribution of vegetables using the FBG. For more information, see "Standardized Recipes" in section 2.

Crediting Vegetables with Added Ingredients

Vegetables with added ingredients (such as mayonnaise, yogurt, sugar, molasses, salad dressing, and marshmallows) credit based on the volume of vegetables per serving, excluding the weight or volume of added nonvegetable ingredients. Examples include coleslaw, tossed salad with dressing and croutons, Waldorf salad, potato salad, sweet potato casserole with marshmallows, mashed potatoes made with butter and milk, baked beans with sauce, and carrot-raisin salad.

For example, ½ cup of coleslaw made with shredded cabbage and carrots, mayonnaise, sugar, and spices does not credit as ½ cup of the vegetables component because it contains other ingredients in addition to the vegetables. To credit as ½ cup of the vegetables component, one serving of coleslaw must provide ½ cup of vegetables **before** any added ingredients.

SFAs must maintain documentation on the amount of vegetables in one serving. Commercially prepared foods require a PFS stating the specific contribution of all vegetables. For foods made on site, SFAs must have standardized recipes on file. For more information, see "Documentation for Commercial Products" and "Standardized Recipes" in section 2.

Crediting Vegetable and Fruit Mixtures

Mixtures of vegetables and fruits may credit toward both the vegetables component and fruits component if the serving contains at least ⅛ cup of easily identifiable vegetables and at least ⅛ cup of easily identifiable fruits. For example, a carrot-raisin salad that contains ½ cup of carrots and ⅛ cup of raisins credits as ½ cup of the red/orange vegetables subgroup and ¼ cup of the fruits component (dried fruit credits as twice the volume served).

Crediting Mixed Vegetables

The crediting of mixed vegetables such as three-bean salad or California mix (broccoli, cauliflower, and carrots) depends on whether the menu planner knows the amount of each type of vegetable in the mixture.

- **Same subgroup:** Vegetable combinations from the same subgroup credit toward that vegetable subgroup. For example, a mixture of carrots and sweet potatoes credits as red/orange vegetables because both are from the red/orange subgroup. A mixture of corn and green peas credits as starchy vegetables because both are from the starchy subgroup.

- **Different subgroup:** Vegetable combinations that contain at least ⅛ cup each of different vegetable subgroups credit each vegetable toward the appropriate subgroups. For example, a mixture of ¼ cup of carrots (red/orange) and ¼ cup of corn and peas (starchy) credits as ¼ cup of red/orange vegetables and ¼ cup of starchy vegetables.

- **Unknown subgroup:** If the menu planner does not know the quantities of the different vegetables in a mixture such as a frozen vegetable blend of peas, carrots, and corn, it credits as "additional" vegetables.

SFAs can use manufacturer data such as a PFS to determine the amount of each type of vegetable in a vegetable mixture. This information must clearly document the ratio of the vegetable mixture in the ingredients. For example, if a vegetable blend provides 25 percent broccoli, 25 percent carrots, and 50 percent cauliflower, a 1-cup serving credits as ¼ cup of broccoli (dark green subgroup), ¼ cup of carrots (red/orange subgroup), and ½ cup of cauliflower (other subgroup). SFAs are not required to monitor that each portion contains the documented ratios.

The SBP meal pattern does not require the vegetable subgroups. If the menu planner chooses to substitute mixed vegetables for the fruits component, they credit based on the amount served. For example, ½ cup of mixed vegetables credits as ½ cup of the fruits component (vegetable substitution) at breakfast. For more information, see "Vegetables at Breakfast" in this section.

Crediting Soups

Vegetable soups made on site by the SFA credit based on the amount of each vegetable subgroup contained in one serving of the recipe. SFAs must document this information with a standardized recipe based on the yields in the FBG. One serving of the recipe must contain at least ⅛ cup of vegetables to credit toward part of the vegetables component. If the amount is less than the full serving, the menu must include additional vegetables to meet the full serving for each grade group.

Commercial soups

Only certain types of commercial vegetable soups credit as the vegetables component. A 1-cup serving of lentil, pea, or bean soup credits as ½ cup of vegetables (legumes subgroup). A 1-cup serving of other allowable commercial vegetable soups credits as ¼ cup of "additional" vegetables. Commercial beef barley, chicken or turkey

noodle, and chicken or turkey rice soups do not credit in the NSLP and SBP meal patterns. Table 3-20 lists allowable commercial vegetable soups.

Table 3-20. Allowable commercial soups

"Additional" vegetables [1]	Legumes [2]
Minestrone Tomato Tomato with other basic components such as rice Vegetable (contains only vegetables) Vegetable with other basic components such as meat or poultry	Lentil Pea, e.g., split pea Bean, e.g., black bean, mixed bean

[1] The FBG indicates that 1 cup of commercial vegetable soup credits as ¼ cup of "additional" vegetables. Vegetable soup cannot credit toward any other subgroup unless the manufacturer's PFS documents the amount of each vegetable subgroup per serving.

[2] The FBG indicates that 1 cup of commercial lentil, pea, or bean soup credits as ½ cup of the beans/peas (legumes) subgroup.

To credit a commercial soup product differently from the yields listed in the FBG, the SFA must obtain a manufacturer's PFS stating the specific contribution of all vegetables toward the vegetable subgroups. The PFS must provide the information specified in the USDA's *Product Formulation Statement for Vegetables and Fruits* .

SFAs cannot use any other type of manufacturer product information, such as sales literature or product specification sheets, to document the USDA's meal pattern requirements for the vegetable subgroups. These materials do not provide the specific crediting information that is required on a PFS. For more information, see "Vegetables in Commercial Products" in this section and "Documentation for Commercial Products" in section 2.

Table 3-21 shows an example of unacceptable product information for crediting commercial soups.

Table 3-21. Sample unacceptable product information for commercial soups

Product UPC code	Description	Vegetable subgroup contribution (cups)					
		Dark green	Red/ orange	Beans/ peas (legumes)	Starchy	Other	Total
0-00000-00000-0	Tomato soup, canned	—	½	—	—	—	½
0-00000-00001-0	Vegetable soup, canned	—	⅛	—	⅛	—	¼
0-00000-00003-0	Minestrone soup, canned	—	¼	—	—	⅛	3/8

SFAs cannot use this type of product information because it is not a PFS, and does not provide the specific contribution of all vegetables toward the vegetable subgroups. For example, the company information indicates that tomato soup provides ½ cup of the red/orange vegetable subgroup. However, based on the FBG, 1 cup of commercial tomato soup credits as ¼ cup of "additional" vegetables. Tomato soup cannot credit as the red/orange subgroup unless the manufacturer supplies a PFS with the appropriate crediting information. For more information, see "Product Formulation Statements" in section 2.

Portion sizes for soup

Menu planners must ensure that a serving of soup is sufficient to provide the required amount of the vegetables component. A 1-cup serving is the minimum amount for commercial lentil, pea, or bean soup to credit as ½ cup of the legumes subgroup. A 1-cup serving is the minimum amount for other allowable commercial vegetable soups to credit as ¼ cup of "additional" vegetables.

A 1-cup container (8 fluid ounces) does not provide 1 cup of soup unless it is completely filled to the top, which is impractical. To avoid spilling and ensure that the served portion complies

with the meal pattern requirements, the container should be larger than the planned serving size of soup. For example, SFAs could use a 10-fluid ounce bowl to hold 8 fluid ounces (1 cup) of soup and a 6-fluid ounce bowl to hold 4 fluid ounces (½ cup) of soup.

The CSDE's handout, *Crediting Soup in the NSLP and SBP*, summarizes the requirements for crediting soup in school nutrition programs.

Crediting Pureed Vegetables

Pureed foods made from one vegetable are recognizable creditable vegetables. Examples include tomato sauce, split pea soup, mashed potatoes, mashed sweet potatoes, and pureed butternut squash. Pureed vegetables credit as the vegetables component based on the volume (cups) after pureeing, not the amount of vegetables before pureeing. For many vegetables, the pureed form has a smaller volume than whole vegetable pieces. The FBG has yield information for some pureed vegetables such as tomatoes. For commercial products not included in the FBG, SFAs must obtain yield information from the manufacturer.

However, pureed vegetables in combination foods are unrecognizable. They may contribute to the vegetables component only if the dish that contains them also provides an adequate amount of recognizable creditable vegetables. For example, a serving of macaroni and cheese that contains ⅛ cup of diced butternut squash (recognizable) and ⅛ cup of pureed carrots (unrecognizable) credits as ¼ cup of the red/orange subgroup.

If a food with pureed vegetables does not contain at least ⅛ cup of a recognizable vegetable, it cannot contribute to the vegetables component. For example, a recipe for brownies contains pureed black beans. The pureed beans cannot credit toward the legumes subgroup or the meat/meat alternates component because they are not visible to students; and they are not an ingredient that is typically included in brownies or would be recognizable to students. The USDA emphasizes the importance of the nutrition education aspect of school nutrition programs, which includes the goal of helping children easily recognize the key food groups that contribute to a healthy meal.

Pureed vegetables can be from a different subgroup than the recognizable vegetables. For example, a serving of school-made vegetable soup that contains ⅛ cup of pureed tomatoes (red/orange subgroup) and ⅛ cup of onion pieces ("other" subgroup) credits toward the red/orange and "other" subgroups. As an educational tool for students, the USDA encourages SFAs to make pureed vegetables in a blended dish from the same subgroup as the recognizable vegetables, whenever possible.

For recipes made on site, SFAs should use yields based on the volume of vegetables after pureeing. For example, food service staff would determine the volume of pea puree obtained from 1 cup of whole green peas by pureeing the whole peas and measuring the resulting amount of puree. For more information, see "Determining in-house product yields" in section 2.

Pureed vegetables do not credit as the vegetables component when they are used to improve the nutrient profile of a food. For example, using pureed legumes to replace the oil in brownies or pureed sweet potatoes to replace the butter in a spice cake.

Crediting Vegetable Smoothies

Pureed vegetables in smoothies made on site credit only as juice toward the daily and weekly meal pattern requirements. At lunch, vegetable smoothies that contain one vegetable subgroup or one vegetable juice credit as that subgroup. For example, a smoothie made with pureed carrots or 100 percent carrot juice credits toward the red/orange subgroup.

The crediting of smoothies containing two or more different vegetables or vegetable juices depends on whether the vegetables are from the same or different subgroups.

- **Same subgroup:** Smoothies that contain vegetables and vegetable juice from the same subgroup credit toward that vegetable subgroup. For example, a smoothie containing carrots and tomatoes or a 100 percent carrot/tomato juice blend credits toward the red/orange vegetable subgroup because both vegetables are from the red/orange vegetable subgroup.

- **Different subgroup:** Smoothies that contain vegetables and vegetable juice from more than one subgroup credits only toward the "other" vegetable subgroup. For example, a smoothie containing carrots (red/orange), spinach (dark green), tomato (red/orange) and watercress (dark green) or a 100 percent vegetable juice blend containing carrots, spinach, tomato, and watercress credits toward the "additional" vegetable subgroup.

Smoothies made with pureed fruits and pureed vegetables credit only as juice. SFAs must include smoothies with all other juices, when determining if the menu meets the weekly juice limit. For more information, see "Weekly Limit for Vegetable Juice" in this section and "Weekly Limit for Fruit Juice" in the "Fruits Component" section.

Smoothies that contain a mix of fruits and vegetables (or that contain 100 percent fruit and vegetable juice blends) contribute to the fruits component if fruit juice or fruit puree is the predominant ingredient. If vegetable juice or vegetable puree is more predominant than fruit juice or fruit puree, the smoothie contributes toward "additional" vegetables.
For more information on crediting smoothies, see "Fruit and Vegetable Smoothies" in the "Fruits Component" section.

Crediting Dried Vegetables

Dried vegetables credit when rehydrated if the product's PFS provides specific documentation on the amount of vegetables per serving. SFAs should check the accuracy of the PFS prior to including foods with dehydrated vegetables in reimbursable meals. Dehydrated vegetables used for seasonings, such as dried onion and dried parsley, do not credit in the USDA's meal patterns.

A serving must contain at least ⅛ cup of rehydrated vegetables (the minimum creditable amount) to credit toward part of the vegetables component. If the amount is less than the full serving, the meal must include additional vegetables to meet the full serving for each grade group.

The FBG lists yields for some dehydrated vegetables, including pinto beans, refried beans, onions, bell peppers, potatoes, seaweed, and sweet potatoes. For products not listed, SFAs must determine crediting information based on the rehydrated volume, not the fresh volume that may be stated on the container. Rehydration data on the container often varies from brand to brand. SFAs must use the following procedure for each brand of dehydrated product.

1. Rehydrate (add water or liquid to) a purchase unit of the dehydrated vegetable according to the manufacturer's directions. If the container does not include directions, request rehydration directions from the manufacturer.

2. Measure the rehydrated volume.

3. Measure the number of ¼-cup servings of rehydrated product that one purchase unit provides.

4. Keep records on file as verification. Records should include information on the size of the purchase unit, the number of ¼-cup servings of rehydrated product per purchase unit, the name of the manufacturer, and the manufacturer's directions for rehydrating the product.

For more information, see "Determining in-house product yields" in section 2.

Crediting Hominy as Vegetables

Hominy is a traditional food in Mexican and Native American cultures that is commonly served as a vegetable or milled grain product, e.g., hominy grits. Hominy is made from whole kernels of maize (dried field corn) that have been soaked in an alkaline solution (nixtamalized). This process removes the hull and germ, causes the corn to puff up to about double its normal size, and increases the bioavailability of certain nutrients, such as calcium and niacin.

Hominy is available dried and in a fully cooked canned form. Dried hominy is cooked the same as dried beans (legumes). In its whole form, hominy credits toward the vegetables component as a starchy vegetable. For example, ¼ cup of canned drained hominy credits as ¼ cup of the starchy vegetables subgroup.

For information on crediting hominy as the grains component, see "Crediting Hominy as Grains" in the "Grains" section.

Crediting Pasta Products Made of Vegetable Flour

SFAs may credit pasta products made of vegetable flours as the vegetables component, if they meet the requirements below. The requirements for crediting pasta products made of vegetable flours are summarized in USDA Memo SP 26-2019, CACFP 13-2019 and SFSP 12-2019: *Crediting Pasta Products Made of Vegetable Flour in the Child Nutrition Programs*.

Vegetable flours crediting as a vegetable

Pasta made of one or more 100 percent vegetable flours credits toward the vegetables component, even if the pasta is not served with another recognizable vegetable. These products credit the same as vegetables, i.e., ½ cup of pasta made of 100 percent vegetable flour credits as ½ cup of the vegetables component. The ingredients statements below show examples of pasta products that contain 100 percent vegetable flours.

- Ingredients: Red lentil flour.
- Ingredients: Green lentils, cauliflower, parsnips.

Vegetable flours from one vegetable subgroup

Pasta products made of one or more vegetable flours from one vegetable subgroup may credit toward the appropriate vegetable subgroup. For example, pasta made of 100 percent red lentil flour credits as ½ cup of the legumes subgroup.

Note: Pasta made of 100 percent legumes may also credit as the meat/meat alternates component, but cannot credit as the legumes subgroups and the meat/meat alternates component in the same meal. For more information, see "Crediting Legume Flour Pasta Products as Meat/Meat Alternates" in the Meat/Meat Alternates section.

Vegetable flours from multiple vegetable subgroups

Pasta products made of a blend of 100 percent vegetable flours from multiple vegetable subgroups (e.g., lentils and cauliflower) may credit in two ways.

1. If the pasta product has a manufacturer's PFS detailing the actual volume of each vegetable per serving, SFAs may credit it as the specific vegetable subgroups.

2. If the actual volume of each vegetable flour in the pasta product is unknown, SFAs may credit it as additional vegetables.

Vegetable flours and other nonvegetable ingredients

Pasta products made of vegetable flour and other nonvegetable ingredients may credit toward the vegetables component (or, in the case of 100 percent legume pasta, the meat/meat alternate component) with a PFS that details the actual volume of vegetable flour per serving. This crediting does not apply to grain-based pasta products that contain small amounts of vegetable powder for color, such as spinach pasta or sun-dried tomato pasta. For example, the product below shows cannot credit as the vegetables component.

> Ingredients: Semolina (wheat), durum flour (wheat), *dried spinach*, niacin, ferrous sulfate (iron), thiamin mononitrate, riboflavin, folic acid.

The example below shows an ingredients statement for a vegetable pasta product that contains dried vegetables (carrot, tomato, and spinach) and other nonvegetable ingredients. The SFA must obtain a PFS from the manufacturer to determine this product's crediting information.

> Ingredients: Semolina (wheat), durum flour (wheat), *dried carrots, dried tomato, dried spinach*, niacin, ferrous sulfate (iron), thiamin mononitrate, riboflavin, folic acid.

Required signage and training for pasta products made of vegetable flours

Nutrition education, including signs in cafeterias and other meal service areas, help children understand what foods are in their meals and snacks. SFAs must use signs or other nutrition education to indicate that pasta made of vegetable flour is a "vegetable" and not a grain component of the meal. For example, pasta made of chickpea flour could be labeled as "chickpea pasta" with a symbol showing it to be part of the vegetables component of the meal.

The USDA encourages SFAs to offer vegetables in a variety of ways on the menu and to educate children about vegetables from farm to plate. Additionally, it is critical that school food service staff are trained to recognize a reimbursable meal. SFAs should inform serving line staff when meals include pasta made with vegetable flours. Serving line staff must also understand how the pasta contributes toward the reimbursable meal and be able to identify reimbursable meals with OVS.

Salad Bars

The USDA encourages the use of salad bars in school nutrition programs. SFAs can use a daily salad bar line to meet the weekly vegetable subgroups requirement if the salad bar is available to all students each day and offers all required subgroups every day or over the week.

Students must select all of the components for a reimbursable meal, including the vegetable subgroups, from the regular lunch lines before the point of service (POS). The POS is the point in the food service operation where a determination can accurately be made that a reimbursable free, reduced-price, or paid lunch has been served to an eligible child. To ensure that each student's selections from the salad bar meet the required portions for a reimbursable meal, the salad bar must be stationed before the POS.

If a school is not able to position the salad bar in a location prior to the POS, the SFA may request that the CSDE authorizes an alternative to the POS lunch counts. When fruits and vegetables are located in an approved location beyond the POS, the SFA must have procedures in place to ensure that each reimbursable meal meets the OVS requirement for at least ½ cup of fruits or vegetables.

The SFA must submit a written request to the CSDE and receive approval before using any salad bars that are positioned after the POS. This request must describe the specific

procedures the school will use to ensure that all reimbursable meals include at least ½ cup of fruits or vegetables.

Without CSDE approval, foods served on an unmonitored salad bar after the POS are considered "extras" that are not part of the reimbursable meal, but count toward the dietary specifications. These foods must contain zero trans fats and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. For more information, see "Extra Foods" in section 1.

If a school implements OVS, salad bars must follow the OVS requirements. Schools may pre-portion foods to ensure that students take the minimum required portion sizes from a salad bar and to allow staff to quickly identify if the student has a reimbursable meal under OVS. Without pre-portioning, SFAs must train cashiers to accurately judge the quantities of self-serve items on student trays to determine if food items credit toward a reimbursable meal. For information on implementing OVS, see the CSDE's guide, *Offer versus Serve Guide for School Meals*.

Vegetable subgroups offered on a daily salad bar must be itemized on the school's production records. The NSLP regulations (210.10(a)(3)) require that production records and menu records show how the meals offered contribute to the required food components and food quantities. For more information, see "Menus" and "Production Records" in section 2. For additional guidance on implementing salad bars in schools, see USDA Memo SP 31-2013: *Salad Bars in the National School Lunch Program* and the USDA's *Fruits & Vegetables Galore: Helping Kids Eat More*.

Noncreditable Vegetables

Examples of foods that do not credit as the vegetables component include, but are not limited to:

- chili sauce;
- dehydrated vegetables used for seasoning;
- cream vegetable soups (e.g., cream of broccoli and cream of mushroom);
- home-canned products (for food safety reasons);
- ketchup;
- pickle relish; and
- snack-type foods made from vegetables such as potato chips.

SFAs should use the FBG to identify foods that credit as the vegetables component. For information on using the FBG, see "Determining Food Yields" in section 2.

For more information, see "Noncreditable Foods" at the beginning of this section, the CSDE's handout, *Noncreditable Foods for Grades K-12 in the NSLP and SBP*, and the CSDE's Crediting Foods in School Nutrition Programs webpage.

Common Compliance Issues with the Vegetables Component

Meals must comply with the USDA's requirements for the vegetables component. The list below includes common compliance issues with the vegetables component, based on the CSDE's Administrative Review of school nutrition programs.

- Lunch menus do not meet the weekly vegetable subgroups requirement. Each lunch choice must offer all students the minimum amount of each vegetable subgroup over the week. For more information, see "Ensuring Compliance with the Vegetable Subgroups" in this section.

- A serving line does not offer all of the vegetable subgroups. Students must access another serving line to get a particular vegetable subgroup. When SFAs have multiple serving lines or offer a variety of meals, the vegetable subgroups must be available to all students on every serving line, in at least the minimum required amounts. For more information, see "Ensuring Compliance with the Vegetable Subgroups" in this section.

- Lunch menus do not provide the minimum portion size for vegetables. For each lunch choice, SFAs must plan and offer at least ¾ cup of vegetables for grades K-5 and 6-8, and at least 1 cup of vegetables for grades 9-12. For more information, see "Serving Size for Vegetables" in this section.

- Food service staff substitute a different vegetable subgroup for the planned vegetable subgroup on the menu, e.g., corn instead of broccoli. If the SFA does not offer all vegetable subgroups each day, a vegetable substitution from a different subgroup could cause the menu to be noncompliant with the weekly vegetable subgroups requirement. For more information, see "Vegetable subgroup substitutions" in this section.

- The menu planner credits raw leafy greens (such as spinach and lettuce) incorrectly. SFAs must credit raw leafy greens as half the volume served, e.g., 1 cup equals ½ cup of the vegetables component. For more information, see "Crediting Raw Leafy Greens" in this section.

- Signage for vegetables is missing or inadequate. SFAs must provide appropriate signage on the serving line where the vegetable selections are located. For more information, see "Identifying serving sizes for vegetables" in this section, and "Meal Identification Signage" in section 5.

SFAs must plan the vegetables component to avoid these compliance issues. For more information, see CSDE Operational Memorandum No. 07-19: *Compliance Issues with the Vegetables and Fruits Components for Grades K-12 in the NSLP and SBP*.

Produce Safety

SFAs must ensure that all food service personnel understand how to prepare produce safely. The ICN's Produce Safety Resources webpage includes resources that describe best practices for receiving, storing, handling, and purchasing fresh and fresh-cut produce. The USDA's *Best Practices for Handling Fresh Produce in Schools* summarizes the steps food service personnel can take to ensure that produce is prepared safely. For additional resources, see the CSDE's *Food Safety Resource List* and the CSDE's Food Safety for Child Nutrition Programs webpage and Resources for Child Nutrition Programs webpage.

SFAs must ensure that salad bars comply with Hazard Analysis and Critical Control Point (HACCP). The SFA's standard operating procedures (SOP) for salad bars must include appropriate food safety procedures to ensure that foods stay at proper temperatures and are safe from contamination. For examples of SOPs, see the ICN's sample SOPs, *Preventing Contamination at Food Bars,* and the ICN's Standard Operating Procedures webpage.

Fruits Component

The meal patterns require a serving of the fruits component at lunch and breakfast. At breakfast, SFAs may substitute any vegetables for the fruits component through September 30, 2019. For more information, see "Vegetables at Breakfast" in the "Vegetables Component" section.

The fruits component includes fresh, frozen, canned (in light syrup, water, or fruit juice), and dried fruits; and pasteurized full-strength fruit juice. A serving of canned fruit may include the 100 percent juice in which the fruit is packed, but cannot include water or syrup.

Serving Size for Fruits

All fruits credit based on volume except for dried fruit, which credits as twice the volume served. For more information, see "Dried Fruit" in this section. Table 3-22 summarizes the required servings of the fruits component for grades K-12 at lunch and breakfast for five-day and seven-day weeks.

Table 3-22. Required daily and weekly servings of the fruits component

Grades	Lunch				Breakfast			
	Five-day week		Seven-day week		Five-day week		Seven-day week	
	Daily	Weekly	Daily	Weekly	Daily	Weekly	Daily	Weekly
K-5	½ cup	2½ cups	½ cup	3½	1 cup	5 cups	1 cup	7 cups
6-8	½ cup	2½ cups	½ cup	3½	1 cup	5 cups	1 cup	7 cups
9-12	1 cup	5 cups	1 cup	7 cups	1 cup	5 cups	1 cup	7 cups

The menu planner determines the serving size and the number of servings needed to meet the fruits component for each grade group at each meal. SFAs may choose to serve one fruit or a combination of several fruits to meet the full serving for each grade group. For example, a lunch menu for grades K-5 can meet the required ½-cup serving of the fruits component with

½ cup of peaches, or ¼ cup of peaches and ¼ cup of applesauce. These menu planning decisions affect students' selection of reimbursable meals when implementing OVS. The CSDE encourages SFAs to offer all fruits in ½-cup servings to make it easier for students to choose a reimbursable meal. For more information, see the CSDE's guide, *Offer versus Serve Guide for School Meals*.

A menu item must provide a minimum of ⅛ cup of fruit to credit toward part of the fruits component. If the amount is less than the full serving, the meal must include additional fruits to meet the full serving for each grade group. Fruits offered in amounts less than ⅛ cup are not included in the calculation of daily and weekly fruit offerings, but count toward the weekly dietary specifications. For more information, see "Dietary Specifications" in section 1.

The menu planner must round down the amount of fruit to the nearest ⅛ cup. For example, a recipe with 2½ tablespoons (0.3125 cup) of strawberries per serving credits as 2 tablespoons (0.25 or ¼ cup) of the fruits component.

Identifying serving sizes for fruits

SFAs must use meal identification signage to instruct students on how much food to select from each component daily for a reimbursable meal, based on the planned serving sizes for each grade group. For example, if a high school allows students to select two ½-cup servings of fruit to meet the minimum daily 1-cup serving for grades 9-12 at lunch, the cafeteria signage must clearly communicate that students may select up to two servings of fruit with each meal. This signage must be on the serving line where the fruit selections are located. For more information, see "Meal Identification Signage" in section 5.

