



4

Grains

Food Buying Guide for Child Nutrition Programs

4 | Grains

Grains Component for the Child Nutrition Programs

All reimbursable meals offered in the National School Lunch Program (NSLP), School Breakfast Program (SBP), Child and Adult Care Food Program (CACFP), and Summer Food Service Program (SFSP) must include a grains food product. A reimbursable snack in the CACFP, SFSP, or the NSLP Afterschool Snack Service may include a creditable grain.

FNS meal pattern regulations establish the minimum serving size(s) of grains required for breakfasts, lunches, suppers, and snacks. Meal pattern charts for each of the Child Nutrition Programs are on pages I-7 through I-17. This section pertains to grains requirements in the NSLP, SBP, and CACFP. Please refer to Appendix E for grains requirements for the SFSP and NSLP Afterschool Snack Service.



Definitions

Bran	Bran is the seed husk or outer coating of cereal grains such as wheat, rye, and oats. The bran can be mechanically removed from the flour or meal by sifting or bolting. Bran can be used to meet the enriched grains requirements in Child Nutrition Programs.
Creditable grains	Creditable grains represent all of the grain ingredients in a product that are creditable toward the grains component; they include whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be included in an enriched product such as, enriched bread or in a fortified cereal.
Enriched	Enriched means that the product conforms to the U.S. Food and Drug Administration’s (FDA) Standard of Identity for enrichment (21 CFR Section 137). The terms “enriched,” “fortified,” or similar terms indicate the addition of one or more vitamins or minerals or protein to a food.
Flour	Flour is the product derived by finely grinding and bolting (sifting) wheat or other grains. Flour may be made from all grains (wheat, rye, corn, etc.).
Germ	Germ is the vitamin-rich embryo of the grain kernel. The germ can be separated before milling for use as a cereal or food supplement. Germ can be used to meet the enriched grains requirements in Child Nutrition Programs.
Nixtamalization	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. Nixtamalized corn is used to make hominy, corn masa (dough from masa harina), masa harina (corn flour), and certain types of cornmeal. These ingredients are considered whole grain when evaluating products for CNP meal requirements. If the ingredient statement indicates the corn is treated with lime (for example, “ground corn with trace of lime” or “ground corn treated with lime”), then the corn is nixtamalized.
Ounce equivalents	Ounce equivalents designates the contribution a given serving size makes toward the grains component. One ounce equivalent provides sixteen grams of credible grains.
Primary grain ingredient	Primary grain ingredient is the first grain ingredient listed in the ingredient statement.
Whole grain	Whole grain contains all parts of the grain kernel which includes the bran, germ and endosperm.
Whole grain-rich (WGR)¹	Whole grain-rich (WGR) is the term designated by FNS to indicate that the grains components in a product are at least 50 percent whole grain, with the remaining grains being enriched. This term only refers to FNS criteria for meeting the grains requirements for the NSLP, SBP, and CACFP. The term is not found on product labels and should not be confused with the FDA whole grain health claim.

¹ Please refer to Appendix E for grains/breads requirements in the SFSP and NSLP Afterschool Snack Service.

4 | Grains

Examples of Foods That Are Creditable Toward the Grains Component

The following types of ingredients are considered creditable grains in Child Nutrition Programs:

- whole grains (i.e. whole wheat, whole-wheat meal/flour, brown rice, rolled oats, whole corn)
- enriched grains (i.e. enriched wheat meal/flour, enriched rice)
- bran or germ can be used to meet the enriched grains requirements in Child Nutrition Programs
- Note: nixtamalized corn, (i.e., corn treated with lime), such as hominy, corn masa, and masa harina are considered whole grain when evaluating products for meal requirements. (Please refer to the “Definitions” section for more information on nixtamalization). These ingredients are processed in a way that increases the bioavailability of certain nutrients so they have a nutritional profile similar to whole corn.



Foods that contribute to the grains requirement in all Child Nutrition Programs include the following items when made from above specified ingredients but are not limited to:

Breads, biscuits, bagels, rolls, tortillas, crackers, cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, hominy grits, wheat berries, or couscous

- Must be made from creditable grains: whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or included in an enriched product such as, enriched bread or in a fortified cereal.

Ready-to-eat (RTE) breakfast cereals

- If the product includes enriched ingredients, or the product itself is labeled as “Enriched,” it must meet the Food and Drug Administration’s Standards of Identity for enrichment (12 CFR Section 137).
- In the NSLP/SBP, RTE cereals that list a whole grain as the first ingredient must be fortified. If the cereal is 100 percent whole grain, fortification is not required.
- All breakfast cereals served in the CACFP must contain no more than 6 grams of sugar per dry ounce.

Cereals or bread products that are used as an ingredient in another menu item such as crispy rice treats, cereal bars, oatmeal cookies, or breading on fish or poultry

- Must be made from creditable grains: whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or included in an enriched product such as, enriched bread or in a fortified cereal.

