

Culinary Foundations

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With

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Preface

Culinary arts, in which 'culinary' means "related to cooking", are the 'arts' of preparation, cooking, and presentation of food, usually in the form of meals. People working in this field – especially in establishments such as restaurants – are called "chefs" or "cooks", although, at its most general, the terms "culinary artist" and "culinarian" are also used. Table manners as an exemplar, ("the table arts") are sometimes referred to as a culinary art.

Expert chefs are required to have knowledge of food science, nutrition and diet and are responsible for preparing meals that are as pleasing to the eye as they are to the palate.

The origins of culinary began with primitive humans roughly 2 million years ago. There are various theories as to how early humans used fire to cook meat. According to anthropologist Richard Wrangham, author of *Catching Fire: How Cooking Made Us Human*, primitive humans simply tossed a raw hunk of meat into the flames and watching it sizzle. Another theory claims humans may first have savored roasted meat by chance when the flesh of a beast killed in a forest fire was found to be more appetizing and easier to chew and digest than the conventional raw meat.

Culinary techniques improved with the introduction of earthenware and stoneware, the domestication of livestock, and advancements in agriculture. In early civilizations, the primary employers of professional chefs were kings, aristocrats, or priests. The divide between professional chefs cooking for the wealthy and peasants cooking for their families engendered the development of many cuisines. Each class sought to create distinct culinary experience synonymous with their cultural identity.

A great deal of the study of Culinary Arts in Europe was organized by Jean Anthelme Brillat-Savarin, a man famous for his quote "Tell me what you eat, and I will tell you what you are," which has since been mistranslated and oversimplified into "You are what you eat." Other people helped to parse out the different parts of food science and gastronomy. Over time, increasingly deeper and more detailed studies into foods and the Culinary Arts has led to a greater wealth of knowledge.

In Asia, a similar path led to a separate study of the Culinary Arts, which later essentially merged with the Western counterpart. In the modern international marketplace, there is no longer a distinct divide between Western and Eastern foods. Culinary Arts students today, generally speaking, are introduced to the different cuisines of many different cultures from around the world.

The Culinary Arts, in the Western world, as a craft and later as a field of study, began to evolve at the end of the Renaissance period. Prior to this, chefs worked in castles, cooking for kings and queens, as well as their families, guests, and other workers of the castle. As Monarchical rule became phased out as a modality, the chefs took their craft to inns and hotels. From here, the craft evolved into a field of study.

Before cooking institutions, professional cooks were mentors for individual students who apprenticed under them. In 1879, the first cooking school was founded in the United States: the Boston Cooking School. This school standardized cooking practices and recipes, and laid the groundwork for the culinary arts schools that would follow. Today, there are Culinary Arts schools around the world.

Goals of the Course

One of the first steps in learning how to be a culinary professional is learning ‘professionalism’, the tools of the trade, recipe conversion and measurements, and the proper cooking methods and techniques including the various ways to cook. There are many to learn, and they each cooking method has their advantages and disadvantages. You will begin to notice a trend when it comes to applying cooking methods to various food items. There are some methods and ways of thinking that are basic to the kitchen and the profession, some are more advanced. This course provides the culinary foundations you will need to progress in the field.

Practicing cooking methods and techniques are the only way to become naturally adept with them. You are probably already aware of many of these cooking methods and unknowingly use them on a regular basis. What the goal is to make sure that you are applying the proper cooking technique to the proper food item. While the cooking process is usually seen as an empty canvas in which to experiment with, you must first master the theory and practical skills that gives the canvas its inspirational ability. The importance of strong foundational skill cannot be overstated. These skills are vital to your success in the field, and filling your own inspirational canvas.

The Primary Cooking Methods the Course will Discuss

To keep things simple, it is good to remember that there are only three types of cooking methods. It helps to simplify when cooking as much as possible. Within each type, there are several variations of methods. The three methods.

- **Dry-heat Cooking Method**
- **Moist-heat Cooking Method**
- **Combination Cooking Method**

Foods can be cooked in air, fat, water or steam and that is it. When we say that, we're talking about the mediums required to transfer heat to your foods. Convection, conduction, and radiation. Alter your style of cooking to better suit the meat or vegetable you are cooking. Cooking preparation is king when it comes to *mise en place*.

Dry Heat Cooking Method

Dry-heat cooking methods are those that utilize air or fat. These are:

- **Broiling**
- **Roasting**
- **Grilling**
- **Baking**
- **Sautéing**
- **Pan-frying**
- **Deep-fat frying**

Foods cooked using this method have a rich flavor due to the caramelization and browning of the foods.

Moist Heat Cooking Method

Moist-heat uses water or steam for its cooking procedure. They include:

- **Poaching**
- **Boiling**
- **Steaming**
- **Simmering**

We use moist-heat cooking methods to emphasize the natural flavor in foods, and reduce the major losses of water-soluble vitamins and increase the digestibility of protein.

Combination Cooking Method

Combination cooking is a method that incorporates both dry- and moist-heat cooking. These are:

- **Braising**
- **Stewing**

Each one of these cooking methods is applicable to a large variety of foods including meats, vegetables, fish, pastries, cakes, cookies, etc. to finish different styles of cooking.

This was only a brief overview of what you will learn in culinary foundations. Welcome to the exciting field of culinary arts – and culinary foundations, the beginning of your journey!

Chapter 1:
Professionalism and Saut 

Professionalism

History of Restaurants

Restaurants are an institution in nearly every country and culture in the world. The restaurant, which emerged during the French Revolution, continues to serve as a place where people come together to eat, drink, and socialize. However, even before Marie Antoinette and Louis XVI were sent to the guillotine, restaurants have been around in one form or another for thousands of years.



Ancient Restaurant, Wikipedia



Fruit Basket, Pompeii, C. AD 70, Wikipedia

The idea of selling food for profit existed during the earliest civilizations. It's no coincidence the growth of restaurants through history correlates with the growth of cities. The need for public eateries was firmly established as far back as the Roman Empire and Ancient China. When peasants and farmers brought their livestock and other goods to urban markets, often they traveled for several days at a time and needed a place to eat and rest. This brought about the earliest form of restaurants, the roadside inn.

Usually located in the middle of the countryside, inns served meals at a common table to travelers. There were no menus or even options from which to choose. Every night was chef's choice.



Restaurants in the Middle Ages, Wikipedia

In Europe through the Middle Ages and into the Renaissance, taverns and inns continued to be the main place to buy a prepared meal. In Spain, these establishments were called bodegas, which served small savory Spanish dishes called "tapas." In England, food such as sausage and shepherd's pie were popular; while, in France, stews and soups were offered. All of these early restaurants served simple fare commonly found in peasant or merchant homes.

Following Columbus's voyage to the Americas in 1492, global trade increased, introducing new foods to Europe. Coffee, tea, and chocolate were soon being served in public houses alongside beer, ale, and wine. By the 17th century, while full meals were still typically eaten at home, moderately well-to-do people would hire a caterer or take their meals in a private salon, rather than in the main dining room of a public house.



France, Wikipedia Commons

In France throughout the Middle Ages, guilds had monopolies on many aspects of prepared food. For example, **Charcutiers** were the guild who prepared cooked meats for sale. If you did not belong to that particular guild, it was illegal to sell cooked meat in any form. In 1765, a man named **Boulangier** added cooked lamb to a stew he sold in his shop near the Louvre. The caterer's guild sued him, but Boulangier won the case. Over the next 20 years leading up to the French Revolution, more shops like Boulangier's began opening in Paris. Before Mr. Boulangier, guilds brought foods to the inns whose primary functions was to provide beds and drink.

Guilds of the Middle Ages

- *Rotisseurs.....roast spits*
- *Patissiers.....poultry, pies, tarts*
- *Tamisiers.....bread bakers*
- *Vinaigriers.....soups & stews*
- *Traiteurs.....ragouts*
- *Porte-chapes.....feasts & celebrations*

When Marie Antoinette and Louis XVI went to the guillotine, the old ways of French society went with them. The guilds were swept away and many chefs employed in aristocratic, even royal, households found themselves unemployed. Many of these displaced workers opened their own restaurants in Paris, bringing with them a new way of dining. Delicate china, cutlery, and linen tablecloths, all trappings of aristocracy, were now available to a completely new echelon of French citizens. Menus became more diverse, offering both prix fixe and a la carte options.

