

Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program

This guidance applies to the meal patterns for grades K-12 in the U.S. Department of Agriculture’s (USDA) National School Lunch Program (NSLP), School Breakfast Program (SBP), and Seamless Summer Option (SSO) of the NSLP, which follows the NSLP and SBP meal patterns. For additional guidance on the NSLP and SBP meal patterns and crediting requirements for the grains component, refer to the Connecticut State Department of Education’s (CSDE) [Menu Planning Guide for School Meals for Grades K-12](#) and visit the CSDE’s [Meal Patterns for Grades K-12 in School Nutrition Programs](#) and [Crediting Foods in School Nutrition Programs](#) webpages. **Note:** The grains/breads component of the Afterschool Snack Program (ASP) meal pattern for grades K-12 requires different quantities. Refer to the CSDE’s resource, [Servings for Grains/Breads in the Afterschool Snack Program Meal Pattern for Grades K-12](#).



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Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP

Overview of Ounce Equivalents (Oz Eq) Chart

The U.S. Department of Agriculture's (USDA) *Exhibit A: Grain Requirements for Child Nutrition Programs*, summarizes the required quantities for nine groups (A-I) of grain foods. These quantities are not the same for all Child Nutrition Programs because the meal patterns are different. The chart in this document lists the Exhibit A oz eq that apply to creditable grain foods in the meal patterns for grades K-12.

Groups A-G include baked goods such as crackers, breads, rolls, taco shells, muffins, waffles, pancakes, and grain-based desserts, e.g., cookies, cake, granola bars, and pastries. Group H includes cereal grains like pasta, cooked breakfast cereals, and other cereal grains, e.g., amaranth, barley, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat. Group I includes ready-to eat (RTE) cold breakfast cereals.

The amount of a creditable grain food that provides 1 oz eq varies because different types of foods contain different amounts of creditable grains. For example, to credit as 1 oz eq of the grains component, a roll (group B) must weigh 28 grams or 1 ounce and a blueberry muffin (group D) must weigh 55 grams or 2 ounces. The minimum amount that credits toward the grains component is $\frac{1}{4}$ oz eq.

Creditable Grain Foods

To credit as the grains component, commercial grain products and foods made from scratch must be made with creditable grains. Creditable grains include whole grains, enriched grains, bran (such as oat bran, wheat bran, corn bran, rice bran, and rye bran), and germ (such as wheat germ). Bran and germ credit the same as enriched grains.

- Creditable foods include commercial grain products and foods made from scratch that are whole-grain rich (WGR) or enriched. For guidance on the grain crediting requirements and how to identify WGR and enriched grains, refer to the Connecticut State Department of Education's (CSDE) resources, *Crediting Whole Grains in the National School Lunch Program and School Breakfast Program* and *Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program*,
- Creditable cooked and ready-to-eat (RTE) breakfast cereals include WGR, enriched, and fortified cereals. For additional guidance, refer to the CSDE's *Crediting Breakfast Cereals for Grades K-12 in the National School Lunch Program and School Breakfast Program*.

Additional resources on the grains component of the NSLP and SBP meal patterns for grades K-12, visit the “[Grains Component for Grades K-12](#)” section of the CSDE's [Crediting Foods in School Nutrition Programs](#) webpage.

Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP

Whole Grain-rich (WGR) Requirement

Effective July 1, 2022, at least 80 percent of the weekly grains offered at lunch and breakfast must be WGR. Grains that are not WGR must be enriched and cannot exceed 20 percent of the offered grains. WGR foods include 100 percent whole grains and foods that contain a blend of whole (at least 50 percent) and enriched grains. For guidance on identifying WGR foods, refer to the CSDE's guide, [Meeting the Whole Grain-rich Requirement for the National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12](#).

Limit for Noncreditable Grains

To credit in school meals, all commercial grain products (including WGR foods and enriched grains) must comply with the limit for noncreditable grains. Noncreditable grains cannot exceed 3.99 grams per portion for groups A-G or 6.99 grams per portion for group H. For guidance on meeting the limit for noncreditable grains, refer to the CSDE's resources, [Meeting the Whole Grain-rich Requirement for the National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12](#) and [Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program](#).

Grain-based Desserts

Grain-based desserts are in groups B-G and are indicated in blue or red. Only certain grain-based desserts are allowed at breakfast and lunch.

- **Breakfast and lunch:** Grain-based desserts in blue (footnote 1) are allowed at lunch and breakfast. Examples include sweet crackers (e.g., animal crackers and graham crackers), coffee cakes, cinnamon rolls, doughnuts, cereal bars, granola bars, breakfast bars, sweet rolls, pastries, toaster pastries, and fruit turnovers.
- **Lunch only:** Grain-based desserts in red (footnote 2) are allowed only at lunch. Examples include cookies, cakes, cupcakes, plain brownies, and piecrusts in sweet pies (e.g., apple, coconut, blueberry, and pecan).

