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CULINARY
INSTITUTE OF
CHILD NUTRITION

CULINARY QUICK BITES

DEVELOPING FLAVOR: BASIC
OVERVIEW OF CULINARY ACIDS



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DEVELOPING FLAVOR: BASIC OVERVIEW OF CULINARY ACIDS

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The University of Mississippi, School of Applied Sciences
www.theicn.org

Key Area: 2 – Operations

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TRAINING OVERVIEW

The Culinary Quick Bites training series is a tool to help child nutrition professionals develop and refine their culinary skills. Each lesson is designed to last approximately fifteen minutes. Each lesson should be facilitated (led) by the person responsible for overseeing food production at a meal site, service area, or the district level.

Training facilitators should review the training, in its entirety, prior to conducting the training.

This training has been developed to address a variety of learning styles. The training includes an overview of the topic presented by the facilitator, an infographic to reinforce the training topic visually, a video to demonstrate the topic, and an activity to reinforce learning.

Please contact the Institute of Child Nutrition Help Desk at 1-800-321-3054 or helpdesk@theicn.org if you have any questions about how best to facilitate this training.

KEY AREA

Key Area: 2 – Operations

PROFESSIONAL STANDARDS

FOOD PRODUCTION – 2100

Employee will be able to effectively utilize food preparation principles, production records, kitchen equipment, and food crediting to prepare foods from standardized recipes, including those for special diets.

2130 – Develop culinary skills necessary for school meal preparation.

FACILITATOR'S NOTES

This training counts for 15 minutes of training credit under USDA Professional Standards learning objective 2130 – Develop culinary skills necessary for school meal preparation.

The activity at the end of the lesson involves making Broccoli Salad. This activity helps reinforce knowledge and skills learned during this lesson. The broccoli salad prepared during this lesson may be included in the next day's menu production.

Before the training, prepare for the lesson activity and set up the kitchen workstation as described on page 14.

Deliver the lesson/training to participants:

- Read the lesson overview to the participants.
- Discuss the infographic and how it relates to the training topic.
- View the instruction video with participants.
- Answer any questions participants may have on the lesson, infographic, and video.

Complete the activity as instructed on page 14.

MATERIALS NEEDED



NOTE: Participants will be working together to make the recipe. Determine the quantity of the recipe to prepare based on the number of servings needed for your service. Scale recipe accordingly.

- Required recipe ingredients
- Required recipe utensils, tools, pans, etc.
- Recipe handout: Broccoli Salad – 1 per person
- Infographic: Culinary Acids and Their Uses – 1 per person
- Access to a screen to show the training video. Possible options include:
 - Site computer monitor with sound
 - Projector with sound
 - Tablets and smartphones
 - A QR code has been provided for quick access to the video on handheld devices.

LESSON OVERVIEW

OBJECTIVE:

At the end of this lesson, participants will be able to recognize how to use culinary acids in recipes for school meals.

GENERAL INFORMATION ABOUT CULINARY ACIDS

- Culinary acids are food items that have a lower pH than other foods. Examples include fruit juices like lemon, lime, grapefruit, pineapple, and apple, as well as vinegars.
- Many times when a dish tastes *flat* (lacks flavor), people think they need to reach for salt when, in fact, they may be missing the acid to pull the flavors together, brighten the dish and highlight all of the other flavors.
- Utilizing culinary acids and other flavor-enhancing techniques are important strategies for supporting adding flavor to school meals.
- Acids are used to:
 - Enhance the sweet and salty aspects of the food.
 - Reduce the mouthfeel of cooking fats.
 - Counterbalance the bitter qualities of foods.
- Acids can be added to a dish either at the beginning to build a flavor or at the end to add a fresh flavor note and enhance the freshness of the meal.
- Citrus fruits work well to add the freshness of flavor to foods. You can use the juice from the fruit or the zest of the fruit rind.
- Use fresh or frozen citrus juices because they are better quality and have a better taste compared to canned products.