See above requirements for RTE cereals in the NSLP, SBP, and CACFP.

Macaroni, pasta, noodle products (cooked)

- Must be made from credible grains: whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or included in an enriched product such as, enriched bread or in a fortified cereal.

- The NSLP and SFSP regulations allow enriched macaroni products that have been fortified with protein to be counted toward either the grains or meats/meat alternates requirements, but not toward both meal components simultaneously.
 - In the NSLP, these products may be counted toward meeting part of the meats/meat alternates requirement only. However, enriched macaroni products that have been fortified with protein cannot count toward the grains or meats/meat alternates meal components simultaneously.
 - The CACFP regulations allow enriched macaroni products that have been fortified with protein to be counted toward the grains requirement only.
 - Pasta products made with bean flours do not count toward the grains requirement. Please see Appendix C for more information on products made with bean flour and how they may contribute to Child Nutrition Program meal pattern requirements.

Sweet food products such as toaster pastries, coffee cake, doughnuts, sweet rolls, pie crusts, cookies, cakes, etc.

- Must be made from creditable grains: whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or included in an enriched product such as enriched bread or in a fortified cereal.
- No more than 2.0 oz eq grains served per week in the NSLP may be in the form of a grain-based dessert.
- Grain-based desserts do not count toward the grains component in the CACFP meal pattern requirements.

Non-sweet snack food products such as hard pretzels, hard bread sticks, and tortilla chips

- Must be made from creditable grains: whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or included in an enriched product such as enriched bread or in a fortified cereal.

See pages 4-6 through 4-7 for more information on grains requirements in each CN program.

- *At least eighty percent of the grains offered weekly in the NSLP (7 CFR 210.10(c)(2)(iv)(B)) and the SBP (7 CFR 220.8(c)(2)(iv)(B)) must be whole grain-rich, and the other grain items offered must be enriched. See pages 4-7 through 4-9 for more information on the criteria. (Please note: State agencies have the discretion to set stricter requirements than the minimum nutrition standards for school meals. For additional guidance, please contact your State agency.)*
- *For the CACFP, at least one serving of grains per day must be whole grain-rich.*

4 | Grains

Criteria for Determining Acceptable Grain Items

The following criteria are to be used as a basis for crediting items to meet the grains requirement in the Child Nutrition Programs.

- Creditable grain items are made from grains that are whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be an enriched product, such as enriched bread, or a fortified cereal.
- Some enriched grain products that are being blended with whole-grain ingredients must meet the Food and Drug Administration's Standards of Identity (21 CFR Part 136, Part 137, Part 139) for enriched bread, macaroni and noodle products, rice, or cornmeal.

School Meal Programs

- Ounce equivalents (oz eq) are used to determine the amount of creditable grains.
- One-quarter ounce equivalent (0.25 oz eq) is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- At least eighty percent of the weekly grains offered must meet the whole grain-rich criteria, meaning they are:
 - 100 percent whole grain; or contain a blend of whole-grain ingredients and enriched grain ingredients (whole-grain meal and/or whole-grain flour blended with enriched meal and/or enriched flour), of which at least 50 percent is whole grain.
 - Bran and germ can be used to meet the enriched grains requirements.

Note: Nixtamalized corn (i.e., corn treated with lime), such as hominy, corn masa, and masa harina are considered whole grain when evaluating products for meal requirements. See page 4-3 for more information on nixtamalization.

Please note: State agencies have the discretion to set stricter requirements than the minimum nutrition standards for school meals. For additional guidance, please contact your State agency.

- Up to twenty percent of the grain items offered weekly can be made from grains that are enriched meal and/or flour.
 - Bran and germ can be used to meet the enriched grains requirements.

Please refer to Appendix E for grains requirements in the SFSP and NSLP Afterschool Snack Service.

- Up to 2.0 oz eq grains per week may be credited in the form of a grain-based dessert.

CACFP and Preschool

- Ounce equivalents (oz eq) are used to determine the amount of creditable grains.
- One-quarter ounce equivalent (0.25 oz eq) is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- Grain items must be made from grains that are whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be an enriched product such as enriched bread or a fortified cereal.
- At least one serving of grains per day must be whole grain-rich.
- Grain-based desserts cannot be credited toward the grains component.
- Breakfast cereals must contain no more than 6 grams of sugar per dry ounce.

SFSP and NSLP Afterschool Snack Service

- Grain items are credited in servings. See program guidance and Appendix E for further information.
- One-quarter serving is the smallest amount allowable to be credited toward the grains requirement as specified in program regulations.
- Grain items must be made from grains that are whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be an enriched product, such as enriched bread, or a fortified cereal.

Please note that the SFSP and NSLP Afterschool Snack Service are not required to serve grain items that meet the whole grain-rich criteria; however, regularly offering items that meet these standards will help children develop healthy eating habits.

