

Guidance on Evaluating Recipes for Compliance with the Connecticut Nutrition Standards

Districts that choose the healthy food option of Healthy Food Certification (HFC) under [Section 10-215f](#) of the Connecticut General Statutes must comply with the Connecticut Nutrition Standards (CNS) for all foods sold to students on school premises, separately from reimbursable meals in the National School Lunch Program (NSLP) and School Breakfast Program (SBP). The CNS applies to all sources of food sales to students, including commercial products and recipes for foods made from scratch. Examples of sources of food sales include a la carte sales in the cafeteria, culinary arts programs, family and consumer sciences classes, bake sales, fundraisers, afterschool programs, and any other sales of foods to students.

This document addresses the requirements and steps to determine if recipes comply with the CNS. For information on HFC, see the Connecticut State Department of Education's (CSDE) document, [Requirements for Competitive Foods in HFC Public Schools](#), and the CSDE's [Healthy Food Certification](#) webpage. For information on the CNS requirements, see the CSDE's document, [Summary of Connecticut Nutrition Standards](#), and the CSDE's [Connecticut Nutrition Standards](#) webpage.

How to Determine if Recipes Comply with the CNS

Before selling any foods made from recipes to students separately from reimbursable meals, schools must be able to document that the recipe's serving complies with the CNS. Schools must have recipes on file that indicate the nutrition information per serving for calories, fat, saturated fat, trans fat, sodium, and sugars. If the recipe is missing this information, schools must conduct a nutrient analysis of the recipe. Recipes with nutrition information are required for the two categories of foods below.

- **Foods prepared from scratch using a recipe:** Examples of foods in this category include entrees sold only a la carte (such as pizza, chef's salad, and chicken nuggets); soups; cooked grains such as rice and pasta with added fat (e.g., oil, margarine, or butter) and salt; cooked vegetables with added fat (e.g., oil, margarine, or butter) and salt; salad with dressing; fruit smoothies; and baked goods such as muffins and cookies. Recipes for these foods must provide the nutrition information per serving.



- * **Note:** Recipes and nutrition information are not required for entrees that are sold as part of reimbursable meals in NSLP and SBP, and are also sold a la carte at the **same meal on the same day**. These entrees are exempt from the CNS. This exemption applies only to the three categories of main dish entree items as defined by the CNS. Any other meal components sold separately from reimbursable meals must comply with the CNS for the appropriate food category. For example, muffins that are part of a reimbursable meal cannot be sold a la carte unless they meet the CNS snacks category.

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- **Foods that have additional ingredients added after purchasing:** Adding one or more ingredients to a purchased food changes the nutrition information per serving. Examples of foods in this category include popping popcorn kernels in oil; assembling a sandwich; making muffins from a mix and adding butter and eggs; and adding sprinkles to commercial frozen cookie dough. Schools must create a recipe for these foods based on the specific amount of each ingredient, and conduct a nutrient analysis to determine the nutrition information per serving.



Using Nutrient Analysis Software

Using a nutrient analysis software program is the simplest method to determine a recipe's nutrition information per serving. However, it is important to note that recipes analyzed using the U.S. Department of Agriculture's (USDA) [approved software programs](#) for nutrient analysis of school meals might be missing nutrition information for trans fat and sugars. Schools must check their recipes to ensure that values for trans fat and sugars are included, and that the serving complies with the CNS restrictions for these nutrients. Without complete nutrition information, schools cannot determine if the recipe complies with the CNS.

- **Trans fats:** The CNS requires that foods contain zero trans fats and no partially hydrogenated oils, such as partially hydrogenated cottonseed oil and partially hydrogenated soybean oil. Schools must review recipes to be sure they do not include ingredients that contain partially hydrogenated oils, such as margarine and vegetable shortening.
- **Sugars:** If the nutrient analysis software or recipe does not indicate the amount of sugars per serving, schools must calculate this information manually. The CSDE's Excel worksheet, [CNS Worksheet 10: Evaluating Recipes for Sugars](#), provides additional information and guidance on determining the amount of sugars in recipes.

Note: A missing nutrient value does **not** mean that the recipe does not contain that nutrient. For example, a software program might use an asterisk (*) or "NA" (not available) to indicate a missing value for trans fat. However, the recipe could still contain trans fat. In this case, the school must review the recipe to ensure that it does not contain any ingredients with partially hydrogenated oils.

Software programs that are not approved by the USDA can only be used to analyze **a la carte sales**, not school meals. USDA-approved software must be used to analyze **school meals** for compliance with the USDA's nutrition standards for school meals.

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Required Steps When Recipes include Nutrition Information

Schools must follow the steps below to determine if the recipe's serving complies with the CNS.

