National Watermelon Promotion Board

Watermelon Culinary Curriculum

Introduction

The National Watermelon Promotion Board (NWPB), based in Winter Springs, Florida, was established in 1990 as an agricultural promotion group to promote watermelon in the United States and various markets abroad. Funded through a self-mandated industry assessment paid by more than 1,500 watermelon producers, handlers and importers, NWPB's mission is to increase consumer demand for watermelon through promotion, research and education programs. The program is administered by the NWPB under the supervision of the USDA Agricultural Marketing Service.

NWPB supports all whole watermelon sold in the U.S. (grown domestically and abroad), as well as fresh-cut watermelon, watermelon juice and watermelon puree processed in the U.S.

Watermelon Culinary Curriculum

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Lesson 1 Watermelon History, Cultivation & Market Insights

LEARNING OBJECTIVES

After completing this lesson students will be able to:

- 1. Highlight key historical events that led to the global consumption of watermelon.
- 2. Describe how watermelon is grown.
- 3. Describe how watermelon is harvested.
- 4. List the top reasons consumers like watermelon.

LESSON PLAN

Topic	Suggested Activity	Suggested Time
History	Lecture/Discussion	5 minutes
Cultivation	Lecture/Discussion	5 minutes
Harvest & Packing	Lecture/Discussion	5 minutes
Consumer Insights	Lecture/Discussion	5 minutes

Watermelon History

The origin of watermelon has been traced back to the deserts of southern Africa some 5,000 years ago, where it still grows wild today. This ancestor of the modern watermelon is a tough, drought tolerant fruit prized for its ability to store water for tribes crossing the Kalahari Desert.

The first evidence of people eating watermelon was recorded in Egyptian hieroglyphics as early as the 2nd millennium BC. In the 10th century, China began cultivating watermelon, and at around that same time the Moors are thought to have brought watermelon to Europe and the warmer climates of the Mediterranean.

European colonists and the slave trade brought watermelon to the Americas in the 16th century, with the fruit grown first in Florida. Watermelon reached South America in the 17th century.

Fruit or Vegetable?

A member of cucurbitaceae, the gourd family of flowering plants, watermelon is an annual vine-like scrambler and trailer. Botanists refer to watermelon as a pepo, a berry with a thick rind and a juicy sweet flesh. The curcurbitaceae family includes squash, zucchini and cucumber.

Botanically, watermelon is a fruit, but grown using vegetable production practices. It's planted from seeds, tended throughout its growth period, harvested, and the field is cleared like a vegetable crop.

Watermelon Cultivation

Watermelon plants love the heat. Sun + bees + well-drained sandy soil + water are what's needed to grow watermelon. For commercial production, watermelon nursery stock is transplanted in rows, 8 to 12 feet apart, in raised beds, 4 to 12 inches high, composed of well drained sandy soils. Irrigation is carefully managed throughout the growth cycle to optimize fruit set, fruit size and yield.

Bee colonies are placed in the field when the male flowers begin to appear; the bees pollinate the large yellow female flowers in order for the plant to bear fruit. Even the sterile, seedless watermelon requires pollination in order to fruit.

Vines spread 6 to 8 feet in 30 days, and within 60 days the vine presents its first watermelons. The crop is ready to harvest within 3 months.



PIETRI PHOTOGRAPHY



PIETRI PHOTOGRAPHY

Watermelon Harvest & Packing

Watermelons are harvested at full maturity. The fruit does not ripen (develop internal color or increase in sugar content) after being removed from the vine.

Growers approximate the time for the first pick based on the specific physical characteristics for each cultivar, weather conditions throughout the growing season and other variables. Some growers use a Brix test to assess the total soluble solids of the flesh.

Most fields are picked twice during the season. On average, each watermelon plant produces two to three harvestable fruit. Each time the field is harvested, any exposed watermelons are re-covered with leaves or straw to prevent sunburn.

A sharp knife is used to cut watermelons from the vine then they are flipped over "belly up" to indicate they are ready. "The belly" is the pale spot on the underside of the melon where it rested on the ground while growing. Watermelons pulled from the vine may crack open or result in damage to the stem end. Pickers use these characteristics to check for ripeness:

- Firm symmetrical fruit with a pale or buttery yellow spot on the bottom.
- Heavy for its size due to the fruit's high water content.
- Free from bruises, cuts and dents; a few scratches are okay.





A pitching crew follows the cutters and pitches the watermelons from hand to hand, and then loads them in trucks to be transported to the packing shed. Watermelons are loaded on their sides to protect the thinner rind at the top and bottom from damage.

At the packing shed watermelons are inspected for quality, graded, washed, separated according to size and packed for shipment.

Watermelons are loaded by hand into 700-pound round bins for shipping and distribution to terminal markets, wholesalers and distributors. Size counts for 700-pound bins of seeded and seedless watermelon are 36, 45 and 60. The count refers to the number of watermelon in the bin. The higher the size count the smaller the watermelon.

Cartons for minis weigh 45 to 50 pounds with 6 to 10 pieces of fruit per carton; the most popular size counts are 6 and 8.

A foodservice industry option for packaging for seeded and seedless watermelons is a carton that weighs 65 to 70 pounds with 3 to 6 pieces of fruit per carton.

Labeling on bins and cartons includes the following information:

- Watermelon type (Types covered in Lesson 2)
- Count
- Net weight
- Source country

Square Watermelon

A Japanese graphic designer invented the molding process for square watermelons in 1978, with one of the advantages noted as lowering the cost for storage and transportation. Shortly after, a farmer started growing watermelon in boxes to assume the shape of the container. Fascination with the "cubic" watermelon fetches premium prices in Japan, as do heart-and pyramid-shaped watermelon.

Watermelon Consumer Insights

Watermelon consumption per capita in the United States was an estimated 15.9 pounds in 2016. Watermelon consumption in the United States was approximately 5.1 billion pounds in 2016 according to Agricultural Marketing Service, an agency within the United States Department of Agriculture. The United States exported an additional 348.7 million pounds of watermelon. By weight, watermelon is the most consumed melon in the U.S., followed by cantaloupe and honeydew.

NWPB conducts a consumer survey each year, and 2016 data revealed the following insights about attitudes and usage:

- The top reason consumers buy watermelon is that "it tastes good" and "they like to eat it" followed by: "in season," "cool/refreshing/juicy," "good snack," and "healthy/nutritious."
- At home, consumers are most interested in using watermelon in desserts, salads and beverages.
- About one-third of consumers surveyed have tried watermelon at a restaurant.
 - The research also showed that while consumers would still order a fruit salad with watermelon, more are ordering beverages, vegetable salads and entrees that include watermelon.
- A majority of consumers say they are aware of the "health benefits that watermelon provides."
 - Top benefits cited: "high water content" (80.8%), "good hydration" (77.2%), "low fat" (70.6%), "low calories" (68.4%) and "vitamins" (58.8%).

Lesson 1

QUIZ/REVIEW QUESTIONS

- 1. The origin of watermelon can be traced back to southern Africa.
 - a. TRUE
 - b. FALSE
- 2. The first evidence of people eating watermelon was recorded in:
 - a. Egypt
 - b. China
 - c. Mediterranean
- **3.** Watermelon cousins, in the cucurbitaceae family, include:
 - a. Squash, zucchini, cucumber
 - b. Apples, pears, plums
 - c. Tomatoes
- 4. Sun + bees + well-drained sandy soil + water are what's needed to grow watermelon.
 - a. TRUE
 - b. FALSE
- 5. Watermelons are harvested by hand at full maturity.
 - a. TRUE
 - b. FALSE
- 6. Consumer research shows that taste is the top reason consumers buy watermelon.
 - a. TRUE
 - b. FALSE
- 7. When dining out, more consumers are increasingly ordering items in which of these categories:
 - a. Beverages
 - b. Vegetable salads
 - c. Entrees
 - d. All of the above

Lesson 2 Watermelon Types, Product Formats & Availability

LEARNING OBJECTIVES

After completing this lesson students will be able to:

- 1. List the four types of watermelon and various formats.
- 2. Describe the evolution of seedless watermelon.
- 3. List the primary growing regions that supply watermelons for U.S. consumption.

LESSON PLAN

Topic	Suggested Activity	Suggested Time
Watermelon Types	Lecture/Discussion	5 minutes
Watermelon Formats	Lecture/Discussion	5 minutes
Watermelon Seasons & Availability	Lecture/Discussion	5 minutes



Watermelon Types

More than 300 varieties of watermelon are cultivated in the U.S. and countries that export watermelon to the U.S. New watermelon varieties enter the market each year as a result of hybridization, the crossing of two different types of watermelon. Seed breeding advancements focus on redder color and crisper watermelon texture.

With so many varieties grown, they are grouped according to predominant characteristics like shape, flesh color and size. Watermelon varieties fall into one of these four types:



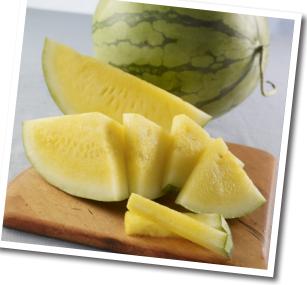
- Round, long, oblong
- 5 to 45 pounds

Seedless

- Round to oblong
- 10 to 25 pounds
- Any small white seed coats in the flesh are undeveloped-and edible.
- Due to high demand, approximately 85% of watermelon cultivars grown today are seedless.







Mini

- Round
- Seedless
- •1 to 7 pounds
- Thinner rinds result in greater yield per pound.

Yellow/Orange

- Round
- Seeded and seedless
- 10 to 30 pounds
- Generally sweeter than red-fleshed watermelon.

The Seedless Watermelon Story

not GMO. Seedless watermelon was first introduced in 1966, and they continue to get redder and crisper thanks to seed breeding advancements. A seedless containing 22 chromosomes* per cell, with a female watermelon flower with 44 chromosomes per cell. When this seeded fruit matures, the small, white seed coats inside contain 33 chromosomes, rendering it sterile and incapable with a donkev.



