



RECIPE STANDARDIZATION

# GUIDE

FOR THE

CHILD AND ADULT CARE  
FOOD PROGRAM



INSTITUTE OF  
*child nutrition*  
RESOURCES • TRAINING • RESEARCH





# Institute of Child Nutrition

The University of Mississippi

The Institute of Child Nutrition was authorized by Congress in 1989 and established in 1990 at the University of Mississippi in Oxford and is operated in collaboration with The University of Southern Mississippi in Hattiesburg. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

## **PURPOSE**

Improve the operation of child nutrition programs through research, education and training, and information dissemination.

## **VISION**

Lead the nation in providing research, education, and resources to promote excellence in child nutrition programs.

## **MISSION**

Provide relevant research-based information and services that advance the continuous improvement of child nutrition programs



# DISCLAIMER

This project has been funded at least in part with Federal funds from the U.S. Department of Agriculture, Food and Nutrition Service through an agreement with the Institute of Child Nutrition at the University of Mississippi. The content of this publication does not necessarily reflect the view or policies of the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

In accordance with federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating on the basis of race, color, national origin, sex (including gender identity and sexual orientation), disability, age, or reprisal or retaliation for prior civil rights activity.

Program information may be made available in languages other than English. Persons with disabilities who require alternative means of communication to obtain program information (e.g., Braille, large print, audiotape, American Sign Language), should contact the responsible state or local agency that administers the program or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339.

To file a program discrimination complaint, a Complainant should complete a Form AD-3027, USDA Program Discrimination Complaint Form which can be obtained online at: <https://www.usda.gov/sites/default/files/documents/ad-3027.pdf>, from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA. The letter must contain the complainant's name, address, telephone number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by:

- (1) Mail: U.S. Department of Agriculture  
Office of the Assistant Secretary for Civil Rights  
1400 Independence Avenue, SW  
Washington, D.C. 20250-9410;
- (2) Fax: (833) 256-1665 or (202) 690-7442; or
- (3) Email: [program.intake@usda.gov](mailto:program.intake@usda.gov)

The USDA is an equal opportunity provider, employer, and lender.

The University of Mississippi is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA Employer.

Except as provided below, you may freely use the text and information contained in this document for non-profit or educational use with no cost to the participant for the training providing the following credit is included. These materials may not be incorporated into other websites or textbooks and may not be sold.

Suggested Reference Citation:

Institute of Child Nutrition. (2024). *Recipe standardization guide for the child and adult care food program*. University, MS: Author.

The photographs and images in this document may be owned by third parties and used by the University of Mississippi under a licensing agreement. The university cannot, therefore, grant permission to use these images. Please contact [helpdesk@theicn.org](mailto:helpdesk@theicn.org) for more information.

©2024, Institute of Child Nutrition, The University of Mississippi, School of Applied Sciences



# TABLE OF CONTENTS

Recipe Standardization Guide Overview	9
Benefits of Standardized Recipes	11
Recipe Standardization Process: Three-Phase Approach	13
Phase One: Recipe Verification	15
Phase Two: Product Evaluation Phase	41
Phase Three: Quantity Adjustment Phase	43
Appendix A: Definitions	51
Appendix B: Resources	53
Appendix C: Recipe Standardization Tools and Templates	55
References	97





# RECIPE STANDARDIZATION GUIDE OVERVIEW

This “how-to” guide describes recipe standardization techniques and includes examples, practice exercises, and reference materials for Child and Adult Care Food Program (CACFP) operators.

---

## Definition

*The U.S. Department of Agriculture (USDA) defines a standardized recipe as one that has been tried, adapted, and retried at least three times and produces the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.*







# BENEFITS OF STANDARDIZED RECIPES

Using standardized recipes provides many benefits to the CACFP operations.

## **Consistent food quality**

Standardized recipes ensure menu items will be consistent in quality each time they are prepared and served.

## **Menu planning**

Standardized recipes simplify menu planning. A standardized recipe provides documentation for meal pattern requirements, making this step more efficient and compliant.

## **Predictable yield**

Standardized recipes produce a planned number of servings. This can help prevent overproduction or shortages. A predictable yield is also important when transporting food from a central kitchen to other serving sites.

## **Participant satisfaction**

Standardized recipes provide the same recipe outcome no matter who is preparing them. Well-developed recipes that appeal to participants are an important factor. Participants will be more satisfied because they know what to expect each time a product is served.

## **Food cost control**

Standardized recipes are developed with specific ingredients and the amounts clearly stated. This provides consistent and accurate information for food cost control because the same ingredients and quantities of ingredients per serving are used each time the recipe is produced. When the amount or type of ingredient is changed, the cost of producing the recipe can also change. When incorrect portions of the food are served, the recipe's overall cost can be affected. Using and adhering to standardized recipes will result in better food cost controls.

## **Efficient purchasing procedures**

Standardized recipes provide the exact quantity of foods needed for production, making purchasing more efficient.

### **Inventory control**

Standardized recipes provide predictable information on the quantity of food inventory used each time the recipe is produced.

### **Labor cost control**

Standardized recipes provide specific directions for the preparation of each recipe. This can help with labor costs by planning a more efficient workday schedule. It can also reduce training costs because new employees are provided with written procedures for recipe preparation.

### **Increased employee confidence**

Standardized recipes eliminate guesswork, decrease the chances of producing poor food products, and prevent shortages of servings during meal service. In turn, employees feel more satisfied and confident in their jobs. It can also increase confidence in meeting CACFP meal pattern requirements and promoting healthy choices.

### **Successful completion of monitoring visits**

Standardized recipes help operators serve nutritionally adequate foods that meet meal pattern requirements for reimbursement. Using standardized recipes may lessen the chance of having meals disallowed for not meeting the meal pattern requirements during monitoring visits.

### **Crediting statement**

Standardized recipes feature crediting statements. The crediting statement helps the CACFP operator assess how the recipe contributes to meal pattern compliance.

# RECIPE STANDARDIZATION PROCESS: THREE - PHASE APPROACH

The recipe standardization process has three phases.



## Phase One: Recipe Verification

The recipe verification phase is the foundation of the recipe standardization process. Determining whether a recipe will work in the beginning will help throughout the recipe standardization process. This phase consists of:

- identifying the recipe,
- sourcing ingredients,
- writing and reviewing the recipe in detail,
- preparing it in a small batch quantity (depending on the size of the operation),
- verifying its yield, and
- recording changes.

Test the recipe as many times as needed to produce the consistent and desired result. Make sure the recipe is tested and has achieved the same consistent results a minimum of three times before moving on to the product evaluation phase. As a reminder, the USDA defines a standardized recipe as one that has been tried, adapted, and retried at least three times and produces the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.



## Phase Two: Product Evaluation (Taste Test)

The product evaluation phase focuses on determining the acceptability of the product produced from the recipe through taste testing. There are two parts in this phase:

- An informal evaluation where the CACFP operator conducts a simple taste test.
- A formal evaluation where the CACFP operator conducts a taste test with participants and stakeholders.



## Phase Three: Quantity Adjustment

The quantity adjustment phase changes the recipe yield and ingredient amounts to the desired number of servings for use in the program.

A recipe may go through these phases several times before becoming standardized. We encourage CACFP operators to work with stakeholders and participants on the recipe standardization process when possible.

Decisions made during each phase determine the flow of a recipe through the standardization process. Once a recipe is standardized, the process does not have to be repeated unless changes occur in the availability of ingredients or equipment.



# PHASE ONE: RECIPE VERIFICATION

---

CACFP operators are responsible for serving cost-effective, nutritious foods that meet meal pattern requirements for reimbursement. Using standardized recipes is a strategy to help program operators accomplish these goals. The first phase in the standardization process is recipe verification.

The recipe verification phase includes:

- identifying the recipe,
- sourcing ingredients,
- writing and reviewing the recipe in detail,
- preparing it in a small batch,
- verifying its yield, and
- recording changes.



## IDENTIFYING A RECIPE

Identifying new recipes can be challenging. There are several things to consider, including food costs, labor and equipment needs, sourcing ingredients, and participant satisfaction. A key starting point in the process of recipe standardization is developing recipes participants will find appealing. Identifying participants' taste preferences will help determine which recipes to select. There are several methods to engage the CACFP community and make decisions based on participants' needs and food preferences. Incorporating CACFP stakeholders is a method proven to increase buy-in. Stakeholders are more engaged when they see themselves as partners in the process.

Soliciting recipes from the CACFP community can take many forms:

- conducting recipe contests among stakeholders
- soliciting stakeholder suggestions through advisory groups
- meeting with community focus groups
- implementing surveys
- hosting a recipe drop box

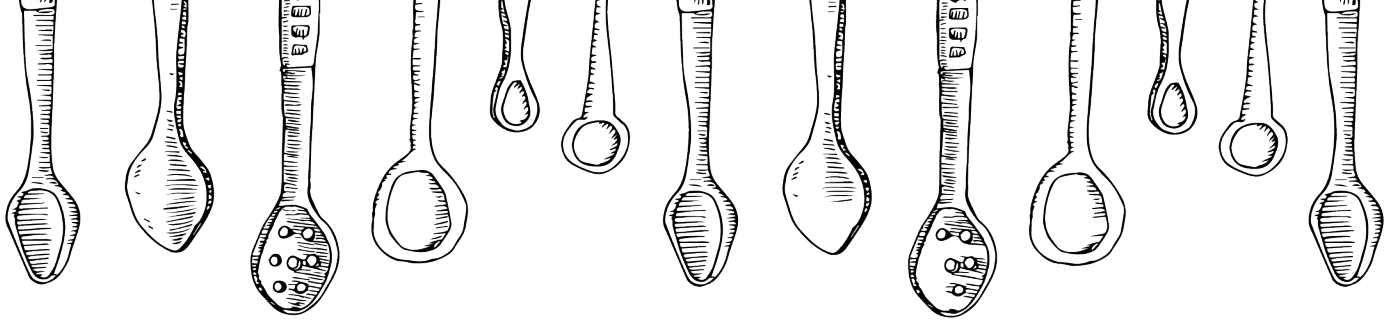




# STRATEGIES FOR SOLICITING RECIPES FROM THE CACFP COMMUNITY

Strategy	Implementation	Benefits
Recipe Contests	<ul style="list-style-type: none"> <li>• Solicit family favorites or culturally diverse recipes</li> <li>• Recognize the winners with their names attached to the recipe</li> <li>• Create a CACFP recipe book to share</li> </ul>	<ul style="list-style-type: none"> <li>• Gains an understanding of local food preferences</li> <li>• Solicits culturally diverse recipes</li> <li>• Creates community awareness of the program</li> <li>• Gives participants and stakeholders buy-in to the program</li> <li>• Includes stakeholders in the continual improvement of the program</li> </ul>
Advisory Groups	<ul style="list-style-type: none"> <li>• Regularly scheduled meetings focused on program improvements               <ul style="list-style-type: none"> <li>▪ Monthly</li> <li>▪ Quarterly</li> </ul> </li> <li>• Organized by demographics such as:               <ul style="list-style-type: none"> <li>▪ Age group</li> <li>▪ Meal sites</li> <li>▪ Parent groups</li> <li>▪ CACFP faculty/staff</li> <li>▪ Stakeholders</li> </ul> </li> <li>• Develop goals and action plans to meet stakeholder needs</li> </ul>	<ul style="list-style-type: none"> <li>• Increases program awareness by members of the CACFP community</li> <li>• Creates program advocates and ambassadors that share program information with a variety of stakeholders</li> <li>• Collects regular feedback from the CACFP community</li> <li>• Inclusion of stakeholders in the continual improvement of the program</li> </ul>
Community Focus Groups	<ul style="list-style-type: none"> <li>• Facilitate small group discussions to learn participants' opinions on a specific topic area</li> <li>• Organized by demographics such as:               <ul style="list-style-type: none"> <li>▪ Age group</li> <li>▪ Meal sites</li> <li>▪ Parent groups</li> <li>▪ CACFP faculty/staff</li> <li>▪ Stakeholders</li> </ul> </li> <li>• Assess stakeholders' perceptions of the program</li> <li>• Identify perceived gaps in the current menus and suggest improvements</li> <li>• Solicit recipe ideas from participants</li> </ul>	<ul style="list-style-type: none"> <li>• Increased program awareness by members of the CACFP community</li> <li>• Increased participation due to the limited-time commitment of the facilitator and participants</li> <li>• Used to seek feedback on a single issue or a variety of topics</li> </ul>

Strategy	Implementation	Benefits
Surveys	<ul style="list-style-type: none"> <li>• Identify food items stakeholders want to see on the menu</li> <li>• Use the information to narrow down the types of recipes to solicit from the community</li> <li>• Use platforms that make sense to the user group—digital, paper, posters with stickers, in-person, etc.</li> <li>• Survey participants</li> <li>• Survey stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Easy to develop and administer</li> <li>• Low cost</li> <li>• Provides a representative sampling of the population. Low levels of subjectivity</li> <li>• Efficiently captures data needed for decision-making</li> <li>• Easy to sort the data and make informed decisions</li> </ul>
Recipe Submission	<ul style="list-style-type: none"> <li>• Provide an opportunity for stakeholders to submit recipes</li> <li>• Develop criteria for the recipes and post them in a centralized location</li> <li>• Pre-assign categories for the recipe submissions</li> <li>• Host a taste test and provide an opportunity for feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Receive recipe ideas and concepts throughout the year</li> <li>• Stakeholders can share popular recipes in an easy-to-use format</li> <li>• Easily categorize and sort recipe submissions</li> <li>• Provides more engagement</li> </ul>



## STANDARDIZED RECIPE COMPONENTS

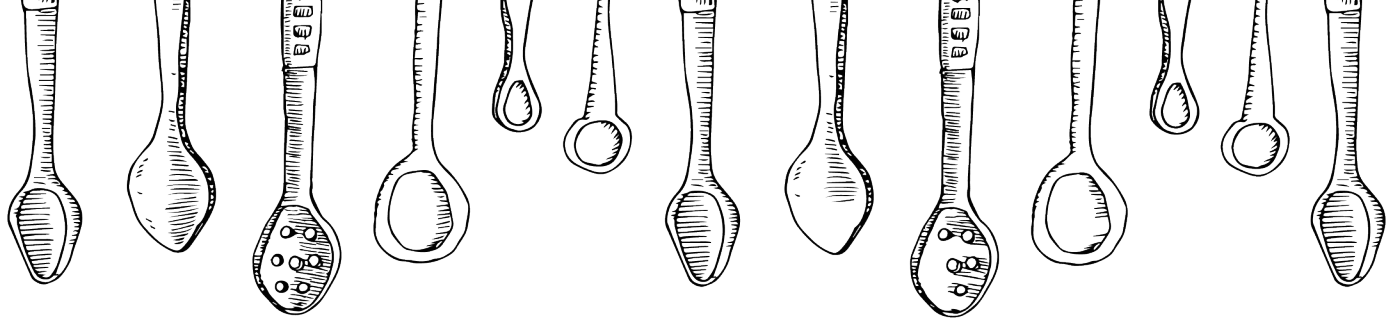
After identifying a potential recipe, the next step is formatting the recipe. A CACFP Standardized Recipe Template is provided in Appendix C to help in recipe development. Once the recipe is formatted in a template, verify that all required components are included.