HOW TO SELECT CULINARY ACIDS FOR YOUR RECIPES

- Utilizing the infographic, review the different flavor profiles and uses of culinary acids.
- Review the embedded training video.

After we review the infographic and video, there will be an activity to reinforce skills learned.

Culinary Quick Bites

FLAVOR ENHANCEMENT

CULINARY ACIDS

Citrus Juice



The acid in citrus juice works well to add a fresh taste to foods. Citrus zest, while not an acid, adds the fruit's true flavor and aroma to food.

Types of Vinegar



Distilled or White:
Most common, high acidity. Used for making pickles, salad dressings, ketchup, and sloppy joes.



White Wine:
Low acidity with a slight sweetness. Lighter flavor than distilled. Used for salad dressings.



Red Wine:
Low acidity with a slight sweetness. Lighter flavor than distilled vinegar. Used for salad dressings.



Cider:
Tart and sweeter than many. Used for salad dressings, braised meat (pork) dishes, marinades.



Rice:
Low acid, sweet flavor. Used for salad dressings, dipping sauces, and marinades. May also be used for making sushi rice.



Balsamic:
Wide range of styles and acidity levels. Vinegar that has sweet and almost syrupy-like qualities. Popular for making salad dressings and some marinades.

RECIPE: BROCCOLI SALAD USDA RECIPE FOR SCHOOLS



Broccoli Salad USDA Recipe for Schools

Our Broccoli Salad combines fresh broccoli and red onions in a slightly sweet creamy dressing.

NSLP/SBP CREDITING INFORMATION

½ cup (No. 8 scoop) provides ½ cup dark green vegetable.

INGREDIENTS	50 SERVINGS		100 SERVINGS		DIRECTIONS
	Weight	Measure	Weight	Measure	
Low-fat mayonnaise	2 lb	3 cups	4 lb	1 qt 2 cups	1 Dressing: Combine mayonnaise, sugar, vinegar, and milk in a medium bowl. Stir well. Set aside for step 3.
Sugar	1 lb	2 cups	2 lb	1 qt	
White vinegar		½ cup		1 cup	
Low-fat (1%) milk		¾ cup		1 ⅓ cups	
*Fresh broccoli, florets	4 lb	1 gal 3 qt ½ cup	8 lb	3 gal 2 qt 1 cup	
					2 Combine broccoli, walnuts (optional), onions, and dried cranberries in a large bowl. Toss lightly.



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RECIPE: BROCCOLI SALAD USDA RECIPE FOR SCHOOLS



Broccoli Salad

INGREDIENTS	50 SERVINGS		100 SERVINGS		DIRECTIONS
	Weight	Measure	Weight	Measure	
(Optional) Walnuts, chopped	1 lb	1 qt	2 lb	2 qt	
*Fresh red onions, diced	6 oz	1 cup 2 Tbsp 2 tsp	12 oz	2¼ cups 1 Tbsp 1 tsp	
Dried cranberries	1 lb	3 cups 3 Tbsp 1 tsp	2 lb	1 gal 2¼ cups 2 Tbsp 2 tsp	
					3 Pour 3 cups (about 1 lb 8 oz) dressing over 1 gal (about 3 lb 1 oz) vegetable mixture. Stir well.
					4 Transfer 3 qt (about 4 lb 8 oz) broccoli salad to a steam table pan (12" x 20" x 2½"). For 50 servings, use 2 pans. For 100 servings, use 4 pans.
					5 Critical Control Point: Cool to 41 °F or lower within 4 hours.
					6 Critical Control Point: Hold at 41 °F or below.
					7 Portion with No. 8 scoop (½ cup).



RECIPE: BROCCOLI SALAD USDA RECIPE FOR SCHOOLS



Broccoli Salad

NUTRITION INFORMATION

For ½ cup (No. 8 scoop).