Watermelon Formats

Fresh cut watermelon, puree and juice are often prepped fresh in foodservice kitchens, and are also available as finished ingredients to save labor and provide consistency. Juices may be single strength or concentrated to varying strengths. Puree is fruit that is crushed, heat- or enzyme-treated to remove pectin and starch, filtered, concentrated to remove

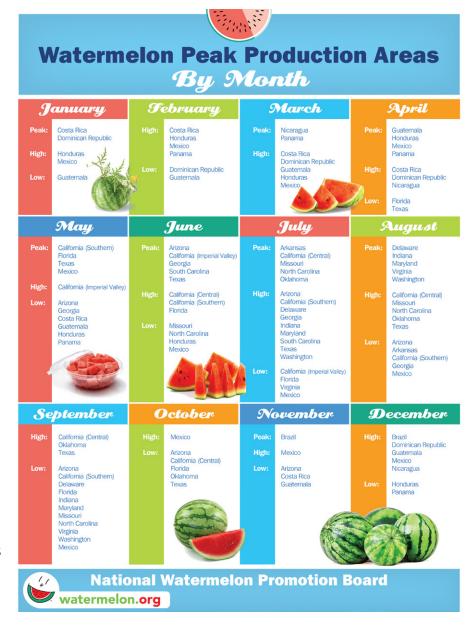


water, packaged and sometimes frozen. Fresh cut watermelon is typically available diced, cubed, planks or slices.

Always in Season, A World of Watermelon

Watermelons grown in the U.S. are available from midspring through early autumn, starting in the far south and moving north as warmer weather brings each growing region into harvest.

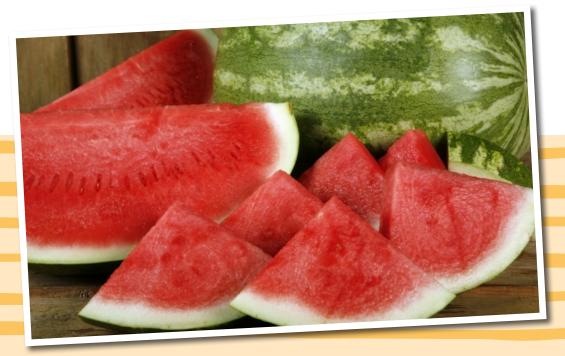
Consumer demand for watermelon is year-round, and the counter seasonal supply from Central America growing regions satisfies that desire. The United States ranks 6th in worldwide production of watermelon. The top watermelon producing countries typically include: China, Turkey, Iran and the U.S. The top watermelon producing states include: Arizona. California. Florida, Georgia and Texas. The top export countries shipping to the U.S. are Mexico and Guatemala.





QUIZ/REVIEW QUESTIONS

- 1. Which is not a type of watermelon?
 - a. Mini
 - b. Yellow/Orange
 - c. Blue
 - d. Seeded
- 2. Approximately 85% percent of watermelon cultivars grown today are seedless.
 - a. TRUE
 - b. FALSE
- 3. Which is not one of the top watermelon producing states in the U.S.?
 - a. California
 - b. Texas
 - c. Montana
- **4.** Mexico and Guatemala are two countries that contribute to the year-round supply of watermelon.
 - a. TRUE
 - b. FALSE
- 5. How many chromosomes does a seedless watermelon have?
 - a. 105
 - b. 2
 - c. 33



Lesson 3 Watermelon Receiving, Handling & Storage

LEARNING OBJECTIVES

After completing this lesson students will be able to:

- 1. Describe the key characteristics of a ripe watermelon.
- 2. Demonstrate appropriate handling and storage techniques for watermelon.
- 3. Demonstrate how to cut a watermelon for the highest yield.

LESSON PLAN

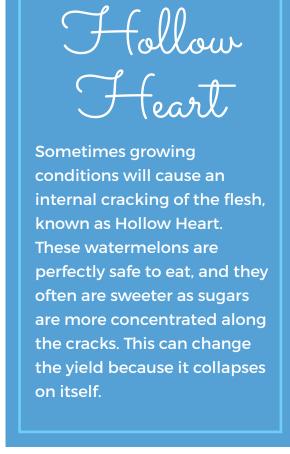
Topic	Suggested Activity	Suggested Time
Receiving & Storage	Lecture/Discussion	5 minutes
Cutting, Yield & Shelf Life	Lecture/Discussion	5 minutes
Introduction & Watermelon Cutting Exercise	Watermelon cutting	15 minutes
	Evaluate results	5 minutes
	Clean up	5 minutes

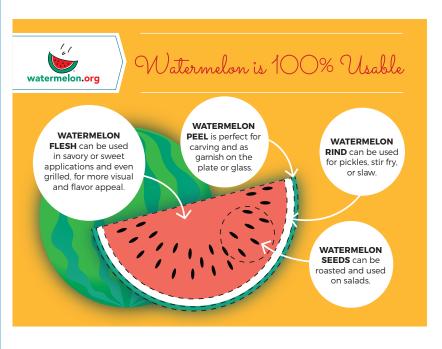


Receiving & Storage

For the best quality watermelon, receiving and storage are extremely important.

- Watermelons should be firm, symmetrical and free of bruises, cuts, dents or soft spots. Some surface scarring is normal.
- Watermelons should be heavy for their size. Each watermelon is 92% water, contributing to most of its weight.
- The ground spot (the part of the watermelon resting on the soil) changes from pale white to a creamy yellow at the proper harvest maturity.
- Depending on growing conditions, variety, handling, etc. whole watermelon has
 a 3 to 4 week shelf life after it's cut from the vine. Considering the supply chain,
 a whole watermelon is expected to have a 7 to 10 day shelf life when received
 at restaurants.
- Watermelon does not need to be refrigerated upon receipt.
 If it arrives under refrigeration and is not intended for use that day, maintain the cold chain until use.
 - The ideal storage temperature for whole watermelon is 50-59°F.
 - Temperatures below 45°F cause chilling injuries like pitted rind, off flavor and loss of color.
 - Fresh-cut watermelon should be refrigerated and kept chilled when offered for self service and on the line.





Watermelon is an Ethylene Sensitive Food

Ethylene gas is a natural ripening agent that's produced by produce items like apples, cantaloupe and unripe bananas. But for some produce items, like broccoli, cucumber and watermelon it speeds decay. It's important to separate gas producers from gas sensitive produce.

Cutting, Yield & Shelf Life

The NWPB collaborated with the Food Innovation Center at Oregon State University to conduct a cutting, yield and shelf life study. Watermelon used was sourced from industry members in Oregon.

Six chefs and retail food handlers were selected to participate and were observed cutting watermelon as they normally would. Between the six participants, they used four different cutting methods. The cutting methods were evaluated in the lab based on time to cut and yield. Once the best method was defined, the method was tested using 50 watermelons from three key sizes: 36, 45 and 60.



Cutting

Using safe handling practices, as outlined by USDA, this cutting sequence resulted in the best yield of cut fruit, balancing yield and time.



Cut off the ends, providing a base and access to the peel and rind.



Angle the knife, placing it where the white rind meets the red flesh and following the curve of the fruit, cut off the rind.



Cut the whole watermelon into disks, widthwise in the desired size of cubes.



Lay the disks face down, pushing the smaller disks to one side and cut same size strips in both directions.

Yield

The cutting steps above need to be followed to obtain the following yield.

YIELD			
Size	60	45	36
Time (min)	2.50	2.58	3.05
Flesh (lbs)	8.61	9.54	10.67
Skin (lbs)	3.61	4.24	7.17
Flesh (%)	70.5%	69.2%	59.8 %

Please note yield can vary by variety, growing conditions, etc.

Shelf Life

As a part of the research, the 36-count watermelon was still edible at day 7 and had a 7-day shelf life. The 45- and 60-count watermelon sampling and microbial study showed that the watermelon was still edible at day 4 and had a 4-day shelf life. Food Innovation Center (a part of Oregon State University) researchers suggested further shelf life research due to the 36-count being received refrigerated and the 45- and 60-count received at ambient temperatures, which could explain the shelf life discrepancy. In general, watermelon cut in-house has a 4-7 day shelf life. Additionally, researchers stressed the need for education about washing the outside of the watermelon before cutting the fruit.

Maximizing Watermelon Yield - Demo and Cutting ExerciseObjectives:

- 1. Increase familiarity with different watermelon types, if available.
- 2. Learn how to break down a whole watermelon into its usable components: peel, rind, flesh and seeds.

For each group:

- Cutting board Knife (size based on size of watermelon) Peeler
- Towel Food scale Gloves Watermelon (use different types of watermelon)
- 1. Contact your primary produce supplier to inquire about the types of watermelon in the market and request one of each type available.
- 2. As a whole group, review the different types of watermelon, referencing information from Lesson 2.
- 3. Break into groups of 4 students.
- 4. Discuss ways to use watermelon flesh, rind and peel.
- 5. Review the watermelon cutting sequence.
- 6. Use the steps outlined above to cut the watermelon rind away from the flesh.
 - a. Cut the flesh for end use: wedge, dice, batonnet, etc.
- 7. Prep the rind and peel for use in recipes and as a garnish.
 - a. Remove the peel from the rind with a vegetable peeler for use as garnish on the plate or glass.
 - b. Cut the rind for use in pickles, slaw and stir fry.
- 8. Each group discuss their experience breaking down a watermelon.