1. **Check the recipe's nutrition information per serving to be sure it lists the amount of calories, fat, saturated fat, trans fat, sodium, and sugars.** If any values are missing, this information must be determined before proceeding to step 2.
 - Use Nutrition Facts labels for ingredients (if available) and the USDA's [FoodData Central](#) nutrient database to obtain missing nutrition information.
 - Enter the missing nutrition information for each ingredient into the CSDE's Excel worksheet, [Worksheet 9: Nutrient Analysis of Recipes](#). This worksheet calculates the recipe's nutrition information per serving.
 - Add the recipe's **original** nutrition information per serving to the **missing** nutrient's nutrition information per serving to get the recipe's **actual** nutrition information per serving.
2. **Determine the nutrition information for any accompaniments served with the food.** Accompaniments are foods that accompany another food or beverage item, such as butter, cream cheese, syrup, salsa, whipped cream, and condiments, e.g., ketchup, mustard, relish, mayonnaise, and salad dressing. The evaluation of a food for compliance with the CNS is based on the food item **as served**, including any added accompaniments. For example, if a muffin is served with butter, the recipe's nutrition information per serving must include the combined amount of calories, fat, saturated fat, trans fat, sodium, fiber, and sugars for both foods.
3. **Determine if the recipe's serving complies with the CNS.** Enter the recipe's nutrition information per serving (including any accompaniments) into the appropriate CNS Excel worksheet for the food category. CNS Excel worksheets 1 and 3-8 can be used for recipes. Worksheet 2 (yogurt and pudding) is only for commercial products.

For example, use:

- CNS worksheet 1 (snacks) for recipes such as cookies, muffins, waffles, pancakes, French toast, soft pretzels, breads, and rolls;
- CNS worksheet 3 for smoothies made with low-fat yogurt or soy yogurt and fruits/vegetables/100 percent juice;
- CNS worksheet 5 for soup recipes;
- CNS worksheet 6 for cooked grain recipes (prepared with added ingredients such as fat, sugar, salt, and other ingredients), such rice, pasta, and cereal grains, e.g.,

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amaranth, barley, buckwheat, cornmeal, kasha, millet, oats, quinoa, wheat berries, and rolled wheat;

- CNS worksheet 7 for entree recipes, such as breakfast sandwiches, pizza, chef's salad, yogurt and fruit parfait, and chicken vegetable stir-fry; and
- CNS worksheet 8 for non-entree combination foods, such as vegetable egg rolls.

The CNS worksheets compare the recipe's nutrition information per serving with the CNS, and indicate if the serving complies. These worksheets are available in the "[Documents/Forms](#)" section of the CSDE's CNS webpage.

Required Steps When Recipes do not include Nutrition Information

If a nutrient analysis software program is not available, schools must conduct their own nutrient analysis of recipes using Nutrition Facts labels (if available) and a nutrient database. The CSDE recommends using the USDA's [FoodData Central](#) database to obtain nutrition information for specific foods and ingredients. This new USDA database incorporates the USDA's previous National Nutrient Database, and includes five distinct types of data containing information on food and nutrient profiles.

Schools must follow the steps below to conduct a nutrient analysis of the recipe and determine if the recipe's serving complies with the CNS.

1. **Determine the recipe's nutrition information.** Use Nutrition Facts labels for ingredients (if available) and the USDA's [FoodData Central](#) database to determine the amount of calories, fat, saturated fat, trans fat, sodium, and sugars for each ingredient in the recipe. Note the important considerations below for ensuring an accurate nutrient analysis.
 - **Find the specific ingredient in the database.** The accuracy of the nutrient analysis depends on selecting the database ingredient that most closely matches the recipe ingredient, based on the brand, type, form, and pack of the food. Using the wrong ingredient will change the recipe's nutrition information. For example, the USDA's FoodData Central indicates that 1 cup of packed brown sugar (220 grams) contains 836 calories and 213 grams of sugars, while 1 cup of unpacked brown sugar (145 grams) contains 551 calories and 141 grams of sugars ([Data type: Standard Reference \(SR\) Legacy, number 168833](#)). Be sure that the recipe indicates specific information for each ingredient, such as large or medium eggs; fresh or frozen strawberries; white or brown sugar; and canned sliced peaches in juice, water, or drained. Match this information to the database ingredient.

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- **Calculate nutrition information based on the appropriate measurement for each ingredient.** If the amount from the Nutrition Facts label or the nutrient database does not match the amount used in the recipe, convert the nutrition information for each ingredient based on the **actual amount** used. For example, if the recipe uses 2 cups of whole-wheat flour but the database lists the nutrition information for 1 cup, multiply the amount of each nutrient in 1 cup of flour by 2 to determine the nutrition information for the 2 cups used in the recipe. For assistance with recipe calculations, such as converting fractions to decimals, review the resources below.