A standardized recipe format should include:

- Recipe Title and Description
- Recipe Category
- Ingredients
- Weight/Volume of Each Ingredient
- Preparation Directions
- Cooking Time, Temperature, and Preparation Time
- Serving Size
- Yield (Number of Servings)
- Equipment and Tools Needed
- Crediting Information
- Marketing Guide
- Food Safety Guidelines/Critical Control Points



Optional information such as service style, nutrient information, recipe variations, alternative ingredients, optional ingredients, and safety notes such as choking risks and food allergy information may also be included. These are not related to the standardization process but are still useful.



## Recipe Title and Description

The recipe should have a title (name) along with a brief description (1-3 sentences) that accurately describes the recipe, is easily understood, and helps to entice participants to try the dish.

Developing a catchy name and description is important, as this is often the first impression of the recipe.

Strategies for developing a good name and description:

- Use language that focuses on the recipe's flavors and/or textures.
- Use age-appropriate names for each age group the recipe will serve.
- Use culturally appropriate words that focus on a regional, new, or unfamiliar flavor.
- Use language that is fun, informative, and creates excitement.

## Recipe Category

A recipe category identifies the recipe as a main dish (entrée) or a side dish and helps with the organization of recipes.

### **Main Dish (Entrée)**

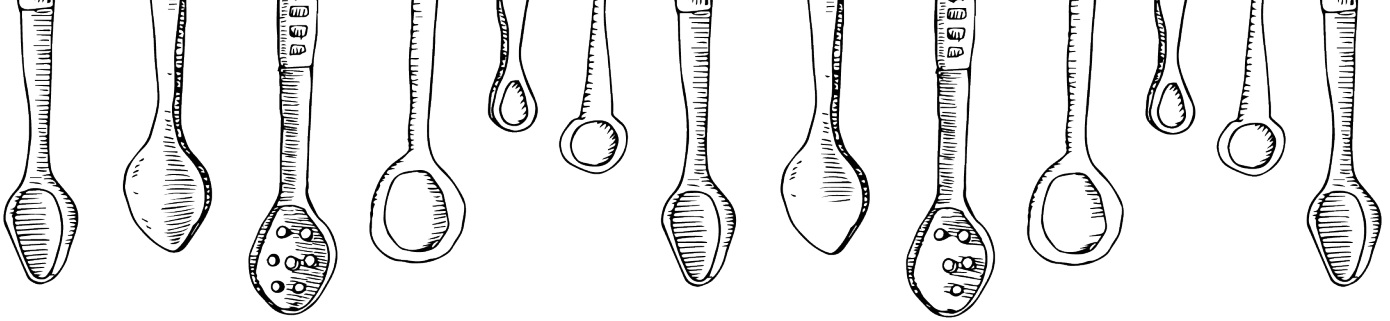
An item served as the main dish can be:

- A combination food of meats and/or meat alternates and grains
- A combination food of vegetables and/or fruits and meats and/or meat alternates
- A combination food of meats and meat/alternates and/or grains and/or vegetables and/or fruits
- A meat or meat alternate alone except for yogurt, low-fat or reduced-fat cheese, nuts, seeds, nut or seed butters, and meat snacks (such as dried beef jerky)
- A grain that is served as a breakfast in the CACFP program

### **Side Dish**

An item served as a side dish is an accompanying item and can be:

- A wide variety of fruits and vegetables
- Grains, such as brown rice, whole grain-rich pasta, rolls, breadsticks, or grain-based salads
- A combination food of vegetables, fruits, and/or grains



## Ingredients

Include all the ingredients used in a recipe. The ingredient name should list the name of the product, its form, and any preparation techniques.

### **Tips for properly listing ingredients:**

#### **Preparation Technique: peeled, grated, minced, diced, etc.**

Indicate the size for preparation techniques, such as slicing and dicing.

- Example: sliced  $\frac{1}{2}$  inch, diced  $\frac{1}{4}$  inch

#### **Order of Use**

List the ingredients in the order of usage when preparing the recipe.

#### **Variations: fresh, frozen, canned**

Recipes may have variations of the ingredients included in the recipe. Include the proper unit of measurement for each variation.

- Example: canned corn (#10 can/106 ounces) or frozen corn (5 lb)

#### **Specific Names**

Avoid listing amounts of ingredients in general terms such as “1 package,” “1 box,” or “1 can.” Size and product amounts vary by manufacturer.

#### **Standard Abbreviations**

Use standard abbreviations for units of measurement and include amounts as a fraction.

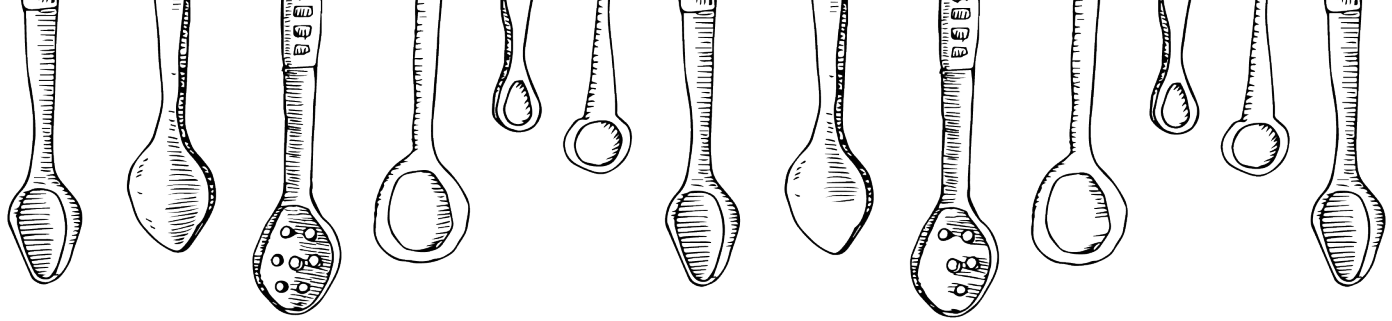
#### **Manageable Units of Measure**

Use the most appropriate standard unit of measurement to save time and reduce errors.

- Example: Weigh 1 lb 4 oz instead of 20 oz
- Example: Measure  $\frac{1}{2}$  cup instead of 8 Tbsp

#### **Ingredient Form of Consumption**

*As Purchased vs. Edible Portion:* Ingredients included in a recipe may be listed in two forms, as purchased (AP) or edible portion (EP), based on how they will be consumed. The *Food Buying Guide* provides yield information to assist with determining EP quantity.



**Fruits and Vegetables:** When fresh fruits and vegetables are processed, there is a loss in yield. This loss occurs because fresh items are often peeled and/or trimmed before they are ready for recipe use.

- Example: serving a whole, unprocessed apple versus serving a whole apple cored and cut into wedges.
  - The whole, unprocessed apple represents the as purchased (AP) form.
  - The whole apple cored and cut into wedges represents the edible portion (EP) form.

**Meats:** The cooked EP amount of meat is less than the raw AP quantity because moisture and fat are lost in the cooking process. Thus, the yield of meats cooked in a CACFP operation is less than 100%. The yield of precooked or processed meats usually is at or near 100%, as no loss in cooking occurs.

**Rice and Pasta:** The cooked quantity (both in volume and in weight) of rice and pasta is more than the dry quantity because water is absorbed in the cooking process. Thus, the yield of rice and pasta is greater than 100%.

## Weight/Volume of Each Ingredient

List the quantity of each ingredient in weight and/or volume. Listing the ingredients in a unit of measure that is easy to understand and appropriate ensures accuracy and ease of preparation.

**Weight** is the heaviness of a product. It is used to measure the amount of a dry or non-liquid ingredient needed for a recipe. Weight provides the most accurate measurement for the *Recipe Analysis Workbook* (RAW).

- Measure weight using a scale.

**Volume** refers to the amount of capacity a product takes up in a three-dimensional space. Use volume to measure liquid ingredients and dry ingredients that weigh 2 oz. or less, such as spices and herbs.

- Measure volume using a liquid measure such as measuring cups and spoons.

Both weight and measurement describe the amount of each dry ingredient needed for the recipe. USDA standardized recipes list ingredients by both weight and volume.

## ACTIVITY:

### Converting Weight/Volume into Manageable Units of Measure

Instructions: Review the measurements in the recipe. Convert the measurements to the most manageable unit of measure. Use the Weight and Volume Conversions chart to assist with this activity.

#### Bunny Sticks



From USDA Team Nutrition CACFP Menu Planning Guide

Original Unit of Measure 24 servings		Most Manageable Unit of Measure 24 servings	
Ingredient	Unit of Measure	Ingredient	Unit of Measure
Sweet potatoes	56 oz	Sweet potatoes	
Margarine, melted, trans-fat free	¼ cup	Margarine, melted, trans-fat free	
Cinnamon, ground	¼ cup	Cinnamon, ground	

# Weight and Volume Conversions

Teaspoons to Tablespoons	Cups to Quarts
3 tsp = 1 Tbsp	4 cups = 1 qt
1½ = ½ Tbsp	3 cups = ¾ qt
1 tsp = ⅓ Tbsp	2 cups = ½ qt
	1 cups = ¼ qt
Tablespoon to Cups	Quarts to Gallons
16 Tbsp = 1 cup	4 qt = 1 gal
12 Tbsp = ¾ cup	3 qt = ¾ gal
10⅔ Tbsp = ⅔ cup	2 qt = ½ gal
8 Tbsp = ½ cup	1 qt = ¼ gal
5½ Tbsp = ⅓ cup	
4 Tbsp = ¼ cup	
2 Tbsp = ⅛ cup	
1 Tbsp = 1/16 cup	
Ounces to Pounds	Fluid Ounces to Volume Measure
16 oz = 1 lb (1.00 lb)	½ fl oz = 1 Tbsp
14 oz = 7/8 lb (0.875 lb)	2 fl oz = ¼ cup
12 oz = ¾ lb (0.750 lb)	2.65 fl oz = ⅓ cup
10 ⅔ oz = ⅔ lb (0.667 lb)	4 fl oz = ½ cup
10 oz = ⅝ lb (0.625 lb)	5.36 fl oz = ⅔ cup
8 oz = ½ lb (0.500 lb)	6 fl oz = ¾ cup
6 oz = ¾ lb (0.375 lb)	8 fl oz = 1 cup
5 ⅓ oz = ⅓ lb (0.333 lb)	16 fl oz = 1 pt
4 oz = ¼ lb (0.250 lb)	32 fl oz = 1 qt
2 oz = ⅛ lb (0.125 lb)	64 fl oz = 2 qt or ½ gal
1 oz = 1/16 lb (0.063 lb)	128 fl oz = 1 gal



## ACTIVITY:

### Converting Weight/Volume into Manageable Units of Measure Answer Key

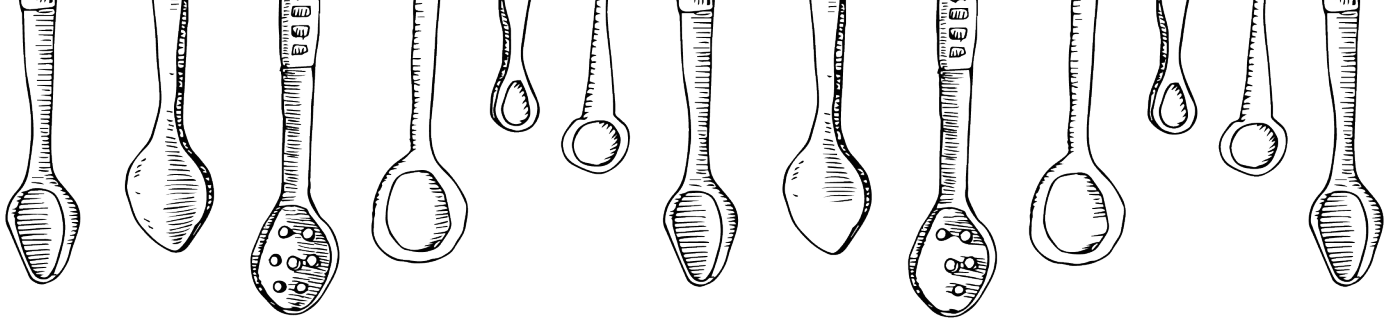
Instructions: Review the measurements in the recipe. Convert the measurements to the most manageable unit of measure. Use the Weight and Volume Conversions chart to assist with this activity.

#### Bunny Sticks



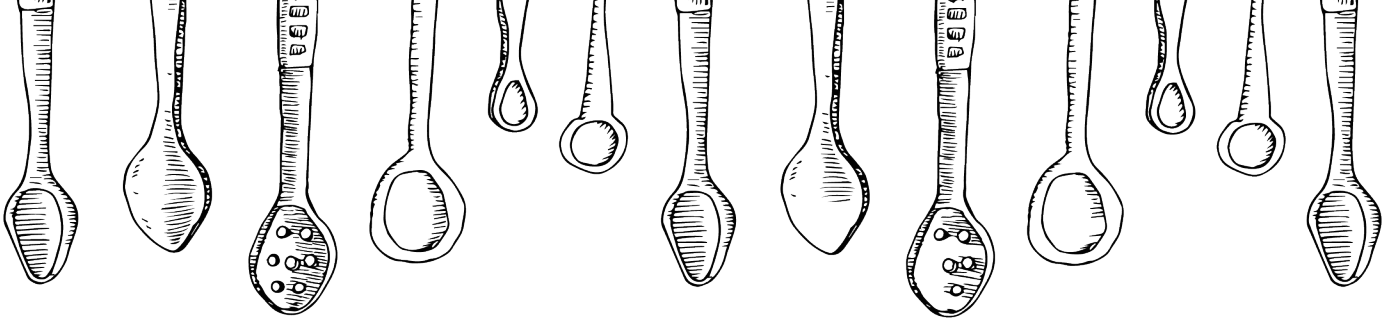
From USDA Team Nutrition CACFP Menu Planning Guide

Original Unit of Measure 24 servings		Most Manageable Unit of Measure 24 servings	
Ingredient	Unit of Measure	Ingredient	Unit of Measure
Sweet potatoes	56 oz	Sweet potatoes	3.5 lbs
Margarine, melted, trans-fat free	1/4 cup	Margarine, melted, trans-fat free	4 Tbsp
Cinnamon, ground	1/4 cup	Cinnamon, ground	4 Tbsp



## Preparation Directions

- Indicate how to combine ingredients using detailed directions.
  - List directions with the corresponding ingredients.
  - List the directions in the correct order to follow in preparing the recipe.
  - Include alternative preparation methods and helpful cooking tips.
- Ensure directions and cooking terms are clear and easily understood. If the correct procedures are not used, the final product will not turn out as intended.
- Include pre-preparation steps as needed. For example:
  - Defrost product 3 days prior in the refrigerator at 41 °F or lower.
  - Pre-heat oven to 375 °F for 15 minutes.
- Include all food safety guidelines throughout the production process.
- Include exact or near-exact preparation and cooking times.
- If the recipe has different elements, such as tacos and salsa, break the recipe into sections that correspond with the ingredients in each element.
- List ingredients that are to be combined using the same method of incorporation (such as combining all the wet ingredients at once) by descending (high to low) weight or volume.
- Include simple preparation methods in the ingredient list. For example:
  - Yellow onion, 1 cup, ¼-inch diced
  - Black beans, canned 3 lb, rinsed
- Indicate the size or type of cookware or utensils to use. For example:
  - 4-quart mixing bowl
  - 9" x 13" baking pan
  - Large, slotted serving spoon
  - Spatula
- Include serving size, serving (portioning) utensils, serving dishes, and any garnish.
- Include food safety directions such as how to cool and store leftovers and when to discard.
- Recipes may include alternative equipment or tools needed to produce the recipe.
- Be as concise as possible. Limit extra or unneeded words.