WATERMELON CULINARY CURRICULUM • LESSON 3

Lesson 3

QUIZ/REVIEW QUESTIONS

- 1. What are the key characteristics used to tell when a watermelon is ripe, before cutting?
 - a. Firm, symmetrical, and free of bruises, cuts, dents or soft spots
 - b. Heavy for its size
 - c. Pale yellow to creamy white ground spot
 - d. All of the above
- 2. Storing watermelon with ethylene producing products causes decay of watermelon flesh.
 - a. TRUE
 - b. FALSE
- **3.** While 55 °F is the ideal storage temperature for watermelon, if the fruit arrives refrigerated the cold chain should not be broken.
 - a. TRUE
 - b. FALSE
- **4.** Watermelon can be stored:
 - a. 5 to 7 days
 - b. 2 days
- **5.** For safety and to maximize the yield the first step is cutting the ends off to create a stable base and provide access to the peel and rind.
 - a. TRUE
 - b. FALSE
- **6.** With a little practice, cutting a whole watermelon into cubes takes ______ minutes.
 - a. 2.50 to 3.05 minutes
 - b. 5 to 6.10 minutes
- **7.** The average yield of watermelon flesh is _____.
 - a. 66.5%
 - b. 47.2%

Lesson 4 Watermelon On The Menu

LEARNING OBJECTIVES

After completing this lesson students will be able to:

- 1. Identify menu trends that reinforce how watermelon adds value to menus.
- 2. List the key attributes of watermelon for menu development.
- 3. Name preparation techniques that can expand watermelon usage.
- 4. List classic and unexpected watermelon flavor pairings.
- 5. Recognize how expanding menu use and applications for watermelon can enhance menu success.

LESSON PLAN

Topic	Suggested Activity	Suggested Time
Menu Trends	Lecture/Discussion	5 minutes
Preparation Techniques	Lecture/Discussion	5 minutes
Flavor Pairing Exercise	Lecture/Discussion	5 minutes
	Class Activity	20 minutes
	Tasting/Discussion/Evaluation	5 minutes
	Clean up	5 minutes
Watermelon on the Menu	Intro	5 minutes
	Cooking Lab	90 minutes
	Tasting/Discussion/Evaluation	15 minutes
	Clean up	15 minutes



Watermelon Menu Trends

Menu data collected by Datassential MenuTrends, from 2005 to 2015, was analyzed to understand watermelon usage trends and identify opportunities for watermelon on foodservice menus. Key findings include:

- Fruit is a key menu item featured on 9 out of 10 restaurant menus.
- Use of watermelon on menus is consistent across all regions of the U.S.
- Watermelon is mentioned on 8.4% of menus.
- Watermelon is featured on 6% of beverage menus, alcoholic and non-alcoholic.
 - Watermelon is one of the fastest growing smoothie flavors, increasing 51% since 2010.
 - Vodka is the top spirit mixed with watermelon.
- Watermelon is featured on 3% of appetizer, entrée and side menus,
 - a 79% increase since 2005.
 - Watermelon is one of the fastest growing fruits on salad menus, increasing 50% since 2010.
 - Chicken and pork are the proteins most commonly menued with watermelon.
 - Cheese is the top ingredient paired with watermelon, growing 54% between 2010 and 2014.
 - Watermelon paired with cucumber has grown more than 100%, from 2010 to 2014.





Preparation Techniques

Explore different techniques to inspire the imagination for new ways to use watermelon on the menu and discover new flavors in the fruit:

- Juice and puree Blend until smooth and strain if desired.
- Glaze Mix pureed watermelon into BBQ sauce (U.S. regional to Asian) for a subtle fruit flavor.
- Compress A vacuum-sealing technique that removes air from watermelon, concentrating and intensifying the fruit's juices, color and flavor. The end product is slightly translucent.
 - This technique can be used to make carpaccio, stir into poke and prep watermelon prior to grilling.
 - Season the watermelon, if desired, before vacuum sealing with ingredients that complement watermelon.
- Pickle Watermelon rind is used to make pickles for Southern dishes and global flavor profiles, such as combining North African sweet spices to make preserved lemon and watermelon chutney. Can be "canned" for longer storage or quick pickled.
 - Use as an accompaniment when you need a bright, tart, sweet taste, julienne and add to a salad or slaw, or include to add complexity to a beverage.
- Infuse Infuse watermelon with single ingredients, like lime juice, tea and vodka
 or with a marinade before adding to a recipe. Watermelon doesn't
 typically need more than an hour for marinating.
- Jell, gelěe Can be used to slow the release of watermelon flavor or present watermelon flavor with an unexpected texture.
- Foam Create fresh foam from strained watermelon juice for an à la minute topping or freeze for a different texture and later use.
- Consommé Strain watermelon puree (seasoned as desired) through cheesecloth, allow to separate and decant the clear liquid. Use for dishes like watermelon consommé with scallop ceviche.



Watermelon Flavor Pairing

Watermelon appeals to all of the senses. The beautiful red spectrum and yellow and orange colors brighten recipes and provide a visual cue to its nutritional value. The delicious aroma doesn't linger and is often described as having green notes reminiscent of the light fragrance of freshly cut grass.

Refreshing, sweet watermelon pairs simply with lime and salt to more complex pairings that draw on the fruit's affinity with unexpected ingredients and seasonings in sweet and savory applications. Explore watermelon with traditional and trendy tastes to understand how to incorporate watermelon on menus.

Watermelon Flavor Pairing Exercise

Objective:

Discover flavor pairings with watermelon for menu development and inspiration.

Set up for each person:

- 10 1-inch watermelon cubes
- Glass plate or bowl for watermelon
- 5 ingredients to taste with watermelon
- 5 sampling cups for ingredients
- 1 fork or toothpicks
- Napkin
- Plate
- Water
- Watermelon Flavor Pairing sheet
- Watermelon Flavor Pairing Tasting sheet (Both can be found in the Appendix for reproduction.)
- 1. Taste watermelon alone and discuss aroma, flavor and texture.
- 2. Taste and evaluate each pairing, and talk about possible menu items using these combinations.

Pairing ideas for flavor discovery:

- Thinly sliced radish
- Lime corn chip
- Curried crispy chickpeas
- Tajin or custom spice blend

- Basil pesto
- Balsamic caramelized onion
- Crispy fried chicken
- Chocolate soft serve



Watermelon on the Menu

The NWPB provides recipes to showcase the versatility of fresh watermelon and to provide ideas for instructors, students and chefs to use for recipe and menu development. The watermelon recipes listed here include details about the part of the watermelon used, product format and cooking techniques. Recipes from each category are included in the Appendix. For these recipes and more visit watermelon.org/recipes. Utilize these recipes as a part of a cooking lab to better understand watermelon on the menu.

Breakfast

- Watermelon Pancake Sandwich with Breakfast Sausage and Watermelon Infused Whipped Cream (flesh, juice)
- Watermelon Oatmeal Smoothie (juice)

Appetizers, Small Plates

- Watermelon Feta Bruschetta (flesh)
- Pickled Watermelon Rind (rind, pickling)
- Lamb Chorizo Watermelon Bites (flesh, rind, pickling)
- Sparkling Watermelon with Watermelon Lemon Sage Sauce, Pickled Watermelon Rind, Feta and Crispy Sage (flesh, carbonated, rind, pickling, gelee)





Soup

- Watermelon Gazpacho (pureed)
- Roasted Watermelon Gazpacho with Crispy Pancetta, Mozzarella Pearls and Basil Oil (roasted, pureed)
- Watermelon Escabeche (rind, pickling, flesh, foam)

Salad

- Watermelon Ancient Grain Salad with Grilled Watermelon, Squash, Black Beans, Sprouted Watermelon Seeds and Pickled Watermelon Rind (grilled, rind, pickling, sprouted seeds)
- Stacked Jicama Chicken Salad (flesh)
- Grilled Watermelon Green Salad (grilled, juice)
- Watermelon Quinoa Salad (flesh)
- Watermelon Beet Salad with Ricotta Salata, Cucumber, Fried Kalettes, Watermelon Radish and Poppy Seed Vinaigrette (flesh)

Sides

- Watermelon Rind Slaw (rind)
- Grilled Spicy Watermelon "Steak" (grilled)
- Thai Watermelon, Tart Cherry Coconut Risotto (juice)

Sandwich

- Pulled Lamb Shoulder Watermelon Sliders with Feta Cream and Watermelon Slaw (juice, flesh)
- Grilled Chicken Al Pastor Panini with Grilled Lime-Infused Watermelon Salsa (grilled, infused)
- Beef Hot Dog with Pickled Watermelon Rind and Fresh Watermelon Relish with Warm Spices (flesh, rind, pickling)
- Greek Pita Flatbread (flesh)







ESSON 4

Entree

- Seared Alaskan Halibut with Heirloom Tomatoes, English Peas, White Asparagus and Watermelon Vinaigrette (flesh, juice)
- Watermelon-Agave Glazed Grilled Salmon with Crispy Onion-Jalapeno Rice (juice)
- Jamaican Shrimp Tacos (flesh)
- Watermelon BBQ Chicken with Watermelon Corn Relish (juice)



Dessert

- Watermelon Pudding with Watermelon-Mint Crème Fraîche, Brown Butter, Pistachio Crumble and Pickled Watermelon Rind Slivers (juice, rind, pickling rind)
- Sweet Milk Pudding with Watermelon Rose Jelly, Minted Watermelon Strawberry Topping and Pistachios (flesh, geleed)
- Watermelon in a Blanket (flesh)

Beverage

- Watermelon Ice Cubes (flesh, juice)
- Chunky Watermelon Lemonade (flesh, juice)
- Watermelon Pomegranate Green Tea (juice)
- Tall Glass of Watermelon (juice)
- Watermelon Lavender Sorbet (puree)
- Watermelon Caipirinha (puree)
- Watermelon Sangria (juice)





QUIZ/REVIEW QUESTIONS

- 1. Which of the following are menu trends that support the use of watermelon on menus.
 - a. Watermelon is one of the fastest growing smoothie flavors.
 - b. Watermelon is one of the fastest growing fruits on salad menus.
 - c. Proteins most commonly menued with watermelon are chicken and pork.
 - d. All of the above.
- 2. Select two cooking techniques for watermelon that you have tried or would like to try.
 - a. Compress
 - b. Grill
 - c. Pickle
 - d. Infuse
 - e. Consommé
- **3.** Watermelon pairs beautifully with ingredients in sweet and savory menu items.
 - a. TRUE
 - b. FALSE
- **4.** Which is a way to incorporate watermelon rind on a menu?
 - a. Sangria
 - b. Flatbread
 - c. Relish
- 5. Watermelon can be prepped using only one technique.
 - a. TRUE
 - b. FALSE

Lesson 5 Watermelon Carving

LEARNING OBJECTIVES

After completing this lesson students will be able to:

• Demonstrate an understanding of the basic techniques for a 2-D carving.