- [Basics at a Glance Portion Control Poster](#) (Institute of Child Nutrition)
- [Table 8: Decimal Equivalents for Fractions of a Unit](#) (“Introduction” section, USDA’s *Food Buying Guide for Child Nutrition Programs*)

- **Include any accompaniments served with the food.** Accompaniments are foods that accompany another food or beverage item, such as butter, cream cheese, syrup, salsa, whipped cream, and condiments, e.g., ketchup, mustard, relish, mayonnaise, and salad dressing. The evaluation of a food for compliance with the CNS is based on the food item **as served**, including any added accompaniments. For example, if a muffin is served with butter, the recipe’s nutrition information per serving must include the combined amount of calories, fat, saturated fat, trans fat, sodium, fiber, and sugars for both foods.
4. **Determine the recipe’s nutrition information per serving.** Enter the nutrition information for each ingredient (including any accompaniments) and the recipe’s number of servings into the CSDE’s Excel worksheet, [Worksheet 9: Nutrient Analysis of Recipes](#). This worksheet calculates the recipe’s nutrition information per serving.
 5. **Determine if the recipe’s serving complies with the CNS.** Enter the recipe’s nutrition information per serving from worksheet 9 into the appropriate CNS Excel worksheets 1 and 3-8 can be used for recipes. Worksheet 2 (yogurt and pudding) is only for commercial products.

For example, use:

- CNS worksheet 1 (snacks) for recipes such as cookies, muffins, waffles, pancakes, French toast, soft pretzels, breads, and rolls;
- CNS worksheet 3 for smoothies made with low-fat yogurt or soy yogurt and fruits/vegetables/100 percent juice;

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- CNS worksheet 5 for soup recipes;
- CNS worksheet 6 for cooked grain recipes (prepared with added ingredients such as fat, sugar, salt, and other ingredients), such as rice, pasta, and cereal grains, e.g., amaranth, barley, buckwheat, cornmeal, kasha, millet, oats, quinoa, wheat berries, and rolled wheat;
- CNS worksheet 7 for entree recipes, such as breakfast sandwiches, pizza, chef's salad, yogurt and fruit parfait, and chicken vegetable stir-fry; and
- CNS worksheet 8 for non-entree combination foods, such as vegetable egg rolls.

The CNS worksheets compare the recipe's nutrition information per serving with the CNS, and indicate if the serving complies. These worksheets are available in the “[Documents/Forms](#)” section of the CSDE's CNS webpage.

Resources

Basics at a Glance Poster (National Food Service Management Institute):

<https://theicn.org/icn-resources-a-z/basics-at-a-glance/>

Connecticut Nutrition Standards (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Connecticut-Nutrition-Standards>

Evaluating Foods for CNS Compliance (CSDE webpage):

<https://portal.ct.gov/SDE/Nutrition/Connecticut-Nutrition-Standards/How-To>

Food Buying Guide for Child Nutrition Programs (USDA):

<https://www.fns.usda.gov/tn/food-buying-guide-for-child-nutrition-programs>

FoodData Central (USDA):

<https://fdc.nal.usda.gov/>

Manager's Corner: Standardized Recipes (ICN):

<https://theicn.org/resources/176/managers-corner/107624/managers-corner-standardized-recipes.pdf>

National Nutrient Database (USDA):

<https://ndb.nal.usda.gov/ndb/>

On the Road to Professional Food Preparation eLearning: Weights and Measures (ICN)

<https://theicn.docebosaaS.com/learn/course/external/view/elearning/19/weights-and-measures>

Standardized Recipe Form (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/NSLP/Crediting/StdRecipeSchools.doc>

Summary of Connecticut Nutrition Standards (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/SummaryCNS.pdf>

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USDA Approved Nutrient Analysis Software:

<https://www.fns.usda.gov/tn/usda-approved-nutrient-analysis-software>

USDA Recipes for Schools:

<https://theicn.org/cnrb/recipes-for-schools/>

Worksheet 1: Snacks (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet1.xlsx>

Worksheet 3: Smoothies (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet3.xlsx>

Worksheet 4: Fruits and Vegetables (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet4.xlsx>

Worksheet 5: Soups (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet5.xlsx>

Worksheet 6: Cooked Grains (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet6.xlsx>

Worksheet 7: Entrees (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet7.xlsx>

Worksheet 8: Non-entree Combination Foods (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet8.xlsx>

Worksheet 9: Nutrient Analysis of Recipes (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet9.xlsx>

Worksheet 10: Evaluating Recipes for Sugars (CSDE):

<https://portal.ct.gov/-/media/SDE/Nutrition/HFC/CNS/CNSworksheet10.xlsx>

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For more information, visit the CSDE's [Healthy Food Certification](#) and [Connecticut Nutrition Standards](#) webpages, or contact the [coordinator of HFC](#) at the Connecticut State Department of Education, Bureau of Health/Nutrition, Family Services and Adult Education, 450 Columbus Boulevard, Suite 504, Hartford, CT 06103-1841.

This document is available at <https://portal.ct.gov/-/media/SDE/Nutrition/HFC/EvaluateRecipeCNS.pdf>.

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