Also, the SFSP and NSLP Afterschool Snack Service (for grades K-12), are not required to credit grains using ounce equivalents. However, ounce equivalents contain a slightly higher amount of creditable grains than grains servings. Therefore, ounce equivalents may be used to calculate grains servings in the SFSP and NSLP Afterschool Snack Service if the Child Nutrition program operator wishes to do so. See Appendix E for more information.

What Foods Meet the Whole Grain-Rich Criteria?

The NSLP, SBP and CACFP meal patterns require specific amounts of grains that meet the whole grain-rich criteria to be served.

Any one of the following methods can be used to evaluate if a grain product meets the whole grain-rich criteria:

- A. Use Exhibit A: Grain Requirements for Child Nutrition Programs:
- For grain items in Groups A – G of Exhibit A, the whole-grain content per 1 ounce equivalent (oz eq) must be at least 8 grams out of the standard 16 grams. The remaining grains must be enriched.

For grain items in Group H of Exhibit A, the volumes or weights listed in the chart can be used to meet grains requirements. For example, a ½ cup of cooked brown rice or enriched rice is equal to 1.0 oz eq of whole grain or enriched grain, respectively. As another example, if dry pasta includes a blend of whole-grain flour and enriched flour, the whole-grain content must be at least 14 grams of whole-grain flour out of the standard 28 grams of creditable grains per oz eq. The remaining 14 grams of flour must be enriched. This information may be determined from information provided on the product packaging or by the manufacturer, if available. If any non-whole grains (refined grains) are included, they must be enriched.

- Ready-to-eat (RTE) breakfast cereals in Group I of Exhibit A must list a whole grain as the primary ingredient and the cereal must be fortified. RTE breakfast cereals that are 100 percent whole grain are not required to be fortified. However, any non-creditable grains must be restricted to insignificant levels.

Please find Exhibit A online at:

<https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/ExhibitA.pdf>

- B. Use the FDA-Approved Whole Grain Health Claim

The product includes one of the following FDA-approved whole grain health claims on its packaging and any refined grains in the product are enriched:

“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 some cancers.” OR “Diets rich in

4 | Grains

whole grain foods and other plant foods, and low in saturated fat and cholesterol, may help reduce the risk of heart disease.”

C. Use the Ingredient Statement (List)

Whole grains are the primary ingredient by weight, with the exception of water. Specifically:

- I. Non-mixed dishes (e.g., breads, cereals): A whole grain is the first ingredient in the list (ingredients are listed in descending order of predominance by weight). Any other grains must be enriched. When a whole grain is listed first and there are two or more enriched grains that follow, additional information is needed from the manufacturer in the form of a product formulation statement. The document will need to indicate that the whole grain weighs equal to or more than the enriched grains in the product.

Even if a whole grain is not listed as the first ingredient, if there are multiple whole-grain ingredients, the combined weight of those whole grains may be more than the weight of the other ingredients. These products could meet the whole grain-rich criteria with proper manufacturer documentation or a standardized recipe. For example, a bread item may be made with three grain ingredients: enriched wheat flour (40 percent of grain), whole-wheat flour (30 percent of grain), and whole oats (30 percent of grain). The Program operator, with the assistance of the manufacturer through the use of a Product Formulation Statement, could determine that the whole grains are the primary grain ingredient by weight because the combined whole-grain ingredients (whole-wheat flour and whole oats), at 60 percent, are greater than the enriched wheat flour at 40 percent.

- II. Mixed dishes (e.g., pizza, corn dogs): A whole grain is the first grain ingredient in the list (ingredients are listed in descending order of predominance by weight). Any other grains must be enriched. Ingredient statements can be organized by component such as by listing the ingredients of the cheese, crust, and toppings separately. In this case, the whole-grain ingredient needs to be the first grain ingredient in the ingredient statement for the crust.

D. Use the State Agency’s Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) List

As an additional flexibility, any grain product found on any State agency’s WIC-approved whole-grain food list meets whole grain-rich criteria for all Child Nutrition Programs. Program operators can obtain a copy of a State agency’s WIC-approved whole-grain food list by contacting the WIC State agency. For a list of WIC State agency contacts, please see: <http://www.fns.usda.gov/wic/wic-contacts>.

Please refer to specific program guidance for complete whole grain-rich criteria for SBP/NSLP and CACFP.

Flour Blends

Some products include flour blends listed in the ingredient declaration, for example, ingredients: flour blend (whole-wheat flour, enriched flour), sugar, cinnamon, etc. When trying to determine if whole grains are the primary ingredient by weight for these products, Child Nutrition Program operators will need to know either that the whole-grain content is at least 8.0 grams per oz eq or that the weight of the whole grain is greater than the first ingredient listed after the flour blend such as sugar in the example. Non-creditable grains in products at very low levels used as processing aids are limited to 2 percent or less of the product formula by weight or less than 0.25 oz eq in the NSLP and SBP.