LESSON PLAN

Topic	Suggested Activity	Suggested Time
Carving Watermelon	Lecture/Discussion	5 minutes
2-D Carving Exercise	Intro	5 minutes
	Demo/Cooking Lab	30 minutes
	Evaluate/Discuss results	5 minutes
	Clean up	5 minutes



Dynamic Displays with Watermelon Carving

Watermelon carvings draw attention, add value and suggest something special. Watermelon carvings can be simple or elaborate. It's relatively easy to create a two-dimensional (2-D) carving using a template and simple tools.

Create a 2-D Carving

- Set up should include: cutting board, towels, food handling gloves, 4-inch paring knife, speedball cutter, toothpicks.
- Have the whole watermelon at room temperature when carving because the cuts will be easier to make. Chill the watermelon in the refrigerator after carving and before presenting, to preserve work.
- Cut a small, thin, flat piece from the bottom of the watermelon before carving. This will make a flat base, making the watermelon more stable when carving.
- Draw the design freehand on the watermelon rind with a fine/medium point waterproof marker or a sharp pencil before you cut. For example:
 - A pattern like an ornament, golf or baseball, or Easter egg
 - A cutout like a pirate skull or tiki mask
 - A basket like a shark's mouth or hedge hog
- After you've drawn the design on the rind, insert toothpicks in key places to use as guides for your cuts.
- Use a sharp knife with a pointed tip the sharper the knife, the easier and cleaner the cuts will be.
- Consider using a channel knife for certain cuts and to hollow out larger areas.
- For more detailed designs, draw a template first on a sheet of white paper with a marker or pencil.
 When finished, transfer the image to the watermelon surface by taping the paper to the melon and tracing along the design's lines with a pencil, making the design right on the watermelon surface.
- When attaching cut pieces on the watermelon to make your design, use round toothpicks or skewers.
 Flat toothpicks will often break due to weight of the piece or the thickness of the rind.



Watermelon 2-D Carving Exercise

Objective:

Understand basic techniques for 2-D carving.

Set up for each person:

- 1 mini watermelon
- Cutting board
- Bowl to collect scraps
- Chef's knife
- Towel
- Food handling gloves (or safety gloves) per individual safety guidelines
- 4-inch paring knife
- Speedball cutter
- Toothpicks
- Fine to medium point waterproof marker



- 1. Lead class through each step of carving a basic logo or design.
- 2. Demonstrate use of tools for specific cuts.
- 3. Evaluate and discuss results.



Create a Vatermelon Bowl & Garnish

Peel a mini watermelon taking care to remove skin in long strips. Select the three best strips, and trim them to they fit the length of the service plate. Scrub the outside of the peeled watermelon with a coarse sponge until a smooth, even surface is achieved. Cut the watermelon in half, then quarters. Scrape out any remaining watermelon to create four smooth clean serving bowls. Place the watermelon bowls on top of the watermelon strips and fill with prepared watermelon grain salads, watermelon poke, etc.

For an easier option, use a mini as a bowl with the rind on. Clean the outside rind, cut a mini in half width-wise, clean the watermelon out and clean the outside rind again. Cut a thick slice off the end to provide a level bottom for the bowl. Fill with a smoothie bowl, gazpacho, sorbet, etc.



Lesson 5

QUIZ/REVIEW QUESTIONS

- 1. Watermelon cuts for carving will be easier to make when the fruit is at room temperature.
 - a. TRUE
 - b. FALSE
- 2. Which of the following will make a watermelon more stable for carving?
 - a. Standing the watermelon in a bowl.
 - b. Cutting a thin slice off the bottom to make a flat base.
- **3.** Which are techniques to transfer a design to the surface of the watermelon?
 - a. Draw a design freehand on the watermelon using a marker or sharp pencil.
 - b. Prepare a paper template of your design and trace along the design's lines onto the watermelon.
 - c. All of the above.
- **4.** Watermelon carvings draw attention, add value and suggest something special in foodservice settings.
 - a. TRUE
 - b. FALSE



LEARNING OBJECTIVES

After completing this lesson students will be able to:

- · List key nutrients found in watermelon.
- · Describe how to use watermelon to build healthy menus.

LESSON PLAN

Topic	Suggested Activity	Suggested Time
Watermelon Nutrition	Lecture/Discussion	5 minutes
Building Healthy Menus Exercise	Intro	5 minutes
	Review Resources from Lesson 4	10 minutes
	Class Activity	15 minutes



Watermelon Brings Health Halo to the Menu

Nutritionists have long appreciated the health benefits watermelon provides. In addition to refreshingly sweet, juicy flavor a two-cup serving is just 80 calories and a natural hydrator. The fruit is naturally cholesterol-free, fat-free and sodium-free. The American Heart Association includes watermelon on its list of heart healthy foods.

USDA has given its stamp of approval to promote watermelon as an excellent source of vitamin C (25% DV) and a source of vitamins A (8% DV) and B6 (6% DV). Other nutrients listed here are understood to benefit well-being when eaten as part of a healthy diet.



Did you Know?

Watermelon
IS

CHOLESTEROL-FREE,
FAT-FREE,
SODIUM-FREE
& ONLY 80
CALORIES PER SERVING!

WWW.Watermelon.org

- Vitamin A (8% DV): important for optimal eye and skin health and may boosts immune health by enhancing the infection-fighting action of white blood cells called lymphocytes.
- Vitamin C (25%): an antioxidant that may aid in the maintenance of normal connective tissues, may promote wound healing, may support the immune system's defenses against infections and viruses and may protect a body from harmful free radicals that can accelerate aging and conditions such as cataracts.
- Pyridoxine (B6) (6% DV) (Vitamin B6): essential for enzymatic functions that convert food into cellular energy.
 - May help the immune system produce antibodies needed to fight diseases, maintain normal never function and form red blood cells. Vitamin B6 may help maintain normal liver function and form red blood cells. The body uses it to help break down proteins. The more protein you eat, the more vitamin B6 you need.
- Potassium (6%): a mineral that is found in every cell, it is necessary for water balance and may help maintain normal blood pressure. People with low potassium levels can experience muscle cramps.





- Lycopene (12.7 grams per 2 cup serving): an antioxidant carotenoid that provides watermelon with its reddish-pink hue. Watermelon contains higher levels of lycopene that any other fresh fruit or vegetable. Lycopene has been studied for a potential role in reducing risk of heart disease, various cancers and protection of skin from harmful UV rays.
- Thiamin (B1) (8% DV): important for maintaining electrolytes and nervous system signal transmissions throughout the body. Also important for energy metabolism.
- Magnesium (6% DV): Watermelon seeds are a rich source of magnesium, which is involved with more than 300 cellular metabolic functions. Magnesium is an essential mineral required by the body for maintaining normal muscle and nerve function, keeping a healthy immune system, maintaining heart rhythm, and building strong bones.

Building Healthy Menus with Watermelon

Objective:

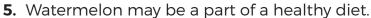
Discover ways to incorporate watermelon into menu items that promote/support healthy eating.

- 1. Work in one large group or break into smaller groups.
- 2. Brainstorm about ways to incorporate watermelon into menu items that meet consumers demand for taste appeal and nutrition.
 - a. Refer to Watermelon Flavor Pairings, Cooking Techniques and Recipes in Lesson 4.
 - b. Approach by day part (breakfast, lunch, dinner, snack), menu part (beverage, appetizer/snack, salad, side, entrée, dessert), or health initiative (weight loss, weight gain, etc.)
- 3. Discuss results as a larger group or smaller groups report on ideas and inspiration.

Lesson 6

QUIZ/REVIEW QUESTIONS

- 1. A two cup serving of watermelon has:
 - a. 30 calories
 - b. 120 calories
 - c. 80 calories
- 2. Watermelon is an excellent source of:
 - a. Lycopene
 - b. Vitamin C
 - c. Vitamin A
 - d. B&C
- 3. Watermelon is a source of Vitamin B6.
 - a. TRUE
 - b. FALSE
- 4. Watermelon is 92% water—a flavorful, nutritious choice for hydration.
 - a. TRUE
 - b. FALSE





b. FALSE



Appendix

REFERENCES & RESOURCES

Visit watermelon.org for:

- Product information
- · Watermelon industry supply chain data and insights
- Foodservice and consumer recipes
- · Foodservice, consumer, nutrition and trade research
- · Carving ideas and tips
- · Nutrition information
- · Materials and recipes for kids
- · FAQs



U.S. Standards for Grades of Watermelon

 $https://www.ams.usda.gov/sites/default/files/media/Watermelon_Standard\%5B1\%5D.pdf$

FDA Food Safety Modernization ACT (FSMA) Rules & Guidance for Industry

http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm253380.htm

Watermelons Add Wow to Your Menus, CIA ProChef

http://www.ciaprochef.com/watermelon/.





For more recipes, visit watermelon.org.



Watermelon Pancakes Sandwiches

Serving: 5, 2-sandwich servings

Watermelon

Cut lengthwise into quarters. Slice ¼ inch thick triangles of watermelon, ensuring they are all around the same size. The triangles should be no longer than 1.5 inches at bottom. Cut 10 triangles. Reserve remaining for pancakes batter and shipped cream.