Crediting Fresh Fruit

The crediting information for one piece of fresh fruit (whole or cut-up) varies depending on the type and size (count pack) of the fruit. The count pack is the number of fruits that fit into a case. The smaller the count, the larger the size of one piece of fruit. For example, the FBG indicates that:

- one 60-count plum, one 88-count peach, and one clementine each credit as ⅜ cup of fruit;
- one 100-120-count banana, one 150-count pear, one 80-count peach, one 138-count orange, and one 45-count plum each credit as ½ cup of fruit;
- one 113-count and 125-count orange each credit as ⅝ cup of fruit;
- one size 56-64 nectarine, one size 56 peach, and one 120-count pear each credit as ¾ cup of fruit; and
- one 125-138-count apple credits as 1 cup of fruit.

Menu planners must ensure that an individual piece of fresh fruit (whole or cut-up) provides the correct serving for each meal and grade group. If the amount is less than the full serving, the meal must include the additional amount from the fruits component to meet the full requirement for each grade group. The scenarios below show some examples.

- The breakfast meal pattern for grades K-12 requires 1 cup of the fruits component. One regular banana (100-120 count) credits as ½ cup of fruit, which does not provide the full 1-cup serving required for grades K-12. To credit as the full fruits component, the breakfast menu must include an additional ½ cup of the fruits component.

- The lunch meal pattern for grades K-5 requires ½ cup of the fruits component. One clementine credits as ⅜ cup of fruit, which does not provide the full 1-cup serving for grades K-5. To credit as the full fruits component, the breakfast menu must include an additional ⅛ cup of the fruits component.

Table 3-23 lists the FBG's meal pattern contribution of some fresh fruits, with the additional amount needed to meet the minimum serving of the fruits component for each meal and grade group.

Table 3-23. Meal pattern contribution of whole fresh fruits

Fruit (one piece)	Meal pattern contribution from FBG	Required serving for fruits component		
		Breakfast K-12 (1 cup minimum)	Lunch K-5 and 6-8 (½ cup minimum)	Lunch 9-12 (1 cup minimum)
		Additional amount (cups) needed for full serving [1]		
Apple, 125 to 138 count	1 cup	0	0	0
Apricot, medium (1 ⅜-inch diameter)	¼ cup	¾ cup	¼ cup	¾ cup
Banana, 150 count, petite	⅜ cup	⅝ cup	⅛ cup	⅝ cup
Banana, 100-120 count, regular	½ cup	½ cup	0	½ cup
Clementine, 1 whole	⅜ cup	⅝ cup	⅛ cup	⅝ cup
Grapefruit, 27-32 count, large	1 cup	0	0	0
Kiwi, 33-39 count	¼ cup	¾ cup	¼ cup	¾ cup

Table 3-23. Meal pattern contribution of whole fresh fruits, *continued*

Fruit (one piece)	Meal pattern contribution from FBG	Required serving for fruits component		
		Breakfast K-12 (1 cup minimum)	Lunch K-5 and 6-8 (½ cup minimum)	Lunch 9-12 (1 cup minimum)
		Additional amount (cups) needed for full serving [1]		
Nectarine, size 88-96 (2 ¼-inch diameter)	½ cup	½ cup	0	½ cup
Nectarine, size 56-64 (2 ¾-inch diameter)	¾ cup	¼ cup	0	¼ cup
Orange, Arizona or California, 113 count	⅝ cup	⅜ cup	0	⅜ cup
Orange, Florida or Texas, 125 count	⅝ cup	⅜ cup	0	⅜ cup
Orange, Arizona or California, 138 count	½ cup	½ cup	0	½ cup
Peach, size 88 and 84 (2 ⅛-inch diameter)	⅜ cup	⅝ cup	⅛ cup	⅝ cup
Peach, size 64 and 60 (2 ½-inch diameter)	⅔ cup	⅓ cup	0	⅓ cup
Peach, size 80	½ cup	½ cup	0	½ cup
Peach, size 56	¾ cup	¼ cup	0	¼ cup
Pear, 150 count	½ cup	½ cup	0	½ cup
Pear, 120 count	¾ cup	¼ cup	0	¼ cup
Pear, D'Anjou, Bosc or Bartlett, 100 count	1¼ cups	0	0	0
Plum, purple, red, or black, size 45 and 50 (2-inch diameter)	½ cup	½ cup	0	½ cup
Plum, Japanese or hybrid, size 60 and 65	⅜ cup	⅝ cup	⅛ cup	⅝ cup
Tangerine, 120 count	⅜ cup	⅝ cup	⅛ cup	⅝ cup

[1] The additional amount may be from the same fruit or a different fruit. At breakfast, the additional amount may also be from vegetables, when the breakfast menu meets certain conditions. For more information, see "Vegetables at Breakfast" in this section.

Crediting Canned Fruit

Canned fruit may be in juice, water, light syrup, or heavy syrup. A serving of canned fruit may include the 100 percent juice in which the fruit is packed, but cannot include water or syrup.

The juice from canned fruit counts toward the weekly juice limit if the SFA credits the juice toward the fruits component. For example, if the menu includes ½ cup of canned peaches in juice, the juice counts toward the weekly juice limit.

The juice from canned fruit does not count toward the weekly juice limit if the SFA plans the juice as an extra food that does not credit toward the meal patterns. For example, the juice from canned fruit does not count toward the weekly juice limit if food service personnel portion ½ cup of canned fruit in a 5½-ounce container, then add the juice after measuring the full ½-cup serving of fruit. Drained canned fruit and canned fruit in light syrup or water do not count toward the weekly juice limit.

The FBG indicates the total amount of fruit and juice combined in canned fruit, but does not provide information on the volume of juice in canned fruit. SFAs must request this information from the manufacturer. To ensure that the volume measurements provided by manufacturers are accurate, the USDA recommends conducting an on-site yield evaluation by measuring the actual fruit and juice content of each canned fruit item served in school meals. For more information, see "Determining In-house Product Yields" in section 2.

Crediting Dried Fruit

Dried fruit (such as raisins, apricots, dried cherries, dried cranberries, dried blueberries, mixed dried fruit, and dried coconut) credits as twice the volume served. For example, ¼ cup of raisins credits as ½ cup of the fruits component.

Note: The crediting requirement for dried fruit (twice the volume served) does not apply to amounts less than ⅛ cup (the minimum creditable amount). For example, SFAs cannot credit $^{1}/_{16}$ cup (1 tablespoon) of raisins as ⅛ cup fruit.

Manufacturers sometimes process dried fruit with added sugar to keep the fruit pieces separated. The CSDE encourages menu planners to read labels and choose dried fruit without added sweeteners, including sugars and nonnutritive sweeteners, e.g., aspartame, acesulfame potassium, sucralose, and stevia. While the USDA allows dried fruit with added sweeteners in school meals, its inclusion cannot cause breakfast or lunch menus to exceed the average weekly calorie limits. For information on planning school meals to meet the dietary specifications, see section 6.

Crediting Fruit Juice

Fruit juice must be pasteurized full-strength (100 percent) fruit juice or a combination of fruit and vegetable juices. The name of the full-strength fruit juice on the label must include one of the following terms: "juice," "full-strength juice," "100 percent juice," "reconstituted juice," or "juice from concentrate." The statements "natural" and "organic" do not indicate that a juice is full strength.

Juice may be fresh, frozen, or made from concentrate; and may be served liquid or frozen, e.g., full-strength frozen juice pops. The meal pattern contribution of frozen fruit juice is based on the fluid volume prior to freezing. SFAs must request this information from the manufacturer and maintain on file for documentation.

Fruit juice does not provide the same nutritional benefits as whole fruits, which provide fewer calories and more nutrients. SFAs should serve whole fruits and vegetables most often, as recommended by the *Dietary Guidelines for Americans*.

Weekly limit for fruit juice

Fruit juice cannot exceed half of the weekly amount of fruits offered at lunch. For example, if a five-day lunch menu for grades K-5 offers 2½ cups of the fruits component over the week, the lunch menu may offer up to 1¼ cups of juice over the week. If SFAs serve larger amounts of fruits and vegetables, the weekly juice limit also increases.

Fruit juice together with vegetable juice and vegetable/fruit juice blends cannot exceed half of the weekly amount (cups) of the fruits component offered at breakfast. For example, if the breakfast menu offers 5 cups of the fruits component over the week, the breakfast menu can offer up to 2½ cups of juice over the week.

Menu planners must count all sources of 100 percent juice available to students during the week toward the weekly juice limit, including:

- juice that is fresh, frozen, and made from concentrate (see "Fruit Juice" in this section);
- frozen juice pops made from 100 percent juice (see "Fruit Juice" in this section);
- pureed fruits and vegetables in fruit/vegetable smoothies (see "Fruit Smoothies" in this section); and
- juice from canned fruit served in 100 percent juice (see "Canned Fruit" in this section).

Juice contains more calories than whole fruits and vegetables. School menus might exceed the weekly calorie limits if SFAs serve juice frequently. For more information, see "Weekly Juice Limits at Lunch" and "Weekly Juice Limits at Breakfast" in section 4.

Juice concentrates

Juice concentrates credit only when they are reconstituted with water to 100 percent full-strength juice and are served in the form of juice. Foods made with juice concentrate, such as gelatin or sherbet, do not credit as juice because they are no longer in the form of juice.

Juice made from concentrate is reconstituted with a volume of water that is several times the amount of the juice concentrate. A typical reconstitution ratio might be three parts water to one part concentrate, but this ratio may vary for different juice products. Commercial juice products made from concentrate will list "water" as the first ingredient, followed by the type of juice concentrate, for example, "water, orange juice concentrate" and "filtered water, grape juice concentrate." Juice made from concentrate that is labeled "100 percent juice" credits when the SFA follows the manufacturer's specific instructions for reconstituting.

Juice blends

Blends of 100 percent fruit and vegetable juice must be a combination of full-strength fruit juices, full-strength vegetable juices, or full-strength fruit and vegetable juices. Juice blends credit if they are a combination of full-strength fruit juices, full-strength vegetable juices, or full-strength fruit and vegetable juices. At lunch, 100 percent fruit and vegetable juice blends credit based on the first juice ingredient. If the first juice ingredient is fruit juice, the product credits as the fruits component. If the first juice ingredient is vegetable juice, the product credits as the "other" or the "additional" vegetables requirement, depending on the needs of the menu planner.

The ingredients statement below shows an example of a vegetable and fruit juice blend. Since the first ingredient is a reconstituted vegetable juice blend, this product may credit as either the "other" or "additional" vegetables subgroup.

> Ingredients: *Reconstituted vegetable juice blend (water and concentrated juices of sweet potatoes, purple carrots, carrots),* reconstituted fruit juices (water and concentrated juices of apples, white grapes, cranberries, blackberries), contains less than 2% of: natural flavoring, citric acid, lemon juice.

For more information on the vegetable subgroups, see "Vegetable Subgroups at Lunch" and "Additional Vegetables" under "Vegetables Component" in this section. For information on vegetable juice blends, see "Vegetable Juice" under "Vegetables Component" in this section.

Juice ingredients

All pasteurized 100 percent juices meet the USDA's requirements for the fruits component, but their ingredients may vary among manufacturers. The FDA's labeling regulations allow 100 percent juice to contain added ingredients and still be labeled "100% juice." Therefore, some 100 percent juices contain added ingredients such as artificial flavors, artificial colors (e.g., red 40, blue 1, yellow 5 and 6, and titanium dioxide), preservatives (e.g., sodium benzoate and potassium sorbate), flavor enhancers (e.g., ethyl maltol), and emulsifiers or thickeners (e.g., glycerol esters of wood rosin and xanthan gum). The CSDE encourages menu planners to read product ingredients statements and choose 100 percent juice without these added ingredients.

Apple cider

Apple cider credits as the fruits component if it is pasteurized 100 percent full-strength juice. Pasteurized juice has been heat-treated to kill harmful bacteria. SFAs cannot serve unpasteurized apple cider or any other unpasteurized juices.

Crediting Fruit and Vegetable Smoothies

Smoothies credit differently depending on whether the SFA prepares them on site or purchases commercially prepared products. The USDA recommends not offering smoothies at more than one meal or ASP snack per day.

Smoothies made on site

Pureed fruits and vegetables in smoothies made on site by the SFA credit only as juice toward the daily and weekly requirements for the fruits and vegetables components. Crediting is based on the actual volume of pureed fruits and vegetables per serving, which must be documented by the SFA's standardized recipe.

SFAs must count pureed fruits and vegetables in smoothies with all other juices toward the weekly juice limit. For more information, see "Weekly Limit for Fruit Juice" in this section, "Weekly Limit for Vegetable Juice" in the "Vegetables Component" section, and "Weekly Juice Limits at Lunch" and "Weekly Juice Limits at Breakfast" in section 4.

The USDA's crediting requirements for smoothies are summarized below.

- Smoothies that contain a mix of pureed fruits and vegetables, or that contain 100 percent fruit and vegetable juice blends, credit as the fruits component if fruit juice or fruit puree is the predominant ingredient. If vegetable juice or vegetable puree is the predominant ingredient, the smoothie credits as the vegetables component. For more information, see "Vegetable Smoothies" in the "Vegetables Component" section.

- Concentrated fruit puree and concentrated juice are added sugars and do not credit as the fruits or vegetables component unless they are reconstituted to full-strength fruit puree or full-strength juice.

- Milk in smoothies made on site by the SFA credits as the milk component if it is low-fat milk (unflavored or flavored) or fat-free milk (unflavored or flavored). The minimum creditable amount of milk in a smoothie is ¼ cup. Crediting milk in amounts less than 1 cup applies only to smoothies. If a smoothie contains less than 1 cup of milk per serving, the menu must include additional milk to meet the full 1-cup requirement for each grade group. To meet the USDA's requirement to offer a variety of milk options, SFAs must also offer fluid milk on the serving line in the required quantity. For more information, see "Milk in Smoothies" in the "Milk Component" section.

- Yogurt and soy yogurt in smoothies made on site by the SFA credit as the meat/meat alternates component. For more information, see "Yogurt and Soy Yogurt" in the "Meat/Meat Alternates Component" section.

- Smoothies may include additional noncreditable ingredients to improve flavor and consistency, such as oatmeal and peanut butter. These ingredients cannot credit toward the meal patterns, but count toward the weekly dietary specifications. They must contain zero trans fat and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. For information on planning school meals to meet the dietary specifications, see section 6.

Table 3-24 shows an example of how to credit a smoothie toward the meal patterns.

Table 3-24. Crediting example for a blueberry smoothie	
Ingredient	**Meal pattern crediting** [1]
Frozen blueberry puree, ½ cup	½ cup of fruit juice (fruits component) [2]
Low-fat yogurt, ½ cup	1 ounce equivalent of meat/meat alternates
Unflavored fat-free milk, 4 fluid ounces	4 fluid ounces of fat-free milk [3]
Oatmeal, 2 tablespoons	None

1 If the amount is less than the full serving of a component, the meal must include additional foods to meet the full serving for each grade group.

2 SFAs must count pureed fruits and vegetables in smoothies with all other juices toward the weekly juice limit. For more information, see "Weekly Limit for Fruit Juice" in this section.

3 The minimum creditable amount of milk in a smoothie is ¼ cup. If a smoothie contains less than 1 cup of milk per serving, the menu must include additional milk to meet the full 1-cup requirement for each grade group. SFAs must also offer a variety of fluid milk separately to meet the milk component requirement, i.e., at least two different choices of low-fat milk (unflavored or flavored) or fat-free milk (unflavored or flavored). For more information, see "Milk in Smoothies" in the "Milk Component" section.

Signage for smoothies

The USDA's regulations require school nutrition programs to identify the food components offered to students. SFAs must inform students about the components in a smoothie by listing the type of smoothie on the menu and serving line signage. For example, "peach and milk smoothie" or "strawberry, yogurt, and milk smoothie." For more information, see "Meal Identification Signage" in section 5.

For more information on smoothies, see USDA Memo SP 40-2019, CACFP 17-2019 and SFSP 17-2019: *Smoothies Offered in Child Nutrition Programs* and the CSDE's handout, *Crediting Smoothies for Grades K-12 in the NSLP and SBP*. For smoothie resources and recipes, visit the New England Dairy & Food Council's Smoothies webpage.

Commercial smoothies

Commercial smoothies do not meet the USDA's requirements for fluid milk or yogurt because they do not comply with the FDA's standard of identity for milk or yogurt. Smoothies with dietary supplements (such as whey protein powder) or herbal supplements (such as gingko biloba, ginseng, and echinacea) cannot credit in Child Nutrition Programs.

Commercial smoothies made with pureed fruits/vegetables credit only as juice toward the fruits component. The product label should include a statement regarding the "percent juice content," which is required by the FDA for beverages made with fruit/vegetable juice or fruit/vegetable puree. For example, an 8-fluid ounce smoothie made from fruit puree with the juice content labeled as "contains 50% juice" credits as 4 fluid ounces or ½ cup of juice. SFAs may need to obtain a PFS from the manufacturer to document the amount of pureed fruit in the product.

Crediting Coconut

Fresh and frozen coconut credit as the fruits component based on the volume served. For example, ⅛ cup of fresh or frozen coconut credits as ⅛ cup of the fruits component. The minimum serving size is ⅛ cup.

Dried coconut credits the same as other dried fruit, i.e., as twice the volume served. For example, ¼ cup of dried coconut credits as ½ cup of the fruits component. For more information, see "Crediting Dried Fruit" in this section.

Menu planners should consider coconut's high caloric and saturated fat content, which may limit its frequency in school menus due to the dietary specifications for calories and saturated fat. Coconut flour, coconut oil, and coconut milk do not credit.

Juices labeled as 100 percent juice, including coconut water, credit toward the fruits component based on the volume served. SFAs must count coconut water with all other juices toward the weekly juice limit. For more information, see "Weekly limit for fruit juice" in this section.

Crediting Pureed Fruit

Pureed foods made from one fruit, such as applesauce, are recognizable fruits and credit as the fruits component. Pureed fruit credits as the fruits component based on the volume (cups) after pureeing, not the amount of fruit before pureeing. For example, the required amount of applesauce is based on volume (cups), not the amount of apples needed to make the applesauce.

The minimum creditable amount is ⅛ cup. For many fruits, the pureed form has a smaller volume than whole fruit pieces.

The FBG lists yield information for some pureed fruits such as blackberries, plums, and raspberries. If a commercial fruit product is not included in the FBG, SFAs must obtain manufacturer information about the yield of the pureed form.

Pureed fruits in combination foods are unrecognizable. They may contribute to the fruits component only if the dish that contains them also provides an adequate amount of recognizable creditable fruits. If a dish with pureed fruit does not contain at least ⅛ cup of a recognizable fruit, it does not contribute to the fruits component.

Pureed fruit does not credit as the fruits component when used to improve the nutrient profile of a food. Examples include using applesauce to replace the oil in brownies or using pureed prunes to replace the butter in spice cake. The USDA emphasizes the importance of the nutrition education aspect of school nutrition programs, which includes the goal of helping children easily recognize the key food groups that contribute to a healthy meal.

Pureed fruits in fruit smoothies credit only as **juice** toward the daily and weekly requirements for the fruit component. SFAs must count pureed fruit in smoothies with all other juices toward the weekly juice limits. For more information, see "Fruit and Vegetable Smoothies" and "Weekly limit for fruit juice" in this section.

For recipes made on site, SFAs must use the yields based on the volume of fruit after pureeing. For example, food service staff would determine the volume of blueberry puree obtained from 1 cup of whole blueberries by pureeing the whole blueberries and measuring the resulting amount of puree. For more information, see "Determining In-house Product Yields" in section 2.

Crediting Fruit in Commercial Products

SFAs must ensure that commercial products made with fruit, such as fruit-filled turnovers or pastries, provide the amount of fruit being credited toward the meal patterns. To document the product's meal pattern contribution, SFAs must obtain a PFS from the manufacturer stating the amount of fruit per serving. SFAs must check this crediting information for accuracy prior to including the item in reimbursable meals. SFAs must keep this information on file to document meal pattern compliance for auditing purposes. For more information, see "Documentation for Commercial Products" in section 2.

Crediting Fruit in Desserts

Fruit added to desserts, such as fruited gelatin, fruit crisp, and fruit pies, credits toward the fruits component if the serving contains at least ⅛ cup of fruit (the minimum creditable amount). If the amount is less than the full serving, the meal must include additional fruits to meet the full serving for each grade group.

For foods made on site, SFAs must determine the standardized recipe's contribution to the fruits component using the ingredient yields listed in the FBG. For commercially prepared foods, SFAs must obtain a PFS from the manufacturer to document the amount of fruit per serving.

Grain-based desserts that contain fruit (such as pies, cobblers, or crisps) credit as both the grains component and the fruits component, if they provide the minimum creditable amount of each component. Only the grain portion (such as pie crust or crisp topping) counts toward the limit for grain-based desserts. Lunch menus must comply with the limit of no more than 2 ounce equivalents of grain-based desserts per week. For more information, see "Limit for Grain-based Desserts" under "Grains Component" in this section.

Lunches that contain sweetened fruit desserts or grain-based desserts with fruit must fit within the weekly dietary specifications. They must contain zero trans fats and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. SFAs should offer these foods in moderation to stay under the weekly limits. For information on planning school meals to meet the dietary specifications, see section 6.

Noncreditable Fruits

Examples of foods that do not credit as the fruits component include, but are not limited to:

- fruit snacks (e.g., fruit roll-ups, fruit leathers, fruit wrinkles, fruit twists, yogurt-covered fruit snacks);
- banana chips;
- home-canned products (for food safety reasons);
- jams, jellies, and preserves; and
- juice drinks that are not 100 percent juice such as grape juice drink, orange juice drink, pineapple-grapefruit drink, cranberry juice cocktail, and lemonade.

SFAs should use the FBG to identify foods that credit as the fruits component. For information on using the FBG, see "Determining Food Yields" in section 2.

For more information, see "Noncreditable Foods" at the beginning of this section, the CSDE's handout, *Noncreditable Foods for Grades K-12 in the NSLP and SBP*, and the CSDE's Crediting Foods in School Nutrition Programs webpage.

Common Compliance Issues with the Fruits Component

Meals must comply with the USDA's requirements for the fruits component. The list below includes common compliance issues with the fruits component, based on the CSDE's Administrative Review of school nutrition programs.

- Menus do not provide the minimum portion size for the fruits component. For each lunch choice, SFAs must plan and offer at least ½ cup of fruit for grades K-5 and 6-8., and 1 cup for grades 9-12. For each breakfast choice, SFAs must plan and offer at least 1 cup of fruit for all grades. For more information, see "Serving Size for Fruits" and "Crediting Fresh Fruit" in this section.

- The menu planner credits dried fruit (such as raisins and dried apricots) incorrectly. Dried fruit credits as twice the volume served, e.g., 1 cup of dried fruit equals ½ cup of the fruits component. For more information, see "Crediting Dried Fruit" in this section.

- The menu planner assumes that one piece of fresh fruit credits as ½ cup of the fruits component. Fresh fruit credits based on the amount indicated in the FBG. Some types of fresh fruits provide less than ½ cup in one piece. For more information, see "Crediting Fresh Fruit" in this section.

- Signage for fruit is missing or inadequate. SFAs must provide appropriate signage on the serving line where the fruit selections are located. For more information, see "Identifying serving sizes for fruits" in this section, and "Meal Identification Signage" in section 5.

SFAs must plan the fruits component to avoid these compliance issues. For more information, see CSDE Operational Memorandum No. 07-19: *Compliance Issues with the Vegetables and Fruits Components for Grades K-12 in the NSLP and SBP*.

Grains Component

The meal patterns require daily and weekly amounts (ounce equivalents) of the grains component at lunch and breakfast. The grains component includes a wide variety of foods, such as:

- breads, biscuits, bagels, rolls, tortillas, and muffins;
- snack products, such as crackers (including animal crackers and graham crackers), hard pretzels, hard bread sticks, tortilla chips, and popcorn;
- certain grain-based desserts, such as cookies, granola bars, cereal bars, cake, and pastries (subject to crediting restrictions);
- cereal grains, such as buckwheat, brown rice, bulgur, and quinoa;
- ready-to-eat (RTE) breakfast cereals;
- cooked breakfast cereals (instant and regular), such as oatmeal;
- bread products used as an ingredient in another menu item, such as combination foods, e.g., breading on fish or poultry and pizza crust in pizza; and
- pasta products, such as macaroni, spaghetti, noodles, orzo, and couscous.

To credit as the grains component, grain menu items must be whole grain-rich (WGR) or enriched. At least half of the weekly grains offered at lunch and breakfast must be WGR.

This section includes five parts to assist menu planners with determining if foods credit as the grains component:

- Part A: Crediting Requirements (beginning on page 154);
- Part B: Creditable Grains (beginning on page 170);
- Part C: WGR Criteria (beginning on page 180);
- Part D: Evaluating Foods for WGR Compliance (beginning on page 200); and
- Part E: Serving Size for Grains (beginning on page 236).

Part A: Crediting Requirements

This section addresses the crediting requirements for the grains component, including the weekly WGR requirement; the crediting requirements for breakfast cereals, corn masa, corn flour, cornmeal, hominy, and popcorn; restrictions for grain-based desserts; and how to evaluate PFS forms to determine if commercial grain products are creditable.

Weekly Whole Grain-rich (WGR) Requirement

Effective July 1, 2019, the USDA's final rule, *Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements* (83 FR 63775), requires that at least half of the weekly grains offered at lunch and breakfast must be WGR. Grains that are not WGR must be enriched.

Previously, the NSLP and SBP meal patterns for grades K-12 required that all grains were WGR. The CSDE strongly encourages SFAs to continue to serve only WGR grains, and offer 100 percent whole grains most often. This provides the best nutrition for children.

SFAs that choose to offer enriched grains must document that at least half of the weekly grains offered at lunch and breakfast are WGR. SFAs must maintain this documentation on file for the CSDE's Administrative Review of school nutrition programs. SFAs may calculate the menu's percentage of WGR grains using the CSDE's Excel worksheet, *Calculating Weekly Percentage of Whole Grain-rich Menu Items in the NSLP and SBP*. For more information, see CSDE Operational Memorandum No. 11-19: *Weekly Whole Grain-rich (WGR) Requirement for the NSLP and SBP Meal Patterns for Grades K-12*. For additional guidance, see "Weekly WGR Requirement" in section 4.