Manufacturers producing qualifying products (meat/meat alternate entrées containing grains) may apply for a Child Nutrition (CN) label to indicate the number of oz eq grains that meet the whole grain-rich criteria. The term “oz eq grains” on the CN label indicates that the product meets the whole grain-rich criteria, while the term “oz eq grains (enriched)” means the grains portion of the product is primarily made from enriched grains.

In addition to the SBP and NSLP, grain foods with a CN label indicating the number of ounce equivalents that meet the whole grain-rich criteria do contribute to the CACFP, SFSP, and NSLP Afterschool Snack Service meal pattern requirements as declared on the CN label. Therefore, the ounce equivalent meets the minimum quantity for the grains component in all Child Nutrition Programs. For more information on the CN Labeling Program, see Appendix C.

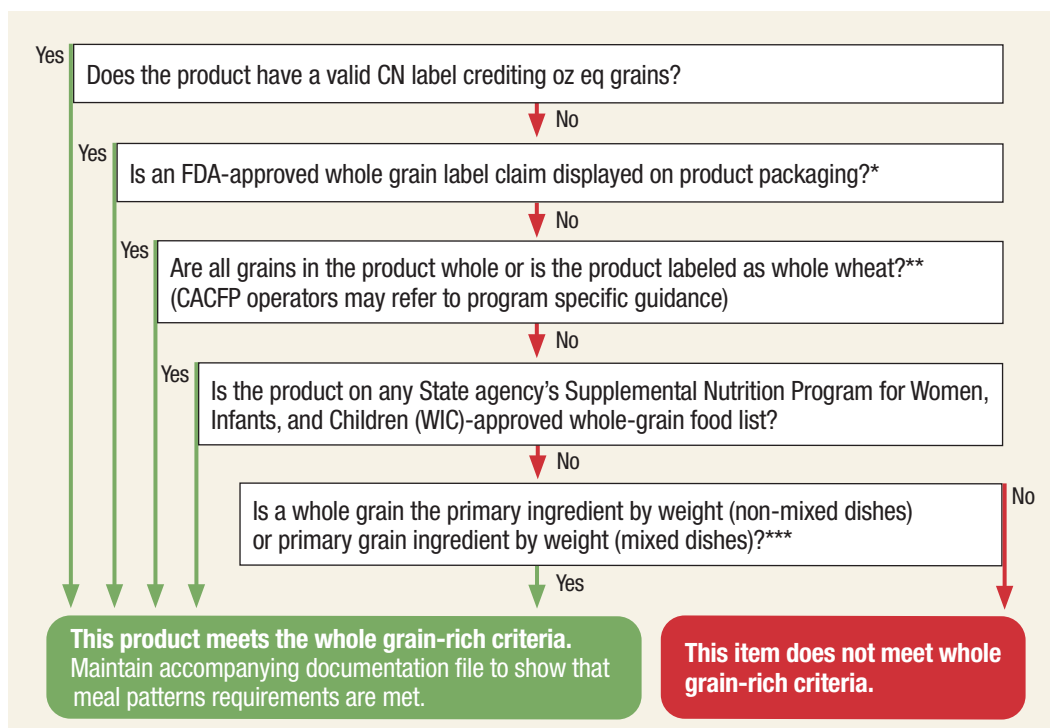
4 | Grains

Does My Product Meet the Whole Grain-Rich Criteria?

By using the following flow chart, you can evaluate a product to determine if it meets the whole grain-rich criteria.

Once you determine that a grain product is creditable, it is important to read through “Criteria for Determining Ounce Equivalents” (see pages 4-11 through 4-12). This section explains when to use Exhibit A (see pages 4-15 through 4-17), or calculate grams of creditable grains (see pages 4-13 through 4-14) to determine the grains contribution.

The following criteria are to be used as a basis for crediting items to meet the grains requirement in the Child Nutrition Programs. Please note, products must include at least 0.25 oz eq grains.



* For the NSLP and SBP, any refined grains included in the product must be enriched, in addition to having a FDA whole grain health claim. To demonstrate compliance with the whole grain-rich criteria in the CACFP, the FDA whole grain health claim is sufficient documentation.

** Nixtamalized corn, (i.e., corn treated with lime), such as hominy, corn masa, and masa harina, are considered whole grain when evaluating products for meal requirements. In School Meal Programs, non-creditable ingredients should be limited to no more than 0.24 oz eq (3.99 grams for Groups A-G or 6.99 grams for Groups H or I of the Exhibit A). All other refined grains must be enriched. The CACFP operators may refer to appropriate regulatory guidance for additional information.

*** At least half of the grains in the product must be whole grains, with any remaining grains being enriched. Nixtamalized corn, (i.e., corn treated with lime), such as hominy, corn masa, and masa harina, are considered whole grain when evaluating products for meal requirements. When determining this in grams, at least 8 grams per oz should be whole grain for items located in Groups A-G or at least 14 grams for items located in Groups H and I of Exhibit A.