Watermelon Pancakes

20, 2-inch pancakes

16 oz. package buttermilk or wheat baking mix

1 cup watermelon puree (by blending on high, not juicing)

1 egg

2 tbsp. brown butter, warm

Watermelon whipped cream

10 portions

8 oz. heavy cream

6 oz. watermelon puree (by blending on high, not juicing)

2 tablespoons agave nectar

Add all ingredients into a whipped cream canister with 2-3 charges of nitrous to ensure it all whips.

To Assemble

Ingredients

20 each mini Watermelon pancakes

10 each cooked patty breakfast sausage (1.5 inch diameter)

1 canister watermelon whipped cream

10 triangles of watermelon

Instructions

Place 10 pancakes on serving vessel, add 1 triangle of watermelon to each. Add a small dollop of watermelon whipped cream and then a warm breakfast sausage. Top with another pancake and finish with a dollop of watermelon whipped cream. Serve immediately.

Recipe created by Chef Dave Woolley, CD Culinary Approach.





Sparkling Watermelon

Serving: 12-15 pieces

Watermelon Juice

Ingredients

Half of a large seedless red watermelon, 3 to 4 pounds

Instructions

Remove all rind and peel from the flesh of the watermelon; reserve the rind to make the pickles. Cut the flesh into 1-inch pieces. Reserve as many of the nicer pieces for carbonated watermelon. Puree the remaining watermelon pieces in batches in a blender. Strain the pureed watermelon through a chinois with 4 layers of cheesecloth. Allow to strain for 2 hours. Keep chilled in an air tight container while stored.

Watermelon Sauce

Ingredients

2 cups watermelon juice (see above) 1/2 cup lime juice 1/8 teaspoon xanthan gum (0.3 grams) 1 tablespoon Lemon Sage Oil (see below) 1 teaspoon kosher salt

Instructions

In a small bowl, whisk together the watermelon juice, lime juice, and xanthan gum. Whisk in the Lemon Sage Oil, whisking until the xanthan gum is completely dissolved. Season with the salt.

Pickled Watermelon Rind

Ingredients

Rind from 1/4 of large red watermelon, half of the rind left from making the juice 1 cup rice wine vinegar 3/4 cup sugar 1 tablespoon kosher salt

Instructions

Remove and discard all of the pink flesh as well as the green peel from the rind. Use a small channel zester or knife to make 1.5-inch "julienne" strips of the rind. Bring the vinegar, sugar, salt, and 1/2 cup water to a boil. Remove the mixture from heat source and allow it to cool for 5 minutes. Pour the hot pickling liquid over the rind and cool to room temperature.

Carbonated Watermelon

Ingredients

Pieces reserved from making juice

Instructions

In a chilled siphon, place the refrigerated watermelon cubes, no more than 30 in a quart size siphon and 15 in a pint. After tightly closing the lid on the siphon, charge the siphon with CO2 soda chargers (3 chargers for quart, 2 for pint). Refrigerate the siphon until service or for at least 20 minutes.

Lemon Sage Oil

Ingredients

10 lemons

2 bunches of sage (leaves only)

1 bunch of basil (leaves and stems)

1 bunch of parsley (leaves and stems)

2 cups EVOO (chilled)

Instructions

Blanch herbs. Zest the lemons using a microplane grater. Place the zest, blanched herbs and chilled oil into a pre-chilled Vitamix blender jar. Blend ingredients thoroughly but do not allow the blender jar to become warm. Strain the oil through a chinois with 4 layers of cheese cloth. The oil may be kept covered, in the refrigerator for up to one month.

Crispy Sage

Ingredients

Sage leaves Canola oil

Instructions

Heat the canola oil to 325 degrees in a pan (or small deep fryer). Carefully add individual pieces to the hot oil making sure to turn and stir them. Frying process should take no more than 20 seconds. Remove and drain excess oil over paper. This can be held in an air tight container for up to 7 days.

Assembly

Ingredients

Watermelon Sauce Pickled Watermelon Rind Carbonated Watermelon Lemon Sage Oil Black Salt (large flake) Feta Snow Crispy Sage

Instructions

In your vessel of choice or tasting spoon, place 2 teaspoons of Watermelon Sauce top with 3 strips of Pickled Watermelon Rind. Next work quickly but carefully and release the pressure on the siphon, place a single cube of Carbonated Watermelon onto the previous ingredients. Add 5-6 drops of Lemon Sage Oil over and around the melon cube. Add a few flakes of black salt on to the cube. Next use a microplane or fine sifter to grate/press a small amount of drained, mild feta over the cube. Garnish with a piece of Crispy Sage.

Recipe created by Chef John Chesnut, Crave Catering.



Watermelon Gazpacho

Servings: 6, 1 cup servings

Ingredients

24 oz. watermelon

4 oz. cucumber

8 oz. tomatoes

5 oz. red bell pepper

5 oz. white onion

1 oz. garlic

1 oz. jalapeño

1 oz. sherry

½ oz. basil

3 oz. extra virgin olive oil

Salt to taste

Crème Fraiche, as needed

Basil Oil, as needed

Basil Oil

Ingredients

3 oz. basil

3 qt. olive oil

1 oz. salt

Instructions

Wash watermelon, remove rind and coarsely chop 2/3. Finely dice remaining watermelon. Peel cucumber, remove seeds from tomato and peppers and coarsely chop all remaining vegetables. Blend coarsely chopped 2/3 watermelon with all remaining ingredients except olive oil. While the blender is running, slowly drizzle in olive oil. Season to taste with salt. Cover and chill for at least one hour. This can be made a day ahead but best used within the first two days. Serve in chilled bowls or iced glass. Garnish with finely diced watermelon with a squeeze of Crème Fraiche and dots of Basil Oil.

Instructions

Blanch basil leaves in a medium pot of boiling water for 10 second. Rinse with cold water. Drain and pat dry with paper towels. Blend oil with basil. Season with salt to taste. Can be strained to remove bits or served chunky. Allow to sit for 24 hours.

Recipe created by Josh Martin, Executive Chef, University of California, Santa Cruz.





Stacked Jicama Chicken Salad

Serving: 4 stacked salads

Ingredients

1 pound skinned, boned chicken breasts, shredded

1 cup instant brown rice

1/3 cup mayonnaise

1/4 cup chutney

2 teaspoons curry

1/3 cup diced (or sliced) celery

2 tablespoons diced red onion

1/4 cup raisins or craisins

2 2/3 cups thin strips of watermelon (no longer than 2 1/2 inches)

1 cup thin strips of peeled jicama (no longer than 21/2 inches, match-stick size)

4 tablespoons chopped cashews

1 handful shredded romaine

4 pint wide-mouth mason jars

Instructions

Place chicken breasts in a medium saucepan, cover with water, and bring to a gentle boil over medium-high heat. Reduce heat and simmer until cooked through, approximately 15 minutes depending on thickness of meat. Remove from water and let cool. Dice. Cook rice according to directions on box. Refrigerate to cool. In a medium bowl, blend mayonnaise, chutney, and curry until thoroughly blended. Add chicken, celery, onion, and raisins. Blend and refrigerate. Divide rice and chicken mixture into 4 equal batches. Starting with the rice, layer approximately 1/4 cup of rice followed by 1/3 cup watermelon, 1/4 cup jicama, 1/3 cup of chicken. Repeat and top with 1 Tablespoon of chopped cashews and shredded romaine. Serve or screw a lid onto jar and refrigerate.

Recipe created by the National Watermelon Promotion Board.



Watermelon Rind Slaw

Serving: 4, 1-cup servings

Ingredients

1/4 cup fat-free, plain Greek yogurt

1/4 cup low-fat sour cream

1 1/2 tablespoons stone-ground mustard

1 tablespoon apple cider vinegar

4 teaspoons fresh lemon juice

1 tablespoon sugar

1 teaspoon poppy seeds

2 teaspoons olive oil

dash salt and pepper (to taste)

4 cups grated watermelon rind with fruit

and green peel removed

1 cup grated carrot

11/2 cups diced fresh pineapple

Instructions

In a small bowl, blend dressing thoroughly. Set aside. Place watermelon rind on several layers of paper towels to soak up excess fluid. In a medium-sized bowl, Place dressing, rind, carrot, and pineapple and toss to thoroughly coat. Serve.

Recipe created by the National Watermelon Promotion Board.



Watermelon Pulled Lamb Sliders

Serving: 5, 2 slider servings

Feta Crème

Ingredients

4 oz. crumble feta 4 oz. whipped cream cheese

Instructions

In a food processor, mix ingredients untilsmooth. Hold cold until serving.

Pulled Lamb

Ingredients

1 boneless lamb shoulder, rolled & tied 1/2 tablespoon smoked paprika 1/2 teaspoon dried oregano 1/2 teaspoon ground cumin 3-4 whole garlic cloves, slightly crushed Salt and freshly ground black pepper Olive oil for cooking 1 onion, sliced 1/2 tablespoon garlic powder 3 cups watermelon juice 5 cups chicken stock

Instructions

Preheat the oven to 400°F. Mix together paprika, oregano, cumin and garlic powder. Rub lamb first with salt and pepper, and then the paprika mix. Lightly oil a high-sided roasting pan and add onion and garlic to pan. Place lamb on top. Pour in watermelon juice and chicken stock. Cover the roasting pan with foil and place in oven. Immediately reduce oven temperature to 300°F and braise for 3.5 hours. Remove lamb from oven and allow to cool. Remove the meat from the liquid (reserve liquid). Pull the lamb into small pieces. Reduce and taste the reserved cooking liquid, skimming off any fat. Add to shredded lamb and toss to mix. Reheat the non-stick pan or griddle and add a little olive oil, toss the seasoned lamb until warmed.