Though public houses continued to exist, the rise of fine dining in France would soon spread throughout Europe and into the New World.

Public gatherings over food and drink have long been a part of human society, as they offer a place for people to come together for a meal and to socialize with others. Following the French Revolution, fine dining restaurants expanded across Europe and to other parts of the world.

The Birth of Fine Dining



The term restaurant itself is French, once used to describe the rich bouillons served at taverns and public houses to restore the spirits and relieve ailments (restoratives). Following the French Revolution at the end of the 18th Century, unemployed chefs from aristocratic households began opening their own RESTAURANTS. They added touches of the upper class to their establishments. Guests did not have to take their meals at a common table, as was typical of taverns and roadside inns. Instead, they had private tables, held by reservations- a new concept. Antoine Beauvilliers of the **Grande Taverne de Londres** was the first to offer a menu, listing dishes during fixed hours served at individual tables.

They dined with fine china and cutlery, and tablecloths- all trademarks of **modern day fine dining**. Menus, either **prix fixe** or a la carte were framed and at the end of the meal, guests were presented with a check, tallying the amount of their bill.

Many fortunes were made by these professional chefs-turned-restaurateurs. They catered to a new class of provincial DEPUTES that came to Paris following the end of the Revolution. 'Savvier restaurateurs' adapted their eateries to include such amenities as bathrooms- for which there was a charge to use. Before the Revolution, there were less than 50 restaurants in Paris. By 1814, there were 3,000 restaurants listed in the **Almanach Des Gourmands** - a popular travel guide.

The French Help Define the Restaurant Concept

During the 19th Century, the number of restaurants in Paris continued to rise. After the defeat of Napoléon, wealthy Europeans flocked Paris to partake in the many gourmet-dining options. This was especially true of the allied officer 'gentlemen' - a move that would be repeated following the end of WWII. The 19th Century also marked the rise of **Cafes**, a style of restaurant that does not offer table service. Rather, customers order their food from a counter and serve themselves. Outside of Paris, soup kitchens and dairy shops offered home-style cooking for cheap, attracting members of the lower working class.

Gourmet Dining Goes Global

Mid 1800's - Charles Ranhofer was the first "celebrity chef in the U.S. **Delmonico's** was his restaurant, *The Epicurean* was his book. It was the Franco-American encyclopaedia of cooking. By the end of the 19th Century, advancement in transportation through steamers, railways and eventually automobiles brought about a change in travel. Luxury tourism grew and with it a new precedent of eating well away from home. No longer was eating while traveling a mere necessity. It became an art. Part of the travel experience was dining at famous Parisian cafes and restaurants, who by now had built a solid reputation for excellent food and service. The biggest contribution to today's modern fine food establishments was made by the team of **Escoffier** and **Ritz**. In the 1820s, Cesar Ritz, a Swiss developer, partnered with a prominent French chef, Auguste Escoffier and built the Grand hotel of Monte Carlo, the first to offer luxury accommodations and gourmet dining all under one roof. Escoffier modernized the kitchen with his brigade system and streamlined the French Sauce System to five mother sauces. He is considered the father of 20th century French cuisine. Caesar Ritz was the service, décor and promotional genius.

Other luxury hotels soon began popping up all over Europe.

The 20th Century saw the French Restaurant go global. In Spain, it was a RESTAURANT. In Italy, it was called a RISTORANTE. In Great Britain and the United States, it remained RESTAURANT, but would soon evolve to fit the demands of changing consumers. By the end of that century, **restaurants** in the United States would evolve further, introducing the world to restaurant chains, the rise of modern-day fast food and an eventual return to the farm-to-table movement.

Evolution of Cooking Styles

Grande Cuisine – 17th and early 18th centuries. Very elaborate tables resplendent with dishes, architectural in their placement. Diners came and sat at the table and ate what they could reach.

By mid-1700's, Antonin Careme refined the dishes and served them in dozens of courses. He studied classical architecture to better build works of confectionery.

Meanwhile, other chefs blended the cooking styles of Grande Cuisine with simpler dishes of the middle classes thus creating the new **Cuisine Bourgeoise**.

When Escoffier refined Careme's 'Grand Cuisine' to the modern **Cuisine Classique**, he propelled French Cuisine into the twentieth century.

The style of cooking that emphasized the natural flavor of food became **Nouvelle Cuisine** in the 1950's. Early masters were Fernand Point, Jean and Pierre Troisgros, Alain Chapel, Roger Verge and Paul Bocuse. Roux and cream sauces gave way to broths and reductions. Lighter and naturally flavored foods prevailed.

By mid-twentieth century in the U.S. fiery hot ethnic cuisines became popular; Szechuan, Hunan, Thai, and Mexican cuisines. By 1971 there was an inkling of a new movement towards cooking in America; fresh food simply prepared! The high priestess of this new way of preparing food was **Chef Alice Waters** at her restaurant Chez Panisse in Berkeley, California. She Americanized Nouvelle Cuisine by rejecting processed package foods in favor of fresh, seasonal, organic produce, fish and meats all prepared to emphasize the food's natural flavor thus creating **The New American Cuisine**.

Special Note: In America beginning in the early part of the 18th century, the American regional cuisine known as **Cajun/Creole** began to take root. With the arrival of the **French, Spanish, Africans, Germans, English, Italians**, and the **Native Americans** already here, America's original regional cuisine evolved into a great art form of the New World.

Later other regional cuisines emerged:

- Tex-Mex
- Southern Soul
- Florida Cuisine
- Gee Chee and Gullah cuisine of the Carolinas
- Pacific Rim
- Appalachian Cuisine
- **The Three Nations of Barbeque**
 - Texas
 - Memphis
 - The Carolinas

Americans in the 1950's also developed a taste for fiery hot ethnic cuisines such as:

- Mexican Cuisine
- Hunan
- Szechuan
- Thai
- Korean

The Brigade

The basic hierarchy of the classical kitchen brigade system is as follows:

Chef de Cuisine – the head honcho, or executive chef, in charge of the entire kitchen (basically the general)

- **Sous Chef** – the *under-chef*, second in command. Supervises and coordinates the various station chefs (chef de parties). Second in command when the chef de cuisine is absent. Also acts as an expeditor (aboyeur) during service (usually in training to become head chef)
- **Chefs de Partie** – various station chefs, which have responsibility for a certain part of meal, which are divided according to the ingredients they specialize in, or the method of cooking. A chef de partie usually has several *demi-chefs* (assistant station chefs) and *commis* (attendants) working under them.

Not all kitchens necessarily would have all the positions, but some of the following stations would be included:

- **Saucier** – sauté chef)
- **Poissonier** – fish and shellfish dishes
- **Friturier** – fry chef prepares all fried items (basically deep frying)
- **Grillardin** – grilled and broiled foods
- **Rotisseur** – roasted and braised foods and any stuffing for them
- **Potager** – stocks and soups, assistant to the saucier. Considered a lower-skilled position.
- **Legumier** – vegetable dishes
- **Entremeteir** – this is a combined potager and legumier, preparing vegetable dishes, soups, and stocks
- **Garde Manger** – prepares or coordinates all cold foods including salads, cold meats, pates, terrines, sausages, hors d'oeuvres, decorative carving garnishes, buffet items, if present.