Crediting Breakfast Cereals

"Breakfast cereals" are defined by the FDA regulations (21 CFR 170.3(n)(4)). They include RTE cereals (such as puffed cereals, round or flaked cereals, and granola) and instant and regular hot cereals (such as oatmeal, cream of wheat, and farina). RTE cereals are a type of breakfast cereal that can be eaten as sold. They are typically fortified with vitamins and minerals. To credit in school meals, breakfast cereals must be WGR, enriched, or fortified; and provide the required volume or weight specified in the USDA's ounce equivalents chart (see table 4-40 in part E of section 3). The CSDE's handout, Crediting Breakfast Cereals for Grades K-12 in the NSLP and SBP, summarizes the requirements for breakfast cereals.

Part A: Crediting Requirements

WGR breakfast cereals

Cooked breakfast cereals, including regular and instant (such as oatmeal), are WGR if they meet three criteria: 1) a whole grain is the first ingredient (or water is the first ingredient and a whole grain is the second ingredient); 2) any other grain ingredients are enriched; and 3) the combined weight of any noncreditable grains (such as fiber, bran, germ, and modified food starch) does not exceed 6.99 grams per ounce equivalent (½ cup cooked or 28 grams dry).

RTE breakfast cereals are WGR if a whole grain is the first ingredient and the cereal is fortified. Fortification is not required for 100 whole grain cereals. The limit for noncreditable grains does not apply to fortified RTE breakfast cereals that contain a whole grain as the first ingredient. For more information, see "WGR Criteria for Breakfast Cereals" in Part C.

Enriched breakfast cereals

A breakfast cereal is enriched if it is labeled as "enriched" or the ingredients statement lists the five enrichment nutrients. The five enrichment nutrients are defined by the FDA and include thiamin (vitamin B_1, thiamin mononitrate, or thiamin hydrochloride); riboflavin (vitamin B_2); niacin (vitamin B_3 or niacinamide); folic acid (folate); and iron (reduced iron, ferrous sulfate, or ferric orthophosphate). They are often listed after "Vitamins and Minerals." The ingredients statements below show some examples of enriched breakfast cereals.

- Ingredients: Wheat farina, salt, defatted wheat germ, guar gum, natural flavor, *ferric orthophosphate,* vitamin A palmitate, *niacin, riboflavin,* pyridoxine hydrochloride, *thiamin mononitrate, folic acid,* BHT (to preserve freshness).

- Ingredients: Rice, sugar, contains 2% or less of salt, malt flavor. BHT added to packaging for freshness. **Vitamins and Minerals:** *Iron*, vitamin C (ascorbic acid), vitamin E (alpha tocopherol acetate), *niacinamide,* vitamin A palmitate, vitamin B6 (pyridoxine hydrochloride), *vitamin B2 (riboflavin), vitamin B1 (thiamin hydrochloride), folic acid,* vitamin B12, vitamin D.

- Ingredients: Milled corn, sugar, malt flavor, contains 2% or less of salt. **Vitamins and Minerals:** *Iron*, vitamin C (sodium ascorbate, ascorbic acid), *niacinamide,* vitamin B6 (pyridoxine hydrochloride), *vitamin B2 (riboflavin), vitamin B1 (thiamin hydrochloride),* vitamin A palmitate, *folic acid*, vitamin D, vitamin B12.

These breakfast cereals are also fortified because they contain additional nutrients beyond the five enrichment nutrients.

Part A: Crediting Requirements

Fortified breakfast cereals

Fortified foods have nutrients added by the manufacturer that were not originally present in the food or that are at higher levels than originally present. Manufacturers may choose which additional nutrients to use for fortification. Fortified breakfast cereals typically contain the five enrichment nutrients (iron, thiamin, riboflavin, niacin, and folic acid) plus other vitamins and minerals that do not exist naturally in grains, such as vitamins A, C, D, E, B_6 (pyridoxine hydrochloride), vitamin B_{12} (cobalamin), pantothenic acid, phosphorous, magnesium, and zinc.

Different cereal brands may list different fortification nutrients. The USDA does not specify a minimum number of nutrients or a minimum percentage for the level of fortification for breakfast cereals in the Child Nutrition Programs.

A breakfast cereal is fortified if the food is labeled as "fortified" or the ingredients statement lists the vitamins and minerals added to the product. The example below shows a whole-grain RTE cereal fortified with 11 vitamins and minerals, listed after "Vitamins and Minerals."

> Ingredients: Whole-grain wheat, raisins, wheat bran, sugar, brown sugar syrup, contains 2% or less of salt, malt flavor. **Vitamins and Minerals:** *Potassium chloride, niacinamide, reduced iron, vitamin B_6 (pyridoxine hydrochloride), zinc oxide, vitamin B_2 (riboflavin), vitamin B_1 (thiamin hydrochloride), vitamin A palmitate, folic acid, vitamin D, vitamin B_{12}.*

Note: This cereal is WGR because it contains a whole grain (whole-grain wheat) as the first ingredient and is fortified. The noncreditable grain (wheat bran) is exempt from the limit for noncreditable grains because the RTE breakfast cereal is fortified and contains a whole grain as the first ingredient.

Noncreditable breakfast cereals

Breakfast cereals that contain 100 percent bran (such as bran cereal) or 100 percent germ (such as wheat germ) do not credit in the NSLP and SBP meal patterns, even if they are fortified. The example below shows a noncreditable fortified 100 percent bran RTE breakfast cereal.

> Ingredients: *Wheat bran*, sugar, malt flavor, contains 2% or less of salt. **Vitamins and Minerals:** *Calcium carbonate, vitamin C (sodium ascorbate and ascorbic acid), reduced iron, niacinamide, vitamin B_6 (pyridoxine hydrochloride), vitamin B_2 (riboflavin), folic acid, vitamin B_1 (thiamin hydrochloride), vitamin A palmitate, vitamin B_{12}, vitamin D.*

This cereal cannot credit as the grains component because the ingredients statement lists wheat bran (noncreditable grain) as the first and only grain ingredient.

Part A: Crediting Requirements

Breakfast cereals served to grades K-12 and preschoolers

The NSLP and SBP meal patterns for grades K-12 do not limit the amount of sugars in breakfast cereals. However, the meal patterns for preschoolers (ages 1-4) in the NSLP and SBP require that RTE and cooked breakfast cereals cannot contain more than 6 grams of sugar per dry ounce. If SFAs serve the same breakfast cereals to grades K-12 and preschoolers, the breakfast cereals must comply with the preschool limit for sugars. The exception is when SFAs choose to follow the K-5 meal pattern for preschoolers and grades K-5 who eat in the same service area at the same time. For more information, see "Serving the same foods to grades K-12 and preschoolers" and "Preschoolers and grades K-5 eating together" in section 1, and the CSDE's handout, *Crediting Breakfast Cereals for Preschoolers in the NSLP, SBP, and ASP*.

For additional guidance on the meal patterns for preschoolers, see the CSDE's guide, *Menu Planning Guide for Preschoolers in the NSLP, SBP, and ASP*. For information on the differences between the two grade groups, see the CSDE's handout, *Comparison of Meal Pattern Requirements for Preschoolers and Grades K-12 in the NSLP and SBP*.

Crediting Corn Masa, Masa Harina, Corn Flour, and Cornmeal

Corn ingredients credit as the grains component if they are whole grain, enriched, or treated with lime (nixtamalized). Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline (slaked lime) solution. This process increases the bioavailability of certain nutrients and provides a nutritional profile similar to whole-grain corn. Nixtamalized corn is used to make hominy, masa harina (corn flour), corn masa (dough from masa harina), and certain types of cornmeal. Masa harina is used for making corn products such as tortillas, tortilla chips, and tamales.

Ingredients labeled as hominy, corn masa, or masa harina are nixtamalized, and therefore credit as whole grains. The ingredients statements below show some examples of corn chip products that credit as 100 percent whole grains.

> Ingredients: *Corn masa flour*, water, contains 2% or less of: cellulose gum, guar gum, amylase, propionic acid, benzoic acid, and phosphoric acid (to maintain freshness).

> Ingredients: *Whole-white corn*, vegetable oil (contains soybean, corn, cottonseed, and/or sunflower oil), salt, *lime/calcium hydroxide* (processing aid). **Note:** The lime/calcium hydroxide is the processing aid for the nixtamalization of corn.

Part A: Crediting Requirements

The ingredients statements below show some examples of taco shell products that credit as 100 percent whole grains.

Ingredients: *Limed whole-grain white corn*, palm oil, salt, TBHQ (preservative).

Ingredients: *Whole-grain yellow corn*, high oleic canola oil, water, *corn flour*, salt, *hydrated lime*. **Note:** The corn flour is nixtamalized with hydrated lime and is therefore a whole grain.

Corn, cornmeal, and corn flour do not credit unless they are whole grain, enriched, or nixtamalized. For example, the corn chip product below cannot credit as the grains component because the corn is not whole grain, enriched, or nixtamalized.

Ingredients: *Corn*, corn oil, salt.

If the product's ingredients statement does not provide sufficient information, SFAs must obtain a PFS from the manufacturer to document that any corn ingredients (such as cornmeal and yellow corn flour) are whole grain, enriched, or nixtamalized. Corn ingredients that are not whole grain, enriched, or nixtamalized are noncreditable grains. They count toward the limit for noncreditable grains under the WGR criteria. For more information, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" in part B of section 3.

SFAs may use the two methods below to identify products made with nixtamalized corn.

1. If a product made with corn includes one of two FDA-approved whole grain health claims on its packaging, the corn in the product is nixtamalized and the product provides at least 50 percent whole grain.

    - **Low-fat claim:** "Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol, may reduce the risk of heart disease and certain cancers."

    - **Moderate-fat claim:** "Diets rich in whole grain foods and other plant foods, and low in saturated fat and cholesterol, may help reduce the risk of heart disease."

    To meet the WGR criteria for grades K-12, any remaining grains in the product must be enriched and the combined weight of all noncreditable grains in the product cannot

exceed the required limits. For information on the WGR criteria, see part C of section 3.

2. If the ingredients statement indicates that the corn is treated with lime, the corn ingredient is nixtamalized. Examples include "ground corn with trace of lime" and "ground corn treated with lime." Nixtamalized corn ingredients credit as whole grains.

Corn masa, corn flour, and cornmeal credit the same as all other creditable grain ingredients and foods. Crediting is determined by the weight of the product (as listed in the USDA's ounce equivalents chart) or by the grams of creditable grain per portion. For more information, see part E of section 3.

Crediting information for corn masa, masa harina, corn flour, and cornmeal is summarized in USDA Memo SP 34-2019, CACFP 15-2019 and SFSP 15-2019: *Crediting Coconut, Hominy, Corn Masa, and Masa Harina in the Child Nutrition Programs.*

Crediting Hominy as Grains

Hominy is a traditional food in Mexican and Native American cultures that is commonly served as a vegetable or milled grain product, e.g., hominy grits. Hominy is made from whole kernels of maize (dried field corn) that have been soaked in an alkaline solution (nixtamalized). This process removes the hull and germ, causes the corn to puff up to about double its normal size, and increases the bioavailability of certain nutrients, such as calcium and niacin.

Hominy is available dried and in a fully cooked canned form. Dried hominy is cooked the same as dried beans (legumes). Hominy offered in a dried, milled form (such as grits) is a considered a whole grain. A ½-cup serving of cooked hominy grits or 1 ounce (28 grams) of dry hominy grits credits as 1 ounce equivalent of the grains component. For information on crediting hominy as the vegetables component, see "Crediting Hominy as Vegetables" in the "Vegetables" section.

Crediting Popcorn

Popcorn is a whole-grain food and a good source of fiber. A 3-cup (1 ounce) serving of plain popped popcorn credits as 1 ounce equivalent of the grains component. The minimum creditable amount is ¾ cup (¼ ounce equivalent). Table 3-25 summarizes the ounce equivalents contribution of popped popcorn.

Part A: Crediting Requirements

Table 3-25. Ounce equivalents of popped popcorn		
Cups [1]	**Weight [1]**	**Ounce equivalents of WGR grains**
¾	0.25 ounces or 7 grams	¼ (minimum creditable amount)
1½	0.5 ounces or 14 grams	½
3	1.0 ounce or 28 grams	1
[1] The volume and weights refer to the amount of popcorn after popping.		

Menu planners should consider the appropriateness of the serving size for each grade group. It may be unreasonable to provide the full serving of the grains component from popcorn, due to the large volume required for crediting. The CSDE recommends providing a smaller serving of popcorn and supplementing with another food from the grains component. For example, SFAs could provide:

- 1½ ounce equivalents of the grains component by serving ¾ cup of popcorn (¼ ounce equivalent) with a 1-ounce equivalent whole-grain wrap; or
- 1 ounce equivalent of the grains component by serving ¾ cup of popcorn (¼ ounce equivalent) in a snack mix with ¾ ounce equivalent of pretzels and cereal.

Foods that contain popcorn as an ingredient (such as a popcorn snack mix or popcorn balls) require documentation to determine the crediting information. SFAs must obtain a PFS for commercial foods and a standardized recipe for foods prepared on site.

Popcorn sometimes includes ingredients and toppings such as salt, caramel, cheese, and butter. SFAs must ensure that these ingredients, as well as any oil or fat used to pop the popcorn, are included in the recipe's nutrient profile. Popcorn products must contain zero trans fat and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. The USDA strongly encourages healthier alternatives, such as seasoning the popcorn with herb blends or serving fresh, plain popcorn.

Popcorn that is an ingredient in products that are grain-based desserts must count toward the weekly limit of no more than 2 ounce equivalents at lunch. For more information, see "Limit for Grain-based Desserts" in this section.

Part A: Crediting Requirements

Note: To prevent the risk of choking, the USDA recommends that SFAs consider children's age and developmental readiness when deciding whether to offer popcorn. This consideration is especially important for SFAs that serve young children.

Crediting information for popcorn is summarized in USDA Memo SP 23-2019, CACFP 10-2019 and SFSP 09-2019: *Crediting Popcorn in the Child Nutrition Programs*.

Limit for Grain-based Desserts

The lunch meal pattern allows up to 2 ounce equivalents of grain-based desserts per week. For example, SFAs may offer a 2-ounce equivalent cookie once per week or a 0.5-ounce equivalent cookie four times per week.

Foods that are creditable grain-based desserts are identified with the footnote 1 (allowed for lunch and breakfast) or the footnote 2 (allowed only for lunch) in the USDA's ounce equivalents chart (see table 3-41 in part E of section 3). 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 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.

Grain-based desserts often contain more solid fats and added sugars than traditional grains. To credit in school meals, grain-based desserts must contain zero trans fats and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fat, and sodium. The CSDE recommends offering nutrient-dense whole grains instead of grain-based desserts. For information on planning school meals to meet the dietary specifications, see section 6.

Menu planners should not rely on a product's name to determine if it is grain-based dessert because cookies and similar grain-based desserts do not have a FDA standard of identity. Manufacturers sometimes use terms in their product names or labels that might be misleading, such as "breakfast rounds" for oatmeal raisin cookies, "breakfast bars" for cereal bars, and "super stars" for doughnut holes. These products often contain higher levels of sugar, fat, and sodium, which could make it difficult for menus to meet the weekly dietary specifications for school meals.

Part A: Crediting Requirements

Grain-based desserts served with daily alternate lunch choices

SFAs cannot offer grain-based desserts as the grains component of daily alternate lunch choices. For example, an alternate daily lunch choice (such as a yogurt and fruit plate) cannot include graham crackers or animal crackers as the grains component each day. This would exceed the weekly limit of no more than 2 ounce equivalents of grain-based desserts.

Grain-based desserts served as extra foods

Grain-based desserts served as an extra menu item at lunch must count toward the minimum daily and weekly servings of the grains component, including the weekly limit of no more than 2 ounce equivalents of grain-based desserts. Grain-based desserts must fit within the weekly dietary specifications. They must contain zero trans fats and their inclusion cannot cause the menu to exceed the average weekly limits for calories, saturated fat, and sodium. For more information, see "Creditable extra foods at lunch" in section 1.

Note: The limit for grain-based desserts applies even if a grain product is not WGR. For example, if an enriched fortune cookie credits as at least ¼ ounce equivalent, SFAs must count it toward the weekly limit for grain-based desserts.

Grain-based desserts at breakfast

The breakfast meal pattern does not require a weekly limit, but only allows certain types of grain-based desserts. The CSDE recommends that SFAs eliminate or limit grain-based desserts at breakfast, and offer 100 percent whole-grain choices most often. This provides the best nutrition for children.

The breakfast meal pattern does not require a weekly limit for grain-based desserts, but only allows certain types. Grain-based desserts that credit at breakfast are identified with the footnote 1 in the USDA's ounce equivalents chart (see table 3-41 in part E of section 3). Examples include animal crackers and graham crackers, cereal bars, granola bars, doughnuts, fruit turnovers, pastries, and sweet rolls.

The CSDE recommends that SFAs limit grain-based desserts at breakfast, and serve more nutrient-dense whole grains instead. Grain-based desserts often contain more solid fats and added sugars than traditional grains. To credit at breakfast, grain-based desserts must contain zero trans fats and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fat, and sodium.

Table 3-26 summarizes which grain-based desserts credit at lunch and breakfast.

Part A: Crediting Requirements

Table 3-26. Allowable grain-based desserts in the NSLP and SBP		
Food Item	Credits as grains component? [1, 2]	
	Lunch (No more than 2 ounce equivalents per week) [3]	Breakfast
Animal crackers	Yes	Yes
Breakfast bars, plain or with nuts, dried fruit, chocolate pieces, fruit purees, filling, and frosting	Yes	Yes
Brownies, frosted	No	No
Brownies, plain	Yes	No
Cakes and cupcakes, plain or frosted	Yes	No
Cereal bars, plain or with nuts, dried fruit, chocolate pieces, fruit purees, filling, and frosting	Yes	Yes
Coffee cakes, cinnamon streusel quick breads	Yes	Yes
Cookies, plain or with nuts, dried fruit, chocolate pieces, fruit purees, filling, and frosting	Yes	No
Doughnuts, cake and yeast raised, frosted or unfrosted, glazed or unglazed	Yes	Yes
Fruit cobblers (cobbler topping)	Yes	No
Fruit crisps (crisp topping)	Yes	No
Fruit dessert pies (pie crust)	Yes	No
Fruit turnovers	Yes	Yes
Graham crackers	Yes	Yes

Part A: Crediting Requirements

Table 3-26. Allowable grain-based desserts in the NSLP and SBP		
Food Item	Credits as grains component? [1, 2]	
	Lunch (No more than 2 ounce equivalents per week) [3]	Breakfast
Grain-fruit bars, e.g., cereal bars	Yes	Yes
Granola bars, plain or with nuts, dried fruit, chocolate pieces, fruit purees, filling, and frosting	Yes	Yes
Pastries, plain or frosted	Yes	Yes
Sweet rolls, plain or frosted	Yes	Yes
Toaster pastries, plain or frosted	Yes	Yes

1 All grain-based desserts must be WGR or enriched. Grain-based desserts must provide the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains (see "Method 2: Creditable grains" in part E of section 3). SFAs must maintain documentation on file to indicate that grain-based desserts meet these requirements.

2 Grain-based desserts must contain zero trans fats and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. For information on planning school meals to meet the dietary specifications, see section 6.

3 The total amount of all grain-based desserts served at lunch cannot exceed 2 ounce equivalents per week.

Evaluating PFS Forms for Grain Products

SFAs may need to obtain a PFS from the manufacturer to determine if a commercial grain product complies with the crediting requirements for school meals. Table 3-27 shows a sample completed PFS that determines the ounce equivalents of a commercial grain product based on the grams of creditable grains per serving. For guidance on calculating a product's ounce equivalents contribution using this method, see "Method 2: Creditable grains" in part E of section 3. For guidance on when a PFS is required, see "When Method 2 is Required for Commercial Products" in part E of section 3.

A PFS does not provide any warranty against audit claims for reimbursable school meals. SFAs must check the manufacturer's crediting information for accuracy prior to including the product in reimbursable meals. The PFS must include the same information listed on the USDA's *Product Formulation Statement for Grains: Ounce Equivalents*. It must be on company letterhead, and signed and dated by an official company representative. If the PFS does not meet these requirements, the SFA cannot accept it, and the product cannot credit in school meals.

The CSDE has observed several common compliance issues with manufacturers' PFS forms for grain products. The guidance below helps SFAs avoid these issues.

- If the manufacturer uses a format that is different from the USDA's *Product Formulation Statement for Grains: Ounce Equivalents*, check to be sure that the manufacturer's PFS includes the same information listed on the USDA's form.

- Check that the PFS is on company letterhead, and is signed and dated by an official company representative.

- Check that part III of the PFS lists the correct grain group (A-I) for the product, as indicated in the USDA's ounce equivalents chart (see table 3-41 in part E of section 3). For example, the PFS for a bread product must list group B.

- Read the product's ingredients statement to identify the creditable grain ingredients. Check that the chart in part III of the PFS lists the **same** ingredients and indicates the weight (grams) of each ingredient in one serving. **Note:** Creditable grains include only whole and enriched grains. Bran and germ do not credit. For guidance on identifying creditable grains, see part B of section 3.

- Check that the chart in part III of the PFS uses the correct calculation to determine the ounce equivalents per serving of the product. The number listed under "Gram standard of creditable grain per oz eq (16 grams or 28 grams)" must be 16 grams for

groups A-G (baked goods) and 28 grams for group H (cereal grains). Group I (RTE breakfast cereals) requires 1 ounce of cereal to provide 1 ounce equivalent, or the equivalent volume indicated in the USDA's ounce equivalents chart (1 cup for flaked and round cereals, 1¼ cups for puffed cereals, and ¼ cup for granola).

- Read the product's ingredients statement to determine if it contains any noncreditable grains. Compare this information with part II of the PFS. If the product's ingredients statement lists any noncreditable grains, the PFS must indicate the combined weight (grams) of all noncreditable grains per ounce equivalent. Sometimes a product's ingredients statement contains noncreditable grains but the PFS incorrectly states that the product does not contain any noncreditable grains. For information on noncreditable grains, see table 3-34 part C of section 3.

- If the product's ingredients statement contains more than one noncreditable grain, confirm with the manufacturer that the amount of noncreditable grains indicated on the PFS includes the combined weight (grams) of all noncreditable grains listed in the product's ingredients statement. For example, if part II of the PFS indicates that the product contains 0.89 grams of noncreditable grains and the product's ingredients statement lists oat bran, modified corn starch, wheat flour, and rice starch, verify that 0.89 grams includes the weight of all four noncreditable grains. For information on determining if noncreditable grains comply with the limit, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" part C of section 3.

SFAs must maintain PFS forms and supporting information on file to document meal pattern compliance for auditing purposes. The CSDE will review this information during the Administrative Review of school nutrition programs. For more information on meal pattern documentation, see section 2.

Part A: Crediting Requirements

Table 3-27. Sample Completed PFS Based on Grams of Creditable Grains

Product name: Wheat Smile Pancakes Code number: 14005

Manufacturer: ABC Bread Company Serving size: 2 pancakes: 50 grams (1.75 ounces)

I. Does the product meet the whole grain-rich criteria? ☑ Yes ☐ No

Refer to USDA policy memo SP 30-2012: *Grain Requirements for the National School Lunch Program and School Breakfast Program*.

II. Does the product contain any noncreditable grains? ☐ Yes: How many grams: _____ ☑ No

Products with more than 0.24 oz equivalent or 3.99 grams for Groups A-G or 6.99 grams for Group H of noncreditable grains cannot credit toward the grain requirements for school meals.

III. Use USDA policy memo SP 30-2012: *Grain Requirements for the National School Lunch Program and School Breakfast Program: Exhibit A* to determine if the product fits into groups A-G (baked goods), group H (cereal grains), or group I (RTE breakfast cereals). Different methodologies are applied to calculate the ounce equivalents (oz eq) of the grains component based on creditable grains. Groups A-G use the standard of 16 grams creditable grain per oz eq. Group H uses the standard of 28 grams creditable grain per oz eq. Group I uses volume or weight.

Indicate the group (A-G) in Exhibit A where the product belongs: C

Description of creditable grain ingredient *	Grams of creditable grain ingredient per portion [1] **A**	Gram standard of creditable grain per oz eq (16 grams or 28 grams) [2] **B**	Creditable amount **A ÷ B**
Whole-wheat flour (47%)	23.5	16	1.4687
Enriched flour (22%)	11	16	0.6875
			2.15
		Total creditable amount [3]	**2.00**

* Creditable grains are whole-grain meal/flour and enriched meal/flour.

[1] (Serving size) X (% of creditable grain in formula). If not in grams, convert serving size to grams.

[2] Standard grams of creditable grains from the corresponding group in Exhibit A.

[3] Must round **down** total creditable amount to the nearest quarter (0.25) oz eq. Do **not** round up.

Total weight (per portion) of product as purchased: 50 grams (1.75 ounces)

Total contribution of product (per portion): 2.00 oz eq

I certify that the above information is true and correct and that a 1.75 ounce portion of this product (ready for serving) provides 2.00 oz eq of grains. I further certify that noncreditable grains are **not** above 0.24 oz eq per portion. Products with more than 0.24 oz eq (or 3.99 grams for groups A-G or 6.99 grams for group H) of noncreditable grains cannot credit toward the grain requirements for school meals.

John Smith — Signature

President, ABC Bread Company — Title

John Smith — Printed Name

September 10, 2019 — Date

860-123-4567 — Phone Number

Part A: Crediting Requirements

Common Compliance Issues with the Grains Component

Meals must comply with the USDA's requirements for the grains component. The list below includes common compliance issues with the grains component, based on the CSDE's Administrative Review of school nutrition programs.

- Menus do not provide the minimum daily amounts of the grains component. For example, a lunch menu for grades 9-12 that offers a 1½-ounce equivalent item (such as chicken nuggets) as the only grain item does not provide the minimum daily 2 ounce equivalents for grades 9-12. For each lunch choice, SFAs must plan and offer at least 1 ounce equivalent of the grains component for grades K-5 and 6-8, and at least 2 ounce equivalents of the grains component for grades 9-12. For each breakfast choice, SFAs must plan and offer at least 1 ounce equivalent of the grains component for all grades. For more information, see "Daily Servings of Grains" in part E of section 3.