Criteria for Determining Ounce Equivalents

All grain products served in the NSLP, SBP, CACFP and Preschool must be credited based on ounce equivalent (oz eq) standards. This applies to various products as follows:

- Baked goods (breads, biscuits, bagels, etc.): 16 grams of creditable grains provide 1.0 oz eq credit.
- Cereal grains (oatmeal, pasta, brown rice, etc.): 28 grams (approximately 1.0 ounce by weight) of dry product OR 1/2 cup cooked cereal, pasta, rice, etc. provides 1.0 oz eq credit.
- Ready-to-eat (RTE) breakfast cereal: 28 grams or 1.0 ounce of product provides 1.0 oz eq credit. Ounce equivalent volumes are 1 cup flakes or rounds, 1.25 cups puffed cereal, and 1/4 cup granola.

There are two different ways to determine the amount required to provide 1.0 oz eq grains: by using the weights listed in Exhibit A: Grain Requirement For Child Nutrition Programs or by calculating the grams of creditable grains.

A. Determining Contribution Based on Exhibit A

The weight needed to provide 1.0 oz eq grains for commonly available food products can be determined using Exhibit A (see pages 4-15 through 4-17). The wide variety of prepared grain products listed in Exhibit A are grouped based on their average grains content. Food types having similar concentrations of creditable grains are grouped together. Each group in Exhibit A provides the minimum weight required to supply 1.0 oz eq grains.

Exhibit A, Groups A-G

- For the types of food products listed in Groups A-G, 1.0 oz eq grains provide at least 16.0 grams of creditable grains. The weights given in Exhibit A, Groups A-G, may be used for grain products that are either commercially purchased or prepared on-site.
- Grain products listed in Groups A-G should provide the minimum of 16.0 grams of creditable grains for 1.0 oz eq. Obtain manufacturer's documentation if it is unclear that the item is creditable toward program requirements. Once documentation is obtained, calculate the serving size based on the grams of creditable grains as shown below in section B.
- Exhibit A, Groups A-G also provides the weight needed for 1/4, 1/2, and 3/4 of an oz eq in addition to the weight needed for 1.0 oz eq grains.

Exhibit A, Groups H & I

- When items in Groups H and I are served as cooked or cold breakfast cereals (such as cooked oatmeal, cooked millet, cooked rice or cold cereal) or cooked pasta, the weights OR volumes listed in Exhibit A, groups H or I must be used. For example, the serving size required for 1.0 oz eq of cooked oatmeal made from dry oats is 1/2 cup cooked or 28 grams dry oats.
- Some of the food products in Group H, such as dry oatmeal or cornmeal, may be used as a grain ingredient in a recipe as well as a cooked cereal. When the cereal grain items listed in Group H are used as an ingredient in a recipe such as oatmeal bread or in a cereal bar (in contrast to being used as a breakfast cereal) do not use the amounts listed in Group H. In this case, the grains contribution should be determined using the weights given in Groups A-G of Exhibit A corresponding to the appropriate food group, or calculated using the grams of creditable grains per portion (16 grams of the creditable

4 | Grains

grains provide 1.0 oz eq grains).

- For example, oatmeal bread may be credited in one of two ways: 1) using the finished serving weight in Group B of Exhibit A, or 2) using the grains contribution based on the standard 16 grams of creditable grains per oz eq.

B. Determining Serving Sizes Based on Creditable Grains Content

There are several situations where creditable grains would be used to calculate the serving size instead of using the serving weights given in Exhibit A. Some of these situations are: 1) a manufacturer's formula demonstrates that a product provides a higher amount of creditable grains than the standard grams per oz eq (>16.0g for items in Groups A-G or >28.0g for Groups H and I) of Exhibit A; or 2) you are using a recipe and you choose to calculate the serving size based on grams of creditable grains instead of using Exhibit A.

In these cases, the Child Nutrition Program operator will need to obtain or maintain documentation (such as documentation from manufacturer or recipe) showing the weight of creditable grain(s) per portion of the grain item. This will be easy for grain items prepared on-site, since the exact weight of the creditable grains can be documented using the recipe. For purchased products, the manufacturer will need to provide the required documentation showing the weight of creditable grain(s) per portion. Manufacturers may wish to provide this information using a Product Formulation Statement (PFS) to protect their proprietary information. Sample PFS templates are located on the CN Labeling website at <https://www.fns.usda.gov/cnlabeling/food-manufacturersindustry>. If you have a situation where documentation is required, but the manufacturer cannot supply the documentation, that product is not creditable toward the reimbursable meal.

When the exact or minimum amount of creditable grains can be documented, the grains contribution for items listed in Groups A-G of Exhibit A may be calculated using 16.0 grams of creditable grains as 1.0 oz eq or items listed in Groups H and I may be calculated using 28 grams of creditable grains as 1.0 oz eq.