## Cooking Time and Temperature and Preparation Time

Including preparation and cooking times on the recipe helps with time management and can help identify which recipes work well on different days. Knowing this information helps the menu planner develop cycle menus.

- Write the cooking time and temperature on the recipe.
- Specify the amount of time required to prepare the recipe.
  - Include time for chopping or dicing ingredients, assembling the recipe, preparing individual servings, placing items on a baking sheet, etc.
- List the final internal temperature of the prepared foods to ensure that foods are cooked safely.
- Include holding for service temperature. For example: Hold for hot service at 140 °F. Hold for cold service at 41 °F or lower.

## Serving Size

Serving the correct portion size maintains the integrity of the recipes' nutritional value and meets meal pattern requirements. Proper portion control ensures the recipe yields the correct number of servings and correct meal components crediting.

List the weight and volume of one individual serving and the general description of the serving size. The weight and volume of the serving determine the yield information. In addition, determine whether the serving size is appropriate for the age group being served.

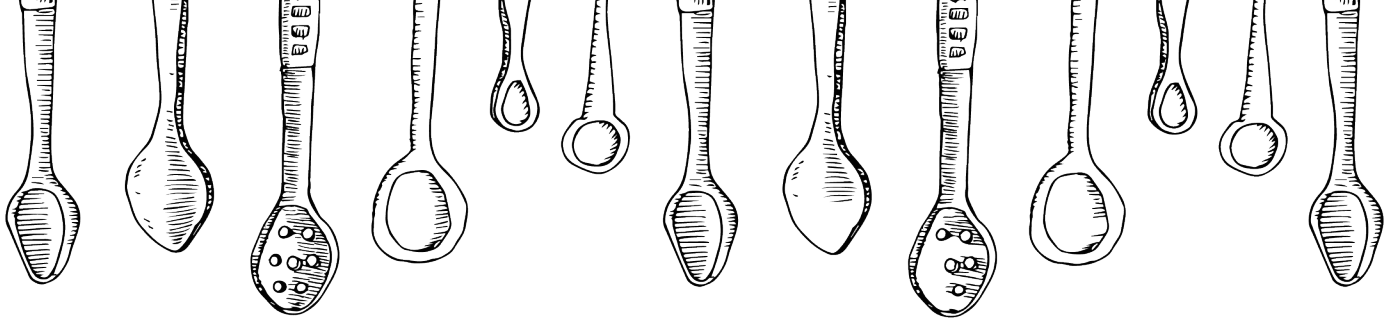
- List the amount, such as ½ cup, 1 slice, 2 squares, etc.
- List information regarding the correct serving utensil to use when portioning food items.

Incorrect portioning can lead to:

- Running out of food when plating meals
- Increase in food and labor costs
- Unsatisfied participants
- Inaccurate nutritional makeup of the serving

## Yield (Number of Servings)

Recipe yield refers to the amount of finished product or number of servings produced from the prepared recipe. Identify recipe yield in total weight and/or volume. For example, each 9" x 13" pan yields 12 servings.

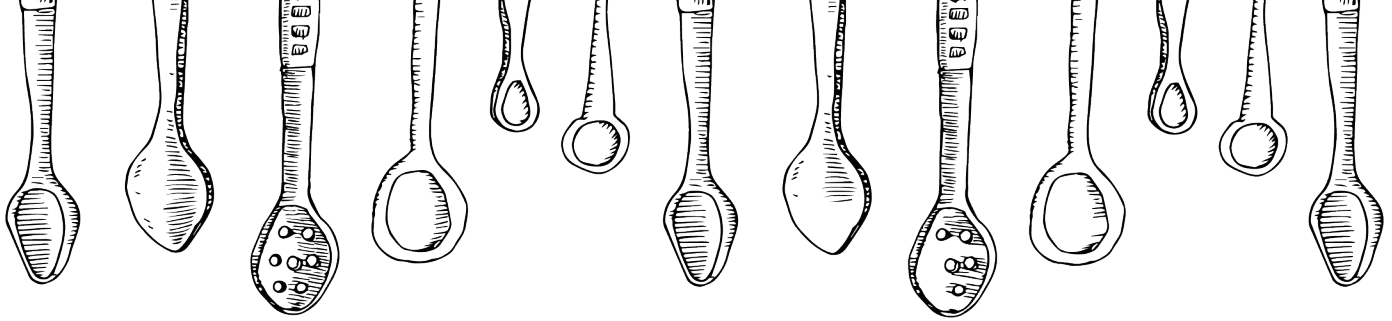


## Equipment and Tools Needed

Standardized recipes provide consistent results when using the same ingredients and equipment. Standardize recipes to the program's kitchen and the specific equipment available. This applies to new recipes only, not already standardized recipes.

### Tips for Listing Equipment and Tools

- List the cooking and serving equipment needed to prepare and serve the recipe.
- Different pieces of equipment can achieve the same outcome.
  - For example, use a convection or conventional oven to bake a casserole, or use a saucepan, slow cooker, pressure cooker, multi-cooker, or rice cooker for cooking rice.
- Consider the capacity of the cooking equipment.
  - For example, the site needs 50 rolls, but if the mixer capacity is smaller/different, the site may have to prepare the recipe in multiple smaller batches (e.g., two batches of 25) that the mixer can accommodate.
- Determine the cooking time and temperature based on the specific piece of equipment used to prepare the recipe.
- Identify the pans needed to produce and serve the product.
  - Include the length, width, and depth of the pans.
- List the utensil(s) for portioning and/or serving the product in the recipe.



## Crediting Information

The crediting statement is a crucial component for identifying how the recipe contributes to the CACFP meal pattern. It identifies the meal component(s) (e.g., meats/meat alternates, vegetables, fruits, grains) and the amount they contribute toward the meal pattern requirements. Below are examples of crediting statements:

- Single meal component example: 1 biscuit provides 2 oz eq grains
- Multiple meal component example: 1 cup (8 fl oz spoodle) provides  $\frac{1}{8}$  cup vegetable,  $\frac{3}{8}$  cup fruit, and 1 oz eq grains

If an ingredient credits toward more than one meal component, include both crediting statements. For example, beans, peas, and lentils may credit toward the meat alternates component and the vegetable component, but not as both in the same meal. The recipe should list both crediting statements:

Example: 1 Bean Burrito Bowl provides:

Legume as Meat Alternate: 1-12 oz bowl provides  $\frac{5}{8}$  cup vegetable ( $\frac{1}{8}$  cup additional vegetable,  $\frac{3}{8}$  cup red/orange vegetable,  $\frac{1}{8}$  cup other vegetable), 2 oz equivalent meat/meat alternate, and 1 oz equivalent grains.

OR

Legume as a Vegetable: 1-12 oz bowl provides 1  $\frac{1}{8}$  cup vegetable ( $\frac{1}{4}$  cup additional vegetable,  $\frac{3}{8}$  cup legume vegetable,  $\frac{3}{8}$  cup red/orange vegetable,  $\frac{1}{8}$  cup other vegetable), 0.25 oz equivalent meat/meat alternate, and 1 oz equivalent grains.

# Bean Burrito Bowl (Vegetable) - USDA Recipe for Family Child Care

Age Group: Ages 3-5

Serving Size: 6

Bowl meals are one of the newest ways to create layers of nutrition. Our Bean Burrito Bowl's burst of southwest flavor comes from brown rice, black beans, Mexican spices and popular pico de gallo.

### CACFP Home Childcare Crediting Information

**Legume as Meat Alternate:** 1-12 oz bowl provides  $\frac{3}{8}$  cup vegetable ( $\frac{1}{8}$  cup additional vegetable,  $\frac{3}{8}$  cup red/orange vegetable,  $\frac{1}{8}$  cup other vegetable), 2 oz equivalent meat/meat alternate, and 1 oz equivalent grains.

OR

**Legume as a Vegetable:** 1-12 oz bowl provides  $1\frac{1}{8}$  cup vegetable ( $\frac{1}{4}$  cup additional vegetable,  $\frac{3}{8}$  cup legume vegetable,  $\frac{3}{8}$  cup red/orange vegetable,  $\frac{1}{8}$  cup other vegetable), 0.25 oz equivalent meat/meat alternate, and 1 oz equivalent grains.



Recipe link: Bean Burrito Bowl: <https://theicn.org/cnr/recipes-for-homes/recipes-for-homes-main-dishes/bean-burrito-bowl/>

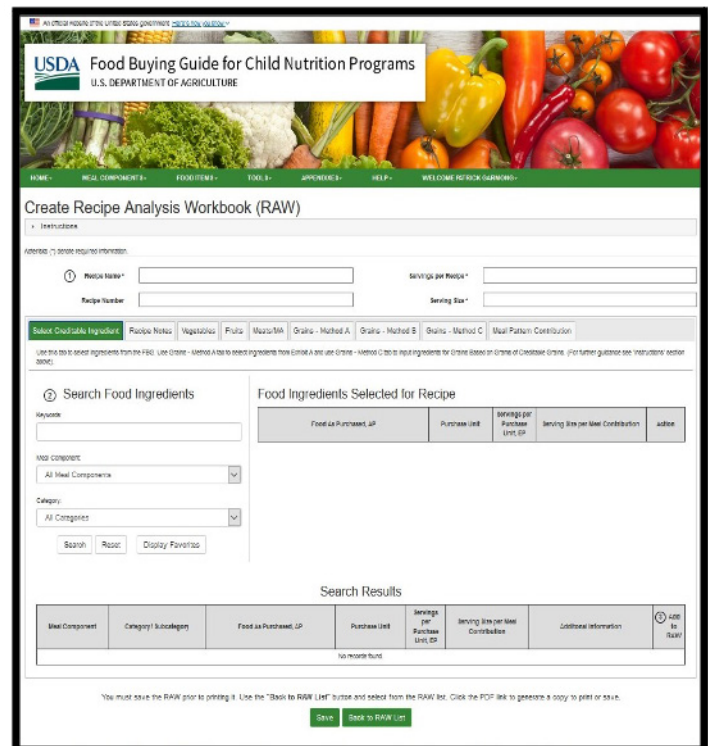
Each meal component has a minimum creditable amount, which is the smallest portion of food that counts toward meal component requirements. For example,  $\frac{1}{8}$  cup vegetable is the minimum creditable amount for vegetables. Understanding minimum creditable amounts helps plan reimbursable meals. Serving food items in portions smaller than the minimum creditable amount will not count toward reimbursement requirements.

Reviewing the recipe's crediting statement is helpful when unplanned substitutions are necessary. CACFP operators can use the crediting statement to identify the component(s) that need substitution and search for alternative recipes that will meet the planned menu's meal pattern requirements.

## Recipe Analysis Workbook (RAW)

Use the *Recipe Analysis Workbook (RAW)* when developing recipes to determine the crediting statement. The *Recipe Analysis Workbook* is a tool for calculating the meal pattern contribution of a recipe's ingredients toward the vegetables, fruits, meats/meat alternates, and grains components of the CACFP meal pattern requirements.

The *Recipe Analysis Workbook (RAW)* is available in the Food Buying Guide (Appendix A) at <https://foodbuyingguide.fns.usda.gov/>



## STEPS TO COMPLETE THE RECIPE ANALYSIS WORKBOOK

Search and select only the recipe food ingredients that contribute to the meal pattern. These ingredients will automatically populate under the appropriate meal component tabs. It is important to select the correct form of the ingredient (fresh, frozen, etc.) from the *Food Buying Guide* (FBG). If an exact match is not available, choose a food item in the FBG that closely matches your recipe ingredient.

Please note there are three methods to calculate meal pattern contribution for grains:

### Method A

based on Exhibit A – Go to this tab to search and select ingredients from Exhibit A. ([https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/Exhibit\\_A\\_Grain\\_Requirements\\_For\\_Child\\_Nutrition\\_Programs.pdf](https://foodbuyingguide.fns.usda.gov/Content/TablesFBG/Exhibit_A_Grain_Requirements_For_Child_Nutrition_Programs.pdf))

### Method B

based on *Food Buying Guide* – This tab will automatically populate if food ingredients are selected from the search below.

### Method C

based on Grams of Creditable Grains – Go to this tab to manually enter grain ingredients. Use Method C for grain ingredients used in finished products that are listed in Groups A–I in Exhibit A. For example, your recipe is a roll (Group B) or a muffin (Group D).

NOTE: These instruction steps correspond to the numbers listed next to the data entry fields below.

NOTE: These instruction steps correspond to the numbers listed next to the data entry fields below.

1. Enter Recipe Name, Servings per Recipe, and Serving Size. These fields are required to calculate the Meal Pattern Contribution. The Recipe Number field is optional. Select a Folder to place the RAW (optional).
2. Search for food ingredients as listed in the *Food Buying Guide*.
3. Click the Add button to select the ingredient from the search results. The ingredient will display in the Food Ingredients Selected for Recipe table and on the corresponding Meal Component tab.

**Vegetables, Fruits, Meats/Meat Alternates, and Grains – Method B tabs – for each ingredient:**

4. Enter Quantity of Ingredient.
5. Enter Prepared Yield (if applicable).
6. Calculated Quantity to Purchase will automatically calculate. Meal Pattern Contribution will calculate per Meal Component and display on the Meal Pattern Contribution tab.