Watermelon Rind Pickles

Ingredients

4 cups water

1 tablespoon coarse salt

2 cups peeled watermelon rind (leave a thin layer of pink), cut into $1 \times 1/2 \times 2$ inch pieces

3/4 cups granulated sugar

1 allspice berry

1/2 cup cider vinegar

4 peppercorns

4 whole cloves

1/2 teaspoon pickling spice

1 long slice of fresh gingeroot

1/4 teaspoon celery seeds

Instructions

In large pot, bring water and salt to boil over medium high heat. Add rind pieces and boil until tender, about 5 minutes. Strain. Transfer rinds to a large metal bowl. In saucepan, combine remaining ingredients. Bring to a boil over medium high heat, stirring until sugar dissolves. Simmer for 15 minutes, until slightly reduced. Pour over watermelon rinds in bowl. Place plate over top to keep rinds submerged in liquid. Cover and refrigerate for one day. Transfer to a glass jar and keep sealed in the refrigerator for up to 2 weeks.

Watermelon Slaw

Ingredients

2 cups watermelon, chopped into a small julienne

2 oz. thin sliced red onion, soaked in ice water for 10 minutes then drained

1/2 cup chopped cilantro

1 oz. lime juice

1 small jalapeno, seeded and finely chopped

Salt to taste

1 radish, sliced thin and then chopped into small julienne

1 cup of pickled watermelon rind, minced but still definable pieces

Instructions

Toss together and refrigerate.

Assembly

Ingredients

10 slider buns, warm Feta Crème Pulled lamb Watermelon Slaw

Instructions

Add ½ oz. Feta crème spread evenly between top and bottom of a warm slider then add from the bottom bun up, 2 oz. of warm pulled lamb, then 1 oz. of watermelon slaw and top bun. Then pick with bamboo skewer and serve.

Recipe created by Chef Dave Woolley, CD Culinary Approach.



Seared Alaskan Halibut with Heirloom Tomatoes, English Peas, White Asparagus & Watermelon Vinaigrette

Serving: 1 dish

Watermelon Vinaigrette

Ingredients

½ watermelon blended, juice ¼ cup honey ½ cup Champagne vinegar 2 tbsp chopped shallots 1 tbsp Dijon mustard 1 cup olive oil 1 cup blended oil 1 sachet of chopped fresh mint Salt & Pepper

Instructions

Reduce watermelon juice and honey to +/- 3 cups. Add all ingredients and slowly mix in the oil. Salt & pepper to taste. Infused the sachet of fresh mint in the vinaigrette.

Assembly

The base of the plate contains a thick slice of heirloom tomato and on top of that a circular piece of watermelon. Dress both with salt/pepper and lemon oil. The seared halibut goes on top. Garnish the plat with sautéed white asparagus, cut on the bias and fresh English peas. Pour 1-2 oz. of watermelon vinaigrette over the fish.

Recipe created by Marc Johnson, Executive Chef, Oak Grill | Aqua Lounge, Newport Beach, CA.



Milk Pudding with Rose Jelly and Watermelon Salad

Serving: 20

Milk Pudding

Ingredients

8 ¼ cups whole milk 2 ¾ oz. caster sugar 3 ½ oz. corn flour 2 each cinnamon sticks

Instructions

Combine 1 cup of milk, sugar and corn flour in a jug until dissolved. Bring remaining milk and cinnamon to simmering point over medium heat. Pour in corn flour mixture and whisk continuously until thickened and smooth. Remove cinnamon. Spoon mixture into 20 individuals serving glasses and chill until set.

Rose Jelly

Ingredients

1 oz. powdered gelatin
2 ¾ oz. caster sugar
3 cups water, extra purified
1 tsp rosewater
2 tbsp watermelon juice

Instructions

Combine gelatin and sugar, add boiling water and stir until gelatin is completely dissolved (microwave if necessary). Combine extra water, rosewater and watermelon juice in a large bowl and stir in gelatin mixture. Top each milk pudding with 1.5 oz of rosewater jelly and allow to completely set.

Strawberry Watermelon Salad Ingredients

10 each watermelon, yielded-finely chopped 3 tbsp strawberry, yielded-finely chopped 3 tbsp mint, fresh yielded 3 tbsp pistachios, finely chopped

Instructions

Combine fruit and mint and spoon over set jelly. Serve sprinkled with pistachio nuts. Recipe created by Jose Manuel Martinez, Senior Executive Chef, Residential Cal Dining.



A Tall Glass of Water(melon)

Serving: 1 cocktail

Ingredients

1.5 oz. Death's Door Vodka1.5 oz. watermelon juice.5 oz. Aperol.25 oz. simple syrup.75 oz. lime juice2 dashes Angostura Bitters

Instructions

Shake, strain over ice in a Collins glass, top with soda water and garnish with fresh watermelon.

Recipe created by John Stanton, head bartender, Sable Kitchen & Bar, Hotel Palomar Chicago.





Watermelon Peak Production Areas By Month

January

Peak:

Costa Rica Dominican Republic

High:

Honduras Mexico

Low:



February

Costa Rica Honduras Mexico Panama

Dominican Republic Guatemala

March

Peak:

Nicaragua Panama

High:

Costa Rica Dominican Republic Guatemala

Honduras Mexico

April

Peak:

Guatemala Honduras Mexico Panama

High:

Costa Rica Dominican Republic Nicaragua

Florida Texas

May

Peak:

California (Southern) Florida

Texas Mexico

High:

California (Imperial Valley)

Low:

Arizona Georgia Costa Rica Guatemala Honduras Panama



June

Peak:

Arizona California (Imperial Valley) Georgia

South Carolina Texas

California (Central) California (Southern)

Florida

Missouri North Carolina Honduras Mexico



July

Peak: Arkansas

California (Central) Missouri North Carolina Oklahoma

High:

Arizona California (Southern) Delaware Georgia Indiana Maryland South Carolina

Texas Washington

California (Imperial Valley)

Florida Virginia Mexico

August

Peak:

Delaware Indiana Maryland Virginia Washington

High:

California (Central) Missouri North Carolina Oklahoma Texas

Low:

Arizona Arkansas California (Southern)

Georgia Mexico

September

High:

California (Central) Oklahoma Texas

Low:

Arizona California (Southern) Delaware Florida Indiana Maryland Missouri North Carolina Virginia Washington

Mexico

October

Mexico

Arizona California (Central) Florida Oklahoma **Texas**



November

Peak:

Low:

High:

Low:

Brazil

Mexico

Arizona Costa Rica Guatemala

December

High:

Dominican Republic Guatemala

Mexico Nicaragua

Honduras Panama





watermelon.org **National Watermelon Promotion Board**

Culting & Yield



Cut off the ends, providing a base and access to the peel and rind.



Angle the knife, placing it where the white rind meets the red flesh and following the curve of the fruit, cut off the rind.



Cut the whole watermelon into disks, widthwise in the desired size of cubes.



Lay the disks face down, pushing the smaller disks to one side and cut same size strips in both directions.

YIELD

60	45	36
2.50	2.58	3.05
8.61	9.54	10.67
3.61	4.24	7.17
70.5%	69.2%	59.8 %
	2.50 8.61 3.61	2.50 2.58 8.61 9.54 3.61 4.24





Watermelon Flavor Pairings

The flavor, texture and color of watermelon pairs well with so θ many flavors. Use this pairing guide for recipe ideation inspiration.

HERBS

Basil, fresh Oregano,
Cilantro dry
Dill, fresh Parsley
Ginger, Rosemary
fresh Sage
Lemongrass Tamarind
Mint Thyme

SPICES

Allspice Cinnamon
Black Pepper Cloves
Cajun Spices Coriander
Cayenne Cumin
Pepper Dried Mild
Celery Seed Chilis
Chile Flakey salt

Garlic Sage
Jerk Spice Sweet
Madras Curry Chili
Mustard Seeds Tamari
Paprika, sweet, Thai Re
smoked Tumeri
Roasted garlic Vanilla

Sage Sweet Thai Chili Tamarind Thai Red Curry Tumeric

DRESSINGS/SAUCES

BBQ Sauce Chimichurri Dijon Mustard Harissa Vinegar, apple cider, balsamic, red wine Za'atar Carmel Mayonaisse Olive Oil Tea, black, green

FRUITS

Avocado
Berries
Coconut
Grapefruit
Kaffir Lime
Lemon
Lime
Mango
Orange
Pineapple
Pomegranate
Tomato

VEGETABLES

Arugula Kale Spring mix
Cabbage Olive, black Squash
Carrot Onion, Sweet Pepper,
Cauliflower caramelized, roasted
Celery cripsy, green, Watercress
Chilis red, sweet Zucchini
Corn, roasted Potatoes, white,

Cucumbers sweet Fennel Romaine Jalapeños Spinach

Jicama

GRAINS/NUTS/BEANS/LEGUMES

Almonds Rice Black Beans Rye

Cashews Sunflower Seeds

Edamame Walnut Kamut Wheat

Quinoa Graham Crackers

DAIRY

Blue Cheese Gouda
Cream Parmesan
Creme Fraiche Pepper Jack
Feta Sour Cream
Fresh Mozzarella Yogurt
Goat Cheese

PROTEIN

Bacon Fish, grilled Pork, roasted
Beef, grilled Lamb Salmon
Chicken, grilled, Lobster Scallops
fried Oysters Shrimp

MISCELLANEOUS

Agave Honey Choclate, dark, Tequila milk, white

FLAVOR AFFINITIES

Watermelon + cilantro + cream + tequila

Watermelon + fennel + lemon juice + parsley + salt

Watermelon + feta cheese + red onion

Watermelon + kaffir lime + vanilla

Source: The Flavor Bible, by Kares Page and Andrew Demembers

COOKING TECHNIQUES

Juice Compress Jell, gelĕe
Puree Pickle Foam
Glaze Infuse Consommé
Grill, sear Carbonate



Watermelon Ideation



Think Outside the Peel

WATERMELON

FLESH can be used in savory or sweet applications and even grilled, for more visual and flavor appeal.

