

Grains – Finding All the Answers



Linda Stull
School Nutrition Programs
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GRAINS



Grain Requirements for the NSLP and SBP: USDA Memo SP 30-2012

- Addresses the new implementation of “ounce equivalencies” (oz eq) in the school meal programs and defines “whole grain-rich” (WGR)
- Quantities of grains are based on ounce equivalencies in a manner that is consistent with the DGAs and MyPlate food guidance system
- Beginning **July 1, 2013**, all grains must be credited using “oz eq” method



Ounce Equivalencies




Calculating Ounce Equivalencies

- Can credit ounce equivalencies based on:
 - 1) ounce weights listed in SP 30-2012 & updated Exhibit A
 - 2) grams of creditable grain in each product portion
 - Documented by standardized recipe
 - Product formulation statement signed by manufacturer




Exhibit A: School Lunch and Breakfast

Whole Grain-Rich Ounce Equivalency (Oz Eq) Requirements for School Meal Programs^{1,2}

GROUP A	OZ EQ FOR GROUP A
<ul style="list-style-type: none"> • Bread type coating • Bread sticks (bread) • Chow mein noodles • Savory crackers (saltines and snack crackers) • Croissants • Pretzels (hard) • Stuffing (dry) <i>Note: Weights apply to bread in stuffing.</i> 	1 oz eq = 25 g or 0.8 oz 3/4 oz eq = 17 g or 0.6 oz 1/2 oz eq = 11 g or 0.4 oz 1/4 oz eq = 6 g or 0.2 oz
GROUP B	OZ EQ FOR GROUP B
<ul style="list-style-type: none"> • Bagels • Batter type coating • Biscuits • Breads (sliced whole wheat, French, Italian) • Buns (hamburger and hot dog) • Sweet crackers* (graham crackers - all shapes, animal crackers) • Egg roll skins • English muffins • Pita bread (whole wheat or whole grain rich) • Pizza crust • Pretzels (soft) • Puffs (whole wheat or whole grain rich) • Tortillas (whole wheat or whole corn) • Tortilla chips (whole wheat or whole corn) • Taco shells (whole wheat or whole corn) 	1 oz eq = 26 g or 1.0 oz 3/4 oz eq = 21 g or 0.75 oz 1/2 oz eq = 14 g or 0.5 oz 1/4 oz eq = 7 g or 0.25 oz
GROUP C	OZ EQ FOR GROUP C
<ul style="list-style-type: none"> • Cookie* (plain - includes vanilla wafers) • Cornbread • Corn muffins • Croissants • Pancakes • Pie crust (dessert pies,* cobblers,* fruit turnovers,* and meat/ meat alternate pies) • Waffles 	1 oz eq = 34 g or 1.2 oz 3/4 oz eq = 26 g or 0.9 oz 1/2 oz eq = 17 g or 0.6 oz 1/4 oz eq = 9 g or 0.3 oz

¹ The following food quantities from Groups A-C, must contain at least 16 grams of whole grain or can be made with 8 grams of whole grain and 8 grams of enriched flour and/or enriched flour to be considered whole grain rich.
² Some of the following grains may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding their class in some items.
³ Allowed only as dessert at lunch as specified in §210.16.
⁴ Allowed for dessert at lunch as specified in §210.16 and for beverages served under the SFP.




Calculating Ounce Equivalencies

Program operators have the ability to credit ounce equivalencies for grain products based on the ounce weights listed in FNS Policy Memo SP 30-2012 and updated Exhibit A, or by the grams of creditable grain in each product portion (documented by standardized recipe or product formulation statement signed by a manufacturer). The following examples demonstrate how each method may be used to determine how qualifying products meet ounce equivalency requirements for grains in the National School Lunch and Breakfast programs.