- Menus do not provide the minimum weekly amounts of the grains component. For grades K-5 and 6-8 at lunch and all grades at breakfast, SFAs must offer **more** than the minimum daily amount of the grains conponent on some days of the week, in order to meet the weekly minimum. If the menu offers a choice of more than one item on an individual day, the menu planner must use the daily item with the **smallest** ounce equivalents to count toward the weekly requirement. For more information, see "Weekly Servings of Grains" in part E of section 3, and "Weekly Grains and Meat/Meat Alternates at Lunch" and "Weekly Grains at Breakfast" in section 4.

- The menu planner credits commercial grain products based on the weight served without reviewing the USDA's ounce equivalents chart or the product's PFS (or CN label, if available). SFAs must provide the appropriate weight based on one of the two allowable methods, which include the USDA's ounce equivalents chart (method 1) or the creditable grains per serving (method 2). For example, a 2-ounce blueberry muffin does not credit as 2 ounce equivalents. Based on the group D of the USDA's ounce equivalents, a 2-ounce muffin (except corn) credits as 1 ounce equivalent. For more information, see "Options for Calculating Ounce Equivalents" in part E of section 3.

- The menu planner does not verify that a grain product or recipe meets the crediting criteria for the grains component. All grains must be WGR or enriched. RTE breakfast cereals must be WGR, enriched, or fortified. For information on creditable grains, see part B of section 3. For information on the WGR criteria, see part C of section 3.

Part A: Crediting Requirements

- A manufacturer's PFS is needed to determine the crediting of a commercial grain product, but the SFA does not obtain it. There are six situations when SFAs must obtain a PFS and use method 2 (instead of using the USDA's ounce equivalents chart) to determine the ounce equivalents contribution of commercial grain products. For more information, see "When Method 2 is Required for Commercial Products" in part E of section 3.

- The lunch menu exceeds the weekly limit of no more than 2 ounce equivalents of grain-based desserts. For example, SFAs cannot offer graham crackers daily as the grains component of an alternate lunch choice. For more information, see "Limit for Grain-based Desserts" in part A of section 3.

SFAs must plan the grains component to avoid these compliance issues.

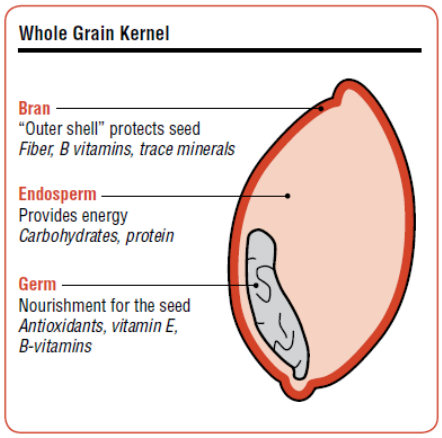
Part B: Creditable Grains

Creditable grains are the grain ingredients in a product that credit toward the grains component in the NSLP and SBP meal patterns. Creditable grains include whole grains and enriched grains. Bran and germ do not credit; they are noncreditable grains and count toward the limit for noncreditable grains required by the USDA's WGR criteria. For more information, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" part C of section 3.

Whole Grains

Whole grains consist of the entire cereal grain seed or kernel, after removing the inedible outer husk or hull. The kernel includes the starchy endosperm, the fiber-rich bran, and the nutrient-rich germ. Bran (such as oat bran, wheat bran, corn bran, rice bran, and rye bran) is the seed husk or outer coating of cereal grains such as wheat, rye, and oats. Germ (such as wheat germ) is the vitamin-rich embryo of the grain kernel.

Usually the grain kernel is cracked, crushed, flaked, or ground during the milling process. A finished grain product is considered whole grain if it contains the same relative amounts of bran, germ, and endosperm as the original grain. A food is 100 percent whole grain if all grain ingredients are whole grain.



Whole grains contain a wide variety of nutrients and compounds that help reduce the risk of chronic diseases. The CSDE encourages SFAs to serve 100 percent whole-grain products most often. This provides the best nutrition for children.

Identifying whole grains in commercial products

Table 3-28 lists examples of whole-grain products and ingredients. The ingredients statement on commercial product labels lists ingredients by weight, from most to least. The closer an ingredient is to the beginning of the ingredients statement, the more of it the food contains. A commercial product is 100 percent whole grain if the ingredients statement lists a whole grain as the first ingredient (or lists water as the first ingredient and a whole grain as the second ingredient) and all other grain ingredients are whole grains.

Part B: Creditable Grains

The ingredients statements below show examples of 100 percent whole-grain products.

- Ingredients: *Whole-wheat flour*, sugar, wheat gluten. Contains 2% or less of each of the following: honey, salt, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono-and diglycerides, l-cysteine, enzymes.

- Ingredients: Water, *whole-wheat flour, whole oats*, sugar, wheat gluten, yeast, soybean oil, salt, calcium propionate (preservative), monoglycerides, datem and/or sodium stearoyl lactylate, calcium sulfate, citric acid, calcium carbonate, soy lecithin, whey, nonfat milk

If the ingredients statement lists a grain name without the word "whole" (such as "wheat flour" instead of "whole wheat flour"), the product is usually not whole grain. However, some products that do not use the word "whole" in their description are whole grains. Examples include berries (e.g., wheat berries), groats (e.g., oat groats), rolled oats and oatmeal (including old-fashioned, quick-cooking, and instant oatmeal), brown rice, brown rice flour, wild rice, quinoa, millet, triticale, teff, amaranth, buckwheat, and sorghum. In addition, some grains have a FDA standard of identity that indicates they are whole grain. These include cracked wheat, crushed wheat, whole-wheat flour, graham flour, entire-wheat flour, bromated whole-wheat flour, and whole durum wheat flour.

If the ingredients statement does not provide sufficient information to determine if a grain is whole grain, the SFA must obtain a PFS from the manufacturer to document the amount of whole grains in the product. For more information, see "Product formulation statements" in section 2 and "Evaluating PFS Forms for Grain Products" in part A of section 3.

Part B: Creditable Grains

Table 3-28. Whole-grain products and ingredients [1]

Barley
Dehulled barley
Dehulled-barley flour
Whole barley
Whole-barley flakes
Whole-barley flour
Whole-grain barley
Whole-grain barley flour

Brown rice
Brown rice
Brown rice flour
Sprouted brown rice

Corn
Corn masa (whole corn treated with lime) [2]
Cornmeal, nixtamalized [2]
Hominy made from nixtamalized corn [2]
Masa harina (corn flour) [2]
Whole corn
Whole-corn flour
Whole cornmeal
Whole-grain corn
Whole-grain corn flour
Whole-grain grits
Whole-ground corn

Oats
Instant oats
Oat groats [3]
Oatmeal
Old-fashioned oats

Oats, *continued*
Quick-cooking oats
Rolled oats
Whole oats
Whole-oat flour
Whole-grain oat flakes
Whole-grain oat flour

Rye
Whole rye
Rye berries [3]
Rye groats [3]
Sprouted whole rye
Whole-rye flour
Whole-rye flakes

Wheat (white) [6]
Whole white wheat
Whole white wheat flour

Wild rice
Wild rice
Wild rice flour

Wheat (red) [4]
Bulgur (cracked wheat)
Bromated whole-wheat flour
Cracked wheat
Crushed wheat
Entire-wheat flour
Graham flour
Sprouted whole wheat
Sprouted wheat berries [3]

Wheat (red), *continued*
Stone ground whole-wheat flour [5]
Toasted crushed whole wheat
Wheat berries [3]
Wheat groats [3]
Whole bulgur
Whole durum flour
Whole durum wheat flour
Whole-grain bulgur
Whole-grain wheat
Whole-grain wheat flakes
Whole wheat
Whole-wheat flour
Whole-wheat pastry flour
Whole-wheat flakes

Other grains
Amaranth
Amaranth flour
Buckwheat
Buckwheat flour
Buckwheat groats [3]
Einkorn
Einkorn berries
Einkorn flour
Emmer (farro)
Kamut®
Millet
Millet flour

Continued on next page

Part B: Creditable Grains

Table 3-28. Whole-grain products and ingredients [1], *continued*

Other grains, *continued*

Quinoa
Sorghum (milo)
Spelt
Spelt berries
Sprouted buckwheat
Sprouted einkorn
Sprouted spelt
Teff
Teff flour
Triticale
Triticale flour
Whole-grain spelt flour

1 This list is not all-inclusive.
2 Hominy, masa harina (corn flour), corn masa (dough from masa harina), and cornmeal credit as whole grains if they are nixtamalized. Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline solution. SFAs may need to obtain a PFS from the manufacturer to determine if a corn ingredient is nixtamalized. For more information, see "Crediting Corn Masa, Masa Harina, Corn Flour, and Cornmeal" in part A of section 3.
3 Groats and berries are the hulled kernels of cereal grains such as oat, wheat, rye, and barley.
4 Red wheat is the most common kind of wheat in the United States.
5 "Stone ground" describes the process used for making the flour or meal and does not necessarily mean that the product is whole grain. Check the ingredients statement for "whole" in combination with "stone ground."
6 White whole-wheat products are lighter in color and lack the slightly bitter taste associated with the bran in red wheat. Read labels carefully to be sure products are "white whole wheat" and not "white wheat," which is not a whole grain.

Criteria that Do Not Indicate Whole Grain Content

Menu planners cannot determine if a commercial grain product contains whole grains by using any of the following: certain statements about grain content on the product's package; the Whole Grains Council's whole grain stamp; or the product's color and fiber content.

Label statements about grain content

Careful label reading is important because the packaging for grain products can be misleading. Manufacturers often use terms in their product names or labels that make a product appear to contain a significant amount of whole grain when it does not.

Table 3-29 includes some common misleading terms found on product packages. Products with these terms are usually not 100 percent whole grain, and may or may not meet the WGR criteria. They often contain refined flour, or other ingredients that are not whole grain, as the first or second ingredient.

Table 3-29. Common misleading terms for grains

"Made with whole grains"	These products must have some whole grains but may contain mostly refined flour. The amount of whole grains can vary greatly among different products.
"Made with whole wheat"	These products must have some whole wheat but may contain mostly refined flour. The amount of whole wheat can vary greatly among different products.
"Contains whole grain"	These products may contain a small amount of whole grain but usually are mostly refined grains. The amount of whole grains can vary greatly among different products.
"100% wheat"	All breads made from any part of the wheat kernel are 100 percent wheat, which is not the same as 100 percent whole wheat. "100% wheat" products may contain some whole-wheat flour or may contain only refined flour. Look for the terms "100% whole wheat" or "100% whole grain" to indicate that the product is made from only whole grains.

Part B: Creditable Grains

Table 3-29. Common misleading terms for grains, *continued*	
"Multigrain" or specifies number of grains, e.g., "seven-grain bread"	These products must contain more than one type of grain, which can include refined grains, whole grains, or both. Some multigrain breads may have enriched flour as the primary ingredient with multiple grains in smaller amounts, while others contain mostly whole grains.
"Cracked wheat bread"	While cracked wheat is a whole grain, cracked wheat bread may contain refined flour as the primary ingredient with small amounts of cracked wheat.
"Stone ground" flour or meal	"Stone ground" describes the process used for making the flour or meal. It does not necessarily mean that the product is whole grain. Check the ingredients statement for the term "whole" in combination with "stone ground."

Whole grain stamp

The Whole Grains Council provides three stamps that manufacturers may use on product packaging to identify foods that contain whole grains. However, the USDA does not allow SFAs to use these stamps to determine if grain products meet the WGR criteria for the grains component. The whole grain stamps indicate that a product is made with or contains 100 percent whole grains, but they do not indicate if all other grains in the product are enriched or if any noncreditable grains comply with the USDA's limit for noncreditable grains. To determine compliance with the WGR criteria for the grains component, SFAs must review the product's ingredients statement and packaging and, if necessary, obtain a PFS from the manufacturer.

Color

A product's color does not indicate whether it contains whole grains. While whole-grain products are usually browner than products made with refined white flour, sometimes the brown color comes from coloring (e.g., caramel coloring) or molasses, not from whole-grain ingredients. Read the product's ingredients statement or the school's standardized recipe to determine if the food contains any whole grains.

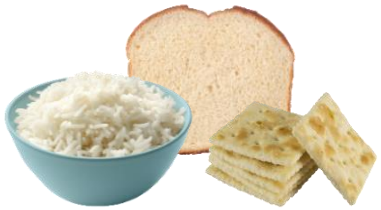
Fiber content

Whole grains and fiber both provide health benefits, but they are not the same. The fiber content on the Nutrition Facts label is not a good indicator of whether a commercial product contains whole grains. Grain-based foods that are good sources of fiber, such as bran cereal, may added fibers, but few or no whole grains. The Nutrition Facts label lists total fiber, which includes naturally occurring fiber and sources added by the manufacturer, such as cellulose, inulin, and chicory root.

Enriched Grains

Enriched grains are refined grains (such as wheat, rice, and corn) and grain products (such as cereal, pasta, and bread) that have certain vitamins and minerals added to replace some of the nutrients lost during processing The five enrichment nutrients are defined by the FDA and include:

- thiamin (vitamin B_1, thiamin mononitrate, or thiamin hydrochloride);
- riboflavin (vitamin B_2);
- niacin (vitamin B_3 or niacinamide);
- folic acid (folate); and
- iron (reduced iron, ferrous sulfate, or ferric orthophosphate).



If the grain product includes enriched ingredients or the product itself is enriched, the ingredients or product must meet the applicable FDA standard of identity for enrichment. Examples of enriched ingredients include enriched flour (21 CFR 137.165) and enriched cornmeal (21 CFR 137.260). Examples of enriched products include enriched bread, rolls, and buns (21 CFR 136.115); enriched macaroni products (21 CFR 139.115); enriched noodle products (21 CFR 139.155); enriched rice (21 CFR 137.350); and enriched farina (21 CFR 137.305).

Enriched products are not nutritionally equivalent to whole-grain products because enrichment does not replace all of the nutrients originally present in the whole grain. Enriched products (such as enriched crackers, enriched bread, enriched pasta, enriched farina, enriched white rice, and enriched corn grits) credit in the NSLP and SBP meal patterns, but cannot exceed half of all grains offered during the week at lunch and breakfast. For more information, see "Weekly WGR Requirement" in part A of section 3.

Part B: Creditable Grains

Identifying enriched grains in commercial products

A commercial grain product is enriched if it meets at least one of the two criteria below.

1. The food is labeled as "enriched." For example, long grain rice that is enriched will have the product name "enriched long grain rice."

2. An enriched grain is the first ingredient (or water is the first ingredient and an enriched grain is the second ingredient) in the food's ingredients statement. The label will usually state "enriched flour" or "enriched wheat flour," or the grain ingredient includes a sublisting of the five enrichment nutrients in parenthesis. The ingredients statements below show some examples of enriched products.

   Ingredients*:* Water, *enriched flour (wheat flour, niacin, reduced iron, vitamin B1 [thiamin mononitrate], vitamin B2 [riboflavin], folic acid)*, water, sugar, soybean and/or canola oil, buttermilk, eggs, contains 2% or less of leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), salt, fructose, soy lecithin.

   Ingredients*: Enriched flour (wheat flour, niacinamide, reduced iron, thiamin mononitrate [vitamin B1], riboflavin [vitamin B2], folic acid)*, soybean oil with TBHQ for freshness, salt, contains two percent or less of corn syrup, baking soda, yeast, soy lecithin.

   For guidance on identifying enriched RTE and cooked breakfast cereals, see "Enriched breakfast cereals" in part A of section 3.

Not all refined products are enriched. For example, when manufacturers process corn into cornmeal, they remove the germ of the grain. The resulting cornmeal is not enriched unless:

- the product states "enriched cornmeal;" or
- the ingredients statement lists the five enrichment nutrients, e.g., "enriched cornmeal (cornmeal, niacin, iron, thiamine mononitrate, riboflavin, folic acid)."

SFAs must check the ingredients statement to ensure that a product is enriched. If the ingredients statement does not provide sufficient information, SFAs must obtain a PFS from the manufacturer to document the amount of creditable grains (whole and enriched) in the product. For more information, see "Product formulation statements" in section 2 and "Evaluating PFS Forms for Grain Products" in part A of section 3.

Table 3-30 lists examples of enriched grain products and ingredients.

Part B: Creditable Grains

Table 3-30. Enriched products and ingredients [1]	
Enriched [2]	**Not enriched [3]**
Bleached enriched flour	Bleached flour
Enriched bromated flour	Bromated flour
Enriched corn flour	Corn flour [4]
Enriched corn grits	Corn grits [4]
Enriched cornmeal	Cornmeal [4]
Enriched degerminated cornmeal	Degerminated cornmeal
Enriched durum flour	Durum flour
Enriched durum wheat flour	Durum wheat flour
Enriched farina	Farina
Enriched flour	Flour
Enriched rice	Rice
Enriched rice flour	Rice flour
Enriched rye flour	Rye flour
Enriched self-rising flour	Self-rising flour
Enriched semolina flour	Semolina flour
Enriched wheat flour	Wheat flour
Enriched white flour	White flour
Enriched white cornmeal	White cornmeal [4]
Enriched yellow cornmeal	Yellow cornmeal [4]
Milled corn enriched with....(lists the five enrichment nutrients)	Milled corn [4]
Puffed wheat enriched with....(lists the five enrichment nutrients)	Puffed wheat
Puffed rice enriched with....(lists the five enrichment nutrients)	Puffed rice

Part B: Creditable Grains

Table 3-30. Enriched products and ingredients [1], *continued*	
Enriched [2]	**Not enriched [3]**
Unbleached enriched wheat flour	Unbleached wheat flour
Unbleached enriched white flour	Unbleached white flour

1 This list is not all-inclusive.
2 Enriched grains (such as enriched crackers, enriched bread, enriched pasta, enriched white rice, and enriched corn grits) cannot exceed half of the weekly grains offered in the NSLP or SBP.
3 These ingredients are not enriched unless the label states "enriched" or the ingredients statement lists the five enrichment nutrients.
4 Some cornmeal products may require a PFS to determine if they are creditable (i.e., whole grain, enriched, or nixtamalized). For more information, see "Crediting Corn Masa, Masa Harina, Corn Flour, and Cornmeal" in part A of section 3.

The CSDE's handout, *Crediting Enriched Grains in the NSLP and SBP,* summarizes the requirements for enriched grains in school nutrition programs.

Enrichment exception for Jewish institutions

During the religious observance of Passover, the USDA allows Jewish schools, institutions, and sponsors to have a religious exemption for the enrichment requirement of the meal patterns for Child Nutrition Programs. Unenriched matzo may be substituted during Passover only. Enriched or whole-grain matzo used as the grains component must be served at all other times of the year. The USDA grants these exemptions for entities (schools, institutions, and sponsors) not individuals. SFAs must receive approval from the CSDE before implementing this option. For more information on the enrichment exemption, see the USDA's FNS instruction 783-13 (Revision 3).

Part C: WGR Criteria

At least half of the weekly grains offered at lunch and breakfast must be WGR. The WGR criteria are different for commercial products and foods made on site by the SFA. The information below summarizes these requirements.

WGR Criteria for Commercial Products

The WGR criteria are different for commercial grain foods (such as bread, rice, and pasta) and commercial combination foods that contain a grain portion with other food components, such as pizza crust in pizza, noodles in lasagna, tortilla shells in burritos, and breading on chicken nuggets.

- **Commercial grain foods (groups A-H):** Grain products in groups A-G (such as breads, muffins, pancakes, and crackers) and group H (such as rice, pasta, quinoa, and cooked breakfast cereals, e.g., oatmeal) are WGR if they meet three criteria: 1) a whole grain is the first ingredient (excluding water); 2) any other grains are enriched; and 3) the combined weight of any noncreditable grains complies with the specified limit. Table 3-31 summarizes the WGR criteria for commercial grain products in groups A-H.

- **RTE breakfast cereals (group I):** RTE breakfast cereals are WGR if a whole grain is the first ingredient and the cereal is fortified. The limit for noncreditable grains does not apply to fortified WGR RTE breakfast cereals. Fortification is not required for 100 whole grain cereals. Table 3-32 summarizes the WGR criteria for RTE breakfast cereals in group I. For more information, see "WGR Criteria for Breakfast Cereals" in this section.

- **Commercial combination foods:** Combination foods that contain a grain portion from groups A-I (such as pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets) are WGR if they meet three criteria: 1) a whole grain is the first **grain** ingredient (or the first ingredient in the **grain portion** if it is listed separately); 2) any other grains in the grain portion are enriched; and 3) the combined weight of any noncreditable grains in the grain portion complies with the specified limit. Table 3-33 summarizes the WGR criteria for commercial combination foods that contain a grain portion from groups A-I.

Menu planners must determine if commercial foods meet the WGR criteria by reviewing the

Part C: WGR Criteria

product's ingredients statement and packaging, and if necessary, obtaining a PFS from the manufacturer. For more information, see "Product formulation statements" in section 2 and "Evaluating PFS Forms for Grain Products" in part A of section 3.

A PFS is not required if the grain is part of a meat/meat alternate product that has a CN label. CN-labeled products credit based on the stated crediting information for WGR ounce equivalents. The USDA's Authorized Labels and Manufacturers webpage lists approved CN-labeled products and manufacturers.

Grain products (such as breads, muffins, pancakes, crackers, and breakfast cereals) 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 the crediting information for grains, vegetables, and fruits that are part of the product. For information on CN labels, see section 2.

Part C: WGR Criteria

Table 3-31. WGR criteria for commercial grain products in groups A-H

These criteria apply to commercial grain products in groups A-G (such as breads, muffins, pancakes, and crackers) and group H (such as rice, pasta, quinoa, and cooked breakfast cereals, e.g., oatmeal). A product must meet all three criteria to be WGR.

WGR criterion 1

The product must contain at least 50 percent whole grains by weight. SFAs may use any one of the methods below to determine if a product meets this criterion.

- **Method 1:** The ingredients statement lists a whole grain as the first ingredient (or water is the first ingredient and a whole grain is the second ingredient), or the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. **Note:** Products that list a whole grain first in a flour blend of whole and enriched flour, such as "*flour blend (whole-wheat flour, enriched flour),*" require a PFS to determine if the whole grain weighs more than the first ingredient listed after the flour blend. For more information, see "Products with Flour Blends" in this section.
- **Method 2:** The product packaging or manufacturer's PFS indicates that the product contains the minimum grain content for 1 ounce equivalent. Groups A-G (baked goods) must contain at least 8 grams of whole grains per ounce equivalent. Group H (cereal grains) must contain at least ¼ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup).
- **Method 3:** The product packaging includes one of the FDA's approved whole grain health claims. For more information, see "Method 3: Whole Grain Health Claim" in this section.

For more information, see "WGR Criterion 1: At Least 50 Percent Whole Grains" in this section.

WGR criterion 2

Any remaining grain ingredients in the product must be enriched. For more information, see "WGR Criterion 2 – All Other Grains are Enriched" in this section.

WGR criterion 3

Any noncreditable grains must be less than 2 percent (¼ ounce equivalent) of the product formula. To comply with this limit, the combined total of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for group H. If noncreditable grains exceed these amounts, the product is noncreditable, even if it meets WGR criteria 1 and 2. For more information, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" in this section.

Part C: WGR Criteria

Table 3-32. WGR criteria for RTE breakfast cereals in group I

These criteria apply to RTE breakfast cereals in group I, such as puffed cereals, flaked or round cereals, and granola. A product must meet both criteria to be WGR. **Note:** The limit for noncreditable grains does not apply to fortified RTE breakfast cereals that contain a whole grain as the first ingredient.

WGR criterion 1

The product must contain at least 50 percent whole grains by weight. SFAs may use any one of the methods below to determine if a product meets this criterion.

- **Method 1:** The ingredients statement lists a whole grain as the first ingredient, or the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.
- **Method 2:** The product packaging or manufacturer's documentation indicates that the product contains the required weight (1 ounce) or volume (1 cup of flaked or round cereal, 1¼ cups of puffed cereal, and ¼ cup of granola) for 1 ounce equivalent, and a whole grain is the greatest ingredient by weight.
- **Method 3:** The product packaging includes one of the FDA's approved whole grain health claims. For more information, see "Method 3: Whole Grain Health Claim" in this section.

For more information, see "WGR Criterion 1: At Least 50 Percent Whole Grains" in this section.

WGR criterion 2

The product must be fortified, unless it is 100 percent whole grain. A breakfast cereal is fortified if the food is labeled as "fortified" or the ingredients statement lists the vitamins and minerals that have been added to the product. Fortified breakfast cereals typically contain the five enrichment nutrients (iron, thiamin, riboflavin, niacin, and folic acid) plus other vitamins and minerals that do not exist naturally in grains. For example, the RTE cereal below is fortified with 11 vitamins and minerals, listed after "Vitamins and Minerals."

> Ingredients: Whole-grain wheat, raisins, wheat bran, sugar, brown sugar syrup, contains 2% or less of salt, malt flavor. **Vitamins and Minerals:** *Potassium chloride, niacinamide, reduced iron, vitamin B6 (pyridoxine hydrochloride), zinc oxide, vitamin B2 (riboflavin), vitamin B1 (thiamin hydrochloride), vitamin A palmitate, folic acid, vitamin D, vitamin B12.*

For more information, see "WGR Criteria for Breakfast Cereals" in this section.

Part C: WGR Criteria

Table 3-33. WGR criteria for commercial combination foods

These criteria apply to commercial combination foods that contain a grain portion from groups A-I. Examples include pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets. A product must meet all three criteria to be WGR. **Note:** These criteria do not apply to CN-labeled meat/meat alternate products that contain a WGR grain portion. These products are WGR if the label states the WGR ounce equivalents.

WGR criterion 1

The grain portion of the product must contain at least 50 percent whole grains by weight. SFAs may use any one of the methods below to determine if a product meets this criterion.

- **Method 1:** The product's ingredients statement indicates that a whole grain is the greatest ingredient by weight in the **grain portion**, or the PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight in the **grain portion**. If the product lists the grain ingredients as a *separate* grain portion, a whole grain must be the first ingredient in the grain portion (or water is the first ingredient and a whole grain is the second ingredient). If the product lists the grain ingredients *together* with all other ingredients, a whole grain must be the first grain ingredient.
- **Method 2:** The product packaging or PFS indicates that the **grain portion** of the product contains the minimum grain content for 1 ounce equivalent. Groups A-G (baked goods) must contain at least 8 grams of whole grains per ounce equivalent. Group H (cereal grains) must contain at least ¼ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). Group I (RTE breakfast cereals) must contain the required weight or volume for 1 ounce equivalent, and must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole-grain cereals.
- **Method 3:** The product packaging includes one of the FDA's approved whole grain health claims. For more information, see "Method 3: Whole Grain Health Claim" in this section.