WATERMELON

PEEL is perfect for carvings to bring excitement to any table.

WATERMELON

RIND can be used for pickles, stir fry, or slaw.

WATERMELON SEEDS can be roasted and used on salads.



Why Watermelon?

The National Watermelon Promotion Board invested in Datassential MenuTrends menu mention research to understand the opportunity and trends for watermelon in foodservice. Here's what was discovered!

27TH MOST POPULAR

fruit by penetration



INCEPTION ADOPTION PROLIFERATION UBIQUITY

Mentioned on 8.4% of menus

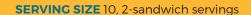
Penetration is stable across all regions of the U.S. making it a

FOR ALL CHAINS

Watermelon is one of the fastest growing fruits on salad menus, INCREASING 50% SINCE 2010









WATERMELON

Cut lengthwise into quarters. Slice ¼ inch thick triangles of watermelon, ensuring they are all around the same size. The triangles should be no longer than 1.5 inch at bottom. Cut 20 triangles.

WATERMELON PANCAKES

20, 2-inch pancakes

- · 1-6 oz. package buttermilk or wheat baking mix
- ·1 cup watermelon puree (by blending on high in blender not juicing)
- ·1 egg
- · 2 tbsp. brown butter, warm

WATERMELON WHIPPED CREAM

20 dollops

- · 8 oz. heavy cream
- 6 oz. watermelon puree (by blending on high in blender, not juicing)
- · 2 tbsp. agave nectar Add all ingredients into a whipped cream canister with 2-3 charges of nitrous to ensure it all whips.

TO ASSEMBLE

- · 20 each mini watermelon pancakes
- · 10 each cooked patty breakfast sausage (1.5 inch diameter)
- ·1 canister watermelon whipped cream
- · 10 each triangles of watermelon

Place 10 pancakes on a serving vessel. Top with 1 triangle of watermelon followed by a dollop of whipped cream, a breakfast sausage, another pancake and finish with a dollop of whipped cream. Serve immediately.

Pickled Watermelon Rind

INGREDIENTS

4 cups water
1 tablespoon coarse salt
2 cups peeled watermelon
rind (leave a thin layer of pink),
cut into 1 x 1/2x2 inch pieces
¾ cup granulated sugar
1 ea. all spice berries
½ cup cider vinegar
4 each peppercorns
4 whole cloves
½ teaspoon pickling spice
1 long slice of fresh
gingerroot
¼ teaspoon celery seeds

INSTRUCTIONS

In large pot, bring water and salt to a boil over medium high heat. Add rind pieces and boil until tender, about 5 minutes. Strain. Transfer rinds to a large metal bowl.

In a saucepan, combine sugar, all spice barries, cider vinegar, peppercorns, cloves, pickling spice, gingerroot, and celery seeds. Bring to a boil over medium high heat, stirring until sugar dissolves. Simmer for 15 minutes, until slightly reduced. Pour over watermelon rinds in bowl. Place plate over top to keep rinds submerged in liquid. Cover and refrigerate for one day. Transfer to a glass jar and keep sealed in the refrigerator for up to 2 weeks. Serving Recommendation: Can be served on a sandwich or burger or with a washed rind, semi soft cheese and crackers.





Sparkling Watermelon

WATERMELON JUICE

INGREDIENTS

Half of a large seedless red watermelon, 3 to 4 pounds needed

DIRECTIONS

Remove all rind and peel from the flesh of the watermelon; reserve the rind to make the pickles. Cut the flesh into 1-inch cubes. Reserve as many of the nicer pieces for carbonated watermelon. Puree the remaining watermelon in batches in a blender. Strain the pureed watermelon through a chinois with 4 layers of cheesecloth. Allow to strain for 2 hours. Keep chilled in an air tight container.

Recipe courtesy of Chef John Chesnut, Crave Catering.

LEMON SAGE OIL (Makes 2 cups)

INGREDIENTS

10 lemons

2 bunches of blanched sage, leaves only

- 1 bunch of blanched basil, leaves and stems
- 1 bunch of blanched parsley, leaves and stems
- 2 cups EVOO, chilled

DIRECTIONS

Zest the lemons using a Microplane grater. Place the zest, blanched herbs and chilled oil into a pre-chilled Vitamix blender jar. Blend ingredients thoroughly but do not allow the blender jar to become warm. Strain the oil through a chinois with 4 layers of cheese cloth. The oil may be kept covered in the refrigerator for up to 1 month.

CARBONATED WATERMELON

INGREDIENTS

Cubes reserved from making juice

DIRECTIONS

In a chilled siphon, place the refrigerated watermelon cubes, no more than 30 in a quart size siphon and 15 in a pint. After tightly closing the lid on the siphon, charge the siphon with CO2 soda chargers (3 chargers for quart, 2 for pint). Refrigerate the siphon until service or for at least 20 minutes.

WATERMELON SAUCE

INGREDIENTS

2 cups watermelon juice 1/2 cup lime juice 1/8 teaspoon xanthan gum (0.3 grams) 1 tablespoon Lemon Sage Oil 1 teaspoon kosher salt

DIRECTIONS

In a small bowl, whisk together the watermelon juice, lime juice, and xanthan gum. Whisk in the Lemon Sage Oil, whisking until the xanthan gum is completely dissolved. Season with the salt.

PICKLED WATERMELON RIND

INGREDIENTS

Rind from 1/4 of large red watermelon, (half of the rind left from making the juice) 1 cup rice wine vinegar 3/4 cup sugar 1 tablespoon kosher salt

DIRECTIONS

Remove and discard any flesh as well as the green peel from the rind. Use a small channel zester or knife to make 1.5-inch "julienne" strips of the rind. Bring the vinegar, sugar, salt, and 1/2 cup water to a boil. Remove the mixture from heat and allow it to cool for 5 minutes. Pour the hot pickling liquid over the rind and cool to room temperature.

CRISPY SAGE

INGREDIENTS

Sage leaves Canola oil

DIRECTIONS

Heat the canola oil to 325 degrees in a pan (or small deep fryer). Carefully add individual pieces to the hot oil making sure to turn and stir them. Frying process should

take no more than 20 seconds. Remove and drain excess oil over paper. This can be held in an air tight container for up to 7 days.

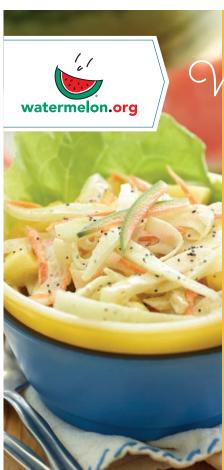
TO FINISH

INGREDIENTS

Carbonated Watermelon Pickled Watermelon Rind Watermelon Sauce Lemon Sage Oil Black Salt (large flake) Feta Snow Crispy Sage

DIRECTIONS

In your vessel of choice or tasting spoon, place 2 teaspoons of Watermelon Sauce, top with 3 strips of Pickled Watermelon Rind. Working quickly but carefully, release the pressure on the siphon, and place a single cube of Carbonated Watermelon onto the previous ingredients. Add 5-6 drops of Lemon Sage Oil over and around the melon cube. Add a few flakes of black salt on to the cube. Use a Microplane or fine sifter to grate/press a small amount of drained, mild feta over the cube. Garnish with a piece of Crispy Sage.



Watermelon Rind Slaw

SERVING SIZE

4, 1-cup servings

INGREDIENTS

1/4 cup plain Greek yogurt 1/4 cup sour cream 1 1/2 tablespoons stone-ground

4 teaspoons fresh lemon juice

1 tablespoon sugar

1 teaspoon poppy seeds

2 teaspoons olive oil

dash salt and pepper (to taste)

4 cups grated watermelon rind with flesh and green peel removed

1 cup grated carrot

1 tablespoon apple cider vinegar 11/2 cups diced fresh pineapple

INSTRUCTIONS

In a small bowl, blend dressing ingredients thoroughly. Set aside. Place watermelon rind on several layers of paper towels to soak up excess fluid for at least 10 minutes. In a medium bowl, place dressing and slaw ingredients and toss to thoroughly coat.

Watermelon Feta Bruschetta

SERVING SIZE

16, 2 piece servings

INGREDIENTS

124-inch-long loaf of Italian or French bread

1 garlic clove, diced

1/4 cup extra-virgin olive oil

2 tablespoons olive oil (preferably extra-virgin)

2 cups diced watermelon

1 cup feta cheese, cut into fine diced cubes

2 tablespoons minced fresh chives

2 tablespoons minced fresh mint

4 teaspoons balsamic vinegar, or to taste

INSTRUCTIONS

To make toasts, prepare grill or preheat broiler. With a serrated knife cut bread crosswise into 3/4-inch-thick slices. Combine the garlic and olive oil and spread it on one side of the cut bread. Arrange bread slices in one layer in a shallow baking pan and bake in middle of oven until golden, about 10 minutes. In a bowl toss together watermelon, cheese, chives, mint, vinegar, and salt and pepper to taste and mound about 1 tablespoon on oiled side of each toast.