Sample Product 1:

Whole-Grain Bread

- One slice weighs 0.9 oz
- Ingredient statement lists whole-wheat flour first. All other grains are enriched.
- Manufacturer documentation states that each slice contains 17 grams of creditable grain and no noncreditable grains



1. Calculating based on total weight of creditable product:

Because this product contains the required 16 grams of creditable grain per ounce equivalent for Groups A-C of the revised Exhibit A, we may credit it using the Exhibit A weight. The weight of the bread slice is divided by the standard weight listed for Group B products (see page 23).

$$\text{Calculation: } 0.9 \text{ oz} \div 1.0 \text{ oz} = 0.9 \text{ oz}$$

0.9 oz rounds down to **0.75 oz eq grains** per slice.

2. Calculating based on grams of creditable grain

Ingredient:
The same slice of bread may be credited using the amount of creditable grain. Manufacturers must provide documentation on company letterhead (or schools may retain a copy of their standardized recipe). Sample product formulation statements are provided starting on page 25.

For this calculation, divide the grams of creditable grain by the standard of 16 grams per oz equivalent.

$$\text{Calculation: } 17 \text{ g} \div 16 \text{ g} = 1.06$$

1.06 rounds down to **1.0 oz eq grains** per slice.



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Sample Product 2:

Whole-Grain Pasta

- One portion of dry pasta weighs 32 grams (including creditable grains and other ingredients).
- Ingredient statement lists whole-wheat flour first. All other grains are enriched.
- Manufacturer documentation states that each 1/2 cup (cooked) contains 29 grams of creditable grain.



1. Calculating based on Exhibit A volume:

Group H of Exhibit A states that 1/2 cup of cooked pasta made from creditable ingredients provides 1.0 ounce equivalent grams. Product label and manufacturer documentation should be maintained on file.

$$\text{Calculation: } 1/2 \text{ cup served} \div 1/2 \text{ cup per oz eq} = 1.0 \text{ oz eq grains}$$

2. Calculating based on dry weight:

For this calculation, the weight of the dry portion of pasta is divided by the weight listed for that product in the appropriate group of the revised Exhibit A.

$$\text{Calculation: } 32 \text{ g} \div 28 \text{ g} = 1.14$$

1.14 rounds down to **1.0 oz eq grains** per portion of dry pasta.

3. Calculating based on grams of creditable grain

Ingredient per portion:
The same pasta may be credited using the percent of creditable grain. Manufacturers must provide documentation on company letterhead.

For this calculation, divide the grams of creditable grain by the standard of 28 grams per oz equivalent for Group H of Exhibit A.

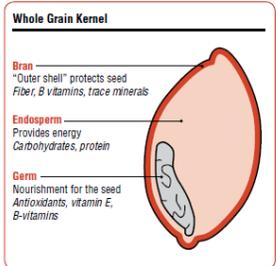
$$\text{Calculation: } 29 \text{ g} \div 28 \text{ g} = 1.03$$

1.03 rounds down to **1.0 oz eq grains** per 1/2 cup cooked pasta.



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What is a Whole Grain?



Whole Grain Kernel

- Bran** — "Outer shell" protects seed
Fiber, B vitamins, trace minerals
- Endosperm** — Provides energy
Carbohydrates, protein
- Germ** — Nourishment for the seed
Antioxidants, vitamin E, B-vitamins

MICHIGAN Education 

Whole Grain-Rich vs Whole Grain

- SY 2014-2015: All grains must be whole grain-rich (not 100% whole grain)
 - Whole grain-rich = At least 50% whole grain and rest of product/blend must be enriched refined flour

MICHIGAN Education 

What Foods Meet Whole Grain-Rich Criteria?

- Contain **100% whole grain**
OR
- Contain a blend of **whole-grain meal and/or flour** and **enriched meal and/or flour** of which at least 50% is whole grain.
 - Remaining 50% or less of grains must be enriched

MICHIGAN Education 

Considered Whole Grains

- Cracked wheat
- Crushed wheat
- Whole-wheat flour
- Graham flour
- Entire-wheat flour
- Bromated whole-wheat flour
- Whole durum wheat flour
- Quinoa
- Millet
- Amaranth
- The word *whole* listed before a grain - e.g. *whole* wheat
- *Berries* & *groats* are used to designate whole grains – e.g. wheat *berries* or oat *groats*
- Rolled oats & oatmeal (includes old-fashioned, quick cooking, instant)
- Brown rice, brown rice flour, wild rice
- Triticale, teff
- Sorghum
- Buckwheat