There are three steps to determine how many oz eq grains a recipe yields when calculating based on the grams of creditable grains:

1. Divide the total grams of creditable grains in the recipe by the number of portions the recipe yields: (Note: 1 lb = 453.6 grams). One "portion" is the amount of the food product you plan to serve to each program participant to meet the daily and/or weekly grains requirements. One "portion" is not necessarily equivalent to 1.0 oz eq grains.

Total grams of creditable grains ÷ number of portions the recipe yields

This calculation gives you the total grams of creditable grains contained in one portion of your recipe.

2. Divide the total grams of creditable grains in one portion (the answer from the calculation in step 1) by 16.0 grams or 28.0 grams (note: 16.0 grams of creditable grains = one full oz eq for Groups A-G of Exhibit A and 28.0 grams of creditable grains = one full oz eq for Groups H and I of Exhibit A):

$$\begin{array}{r} \text{Total grams of creditable grains in ONE portion} \\ 16.0 \text{ grams or } 28.0 \text{ grams} \\ \hline = \text{the number of oz eq grains per portion} \end{array}$$

3. Round down to the nearest 0.25 oz eq. To count as one full oz eq, the product must contain no less than 16.0 grams for Groups A-G of Exhibit A or 28.0 grams for Groups H and I of Exhibit A of creditable grains.

Worksheet for Calculating Grains Contribution Using Grams of Creditable Grains

Instructions:

1. On the worksheet (see page 4-14), list each creditable grain ingredient in the recipe. Grain ingredients that are whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran or germ are creditable toward the grains requirements for Child Nutrition Programs.
2. Fill in the quantity (for example: cups, pounds, kilograms, ounces, grams, etc.) of each creditable ingredient in the recipe.
3. Convert the amount of each creditable grain ingredient in the recipe to grams. Use the chart below for commonly used conversions.

Conversions

Number of pounds of ingredient	x 453.6 grams
Number of ounces of ingredient	x 28.35 grams
Number of cups of enriched white flour	x 125 grams
Number of cups of regular rolled oats	x 81 grams
Number of cups of quick-cooking oats	x 81 grams
Number of cups of degermed, enriched cornmeal	x 138 grams
Number of cups of wheat bran	x 58 grams
Number of cups of wheat germ	x 115 grams
Number of cups of whole wheat flour	x 120 grams

4. Add the grams for each creditable grain ingredient to determine the total grams of creditable grains in the recipe.
5. Divide the total grams of creditable grains in the recipe by the number of portions in the recipe to determine the number of grams of creditable grains per portion of food product.
6. Divide the number of grams of creditable grains per portion by 16.0 grams (standard amount of enriched or whole-grain meal and/or flour, in 1.0 oz eq grains for Groups A-G of Exhibit A) or 28.0 grams (standard amount of grains, in 1.0 oz eq grains for Groups H and I of Exhibit A).
7. Round down to the nearest 0.25 oz eq grains.

4 | Grains

Worksheet

1. Creditable Grain Ingredient	2. Quantity (pounds, ounces, cups)	3. Convert to Grams (reference conversion chart)	Grams
		X	=
		X	=
		X	=
		X	=
4. Total Grams			=

5. Total grams divided by number of portions in recipe.

$$\frac{\text{Total grams creditable grains from Step 4}}{\text{Number of portions per recipe}} = \text{Number of grams creditable grains per portion}$$

6. Divide the number of grams per portion by 16.0 or 28.0

$$\frac{\text{Number of grams credible grains per portion from Step 5}}{16.0 \text{ or } 28.0} = \text{oz eq grains}$$

7. Round down to the nearest 0.25 oz eq grains.

$$\text{oz eq from Step 6} = \text{oz eq grains}$$

Exhibit A: Grain Requirements for Child Nutrition Programs

The following Chart titled “Exhibit A: Grain Requirements for Child Nutrition Programs” provides a general guideline for crediting prepared grain items. Once you have determined that a food product is creditable (see pages 4-4 through 4-7), find the Group on the chart containing the name of the food product. Read the minimum serving size required for that group on the right-hand side of the chart.

Exhibit A: Grain Requirements For Child Nutrition Programs^{1, 2}

Food Products per Group	Ounce Equivalent (oz eq)	Minimum Serving Size
Group A	Ounce Equivalent (oz eq) for Group A	Minimum Serving Size for Group A
Bread type coating	1 oz eq = 22 gm or 0.8 oz	1 serving = 20 gm or 0.7 oz
Bread sticks (hard)	3/4 oz eq = 17 gm or 0.6 oz	3/4 serving = 15 gm or 0.5 oz
Chow Mein noodles	1/2 oz eq = 11 gm or 0.4 oz	1/2 serving = 10 gm or 0.4 oz
Savory Crackers (saltines and snack crackers)	1/4 oz eq = 6 gm or 0.2 oz	1/4 serving = 5 gm or 0.2 oz
CROUTONS		
Pretzels (hard)		
Stuffing (dry) <i>Note: weights apply to bread in stuffing</i>		
Group B	Ounce Equivalent (oz eq) for Group B	Minimum Serving Size for Group B
Bagels	1 oz eq = 28 gm or 1.0 oz	1 serving = 25 gm or 0.9 oz
Batter type coating	3/4 oz eq = 21 gm or 0.75 oz	3/4 serving = 19 gm or 0.7 oz
Biscuits	1/2 oz eq = 14 gm or 0.5 oz	1/2 serving = 13 gm or 0.5 oz
Breads - all (for example sliced, French, Italian)	1/4 oz eq = 7 gm or 0.25	1/4 serving = 6 gm or 0.2 oz
Buns (hamburger and hot dog)		
Sweet Crackers ⁵ (graham crackers - all shapes, animal crackers)		
Egg roll skins		
English muffins		
Pita bread		
Pizza crust		
Pretzels (soft)		
Rolls		
Tortillas		
Tortilla chips		
Taco shells		