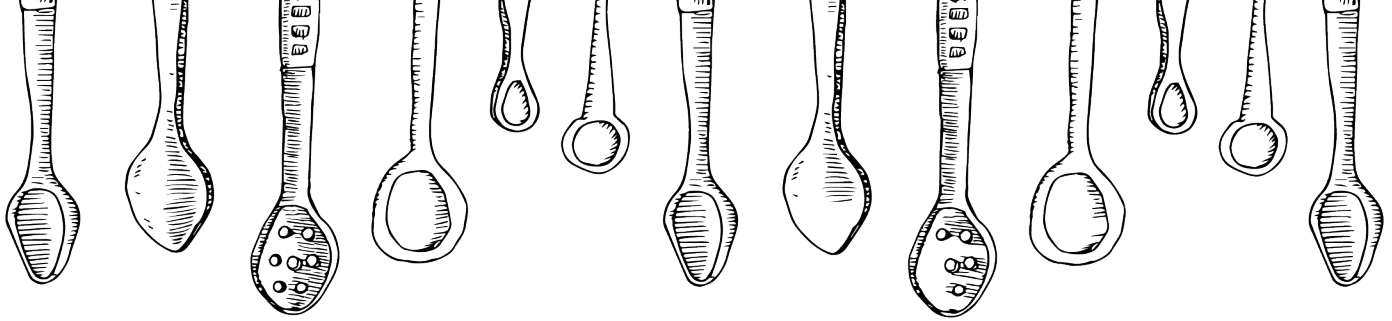
**Grains – Method A – for each ingredient:**

4. Search for ingredients as listed in Exhibit A.
5. Click the Add button to select the ingredient from the search results.
6. Enter Quantity of Product.
7. Enter Weight of One Unit.
8. Enter Measurement Unit.
9. Quantity of Product in Ounces will automatically calculate. Grains Meal Pattern Contribution will calculate and display on the Meal Pattern Contribution tab.

**Grains – Method C – for each ingredient:**

4. Click Add New Ingredient button to enter a creditable grain ingredient.
5. Enter Description of the Creditable Grain Ingredient.
6. From the drop-down menu, select the Exhibit A Group (A–I) that the end product belongs to.
7. Enter Quantity of Ingredient in Grams.
8. The Gram Standard of Creditable Grain per Oz Equivalent will automatically populate.
9. Grains Meal Pattern Contribution will calculate and display on the Meal Pattern Contribution tab.





## MARKETING GUIDE

The Marketing Guide provides suggested purchase quantities for ingredients, such as fresh fruits and vegetables that have a preparation loss to help prevent under- and over-purchasing. Recipes call for a specific amount of an ingredient. However, the ingredient amount is seldom equal to the purchasing amount for many types of food. It is recommended to add a Marketing Guide to all CACFP recipes that include fresh fruits and vegetables. USDA provides a Marketing Guide to standardized recipes with 25 or more servings to assist in purchasing the right amount of food for recipe production.

The marketing guide section of each recipe provides purchasing information, including:

- Food As Purchased (AP) – lists each food item to purchase
- Food quantity to purchase for each recipe yield; for example, 25 servings

### **Example**

The USDA CACFP *Arroz Con Queso (Rice with Cheese)* recipe calls for 12 oz of fresh, diced yellow onions when preparing 25 servings. The Marketing Guide on the recipe shows that 14 oz of mature yellow onions will trim and dice to 12 oz. Both measurements are weight. A volume amount of diced onion is also provided in the recipe:  $2\frac{1}{3}$  cups + 2 tsp. When appropriate, both weight and volume are listed in the recipe.



USDA United States Department of Agriculture **Arroz Con Queso**

INGREDIENTS	25 SERVINGS		50 SERVINGS		DIRECTIONS
	Weight	Measure	Weight	Measure	
					<b>6</b> Critical Control Point: Heat to 140 °F or higher for at least 15 seconds.
					<b>7</b> Critical Control Point: Hold for hot service at 140 °F or higher.
					<b>8</b> Set aside for step 11.
*Fresh green onions, diced		3 Tbsp ½ tsp	2 oz	¼ cup 2 Tbsp ⅔ tsp	<b>9</b> Combine onions, jalapeños, peppers, corn, chilies, pinto beans, sour cream, milk, half of the cheese, cilantro, flour, minced garlic, ancho chili powder, garlic powder, salt, and sugar in a large bowl. Stir well.
*Fresh yellow onions, chopped	12 oz	2½ cups 2 tsp			
*Fresh jalapeño peppers, chopped	2 oz	½ cup			

**Arroz Con Queso**

MARKETING GUIDE		
Food as Purchased for	25 Servings	50 Servings
Mature yellow onions	14 oz	1 lb 12 oz
Mature green onions	2 oz	4 oz
Jalapeño peppers	3 oz	6 oz
Red bell peppers	1 lb 7 oz	2 lb 14 oz

Recipe link: Arroz Con Queso (<https://theicn.org/cnrb/pdfs/cacfp/Arroz-Con-Queso.pdf>)

The *Food Buying Guide for Child Nutrition Programs* (FBG) shows how to determine marketing guide quantities. Use the FBG information under the Additional Information Column. The chart shows that 1 lb of fresh mature onions, when trimmed and cooked, yields about 0.78 lb of the finished product.

Other Vegetables - ONIONS, MATURE					
Onions, Mature, fresh <i>All sizes, Whole</i>	Pound	9.30	1/4 cup raw, chopped vegetable	10.80	1 lb AP = 0.88 lb ready-to-serve or -cook raw onion
	Pound	14.20	1/4 cup raw, sliced vegetable	7.10	1 lb AP = 0.88 lb ready-to-serve or -cook raw onion
	Pound	7.90	1/4 cup cooked vegetable pieces	12.70	1 lb AP = 0.78 lb cooked onion; 1 lb AP = 0.88 lb ready-to-serve or -cook raw onion
	Pound	7.10	1/4 cup cooked, whole vegetable	14.10	1 lb AP = 0.78 lb cooked onion; 1 lb AP = 0.88 lb ready-to-serve or -cook raw onion

# FOOD SAFETY GUIDELINES

Food safety must be a priority in all aspects of food production. Including food safety information in the recipe ensures the CACFP operator understands and follows safe food handling practices.

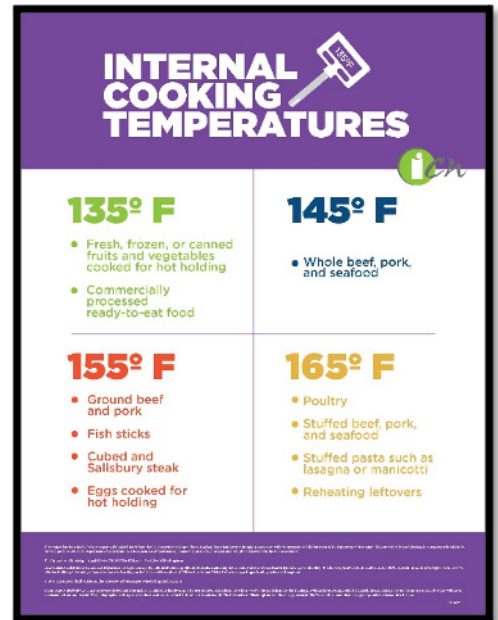
- Include procedures designed to ensure the safe production and service of food.
- Include the appropriate food safety temperature. This includes cooking, chilling, and final hot or cold holding temperatures.
- Include optional information about food allergens or developmental considerations such as choking hazards for young children.

## ICN Food Safety Tools and Resources

The Institute of Child Nutrition provides a variety of food safety resources that can assist recipe developers and program operators in ensuring their recipes and programs have the most up-to-date food safety procedures. Topics include employee health and hygiene, food safety standard operating procedures (SOPs), cooking and cooling procedures, and much more.

Please visit <https://theicn.org/icn-resources-a-z/food-safety-resources/> for the most up-to-date tools and resources.

Please check with state or local health authorities for guidance related to safe internal cooking temperatures.



## OPTIONAL INFORMATION

### **Service Style**

Include information about how the recipe will be served (e.g., family style meal service or pre-plated) in the Notes section of the recipe template.



### **Recipe Variations**

Include alternative ways of preparing the recipe. For example, using an oven, pressure cooker, slow cooker, air fryer, or multi-cooker.



### **Alternative Ingredients**

Include ingredients that can be substituted for a listed recipe ingredient. For example, bouillon cubes instead of stock. Consider seasonal ingredients and provide substitutions for when the ingredients may not be available. The use of alternative ingredients may alter the crediting information.



### **Optional Ingredients**

Include optional ingredients that can be added to the recipe. For example, using cilantro as a garnish. The use of optional ingredients may alter the crediting information.



## WRITING AND REVIEWING THE RECIPE

When reviewing the recipe, it is strongly encouraged to include the CACFP team in the review process. In addition to including the required information on the recipe template, it is also important to evaluate the following areas:

### Execution of the recipe

Does the kitchen have the equipment and staff skill level needed to produce the recipe?

### Ingredient sourcing

Are the ingredients available at the time of year the recipe is planned?

Does the cost of the ingredients work within the food budget?

### Production schedule

How long will it take to prepare the recipe from start to finish?

How will that affect other menu items?

What equipment will be needed for preparation?

Will there be conflicts with other menu items being prepared using the same equipment?

### Menu mix

How will the recipe be used in the menu?

Which other menu items will be offered on the same day/meal period? Is the crediting information included?

### Likeability

Will the participants like the recipe?

Have the participants' nutritional needs been met?

*Get feedback and buy-in from the CACFP staff since they will be preparing the recipe.*

A Recipe Review Checklist has been provided in Appendix C to verify the recipe includes all the information required to move into the recipe-testing phase.



## SMALL BATCH TESTING

The final step in the recipe verification phase is small batch testing. Once the recipe has gone through the initial steps of the Recipe Verification Phase, create a small batch of the recipe for the recipe development team and the program participants to taste test. To streamline the process and reduce food waste, this step and the informal evaluation taste test can be combined.

The recommended small batch size is 6 servings. Throughout the process of making the small batch version of the recipe, taste as you go, and keep careful notes about any variations made. Record this information directly on the recipe for future use.

Even minor changes to a recipe during small batch testing can change the contribution to meal pattern requirements. Use the *Food Buying Guide* and *Recipe Analysis Workbook* to verify accuracy.

A Small Batch Taste Testing Checklist and Quality Score Cards are provided in Appendix C to determine if the recipe or food product will meet the program's desired outcome.



## VERIFYING YIELD

Once the recipe has been tried and taste tested in a small batch and any adjustments made, verify the recipe for yield accuracy. Yield accuracy ensures that the crediting statement and number of portions between the written and prepared recipes correspond.

### Verify the correct yield has been reached.

- Verify that the ingredients, recipe, and serving yields are accurate.
- Determine the As Purchased (AP) quantity needed to yield the necessary Edible Portion (EP) quantity of an ingredient.
- Yields can vary depending on product quality, preparation techniques, cooking times, and temperatures.
- Recipe yield verification occurs once all the ingredients have been combined and the recipe preparation is completed.

### How to determine yield

- Specify recipe yield in the total quantity (weight and volume) and number of servings.
- Determine recipe yield by weighing the final product or measuring its volume.
- Determine the weight of a serving by taking the final product's total weight and dividing it by the number of servings the recipe makes.
- Include guidelines for portioning the product into individual servings in the recipe.
- Identify a serving utensil for each product.
- Compare the weights of the actual servings to the calculated serving weight to ensure portioning is done correctly.
- If the desired serving size is not achieved when verifying the yield, changes in the recipe, portioning, or ingredient amounts may be needed.

Test the recipe as many times as needed to produce the consistent and desired result. Make sure the recipe is tested, and you have achieved the same consistent results a minimum of three times before moving on to the product evaluation phase. As a reminder, the USDA defines a standardized recipe as one that has been tried, adapted, and retried at least three times and produces the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.

Once the recipe verification phase has been completed, the next step is the product evaluation phase.







# PHASE TWO: PRODUCT EVALUATION PHASE

---

The second phase in the recipe standardization process is product evaluation. It will help determine the acceptability of the recipe and provide objective information to improve the recipe. The informal and formal evaluation phase could be combined for family child care homes or smaller centers. In larger centers, consider two separate evaluations: informal and formal. This phase can be completed on a small or large scale depending on the program size and consists of two parts:

- **Informal Evaluation** – The CACFP operator conducts a simple small batch taste test.
- **Formal Evaluation** – The CACFP operator conducts a taste test with participants and program stakeholders.

Gathering feedback from taste testers who are the participants and stakeholders is key. Provide an appropriate evaluation for the intended age group and keep it simple. Sample taste-testing templates for CACFP participants and stakeholders are provided in Appendix C.

Gathering feedback could include:

- Age appropriate paper surveys
- Posters with stickers – “I Liked It!” “It’s Okay” “Maybe Next Time”
- Asking questions with a show of hands as a response
- Ballot boxes

It is important to explain tasting procedures and review the evaluation form for those who will be evaluating the product.

- Remind them of the importance of not making facial expressions or verbal comments about the food during the tasting.
- If asking for an evaluation of qualities such as moistness or temperature, explain what these terms mean.



The evaluation form will help determine the next steps for the recipe.

- If comments are very poor, then the recipe should be rejected.
- If comments are neutral, additional work may be needed. Consider making changes to ingredients, preparation directions, or cooking procedures. Repeat the first phase.
- If comments are positive, then the recipe is accepted as is.

Once the recipe is accepted, determine whether the recipe is in the correct quantity.

- If a different yield *is not needed*, the recipe is considered standardized, and the process is complete. Keep in mind, the recipe has now been produced with consistent results at least three times. Congratulations! The recipe is standardized!
- If a different yield *is needed*, the recipe moves to the quantity adjustment phase.

# PHASE THREE: QUANTITY ADJUSTMENT PHASE

---

If it is determined that a different yield is needed, then the recipe moves to phase three, which is quantity adjustment. Adjusting the recipe's quantity means scaling the recipe up or down to reflect the number of servings used in the program.