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NOT Whole Grains

Grain ingredients that should not be considered whole grains (please contact your State agency to determine if a questionable grain ingredient is creditable):

flour	phosphated flour	hominy grits
white flour	self-rising flour	hominy
wheat flour	self-rising wheat flour	farina
all-purpose flour	enriched self-rising flour	semolina
unbleached flour	bread flour	degerminated corn meal
bromated flour	cake flour	enriched rice
enriched bromated flour	durum flour	rice flour
enriched flour	corn grits	couscous
instantized flour		




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NOT Whole Grains

- Pot, Scotch or pearl (pearled) barley
- “Stone ground” – describes a process
 - Ok if “whole” in combination with “Stone ground” is in ingredient statement




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Noncreditable Grains

There are some grain ingredients such as oat fiber, corn fiber, bran, germ, modified food starch, corn starch, and wheat starch (including potato, legume, and other vegetable flours) that do not contribute toward meal pattern components. If purchased grain products include these ingredients they must be present at a level of less than 2 percent of the product formula (or less than 0.25 oz eq) for the product to be creditable at lunch or breakfast beginning SY 2013-2014.




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Whole Grain-Rich Product Checklist

- **Meets Element 1 criteria:** The food item must meet the oz eq requirements as defined in Exhibit A
- **AND**
- **Meets one of Element 2 criteria:**
 1. Whole grains per serving must be ≥ 8 grams for Groups A-G
 2. Contains FDA health claim:
"Diets rich in whole grain foods and other plant foods and low in total fat, sat fat, and cholesterol reduce the risk of heart disease and some cancers."
 3. Whole grain is first ingredient in the product listing




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Determining if Products Meet Whole Grain-Rich Requirements

- Ingredient declaration from a product carton that shows a whole grain as the primary ingredient by weight.
- Copy of a food label showing amount of whole grain in grams for NSLP/SBP serving size.
- Copy of food label displaying one of the FDA whole-grain health claims.
- Recipe that includes the ingredients & ingredient amounts by weight & volume.
- Customized product formulation statement on mfg letterhead.
- USDA Foods Fact Sheet (applicable for foods indicated as meeting the whole grain-rich criteria. Fact sheets must be accompanied by acceptable mfg documentation if it is not clear the item meets whole grain-rich criteria)




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Fortification of Cereals

- A ready-to-eat breakfast cereal must be fortified to meet program requirements
 - 100% whole grain cereals do not need to be fortified
 - Check cereal products for an ingredient statement on the side or back of the box
 - Sample ingredient list:
 - Whole grain wheat, sugar, psyllium seed husk, oat fiber, contains 2% or less of salt, baking soda, caramel color, annatto color, BHT for freshness. Vitamins and Minerals: Vitamin C (sodium ascorbate, ascorbic acid), niacinamide, vitamin B6 (pyridoxine hydrochloride)...etc....



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Which of the Following Products are Whole Grain-Rich?



White Whole-Wheat Breadsticks

Nutrition Facts

Amount Per Serving		Calories from Fat 10	
Calories 130		% Daily Value*	
Total Fat	1.5g		2%
Saturated Fat	0g		0%
Trans Fat	0g		0%
Cholesterol	0mg		0%
Sodium	250mg		12%
Total Carbohydrate	24g		8%
Dietary Fiber	3g		12%
Sugars	4g		
Protein 5g			
Vitamin A	0%	Vitamin C	0%
Calcium	0%	Iron	0%
Asih	0%	Folate	0%
Niacin	12%	Thiamin	4%
Thiamin	12%		

*Percent Daily Values are based on a diet of other people's secrets.
 †Percent Daily Values are based on a diet of other people's secrets.
 ‡Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	500k	1,000k
Total Fat	Less Than	8g	8g
Saturated Fat	Less Than	0g	0g
Cholesterol	Less Than	0mg	0mg
Sodium	Less Than	250mg	500mg
Total Carbohydrate	Less Than	24g	24g
Dietary Fiber	More Than	3g	3g

Calories per gram:
 Fat 9 Total Carbohydrate 4 Protein 4



Ingredients for U.S. Market:
 Whole unenriched flour, water, enriched unbleached wheat flour (enriched flour, malted barley flour, niacin, iron, ferrous sulfate, thiamine mononitrate, enzymes, riboflavin, folic acid), yeast, sugar, wheat gluten. Contains less than 2% of the following: soybean oil, salt, yeast flour, honey, sodium monogluconate, diacetyl, monochlorophyll potassium, ascorbic acid, enzymes. May contain milk, egg and sesame.