The lunch meal pattern requires a weekly limit of no more than 2 oz eq, including all WGR and enriched grain-based desserts. For example, the lunch menu may include a 2-oz eq grain-based dessert once per week or a 1-oz eq grain-based dessert twice per week. **Note:** School food authorities (SFAs) cannot offer graham crackers (or any other grain-based desserts) as the grains component of daily alternate lunch choices because this exceeds the 2 oz eq weekly limit.

The breakfast meal pattern does not require a weekly limit for grain-based desserts but restricts the types that are allowed. The CSDE recommends limiting grain-based desserts at breakfast. Menus that frequently include grain-based desserts might not meet the weekly dietary specifications for calories, saturated fat, and sodium. For additional guidance, refer to the CSDE's [Crediting Grain-based Desserts for Grades K-12 in the School Nutrition Programs](#).

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Using the Grain Oz Eq Chart

The oz eq chart in this document (refer to pages 4-5) indicates the required weight (groups A-E) or volume (groups H and I) for each group of grain products to credit as 1 oz eq of the grains component in the NSLP and SBP meal patterns for grades K-12. It also indicates the required quantities for $\frac{3}{4}$ oz eq, $\frac{1}{2}$ oz eq, and $\frac{1}{4}$ oz eq (the minimum creditable amount).

SFAs must know the grain item's serving weight (groups A-G) or volume (groups H and I) to use this chart. Oz eq are calculated by dividing the *grain item's serving weight/volume* by the *required weight/volume for 1 oz eq* of the applicable grain group.

- The serving weight/volume for commercial products is listed on the Nutrition Facts label or product formulation statement (PFS).
- The serving weight/volume for foods made from scratch is determined from the SFA's standardized recipe. If the standardized recipe does not provide this information, SFAs must either determine the average serving weight/volume by weighing or measuring several portions (refer to the CSDE's *Yield Study Data Form for Child Nutrition Programs*) or use the creditable grains method for determining oz eq (refer to the CSDE's resource, *Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*).

The steps for using the oz eq chart are indicated in the CSDE's resource, *How to Use the Grain Ounce Equivalents Chart for the National School Lunch Program and School Breakfast Program*. Training is available in module 13 of the CSDE's training program, *What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12*. For detailed guidance on both methods for determining the oz eq of commercial grain products and standardized recipes, refer to the CSDE's resource, *Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program*.

When a PFS is required

The oz eq chart can only be used for creditable grain foods. A manufacturer's PFS is required when a commercial product's ingredients statement and packaging do not provide sufficient information to determine if it meets the crediting criteria. For guidance on when a PFS is required and what it must include, refer to the CSDE's resources, *When Commercial Grain Products Require a Product Formulation Statement to Credit in the School Nutrition Programs* and *Using Product Formulation Statements in the School Nutrition Programs*.

Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program

Grain Oz Eq Chart

This chart reflects the required quantities for nine groups (A-I) of grain foods in the USDA’s *Exhibit A: Grain Requirements for Child Nutrition Programs*. Grain-based desserts in groups B-G are indicated in blue or red. Grain-based desserts in **blue** (footnote 1) are allowed at lunch and breakfast. Grain-based desserts in **red** (footnote 2) are allowed only at lunch and cannot exceed 2 oz eq per week.

Group A		Group B		Group C	
Foods	Oz eq	Foods	Oz eq	Foods	Oz eq
Bread-type coating	1 oz eq = 22 grams	Bagels	1 oz eq = 28 grams	Cookies, plain, including	1 oz eq = 34 grams
Breadsticks, hard	or 0.8 ounce	Batter-type coating	or 1 ounce	vanilla wafers ²	or 1.2 ounces
Chow Mein noodles	¾ oz eq = 17 grams	Biscuits	¾ oz eq = 21 grams	Cornbread	¾ oz eq = 26 grams
Crackers, savory, e.g., saltines and snack crackers	or 0.6 ounce	Breads, e.g., white, wheat, whole wheat, French, Italian	or 0.75 ounce	Corn muffins	or 0.9 ounce
Croutons	½ oz eq = 11 grams	Buns, hamburger and hot dog	½ oz eq = 14 grams	Croissants	½ oz eq = 17 grams
Pretzels, hard	or 0.4 ounce	Crackers, sweet, e.g., graham	or 0.5 ounce	Pancakes	or 0.6 ounce
Stuffing, dry (weights apply to bread in stuffing)	¼ oz eq = 6 grams or 0.2 ounce	crackers and animal crackers,	¼ oz eq = 7 grams	Piecrust (dessert pies ²,	¼ oz eq = 9 grams
		all shapes ¹	or 0.25 ounce	cobblers ²,	or 0.3 ounce
		Egg roll skins		fruit turnovers ¹,	
		English muffins		and meat or meat alternate pies)	
		Pita bread		Waffles	
		Pizza crust			
		Pretzels, soft			
		Rolls			
		Taco shells			
		Tortilla chips			
		Tortillas			

¹ Allowed at lunch in the NSLP and breakfast in the SBP. The weekly total of all grain-based desserts at lunch cannot exceed 2 oz eq.