For more information, see "WGR Criterion 1: At Least 50 Percent Whole Grains" in this section.

WGR criterion 2

Any remaining grain ingredients in the grain portion of the product must be enriched. For more information, see "WGR Criterion 2: All Other Grains are Enriched" in this section.

Continued on next page

Part C: WGR Criteria

Table 3-33. WGR criteria for commercial combination foods, *continued*

WGR criterion 3
Any noncreditable grains in the **grain portion** must be less than 2 percent (¼ ounce equivalent) of the product formula. To comply with this limit, the combined total of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. If noncreditable grains exceed these amounts, the product is noncreditable, even if it meets WGR criteria 1 and 2. For more information, see "WGR Criterion 3 – Noncreditable Grains Meet Limit" in this section.

WGR Criterion 1 – At Least 50 Percent Whole Grains

The USDA defines three methods to determine if a commercial grain product contains at least 50 percent whole grains by weight. SFAs may use any one of these methods to determine if a product meets this criterion.

- **Method 1:** A whole grain is the first ingredient, with an exception for water (i.e., water is the first ingredient and a whole grain is the second ingredient); or the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight.

- **Method 2:** The product contains the minimum grain content for 1 ounce equivalent, as required for the appropriate grain group (A-I) in the USDA's ounce equivalent chart. Groups A-G must contain at least 8 grams of whole grains per ounce equivalent. Group H must contain at least ¼ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). Group I must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole grain cereals.

- **Method 3:** The product's packaging contains the FDA's whole grain health claim.

If a product meets WGR criterion 1, the menu planner must also determine if it meets WGR criteria 2 and 3. For more information, see "WGR Criterion 2: All Other Grains are Enriched" and "WGR Criterion 3 – Noncreditable Grains Meet Limit" in this section.

Part C: WGR Criteria

Method 1: Whole grain is first ingredient

Ingredients on product labels are listed by weight, from most to least. The closer an ingredient is to the beginning of the ingredients statement, the more of it the food contains. A commercial grain product contains at least 50 percent whole grains if a whole grain is the first ingredient, excluding water. The method for determining if a whole grain is the first ingredient is different for commercial grain products (such as breads, rice, and pasta) and commercial combination foods that contain a grain portion with other food components such as meat/meat alternates, vegetables, and fruits. These methods are summarized below.

- **Grain products (groups A-H):** A commercial grain product in groups A-G (such as breads, muffins, pancakes, and crackers) and group H (such as rice, pasta, quinoa, and cooked breakfast cereals, e.g., oatmeal) contains at least 50 percent whole grains if a whole grain is the first ingredient (or water is the first ingredient and a whole grain is the second ingredient). For example, the first product below contains a whole grain (whole-wheat flour) as the first and only grain ingredient. The second product below contains a whole grain (whole-wheat flour) as the first ingredient after water.

  Ingredients: *Whole-wheat flour*, sugar, wheat gluten. Contains 2% or less of each of the following: honey, salt, yellow corn flour, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono-and diglycerides, l-cysteine, enzymes.

  Ingredients: Water, *whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid)*, yeast, wheat gluten, contains less than 2% of each of the following: soybean oil, sugar, salt, calcium propionate (preservative), fumaric acid, baking soda, monocalcium phosphate, calcium sulfate, ammonium sulfate.

- **Combination foods (groups A-H):** The WGR criteria apply only to the **grain portion** of combination foods, such as pizza crust in pizza, noodles in lasagna, and breading on chicken nuggets. The WGR criteria depend on whether the ingredients statement lists the grain ingredients as a separate grain portion or together with all other nongrain ingredients.

  - **Grain portion listed separately:** If the ingredients statement lists the grain ingredients as a separate grain portion, the combination food contains at least 50 percent whole grains if a whole grain is the first ingredient in the **grain portion**. For example, the chicken nuggets product below contains white

whole wheat-flour as the first ingredient in the grain portion (highlighted in yellow).

> Ingredients: Chicken, water, salt, and natural flavor. **Breaded with:** *white whole-wheat flour*, water, wheat starch, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), salt, contains 2% or less of the following: yellow corn flour, corn starch, dried onion, dried garlic, dried yeast, brown sugar, extractives of paprika, and spices. Breading set in vegetable oil.

- **Grain ingredients listed with nongrain ingredients:** If the ingredients statement lists the grain ingredients together with all other ingredients, the combination food contains at least 50 percent whole grains if a whole grain is the first **grain** ingredient. For example, the chicken nuggets product below contains whole wheat-flour as the first and only grain ingredient.

> Ingredients: Boneless, skinless chicken breast with rib meat, water, *whole-wheat flour*, contains 2% or less of the following: dried garlic, dried onion, salt, sea salt, soybean oil, spice, sugar, torula yeast, turmeric, yeast, yeast extract. Breading set in vegetable oil.

- **Products with multiple whole grains:** If a whole grain is not the first ingredient, but the ingredients statement lists more than one whole grain, the product could contain at least 50 percent whole grains if the **combined weight** of all whole grains is more than the weight of the first ingredient (excluding water). The SFA must obtain a PFS from the manufacturer to document this information. For example, the product below could contain at least 50 percent whole grains if the manufacturer's PFS indicates that the combined weight of the two whole grains (whole-wheat flour and whole oats) is more than the weight of the enriched wheat flour.

> Ingredients: Water, *enriched wheat flour [flour, malted barley flour, reduced iron, niacin, thiamin mononitrate (vitamin B1), riboflavin (vitamin B2), folic acid]*, water, *whole-wheat flour, whole oats*, sugar, wheat gluten, yeast, soybean oil, salt, calcium propionate (preservative), monoglycerides, datem and/or sodium stearoyl lactylate, calcium sulfate, citric acid, calcium carbonate, soy lecithin, whey, nonfat milk.

- **Products with flour blends:** An ingredients statement with a flour blend of whole and enriched flour, such as "*flour blend (whole-wheat flour, enriched flour)*," 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. If the product's first ingredient is a flour blend of whole and enriched flour (or water is the first ingredient and a flour blend of whole and enriched flour is the second ingredient), the SFA must obtain a PFS from the manufacturer to document that either:

- the whole grain content is at least 8 grams per ounce equivalent (groups A-G); or
- the weight of the whole grain in the flour blend is more than the first ingredient listed *after* the flour blend.

For example, the PFS for the product below must document that the whole-wheat flour in the flour blend (highlighted in yellow) weighs more than the brown sugar (first ingredient after the flour blend).

> Ingredients: Water, **flour blend** [*whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid)],* **brown sugar**, corn oil, nonfat dry milk, yeast, cinnamon, dough conditioner (soybean oil, vegetable glycerides, soy flakes), salt, wheat gluten and 2% or less of each of the following: sodium benzoate (to protect flavor), corn syrup solids, potassium sorbate, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides, sorbitan monostearate), vanilla flavor [propylene glycol, water, sodium benzoate (as a preservative)].

A PFS is not required if the flour blend contains only whole grains, such as "flour blend (whole-wheat flour, whole-grain oats)." Products that contain 100 percent whole grains are WGR.

Method 2: Minimum grain content

A commercial grain product contains at least 50 percent whole grains if the product's packaging or manufacturer's documentation indicates that the product contains the minimum grain content for 1 ounce equivalent for the appropriate grain group (A-I) in the USDA's ounce equivalent chart. Groups A-G (baked goods) must contain at least 8 grams of whole grains per ounce equivalent. Group H (cereal grains) must contain at least ¼ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). Group I (RTE breakfast cereals) must contain the required weight (1 ounce) or volume (1 cup of flaked or round cereal, 1¼ cups of puffed cereal, and ¼ cup of granola) for 1 ounce equivalent, and must list a whole grain as the first ingredient and be fortified. Fortification is not required for 100 whole grain cereals.

Part C: WGR Criteria

Method 3: Whole grain health claim

A commercial grain product contains at least 50 percent whole grains if the product packaging includes one of the FDA's two approved whole grain health claims. These claims are not commonly found on most grain products.

- **Low-fat claim:** "Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol, may reduce the risk of heart disease and certain cancers."

- **Moderate-fat claim:** "Diets rich in whole grain foods and other plant foods, and low in saturated fat and cholesterol, may help reduce the risk of heart disease."

The health claim on the package label must be identical to one of these statements. For consistency with the *Dietary Guidelines for Americans,* the USDA recommends choosing grain products with the FDA's low-fat health claim.

WGR Criterion 2 – All Other Grains are Enriched

A commercial grain product meets WGR criterion 2 if all grains (other than whole grains) are enriched. A grain is enriched if it contains the term "enriched" e.g., "enriched flour," or lists the five enrichment nutrients after the grain ingredient. For example, the bread product below contains an enriched grain as the second ingredient.

> Ingredients: Whole-wheat flour, *unbleached enriched wheat flour (niacin, iron, thiamin mononitrate, riboflavin, folic acid)*, water, canola oil, all natural molasses, salt, baking soda.

For guidance on identifying enriched grains, see "Enriched Grains" in part B of section 3. For guidance on identifying enriched RTE and cooked breakfast cereals, see "Enriched breakfast cereals" in part A of section 3.

WGR Criterion 3 – Noncreditable Grains Meet Limit

A commercial grain product meets WGR criterion 3 if the combined weight of all noncreditable grains is less than 2 percent (¼ ounce equivalent) of the product formula. A commercial combination food meets WGR criterion 3 if the **grain portion** of the product meets this limit. The combined weight of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. If noncreditable grains exceed the limit, the product is not WGR and cannot credit as the grains component.

Table 3-34 lists examples of noncreditable grain ingredients commonly found in commercial products. The ingredients in column A must be included when determining the total weight of a product's noncreditable grain ingredients. The ingredients in column B do not count toward the limit for noncreditable grains, and can be ignored.

Exceeding limit for noncreditable grains

If noncreditable grains exceed the specified limit for the grain group, the product cannot credit as the grains component, even if it meets WGR criteria 1 and 2. Products that exceed the limit for noncreditable grains may be served as extra (noncreditable) foods. However, SFAs must consider whether these foods are practical for school meals because they cannot credit toward the minimum daily or weekly servings of the grains component, but must be counted toward the weekly dietary specifications. They must contain zero trans fat and their inclusion cannot cause the menu to exceed the weekly limits for calories, saturated fats, and sodium. For more information, see "Extra Foods" in section 1. For information on planning school meals to meet the dietary specifications, see section 6.

Part C: WGR Criteria

Table 3-34. Examples of noncreditable grain ingredients [1]

Column A Counted toward limit [2]	Column B Not counted toward limit [3]
Barley grits	Cellulose fiber
Bran	Chicory extract
Corn bran	Chicory root
Corn fiber	Citrus fiber
Corn flour (not whole grain, enriched, or nixtamalized) [4]	Corn dextrin
Corn grits (not whole grain, enriched, or nixtamalized) [4]	Fibersol
Cornmeal (not whole grain, enriched, or nixtamalized) [4]	Inulin
Corn starch	Malt
Cultured wheat starch	Malt powder
Degermed corn	Maltodextrin
Durum flour (not whole grain or enriched)	Pea fiber
Durum grits	Powdered cellulose
Fava bean flour	Short chain fructan (fiber)
Fermented wheat	Vital wheat gluten
Germ	Wheat gluten
Grits	
Hydrolyzed starch	
Legume flours, e.g., chick pea flour, pea flour	
Malted barley flour (not enriched)	
Modified food starch (including potato, legume, and other vegetable flours)	
Modified corn starch	
Modified rice starch	
Modified tapioca starch	
Modified wheat starch	
Oat fiber	
Oat hull fiber	
Potato flour	
Potato starch	

Part C: WGR Criteria

Table 3-34. Examples of noncreditable grain ingredients [1], *continued*

Column A Counted toward limit [2]	Column B Not counted toward limit [3]
Rice (not brown rice or enriched rice) Rice flour (not whole grain or enriched) Rice starch Soluble corn fiber Soy fiber Soy flakes Soy grits Soy flour Stone-ground corn Tapioca starch Vegetable flours, e.g., potato and legume Wheat bran Wheat flakes Wheat flour (not whole grain or enriched) Wheat germ Wheat starch White flour (not whole grain or enriched) Yellow corn flour (not whole grain, enriched, or nixtamalized) [4]	

[1] This list is not all-inclusive.

[2] These ingredients must be included in the weight of a product's noncreditable grain ingredients. Noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. The limit for noncreditable grains does not to apply to WGR fortified RTE breakfast cereals.

[3] These ingredients do not count toward the limit for noncreditable grains.

[4] Corn flour, corn grits, and cornmeal are noncreditable grains unless they are whole grain, enriched, or nixtamalized. Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline solution. SFAs may need to obtain a PFS from the manufacturer to determine if a corn ingredient is nixtamalized. Nixtamalized corn ingredients credit as whole grains. For more information, see "Crediting Corn Masa, Masa Harina, Corn Flour, and Cornmeal" in part A of section 3.

Part C: WGR Criteria

"Contains 2% or less"

Sometimes an ingredients statement will list noncreditable grains after the statement, "contains 2% or less." SFAs must obtain a PFS from the manufacturer to document the combined weight (grams) of a commercial product's noncreditable grains if any of the three situations below apply.

1. The ingredients statement lists one or more noncreditable grains **before** the statement, "contains 2% or less." For example, the product below lists one noncreditable grain (soy flakes) before this statement.

   Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid), brown sugar, corn oil, nonfat dry milk, yeast, cinnamon, *soy flakes*, salt, wheat gluten and **2% or less of each of the following:** sodium benzoate (to protect flavor), corn syrup solids, potassium sorbate, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides, sorbitan monostearate), vanilla flavor [propylene glycol, water, sodium benzoate (as a preservative)].

2. The ingredients statement lists more than one noncreditable grain **after** the statement, "contains 2% or less." For example, the product below lists three noncreditable grains (oat fiber, modified food starch, and wheat starch) after this statement.

   Ingredients: Whole-wheat flour, sugar, eggs, water, blueberries, enriched flour (flour, malted barley flour, niacin, reduced iron, thiamin mononitrate, riboflavin, folic acid), invert sugar, soybean oil, **contains 2% or less of:** palm oil, canola oil, propylene glycol mono- and diesters of fats and fatty acids, *oat fiber*, leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), mono- and diglycerides, *modified food starch*, potassium sorbate (preservative), sodium alginate, salt, soy lecithin, natural and artificial flavor, sodium stearoyl lactylate, *wheat starch*, blackberry juice concentrate, blueberry juice concentrate, malic acid, enzymes.

3. The ingredients statement lists one or more noncreditable grains **without** the statement, "contains 2% or less." For example, the product below lists four noncreditable grains (yellow corn flour, modified corn starch, yellow corn flour, and soy flour).

   Ingredients: Whole-wheat bread (whole-wheat flour, water, enriched wheat flour [flour, malted barley flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid], sugar, wheat gluten, yeast, salt, soybean oil, mono and diglycerides, calcium propionate (preservative), datem, calcium sulfate, citric acid, soy lecithin, grain vinegar, potassium iodate), water, whole-wheat batter (whole-wheat flour,

sugar, enriched bleached wheat flour [enriched with niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid], dextrose, eggs, *yellow corn flour*, corn syrup solids, natural flavor, *modified corn starch*, salt, leavening (sodium aluminum phosphate, sodium bicarbonate), nonfat milk, spice, artificial flavor, modified cellulose gum, spice extractive), coating (bleached enriched wheat flour [wheat flour, niacin, iron, thiamine mononitrate, riboflavin, folic acid], *yellow corn flour*, sugar, *soy flour*, salt, dextrose, leavening [sodium bicarbonate, monocalcium phosphate], yeast), soybean oil, cinnamon sugar (sugar, spices, natural flavor, silicon dioxide [added to prevent caking]).

When to ignore noncreditable grains

In some situations, noncreditable grains do not count toward the limit for noncreditable grains. Noncreditable grains can be ignored if any of the five situations below apply.

1. The ingredients statement lists only **one** noncreditable grain after the statement, "contains 2% or less." For example, the ingredients statement below lists one noncreditable grain (yellow corn flour) after this statement.

   Ingredients: Whole-wheat flour, sugar, wheat gluten. **Contains 2% or less of each of the following:** honey, salt, *yellow corn flour*, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono-and diglycerides, l-cysteine, enzymes.

   Note: The yellow corn flour in this product is a noncreditable grain because it is not whole grain, enriched, or nixtamalized. If the product's PFS indicates that the yellow corn flour is nixtamalized, it is a whole grain. For more information, see "Crediting Corn Masa, Masa Harina, Corn Flour, and Cornmeal" in part A of section 3.

2. The noncreditable grains are part of a **nongrain** ingredient. The limit for noncreditable grains does not apply to nongrain ingredients in commercial grain products. Examples include cereal bars that contain marshmallows made with modified corn starch; muffins that contain jam filling made with modified food starch; bagels that contain molasses powder made with wheat starch; or bread that contains a dough conditioner made with soy flakes.

   SFAs can determine if noncreditable grains are part of the nongrain ingredients by reviewing the product's ingredients statement. When a product contains an ingredient that contains two or more ingredients itself (such as marshmallows or jam filling), these subingredients are listed after the name of the ingredient, or in parentheses or

brackets after the name of the ingredient. The ingredients statements below show some examples of subingredients that contain noncreditable grains.

- Filling: Invert sugar, corn syrup, blueberry puree concentrate, glycerin, sugar, *modified food starch*, sodium alginate, citric acid, methylcellulose, dicalcium phosphate, malic acid, blueberry juice concentrate, natural and artificial flavor, red 40, blue 1.
- Marshmallows (sugar, dextrose, *modified corn starch*, corn syrup, cocoa, gelatin, natural and artificial flavor).
- Molasses powder (molasses, *wheat starch*).
- Dough conditioner (soybean oil, vegetable glycerides, *soy flakes*).

3. The noncreditable grains are part of a **WGR fortified RTE breakfast cereal**. The limit for noncreditable grains does not apply to fortified RTE breakfast cereals that contain a whole grain as the first ingredient. For more information, see "Fortified Breakfast Cereals" in this section.

4. The noncreditable grains are part of a WGR fortified RTE breakfast cereal that is an ingredient in a cereal bar. The limit for noncreditable grains does not apply to WGR fortified RTE breakfast cereals. However, the limit still applies to the combined weight of any other noncreditable grains in the **noncereal grain portion** of the cereal bar.

For example, the cereal bar product below contains a WGR fortified RTE breakfast cereal (highlighted in yellow) as the second ingredient. The cornmeal (noncreditable grain) in the RTE cereal is ignored because the RTE cereal contains a whole grain as the first ingredient and is fortified. However, the noncereal grain portion of the cereal bar contains two noncreditable grains (wheat starch and modified wheat starch) listed **outside** of the cereal ingredients, after the statement, "contains 2% or less." The SFA must obtain a PFS from the manufacturer to document that the combined weight of the two noncreditable grains in the grain portion does not exceed 3.99 grams per ounce equivalent.

> Ingredients: Whole-grain oats, **cereal** (whole-grain wheat, sugar, *cornmeal*, brown sugar syrup, canola and/or rice bran oil, dextrose, baking soda, salt, calcium carbonate, trisodium phosphate, zinc and iron [mineral nutrients], vitamin C [sodium ascorbate], a B vitamin [niacinamide], artificial flavor, vitamin B6 [pyridoxine hydrochloride], vitamin B2 [riboflavin],vitamin B1 [thiamin

mononitrate], vitamin A [palmitate], a B vitamin [folic acid], vitamin B12, vitamin D, BHT added to retain freshness), corn syrup, sugar, rice bran and/or canola oil , fructose, brown rice flour. Contains 2% or less of: whole-corn flour, glycerin, calcium carbonate, whole-grain oat flour, *wheat starch, modified wheat starch*, cocoa processed with alkali, salt, gelatin, color added, natural and artificial flavor, BHT added to retain freshness.

Note: Cereal bars are grain-based desserts. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents. For more information, see "Limit for Grain-based Desserts at Lunch" in part B of section 3.

5. The noncreditable grains are part of the **nongrain portion** of a combination food, such as meat/meat alternates, vegetables, or fruits. The limit for noncreditable grains does not apply to the nongrain portion. Examples include modified food starch in the chicken portion of breaded chicken; wheat flour in the cheese filling of ravioli; soy flour and corn starch in the vegetable filling of an egg roll; and modified food starch in the fruit filling of a breakfast bun.

   SFAs can determine if a noncreditable grain is part of the nongrain portion of a commercial product by reviewing the product's ingredients statement. When a product contains an ingredient that contains two or more ingredients itself (such as seasoning on chicken, apple filling in a breakfast bun, and cheese filling in ravioli), these subingredients are listed after the name of the ingredient, or in parentheses or brackets after the name of the ingredient. The ingredients statements below show some examples of subingredients that contain noncreditable grains.

   - Seasoning [sugar, salt, sea salt, dextrose, spices, yeast extract, natural flavor, maltodextrin, canola oil (as a processing aid), *modified corn starch*].
   - Apple filling (corn syrup, *modified food starch*, evaporated apples, cinnamon, lemon juice, locust bean gum, erythorbic acid and potassium sorbate [used as preservatives]).

   The examples below show combination foods that contain noncreditable grains in the nongrain portion.

   Example 1: Cheese ravioli

   A ravioli product contains two noncreditable grains (bleached wheat flour and modified corn starch) in the meat/meat alternates portion (cheese filling), which is highlighted in yellow below. These noncreditable grains do not count toward the limit

because they are part of the **nongrain portion**. The pasta (grain portion) does not contain any noncreditable grains.

Ingredients: **Filling:** Fat-free ricotta cheese (whey, skim milk [made from nonfat dry milk powder], vinegar, xanthan gum, carrageenan), egg, low moisture part skim mozzarella cheese (cultured part skim milk, salt, enzymes), whey protein isolate, sodium caseinate, romano cheese made from cow's milk (cultured milk, salt, enzymes), *bleached wheat flour*, garlic salt (salt, dehydrated garlic), salt, *modified corn starch*, sugar, dehydrated garlic. **Pasta:** whole-wheat flour, enriched durum wheat flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), water, egg.

Example 2: Fruit-filled breakfast bun

A fruit-filled breakfast bun contains one noncreditable grain (modified food starch) in the fruit portion (apple filling) and another noncreditable grain (whole soy flour) in the egg replacer (nongrain ingredient), which are highlighted in yellow below. These noncreditable grains do not count toward the limit because they are part of the nongrain portion. However, the **grain portion** contains three noncreditable grains (rye flour, malted barley flour, and wheat flour) listed after the statement, "contains 2% or less." These must be included when determining if the combined weight of all noncreditable grains meets the required limit. The SFA must obtain a PFS from the manufacturer to document that the combined weight of the three noncreditable grains does not exceed 3.99 grams per ounce equivalent.

Ingredients: Whole-grain white wheat flour, **apple filling** (corn syrup, *modified food starch*, evaporated apples, cinnamon, lemon juice, locust bean gum, erythorbic acid and potassium sorbate [used as preservatives]), water, margarine (palm oil, soybean oil, whey [milk], mono and diglycerides, soybean lecithin [soy], natural butter flavor, colored with beta carotene, vitamin A palmitate added), sugar, contains 2% or less of *rye flour, malted barley flour*, *wheat flour*, nonfat dry milk (nonfat dry milk, whey [milk]), salt, eggs, **egg replacer** (*whole soy flour*, wheat gluten, corn syrup solids, algin), yeast (leavening).

Note: Fruit-filled breakfast buns are grain-based desserts. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents. For more information, see "Limit for Grain-based Desserts at Lunch" in part B of section 3.

Part C: WGR Criteria

WGR Criteria for Breakfast Cereals

Cooked breakfast cereals, including regular and instant (such as oatmeal), are WGR if they meet the following three criteria: 1) a whole grain is the first ingredient (or water is the first ingredient and a whole grain is the second ingredient); 2) any other grain ingredients are enriched; and 3) the combined weight of any noncreditable grains (such as fiber, bran, germ, and modified food starch) does not exceed 6.99 grams per ounce equivalent (½ cup cooked or 28 grams dry). Cooked breakfast cereals that exceed this limit do not meet the WGR criteria.

RTE breakfast cereals are WGR if a whole grain is the first ingredient and the cereal is fortified. Fortification is not required for 100 whole grain cereals. The limit for noncreditable grains does not apply to fortified RTE breakfast cereals that contain a whole grain as the first ingredient. For more information, see "Crediting Breakfast Cereals" in part A of section 3.

WGR Criteria for Foods Made On Site

Grain foods prepared on site by the SFA must have a standardized recipe that documents the weight of creditable grains (whole and enriched) in one serving. Grain foods made on site are WGR if they meet the following three criteria: 1) the recipe contains at least 50 percent whole grains by weight; 2) all grains other than whole grains are enriched; and 3) the combined weight of any noncreditable grains (such as bran, germ, and corn starch) does not exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. For example, a pizza dough recipe that contains 6 pounds of whole-wheat flour, 5 pounds of enriched flour, and no noncreditable grains is WGR because the whole-wheat flour weighs more than the enriched flour. Table 3-35 summarizes the WGR criteria for foods made on site by the SFA.

Part C: WGR Criteria

Table 3-35. WGR criteria for foods made on site by the SFA

These WGR criteria apply to all foods made on site. A food must meet all three criteria to be WGR.

WGR criterion 1

The recipe must contain at least 50 percent whole grains by weight. A recipe meets this criterion if the combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains; or the recipe contains only whole grains. For more information, see "Whole Grains" and table 3-26 in part B of section 3. For combination foods made on site that contain a grain portion (such as pizza crust in pizza and breading on chicken), the WGR criteria apply only to the **grain portion** of the recipe.

WGR criterion 2

All grains in the recipe other than whole grains must be enriched. For more information, see "Enriched Grains" and table 3-28 in part B of section 3.