There are several ways to increase or decrease the ingredients in a standardized recipe:

- Factor method
- Direct reading tables method
- Percentage method
- Computerized recipe adjustments



## COMPARISON OF STANDARDIZED RECIPE ADJUSTMENT METHODS

Method	Advantages	Disadvantages	Initial Recipe	Final Recipe
Factor Method	<ul style="list-style-type: none"> <li>• Can be used for most recipes</li> <li>• Easy to use</li> </ul>	<ul style="list-style-type: none"> <li>• Math skills required</li> <li>• Does not calculate proportionally for certain ingredients</li> </ul>	<ul style="list-style-type: none"> <li>• Can start with any recipe and desired yield</li> </ul>	<ul style="list-style-type: none"> <li>• Final recipe can yield any number of servings desired</li> </ul>
Direct Reading Table Method	<ul style="list-style-type: none"> <li>• Minimal math skills required</li> </ul>	<ul style="list-style-type: none"> <li>• Direct reading tables must be available</li> <li>• Must know how to read tables</li> <li>• Can only be used for yields in multiples of 25</li> </ul>	<ul style="list-style-type: none"> <li>• Must have yield of 25 servings or multiples of 25 servings</li> </ul>	<ul style="list-style-type: none"> <li>• Yield of 25 servings or multiples of 25 servings (i.e., 50, 75, 100)</li> </ul>
Percentage Method	<ul style="list-style-type: none"> <li>• Further adjustments to a single recipe are easy after initial ingredient percentages are calculated</li> </ul>	<ul style="list-style-type: none"> <li>• Many steps in the process</li> <li>• Math skills required</li> <li>• Must use weights for all ingredients</li> <li>• Must calculate and adjust for handling loss</li> </ul>	<ul style="list-style-type: none"> <li>• Can start with any recipe and yield</li> <li>• Initial recipe ingredients must be in weights</li> </ul>	<ul style="list-style-type: none"> <li>• Yield can be any amount desired</li> <li>• All final ingredients are in weights</li> </ul>
Computerized Recipe Adjustment	<ul style="list-style-type: none"> <li>• Adjustments are easy after the recipe is entered into the system</li> <li>• No math skills needed</li> </ul>	<ul style="list-style-type: none"> <li>• Computer programs can be expensive</li> <li>• Some programs require ingredients to be entered in weights only</li> <li>• Ingredient quantities may be listed in decimals</li> </ul>	<ul style="list-style-type: none"> <li>• Can start with any recipe and desired yield</li> </ul>	<ul style="list-style-type: none"> <li>• Final recipe can yield any number of servings desired</li> </ul>

The factor method is most commonly used in CACFP programs to adjust the yield of a standardized recipe.

To use the factor method, follow these steps:

**Step 1:** Determine the factor to be used

**Step 2:** Multiply each ingredient (quantity) by the factor

**Step 3:** Change amounts into more common measurements

Here is an example of increasing a recipe from 6 to 25 servings for the first two steps:

**Step 1:** Determine the factor to be used:

desired serving yield (25) ÷ current serving yield (6) = factor  
 $25 \div 6 = 4.16$

**Step 2:** Multiply each ingredient (quantity) by the factor:

current measure x factor = new measure  
1.2 pounds (current measure for 6 servings) x 4.16 (factor) = 5 pounds (new measure for 25 servings)

NOTE: The factor to increase a recipe is always greater than 1.

Here is an example of decreasing a recipe from 25 to 6 servings for the first two steps:

**Step 1:** Determine the factor to be used:

desired serving yield (6) ÷ current serving yield (25) = factor  
 $6 \div 25 = 0.24$

**Step 2:** Multiply each ingredient by the factor:

current measure x factor = new measure  
5 pounds (current measure for 25 servings) x 0.24 (factor) = 1.2 pounds (new measure for 6 servings).

NOTE: The factor to decrease a recipe is always less than 1.

If necessary, use the third step:

**Step 3:** Change amounts into a more common measurement. A new measure may not convert to a useful measure.



## ACTIVITY: FACTOR METHOD

Instructions: Using the Factor Method, adjust the Spanish Rice recipe below to determine the amount of each ingredient needed to make 6 servings. The measure of some ingredients may need to be converted to simplify the math equation.

### Spanish Rice

Desired Yield: 6

Current Yield: 24

Factor: \_\_\_\_\_



Ingredients	24 Servings Recipe Amount	Converted Quantities	Factor	6 Servings Recipe Amount
Low sodium vegetable broth OR Water	1 qt 2 cups			
Salt	1 tsp			
Garlic, minced	2 Tbsp			
Brown rice, long-grain, regular, dry, parboiled OR Brown rice, medium-grain, regular, dry OR Brown rice, long-grain, regular, dry	1 lb 13 oz or 1 qt ½ cup  1 lb 14 oz or 1 qt  1 lb 11 oz or 1 qt ⅛ cup			
Variation: Cilantro, fresh, finely chopped	1 oz or 1 ¾ cups			
Variation: Limes, fresh, cut in half	2 each			
Variation: Turmeric, ground	2 tsp			

## ACTIVITY: FACTOR METHOD ANSWER KEY

Instructions: Using the Factor Method, adjust the Spanish Rice recipe below to determine the amount of each ingredient needed to make 6 servings. The measure of some ingredients may need to be converted to simplify the math equation.

### Spanish Rice

Desired Yield: 6

Current Yield: 24

Factor: \_\_\_\_\_



Ingredients	24 Servings	Converted Quantities	Factor	6 Servings
	Recipe Amount			Recipe Amount
Low sodium vegetable broth OR Water	1 qt 2 cups	6 cups	0.25	1 ½ cups
Salt	1 tsp	1 tsp	0.25	pinch
Garlic, minced	2 Tbsp	6 tsp	0.25	1 ½ tsp
Brown rice, long-grain, regular, dry, parboiled OR Brown rice, medium-grain, regular, dry OR Brown rice, long-grain, regular, dry	1 lb 13 oz or 1 qt ½ cup  1 lb 14 oz or 1 qt  1 lb 11 oz or 1 qt ⅛ cup	29 oz 4 ½ cups  30 oz 4 cups  27 oz 4 ⅛ cups	0.25	7 ¼ oz or 1 ⅛ cup  7 ½ oz or 1 cup  6 ¾ oz or 1 cup 1 ½ tsp
Variation: Cilantro, fresh, finely chopped	1 oz or 1 ¾ cups	1 oz or 28 Tbsp	0.25	¼ oz or 7 Tbsp
Variation: Limes, fresh, cut in half	2 each	2 each	0.25	½ lime
Variation: Turmeric, ground	2 tsp	2 tsp	0.25	½ tsp



**Step 1:** Determine the “factor” to be used.

The factor is determined by dividing the desired yield in servings (6) by the current yield in servings (24).

$$6 \div 24 = 0.25$$

**Step 2:** Multiply each ingredient quantity by the “factor.”

Several conversions could be done before multiplying to simplify the math.

For example, the 1 lb 13 oz of rice could be converted to 29 oz or 4½ cups.

**Step 3:** Change amounts into more common measurements.

Once the new quantities have been calculated, conversion to more common measures may be needed.

---

## ADDITIONAL CONSIDERATIONS

Some ingredients require special attention during the quantity adjustment phase. These ingredients do not increase or decrease proportionately:

- Herbs and spices
- Leavening agents – baking powder, baking soda, and yeast
- Thickening agents – flour, cornstarch, and eggs
- Liquids – water and juice

The best method to determine the quantities of these specific ingredients is to prepare the recipe. Once the recipe has the desired yield and the quantity adjustment phase is complete, there are no further steps.

**Congratulations! The recipe is standardized!**



## APPENDIX A: DEFINITIONS

### **CACFP Operator**

A CACFP operator prepares and serves meals and snacks to participants and receives reimbursements. Child care centers, adult care centers, afterschool care program operators, and emergency shelters can apply to participate in CACFP, independently or as a sponsored center.

### **Crediting Statement**

A crediting statement shows how much each creditable meal component contributes to the meal pattern requirements

### **Entrée (Main Dish)**

An item that is served as the main dish and is either:

- A combination food of meat and/or meat alternate and grains
- A combination food of vegetables and/or fruits and meat and/or meat alternates
- A combination food of meat and/or meat alternates and/or grains and/or vegetables and/or fruits
- A meat or meat alternate alone except for yogurt, low-fat or reduced-fat cheese, nuts, seeds, nut or seed butters, and meat snacks (such as dried beef jerky)

### **Food Buying Guide for Child Nutrition Programs (FBG)**

The authoritative guide developed by USDA to help child nutrition professionals determine how much food to purchase, in the most cost-effective manner, for crediting meal components in food-based menu planning. This can be especially helpful in preparing a new standardized recipe for meal service. FBG and related resources: <https://foodbuyingguide.fns.usda.gov/>

### **Recipe Analysis Workbook (RAW)**

A tool developed by USDA used to determine the expected meal pattern contribution and crediting statement for a recipe. This tool is available as part of the Food Buying Guide for Child Nutrition Programs: <https://foodbuyingguide.fns.usda.gov/>

### **Small Batch Servings**

A small batch of a recipe is prepared for the recipe development team and program participants to taste test. The recommended small batch size is 6 servings. Throughout the process of making the small batch version of the recipe, taste as you go, and keep careful notes about any variations made.

## Stakeholder

A stakeholder is an individual or group that has an interest in the decisions or activities of the CACFP program. Stakeholders may include parents, local and regional community members, suppliers, internal staff, and monitors. Additionally, stakeholders may include purchasers, clients, and owners.

## Standardized Recipe

A standardized recipe is a recipe that has been tried, adapted, and retried at least three times for use by a given CACFP operation. The recipe has been found to produce the same good results and yield every time it is prepared when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients.

A USDA standardized recipe for CACFP meals is verified, evaluated, and adjusted for yield quantities using a standardized process. It presents information for recipe yields in accordance with a specific template.

## Yield

Yield information is a valuable menu planning and production tool used to:

- Estimate the amount of food to purchase.
- Determine meal pattern contribution for each meal component.
- Help control food costs.
- Minimize food waste.
- Ensure an adequate quantity of food is produced each meal.
- Purchase the appropriate amount of food for the meal preparation.



## APPENDIX B: RESOURCES

### **Child Nutrition Recipe Box**

A resource for USDA Standardized Recipes for Child Nutrition Programs.

<https://theicn.org/cnr/>

### **Culinary Institute of Child Nutrition (CICN) Resources**

Visit the Culinary Institute of Child Nutrition (CICN) website for tips and strategies for preparing and serving healthy culinary-inspired meals.

<https://theicn.org/cicn/>

### **Food Buying Guide for Child Nutrition Programs (FBG) and Recipe Analysis Workbook (RAW)**

The *Food Buying Guide* (FBG) is the essential resource for food yield information for all child nutrition programs (CNP). The FBG assists with purchasing the correct amount of food and determining the contribution that each food makes toward meal pattern requirements.

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

### **Institute of Child Nutrition (ICN) Child Nutrition Sharing Site (CNSS)**

The Child Nutrition Sharing Site (CNSS) is an online information center providing Child Nutrition Programs with a means for sharing effective resources related to program operation. ICN's CNSS aids in the collection and sharing of state and local resources by providing a centralized place to store, organize, manage, and share knowledge and tools with other child nutrition professionals. This collaboration between ICN and USDA/FNS gives child nutrition professionals access to resources that support current Federal regulations, policies, and guidance.

<https://theicn.org/cnss/>

### **Institute of Child Nutrition (ICN) eLearning Portal**

The ICN eLearning Portal provides a variety of free online trainings for Child Nutrition Professionals.

<https://theicn.docebosaa.com/learn>

### **Institute of Child Nutrition (ICN) Mealtime Memo: Standardized Recipes, May 2023**

This Mealtime Memo focuses on creating a standardized recipe for simple menu items with just a few ingredients.

<https://theicn.org/memo-may-2023/>

### **National CACFP Sponsors Association**

This template offers a recipe example and helps with crediting recipes in the CACFP.

<https://www.cacfp.org/assets/pdf/Crediting+Recipes+in+the+CACFP+Fillable+12-15+cacfp.org/>

### **USDA Crediting Handbook for the Child and Adult Care Food Program**

*The Crediting Handbook* is a supplementary resource to the Food Buying Guide and contains additional information on creditable foods served in the CACFP. It reflects the updated CACFP meal pattern requirements. The handbook plays a key role in helping CACFP operators improve the health and nutrition of children and adults in the program while promoting the development of good eating habits through nutrition education.

<https://www.fns.usda.gov/tn/crediting-handbook-child-and-adult-care-food-program>

### **USDA Team Nutrition Crediting Tip Sheets in Child Nutrition Programs**

The crediting tip sheet series provides handy references for program operators on how to credit the five meal components in child nutrition programs. Each tip sheet provides simple, easy-to-use information for one meal component.

<https://www.fns.usda.gov/tn/crediting-tip-sheets-child-nutrition-programs>

### **USDA Team Nutrition Taste Testing Event Resources**

Use these resources to help plan and host a successful taste-testing event.

<https://www.fns.usda.gov/tn/taste-testing-event-resources>



## APPENDIX C: RECIPE STANDARDIZATION TOOLS AND TEMPLATES

CACFP Standardized Recipe Template

Recipe Review Checklist

Recipe Review Checklist Decision Guide

Small Batch Taste-Testing Checklist

Quality Score Cards

Taste-Testing Survey Templates (For Young CACFP Participants)

Taste-Testing Survey Template (For CACFP Stakeholders and Adult Participants)

Culinary Terms

Recipe Conversion Charts

*Food Buying Guide* Tables and Figures





# CACFP Standardized Recipe

Recipe Name:

Category:

Recipe Number:

Description:

Insert recipe photo here

Ages:  
Serving Size:  
Yield (# of Servings):  
Cook Time/Temperature:  
Prep Time:  
Utensil (ex. Scoop #):

Notes:

Ingredients	Amount		Directions
	For _____ Servings		
	Weight	Measure	

Meal Pattern Contribution (based on serving size)	
Meats/meat alternates (oz eq)	
Grains (oz eq)	
Fruits (cups)	
Vegetables (cups)	

Marketing Guide

# Recipe Review Checklist

The recipe review checklist is a tool to verify the recipe includes all the information required to move into the recipe-testing phase.

Review Steps	Questions	Yes	No	N/A	Action Needed
Title	Does the title reflect the content?				
	Is the title appealing to participants?				
Recipe category	Does the recipe list a category (main dish, side dish)?				
Ingredients	Are the ingredient names clear?				
	Are the ingredient names listed in the order they are used?				
	Does each ingredient's name list the product type/form (i.e., fresh, frozen, canned [drained, packed in syrup, packed in juice], dried, dehydrated, cooked)?  Does each ingredient's name list the pre-preparation technique (i.e., peeled, sliced, chopped, diced, grated, minced) and size, if applicable (¼ inch, ½ inch)?				
Weight or volume	Is there a weight and/or volume listed for each ingredient?				
Unit of measure	Is the unit of measure listed for each quantity and is it a commonly used one?				

Review Steps	Questions	Yes	No	N/A	Action Needed
Directions	Do the written directions clearly describe what needs to be done to prepare the recipe?				
Food preparation temperature	Is the preparation temperature listed on the recipe?				
Hot and cold holding temperature	Are the hot and cold holding temperatures listed on the recipe?				
Cooking and preparation time	Is the cooking time listed on the recipe? Have time standards been established for the recipe preparation?				
Serving size	Is the serving size listed on the recipe? Is the serving weight listed? Are directions listed for how to divide the product into individual servings?				
Recipe yield	Is the recipe yield listed?				
Equipment	If preparation equipment is needed, is it listed? Is the cooking equipment listed? Is the serving utensil listed?				
Food safety guidelines	Are food safety guidelines listed for each step of the process?				
Crediting statement	Are meal components appropriately credited?				