Watermelon Escabeche

SERVING SIZE: 5

WATERMELON RIND CURTIDO INGREDIENTS

1½ cups watermelon rind, finely diced
1½ cups red pepper, finely diced
½ cup diced white onion, finely diced
¼ cup fresno pepper, finely diced
1 cup apple cider vinegar
½ cup white granulated sugar
1 tbsp salt
1½ tsp mustard seed
¼ tsp celery seed
1 tsp dill
¼ tsp turmeric, dry spice
½ tsp red chili flakes

INSTRUCTIONS

First, slice off a few pieces of watermelon, cut out the inside and peel off the outer green skin with a vegetable peeler, leaving the watermelon rind. Seed and dice the peppers, dice the onion and mix them in a bowl. Add the salt and stir together, let rest for 2 hours. Salt will draw out the moisture. Pour off all the water and then squeeze out as much as possible. In a pot add the vinegar, sugar and all spices. Bring to a boil and add the vetegables. Bring back to a boil and simmer for 10-12 minutes. Remove from heat and cool down completely. Put curtido in a mason jar, cover and let flavors marinate for at least a day. Flavors will develop if you conserve it for longer. One week is recommended. It will last about a month in the refrigerator.

ROSEWATER INFUSED FOAM INGREDIENTS

½ cups watermelon juice ½ cup simple syrup 1 tsp rosewater 1 tsp sucrose ester

INSTRUCTIONS

Blend all ingredients using a stick blender with whisk attachment or an eggbeater. Mix should be foamy.



SCALLOP CEVICHE INGREDIENTS

10 ea bay scallops, 10-20 ct.

3 tbsp fresh lime juice

3 tbsp fresh grapefruit juice

3 tbsp fresh lemon juice

3 tbsp fresh watermelon juice

1/8 tsp sea salt

1/8 tsp ground black pepper

INSTRUCTIONS

For scallops, remove side muscles and slice in half. In a non-reactive container, mix all ingredients and let scallops marinate in liquid for 3-5 hours only. Drain scallops and refrigerate until needed.

CUT FRESH WATERMELON ESCABECHE

INGREDIENTS

1½ cups fresh watermelon, ¼ in.

 $1 \frac{1}{2}$ cups Watermelon Rind Curtido

1 oz micro cilantro

20 each Scallop Ceviche

1 cup Rosewater Infused Foam 20 each chives, 1½ in stick

INSTRUCTIONS TO PLATE

Mix fresh watermelon, curtido and micro cilantro together, Toss gently to mix into escabeche. Divide escabeche into 5 equal portions. Place 4 of the scallop ceviche on the bottom of each plating vessel, 5 plates total. Divide each portion of watermelon escabeche in 4 and place on of each scallop divided by 5 plates, 20 equal portions, 4 per. Place chive vertical in between each scallop, 4 on each plate. Mount rosewater infused foam on top of each Watermelon Escabeche.

Vatermelon Gazpacho

INGREDIENTS

24 oz. Watermelon

4 oz. Cucumber

8 oz. Tomatoes

5 oz. Red Bell Peppers

5 oz. White Onion

1 oz. Garlic

1 oz. Jalapeno

1 oz. Sherry

½ oz. Basil

3 oz. Extra Virgin Olive Oil

Salt to taste

Crème Fraîche, as needed

Basil Oil, as needed

INSTRUCTIONS

- 1. Wash watermelon, remove rind and coarsely chop 2/3. Finely dice remaining watermelon.
- 2. Peel cucumber, remove seeds from tomato and peppers, coarsely chop all remaining vegetables.
- 3. Blend coarsely chopped 2/3 watermelon with all remaining ingredients except olive oil.
- 4. While the blender is running, slowly drizzle in olive oil. Season to taste with salt.
- 5. Cover and chill for at least one hour. This can be made the day ahead. Best if used within the first two days.
- 6. Serve in chilled bowls or iced glass.
- 7. Garnish with remaining finely dice watermelon with a squeeze of Crème Fraîche and dots of Basil Oil (recipe on reverse).





Basil Oil

INGREDIENTS

3 oz. Basil

3 qt. Olive Oil

1 oz. Salt

INSTRUCTIONS

- 1. Blanch basil leaves in a medium pot of boiling water for ten seconds. Rinse with cold water. Drain and pat dry with paper towels.
- 2. Blend oil with basil. Season with salt to taste. Can be strained to remove bits or served chunky.
- 3. Allow to sit for 24 hours.

Recipe from Josh Martin, Executive Chef, University of California, Santa Cruz





Stacked Watermelon Chicken Salad

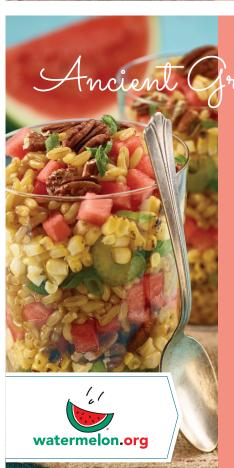
SERVING SIZE: 4 stacked salads

INGREDIENTS

1 lb. skinned, boned chicken breasts, shredded 1 cup instant brown rice 1/3 cup mayonnaise 1/4 cup chutney 2 teaspoons curry powder 1/3 cup diced (or sliced) celery 2 tablespoons diced red onion 1/4 cup raisins or craisins 2 2/3 cups thin strips of watermelon 1 cup thin strips of peeled jicama 4 tablespoons chopped cashews 1 handful shredded romaine 4 pint, wide-mouth mason jars

INSTRUCTIONS

Place chicken breasts in a medium saucepan, cover with water, and bring to a gentle boil over medium-high heat. Reduce heat and simmer until cooked through, approximately 15 minutes depending on thickness of meat. Remove from water and let cool, shred. Cook rice according to directions. Refrigerate to cool. In a medium bowl, blend mayonnaise, chutney, and curry until thoroughly blended. Add chicken, celery, onion, and raisins. Toss to coat and refrigerate. Divide rice and chicken mixture into 4 equal batches. Starting with the rice, layer approximately 1/4 cup of rice followed by 1/3 cup watermelon, 1/4 cup jicama, 1/3 cup of chicken. Repeat and top with 1 tablespoon chopped cashews and shredded romaine. Serve or screw lid onto jar and refrigerate.



Ancient Grain Watermelon Salad

SERVES 6

INGREDIENTS

3 tablespoons extra-virgin olive oil

4 tablespoons maple syrup

3 tablespoons lemon juice

2 teaspoons lemon zest

Salt to taste

3 cups warm cooked kamut grain (about 1 ½ cups dry)

1/2 cup coarsely chopped pecans 1/3 cup thinly sliced green onions, plus 1 tablespoon 1/3 cup thinly sliced celery 1 cup corn, grill if preferred 2 cups chopped watermelon

INSTRUCTIONS

- 1. Blend oil, maple syrup, lemon juice, lemon zest, and salt in a small bowl. Add kamut and nuts. Stir thoroughly and let sit until cooled.
- 2. Assemble salad in a tall, glass bowl: Place 1/3 of the kamut at the bottom, topped by half each of the onions and celery, corn, and watermelon. Repeat. Add the last 1/3 of the kamut to the top and sprinkle with the remaining 1 tablespoon of diced green onion. Present as a layered salad and toss just before serving.

Note: If you make ahead and it will sit overnight, add the watermelon last because the watermelon leaks water.

Watermelon Pudding

WITH WATERMELON-MINT CRÈME FRAICHE, BROWN BUTTER-PISTACHIO CRUMBLE AND PICKLE WATERMELON RIND SLIVERS



INGREDIENTS

1/4 cup sugar
1/4 cup brown sugar
3 tablespoons cornstarch
1/8 teaspoon salt
½ cup whole milk
1½ cups watermelon juice
(Blending a cleaned, seedless
watermelon in blender on high until
blended, do not strain)
2 egg yolks
2 tablespoons unsalted butter

1 teaspoon vanilla extract

INSTRUCTIONS

Whisk together the sugars, cornstarch, and salt in a saucepan. Pour 1/4 cup of the milk into the sugar mixture, stirring to form a smooth paste. Whisk in the remaining milk, watermelon, and egg yolks. Cook the pudding mixture over low heat, stirring continuously with a wooden spoon until thickened, about 15 minutes. Do not allow it to boil. Remove from heat and stir in the butter and vanilla. Scrape the pudding into a bowl. Cover with plastic wrap, pressing the surface to make an airtight seal and prevent a skin from forming. Refrigerate until well chilled.

Watermelon-Mint Crème Fraiche

INGREDIENTS

¾ cup crème fraiche½ cup fine dice watermelon (seedless)1 teaspoon minced fresh mint

INSTRUCTIONS

Blend all together, use immediately.

Brown Butter-Pistachio Crumble

INGREDIENTS

Pinch salt

¼ cup brown butter,strained and warm¼ cup graham crumbs¼ cup minced pistachios,toasted1/8 cup brown sugar

INSTRUCTIONS

Mix all ingredients together. Let cool for 10 minutes, then use.

Milk Pudding with Rose Jelly and Watermelon Salad

SERVING SIZE: 20

MILK PUDDING

INGREDIENTS

8 ¼ cups whole milk 2 ¾ oz caster sugar 3 ½ oz corn flour 2 each cinnamon sticks

INSTRUCTIONS

Combine 1 cup of milk, sugar and corn flour in a jug until dissolved. Bring remaining milk and cinnamon to simmering point over medium heat. Pour in corn flour mixture and whisk continuously until thickened and smooth. Remove cinnamon. Spoon mixture into 20 individuals serving glasses and chill until set.

ROSE JELLY INGREDIENTS

INCREDIENTS

1 oz powdered gelatin

2 ¾ oz caster sugar

3 cups water, extra purified

1 tsp rosewater

2 tbsp watermelon juice

INSTRUCTIONS

Combine gelatin and sugar, add boiling water and stir until gelatin is completely dissolved (microwave if necessary). Combine extra water, rosewater and watermelon juice in a large bowl and stir in gelatin mixture. Top each milk pudding with 1 ½ oz of rosewater jelly and allow to completely set.

STRAWBERRY WATERMELON SALAD INGREDIENTS

12 oz watermelon, finely chopped 9 oz strawberry, finely chopped 1/2 cup fresh mint, finely chopped 3 oz pistachios, finely chopped

INSTRUCTIONS

Combine fruit and mint. Spoon over set jelly. Serve sprinkled with pistachio nuts.