¹ In the NSLP and SBP (grades K-12), at least eighty percent of the weekly grains offered must meet the whole grain-rich criteria and the remaining grain items offered must be made from whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be an enriched product, such as enriched bread, or a fortified cereal. Please note: State agencies have the discretion to set stricter requirements than the minimum nutrition standards for school meals. For additional guidance, please contact your State agency. For all other Child Nutrition Programs, grains must be made from whole-grain flour, whole-grain meal, corn masa, masa harina, hominy, enriched flour, enriched meal, bran, germ, or be an enriched product, such as enriched bread, or a fortified cereal. Under the CACFP child and adult meal patterns, and in the NSLP/SBP preschool meals, at least one grains serving per day must meet whole grain-rich criteria.

² For the NSLP and SBP (grades K-12), grain quantities are determined using ounce equivalents (oz eq). All other Child Nutrition Programs determine grain quantities using grains/breads servings. Beginning Oct. 1, 2021, grain quantities in the CACFP and NSLP/SBP infant and preschool meals will be determined using oz eq. Some of the following grains may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.

⁵ Allowed in NSLP (up to 2.0 oz eq grain-based dessert per week in grades K-12) as specified in §210.10. May count toward the grains component in the SBP (grades K-12), CACFP, NSLP/SBP infant and preschool meals, and SFSP.

Chart continues on next page

4 | Grains

Food Products per Group	Ounce Equivalent (oz eq)	Minimum Serving Size
Group C	Ounce Equivalent (oz eq) for Group C	Minimum Serving Size for Group C
Cookies ³ (plain - includes vanilla wafers) Cornbread Corn muffins Croissants Pancakes Pie crust (dessert pies ³ , cobbler ³ , fruit turnovers ⁴ , and meats/meat alternate pies) Waffles	1 oz eq = 34 gm or 1.2 oz 3/4 oz eq = 26 gm or 0.9 oz 1/2 oz eq = 17 gm or 0.6 oz 1/4 oz eq = 9 gm or 0.3 oz	1 serving = 31 gm or 1.1 oz 3/4 serving = 23 gm or 0.8 oz 1/2 serving = 16 gm or 0.6 oz 1/4 serving = 8 gm or 0.3 oz
Group D	Ounce Equivalent (oz eq) for Group D	Minimum Serving Size for Group D
Doughnuts ⁴ (cake and yeast raised, unfrosted) Cereal bars, breakfast bars, granola bars ⁴ (plain) Muffins (all, except corn) Sweet roll ⁴ (unfrosted) Toaster pastry ⁴ (unfrosted)	1 oz eq = 55 gm or 2.0 oz 3/4 oz eq = 42 gm or 1.5 oz 1/2 oz eq = 28 gm or 1.0 oz 1/4 oz eq = 14 gm or 0.5 oz	1 serving = 50 gm or 1.8 oz 3/4 serving = 38 gm or 1.3 oz 1/2 serving = 25 gm or 0.9 oz 1/4 serving = 13 gm or 0.5 oz
Group E	Ounce Equivalent (oz eq) for Group E	Minimum Serving Size for Group E
Cereal bars, breakfast bars, granola bars ⁴ (with nuts, dried fruit, and/or chocolate pieces) Cookies ³ (with nuts, raisins, chocolate pieces and/or fruit purees) Doughnuts ⁴ (cake and yeast raised, frosted or glazed) French toast Sweet rolls ⁴ (frosted) Toaster pastry ⁴ (frosted)	1 oz eq = 69 gm or 2.4 oz 3/4 oz eq = 52 gm or 1.8 oz 1/2 oz eq = 35 gm or 1.2 oz 1/4 oz eq = 18 gm or 0.6 oz	1 serving = 63 gm or 2.2 oz 3/4 serving = 47 gm or 1.7 oz 1/2 serving = 31 gm or 1.1 oz 1/4 serving = 16 gm or 0.6 oz
Group F	Ounce Equivalent (oz eq) for Group F	Minimum Serving Size for Group F
Cake ³ (plain, unfrosted) Coffee cake ⁴	1 oz eq = 82 gm or 2.9 oz 3/4 oz eq = 62 gm or 2.2 oz 1/2 oz eq = 41 gm or 1.5 oz 1/4 oz eq = 21 gm or 0.7 oz	1 serving = 75 gm or 2.7 oz 3/4 serving = 56 gm or 2 oz 1/2 serving = 38 gm or 1.3 oz 1/4 serving = 19 gm or 0.7 oz

³ Allowed in NSLP (up to 2.0 oz eq grain-based dessert per week in grades K-12) as specified in §210.10 and at snack service in SFSP. Considered a grain-based dessert and cannot count toward the grains component in CACFP or NSLP/SBP infant and preschool meals as specified in §§226.20(a)(4) and 210.10.