# Recipe Review Checklist Decision Guide

The recipe review checklist is a tool to verify the recipe includes all the information required to move into the recipe-testing phase.

Review Steps	Questions	Yes	No	N/A	Action Needed
Title	<p>Does the title reflect the content?</p> <p>Is the title appealing to participants?</p>				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, consider a new title.</li> <li>• If yes, move to the next review step.</li> <li>• If no, consider alternate titles to be used on the menu.</li> </ul>
Recipe category	Does the recipe list a category (main dish, side dish)?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the recipe category on the recipe.</li> </ul>
Ingredients	<p>Are the ingredient names clear?</p> <p>Are the ingredient names listed in the order they are used?</p> <p>Does each ingredient's name list the product type/form (i.e., fresh, frozen, canned [drained, packed in syrup, packed in juice], dried, dehydrated, cooked)?</p> <p>Does each ingredient's name list the pre-preparation technique (i.e., peeled, sliced, chopped, diced, grated, minced) and size, if applicable (¼ inch, ½ inch)?</p>				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, rewrite the ingredient name.</li> <li>• If yes, move to the next review step.</li> <li>• If no, change the order so ingredients are listed in the order used.</li> <li>• If yes, move to the next review step.</li> <li>• If no, add product type information to the ingredient name.</li> <li>• If yes, move to the next review step.</li> <li>• If no, list the preparation technique to the ingredient name.</li> </ul>
Weight or volume	Is there a weight and/or volume listed for each ingredient?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the weight (preferred) or volume for each ingredient.</li> </ul>

Review Steps	Questions	Yes	No	N/A	Action Needed
Unit of measure	Is the unit of measure listed for each quantity and is it a commonly used one?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the unit of measure for each quantity.</li> </ul>
Directions	Do the written directions clearly describe what needs to be done to prepare the recipe?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, write specific directions for preparing the recipe.</li> </ul>
Food preparation temperature	Is the preparation temperature listed on the recipe?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the cooking temperature.</li> </ul>
Hot and cold holding temperature	Are the hot and cold holding temperatures listed on the recipe?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the hot and cold holding temperatures.</li> </ul>
Cooking and preparation time	Is the cooking time listed on the recipe?  Have time standards been established for the recipe preparation?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the cooking time on the recipe.</li> <li>• If yes, move to the next review step.</li> <li>• If no, write the preparation times on the recipe.</li> </ul>

Review Steps	Questions	Yes	No	N/A	Action Needed
Serving size	<p>Is the serving size listed on the recipe?</p> <p>Is the serving weight listed?</p> <p>Are directions listed for how to divide the product into individual servings?</p>				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, the serving size will need to be determined when the recipe is prepared during the Verification Phase and listed on the recipe.</li> <li>• If yes, move to the next review step.</li> <li>• If no, list the serving weight of the product.</li> <li>• If yes, move to the next review step.</li> <li>• If no, list the directions for portioning the product.</li> </ul>
Recipe yield	Is the recipe yield listed?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, the yield will need to be determined when the recipe is prepared during the Verification Phase and listed on the recipe.</li> </ul>

Review Steps	Questions	Yes	No	N/A	Action Needed
Equipment	<p>If preparation equipment is needed, is it listed?</p> <p>Is the cooking equipment listed?</p> <p>Is the serving utensil listed?</p>				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list what preparation equipment should be used.</li> <li>• If yes, move to the next review step.</li> <li>• If no, list which piece(s) of equipment should be used.</li> <li>• If yes, move to the next review step.</li> <li>• If no, list the serving utensil</li> </ul>
Food safety guidelines	Are food safety guidelines listed for each step of the process?				<ul style="list-style-type: none"> <li>• If yes, move to the next review step.</li> <li>• If no, list the proper food safety guidelines</li> </ul>
Crediting statement	Are meal components appropriately credited?				<ul style="list-style-type: none"> <li>• If yes, the review is complete</li> <li>• If no, use the <i>Recipe Analysis Workbook</i> and/or <i>FBG Exhibit A</i> tool to complete the crediting statement.</li> </ul>



## Small Batch Taste-Testing Checklist

Questions	Yes	No	Corrective Action
Is the visual appearance of the product acceptable?			
Is the flavor of the product one that participants might enjoy?			
Are the ingredients in the recipe easily obtained?			
Is the texture of the recipe correct?			
Is the labor time to make the product reasonable?			
Does the staff possess the skills to prepare this item?			
Is the equipment available to prepare this item?			
Is the recipe acceptable enough to continue with more evaluation?			

### Decision Guidelines

- If the answer is yes to all the questions, then the recipe is acceptable and now the yield must be verified.
- If the answer is no to one or two of the above questions, return to the recipe, make necessary corrections and do another informal evaluation.
- If the answer is no to three or more of the above questions, modify or eliminate the recipe.



# Quality Scorecard for Meats, Poultry, and Fish

Date	Name of Menu Item:			
Proudly Prepared By:	Quality Scored By:			
<p>Instructions: When the food is ready to serve, use this Quality Scorecard to evaluate the quality. Mark YES when the food meets the standard and NO when it does not. Mark N/A (Not Applicable) when a specific quality standard does not apply to the evaluated food. Use the COMMENTS section to explain why the food does not meet a standard. Remember, the food should not be served if it does not meet the quality standards.</p>				
Quality Standards	Yes	No	N/A	Comments
<b>Appearance</b>				
Product appears moist.				
Product has been trimmed of any excess visible fat.				
Product has been drained, and no cooking fat is visible.				
Color is a rich brown, characteristic of the meat, poultry, or fish item.				
Browning is even and correct for the product (not too brown).				
Portions are uniform in size.				
Portions maintain integrity when being held during service.				
<b>Texture Or Consistency</b>				
Product is tender and easily chewed.				
Product can be pierced with a fork with minimum pressure.				
Product is firm and moist.				
<b>Flavor And Seasoning</b>				
Product is juicy.				
Flavor is fresh and appropriate for the product (no refrigerator taste or freezer burn).				
Seasonings enhance but do not overpower the taste (no greasy taste, not too much salt).				
<b>Service Temperature</b>				
Meat and poultry products served hot: 135 °F or above.				
Meat or poultry products served cold: 40 °F or below.				

# Quality Scorecard for Sandwiches

Date:		Name of Menu Item:		
Proudly Prepared By:		Quality Scored By:		
<p>Instructions: When the food is ready to serve, use this Quality Scorecard to evaluate the quality. Mark YES when the food meets the standard and NO when it does not. Mark N/A (Not Applicable) when a specific quality standard does not apply to the evaluated food. Use the COMMENTS section to explain why the food does not meet a standard. Remember, the food should not be served if it does not meet the quality standards.</p>				
Quality Standards	Yes	No	N/A	Comments
<b>Appearance</b>				
The proportion of sandwich filling to bread is balanced.				
Vegetable accompaniments are attractive and not wilted.				
If sandwich is toasted, the color of the bread is even and golden.				
<b>Texture Or Consistency</b>				
Sandwich bread is fresh.				
Crumbs are moist but not doughy.				
Vegetables, if used, are crisp.				
<b>Flavor And Seasoning</b>				
Flavors of the filling, spread, and accompaniments complement each other.				
Bread is free from unexpected flavors such as rancid fat or sour taste.				
<b>Service Temperature</b>				
Cold sandwiches: 34 °F – 38 °F.				
Hot sandwiches: 135 °F or above.				

# Quality Scorecard for Pasta, Rice, and Grains

Date:		Name of Menu Item:		
Proudly Prepared By:		Quality Scored By:		
<p>Instructions: When the food is ready to serve, use this Quality Scorecard to evaluate the quality. Mark YES when the food meets the standard and NO when it does not. Mark N/A (Not Applicable) when a specific quality standard does not apply to the evaluated food. Use the COMMENTS section to explain why the food does not meet a standard. Remember, the food should not be served if it does not meet the quality standards.</p>				
Quality Standards	Yes	No	N/A	Comments
<b>Appearance</b>				
Pasta strands or pieces are distinct.				
Rice grains are intact (still whole).				
Grains/cereals have distinct particles, grains, or flakes.				
Product is moist but not watery.				
No oil or fat is visible.				
<b>Texture Or Consistency</b>				
Pasta pieces are tender (al dente) but not gummy.				
Rice/grains are firm but tender, fluffy.				
Cereal is thick but not gummy.				
Portions maintain integrity when being held during service.				
Product does not have lumps.				
<b>Flavor And Seasoning</b>				
Flavor is bland but does not taste starchy.				
Flavor is typical of the grain.				
Product is free from a scorched or burned taste.				
A mixed dish is well seasoned but not to excess.				
<b>Service Temperature</b>				
Hot pasta, rice, and grain dishes: 135 °F or above.				
Cold pasta, rice, or grain salads: 34 °F – 38 °F.				

# Quality Scorecard for Cooked Vegetables

Date:	Name of Menu Item:			
Proudly Prepared By:	Quality Scored By:			
<p>Instructions: When the food is ready to serve, use this Quality Scorecard to evaluate the quality. Mark YES when the food meets the standard and NO when it does not. Mark N/A (Not Applicable) when a specific quality standard does not apply to the evaluated food. Use the COMMENTS section to explain why the food does not meet a standard. Remember, the food should not be served if it does not meet the quality standards.</p>				
Quality Standards	Yes	No	N/A	Comments
<b>Appearance</b>				
Bright color typical of the vegetable.				
Vegetable pieces are similar in size.				
Vegetable pieces are intact (pieces are not overcooked with a mushy appearance).				
Garnish is edible and appropriate for the dish.				
<b>Texture Or Consistency</b>				
Vegetable is fork-tender (slightly crisp and not overcooked).				
All pieces of the vegetable have the same texture.				
Vegetables in casserole-type recipes are well-blended, tender, and identifiable.				
<b>Flavor And Seasoning</b>				
Vegetable has a definite, good flavor.				
Seasonings are detectable but not overpowering.				
Seasonings enhance the vegetable flavor.				
A minimal amount of salt has been added (according to the recipe, if applicable).				
If a sauce is used, it complements the vegetable (mild, not overpowering).				
<b>Service Temperature</b>				
Hot: 135 °F or above.				

# Taste-Testing Survey Templates for Younger Participants



## Score Card for Preschoolers

Child's name: \_\_\_\_\_

Name of food tasted: \_\_\_\_\_

Drawing of fruit or vegetable tasted:



**How did it taste?**



I liked it!



It's okay.



Maybe next time.

# KIDS FOOD CRITIC ACTIVITY

Let kids select a new fruit, vegetable, or recipe to sample. Have them taste the food and rate it based on visual appeal, smell, taste, and texture using a scale of 1 to 5 where 5 is the best.



DRAW FOOD HERE!

	Visual Appeal	1	2	3	4	5	—
		○	○	○	○	○	○
	Smell	1	2	3	4	5	—
		○	○	○	○	○	○
Taste	1	2	3	4	5	—	
	○	○	○	○	○	○	
Texture	1	2	3	4	5	—	
	○	○	○	○	○	○	

**TOTAL:** —

TOTAL SCORE

Serve it again?

YES    NO

**FOR EXTRA FUN:**

- Have kids choose and prepare foods and have friends, siblings, or parents sample and rate them.
- Present 3 new recipes to sample and compare them.

[https://fns-prod.azureedge.us/sites/default/files/tn/Food\\_Critic\\_508.pdf](https://fns-prod.azureedge.us/sites/default/files/tn/Food_Critic_508.pdf)



# Try-Day Taste-Testing Ballot

Copy, cut out, and distribute the ballots to elementary school students so they can share their thoughts on new foods they have tried.



## Make Today a Try-Day!



**It's fun to find new favorite foods!**

Write the name of the food you tried and then circle the faces below to tell us how you feel about it.

The food I tried: \_\_\_\_\_

The food looked:

The food tasted:

The food smelled:

The food made me feel:

## Make Today a Try-Day!



**It's fun to find new favorite foods!**

Write the name of the food you tried and then circle the faces below to tell us how you feel about it.

The food I tried: \_\_\_\_\_

The food looked:

The food tasted:

The food smelled:

The food made me feel:

# Taste-Testing Survey Template for CACFP Stakeholders and Adult Participants

Please rate the following traits of this product using the scale provided.

Recipe Name:	Very Undesirable	Moderately Undesirable	Neither Desirable nor Undesirable	Moderately Desirable	Very Desirable
The appearance of the food	1	2	3	4	5
The taste of the food	1	2	3	4	5
The temperature of the food	1	2	3	4	5
The texture of the food	1	2	3	4	5
The overall acceptability of the food	1	2	3	4	5



## CULINARY TERMS

**Al dente** – to cook until tender but still slightly firm, usually used to describe pasta but can also apply to vegetables; Italian cooking term that translates literally “to the tooth”

**As Purchased (AP)** – the amount of food item as it is purchased before any preparation has been completed

**Bias cut** – cutting on the diagonal, which improves visual appeal, and increases surface area for faster cooking or better browning

**Bake** – to cook by dry heat, usually in an oven. A suitable cooking method for bread and many other foods

**Baste** – to spoon liquids, sauce, or meat juice over food to keep it moist during cooking and to add flavor

**Beat** – to mix vigorously by hand or with mixing equipment to make a mixture light, fluffy, or smooth

**Blanch** – to scald vegetables in boiling water or steam for a short time, typically followed by a quick, thorough cooling in very cold or ice water

**Blend** – to mix two or more ingredients

**Boil** – to cook rapidly in water or a liquid so that the bubbles rise and break on the surface

**Braise** – to cook slowly in a covered container with a small amount of liquid or water; a good method for less tender cuts of meat

**Bread** – to coat food with bread crumbs, cracker crumbs, or flour before cooking

**Broil** – to cook by direct heat from a flame, electric unit, or glowing coals; a suitable cooking method for tender meat cuts

**Brown** – to cook food, generally meat, until it is uniformly brown on all sides

**Chill** – to cool food with ice water or refrigeration

**Chop** – to cut food into small pieces with a knife or chopping equipment

**Combine** – to mix two or more ingredients

**Cream** – to work foods such as shortening and sugar together with a spoon or mixer until soft, fluffy, and thoroughly blended

**Crumb** – to cover a food with bread (or cracker) crumbs or to break food, such as bread, into crumbs

**Cut in** – to mix solid fat, such as butter or margarine, into dry ingredients with a cutting motion so that the fat remains in small particles