- **Boucher** – butcher responsible for meat butchery, and poultry and fish treatment. May prepare these and then give them to the garde manger for distribution to the various station chefs.
- **Charcutier** – prepares pork products such as pâté, pâté en croûte, rillettes, hams, sausages, or any cured meats. May coordinate with the garde manger and deliver cured meats.
- **Patissier** – pastry chef
 - **Confiseur** – makes petits fours and candies
 - **Glacier** – makes cold or frozen desserts (today this would be someone who makes ice cream and other frozen desserts, and perhaps also makes ice sculptures.
 - **Decorateur** – decorates cakes or other items
 - **Boulangier** – baker, makes breads, rolls, and cakes
- **Demi-Chef** – assistant station chef. Does most of the actual preparation of the food in the specific station they are assigned, as supervised by the station chef (chef de partie). In charge of the station if the station chef is absent.
- **Commis** – attendants assigned to a particular station and given the grunt work, or lower-skill work. Usually in training to become a demi-chef.
- **Apprentice** – lowest man on the totem pole and given the heavy lifting work while studying the culinary arts and in training to become a commis and then move up from there. Works through all the various stations in order to become prepared to move up.

The Modern Kitchen Brigade

Modern restaurant kitchens, as mentioned, rarely use the classic brigade system. However, due to the large volume, you might find the classic system in use on large cruise liners or any place where a huge volume of food is prepared.

- **Executive Chef** – the top chef who manages everything to do with the kitchen, creates the menu, orders supplies, oversees the staff, communicates and reports to the owners and/or managers. Executive chefs may oversee more than one restaurant kitchen, as when there are several restaurants in a hotel or resort. Not all restaurants have a separate executive chef and chef de cuisine, defined below and an executive chef may spend much of his or her time cooking, instead of involved in administrative duties.
- **Chef de cuisine** – the kitchen chef who is the head chef of the kitchen. May report to the executive chef, or directly to the owner, if the owner maintains control of the kitchen. In some cases, the executive chef and the chef de cuisine may be the same.
- **Sous chef** – next in line under the chef de cuisine, same as the under chef in the classic system, and in command when the head chef (or executive chef, if applicable) is not present. Oversees the preparation, portioning, and presentation of the menu items according to the standards of the executive chef or chef de cuisine.

- **Area chefs** – these are basically the chefs de partie or station chefs, responsible for a particular area in the kitchen. Depending on how closely the kitchen follows the classic brigade, the station chefs may have line cooks under them, or line cook and station chef may essentially be the same position. Any of the positions of the classic system are possible, such as: saucier, poissonnier, rotisseur, or grillardin, etc. and in modern kitchens, duties may rotate.
- **Line cooks** – works for the area chef and assigned a particular position in the assigned kitchen area.
- **Expeditor** – (aboyeur) takes orders from servers in dining room, announces them to the kitchen, and facilitates the efficient coordination of each dish. May make a final check on the finished plate and apply finishing touches. Makes sure the servers deliver the plates promptly and correctly, and may deliver orders themselves, in some cases.

There are many other positions possible in a kitchen, and there are also duties that have not been covered here, such as dishwasher and others, that are needed for the functioning of a busy kitchen.

Work Ethics of a Chef

Here is the reality check: if a person wants to pursue a career in food operations, he or she must understand that the commitment is unique. Yes, other careers do require a strong work ethic, but foodservice is unusual in that the requirement for work typically exceed what one would normally expect. It is what it is and will not likely change. Here is why: we work so that other people can play. This is our charge, this is what is required and is the nature of hospitality. Holidays are busy days in restaurants – there is no getting around it. Dinner happens after 5 p.m. when others are done for the day – this is the time when we gear up for a long night. Weekends are not for foodservice staff – in fact, our weekends are typically Monday and Tuesday, if at all. Accept it – this is what we are about. Food positions are not for the weak at heart. No matter what some might promote as a need to change, this is the reality of work in hospitality. Now, all that being said, those who can make that adjustment will share in the lifestyle of a unique, very special group of people who are hard-working and fun loving – people who are committed to service and do enjoy making others happy. Those who do not fit will move on to something else, those who stay are the heart and soul of the service business and the nurturers of others enjoyment. Work ethic in foodservice must include an understanding and acceptance of this.

Hire work ethic, be upfront with those who apply, enjoy the company of those who are willing to commit and celebrate the dedication that they have to the enjoyment of others.

Strong work ethic is the price of admission in food service.

Attributes of a Chef

A Thinker:

Cooks and chefs are faced with analyzing situations and making decisions constantly. As much as the job of cooking is physical, it is just as mental. Determining timing, prioritizing steps, adapting to variables in the flavor profile of ingredients, troubleshooting staffing issues, and solving equipment issues requires sharp minds as well as accomplished hands.

Intelligent:

Cooks possess an innate intelligence demonstrated through their ability to sift through various situations and factors that lead to rapid-fire decisions. As stated in the description above, cooks and chefs are consummate planners, masterful problem-solvers, highly creative artists, great students of food, and in possession of fine-tuned memories that allow them to keep multiple tasks and procedures close to their chest.

Inquisitive – Willing To Question:

Serious cooks and chefs are constantly looking for the answer to “why”. It is this quest for answers that makes a cook better at his or her craft and a ‘chef’ able to meet the demands of the job.

A Dreamer:

Although it is usually advisable for cooks and chefs to prepare food that customers are comfortable with, the culinary professional pushes the envelope and introduces food that we will learn to love and become excited about. This is what continues to allow restaurants to grow and remain significant.

Competitive:

Great cooks are inherently competitive. Sometimes they focus on competition with other restaurants, other chefs, or even their peers, but the most successful cooks and chefs are primarily, in competition with themselves. “How can I improve? How can a dish that is well supported by guests become even better?”

Great cooks and chefs are never satisfied with how well they are performing today. They are always seeking to stay relevant and improve.

A Person with Unquestionable Work Ethic:

To define a cook or chef as “serious” is directly relates to their commitment to the work. Great work ethic is second nature to great cooks. We might complain about the long hours and intensity of the work, but underneath we know that anything less is not enough. Total commitment to doing what is necessary is the essence of professional cooking.

Goal Driven:

If the ultimate form of business assessment is results, then cooks and chefs should be the poster child. Some goals are small, while others might determine the longevity of a restaurant as a business, but to a cook they are all the same. A goal is a goal and it is their job to meet or exceed expectations.

Creative:

Cooks are the consummate artists. Appealing to every human sense in a way that brings enjoyment is an everyday job for kitchen professionals.

Dependable:

Frankly – no other part of a cooks profile is more important than his or her desire and total commitment to trust. To be a great cook or chef is to be dependable without exception. Trust that they are present and ready when needed, trust that quality will never be sacrificed, and trust that the best interests of the team and the operation are of paramount importance to every cook who carries the label of “serious”.

Antagonistic:

The best cooks push others, critique others (while offering solutions), ensure that everyone remembers what the big picture is, and never turns his or her back on doing things right. He or she might be a thorn in other cooks sides, but they help to make everyone better at what they do.

A Rebel with a Cause:

Unlike James Dean, the cook who is often seen as rebellious, pushy, crusty, hard, confrontational, and a real pain in the ass is really a proud professional. He or she helps to ensure that everyone remembers what they are in the kitchen to accomplish; respect the food; working as a team; producing exceptional food; pleasing the guest; and helping the restaurant to build a brand and reach its goals.

Your Best Friend or Your Worst Enemy:

I have never found individuals who can fit the description of “friend” better than a cook who has learned to trust me. I have never found a higher level of commitment to friendship and respect than in the kitchen but at the same time, it would be hard to find someone more intent on taking another person down than a cook who feels that another has violated this trust or commitment.

Highly Organized:

Without methodical organization in a kitchen you are only left with chaos. Since mise en place is at the core of what we do and the first skill that a cook learns, it only makes sense that serious cooks find that organization is the essence of what they do.

Protective:

All for one and one for all – cooks are protective of other cooks. This level of protection may even go beyond the walls of an individual kitchen. If you wear whites then you feel support from anyone else who wears the uniform and stands before a range.

Street Smart:

Those who are street smart are individuals who can separate truth from a line of bull, fact from fiction, honest from dishonest, opportunity from danger, and inherently good people from those whom you should avoid. I am not sure if it is the work of the kitchen or the diversity of characters that call it home – but most serious cooks that I know are as street smart as they come. This skill allows them to survive and thrive. A cook who is dedicated to the craft and street smart is more likely to become an effective chef/leader than one who lacks this breadth of experience.