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Adding Whole Grains to School Meals

- Whole grain-rich pretzels
- Whole grain-rich pita pockets
- Whole grain-rich cornbread
- Whole grain-rich crackers or cookies
- Whole grain-rich tortillas or taco shells
- Whole grain-rich pasta
- Whole grain-rich ready-to-eat or cooked breakfast cereals
- Whole grain-rich granola or granola bars
- Whole grain-rich pancakes or waffles
- Whole grain-rich bagels, breads, rolls, buns, or muffins



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Flexibility Using Enriched Pasta – SY 2014-15 and SY 2015-16

- SA may approve SFA request to use enriched pasta
- Flexibility is allowed only until acceptable products are available & identified
- Flexibility is allowed while SFA can demonstrate a continued negative impact
 - USDA memo SP 47-2014
 - To apply for waiver, complete survey:
 - <https://www.surveymonkey.com/s/TQ5PS96>



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Grain-based Desserts

- Grain-Based Desserts
 - Grain-based desserts limited to 2 oz eq/week
- Graham crackers
 - Considered a dessert item at lunch



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Grain-based Desserts

- Grain-based dessert limit does not apply at breakfast
- Formulated grain-fruit products do not credit
- Sugar in grain items is allowed
 - Some grain products can *only* be served as desserts in lunch/not allowable in breakfast (brownies, cake, cookies)
 - Perception is part of the menu planning process
 - Grain-based desserts are a big source of sugar and added fats



RESOURCES



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Technical Assistance Resources

- FNS New Meal Pattern website
 - <http://www.fns.usda.gov/cnd/Governance/Legislation/nutritionstandards.htm>
 - Timeline
 - Technical Assistance & Guidance Materials
 - Recently released Q&As, other policy memos
- Best Practices Sharing Center
 - SFAs and States can share resources and tools they use to serve healthy menus that meet the new school meal regulations by uploading information to this site
 - <http://healthymeals.nal.usda.gov/bestpractices>



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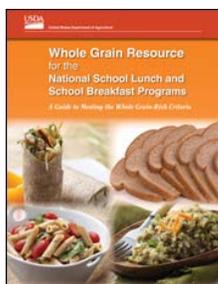
Technical Assistance Resources

- **NEW! SP 57-2014: Updated Offer Versus Serve: Guidance for the National School Lunch and Breakfast Program**
- **NEW! SP 10-2012 (v.8): Q and As on "Nutrition Standards in the National School Lunch and School Breakfast Programs"**
- **SP 30-2012: Grain Requirements for the National School Lunch & School Breakfast Programs**
- **SP 41-2014: Clarification Policy for Food Consumption Outside FS Area and Whole Grain-Rich Requirement**
- **SP 47-2014: Flexibility for WGR Pasta**



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Whole Grain Resource



- <http://www.fns.usda.gov/tn/whole-grain-resource>

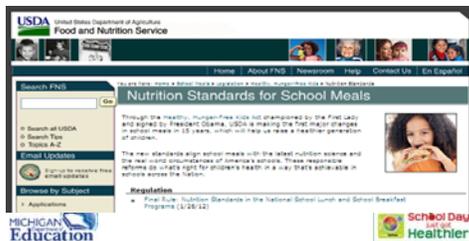


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USDA Website

- For current updated information, go to **Nutrition Standards for School Meals**

<http://www.fns.usda.gov/cnd/Governance/Legislation/nutritionstandards.htm>



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Contact MDE School Nutrition Programs

Phone: 517-373-3347

or

E-mail: MDE-SchoolNutrition@michigan.gov



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