NUTRIENTS	AMOUNT
Calories	107
Total Fat	2 g
Saturated Fat	0 g
Cholesterol	6 mg
Sodium	170 mg
Total Carbohydrate	22 g
Dietary Fiber	2 g
Total Sugars	18 g
Added Sugars included	N/A
Protein	1 g
Vitamin D	2 IU
Calcium	23 mg
Iron	0 mg
Potassium	128 mg

N/A=data not available.

SOURCE

USDA Standardized Recipes Project.

MARKETING GUIDE

Food as Purchased for	50 Servings	100 Servings
Mature red onions	8 oz	1 lb
Broccoli	4 lb	8 lb

NOTES

*See Marketing Guide for purchasing information on foods that will change during preparation or when a variation of the ingredients is available.

Cooking Process: #1: No Cook.

YIELD/VOLUME

50 Servings	100 Servings
About 9 lb About 1 gal 2 cups/2 steam table pans (12" x 20" x 2½")	About 18 lb About 2 gal 1 qt/4 steam table pans (12" x 20" x 2½")





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Basic Overview of Culinary Acids

[WATCH THE VIDEO](#)

<https://vimeo.com/695263855/223695ff07>

QR CODE

Utilize the QR code embedded to the right to share the video with staff utilizing handheld devices such as smartphones and tablets. Use the photo app on the smart device to scan the code to be directed to the video.



ACTIVITY

SETUP

MATERIALS:



Broccoli Salad USDA
Recipe for Schools
handout
- 1 per person



Required recipe
ingredients



Required recipe
utensils, tools,
pans, etc.



Infographic: Culinary
Acids and Their Uses
- 1 per person

NOTE: Participants will be working together to make the recipe. Determine the quantity of the recipe to prepare based on the number of servings needed for your service. Scale recipe accordingly.

SETUP INSTRUCTIONS FOR FACILITATOR

- 1** Prior to the training, gather all of the materials needed for the activity. Pre-wash the ingredients that will be used for the training. Set up a workstation for each participant with the utensils and ingredients needed to prepare the recipe.
- 2** During the activity, remember to monitor and observe staff as they practice their culinary skills.

ACTIVITY

ACTIVITY INSTRUCTIONS FOR PARTICIPANTS

- 1** Refer the participants to the infographic and recipe. Then read the instructions for the activity. Ask the participants if there are any questions before beginning the activity.
- 2** Instruct all participants to wash their hands and put on single-use gloves before starting the activity.
- 3** As a group, the participants will prepare the recipe. Divide and assign the recipes steps so everyone can participate.
 - Instruct participants to take their time and follow the recipe carefully.
 - Before adding the dressing to the salad, instruct the participants to taste the dressing with and without the white vinegar.
 - For participants to understand the importance of culinary acids to the flavor of recipes, ask the participants to mix the dressing per the recipe omitting the white vinegar and taste the dressing. Briefly discuss the flavor of the dressing without the vinegar.
 - Then add the white vinegar and ask participants to try the dressing. Briefly discuss the flavor differences between the dressing without and with the white vinegar.
 - Complete the recipe and encourage the participants to taste the final product.
 - Discard waste.

POST ACTIVITY

- After completing the hands-on activity, recap the lesson with the participants. Offer an opportunity for participants to share their learning experience during the training and highlight any tips or takeaways they want to share with the group.
- If time allows, facilitate a discussion with the participants. Suggested discussion topics include:
 - Ask participants to discuss how to use the lesson to adapt other menu items to be more flavorful through the use of culinary acids.
 - Ask participants in what kinds of dishes would their students enjoy the addition of culinary acids.
- Ask if the participants feel more comfortable with the training topic or want more time to develop the skill further if time allows.
- Plan the next training session based on the needs of your staff.
- Remind participants that they should not add ingredients to any standardized recipe without consulting with the Menu Planner or Supervisor first. Recipes may need to be tested/analyzed when adding spices/herbs/culinary acids, etc. before implementing in school cafeterias.



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