In Touch with the Five Senses:

Of course, unlike the vast majority of people, cooks are tactile artists who understand how to incorporate taste, touch, sight, smell, and sounds into the experience of eating food and dining in restaurants. Cooks are the complete artist package.

Tough but Tender:

Crusty and tough as nails, serious cooks are tender underneath. They are emotional bandits who feel deeply, care wholeheartedly, and give more than they take.

A Fantastic Storyteller:

Chefs, in particular, use their story making skills in numerous ways. Most significantly, a restaurant menu is a compendium of stories that depict a chef’s career and the impact that food

and specific dishes have had on his or her life. Sometimes this is made obvious through a theme or stated philosophy, but even when this is not the case; the menu will reflect a chef's comfort level with certain preparations and the stories behind them.

In a more obvious way, cooks and chefs accumulate stories of the kitchen (the good, the bad, and the ugly) over a period of years, and are always willing to share them with others. The longer that a cook spends in professional kitchens, the better he or she becomes at telling, and sometimes exaggerating these stories. It is these stories that serve to attract others to careers in the kitchen and fascinate those who dream about what it must be like to cook for a living.

Proud as Hell:

Above all else – cooks are proud of what they do, what they are capable of, the people with whom they work, and the impact that they have on others. It is the chef's greatest pleasure to point this out, shake hands with his or her team, hug those who give it all every day, and celebrate this pride every day with some of the best, most talented people anyone could know.

****This type of person is valuable, appreciated, respected, and on the road to success. BE THIS KIND OF COOK and watch how many doors open and how many opportunities come your way.**

Knife Skills

Knife skills are the single most important and the most fundamental skill a chef must acquire. Knife skills take repetition and practice to build speed and productivity. Good knife skills require an organized workstation, properly sharpened knives, and disciplined technique. The Chef Knife or French Knife is the single instrument with which you will spend the most time.

Gripping the Knife



A good grip will give you better control increasing cutting accuracy and speed, while preventing slippage and lessening the chances of accidents.

Handling the Knife

The best way to hold a chef knife is to grip the heel of the blade with your thumb and forefinger and wrap the remaining three fingers around the handle.

The Guide Hand

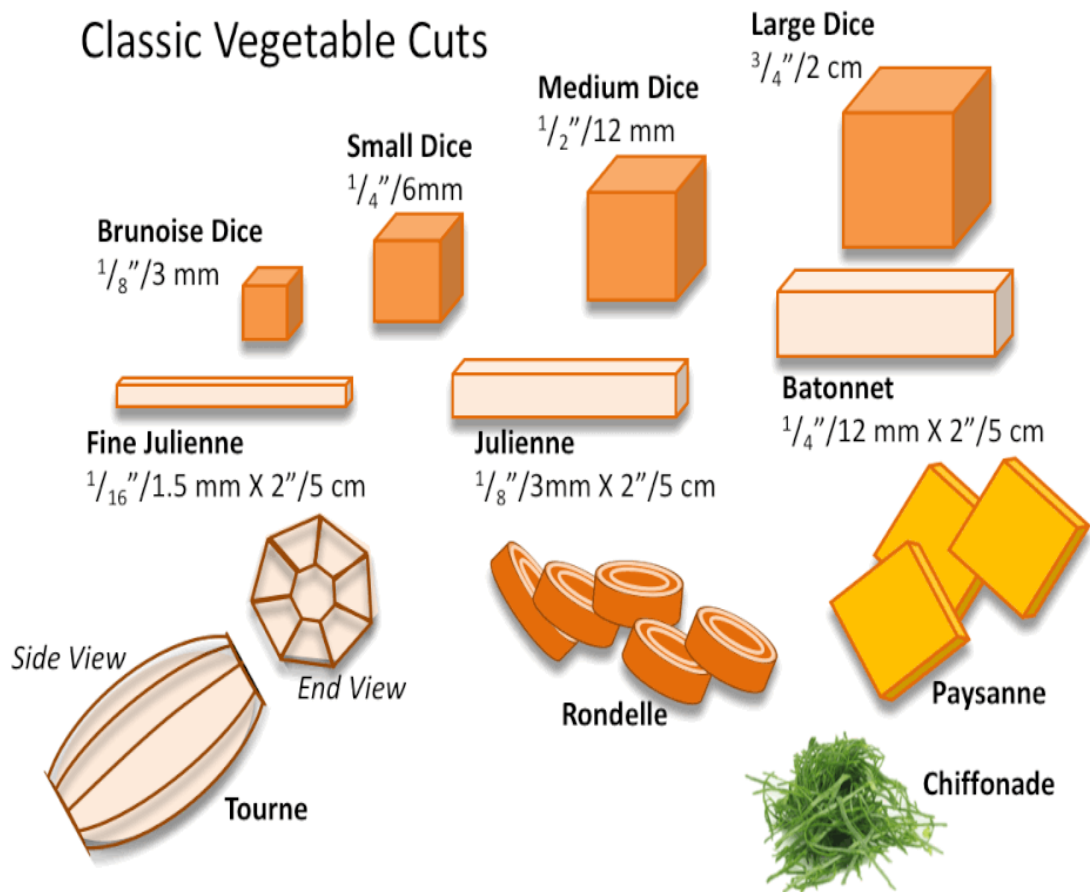


The purpose of the opposite hand is used for holding and guiding the food to be processed. Always curl the fingertips of the opposite hand into a 'claw' shape, never lay them flat. Use the second joint of the opposite fingers as a guide for the knife blade. This will help control the thickness of the cut. Slide the blade across the product. A sharp edge will allow the knife to glide through the object with minimal applied pressure.

Uniformity & Consistency

1. **Consistency in shape and size is important for two reasons:**
2. **A uniform size will give the dish a better appearance.**
3. **Uniformity in size means the product will cook evenly.**

Classic Vegetable Cuts



Mise en Place

Bouquet Garni, Sachet d'épice



Mirepoix & Matignon



Other mise en place cuts would include:

- Minced garlic
- Minced parsley
- Tomato concassee
- Diced bell pepper

Standard U.S. Measurements (See Appendix for Additional Measures)

Unit:	Equals:	Also equals:
1 teaspoon	1/3 tablespoon	1/6 fluid ounce
1 tablespoon	3 teaspoons	1/2 fluid ounce
1/8 cup	2 tablespoons	1 fluid ounce
1/4 cup	4 tablespoons	2 fluid ounces
1/3 cup	1/4 cup plus 4 teaspoons	2 3/4 fluid ounces
1/2 cup	8 tablespoons	4 fluid ounces
1 cup	1/2 pint	8 fluid ounces
1 pint	2 cups	16 fluid ounces
1 quart	4 cups	32 fluid ounces
1 liter	1 quart plus 1/4 cup	4 1/4 cups
1 gallon	4 quarts	16 cups/128 fl. oz.

Understanding Heat

A chef is more than someone who combines certain ingredients in a certain order – a true chef is a master of thermodynamics.

The Relationship between Heat Transfer and Cooking

Have you ever wondered what is actually happening when you are cooking food? While this is something that we usually take for granted, this process of heating food - known as heat transfer - is complicated and fascinating. Keep reading to learn more about the relationship between heat transfer and cooking and the important role it plays in your kitchen.



What is Heat Transfer?

Heat transfer is an exchange of thermal energy between two objects. The rate of heat transfer depends upon the temperatures of each entity and the medium through which the thermal energy is being transferred. In cooking, heat transfer refers to heating your food items through a cooking appliance, such as a stove, fryer, microwave, or oven.

How is Heat Transfer Used in Cooking?

Heat transfer is a very important aspect of the cooking process. Heating food destroys potentially harmful bacteria and other microorganisms, which makes food safe to eat and easier to digest. When food or liquids become hot, their molecules absorb energy, begin vibrating rapidly, and start to bounce off of each other. As they collide, heat energy is produced and transferred, which warms and cooks our food.