² Allowed only at lunch in the NSLP. The weekly total of all grain-based desserts at lunch cannot exceed 2 oz eq.

Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP

Group D		Group E		Group F	
Foods	Oz eq	Foods	Oz eq	Foods	Oz eq
Cereal bars, breakfast bars, granola bars, plain ¹	1 oz eq = 55 grams or 2 ounces	Cereal bars, breakfast bars, granola bars, with nuts, dried fruit, and/or chocolate pieces ¹	1 oz eq = 69 grams or 2.4 ounces	Cake, plain, unfrosted ²	1 oz eq = 82 grams or 2.9 ounce
Doughnuts, cake and yeast raised, unfrosted ¹	³ / ₄ oz eq = 42 grams or 1.5 ounces	Cookies, with fillings or coverings, nuts, raisins, chocolate pieces, and/or fruit purees ²	³ / ₄ oz eq = 52 grams or 1.8 ounces	Coffee cake ¹	³ / ₄ oz eq = 62 grams or 2.2 ounce
Muffins, all except corn	¹ / ₂ oz eq = 28 grams or 1.0 ounce	Doughnuts, cake and yeast raised, frosted or glazed ¹	¹ / ₂ oz eq = 35 grams or 1.2 ounces		¹ / ₂ oz eq = 41 grams or 1.5 ounce
Sweet rolls, unfrosted ¹	¹ / ₄ oz eq = 14 grams or 0.5 ounce	French toast	¹ / ₄ oz eq = 18 grams or 0.6 ounce		¹ / ₄ oz eq = 21 grams or 0.7 ounce
Toaster pastries, unfrosted ¹		Sweet rolls, frosted ¹			
		Toaster pastries, frosted ¹			

Group G		Group H		Group I	
Foods	Oz eq	Foods	Oz eq	Foods	Oz eq
Brownies, plain ²	1 oz eq = 125 grams or 4.4 ounces	Barley	Macaroni, all shapes	Ready-to-eat (RTE) breakfast cereals (cold dry) ³	1 oz eq = 1 cup or 1 ounce for flakes and rounds
Cake, all varieties, frosted ²	³ / ₄ oz eq = 94 grams or 3.3 ounces	Breakfast cereals, cooked ³	Noodles, all varieties		1 ¹ / ₄ cups or 1 ounce for puffed cereal
	¹ / ₂ oz eq = 63 grams or 2.2 ounces	Bulgur or cracked wheat	Pasta, all shapes		¹ / ₄ cup or 1 ounce for granola
	¹ / ₄ oz eq = 32 grams or 1.1 ounces	Cereal grains, e.g., amaranth, buckwheat, cornmeal, corn grits, farina, kasha, millet, oats, quinoa, wheat berries, and rolled wheat	Ravioli, noodle only		¹ / ₂ oz eq = ¹ / ₂ cup or ¹ / ₂ ounce for flakes and rounds
			Rice, brown or enriched white		³ / ₄ cup or ¹ / ₂ ounce for puffed cereal
					¹ / ₈ cup or ¹ / ₂ ounce for granola

¹ Allowed at lunch in the NSLP and breakfast in the SBP. The weekly total of all grain-based desserts at lunch cannot exceed 2 oz eq.

² Allowed only at lunch in the NSLP. The weekly total of all grain-based desserts at lunch cannot exceed 2 oz eq.

³ RTE breakfast cereals must be WGR, enriched, or fortified. For more information, refer to the CSDE's resource, [Crediting Breakfast Cereals for Grades K-12 in the National School Lunch Program and School Breakfast Program](#).

Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program

Resources

Calculating the Weekly Percentage of Whole Grain-rich Menu Items in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Calculate_WGR_Percentage_SNP.pdf

Calculation Methods for Grain Ounce Equivalents for Grades K-12 in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Grain_Calculation_SNP_grades_K-12.pdf

Crediting Breakfast Cereals for Grades K-12 in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Cereals_SNP_preschool.pdf

Crediting Enriched Grains in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Enriched_Grains_SNP.pdf

Crediting Grain-based Desserts for Grades K-12 in the School Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Grain_Based_Desserts_grades_K-12_SNP.pdf

Crediting Whole Grains in the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Credit_Whole_Grains_SNP.pdf

Exhibit A: Grain Requirements for Child Nutrition Programs (USDA):

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

Exhibit A Grains Tool to the Rescue (USDA Webinar):

<https://www.fns.usda.gov/tn/exhibit-grains-tool-rescue>

Food Buying Guide Exhibit A Grains Tool (USDA):

<https://www.fns.usda.gov/tn/food-buying-guide-interactive-web-based-tool>

Food Buying Guide Section 4: Overview of Crediting Requirements for the Grains Component (USDA):

https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/USDA_FBG_Section4_Grains.pdf

Food Buying Guide Section 4: Yield Table for Grains (USDA):

https://foodbuyingguide.fns.usda.gov/files/Reports/USDA_FBG_Section4_GrainsYieldTable.pdf

Grains Component for Grades K-12 (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Crediting-Foods-in-School-Nutrition-Programs/Documents#Grains>

Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP

How to Maximize the Exhibit A Grains Tool (USDA Webinar):

<https://www.fns.usda.gov/tn/how-maximize-exhibit-grains-tool>

How to Use the Grain Ounce Equivalents Chart for the National School Lunch Program and School Breakfast Program (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/How_to_Use_Ounce_Equivalents_Chart.pdf

Meeting the Whole Grain-rich Requirement for the NSLP and SBP Meal Patterns for Grades K-12 (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/WGR_Requirement_SNP_grades_K-12.pdf

Menu Planning Guide for School Meals for Grades K-12 (CSDE):

<https://portal.ct.gov/SDE/Nutrition/Menu-Planning-Guide-for-School-Meals>

Product Formulation Statement for Documenting Grains in Child Nutrition Programs (USDA):

https://www.fns.usda.gov/sites/default/files/resource-files/PFS_Grains_Oz_Eq_Fillable_508.pdf

Product Formulation Statement for Documenting Grains in Child Nutrition Programs – Completed Sample (USDA):

https://www.fns.usda.gov/sites/default/files/resource-files/PFS_Example_Grains_Oz_Eq.pdf

Tips for Evaluating a Manufacturer’s Product Formulation Statement (USDA):

<https://fns-prod.azureedge.us/sites/default/files/resource-files/manufacturerPFStipsheet.pdf>

USDA Memo SP 05-2022: Meal Requirements Under the National School Lunch Program and School Breakfast Program: Questions and Answers for Program Operators Updated to Support the Transitional Standards for Milk, Whole Grains, and Sodium Effective July 1, 2022:

<https://www.fns.usda.gov/cn/sp052022-questions-answers-program-operators>

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:

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Memos/OM2019/SP34_CACFP15_SFSP15-2019s.pdf

Using Product Formulation Statements in the School Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Product_Formulation_Statements.pdf

What’s in a Meal Module 6: Meal Pattern Documentation (CSDE’s Training Program,

What’s in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP

What's in a Meal Module 11: Grains Component (CSDE's Training Program,

What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

What's in a Meal Module 12: Whole Grain-rich Requirement (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

What's in a Meal Module 13: Grains Ounce Equivalents (CSDE's Training Program, What's in a Meal: National School Lunch Program and School Breakfast Program Meal Patterns for Grades K-12):

<https://portal.ct.gov/SDE/Nutrition/Meal-Pattern-Training-Materials>

Whole Grain Resource for the National School Lunch and Breakfast Programs (USDA):

<https://www.fns.usda.gov/tn/whole-grain-resource-national-school-lunch-and-breakfast-programs>

When Commercial Grain Products Require a Product Formulation Statement to Credit in the School Nutrition Programs (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/When_Commercial_Grain_Products_Require_PFS_SNP.pdf.

Worksheet to Calculate the Weekly Percentage of Whole Grain-rich Menu Items in School Lunch and Breakfast Menus for Grades K-12 (CSDE):

https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Worksheet_Calculate_WGR_Percentage_SNP_grades_K-12.xlsx

Grain Ounce Equivalents for Grades K-12 in the NSLP and SBP



For more information, visit the “[Grains Component for Grades K-12](#)” section of the CSDE’s [Crediting Foods in School Nutrition Programs](#) webpage or contact the [school nutrition programs staff](#) at the Connecticut State Department of Education, Bureau of Child Nutrition Programs, 450 Columbus Boulevard, Suite 504, Hartford, CT 06103-1841.

This document is available at https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/Grain_Oz_Eq_SNP_grades_K-12.pdf.

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Washington, D.C. 20250-9410; or
2. fax: (833) 256-1665 or (202) 690-7442; or
3. email: program.intake@usda.gov

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