WGR criterion 3

Any noncreditable grains (such as bran, germ, and corn starch) must be less than 2 percent (¼ ounce equivalent) per ounce equivalent of the recipe. To comply with this limit, the combined total of all noncreditable grains cannot exceed 3.99 grams per ounce equivalent for groups A-G or 6.99 grams per ounce equivalent for groups H-I. If noncreditable grains exceed these amounts, the recipe is noncreditable, even if it meets WGR criteria 1 and 2. For examples of noncreditable grains, see table 3-34 in this section.

WGR Criteria for Preschoolers (Ages 1-4)

The USDA's WGR definition for preschool meals is different from the WGR definition for grades K-12 because it does not require a specific limit for noncreditable grains. Foods that meet the WGR criteria for preschool meals in the NSLP and SBP and preschool snacks in the ASP may or may not meet the WGR criteria for grades K-12. If SFAs serve the same grain foods to grades K-12 and preschoolers, these foods must comply with the WGR criteria for grades K-12. For more information, see "Serving the same foods to grades K-12 and preschoolers" in section 1, and the CSDE's handout, *Whole Grain-rich Criteria for Preschoolers in the NSLP, SBP, and ASP*. For additional guidance on the meal patterns for preschoolers, see the CSDE's guide, *Menu Planning Guide for Preschoolers in the NSLP, SBP, and ASP,* and the CSDE's Meal Patterns for Preschoolers in School Nutrition Programs webpage. For information on the differences between the two grade groups, see the CSDE's handout, *Comparison of Meal Pattern Requirements for Preschoolers and Grades K-12 in the NSLP and SBP*.

Part D: Evaluating Foods for WGR Compliance

SFAs must be able to document that menu items credited as WGR items comply with the WGR criteria. Menu planners must review commercial foods and foods made on site to determine if they:

- contain creditable grains (see part B);
- meet the WGR criteria (see part C); and
- provide the required ounce equivalents for each grade group (see part E).

The WGR criteria for commercial grain foods in groups A-H are summarized in table 3-31 part C of section 3. The WGR criteria for combination foods are summarized in table 3-32 part C of section 3. The WGR criteria for RTE breakfast cereals are summarized in table 3-33 in part C of section 3.

Evaluating Commercial Products

The sample products in this section show how to evaluate commercial foods for compliance with the WGR criteria for grades K-12. The following guidance applies to the ingredients listed in the sample commercial products.

- Creditable grains (whole and enriched grains) are listed in **bold** text and whole grains are in bold **UPPERCASE** text. For examples of whole grains, see table 3-26 in part B of section 3. For examples of enriched grains, see table 3-28 in part B of section 3.

- Noncreditable grains (such as wheat flour, yellow corn flour, and modified food starch) are listed in ***bold italicized*** text. Noncreditable grains must be included in the weight of a product's noncreditable grain ingredients unless one of the five situations when noncreditable grains can be ignored applies. For more information, see "When to ignore noncreditable grains" in part C of section 3. For examples of noncreditable grains, see table 3-34 (column A) in part C of section 3.

- Grain derivatives (by-products of grains) and other ingredients that do not count toward the limit for noncreditable grains (such as wheat gluten and maltodextrin), are listed in *italicized text*. For examples of grain derivatives, see table 3-34 (column B) in part C of section 3.

Table 3-36 includes definitions for some common ingredients found in commercial grain products.

Part D: Evaluating Foods for WGR Compliance

Table 3-36. Definitions of common ingredients in commercial grain products

Azodicarbonamide (ADA) is a chemical substance approved by the FDA for use as a whitening agent in cereal flour and as a dough conditioner in bread baking.

Bleached flour contains a food additive that accelerates the aging process, improves texture, stiffens soft flour, and makes the flour appear whiter. Unbleached flour does not contain this food additive. Bleached flour is a creditable grain if it is enriched.

Bromated flour has been enriched with potassium bromate, which promotes gluten development in dough to improve its baking qualities. Unbromated flour does not contain this ingredient. Bromated flour is a creditable grain if it is enriched.

DATEM or **datem** (diacetyl tartaric acid ester of mono- and diglycerides) is an emulsifier used in baking. It strengthens the gluten network in dough to improve the bread's texture and shape.

L-cysteine is an amino acid used in baking to help soften the dough and reduce processing time.

Maltodextrin is a carbohydrate produced from starch. It is used as a food additive to enhance texture and flavor. Maltodextrin is a grain derivative that does not count toward the limit for noncreditable grains. [1]

Modified food starch is made from starch and is used as a thickening agent, stabilizer, or emulsifier. The most common types of modified food starch are made from corn, wheat, potato, and tapioca. Modified food starch is a grain derivative that does not count toward the limit for noncreditable grains. [1]

Vital wheat gluten is a powdered form of wheat gluten that is used in baking to add elasticity to flours that are low in gluten, such as whole wheat or rye. It is a grain derivative that does not count toward the limit for noncreditable grains. [1]

Wheat gluten is the protein component of the wheat grain that helps baked goods hold their shape. It is a grain derivative that does not count toward the limit for noncreditable grains. [1]

Whey is a milk protein that is used to emulsify, thicken, and brown baked goods.

[1] For examples of grain derivatives, see column B in table 3-34 in part C of section 3.

Part D: Evaluating Foods for WGR Compliance

Product 1: Whole-wheat bagel (commercial grain product)

Ingredients: **WHOLE-WHEAT FLOUR**, sugar, *wheat gluten*. Contains 2% or less of each of the following: honey, salt, ***yellow corn flour***, yeast, molasses, diacetyl tartaric acid esters of mono-diglycerides (datem), ascorbic acid, mono-and diglycerides, l-cysteine, enzymes.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Whole-wheat flour is the only creditable grain ingredient. The product is 100 percent whole grain.	☑ Yes ☐ No ☐ Need PFS
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product contains only one noncreditable grain (yellow corn flour) listed after the statement, "contains 2% or less." For more information, see "Contains 2% or less" in part C of section 3.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☑ Yes [1] ☐ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Part D: Evaluating Foods for WGR Compliance

Product 2: Whole-grain bagel (commercial grain product)

Ingredients: **WHOLE-WHEAT FLOUR, enriched bromated wheat flour (niacin [a-B vitamin], thiamine mono nitrate [vitamin B-1], ferrous sulfate [iron], potassium bromate, riboflavin [vitamin B-2], and folic acid)**, water, brown sugar granulated sugar. Contains 2% or less of the following ingredients: salt, vital wheat gluten, mono & diglycerides, honey, ***cornmeal***, calcium propionate, ***malted barley flour***, molasses powder (molasses, ***wheat starch***), ammonium chloride, ascorbic acid (vitamin C), l-cysteine hydrochloride, azodicarbonamide (ADA), calcium sulfate, enzymes.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched; or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched bromated wheat flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

Continued on next page

Part D: Evaluating Foods for WGR Compliance

Product 2: Whole-grain bagel (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains is no more than 3.99 grams for groups A-G and no more than 6.99 grams for groups H-I. The product contains two noncreditable grains (cornmeal and malted barley flour) listed after the statement, "contains 2% or less." The SFA must obtain a PFS from the manufacturer to determine if their combined weight is 3.99 grams or less. For more information, see "Contains 2% or less" in part C of section 3. **Note:** The wheat starch (noncreditable grain) in the molasses powder is ignored because molasses powder is a nongrain ingredient. For more information, see "When to ignore noncreditable grains" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Is product WGR? ☐ Yes [1] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

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Product 3: English muffin (commercial grain product)

Ingredients: Water, **WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid),** yeast, *wheat gluten*, contains less than 2% of each of the following: soybean oil, sugar, salt, calcium propionate (preservative), fumaric acid, baking soda, monocalcium phosphate, calcium sulfate, ammonium sulfate.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Water is the first ingredient and whole-wheat flour is the second ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched bromated wheat flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product does not contain any noncreditable grains	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☑ Yes [1] ☐ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

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Product 4: Oat bread (commercial grain product)

Ingredients: **Unbleached enriched wheat flour [flour, malted barley flour, reduced iron, niacin, thiamin mononitrate (vitamin B1), riboflavin (vitamin B2), folic acid]**, water, **WHOLE-WHEAT FLOUR, WHOLE OATS**, sugar, *wheat gluten*, yeast, soybean oil, salt, calcium propionate (preservative), monoglycerides, datem and/or sodium stearoyl lactylate, calcium sulfate, citric acid, calcium carbonate, soy lecithin, whey, nonfat milk.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Unbleached enriched wheat flour is the first ingredient but the product also contains two whole grains (whole-wheat flour and whole oats). The SFA must obtain a PFS from the manufacturer to determine if the combined weight of the whole grains is more than the weight of the enriched flour. For more information, see "Products with multiple grains" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Unbleached enriched wheat flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

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Part D: Evaluating Foods for WGR Compliance

Product 4: Oat bread (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product does not contain any noncreditable grains	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☐ Yes [1] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

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Product 5: Oatmeal raisin cookie (commercial grain product)

Ingredients: Sugar, **WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid), ROLLED OATS**, raisins, eggs, soybean oil, margarine (palm oil, butter [cream, salt], water, contains 2% or less of salt, mono & diglycerides, natural flavor, citric acid, vitamin A palmitate added, beta carotene [color]), invert sugar, contains 2% or less of: water, mono- and diglycerides, molasses, *maltodextrin*, leavening (baking soda, sodium aluminum phosphate), salt, datem, soy lecithin, cinnamon, natural and artificial flavor.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Sugar is the first ingredient but the product also contains two whole grains (whole-wheat flour and rolled oats). The SFA must obtain a PFS from the manufacturer to determine if the combined weight of the whole grains is more than the weight of the sugar. For more information, see "Products with multiple grains" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

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Part D: Evaluating Foods for WGR Compliance

Product 5: Oatmeal raisin cookie (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product does not contain any noncreditable grains	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☐ Yes [1, 2] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

[2] Grain-based desserts cannot credit for more than 2 ounce equivalents per week at lunch. For more information, see "Limit for Grain-based Desserts at Lunch" in part B of section 3.

Part D: Evaluating Foods for WGR Compliance

Product 6: Corn muffin (commercial grain product)

Ingredients: Water, sugar, eggs, **WHOLE GRAIN CORN FLOUR, WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid)**, soybean/ canola oil, ***modified corn starch***, milk whey, leavening (sodium acid pyrophosphate, baking soda), *vital wheat gluten*, sugar, nonfat milk, calcium acetate, xanthan gum, guar gum.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Water is the first ingredient and sugar is the second ingredient, but the product also contains two whole grains (whole-grain corn flour and whole-wheat flour). The SFA must obtain a PFS from the manufacturer to determine if the combined weight of the whole grains is more than the weight of the sugar. For more information, see "Products with multiple grains" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

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Part D: Evaluating Foods for WGR Compliance

Product 6: Corn muffin (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product contains one noncreditable grain (modified corn starch). The SFA must obtain a PFS from the manufacturer to document that the weight of the noncreditable grain does not exceed 3.99 grams per ounce equivalent. For more information, see "Contains 2% or less" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Is product WGR? ☐ Yes [1] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Part D: Evaluating Foods for WGR Compliance

Product 7: Cinnamon roll (commercial grain product)

Ingredients: Water, **flour blend [WHOLE-WHEAT FLOUR, enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, enzyme, folic acid)],** brown sugar, corn oil, nonfat dry milk, yeast, cinnamon, dough conditioner (soybean oil, vegetable glycerides, ***soy flakes***), salt, *wheat gluten* and 2% or less of each of the following: sodium benzoate (to protect flavor), corn syrup solids, potassium sorbate, icing stabilizer (calcium carbonate, sugar, agar, salt, mono and diglycerides, sorbitan monostearate), vanilla flavor [propylene glycol, water, sodium benzoate (as a preservative)].

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Water is the first ingredient and a flour blend (whole-wheat flour and enriched flour) is the second ingredient (highlighted in yellow). The SFA must obtain a PFS from the manufacturer to determine if the weight of the whole-wheat flour in the flour blend is more than the weight of the brown sugar. For more information, see "Products with flour blends" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

Part D: Evaluating Foods for WGR Compliance

Product 7: Cinnamon roll (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The soy flakes (noncreditable grain) in the dough conditioner (highlighted in yellow) are ignored because dough conditioner is a nongrain ingredient. For more information, see "When to ignore noncreditable grains" in part C of section 3.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☐ Yes [1, 2] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

[2] Grain-based desserts cannot credit for more than 2 ounce equivalents per week at lunch. For more information, see "Limit for Grain-based Desserts at Lunch" in part B of section 3.

Part D: Evaluating Foods for WGR Compliance

Product 8: Apple breakfast bun (commercial grain product)

Ingredients: **WHOLE-GRAIN WHITE WHEAT FLOUR, Apple Filling** (corn syrup, ***modified food starch***, evaporated apples, cinnamon, lemon juice, locust bean gum, erythorbic acid and potassium sorbate [used as preservatives]), water, margarine (palm oil, soybean oil, whey [milk], mono and diglycerides, soybean lecithin [soy], natural butter flavor, colored with beta carotene, vitamin A palmitate added), sugar, contains 2% or less of: dough conditioner (***rye flour, malted barley flour***, ascorbic acid, enzymes, guar and/or arabic gums, ***wheat flour***), nonfat dry milk (nonfat dry milk, whey [milk]), natural orange emulsion (natural flavor, propylene glycol, gum), salt, eggs, egg replacer (***whole soy flour***, *wheat gluten*, corn syrup solids, algin), yeast (leavening).

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-grain white wheat flour is the first ingredient in the grain portion (bun).	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Whole-grain white wheat flour is the only creditable grain ingredient in the grain portion (bun). The product is 100 percent whole grain.	☑ Yes ☐ No ☐ Need PFS

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Part D: Evaluating Foods for WGR Compliance

Product 8: Apple breakfast bun (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The noncreditable grains in the nongrain ingredients (highlighted in yellow) do not count toward the limit for noncreditable grains. This includes the modified corn starch in the apple filling; the rye flour, malted barley flour, and wheat flour in the dough conditioner; and the whole soy flour in the egg replacer. For more information, see "When to ignore noncreditable grains" in part C of section 3.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☐ Yes [1, 2] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

[2] The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents. For more information, see "Limit for Grain-based Desserts at Lunch" in part B of section 3.

Part D: Evaluating Foods for WGR Compliance

Product 9: French toast (commercial grain product)

Ingredients: Whole-wheat bread **(WHOLE-WHEAT FLOUR, water, enriched wheat flour [flour, malted barley flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid],** sugar, *wheat gluten*, yeast, salt, soybean oil, mono and diglycerides, calcium propionate (preservative), datem, calcium sulfate, citric acid, soy lecithin, grain vinegar, potassium iodate), water, whole-wheat batter **(WHOLE-WHEAT FLOUR**, sugar, **enriched bleached wheat flour [enriched with niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid**], dextrose, eggs, ***yellow corn flour***, corn syrup solids, natural flavor, ***modified corn starch***, salt, leavening (sodium aluminum phosphate, sodium bicarbonate), nonfat milk, spice, artificial flavor, modified cellulose gum, spice extractive), coating (**bleached enriched wheat flour [wheat flour, niacin, iron, thiamine mononitrate, riboflavin, folic acid**], ***yellow corn flour***, sugar, ***soy flour***, salt, dextrose, leavening [sodium bicarbonate, monocalcium phosphate], yeast), soybean oil, cinnamon sugar (sugar, spices, natural flavor, silicon dioxide [added to prevent caking]).

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first ingredient in the whole-wheat bread.	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). All other creditable grain ingredients are either whole grains (whole-wheat flour in the batter) or enriched grains (enriched wheat flour in the bread, batter, and coating).	☑ Yes ☐ No ☐ Need PFS

Continued on next page

Part D: Evaluating Foods for WGR Compliance

Product 9: French toast (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product contains two noncreditable grains (yellow corn flour and modified corn starch) in the batter and two noncreditable grains (yellow corn flour and soy flour) in the coating. The SFA must obtain a PFS from the manufacturer to document that the combined weight of the four noncreditable grains does not exceed 3.99 grams per ounce equivalent. For more information, see "Contains 2% or less" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Is product WGR? ☐ Yes [1] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

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Product 10: Blueberry muffin (commercial grain product)

Ingredients: **WHOLE-WHEAT FLOUR**, sugar, eggs, water, blueberries, **enriched flour (flour, malted barley flour, niacin, reduced iron, thiamin mononitrate, riboflavin, folic acid**), invert sugar, soybean oil, contains 2% or less of: palm oil, canola oil, propylene glycol mono- and diesters of fats and fatty acids, ***oat fiber***, leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), mono- and diglycerides, ***modified food starch***, potassium sorbate (preservative), sodium alginate, salt, soy lecithin, natural and artificial flavor, sodium stearoyl lactylate, ***wheat starch***, blackberry juice concentrate, blueberry juice concentrate, malic acid, enzymes.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

Continued on next page

Part D: Evaluating Foods for WGR Compliance

Product 10: Blueberry muffin (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product contains three noncreditable grains (oat fiber, modified food starch, and wheat starch) listed after the statement, "contains 2% or less." The SFA must obtain a PFS from the manufacturer to document that the combined weight of the three noncreditable grains does not exceed 3.99 grams per ounce equivalent. For more information, see "Contains 2% or less" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Is product WGR? ☐ Yes [1] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

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Product 11: Cereal bar (commercial grain product)

Ingredients: **WHOLE-GRAIN OATS**, **Cereal** (**WHOLE-GRAIN WHEAT**, sugar, ***cornmeal***, brown sugar syrup, canola and/or rice bran oil, dextrose, baking soda, salt, calcium carbonate, trisodium phosphate, zinc and iron [mineral nutrients], vitamin C [sodium ascorbate], a B vitamin [niacinamide], artificial flavor, vitamin B6 [pyridoxine hydrochloride], vitamin B2 [riboflavin],vitamin B1 [thiamin mononitrate], vitamin A [palmitate], a B vitamin [folic acid], vitamin B12, vitamin D, BHT added to retain freshness), corn syrup, sugar, rice bran and/or canola oil, fructose, **BROWN RICE FLOUR**, **Marshmallows** (sugar, dextrose, ***modified corn starch***, corn syrup, cocoa, gelatin, natural and artificial flavor), chicory root extract, maltodextrin. Contains 2% or less of: **WHOLE-CORN FLOUR**, glycerin, calcium carbonate, **WHOLE-GRAIN OAT FLOUR**, ***wheat starch, modified wheat starch***, cocoa processed with alkali, salt, gelatin, color added, natural and artificial flavor, BHT added to retain freshness.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-grain oats are the first ingredient.	☐ Yes ☐ No ☑ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). The other creditable grain ingredients include whole grain-wheat and brown rice flour in the fortified breakfast cereal (highlighted in yellow), and whole-corn flour and whole-grain oat flour.	☑ Yes ☐ No ☐ Need PFS

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Product 11: Cereal bar (commercial grain product), *continued*

WGR criteria for commercial grain products	Complies?
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product contains two noncreditable grains (wheat starch and modified wheat starch) listed after the statement, "contains 2% or less." The SFA must obtain a PFS from the manufacturer to determine if their combined weight is 3.99 grams or less. For more information, see "Contains 2% or less" in part C of section 3. **Note:** The second ingredient in the cereal bar is a fortified RTE breakfast cereal (highlighted in yellow) that contains whole-grain wheat as the first ingredient. Therefore, the noncreditable grain (cornmeal) in the RTE cereal does not count toward the limit for noncreditable grains. Fortified breakfast cereals that contain a whole grain as the first ingredient are exempt from the limit for noncreditable grains. The modified corn starch in the marshmallows (highlighted in yellow) does not count toward the limit for noncreditable grains because it is part of a nongrain ingredient. For more information, see "When to ignore noncreditable grains" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Is product WGR? ☐ Yes [1, 2] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

[2] The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents. For more information, see "Limit for Grain-based Desserts at Lunch" in part B of section 3.

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Product 12: Tortilla chips (commercial grain product)

Ingredients: **Yellow corn (enriched with thiamine, riboflavin, niacin, iron, folic acid**), vegetable oil (contains one or more of the following: canola oil, corn oil, sunflower oil), salt.

WGR criteria for commercial grain products	Complies?
Criterion 1 (whole grain): A whole grain is the first ingredient; or water is the first ingredient and a whole grain is the second ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. The product does not contain a whole grain as the first ingredient. Enriched yellow corn is the first ingredient.	☐ Yes ☑ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched yellow corn is the only creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 3 (noncreditable grains): The product does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product does not contain any noncreditable grains.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☐ Yes [1] ☑ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

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Product 13: Breaded chicken nuggets product A (commercial combination food)

Ingredients: Boneless, skinless chicken breast with rib meat, water, **WHOLE-WHEAT FLOUR**, contains 2% or less of the following: dried garlic, dried onion, salt, sea salt, soybean oil, spice, sugar, torula yeast, turmeric, yeast, yeast extract. Breading set in vegetable oil.

WGR criteria for commercial combination foods ***(grain ingredients listed with nongrain ingredients)***	**Complies?**
Criterion 1 (whole grain): A whole grain is the first grain ingredient; or a whole grain is not the first ingredient but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first grain ingredient.	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Whole-wheat flour is the only creditable grain ingredient. The grain ingredient of the product is 100 percent whole grain.	☑ Yes ☐ No ☐ Need PFS
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The product does not contain any noncreditable grains.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☑ Yes [1] ☐ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Note: To credit the chicken as the meat/meat alternates component, the product's CN label or PFS must document the amount of cooked chicken per serving.

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Product 14: Breaded chicken nuggets product B (commercial combination food)

Ingredients: Chicken, water, salt, and natural flavor. Breaded with: **WHITE WHOLE-WHEAT FLOUR**, water, ***wheat starch***, **enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid)**, salt, contains 2% or less of the following: ***yellow corn flour, corn starch***, dried onion, dried garlic, dried yeast, brown sugar, extractives of paprika, and spices. Breading set in vegetable oil.

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 1 (whole grain): A whole grain is the first ingredient in the grain portion; or water is the first ingredient in the grain portion and a whole grain is the second ingredient; or a whole grain is not the first ingredient in the grain portion but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. White whole-wheat flour is the first ingredient in the breading (grain portion).	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains other than whole grains are enriched or the product contains only whole grains (i.e., product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient in the grain portion.	☑ Yes ☐ No ☐ Need PFS

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Product 14: Breaded chicken nuggets product B (commercial combination food)

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The grain portion contains three noncreditable grains. Wheat starch is listed before the statement, "contains 2% or less," and yellow corn starch and corn starch are listed after this statement. The SFA must obtain a PFS from the manufacturer to document that the combined weight of the three noncreditable grains does not exceed 3.99 grams per ounce equivalent. The SFA must obtain a PFS from the manufacturer to document that the combined weight of the three noncreditable grains does not exceed 3.99 grams per ounce equivalent. For more information, see "Contains 2% or less" in part C of section 3.	☐ Yes ☐ No ☑ Need PFS
Is product WGR? ☐ Yes [1] ☐ No ☑ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Note: To credit the chicken as the meat/meat alternates component, the product's CN label or PFS must document the amount of cooked chicken per serving.

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Product 15: Breaded chicken breast fillet (commercial combination food)

Ingredients: Chicken breast fillets with rib meat, water, **seasoning** [sugar, salt, sea salt, dextrose, spices, yeast extract, natural flavor, *maltodextrin*, canola oil (as a processing aid), ***modified corn starch***], ***modified corn starch***, sodium phosphates. Breaded with: **WHOLE-WHEAT FLOUR**, **enriched wheat flour (enriched with niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid)**, salt, yeast extract, soybean oil (as processing aid), spice, leavening (sodium aluminum phosphate, sodium bicarbonate), torula yeast, monoglycerides, dextose, *maltodextrin*, caramel color, extractives of paprika, annatto and turmeric, yeast, enzyme modified butter oil, guar gum, sugar, corn syrup solids, sodium caseinate, dehydrated butter, ascorbic acid, natural flavor. Pre-dusted and battered with: **WHOLE-WHEAT FLOUR, enriched wheat flour (enriched with niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid)**, water, sugar, *wheat gluten*, salt, yeast extract, torula yeast, spice, citric acid, *maltodextrin*, artificial flavor, enzyme modified butter oil, corn syrup solids, xanthan gum, sodium caseinate, dehydrated butter, cellulose gum, guar gum, lactic acid, extractives of annatto and turmeric. Breading set in vegetable oil.

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 1 (whole grain): A whole grain is the first ingredient in the grain portion; or water is the first ingredient in the grain portion and a whole grain is the second ingredient; or a whole grain is not the first ingredient in the grain portion but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. Whole-wheat flour is the first ingredient in the grain portion (breading, pre-dusting, and batter).	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains in the grain portion (other than whole grains) are enriched; or the grain portion contains only whole grains (i.e., the grain portion of the product is 100 percent whole grain). Enriched flour is the only other creditable grain ingredient in the grain portion (breading, pre-dusting, and batter).	☑ Yes ☐ No ☐ Need PFS

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Product 15: Breaded chicken breast fillet (commercial combination food), *continued*

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The grain portion (breading, pre-dusting, and batter) does not contain any noncreditable grains. The two sources of modified food starch in the chicken breast fillets (nongrain portion highlighted in yellow) do not count toward the limit for noncreditable grains. For more information, see "Contains 2% or less" in part C of section 3.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☑ Yes [1] ☐ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Note: To credit the chicken as the meat/meat alternates component, the product's CN label or PFS must document the amount of cooked chicken per serving.

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Product 16: Chicken vegetable egg roll (commercial combination food)

Ingredients: Filling: cabbage, ground chicken, carrots, textured soy protein (***textured soy flour,*** zinc oxide, niacinamide, ferrous sulfate, copper gluconate, vitamin a palmitate, calcium pantothenate, thiamine mononitrate [B1], pyridoxine hydrochloride [B6], riboflavin [B2], cyanocobalamin [B12]), celery, water, onion, contains 2% or less of: dried whole egg, whey protein concentrate, flavor (autolyzed yeast extract, salt, dextrose, natural flavor), sugar, soy sauce powder (soy sauce [***wheat,*** soybeans, salt], maltodextrin, salt), ***modified food starch***, dehydrated onions, sea salt, garlic, spice; Wrapper: **WHITE WHOLE-WHEAT FLOUR, water, enriched flour (wheat flour [niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid], malted barley flour), enriched durum flour (wheat flour, niacin, ferrous sulfate, thiamine mononitrate, riboflavin, folic acid)**, contains 2% or less of: wheat gluten, canola oil, flavor (autolyzed yeast extract, salt, dextrose, natural flavor), dried whole egg, salt, rice extract, ascorbic acid, ***corn starch;*** water. Fried in vegetable oil (soybean, cottonseed, corn, and/or canola oil).