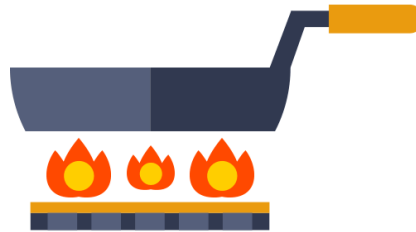
Methods of Heat Transfer

There are 3 types of heat transfer:

- Conduction
- Convection
- Radiation

Each of these methods features its own unique characteristics, but there is also some crossover between the different types.

What is Conduction?



Conduction is the process of heat being transferred between objects through direct contact, and it's the most common type of heat transfer. For example, in cooking the burners on stoves will conduct heat energy to the bottom of a pan sitting on top of it. From there, the pan conducts heat to its contents.

A deep fryer also uses conduction heating as the hot oil cooks the food when it comes into direct contact with it. Additionally, conduction heat is responsible for moving heat from the outside of the food to the inside. As a result, conduction heat also happens when cooking with convection and radiation heating methods.

Conduction is the slowest method of heat transfer, but the direct contact between the cooking surface and the item to be heated allows food to be cooked from the outside in. When [cooking a steak in a cast iron skillet](#), for example, conduction produces an evenly cooked exterior and a moist, juicy interior that guests are sure to love.

Examples of Conduction Cooking

Here are a few examples conduction heating:

- Burning your hand on a hot piece of metal
- Grilling steak, chicken breasts, or pork chops
- Using ice water to blanch vegetables after steaming to keep them from losing their color

What is Convection?

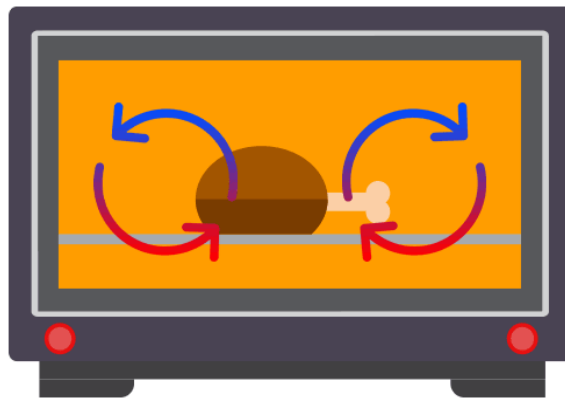
Convection combines conduction heat transfer and circulation to force molecules in the air to move from warmer areas to cooler ones. As the molecules closest to the heat source become warm, they rise and are replaced by cooler molecules. There are two types of convection that are based on the movement of the heated molecules.

Natural Convection

Natural convection occurs when molecules at the bottom of a cooking vessel rise and warm while cooler and heavier molecules sink. This creates a circulating current that evenly distributes heat throughout the substance being prepared.

For example, when a pot of water is placed on the stove to boil, conduction heat warms up the pot, which then heats the water molecules inside. As these molecules heat, convection causes them to move away from the interior of the pot as they are replaced by cooler molecules. This continuous current creates convection heat transfer within the water.

Mechanical Convection



Mechanical convection occurs when outside forces circulate heat, which shortens cooking times and cooks food more evenly. Examples of this include stirring liquid in a pot or when a [convection oven](#) uses a fan and exhaust system to blow hot air over and around the food before venting it back out.

Examples of Convection Cooking

Here are a few examples of how heat transfer via convection works:

- Water coming to a boil and circulating in the pot
- Running cold water over frozen food, which transfers heat into the food to thaw it more quickly
- Room temperature air moving around frozen food to thaw it

What is Radiation Cooking?

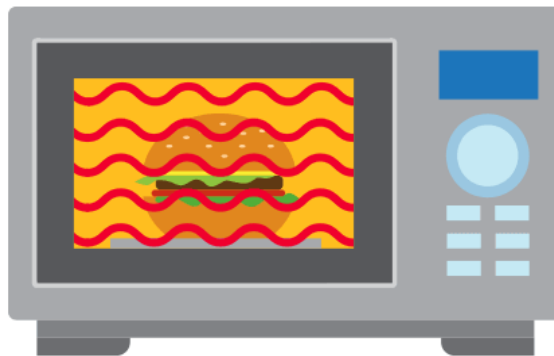
In cooking, radiation is the process where heat and light waves strike and penetrate your food. As such, there is no direct contact between the heat source and the cooking food. There are two main radiant heat cooking methods: infrared and microwave radiation.

Infrared Radiation

Infrared radiation utilizes an electric or ceramic heating element that gives off electromagnetic energy waves. These waves travel in any direction at the speed of light to quickly heat food, and are mainly absorbed at the surface of whatever you're preparing. Examples of things that create infrared radiation are glowing coals in a fire, toaster ovens, and broilers.

Microwave Radiation

Microwave radiation utilizes short, high-frequency waves that penetrate food, which agitates its water molecules to create friction and transfer heat. If you're heating a solid substance, this heat energy is transferred throughout the food through conduction, while liquids do so through convection.



Microwave heat transfer usually cooks food faster than infrared radiation, as it is able to penetrate foods several inches deep. Keep in mind that microwave radiation works best when cooking small batches of food.

Examples of Radiation Cooking

Here are a few examples of how heat transfer via radiation works:

- Warming your hands over a fire
- Lying in the sun to get warm
- Heating up dinner in the microwave

Whether you are using a pan on a stove, a convection oven, or a heavy-duty microwave, conduction, convection, and radiation are all around us. Knowing and understanding what heat transfer is, how it works, and which type of heat transfer is happening as you cook can help you better understand the science of cooking and improve your skills as a chef.

The Cooking Techniques

Sauté

Sauté is a French term, translated it means, “to jump”. It is a dry method of cooking that uses a relatively small amount of **oil** or **fat** in a shallow pan over relatively high heat. Various sauté methods exist, and sauté pans are a specific type of **pan** designed for sautéing. Ingredients for sautéing are usually cut into pieces or thinly sliced to facilitate fast cooking. The primary mode of heat transfer during sautéing is conduction between the pan and the food being cooked. Food that is sautéed is **browned** while preserving its texture, moisture, and flavor. If meat, chicken, or fish is sautéed, the sauté is often finished by **deglaizing** the pan's residue (fond) to make a **sauce**. Sautéing differs from **searing** in that searing only browns the surface of the food. Certain oils should not be used to sauté due to their low **smoke point**. **Clarified butter**, **rapeseed oil** and **sunflower oil** are commonly used for sautéing;^[8] whatever the fat, it must have a smoke point high enough to allow cooking on medium-high heat, the temperature at which sautéing is done. For example, though regular butter would produce more flavor, it would burn at a lower temperature and more quickly than other fats due to the presence of milk solids. Clarified butter is more fit for this use. In a sauté, all the ingredients are heated at once, and cooked quickly. To facilitate this, the ingredients are rapidly moved around in the pan, either by the use of a utensil, or by repeatedly jerking the pan itself. A sauté pan must be large enough to hold all of the food in one layer, so steam can escape, which keeps the ingredients from **stewing**, and promotes the development of **fond**.

Sautéed Leeks.



Sauté



The Sauté Toss. Wikipedia. Commons

Chapter 2: *Recipe conversions and Braising*

Recipe Conversion

Scaling a recipe means that you are adjusting the ingredient quantities for a different amount of servings. While doubling or halving a recipe is relatively easy, you will need to do some math when you want to convert a six-serving recipe for two people or 14 people. Whether you're increasing a recipe or decreasing it—the procedure for adjusting the ingredient quantities is the same.

The first step is to determine a **conversion factor**. Next, you need to multiply this number by the ingredient measurements.

Determine the Conversion Factor

The conversion factor is a number you are going to use to convert all the quantities. There is a bit of math involved, but it is perfectly fine to use a calculator to do the math calculation. To find your conversion factor, simply divide the desired number of servings (what you want) by the original number of servings (what you have). The resulting number is your conversion factor.

Here is the formula:

$$\text{(Desired servings) divided by (original servings) = conversion factor}$$

For example, to scale a 10-serving recipe down to six portions: Divide 6 (desired servings) by 10 (original servings), which gives you a conversion factor of 0.6.

Applying the Conversion Factor

Once you determine the conversion factor, you need to multiply each ingredient measurement in the recipe by this number. In the example above, you would multiply each ingredient amount by 0.6.