**Dice** – to cut into small cubes with a knife or chopping equipment

**Dredge** – to coat a food by dipping in crumbs, flour, cornmeal, sugar, or other coatings

**Edible Portion (EP)** – the amount of a food item that is ready for use in a recipe after all preparation

**Fold** – to combine several food ingredients into a mixture by gently turning the mixture, with a minimum of motions, until the ingredients are blended

**Fry** – to cook in fat over heat in a skillet, pan, or griddle, or in a fryer

**Glaze** – to coat with a mixture to produce a glossy appearance on the food

**Grill** – to cook uncovered over direct heat on a griddle or pan, removing fat as it accumulates

**Grind** – to chop or pulverize food, such as meat, into small particles by using a food chopping device or meat grinder

**Julienne** – to cut food in narrow, lengthwise strips, resembling matchsticks

**Knead** – to work with dough, such as bread dough, by pressing, folding, and stretching to develop the dough structure

**Leaven** – to cause food, such as bread, to rise and increase volume by adding a leavening agent, such as yeast or baking powder

**Marinate** – to treat food with a marinade to add flavor, and when used with meats, to provide some tenderizing action

**Melt** – to turn solid food into liquid by heating

**Mince** – to finely chop food, such as garlic, into very small pieces

**Mix** – to blend or combine with two or more foods or ingredients

**Parboil** – to boil in water briefly as a preliminary cooking step; may be used with vegetables and meat

**Pare** – to thinly trim off the outer covering or skin of a food, such as potatoes

**Peel** – to strip off the outer covering of a food, such as oranges

**Punch down** – to remove air bubbles from risen yeast dough by pushing the dough down with fists

**Reconstitute** – to bring back a concentrated food, such as a juice concentrate, to the original strength—or dry food, such as nonfat dry milk, to the original state—by adding liquid

**Rehydrate** – to add fluids back into a dried food, such as dehydrated onions

**Roast** – to bake without water, uncovered, in an oven

**Scald** – to heat a liquid (such as milk) to a temperature just below the boiling point; tiny bubbles will appear around the edge of the pan

**Shred** – to cut or grate foods into narrow strips

**Simmer** – to cook in liquid that is kept just below the boiling point

**Slice** – to cut a food with a knife or slicing equipment

**Steam** – to cook food with steam, with or without pressure

**Stir** – to mix with a circular motion

**Stir-fry** – to cook quickly, in a small amount of oil or water, tossing and stirring lightly to preserve the shape of the food

**Whip** – to rapidly beat a food (such as eggs or cream), incorporating air to lighten the mixture and increase its volume; usually done with a whisk, fork, or mixing equipment





## Recipe Conversion and Abbreviation Charts

### Converting Fractions Converting Fractions

$\frac{1}{8}$	0.125
$\frac{1}{4}$	0.250
$\frac{1}{3}$	0.333
$\frac{3}{8}$	0.375
$\frac{1}{2}$	0.500
$\frac{5}{8}$	0.625
$\frac{2}{3}$	0.666
$\frac{3}{4}$	0.750
$\frac{7}{8}$	0.875

### Abbreviations Used in Standardized Recipes

Measurement	Abbreviation
teaspoon	tsp
tablespoon	Tbsp
cup	cup
quart	qt
gallon	gal
ounce	oz
pound	lb
fluid ounces	fl oz

# Weight and Volume Conversion

Teaspoon to Tablespoons	Cups to Quarts
3 tsp = 1 Tbsp	4 cups = 1 qt
1½ tsp = ½ Tbsp	3 cups = ¾ qt
1 tsp = ⅓ Tbsp	2 cups = ½ qt
	1 cups = ¼ qt
Tablespoon to Cups	Quarts to Gallons
16 Tbsp = 1 cup	4 qt = 1 gal
12 Tbsp = ¾ cup	3 qt = ¾ gal
10⅔ Tbsp = ⅔ cup	2 qt = ½ gal
8 Tbsp = ½ cup	1 qt = ¼ gal
5½ Tbsp = ⅓ cup	
4 Tbsp = ¼ cup	
Ounces to Pounds	Fluid Ounces to Volume Measure
16 oz = 1 lb (1.00 lb)	½ fl oz = 1 Tbsp
14 oz = ⅞ lb (0.875 lb)	2 fl oz = ¼ cup
12 oz = ¾ lb (0.750 lb)	2.65 fl oz = ⅓ cup
10 ⅔ oz = ⅔ lb (0.667 lb)	4 fl oz = ½ cup
10 oz = ⅝ lb (0.625 lb)	5.36 fl oz = ⅔ cup
8 oz = ½ lb (0.500 lb)	6 fl oz = ¾ cup
6 oz = ⅜ lb (0.375 lb)	8 fl oz = 1 cup
5 ⅓ oz = ⅓ lb (0.333 lb)	16 fl oz = 1 pt
4 oz = ¼ lb (0.250 lb)	32 fl oz = 1 qt
2 oz = ⅛ lb (0.125 lb)	64 fl oz = 2 qt or ½ gal
1 oz = ⅙ lb (0.063 lb)	128 fl oz = 1 gal



# Rounding Rules

Weights	
If the total amount of an ingredient is	Round it to
Less than 2 oz	Volume measure only unless weight $\frac{1}{4}$ , $\frac{1}{2}$ , or $\frac{3}{4}$ oz amounts
2 to 10 oz	Nearest $\frac{1}{4}$ oz
10 oz to 2 lb 8 oz	Nearest $\frac{1}{2}$ oz
2 lb 8 oz to 5 lb	Nearest full oz
5 lb or more	Nearest 2 oz
Measures	
If the total amount of an ingredient is	Round it to
Less than 2 Tbsp	Nearest $\frac{1}{4}$ tsp
2 Tbsp to $\frac{1}{2}$ cup	Nearest tsp
$\frac{1}{2}$ cup to $\frac{3}{4}$ cup	Nearest Tbsp (unless measure $\frac{2}{3}$ cup)
$\frac{3}{4}$ cup to 2 cups	Nearest Tbsp (unless measure $1\frac{1}{3}$ or $1\frac{2}{3}$ cups)
2 cups to 1 qt	Nearest $\frac{1}{4}$ cup
2 qt to 4 qt	Nearest $\frac{1}{2}$ cup
1 gal to 2 gal	Nearest full cup
2 gal or more	Nearest full qt

## Converting to Decimal Part of a Pound

Ounces	Decimal Part of lb
$\frac{1}{4}$	0.016
$\frac{1}{3}$	0.021
$\frac{1}{2}$	0.031
$\frac{2}{3}$	0.042
$\frac{3}{4}$	0.047
1	0.063
$1 \frac{1}{4}$	0.078
$1 \frac{1}{3}$	0.083
$1 \frac{1}{2}$	0.094
$1 \frac{2}{3}$	0.104
$1 \frac{3}{4}$	0.109
2	0.125
$2 \frac{1}{4}$	0.141
$2 \frac{1}{3}$	0.146
$2 \frac{1}{2}$	0.156
$2 \frac{2}{3}$	0.166
$2 \frac{3}{4}$	0.172
3	0.188
$3 \frac{1}{4}$	0.203
$3 \frac{1}{3}$	0.208
$3 \frac{1}{2}$	0.219
$3 \frac{2}{3}$	0.229
$3 \frac{3}{4}$	0.234
4	0.250
$4 \frac{1}{4}$	0.266
$4 \frac{1}{3}$	0.271
$4 \frac{1}{2}$	0.281
$4 \frac{2}{3}$	0.292
$4 \frac{3}{4}$	0.297

Ounces	Decimal Part of lb
5	0.313
$5 \frac{1}{4}$	0.328
$5 \frac{1}{3}$	0.333
$5 \frac{1}{2}$	0.344
$5 \frac{2}{3}$	0.354
$5 \frac{3}{4}$	0.359
6	0.375
$6 \frac{1}{4}$	0.391
$6 \frac{1}{3}$	0.393
$6 \frac{1}{2}$	0.406
$6 \frac{2}{3}$	0.417
$6 \frac{3}{4}$	0.422
7	0.438
$7 \frac{1}{4}$	0.453
$7 \frac{1}{3}$	0.456
$7 \frac{1}{2}$	0.469
$7 \frac{2}{3}$	0.479
$7 \frac{3}{4}$	0.484
8	0.500
$8 \frac{1}{4}$	0.516
$8 \frac{1}{3}$	0.521
$8 \frac{1}{2}$	0.531
$8 \frac{2}{3}$	0.542
$8 \frac{3}{4}$	0.547
9	0.563
$9 \frac{1}{4}$	0.578
$9 \frac{1}{3}$	0.583
$9 \frac{1}{2}$	0.594
$9 \frac{2}{3}$	0.604
$9 \frac{3}{4}$	0.609

Ounces	Decimal Part of lb
10	0.625
10 $\frac{1}{4}$	0.641
10 $\frac{1}{3}$	0.644
10 $\frac{1}{2}$	0.656
10 $\frac{2}{3}$	0.667
10 $\frac{3}{4}$	0.672
11	0.688
11 $\frac{1}{4}$	0.703
11 $\frac{1}{3}$	0.708
11 $\frac{1}{2}$	0.719
11 $\frac{2}{3}$	0.729
11 $\frac{3}{4}$	0.734
12	0.750
12 $\frac{1}{4}$	0.766
12 $\frac{1}{3}$	0.771
12 $\frac{1}{2}$	0.781
12 $\frac{2}{3}$	0.792
12 $\frac{3}{4}$	0.797
13	0.813
13 $\frac{1}{4}$	0.828
13 $\frac{1}{3}$	0.833
13 $\frac{1}{2}$	0.844
13 $\frac{2}{3}$	0.854
13 $\frac{3}{4}$	0.859
14	0.875
14 $\frac{1}{4}$	0.891
14 $\frac{1}{3}$	0.896
14 $\frac{1}{2}$	0.906
14 $\frac{2}{3}$	0.917

Ounces	Decimal Part of lb
14 $\frac{3}{4}$	0.922
15	0.938
15 $\frac{1}{4}$	0.953
15 $\frac{1}{3}$	0.958
15 $\frac{1}{2}$	0.969
15 $\frac{2}{3}$	0.979
15 $\frac{3}{4}$	0.984
16	1.00

# Abbreviation and Symbols

Abbreviation	Meaning
AP	as purchased
EP	edible portion
incl	including
excl	excluding
cyl	cylinder
pkg	package
No.	number
approx.	approximately
wt	weight
oz	ounce
lb	pound
g	gram
kg	kilogram
vol	volume
tsp	teaspoon
Tbsp	tablespoon
fl oz	fluid ounce
c	cup
pt	pint
qt	quart
gal	gallon
mL	milliliter
L	liter
oz eq	ounce equivalent

## Common Can and Jar Sizes

### Average Net Weight or Fluid Measure and Average Volume per Can

Can Size	Average Net Weight or Fluid Measure per Can		Average Volume per Can	
	Customary	Metric	Cups	Liters
No. 10	6 lb (96 oz) to 7 lb 5 oz (117 oz)	2.72 kg to 3.31 kg	12 cups to 13 <sup>2</sup> / <sub>3</sub> cups	2.84 L to 3.24 L
No. 3 Cyl	51 oz (3 lb 3 oz) or 46 fl oz (1 qt 14 fl oz)	1.44 kg or 1.36 L	5 <sup>3</sup> / <sub>4</sub> cups	1.36 L
No. 2 <sup>1</sup> / <sub>2</sub>	26 oz (1 lb 10 oz) to 30 oz (1 lb 14 oz)	737 g to 850 g	3 <sup>1</sup> / <sub>2</sub> cups	0.83 L
No. 2 Cyl	24 fl oz	709 mL	3 cups	0.71 L
No. 2	20 oz (1 lb 4 oz) or 18 fl oz (1 pt 2 fl oz)	567 g or 532 mL	2 <sup>1</sup> / <sub>2</sub> cups	0.59 L
No. 300	14 oz to 16 oz (1 lb)	396 g to 453 g	1 <sup>3</sup> / <sub>4</sub> cups	0.41 L
No. 2 (Vacuum)	12 oz	340 g	1 <sup>1</sup> / <sub>2</sub> cups	0.36 L
No. 1 (Picnic)	10 <sup>1</sup> / <sub>2</sub> oz to 12 oz	297 g to 340 g	1 <sup>1</sup> / <sub>4</sub> cups	0.30 L
8 oz	8 oz	226 g	1 cup	0.24 L

## Common Can and Jar Sizes per Case and Principal Products

Can Size	Cans Per Case	Principal Products
No. 10	6 cans per case	Institutional size: Fruits, vegetables, some other foods
No. 3 Cyl	12 cans per case	Institutional size: Condensed soups, some vegetables, meat and poultry products, fruit, and vegetable juices
No. 2½	24 cans per case	Family size: Fruits, some vegetables
No. 2 Cyl	24 cans per case	Family size: Juices, soups
No. 2	24 cans per case	Family size: Juices, ready-to-serve soups, some fruits
No. 300	24 cans per case	Small cans: Some fruits and meat products
No. 2 (Vacuum)	24 cans per case	Small cans: Principally vacuum-packed corn
No. 1 (Picnic)	48 cans per case	Small cans: Condensed soups, some fruits, vegetables, meat, fish
8 oz	48 or 72 cans per case	Small cans: Ready-to-serve soups, fruits, vegetables

## A Guide for Substituting Cans

Can Size in Yield Table	No.10	No. 3 Cyl	No. 2½	No. 2	No. 300
No. 10	1.0	2.1	3.7	5.3	7.4
No. 3 Cyl	0.5	1.0	1.8	2.6	3.3
No. 2½	0.3	0.6	1.0	1.5	2.0
No. 2	0.2	0.4	0.7	1.0	1.5
No. 300	0.1	0.3	0.5	0.7	1.0

## Decimal Weight Equivalents

Ounces	Pounds
1 oz	0.06 lb
2 oz	0.12 lb
3 oz	0.19 lb
4 oz	0.25 lb
5 oz	0.31 lb
6 oz	0.38 lb
7 oz	0.44 lb
8 oz	0.50 lb
9 oz	0.56 lb
10 oz	0.62 lb
11 oz	0.69 lb
12 oz	0.75 lb
13 oz	0.81 lb
14 oz	0.88 lb
15 oz	0.94 lb
16 oz	1.00 lb
32 oz	2.00 lb
35 oz	2.19 lb
48 oz	3.00 lb
64 oz	4.00 lb
71 oz	4.44 lb
80 oz	5.00 lb
96 oz	6.00 lb
106 oz	6.63 lb
112 oz	7.00 lb
128 oz	8.00 lb
141 oz	8.82 lb
144 oz	9.00 lb
160 oz	10.00 lb

## Decimal Equivalents of Commonly Used Fractions

Fraction	Decimal
$\frac{1}{8}$	0.125
$\frac{1}{4}$	0.250
$\frac{1}{3}$	0.333
$\frac{3}{8}$	0.375
$\frac{1}{2}$	0.500
$\frac{5}{8}$	0.625
$\frac{2}{3}$	0.667
$\frac{3}{4}$	0.750
$\frac{7}{8}$	0.875

## Converting Decimal Equivalents to the Nearest Portion of a Cup for Fruits and Vegetables

If decimal equivalent is	The recipe contributes
0.125 – 0.249	$\frac{1}{8}$ cup
0.250 – 0.374	$\frac{1}{4}$ cup
0.375 – 0.499	$\frac{3}{8}$ cup
0.500 – 0.624	$\frac{1}{2}$ cup
0.625 – 0.749	$\frac{5}{8}$ cup
0.750 – 0.874	$\frac{3}{4}$ cup
0.875 – 0.999	$\frac{7}{8}$ cup
1.000 – 1.124	1 cup

# Decimal Equivalents for Fractions of a Unit

Whole units are on the left. The fraction or part of the unit is to the right.