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 1 (whole grain): A whole grain is the first ingredient in the grain portion; or water is the first ingredient in the grain portion and a whole grain is the second ingredient; or a whole grain is not the first ingredient in the grain portion but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. White whole-wheat flour is the first ingredient in the grain portion (wrapper).	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains in the grain portion (other than whole grains) are enriched; or the grain portion contains only whole grains (i.e., the grain portion of the product is 100 percent whole grain). The other creditable grain ingredients in the wrapper are enriched (enriched flour and enriched durum flour).	☑ Yes ☐ No ☐ Need PFS

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Product 16: Chicken vegetable egg roll (commercial combination food), *continued*

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The grain portion contains one noncreditable grain (corn starch) listed after the statement, "contains 2% or less." The three noncreditable grains (textured soy flour, wheat, and modified food starch) in the filling (nongrain portion highlighted in yellow) do not count toward the limit for noncreditable grains. For more information, see "Contains 2% or less" in part C of section 3.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☑ Yes [1] ☐ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Note: To credit the ground chicken as the meat/meat alternates component, and the carrots, celery, and onion as the vegetables component, the manufacturer's PFS must document the amount of cooked chicken and vegetables per serving.

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Product 17: Cheese ravioli (commercial combination food)

Ingredients: Filling: fat-free ricotta cheese (whey, skim milk [made from nonfat dry milk powder], vinegar, xanthan gum, carrageenan), water, egg, low moisture part skim mozzarella cheese (cultured part skim milk, salt, enzymes), whey protein isolate, sodium caseinate, romano cheese made from cow's milk (cultured milk, salt, enzymes), ***bleached wheat flour***, garlic salt (salt, dehydrated garlic), salt, ***modified corn starch,*** sugar, dehydrated garlic. Pasta: **WHOLE-WHEAT FLOUR**, **enriched durum wheat flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid)**, water, egg.

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 1 (whole grain): A whole grain is the first ingredient in the grain portion; or water is the first ingredient in the grain portion and a whole grain is the second ingredient; or a whole grain is not the first ingredient in the grain portion but the product's PFS indicates that the combined weight of all whole grains is the greatest ingredient by weight. White whole-wheat flour is the first ingredient in the grain portion (pasta).	☑ Yes ☐ No ☐ Need PFS
Criterion 2 (enriched grains): All grains in the grain portion (other than whole grains) are enriched; or the grain portion contains only whole grains (i.e., the grain portion of the product is 100 percent whole grain). Enriched durum wheat flour is the only other creditable grain ingredient.	☑ Yes ☐ No ☐ Need PFS

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Part D: Evaluating Foods for WGR Compliance

Product 17: Cheese ravioli (commercial combination food), *continued*

WGR criteria for commercial combination foods ***(grain portion listed separately)***	**Complies?**
Criterion 3 (noncreditable grains): The grain portion does not contain any noncreditable grains (see table 3-34 in part C); or only one noncreditable grain is listed after the statement, "contains 2% or less;" or the PFS indicates that the combined weight of all noncreditable grains does not exceed 3.99 grams for groups A-G or 6.99 grams for groups H-I. The grain portion (pasta) does not contain any noncreditable grains. The noncreditable grains (bleached wheat flour and modified corn starch) in the filling (nongrain portion highlighted in yellow) do not count toward the limit for noncreditable grains because they are not part of the grain portion. For more information, see "When to ignore noncreditable grains" in part C of section 3.	☑ Yes ☐ No ☐ Need PFS
Is product WGR? ☑ Yes [1] ☐ No ☐ Need PFS	

[1] The SFA must determine if the product's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3).

Note: To credit the ricotta and mozzarella cheese as the meat/meat alternates component, the manufacturer's PFS must document the amount of cheese per serving.

Part D: Evaluating Foods for WGR Compliance

Evaluating Recipes for Foods Made on Site

To credit foods made on site as WGR foods, SFAs must review the grain ingredients in the standardized recipe. For information on the WGR criteria for recipes, see "WGR Criteria for Foods Made on Site" in part C of section 3.

Standardized recipes list measurements for grain ingredients in weight (pounds and ounces) and volume (e.g., cups and quarts). SFAs must use the recipe's **weight** measurements to determine if the recipe is WGR. For assistance with recipe calculations, such as converting fractions to decimals, SFAs may use the ICN's *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*.

This section includes examples of how to review standardized recipes for compliance with the WGR criteria. If a recipe meets the WGR criteria, the menu planner must determine the ounce equivalents of the grains component in one serving of the recipe, using the weights in the USDA's ounce equivalents chart (method 1) or the creditable grains per serving (method 2). For more information, see "Options for Calculating Ounce Equivalents" and "Using method 2 (creditable grains) for grain foods made on site" in part E of section 3. For detailed guidance on determining the WGR ounce equivalents for foods made on site, see "Sample Calculations for WGR Foods Made on Site" in part E of section 3.

Tables 37 through 39 show examples of determining if a recipe meets the WGR criteria.

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Table 3-37. Evaluating WGR criteria: Sample standardized recipe 1

Corn Muffin (25 servings)		
Ingredients	**Weight**	**Measure**
Whole-wheat flour	**8 oz**	1½ cups
White whole-grain cornmeal	**8 oz**	1¼ cups
Sugar	3 oz	⅓ cup 2 Tbsp
Baking powder		¾ tsp
Salt		3 qt ½ cup
Frozen whole eggs, thawed	3 oz	⅓ cup
Nonfat milk		1¾ cups
Canola oil		¼ cup

WGR criteria for foods made on site	Complies?
Criterion 1 (whole grain): The combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains, or all grains are whole grains (i.e., recipe is 100 percent whole grain). All grains (whole-wheat flour and whole-grain cornmeal) are whole grains. The recipe is 100 percent whole grain.	☑ Yes ☐ No
Criterion 2 (enriched grains): All grains other than whole grains are enriched or all grains are whole grains (i.e., recipe is 100 percent whole grain). The recipe is 100 percent whole grain.	☑ Yes ☐ No
Criterion 3 (noncreditable grains): The recipe does not contain any noncreditable grains (see table 4); or the combined weight of all noncreditable grains meets the limit of no more than 3.99 grams per ounce equivalent for groups A-G and no more than 6.99 grams per ounce equivalent for groups H-I. The recipe does not contain any noncreditable grains.	☑ Yes ☐ No
Is recipe WGR? ☑ Yes [1] ☐ No	

[1] The SFA must determine if the recipe's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3). For detailed guidance, see "Sample Calculations for WGR Foods Made on Site" in part E of section 3.

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Table 3-38. Evaluating WGR criteria: Sample standardized recipe 2

Blueberry Muffin (25 servings)		
Ingredients	**Weight**	**Measure**
Enriched all-purpose flour	**10 oz**	2¼ cups 1 Tbsp
Whole-wheat flour	**7 oz**	1⅓ cups
Sugar	8 oz	1 cup
Baking powder		1 Tbsp 2 tsp
Salt		1 tsp
Low-fat 1% milk		1½ cups
Fresh large eggs		3 each
Vegetable oil		⅔ cup
Frozen blueberries	6 oz	1½ cups

WGR criteria for foods made on site	Complies?
Criterion 1 (whole grain): The combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains, or all grains are whole grains (i.e., recipe is 100 percent whole grain). The whole-wheat flour (7 ounces) weighs less than the enriched all-purpose flour (10 ounces). Therefore, a whole grain is not the greatest ingredient.	☐ Yes ☑ No
Criterion 2 (enriched grains): All grains other than whole grains are enriched or all grains are whole grains (i.e., recipe is 100 percent whole grain). The other creditable grain is enriched all-purpose flour.	☑ Yes ☐ No
Criterion 3 (noncreditable grains): The recipe does not contain any noncreditable grains (see table 4); or the combined weight of all noncreditable grains meets the limit of no more than 3.99 grams per ounce equivalent for groups A-G and no more than 6.99 grams per ounce equivalent for groups H-I. The recipe does not contain any noncreditable grains.	☑ Yes ☐ No
Is recipe WGR? ☐ Yes ☑ No	

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Table 3-39. Evaluating WGR criteria: Sample standardized recipe 3

Sweet potato bread squares (25 servings)		
Ingredients	**Weight**	**Measure**
Whole-wheat flour	**7½ oz**	1⅔ cups
Enriched bread flour	**7¼ oz**	1½ cups 2 Tbsp
Baking powder		1½ tsp
Salt		⅓ tsp
Ground cinnamon		1½ tsp
Brown sugar	7¼ oz	¾ cup 2 Tbsp 1½ tsp
Sugar	5½ oz	⅔ cup
Canned applesauce, unsweetened	8 oz	¾ cup 2 Tbsp ⅔ tsp
Canola oil		½ cup
Frozen whole eggs, thawed	1½ oz	2 Tbsp 2 tsp
Fresh sweet potatoes, shredded	10 oz	2¼ cups

WGR criteria for foods made on site	Complies?
Criterion 1 (whole grain): The combined weight of all whole grains is equal to or greater than the combined weight of all enriched grains, or all grains are whole grains (i.e., recipe is 100 percent whole grain). The whole-wheat flour (7½ ounces) weighs more than the enriched bread flour (7¼ ounces).	☑ Yes ☐ No
Criterion 2 (enriched grains): All grains other than whole grains are enriched or all grains are whole grains (i.e., recipe is 100 percent whole grain). The other creditable grain is enriched bread flour.	☑ Yes ☐ No
Criterion 3 (noncreditable grains): The recipe does not contain any noncreditable grains (see table 4); or the combined weight of all noncreditable grains meets the limit of no more than 3.99 grams per ounce equivalent for groups A-G and no more than 6.99 grams per ounce equivalent for groups H-I. The recipe does not contain any noncreditable grains.	☑ Yes ☐ No
Is recipe WGR? ☑ Yes [1] ☐ No	

[1] The SFA must determine if the recipe's serving size provides the required ounce equivalents (see table 3-41 in part E of section 3) or the minimum creditable grains per serving (see "Method 2: Creditable grains" in part E of section 3). For detailed guidance, see "Sample Calculations for WGR Foods Made on Site" in part E of section 3.

Part E: Serving Size for Grains

Grains served in school meals must provide the required ounce equivalents for each grade group. An ounce equivalent is the amount of food that meets the USDA's requirement for 1 ounce of grain in the NSLP and the SBP meal patterns. The amount of a grain food that provides 1 ounce equivalent varies because different types of foods contain different amounts of creditable grains. An ounce equivalent is:

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

Table 3-40 summarizes the required servings of the grains component for grades K-12 at lunch and breakfast for five-day and seven-day weeks.

Table 3-40. Required daily and weekly servings of the grains component

Grades	Ounce equivalents [1]							
	Lunch				Breakfast			
	Five-day week		Seven-day week		Five-day week		Seven-day week	
	Daily	Weekly [2]	Daily	Weekly [2]	Daily	Weekly [2]	Daily	Weekly [2]
K-5	1	8-9	1	11-12.5	1	7-10	1	10-14
6-8	1	8-10	1	11-14	1	8-10	1	11-14
9-12	2	10-12	2	14-17	1	9-10	1	12.5-14

1 At least half of the weekly grains offered in the NSLP and SBP must be WGR. Grains that are not WGR must be enriched. For more information, see part C.

2 SFAs cannot offer less than the minimum weekly serving of the grains component. The maximum weekly serving is not required, but provides a guide for planning age-appropriate meals that meet the weekly limits for calories, saturated fats, and sodium. For information on planning school meals to meet the dietary specifications, see section 6.

Part E: Serving Size

Daily Servings of Grains

Menu planners determine the size and number of servings needed to meet the grains component for each grade group. Menu planners may choose to serve one grain or a combination of several grains to meet the daily requirement. For example, a lunch menu for grades 9-12 could provide the required 2 ounce equivalents of the grains component from 1 cup of brown rice (2 ounce equivalents), or ½ cup of brown rice (1 ounce equivalent) and a 1-ounce whole-grain roll (1 ounce equivalent). These menu planning decisions affect students' selection of reimbursable meals when implementing OVS. For information on OVS, see the CSDE's guide, *Offer versus Serve Guide for School Meals*, and the CSDE's Offer versus Serve for Grades K-12 in School Nutrition Programs webpage.

Menu planners have the flexibility to determine when to offer more than the minimum amount of the grains component, as long as each meal includes at least the daily minimum. When counting grain foods toward the daily and weekly requirements, the menu planner must round down all amounts to the nearest ¼ ounce equivalent. For example, a 1.49-ounce whole-wheat roll credits as 1.25 ounce equivalents of the grains component.

Weekly Servings of Grains

SFAs must determine the weekly servings of the grains component by adding the ounce equivalents of all daily offerings over the week, separately for lunch and breakfast. SFAs must review all grain choices offered to students during the week to determine compliance with the minimum weekly requirements. If the menu offers a choice of more than one item on an individual day, the menu planner must use the daily item with the **smallest** ounce equivalents to count toward the weekly requirements. For example, if the lunch menu offers two daily grain choices that include a 1½-ounce equivalent item and a 2-ounce equivalent item, the menu planner must count the 1½-ounce equivalent item toward the weekly requirements.

Depending on the meal and grade group, SFAs must offer more than the minimum daily amount of the grains conponent on some days of the week. If a breakfast or lunch menu for grades K-5 and 6-8 offers the same amount of grains each day, the minimum daily amount must be at least 1¾ ounce equivalents in order to provide the minimum weekly amount.

- **Lunch grades K-5 and 6-8:** The minimum weekly requirement is 8 ounce equivalents for five-day weeks and 11 ounce equivalents for seven-day weeks. SFAs must offer **more** than 1 ounce equivalent on some days because serving the minimum amount provides only 5 ounce equivalents for five-day weeks and 7 ounce equivalents for seven-day weeks.

Part E: Serving Size

- **Lunch grades 9-12:** The minimum weekly requirement is 10 ounce equivalents for five-day weeks and 14 ounce equivalents for seven-day weeks. Serving the minimum daily 2 ounce equivalents meets the minimum weekly requirement for five-day and seven-day weeks.

- **Breakfast grades K-5:** The minimum weekly requirement is 7 ounce equivalents for for five-day weeks and 10 ounce equivalents for seven-day weeks. SFAs must offer **more** than 1 ounce equivalent on some days because serving the minimum amount provides only 5 ounce equivalents for five-day weeks and 7 ounce equivalents for seven-day weeks.

- **Breakfast grades 6-8:** The minimum weekly requirement is 8 ounce equivalents for for five-day weeks and 11 ounce equivalents for seven-day weeks. SFAs must offer **more** than 1 ounce equivalent on some days because serving the minimum amount provides only 5 ounce equivalents for five-day weeks and 7 ounce equivalents for seven-day weeks.

- **Breakfast grades 9-12:** The minimum weekly requirement is 9 ounce equivalents for five-day weeks and 12½ ounce equivalents for seven-day weeks. SFAs must offer **more** than 1 ounce equivalent on some days because serving the minimum amount provides only 5 ounce equivalents for five-day weeks and 7 ounce equivalents for seven-day weeks.

For more information on meeting the weekly minimums for the grains component, see "Weekly Grains and Meat/Meat Alternates at Lunch" and "Weekly Grains at Breakfast" in section 4.

Part E: Serving Size

Identifying Serving Sizes for Grains

SFAs must use meal identification signage to instruct students on how much food to select from each component daily for a reimbursable meal, based on the planned serving sizes for each grade group. For example, if a high school allows students to select two 1-ounce whole-grain rolls to meet the minimum daily 2 ounce equivalents of the grains componentat lunch, the cafeteria signage must clearly communicate that students are allowed to select two rolls with each meal. This signage must be on the serving line where the rolls are located. For more information, see "Meal Identification Signage" in section 4.

Ounce Equivalents Chart

The USDA's ounce equivalents chart (table 3-40) provides minimum weights (groups A-G) and volumes (groups H-I) for a variety of grain products. The nine groups (A-I) are based on the average grain content of similar products. Some grains (such as grain-based desserts) are high in sugar, salt and fat. This should be a consideration when deciding how often to serve them. Grain-based desserts in this chart are designated with the footnote 1 (allowed for lunch and breakfast) or 2 (allowed only for breakfast).

- **Groups A-G (baked goods**) require 16 grams of creditable grains to credit as 1 ounce equivalent of the grains component. To be WGR, the food must contain at least 8 grams of whole grains per ounce equivalent.

- **Group H (cereal grains)** require ½ cup cooked or 1 ounce (28 grams) dry to credit as 1 ounce equivalent of the grains component. To be WGR, the food must contain at least ¼ cup cooked or 14 grams dry of whole grains per ounce equivalent.

- **Group I (RTE breakfast cereals**) require 1 ounce (28 grams) to credit as 1 ounce equivalent of the grains component. RTE breakfast cereals are WGR if a whole grain is the first ingredient and the cereal is fortified. Fortification is not required for 100 whole grain cereals. A 1-ounce equivalent serving equals 1 cup of flaked or round cereals, 1¼ cups of puffed cereals, and ¼ cup of granola. If the appropriate volume of cereal weighs less than 28 grams, it still credits as 1 ounce equivalent. For example, 1 cup of flaked cereal that weighs 26 grams credits as 1 ounce equivalent.

The required weight for each group to provide 1 ounce equivalent varies because different types of foods contain different amounts of whole and enriched grains. Grains with fillings, frosting, toppings, nuts, chocolate chips, dried fruit, and other similar ingredients require a larger serving to meet the minimum grain content. For example, to credit as 1 ounce equivalent of the grains component, a roll must weigh 1 ounce, a cereal bar must weigh 2.4 ounces, and a piece of frosted cake must weigh 4.4 ounces.

Part E: Serving Size

A grain item must provide at least ¼ ounce equivalent to credit toward the grains component. If the amount is less than the full serving, the meal must include additional grains to meet the full serving for each grade group. Grains offered in amounts less than ¼ ounce equivalent are not included in the calculation of daily and weekly grain offerings, but count toward the dietary specifications. For more information, see "Dietary Specifications" in section 1. For information on planning school meals to meet the dietary specifications, see section 6.

The USDA's ounce equivalents chart applies to creditable commercial grain products. SFAs may also use this chart for creditable grain foods made on site, if the standardized recipe indicates the weight of the prepared (cooked) serving. If the standardized recipe does not provide this information, the SFA must calculate the average weight per serving. For more information, see "Using method 1 (ounce equivalents chart) for foods made on site" in this section.

Each grain group includes similar products based on their average grain content. Some grains (such as grain-based desserts) are high in sugar, salt and fat. This should be a consideration when deciding how often to serve them.

Table 3-41. Grain ounce equivalents for grades K-12 in the NSLP and SBP

Group A	Oz Eq for Group A
Bread sticks, hard Bread-type coating Chow mein noodles Crackers, savory, e.g., saltines and snack crackers Croutons Pretzels, hard Stuffing, dry **Note:** weights apply to bread in stuffing	 1 oz eq = 22 grams or 0.8 ounce ¾ oz eq = 17 grams or 0.6 ounce ½ oz eq = 11 grams or 0.4 ounce ¼ oz eq = 6 grams or 0.2 ounce

Part E: Serving Size

Table 3-41. Grain ounce equivalents for grades K-12 in the NSLP and SBP

Group B	Oz Eq for Group B
Bagels Batter-type coating Biscuits Breads, e.g., sliced whole wheat, French, Italian Buns, hamburger and hot dog Crackers, sweet, e.g., graham crackers and animal crackers, all shapes [1] Egg roll skins English muffins Pita bread, whole wheat or whole-grain rich Pizza crust Pretzels, soft Rolls, whole wheat or whole-grain rich Taco shells, whole wheat or whole corn Tortilla chips, whole wheat or whole corn Tortillas, whole wheat or whole corn	1 oz eq = 28 grams or 1 ounce ¾ oz eq = 21 grams or 0.75 ounce ½ oz eq = 14 grams or 0.5 ounce ¼ oz eq = 7 grams or 0.25 ounce
Group C	**Oz Eq for Group C**
Cookies, plain, including vanilla wafers [2] Cornbread Corn muffins Croissants Pancakes Pie crust (dessert pies [2], cobblers [2], fruit turnovers [1], and meat or meat alternate pies) Waffles	1 oz eq = 34 grams or 1.2 ounces ¾ oz eq = 26 grams or 0.9 ounce ½ oz eq = 17 grams or 0.6 ounce ¼ oz eq = 9 grams or 0.3 ounce

[1] Allowed for dessert at lunch in the NSLP and breakfast in the SBP. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents.

[2] Allowed only for dessert at lunch in the NSLP. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents.

Part E: Serving Size

Table 3-41. Grain ounce equivalents for grades K-12 in the NSLP and SBP

Group D	Oz Eq for Group
Doughnuts, cake and yeast raised, unfrosted [1] Cereal bars, breakfast bars, granola bars, plain [1] Muffins, all except corn Sweet rolls, unfrosted [1] Toaster pastries, unfrosted [1]	1 oz eq = 55 grams or 2 ounces ¾ oz eq = 42 grams or 1.5 ounces ½ oz eq = 28 grams or 1.0 ounce ¼ oz eq = 14 grams or 0.5 ounce
Group E	**Oz Eq for Group E**
Cereal bars, breakfast bars, granola bars, with nuts, dried fruit or chocolate pieces [1] Cookies, with fillings or coverings, nuts, raisins, chocolate pieces or fruit purees [2] Doughnuts, cake and yeast raised, frosted or glazed [1] French toast Sweet rolls, frosted [1] Toaster pastries, frosted [1]	1 oz eq = 69 grams or 2.4 ounces ¾ oz eq = 52 grams or 1.8 ounces ½ oz eq = 35 grams or 1.2 ounces ¼ oz eq = 18 grams or 0.6 ounce
Group F	**Oz Eq for Group F**
Cake, plain, unfrosted [2] Coffee cake [1]	1 oz eq = 82 grams or 2.9 ounce ¾ oz eq = 62 grams or 2.2 ounce ½ oz eq = 41 grams or 1.5 ounce ¼ oz eq = 21 grams or 0.7 ounce
Group G	**Oz Eq for Group G**
Brownies, plain [2] Cake, all varieties, frosted [2]	1 oz eq = 125 grams or 4.4 ounces ¾ oz eq = 94 grams or 3.3 ounces ½ oz eq = 63 grams or 2.2 ounces ¼ oz eq = 32 grams or 1.1 ounces

[1] Allowed only for dessert at lunch in the NSLP and breakfast in the SBP. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents.

[2] Allowed only for dessert at lunch in the NSLP. The weekly total of all grain-based desserts at lunch cannot exceed 2 ounce equivalents.

Part E: Serving Size

Table 3-41. Grain ounce equivalents for grades K-12 in the NSLP and SBP	
Group H	**Oz Eq for Group H**
Breakfast cereals, cooked [3] Bulgur or cracked wheat Cereal grains, e.g., amaranth, barley, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat Macaroni, all shapes Noodles, all varieties Pasta, all shapes Ravioli, noodle only Rice, brown or enriched white	1 oz eq = ½ cup cooked or 1 ounce (28 grams) dry
Group I	**Oz Eq for Group I**
Ready-to-eat (RTE) breakfast cereals (cold dry) [3, 4]	1 oz eq = 1 cup or 1 ounce for flakes and rounds 1 oz eq = 1¼ cups or 1 ounce for puffed cereal 1 oz eq = ¼ cup or 1 ounce for granola

[3] Breakfast cereals may be served in meals other than breakfast.

[4] RTE breakfast cereals must be WGR, enriched, or fortified. For more information, see the CSDE's handout, *Crediting Breakfast Cereals for Grades K-12 in the NSLP and SBP:*

Part E: Serving Size

Serving Size for Cereal Bars and Granola Bars

SFAs must consider the appropriateness of the serving size when crediting cereal bars and granola bars as the grains component. Plain cereal bars and granola bars (group D) require 2 ounces (55 grams) to provide 1 ounce equivalent of the grains component. Cereal bars and granola bars with additional ingredients such as nuts, dried fruit, and chocolate pieces (group E) require 2.4 ounces (69 grams) to provide 1 ounce equivalent of the grains component.

These products often require more than one bar to meet the minimum daily ounce equivalents of the grains component. For example, a fruit-filled cereal bar that weighs 37 grams credits as ½ ounce equivalent of the grains component. SFAs must serve two fruit-filled cereal bars to provide 1 ounce equivalent of the grains component at breakfast. This serving size may not be practical or cost-effective.

Note: Cereal bars and granola bars count toward the limit for grain-based desserts at lunch. Grain-based desserts cannot exceed 2 ounce equivalents per week. For more information, see "Limit for Grain-based Desserts" in this section.

Menu Items with Multiple Grain Sources

SFAs must determine the amount of ounce equivalents in a menu item by rounding down all amounts to the nearest ¼ ounce equivalent. When grains are part of a recipe (such as a sandwich) that students do not have the option to separate, the menu planner must calculate the total amount of grains in the recipe **before** rounding down to the nearest ¼ ounce equivalent.

The following example illustrates this requirement. Bread products in group B credit based on 1 ounce of product providing 1 ounce equivalent of the grains component. If a sandwich recipe contains 2 slices of WGR bread that each weigh 0.9 ounce (0.9 ounce equivalent), the menu planner must determine the grains contribution by adding the weight of both slices, then rounding down to the nearest ¼ ounce equivalent. If the menu planner rounds down the weight of each slice first, the calculation is incorrect.

- **Correct calculation:** Two slices of bread multiplied by 0.9 ounces equals 1.8 ounces (1.8 ounce equivalents), which rounds down to 1.75 ounce equivalents of the grains component.

- **Incorrect calculation:** One 0.9-ounce slice rounds down to 0.75 ounce (0.75 ounce equivalent), multiplied by two slices equals 1.5 ounce equivalents of the grains component.

If the recipe contains only one slice of bread (0.9 ounce), the menu planner would round down the 0.9-ounce slice to 0.75 ounce (0.75 ounce equivalent).