Use this simple example to illustrate the calculations. Say your recipe calls for 2 quarts of [chicken stock](#). All you need to do is multiply 2 quarts by your conversion factor of 0.6:

$$2 \text{ quarts} \times 0.6 = 1.2 \text{ quarts chicken stock}$$

Converting the Measurements to Make Sense

As you see from the example, you are often left with a result that includes a decimal. You are in good luck if it is any of these numbers:

- 0.25: One quarter
- 0.33: One third
- 0.50: One half
- 0.66: Two thirds

- 0.75: Three quarters

When you have other numbers that result, such as the 0.2 of the 1.2 quarters, you can either try to 'eyeball' it or you can make a more precise conversion. The eyeballing route works fine for many types of cooking but can produce a flop if you are baking, where exact measurements are more important.

While the rest of the world uses the metric system, those in the U.S. will need to convert 1.2 quarts into ounces. Consulting a cooking conversion chart, you will learn that there are 32 ounces in a quart, so:

$$32 \times 1.2 = 38.4 \text{ ounces}$$

You can round that down to about 38 ounces, but that's still kind of a weird amount. It would be more clear if it were given in cups. Go back to the cooking conversion tool to find that there are 8 ounces in a cup, so:

$$38 \div 8 = 4.75$$

Which means 1.2 quarts is equal to approximately 4 3/4 cups, a much more doable number.

Do not worry this is going to take a long time or a lot of research. Not every ingredient is going to need multiple conversions. Many will be close to the easier decimals and you can use a half-cup, 2/3 cup, or other measures.

When Portion Sizes Change

Suppose that you are working with a book of standardized recipes. These types of recipes will produce a known quantity and quality of food. In addition, suppose you work for a fine catering company and a customer wants you to serve a six-ounce serving of jambalaya for a 284 guests, sit down dinner. Your standardized recipe is for 100, 4 oz. servings. What are you going to do so that you do not run out or produce too much? Convert the recipe by first obtaining the Conversion Factor:

1. Determine the total yield of both amounts:

$$284 \times 6 = 1704$$

$$100 \times 4 = 400$$

2. Divide what you want by what you have:

$$1704 \text{ divided by } 400 = 4.26, \text{ your conversion factor.}$$

3. Every ingredient in the standardized recipe is multiplied by 4.26, and then cook the jambalaya by the recipe directions.

The Cooking Techniques

Braising

Braising (from the **French** word *braiser*) is a combination-cooking method that uses both wet and dry heats: typically, the food is first [sautéed](#) or [seared](#) at a high temperature, then finished in a covered pot at a lower temperature while sitting in some (variable) amount of liquid (which may also add flavor). Braising of meat is often referred to as [pot roasting](#), though some authors make a distinction between the two methods, based on whether additional liquid is added. Braising relies on heat, time, and moisture to break down the tough connective tissue (collagen) that binds together the muscle fibers collectively called "meat", making it an ideal way to cook tougher, more affordable cuts. Many classic braised dishes (e.g., coq au vin) are highly evolved methods of cooking tough and otherwise unpalatable foods. Both [pressure cooking](#), and slow cooking (e.g., crockpots) are forms of braising.

Most braises follow the same basic steps.

- The food to be braised (meats, vegetables, mushrooms, etc.) is first pan-seared to brown its surface and enhance its flavor (through the Maillard reaction).
- If the food will not produce enough liquid of its own, a certain amount of cooking liquid that often includes an acidic element (e.g., tomatoes, beer, balsamic vinegar, wine) is added to the pot, often with stock. A classic braise is done with a relatively whole cut of meat, and the braising liquid will cover one-third to one-half of the food in the pan.
- The dish is then covered and cooked at a very low simmer until the meat becomes so tender that it can be "cut" with just the gentlest of pressure from a fork (versus a knife).
- Often the cooking liquid is finished to create a sauce or gravy as well.



Pot Roast. Wikipedia. Commons cc-by 3.0

Chapter 3:

Mise en Place

Perhaps you have heard the saying, “Prior preparation prevents poor performance.” It is a memorable saying that reminds us that if we want to be successful, we must first spend time preparing for the task at hand. This principle is essential in commercial kitchens. When serving a wide variety of dishes to several people a day, preparation is crucial to success. In fact, preparation is a key principal in professional kitchens, and it has a name: Mise en place.

Four Essential Steps of Mise en Place:

- Assemble tools
- Assemble ingredients
- Wash, trim, cut, prepare and measure raw materials
- Prepare equipment (pre-heat oven or pan, line sheet pan with parchment, etc.)

What is Mise en Place?

Mise en place (rhymes with “cheese on sauce”) is a French term that literally means to put in place. It describes all of the advance preparation that takes place in the kitchen before the doors open for business. For every dish on the menu, the chef gathers, prepares, and organizes all the necessary ingredients. Vegetables are chopped. Salad greens are washed. Sauces and stocks are prepared. Cuts of protein are trimmed and portioned. The chef also gathers and organizes all the necessary tools he will need once the meal service period begins. When he completes his mise en place, the chef should have everything he needs within reach to assemble every dish at his station. There is no time during the lunch or dinner rush to stop and prepare an ingredient you need for a dish. Let’s say you have a strip steak on your menu served with a bearnaise sauce. If you failed to make enough sauce during your mise en place, you will not be able to sell that dish. What happens when you run out of that sauce and you still have three steak orders to fill? Some of your guests are going to walk away disappointed.

A State of Mind

Mise en place is more than just preparation; it is a state of mind. In the previous example, either the chef did not anticipate the number of steak orders that night, or he miscalculated the amount of sauce needed. Understanding the concept of mise en place means anticipating what tasks need to be accomplished and in what order. It is the ability to be proactive rather than reactive. The chef who masters the practice of mise en place is the chef who is in control of the kitchen. The kitchen is not in control of him. Various external elements, both big and small, can help your “mise en place state of mind”. Looking professional by wearing a proper, clean, wrinkle free uniform and headwear can go a long way to a proper state of mind. Getting your station ready for service is crucial, but so is keeping it clean and organized throughout service. A messy, unorganized station denotes a messy, unorganized mind! Clean-as-you-go principles are crucial to maintaining a proper state of mind, and thus, proper mise en place.

Control the Chaos

Anthony Bourdain stated, "*Mise-en-place is the religion of all good line cooks...As a cook, your station, and its condition, its state of readiness, is an extension of your nervous system*".

Every foodservice establishment has to solve the conflict; there is too much work to be done to wait until the last minute and most foods are at their peak of quality immediately after preparation. Mise en place solves the conflict!

Chefs start their work early in the day to prepare their mise en place for service. The goal is to do as much work in advance without loss of quality so that at service time all energy can be focused on putting out a fresh quality product! This preparation covers everything from cutting vegetables, preparing garnishes, making sauces, and cooking ingredients sous-vide. When dinner service begins, the chefs can then arrange and assemble each dish quickly. If the mise en place is organized and every ingredient is covered, a chef should be able to assemble their dish blindfolded, since each ingredient is consistently placed in the same spot. Absence of proper mise en place insures that chaos will reign.

The Big Picture

While the organization of one's self and station allowing for timely preparation and service is important, it does not stop there. Front of the house management should follow mise en place principles for better service. Successful office management, overseeing purchasing, inventory, cost control, payroll etc., will utilize mise en place principles every day whether they realize it or not! If they did not, they would not be successful! Complete interaction of the back of the house, front of the house, and management is required for complete mise en place and a successful foodservice operation.

If restaurants are the definition of controlled chaos, *mise en place* controls the chaos!

The Cooking Techniques

Stewing

Stewing Basics

This is a slow-cooking method, similar to braising, with the key difference being the meat is covered in liquid. Stewing is best done in a heavy stockpot or Dutch oven on the stovetop or in the oven, or in a slow-cooker.