If the whole units are:	The decimal equivalents part are of:
Ounces	1 pound
Tablespoons	1 cup
Cups	1 gallon

## Fraction or Part of the Unit

Number of Units	–	+ $\frac{1}{4}$ of unit	+ $\frac{1}{3}$ of unit	+ $\frac{1}{2}$ of unit	+ $\frac{2}{3}$ of unit	+ $\frac{3}{4}$ of unit
0	–	0.02	0.02	0.03	0.04	0.05
1	0.06	0.08	0.08	0.09	0.10	0.11
2	0.12	0.14	0.15	0.16	0.17	0.17
3	0.19	0.20	0.21	0.22	0.23	0.23
4	0.25	0.27	0.27	0.28	0.29	0.30
5	0.31	0.33	0.33	0.34	0.35	0.36
6	0.38	0.39	0.40	0.41	0.42	0.42
7	0.44	0.45	0.46	0.47	0.48	0.48
8	0.50	0.52	0.52	0.53	0.54	0.55
9	0.56	0.58	0.58	0.59	0.60	0.61
10	0.62	0.64	0.65	0.66	0.67	0.67
11	0.69	0.70	0.71	0.72	0.73	0.73
12	0.75	0.77	0.77	0.78	0.79	0.80
13	0.81	0.83	0.83	0.84	0.85	0.86
14	0.88	0.89	0.90	0.91	0.92	0.92
15	0.94	0.95	0.96	0.97	0.98	0.98
16	1.00	1.02	1.02	1.03	1.04	1.05



## A Guide to Metric Conversions

To change	To	Multiply by
ounces (oz)	grams (g)	28.35
pounds (lb)	grams (g)	453.6
pounds (lb)	kilograms (kg)	0.4536
teaspoons (tsp)	milliliters (mL)	4.93
tablespoons (Tbps)	milliliters (mL)	14.79
fluid ounces (fl oz)	milliliters (mL)	29.57
cups (c)	liters (L)	0.236
pints (pt)	liters (L)	0.473
quarts (qt)	liters (L)	0.946
gallons (gal)	liters (L)	3.785

## Metric Equivalents by Weight

Customary Unit	Metric Unit
Fluid Ounces (fl oz)	Grams (g)
1 oz	28.35 g
4 oz	113.4 g
8 oz	226.8 g
16 oz	453.6 g
Pounds (lb)	Grams (g)
1 lb	453.6 g
2 lb	907.2 g
Pounds (lb)	Kilograms (kg)
2.2 lb	1 kg (1000 g)

## Metric Equivalents by Volume

Customary Unit Fluid ounces (fl oz)	Metric Unit
1 cup (8 fl oz)	236.59 milliliters (mL)
1 quart (32 fl oz)	946.36 milliliters (mL)
1.5 quarts (48 fl oz)	1.42 liters (L)
33.818 fl oz	1.0 liters (L)

## Guide to Volume Equivalents for Liquids

1 tablespoon	= 3 teaspoons	= 0.5 fluid ounce
$\frac{1}{8}$ cup	= 2 tablespoons	= 1 fluid ounce
$\frac{1}{4}$ cup	= 4 tablespoons	= 2 fluid ounces
$\frac{1}{3}$ cup	= $5\frac{1}{3}$ tablespoons	= 2.65 fluid ounces
$\frac{3}{8}$ cup	= 6 tablespoons	= 3 fluid ounces
$\frac{1}{2}$ cup	= 8 tablespoons	= 4 fluid ounces
$\frac{5}{8}$ cup	= 10 tablespoons	= 5 fluid ounces
$\frac{2}{3}$ cup	= $10\frac{2}{3}$ tablespoons	= 5.3 fluid ounces
$\frac{3}{4}$ cup	= 12 tablespoons	= 6 fluid ounces
$\frac{7}{8}$ cup	= 14 tablespoons	= 7 fluid ounces
1 cup	= 16 tablespoons	= 8 fluid ounces
$\frac{1}{2}$ pint	= 1 cup	= 8 fluid ounces
1 pint	= 2 cup	= 16 fluid ounces
1 quart	= 2 pints	= 32 fluid ounces
1 gallon	= 4 quarts	= 128 fluid ounces
1 peck	= 8 quarts (dry)	
1 bushel	= 4 pecks	

## Sizes and Capacities of Scoops (for Dishers)

Number on Scoop (Disher)	Level Measure
6	$\frac{2}{3}$ cup
8	$\frac{1}{2}$ cup
10	$\frac{3}{8}$ cup
12	$\frac{1}{3}$ cup
16	$\frac{1}{4}$ cup
20	$3\frac{1}{3}$ tablespoons
24	$2\frac{2}{3}$ tablespoons
30	2 tablespoons
40	$1\frac{2}{3}$ tablespoons
50	$3\frac{3}{4}$ teaspoons
60	$3\frac{1}{4}$ teaspoons
70	$2\frac{3}{4}$ teaspoons
100	2 teaspoons

## Sizes and Capacities of Ladles

Number on Ladles	Approximate Measure
1 ounce	$\frac{1}{8}$ cup
2 ounce	$\frac{1}{4}$ cup
4 ounce	$\frac{1}{2}$ cup
6 ounce	$\frac{3}{4}$ cup
8 ounce	1 cup

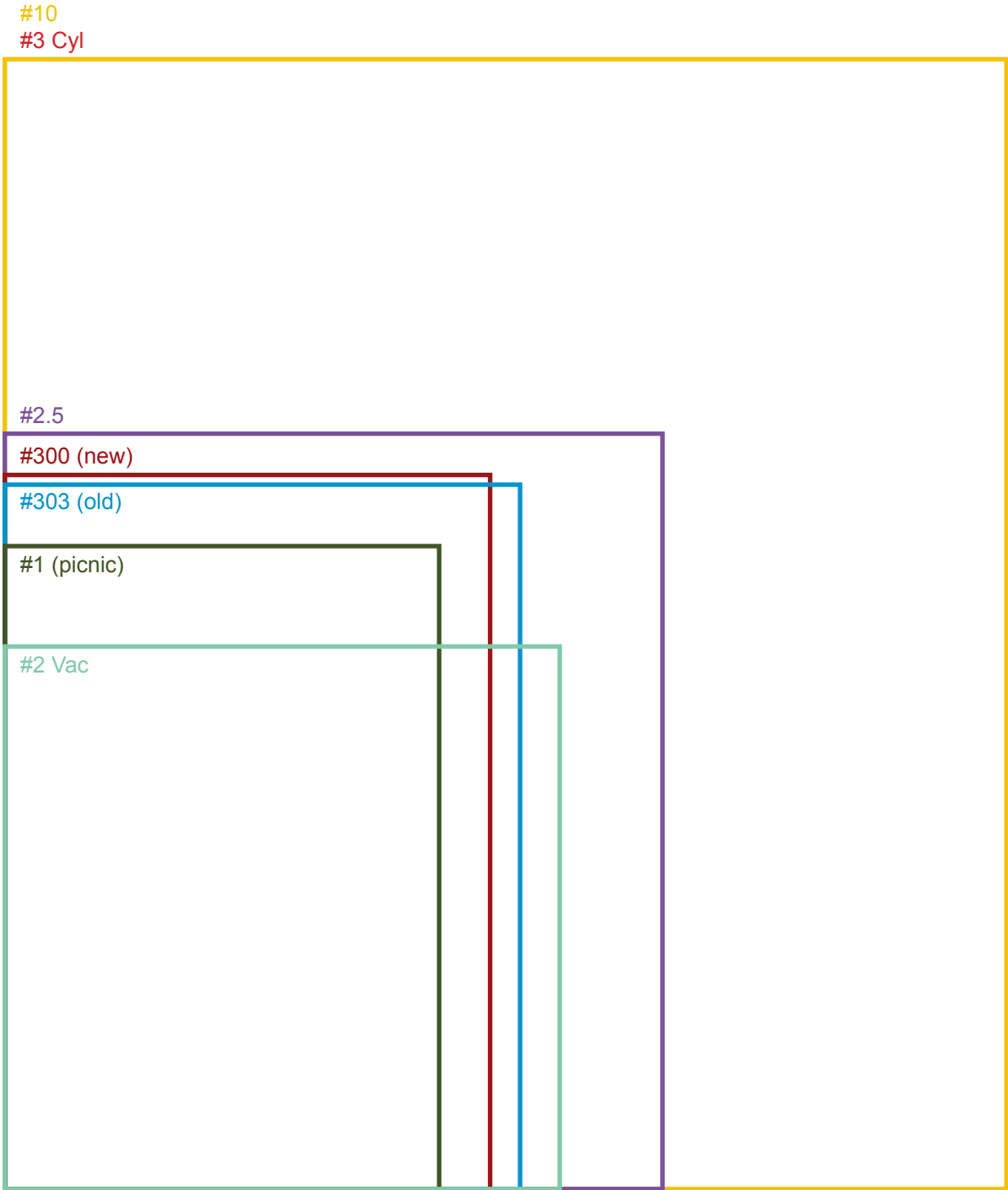
## Sizes and Capacities of Measuring-Serving Spoons

Size of Measuring/Serving Spoon	Approximate Measure
2 oz	$\frac{1}{4}$ cup
3 oz	$\frac{3}{8}$ cup
4 oz	$\frac{1}{2}$ cup
6 oz	$\frac{3}{4}$ cup
8 oz	1 cup

# CAN SIZE TEMPLATE

Lie a can on its side directly on this actual size template to help you determine what size can it is.

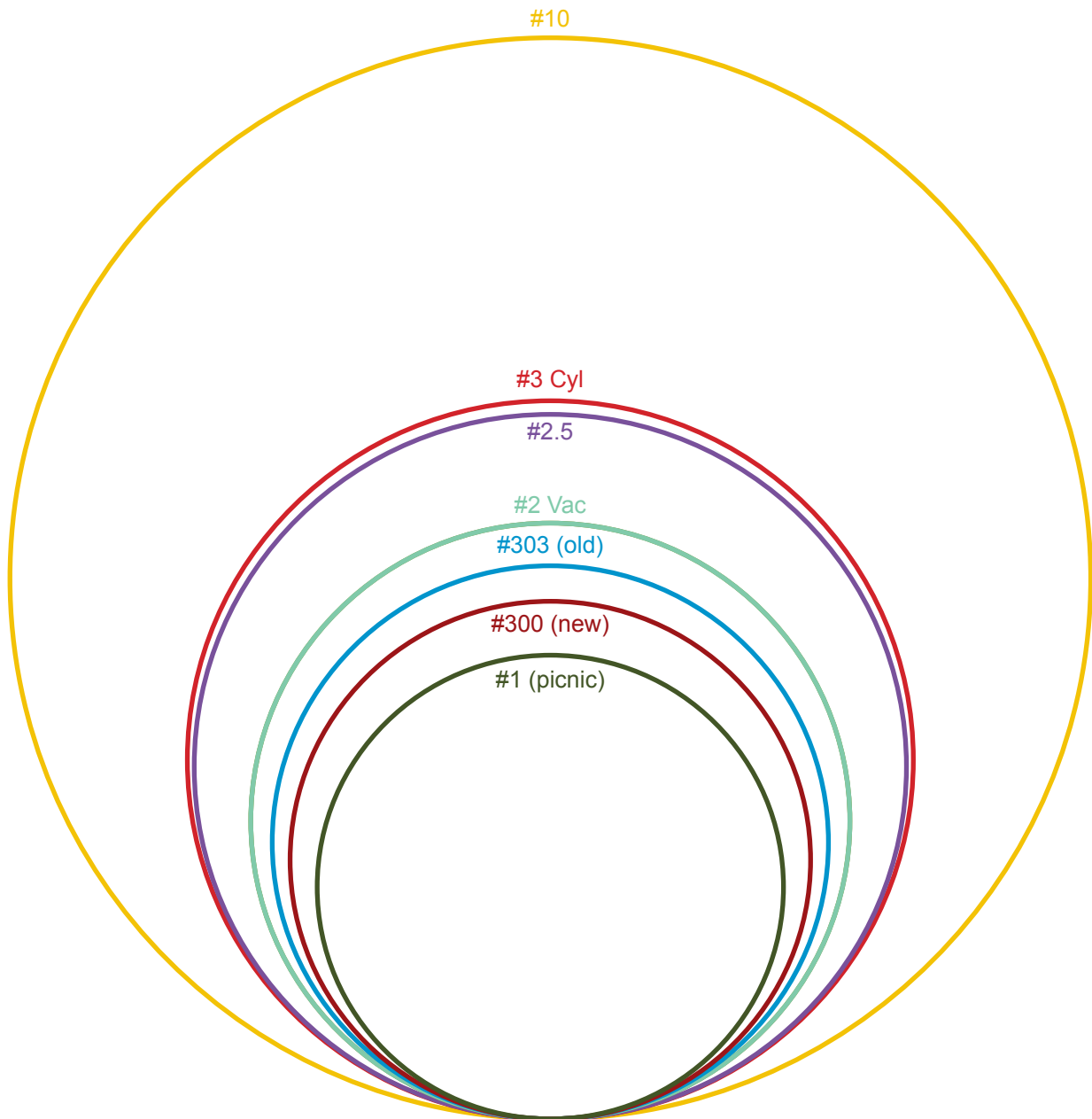
## Dimensional Food Can Standards: Height



# CAN SIZE TEMPLATE

Position the top side of a can directly on this actual size template to help you determine what size can it is.

## Dimensional Food Can Standards: Diameter



# REFERENCES

U.S. Department of Agriculture, Food and Nutrition Service. (2020). *Food buying guide for child nutrition programs*. <https://foodbuyingguide.fns.usda.gov/Appendix/DownloadFBG>

Institute of Child Nutrition. (2022). *USDA recipe standardization guide for child nutrition programs*. University, MS: Author.



The University of Mississippi  
School of Applied Sciences

800-321-3054  
[www.theicn.org](http://www.theicn.org)