Options for Calculating Ounce Equivalents

SFAs have two options for calculating the ounce equivalents for creditable commercial products and foods made on site. SFAs are not required to use either method if a product has a CN label. CN-labeled products credit based on the stated crediting information for ounce equivalents. Grain products (such as muffins, bagels, and rolls) are ineligible 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. The USDA's Authorized Labels and Manufacturers webpage lists approved CN-labeled products and manufacturers. For more information, see "CN Labels" in section 2.

Method 1: Ounce equivalents chart (weights or volumes)

Method 1 determines the ounce equivalents for creditable grain products using the weight (groups A-G) or volume (groups H-I) for the appropriate grain group in the USDA's ounce equivalents chart (table 3-41). For example, to provide 1 ounce equivalent, a whole-wheat roll (group B) must weigh 28 grams (1 ounce) and a blueberry muffin (group D) must weigh 55 grams (2 ounces). The minimum creditable amount for all groups is ¼ ounce equivalent.

- **Groups A-G (baked goods):** Baked goods (such as crackers, breads, rolls, taco shells, muffins, waffles, pancakes, and grain-based desserts, e.g., cookies, cake, granola bars, and pastries) require 16 grams of creditable grains (whole and enriched) to credit as 1 ounce equivalent. The amount that provides 1 ounce equivalent varies from 22 grams (0.8 ounces) for foods in group A to 115 grams (4.4 ounces) for foods in group G. To be WGR, a food must contain at least 8 grams of whole grains per ounce equivalent. **Note:** At lunch, the weekly total of all grain-based desserts in groups B-G (such as cookies, graham crackers, brownies, and cake) cannot exceed 2 ounce equivalents.

- **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 1 ounce (28 grams) dry to credit as 1 ounce

equivalent. Cereal grains typically credit based on the cooked serving, but SFAs may choose to use the dry uncooked weight. To be WGR, a food must contain at least ¼ cup cooked or 14 grams dry of whole grains per ounce equivalent (½ cup). **Note:** Dry cereal grains used as an ingredient in a recipe (such as rolled oats in bread) credit the same as groups A-G; they require 16 grams of creditable grains to credit as 1 ounce equivalent. For more information, see "Crediting Breakfast Cereals" in part A of section 3.

- **Group I (RTE breakfast cereals):** RTE breakfast cereals require 1 ounce (28 grams) to credit as 1 ounce equivalent. A 1-ounce equivalent serving equals 1 cup of flaked or round cereals, 1¼ cups of puffed cereals, and ¼ cup of granola. If the appropriate volume of cereal weighs less than 28 grams, it still credits as 1 ounce equivalent. For example, 1 cup of flaked cereal that weighs 26 grams credits as 1 ounce equivalent. RTE breakfast cereals are WGR if a whole grain is the first ingredient and the cereal is fortified. The limit for noncreditable grains does not apply to fortified WGR RTE breakfast cereals. Fortification is not required for 100 whole grain cereals. For more information, see "Crediting Breakfast Cereals" in part A of section 3.

The USDA's ounce equivalents chart applies to all creditable commercial grain products. SFAs may also use this chart for creditable grain foods made on site, if the standardized recipe indicates the weight of the prepared (cooked) serving. If the standardized recipe does not provide this information, the SFA 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.* For guidance on identifying whole and enriched grains, see part B of section 3.

Method 2: Creditable grains

Method 2 determines the ounce equivalents for creditable grain products and recipes by calculating the total weight (grams) of creditable grains (whole and enriched) per serving. A food in groups A-G of the USDA's ounce equivalents chart must contain 16 grams of creditable grains to credit as 1 ounce equivalent, and at least 8 grams of whole grains per ounce equivalent to be WGR. A food in groups H of the USDA's ounce equivalents chart must contain 28 grams of creditable grains to credit as 1 ounce equivalent, and at least 14 grams of whole grains per ounce equivalent to be WGR. For guidance on identifying whole and enriched grains, see part B of section 3.

- **Commercial products:** SFAs must obtain a manufacturer's PFS that indicates the weight of all creditable grains (and noncreditable grains, if applicable). This

information cannot be determined from the product's Nutrition Facts label or packaging. For information on PFS forms, see "Product formulation statements" in section 2 and "Evaluating PFS Forms for Grain Products" in part A of section 3.

- **Foods made on site:** SFAs must determine the amount of creditable grains per serving from the weights listed for each grain ingredient in the standardized recipe. If the recipe lists grain ingredients by volume (e.g., cups and quarts), the SFA must calculate the equivalent weight (grams) for each grain ingredient. For more information, see "Calculation for recipes listing volume of grain ingredients" in this section. For information on standardized recipes, see section 2. For examples of noncreditable grains, see table 3-34 in part C of section 3.

When Method 2 is Required for Commercial Products

There are six situations when SFAs must use method 2 (instead of using the USDA's ounce equivalents chart) to determine the ounce equivalents contribution of commercial grain products. Each situation requires a manufacturer's PFS for the product.

1. **Multiple creditable grains:** A creditable grain is not the first ingredient (excluding water), but the product contains more than one creditable grain. SFAs 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 not a creditable grain because it is not whole grain, enriched, or nixtamalized. To credit in the NSLP and SBP 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 (noncreditable grain), and that the weight of the yellow corn flour does not exceed the limit for noncreditable grains.

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

   Note: Nixtamalization is a process in which dried corn is soaked and cooked in an alkaline solution. If the product's PFS indicates that cornmeal or corn flour are nixtamalized, these ingredients are whole grain. For more information, see "Crediting Corn Masa, Masa Harina, Corn Flour, and Cornmeal" in part A of section 3.

2. **Flour blends:** A commercial product contains a blend of whole and enriched flour (such as "flour blend (whole-wheat flour, enriched flour)") and the SFA wants to determine if the product is WGR. Flour blends do not indicate if the whole grain is the greatest grain 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. SFAs must obtain a PFS from the manufacturer to document that either the whole grain content is at least 8 grams per ounce equivalent (groups A-G), or the weight of the whole grain in the flour blend is more than the first ingredient 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 for flour blends that contain only whole grains, such as "flour blend (whole-wheat flour, whole-grain oats)." Products that contain 100 percent whole grains are WGR.

3. **Combination foods:** A commercial combination food contains a grain portion from groups A-I of the USDA's ounce equivalents chart. Examples include 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 (and noncreditable grains, if applicable) in the **grain portion** of the product.

4. **Manufacturer's crediting claim:** The manufacturer claims that a commercial product can provide the minimum creditable grains using a serving that is **less** than the minimum weight or volume specified for that product's group in the USDA's ounce equivalents chart.

5. **Product not listed:** A commercial product does not belong to one of the nine groups listed in the USDA's ounce equivalents chart.

6. **SFA credits a product differently:** The SFA wants to credit a commercial product differently from the ounce equivalents listed in the USDA's ounce equivalents chart.

For each situation described above, SFAs must obtain a product manufacturer's PFS that states the amount of creditable grains (whole and enriched) per serving, and the amount of noncreditable grains, if applicable. The PFS must also demonstrate how the product provides that amount according to the USDA's regulations, guidance, or policy.

Part E: Serving Size

SFAs must verify the accuracy of the product's PFS prior to including the product in reimbursable meals, and must maintain all crediting documentation on file. The CSDE will review this information during the Administrative Review of school nutrition programs. **Note:** If the manufacturer will not supply a PFS, or the PFS does not provide the appropriate documentation, SFAs cannot use the product to credit as the grains component in school meals.

Sample Calculations for Commercial Products in Groups A-G

Table 3-42 shows a sample calculation using method 1 to determine the ounce equivalents contribution for a commercial whole-wheat pancake product in group C. Table 3-43 shows a sample calculation for this same product using method 2.

Each method results in a different crediting contribution for this product. For some products, each method results in the same crediting contribution. SFAs may use **either** method, but must document how the crediting information was obtained. For more information, see "Choosing a Calculation Method" in this section.

With method 1, SFAs must use the weight (ounces or grams) of one serving from the commercial product's Nutrition Facts label or the manufacturer's PFS. If the product lists ounces and grams, SFAs may choose to use either one. To convert ounces to grams, multiply ounces by 28.35.

Part E: Serving Size

Table 3-42. Using method 1 (ounce equivalents chart) to calculate the ounce equivalents for commercial products in groups A-G

Mini Whole-Wheat Pancakes [1]

Manufacturer's serving size:
5 pancakes (1.75 ounces)

Group C (USDA's ounce equivalents chart):
1 ounce equivalent = 34 grams or 1.2 ounces

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

1. List the weight of the manufacturer's serving size from the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).	**A**	**1.75**	ounces
2. List the required weight for 1 ounce equivalent for the product's group (A-G) in the USDA's ounce equivalents chart. [2]	**B**	**1.2**	ounces
3. Determine the ounce equivalents in one serving of the product: Divide A by B.	**C**	**1.46**	ounce equivalents per manufacturer's serving
4. Round down the number in C to the nearest ¼ ounce equivalent. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.	**D**	**1.25**	**ounce equivalents per manufacturer's serving (rounded)**

[1] This product is WGR because whole-wheat flour is the first ingredient (excluding water), enriched flour is the only other grain ingredient, and the product does not contain any noncreditable grains. For guidance on identifying WGR foods, see part C of section 3.

[2] Calculations use the weight for the appropriate grain group in the USDA's ounce equivalents chart (see table 3-41 in part E of section 3). Pancakes are in group C.

Part E: Serving Size

Table 3-43. Using method 2 (creditable grains) to calculate the ounce equivalents for commercial products in groups A-G

Mini Whole-Wheat Pancakes [1]

Manufacturer's serving size:
5 pancakes (1.75 ounces)

Group C (USDA's ounce equivalents chart):
1 ounce equivalent = 34 grams or 1.2 ounces

Creditable grains per serving (from product's PFS):
Whole-wheat flour: 16 grams
Enriched flour: 14 grams
Noncreditable grains: 0 grams

Ingredients: Water, whole-wheat flour, enriched flour (wheat flour, niacin, ferrous sulfate, thiamin mononitrate, riboflavin, folic acid), sugar, canola oil. Contains 2% or less of: leavening (baking soda, sodium aluminum phosphate, monocalcium phosphate), eggs, salt, buttermilk.

1. List the combined weight (grams) of whole and enriched grains in one serving from the product's PFS (1 ounce = 28.35 grams). [2] 16 grams of whole-wheat flour + 14 grams of enriched flour = 30 grams of creditable grains	**A**	**30**	grams
2. Determine the ounce equivalents in one serving of the product: Divide A by 16 (16 grams of creditable grains = 1 ounce equivalent for groups A-G).	**B**	**1.88**	ounce equivalents per manufacturer's serving
3. Round down the number in B to the nearest ¼ ounce equivalent. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.	**C**	**1.75**	**ounce equivalents per manufacturer's serving (rounded)**

[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 guidance on identifying WGR foods, see part C of section 3.

[2] To credit a product using method 2, SFAs must obtain a manufacturer's PFS that states the weight of all creditable grains (and noncreditable grains, if applicable). For information on PFS forms, see section 2 and "Evaluating PFS Forms for Grain Products" in part A of section 3.

Sample Calculations for Commercial Products in Group H

Table 3-44 shows a sample calculation using method 1 to determine the ounce equivalents contribution for a commercial whole-grain pasta product in group H. Table 3-45 shows a sample calculation for this same product using method 2.

Each method results in the same crediting contribution for this product. For some products, each method results in a different crediting contribution. SFAs may use **either** method, but must document how the crediting information was obtained. For more information, see "Choosing a Calculation Method" in this section.

Note: Cereal grains in group H typically credit based on the **cooked** serving (e.g., ½ cup credits as 1 ounce equivalent), but SFAs may choose to calculate the product's ounce equivalents based on the dry uncooked weight (1 ounce credits as 1 ounce equivalent). With method 1, SFAs must use the weight (ounces or grams) of one serving from the commercial product's Nutrition Facts label or the manufacturer's PFS. If the product lists ounces and grams, SFAs may choose to use either one.

Part E: Serving Size

Table 3-44. Using method 1 (ounce equivalents chart) to calculate the ounce equivalents for commercial products in group H

Whole-grain Pasta [1]

Manufacturer's serving size:
32 grams (½ cup cooked)

Group H (USDA's ounce equivalents chart):
1 ounce equivalent = ½ cup cooked or 28 grams dry

Ingredients: Whole-grain durum wheat flour.

1. List the weight of the manufacturer's serving size from the product's Nutrition Facts label or PFS (1 ounce = 28.35 grams).	**A**	**32**	grams
2. List the required uncooked (dry) weight for 1 ounce equivalent for group H in the USDA's ounce equivalents chart. [2]	**B**	**28**	grams
3. Determine the ounce equivalents in one serving of the product: Divide A by B.	**C**	**1.14**	ounce equivalents per manufacturer's serving
4. Round down the number in C to the nearest ¼ ounce equivalent. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.	**D**	**1**	**ounce equivalents per manufacturer's serving (rounded)**

[1] This product is WGR because whole-grain flour is the first and only ingredient. For guidance on identifying WGR foods, see part C of section 3.

[2] Calculations use the weights for group H in the USDA's ounce equivalents chart (see table 3-41 in part E of section 3), which requires ½ cup cooked or 28 grams dry to provide 1 ounce equivalent; equivalent; and at least ¼ cup or 14 grams of whole grains per ounce equivalent to be WGR.

Part E: Serving Size

Table 3-45. Using method 2 (creditable grains) to calculate the ounce equivalents for commercial products in group H

Whole-grain Pasta [1]

Manufacturer's serving size:
32 grams (½ cup cooked)

Group H (USDA's ounce equivalents chart):
1 ounce equivalent = ½ cup cooked or 28 grams dry

Creditable grains per serving (from product's PFS):
Whole-wheat flour: 15 grams
Enriched flour: 14 grams
Noncreditable grains: 0 grams

Ingredients: Whole-grain durum wheat flour, enriched wheat flour.

1. List the combined weight (grams) of whole and enriched grains in one serving from the product's PFS (1 ounce = 28.35 grams). [2] 15 grams of whole-wheat flour + 14 grams of enriched flour = 29 grams of creditable grains	A	**29**	grams
2. Determine the ounce equivalents in one serving of the product: Divide A by 28 (28 grams of creditable grains = 1 ounce equivalent for group H).	B	**1.04**	ounce equivalents per manufacturer's serving
3. Round down the number in B to the nearest ¼ ounce equivalent. For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.	C	**1**	**ounce equivalents per manufacturer's serving (rounded)**

[1] 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 guidance on identifying WGR foods, see part C of section 3.

[2] To credit a product using method 2, SFAs must obtain a manufacturer's PFS that states the weight of all creditable grains (and noncreditable grains, if applicable). For information on PFS forms, see "Product formulation statements" in section 2 and "Evaluating PFS Forms for Grain Products" in part A of section 3.

Part E: Serving Size

Choosing a Calculation Method

Calculation methods 1 and 2 may result in a different crediting contribution for the same product, or may result in the same crediting contribution for the product. For example, a 2-ounce bagel might credit as 2 ounce equivalents using method 1 (USDA's ounce equivalents chart) and 2½ ounce equivalents using method 2 (amount of creditable grains indicated in the manufacturer's PFS). SFAs may choose to use **either** method for all foods in the USDA's ounce equivalents chart, but must document which method is used for each product.

When using method 2 for commercial products, SFAs must obtain a PFS from the manufacturer that documents the weight of all creditable grains per serving (and the weight of all noncreditable grains, if applicable). When using method 2 for foods made on site (groups A-G), SFAs must have a standardized recipe on file that lists the weight of all creditable grains. If the recipe is not standardized and lists only the volume of grain ingredients, the SFA must calculate the weight equivalent (grams) of each grain ingredient. For more information, see "Calculation for recipes listing volume of grain ingredients" in this section

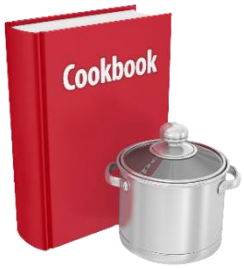
When SFAs choose a calculation method for a specific product, the USDA requires that same calculation method must be used each time that same product is on the menu for that same age group. For example, if the SFA uses method 2 to determine the crediting of a whole-grain bagel at the high school, that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

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

Sample Calculations for Foods Made On Site

SFAs must have standardized recipes on file to document the meal pattern contribution of foods prepared on site, such as breads, rolls, muffins, pizza dough, and pancakes. SFAs must determine the ounce equivalents in one serving of the standardized recipe by using either the appropriate weight (groups A-G) or volume (groups H-I) in the USDA's ounce equivalents chart (method 1), or the weight of creditable grains per serving (method 2). The CSDE encourages SFAs to use method 2 (creditable grains) for recipes in groups A-G because it provides more accurate crediting information. Group H (cereal grains) typically credit based on the cooked serving, i.e., ½ cup credits as 1 ounce equivalent. For information on standardized recipes, see "Standardized Recipes" in section 2.

Note: SFAs do not need to calculate the ounce equivalents for foods prepared from the USDA's recipes for Child Nutrition Programs. These standardized recipes specify the meal pattern crediting information per serving, including grain ounce equivalents. For links to the USDA's recipes, visit the CSDE's Menu Planning for Child Nutrition Programs webpage. For more information, see "Recipe resources" in section 2.



Using method 1 (ounce equivalents chart) for foods made on site

To use the USDA's ounce equivalents chart for school-made foods in groups A-G, SFAs must know the **weight** of the prepared serving of the standardized recipe after cooking or baking. If the standardized recipe does not provide this information, the SFA 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). SFAs must use the recipe's **weight** measurements to determine the creditable grains per serving. For assistance with recipe calculations, such as converting fractions to decimals, review the ICN's *Basics at a Glance Portion Control Poster* and the decimal equivalents of fractions in the "Introduction" section of the FBG.

Method 2 calculation for recipes listing the weight of grain ingredients

Table 3-46 shows how to use method 2 to calculate the ounce equivalents for a standardized recipe that lists the weight (pounds and ounces) of grain ingredients. A standardized recipe for a food in groups A-G must contain 16 grams of creditable grains to credit as 1 ounce equivalent, and at least 8 grams of whole grains per ounce equivalent to be WGR.

Part E: Serving Size

Table 3-46. Using method 2 (creditable grains) to calculate the ounce equivalents for recipes listing the weight of grain ingredients

WGR standardized recipe for multi-grain bread[1]

Yield: 100 servings
Serving size: 1 piece

Grain ingredients:
Whole-wheat flour: 8 ounces (0.5 pound)
Rolled oats: 1 pound 2 ounces (1.125 pounds)
Enriched flour: 1 pound
Enriched cornmeal: 8 ounces (0.5 pound)

1. Determine the total weight (pounds) of all creditable grains in the recipe (16 ounces = 1 pound). Convert fractions to decimals, e.g., 1¾ pounds equals 1.75 pounds.

A	**3.125**	pounds of creditable grains

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 ounce equivalents per recipe serving: Divide D by 16 (1 ounce equivalent = 16 grams of creditable grains).

E	**0.89**	ounce equivalents

6. Round down the number in E to the nearest ¼ ounce equivalent For example, 1.49 and 1.27 round down to 1.25; and 1.24 rounds down to 1.

F	**0.75**	**ounce equivalents (rounded)**

[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), and the recipe does not contain any noncreditable grains.

Part E: Serving Size

Method 2 calculation for recipes listing the volume of grain ingredients

Recipes that are not standardized usually list only the volume (e.g., cups and quarts) of grain ingredients, instead of weight (pounds and ounces). To determine the ounce equivalents of the grains component in the recipe, SFAs must first convert the volume of all grain ingredients to weight (grams). SFAs may use any of the methods below to convert the volume of grain ingredients to grams.

- Use the manufacturer's serving size information on the Nutrition Facts label for the grain ingredient. For example, a recipe contains 2 cups of enriched flour. The product's Nutrition Facts label states that ¼ cup of enriched flour weighs 30 grams. Multiply the weight of the manufacturer's serving (30 grams) by the amount of the ingredient used in the recipe (2 cups) to determine the weight of the ingredient used in the recipe (240 grams).

- Search the USDA's Food Data Central nutrient database for grain ingredients, such as whole-wheat flour or yellow cornmeal. Enter "1" in the data 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. Table 3-48 shows the weight per cup of some commonly used grain ingredients.

- 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 3-47 shows how to use method 2 to calculate the ounce equivalents per serving for a non-standardized recipe that lists only the volume (cups) of the grain ingredients.

Part E: Serving Size

Table 3-47. Using method 2 (creditable grains) to calculate the ounce equivalents for recipes listing the volume of grain ingredients

Multi-grain bread [1]

25 servings		Convert cups to grams			
Grain ingredient	**Measure**	**Grams per cup** [2]			**Weight (grams)**
Whole-wheat flour	2 cups	X	120	=	240.00 grams
Rolled oats	¾ cup	X	181	=	60.75 grams
All-purpose enriched flour	2 cups	X	125	=	250.00 grams
Enriched cornmeal	¼ cup	X	138	=	34.50 grams
Total weight of creditable grains:					**585.25 grams**

1. Determine the combined 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

A	**585.25**	grams

2. List the number of servings in the recipe.

B	**25**	servings

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

C	**23.41**	grams

4. Determine the ounce equivalents per serving: Divide C by 16 (1 ounce equivalent = 16 grams of creditable grains). [3]

D	**1.46**	ounce equivalents

5. Round down the number in D to the nearest ¼ ounce equivalent. For example, 1.49 and 1.27 round down to 1.25, and 1.24 rounds down to 1.

E	**1.25**	**ounce equivalents**

[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.

[2] The grams per cup are from the USDA's Food Data Central nutrient database (Standard Reference (SR) Legacy Data).

[3] Dry cereal grains used as an ingredient in a recipe (such as rolled oats and cornmeal) credit the same as groups A-E; they require 16 grams of creditable grains to credit as 1 ounce equivalent and at least 8 grams of whole grains per ounce equivalent to be WGR.

Part E: Serving Size

Table 3-48. Weights of 1 cup of commonly used grain ingredients [1]	
Food item	**Weight (grams) per cup**
Barley, flour or meal [2]	148
Barley, hulled [2]	184
Barley, pearled, uncooked [2]	200
Barley, pearled, cooked [2]	157
Bread crumbs, dry, grated, plain [2]	108
Bread crumbs, plain, dry, grated, seasoned [2]	120
Bread crumbs, plain soft, white [2]	45
Bulgur, uncooked [2]	140
Bulgur, cooked [2]	182
Cereal, General Mills Cheerios [3]	28
Cereal, General Mills Corn Chex [3]	31
Cereal, General Mills Rice Chex [3]	27
Cereal, General Mills Wheat Chex [3]	47
Cereal, General Mills Wheaties [3]	36
Cereal, Kellogg's All-Bran Bran Buds [4]	90
Cereal, Kellogg's All-Bran Original [4]	62
Cereal, Kellogg's Corn Flakes crumbs [4]	88
Cereal, Kellogg's Corn Flakes, whole [4]	28
Cereal, Kellogg's Rice Krispies [5]	26
Cereal, Quaker Puffed Rice [5]	14
Cereal, Quaker Puffed Wheat [5]	28
Cornmeal, enriched, uncooked, yellow, degerminated 2	157
Cornmeal, enriched, uncooked, yellow, whole grain 2	122
Cracker crumbs, graham, crushed [2]	84
Cracker crumbs, snack, standard snack-type, regular, crushed [2]	52
Flour, buckwheat, whole groat [2]	120
Flour, corn, whole grain, yellow [2]	117
Flour, rice, brown [2]	158
Flour, rice, white [2]	158
Flour, rye, dark [2]	128

Part E: Serving Size

Table 3-48. Weights of 1 cup of commonly used grain ingredients [1]	
Food item	**Weight (grams) per cup**
Flour, rye, light [2]	102
Flour, wheat, white, all-purpose enriched, bleached [2]	125
Flour, wheat, white, all-purpose enriched, unbleached [2]	125
Flour, wheat, white, bread, enriched [2]	137
Flour, wheat, white, cake, enriched, unsifted, dipped [2]	137
Flour, wheat, white, self-rising, enriched [2]	125
Flour, wheat, whole grain [2]	120
Wheat germ, uncooked, plain [2]	88
Wheat germ, toasted, plain [2]	115
Oat bran, raw [2]	94
Oat bran, cooked [2]	219
Oats, rolled, quick, uncooked [2]	81
Oats, rolled, regular, uncooked [2]	81

1 The use of brand-name products is solely for clarification regarding serving sizes and does not constitute approval or endorsement by the USDA or CSDE. 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*.

2 USDA's FoodData Central database (Standard Reference (SR) Legacy Data): https://fdc.nal.usda.gov/

3 General Mills Cereals: https://www.generalmills.com/en/Brands/Cereals

4 Kellogg's Cereals: https://www.kelloggs.com/en_US/home.html

5 Quaker Cereals: https://www.quakeroats.com/products

Part E: Serving Size

Table 3-49 shows how to use method 2 to calculate the ounce equivalents per serving for a non-standardized recipe that lists grain ingredients in volume (cups).

Table 3-49. Calculating ounce equivalents for recipes listing ingredients in volume

Multi-grain bread [1]

25 servings		Convert cups to grams			
Grain ingredient	**Measure**	**Grams per cup** [2]			**Weight (grams)**
Whole-wheat flour	2 cups	X	120	=	240.00 grams
Rolled oats	¾ cup	X	181	=	60.75 grams
All-purpose enriched flour	2 cups	X	125	=	250.00 grams
Enriched cornmeal	¼ cup	X	138	=	34.50 grams
				Total weight of creditable grains:	**585.25 grams**

1. Determine the combined 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

A	**585.25**	grams

2. List the number of servings in the recipe.

B	**25**	servings

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

C	**23.41**	grams

4. Determine the ounce equivalents per serving: Divide C by 16 (1 ounce equivalent = 16 grams of creditable grains). [3]

D	**1.46**	ounce equivalents

5. Round down the number in D to the nearest ¼ ounce equivalent. For example, 1.49 and 1.27 round down to 1.25, and 1.24 rounds down to 1.

E	**1.25**	**ounce equivalents**

[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.

[2] The grams per cup are from the USDA's Food Data Central nutrient database (Standard Reference (SR) Legacy Data).

[3] Dry cereal grains used as an ingredient in a recipe (such as rolled oats and cornmeal) credit the same as groups A-E; they require 16 grams of creditable grains to credit as 1 ounce equivalent and at least 8 grams of whole grains per ounce equivalent to be WGR.