Dredging food. flicker.com

1. CUT & DREDGE

If you're using pre-packaged (or cutting your own) chunks, make sure they're not too small to prevent overcooking. Aim for cubes about the size of a golf ball. Many stew recipes call for dredging the meat in seasoned flour before browning.



inspiredtaste.net

2. BROWN THE MEAT

Heat a drizzle of oil in the pan over medium heat and brown the meat on all sides, and drain (unless your recipe says to leave the drippings). You may need to work in batches if using a smaller pan. If you're using a slow cooker, transfer it over.



Foodnetwork.com

3. ALL TOGETHER NOW

Depending on your recipe, now's the time to add seasonings, vegetables and liquid — such as beef broth, wine, beer, juice or even water. Bring the liquid to a boil, then reduce heat to low and cover with a tight-fitting lid.

4. SIMMER & STEW

Use a tight-fitting lid and keep it on while stewing to prevent moisture and heat loss, which can affect cooking time. Follow your recipe for timing guidelines. Do not lift the lid — unless you are recipe calls for adding vegetables or other ingredients later on. You will know it is done when the meat is fork tender.



Cowboy Beef Stew. beefitswhatsfordinner.com

Chapter 4:

Food Presentation, Standards, and Grilling

Food Presentation

Customers Eat With Their Eyes First

First impressions set customer expectations. Good impressions stimulate the appetite and get digestive juices flowing. Carelessly presented food usually means carelessly cooked and shows the customer that the chef has no regard for his food or his customer! Usually, what you see is what you get. Well presented food gets the customer excited before he takes the first bite!

Attractive food is a hallmark of professionalism.

Creative and thoughtful plating enhances both the look and taste of your food. Focusing on presentation also allows chefs to showcase their creations and demonstrate to guests that they're getting their money's worth. While there aren't any hard and fast rules when it comes to "correct" plating, there are several important concepts to keep in mind as you prepare and present your restaurant's delicious culinary creations.

Professional chefs look at their creations with the eyes of an artist:

- Balance – food that taste good together and offer variety and contrast
- Color – two or three are more interesting than one (said to be monochromatic).
- Shapes – knife skills can offer a variety of shapes
- Texture – something chewy with something crispy, and something smooth or creamy. Different mouth feels stimulate the mind.

Guidelines for Plating Food

For tips and tricks on how to create a beautiful plate, consider the steps below:

1. Choose the Perfect Plate

Selecting the right plate for your meal is key to attractive food presentation. Here are some things to keep in mind:



- **Choose the right plate.** One way to conceptualize plating is to think of yourself as an artist, the plate as your canvas, and the food as your medium.
- **Choose the right size plate.** Choose your plate wisely by making sure it is big enough to allow your food to stand out, but small enough that your portions do not look too small.
- **Choose a complementary plate color.** The color of your plate is also significant. White plates are popular because they create high contrast and provide a neutral background for your colorful creations. Utilize white space by thinking of the rim as your frame, and consider using the rule of thirds to highlight your plate's focal point(s). When applied to cooking, the rule of thirds prescribes placing the focal point of your dish to either the left or right side of the plate, rather than the center.

2. Placing Your Ingredients

Here are a few of the most important aspects to consider as you build your dish:

- **Plate with a clock in mind.** As you begin plating your ingredients, picture the face of a clock. From the diner's point of view, your protein should be between 3 and 9, your starch or carbohydrate from 9 and 12, and your vegetable from 12 and 3.



- **Use moist ingredients as your base.** Another rule of thumb is to plate moist or runny ingredients first, as they tend to move during delivery if they are not held down by other foods. One way to anchor runny ingredients is by placing other foods on top of them. For example, you can angle sliced meat or vegetables against purees and mashed vegetables.

- **Serve odd amounts of food.** If you are serving small foods like shrimp, scallops, or bite-sized appetizers, always give guests odd quantities. Serving seven Brussels sprouts instead of 6 creates more visual appeal, and diners will also perceive that they're getting more food.
- **Place food to create flavor bites.** Essentially, flavor bites are forkfuls of food that combine all of the ingredients in your dish into one bite. Creating flavor bites is the perfect accompaniment to creative plating as it pleases both the eye and the taste buds.
- **Do not overcrowd your plate.** Be sure to never overcrowd your canvas, and keep it simple by focusing on one ingredient - usually the protein. Finding a focal point also ensures that the accompanying ingredients will play a complementary, supporting role.

3. Pay Attention to the Details

As you 'plate' your dish, you will also want to pay attention to the details:

- **Think about color and contrast.** One of the best-kept secrets to beautiful plating is paying close attention to the details. While your focus will obviously be on the protein, considering how the other elements of the plate create color and contrast is also very important.



You can create a beautiful background for your plate by adding green vegetables or brightly colored fruits as accent points. Similarly, try to pair ingredients with complementary colors, as this will further enhance your dish's visual appeal.

- **Create height on your plate.** Another way to catch your guests' eyes is to utilize the power of height. While compactly stacking ingredients is not as popular as it was 5-10 years ago, creating a tall plate can go a long way towards enhancing visual appeal.

You can also balance out taller ingredients by leaning long, flat items against them. For example, you can plate your steak on top of polenta and lean asparagus spears against them at a 45-degree angle.

- **Use texture to enhance your dish.** Finally, don't forget about texture. Contrasting a smooth vegetable puree with crunchy onion straws or topping a steak with crumbled blue cheese creates appealing texture combinations that are classic in high-end cuisine.

4. Design and Create with Sauces

Once you've plated your main ingredients, you're ready to top your dish with delicious sauces. Don't just pour the sauce carelessly all over the plate, though. Instead, think of your squeeze bottle or spoon as a paintbrush, and your sauce as a medium. Then, use them to enhance your plate.

One way to do this is to create accent dots on one side of your plate (while considering the rule of thirds) or by lightly drizzling sauce over the main ingredients so guests get a little bit of sauce in every bite.

5. Use Garnishes Purposefully



In the past, chefs casually threw a piece of kale and an orange slice onto every plate as it left their kitchen. However, these garnishes did not add anything exciting to the dish, and few guests even ate them in the first place. Here are a few examples of smart garnishes and how to incorporate them:

- **Choose edible garnishes.** As you finish plating, remember that garnishes must be related to the dish and should always be edible. Ultimately, they are designed to enhance and complement the flavors of the entree you have created, not distract from them.

- **Place garnishes purposefully.** Similarly, never heap garnishes in one corner of the plate. Instead, disperse them thoughtfully in order to add color or texture. Also, avoid using unappetizing garnishes like raw herbs, large chunks of citrus, and anything with a strong odor. Lastly, make sure your garnishes are quick and easy to apply, so food still goes out piping hot.

Plating Tools of the Trade

Having the proper **food presentation and plating tools** is essential to high-quality plating. Here are a few items you should be sure to purchase if you do not already own them:

Decorating Brushes



As one of the most important products in any chef's toolkit, **decorating brushes** have a variety of applications. You can use them for both detailed line work and broad strokes as you apply sauces, or when plating purees and coulis beneath meat or vegetables.

Garnishing Kits



Garnishing kits come with everything you need to garnish all of your signature dishes, including plating wedges, tongs, squeeze bottles, and brushes.

Molds



Molds are also very important when plating food. By cutting ingredients to a specific shape and size, you'll provide visual appeal and keep your plate tidy. Ring molds also help you develop height and structure when stacking ingredients.

Plating and Precision Tongs



Last but not least, you'll want to have **precision tongs** on hand for placing garnishes or small, delicate foods. Many tongs also feature micro-serrations for improved grip and stability.

Plating Wedges



Plating wedges come pre-cut with flat, round, or pointed edges and are perfect for smearing sauces and other soft ingredients into designs on your plate.

Shavers



Shavers work well when shaving or grating chocolate, hard cheeses, or soft vegetables on top of your finished creations.

Spoons



You will also want to have a variety of **spoons** on hand. Saucier spoons help you drag smears of sauce across your plate, and you can choose a utensil with a tapered bowl that is perfect for drizzling and pouring. Additionally, slotted spoons quickly separate solids from liquids as you complete your presentation.

Squeeze Bottles



Photo Credit: NewlyWoodwards.com

Squeeze bottles are ideal when applying sauces or aioli to your finished plate. Many of these items come with adjustable, precision control tips that allow you to apply the perfect amount of product.