⁴ Allowable in NSLP (up to 2.0 oz eq grain-based dessert per week for grades K-12) as specified in §210.10. May count toward the grains component in SBP (grades K-12) and at snack and breakfast meals in SFSP. Considered a grain-based dessert and cannot count toward the grains component in the CACFP and NSLP/SBP infant and preschool meals as specified in §§226.20(a)(4) and 210.10.

Chart continues on next page

Food Products per Group	Ounce Equivalent (oz eq)	Minimum Serving Size
Group G	Ounce Equivalent (oz eq) for Group G	Minimum Serving Size for Group G
Brownies ³ (plain) Cake ³ (all varieties, frosted)	1 oz eq = 125 gm or 4.4 oz 3/4 oz eq = 94 gm or 3.3 oz 1/2 oz eq = 63 gm or 2.2 oz 1/4 oz eq = 32 gm or 1.1 oz	1 serving = 115 gm or 4 oz 3/4 serving = 86 gm or 3 oz 1/2 serving = 58 gm or 2 oz 1/4 serving = 29 gm or 1 oz
Group H	Ounce Equivalent (oz eq) for Group H	Minimum Serving Size for Group H
Cereal Grains (barley, quinoa, etc.) Breakfast cereals (cooked) ^{6,7} Bulgur or cracked wheat Macaroni (all shapes) Noodles (all varieties) Pasta (all shapes) Ravioli (noodle only) Rice	1 oz eq = 1/2 cup cooked or 1 ounce (28 gm) dry	1 serving = 1/2 cup cooked or 25 gm dry
Group I	Ounce Equivalent (oz eq) for Group I	Minimum Serving Size for Group I
Ready to eat breakfast cereal (cold, dry) ^{6,7}	1 oz eq = 1 cup or 1 ounce for flakes and rounds 1 oz eq = 1.25 cups or 1 ounce for puffed cereal 1 oz eq = 1/4 cup or 1 ounce for granola	1 serving = 3/4 cup or 1 oz, whichever is less

³ Allowed in NSLP (up to 2.0 oz eq grain-based dessert per week in grades K-12) as specified in §210.10 and at snack service in SFSP.

Considered a grain-based dessert and cannot count toward the grain component in CACFP or NSLP/SBP infant and preschool meals as specified in §§226.20(a)(4) and 210.10.

⁶ Refer to program regulations for the appropriate serving size for supplements served to children aged 1 through 5 in the NSLP; breakfast served in the SBP, and meals served to children ages 1 through 5 and adult participants in the CACFP. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

⁷ In the NSLP and SBP, cereals that list a whole grain as the first ingredient must be fortified, or if the cereal is 100 percent whole grain, fortification is not required. For all Child Nutrition Programs, cereals must be whole-grain, enriched, or fortified; cereals served in CACFP and NSLP/SBP infant and preschool meals must contain no more than 6 grams of sugar per dry ounce.

4 | Grains

Instructions for Using Yield Data

The data for grains in the yield table includes yield information on common types and customary portion sizes of products that you can buy on the market. All grains served must meet program requirements.

Explanation of Columns

The approximate weight of an oz eq of grains is given in the table.

Column 1: Food as Purchased, AP

In general, foods are arranged in alphabetical order. The Group number is listed for each product. For additional information on these groups, see Exhibit A (pages 4-15 through 4-17).

Column 2: Purchase Unit

The purchase unit for grain items is generally by the pound or, for cold dry cereals, a package. You can use data for one purchase unit to determine how much of the item you need for the number of people you serve.

Column 3: Servings per Purchase Unit, EP

This column shows the number of oz eq obtained from each purchase unit. Numbers in this column are often rounded down in order to help ensure enough food for the number of servings.

Column 4: Serving Size per Meal Contribution

The size of an oz eq is expressed in weight and/or volume.

Column 5: Purchase Units for 100 Servings

This column shows the number of purchase units needed for 100 servings. Numbers in this column are generally rounded up in order to help ensure enough food for the number of servings.

Column 6: Additional Yield Information

This column gives other information to help you calculate the amount of food you need to prepare meals. For example, the number of cups you will get from one pound of food as purchased is shown for many grain items.

Yield Data Table for Grains