Saying all that, the single, most important thing a chef can do to make sure his food looks and tastes good is to simply *cook it right!*

Examples of Plating Styles

Here are examples of three popular plating styles: classic, free form, and landscape. To demonstrate them, we used filet mignon, potato puree, carrots, a demi-glace, a pea puree, a lima bean and pea blend, thyme, and fried leeks.

Classic Plating



- 1. Pipe the potato puree onto the plate using a pastry bag.



- 2. Place the carrots next to the puree using precision tongs.



- 3. Garnish the carrots with thyme using precision tongs.



4.

1. Plate the steak using precision tongs.



2. Garnish the steak with fried leeks using precision tongs.



3. Drizzle the demi-glace around the plate using a spouted saucier.



7. Wipe the edges of the plate with a clean towel.



8. Finished classic plate.

Free Form Plating



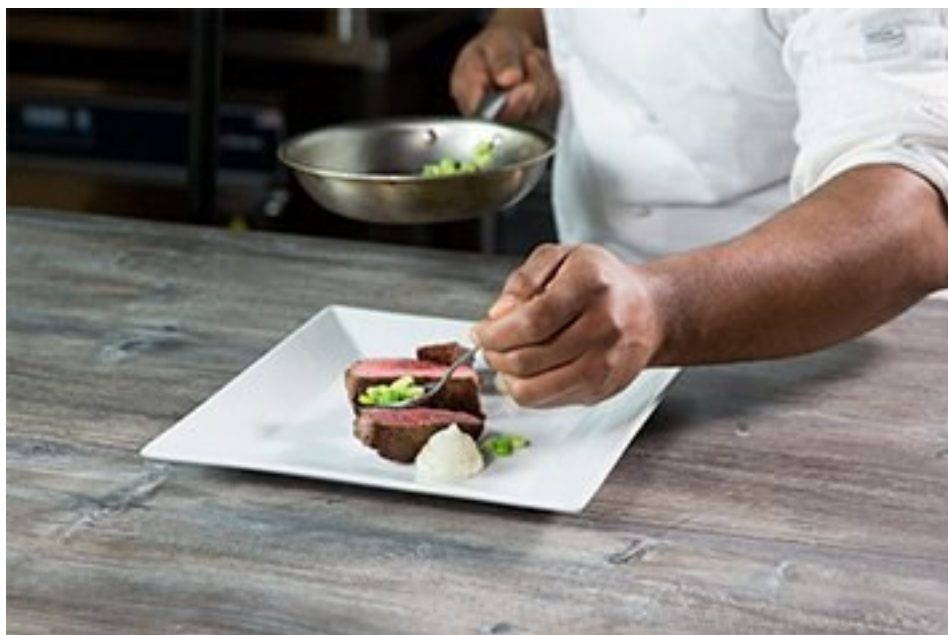
1. Pipe dots of potato puree onto the plate using a pastry bag.



2. Slice the steak into three pieces using a chef's knife.



3. Plate the pieces of steak using precision tongs.



4. Place the lima bean and pea blend around the plate using a spoon.



5. Plate the carrots using precision tongs.



6. Place dots of pea puree around the plate using a large squeeze bottle.



6. Place dots of the demi-glace around the plate using a small squeeze bottle.



8. Garnish the plate with fried leeks using precision tongs.



9. Wipe the edges of the plate with a clean towel.

Landscape Plating



- 1. Place dots of pea puree around the plate using a large squeeze bottle.



- 2. Paint the pea puree onto the plate using a brush.



- 3. Pipe the potato puree onto the plate using a pastry bag.



-
- 4. Plate the carrots using precision tongs.



-
- 5. Lean the steak against the puree and carrots using precision tongs.



- 6. Place the lima bean and pea blend around the plate using a spoon.



- 7. Drizzle the demi-glace around the plate using a spouted saucier.



- 8. Garnish the steak with fried leeks using precision tongs.



- 9. Wipe the edges of the plate with a clean towel.



10. Finished landscape plate.

Whether a fine dining establishment, upscale restaurant, or eclectic cafe, thoughtful and attentive plating is sure to improve customers' impressions of any foodservice operation. An awareness of food presentation also allows chefs to demonstrate their chefs' skills to customers and helps them highlight all of their restaurant's delicious offerings. With an awareness of these basic principles, techniques, and tools, chefs are sure to enhance plating and increase sales.

The Cooking Techniques

Grilling

Basic Grilling Techniques

There are multiple grilling techniques and methods. The types of heat sources for grilling are numerous. Factor in the different types of food like **steaks, poultry, fish, seafood and vegetables** and you can quickly see that the ways and methods of grilling are going to be many and diverse.

The key is to CUSTOMIZE your grilling techniques and your use of equipment to suit the food type to obtain the result you desire. To get the best results from a particular method or technique, these factors have to enter into play.

The main factors are **food type**, **heat source** and **desired result**. The last factor has to do with personal preference or weather. For example, will you be grilling indoors or outdoors?

Grilling Methods

Direct heat grilling is the most basic and common grilling method. The words speak for this method. Food items are placed over direct heat in order to cook them. This can be done over a **charcoal**, **gas**, **wood** or any other heat source.

The heat is usually high and ideal for **SEARING**. Searing involves using high heat to 'burn' both sides of your food item for a few minutes to seal flavors. The thicker your meat the longer you can sear.

After searing, the food item can then be transferred to the 'not-so-hot' part of the grill to cook.

Hamburgers, **steaks**, **chops**, **sausages** even **kabobs** do well with direct heat. These foods usually take 30 minutes or less to be fully cooked.

Indirect grilling is a method where the food is cooked with reflected or indirect heat. It involves **not** placing the food over a direct heat source and keeping the lid covered most of the time.

If the food must be placed over the heat source then the temperature will have to be low for the food to cook 'indirectly'. It is like roasting in an oven. Large pieces that take a while to cook like **whole turkeys**, **leg of lamb** and many **roasts** can be cooked in this way.

Sometimes food items are grilled over direct heat first, to seal flavors, and then they are cooked with indirect heat.

Diamond Grill Marks

1. Preheat grill until very hot (about 500 – 550°F).
2. Season steaks with salt and pepper, or as desired.
3. Place steaks on preheated grill with the ends at 10 and 4 o'clock.
4. When meat has seared and juices begin to rise to the top, turn steaks clockwise, with the ends at 2 and 8 o'clock.
5. After a minute or two, flip steaks over and cook until they reach desired degree of doneness. Use a meat thermometer if necessary.
6. Remove steaks from grill onto clean plate and allow them to rest approximately 5 minutes to redistribute the juices.



Steak with proper cross - hatch marks. gorare.com

Chapter 5: *Emulsions and Steaming*

Emulsions

There is no doubt about it—emulsions are tricky. They are confusing to understand and they are confusing to make. Sometimes even the most seasoned chef can have trouble getting their sauces to emulsify! However, if you can start to get a feel for the science behind the scenes, you will feel more in control and confident next time you decide to whip up a **hollandaise sauce** for Sunday brunch.

At its most basic, an emulsion is a suspension two liquids within each other that would not naturally mix.

Think of a liquid—a cup of vinegar, for instance—as made up of millions of tiny droplets. If you pour oil into the vinegar, at first the oil will float on the top of the vinegar because it is less dense. However, if you whisk them together, the tiny droplets forming each liquid start to mix together and become suspended within each other. **This is an emulsion. The mixing of two ‘unmixable’ liquids held in suspension.**

However, this simple vinaigrette will eventually separate back into vinegar and oil because, at a chemical level, there is nothing holding the drops of each liquid together except for the temporary confusion of having been whisked together.

To get a stable, permanent emulsion, you need to use something to hold the drops of opposing liquid together and prevent them from separating. This “something” is called an emulsifying agent or emulsifier. Moreover, this agent is like a mutual friend who holds the oil-based liquid in one hand and the water-based liquid in the other. It creates a chemical bond with each liquid and becomes a bridge between them.

The most common emulsifying agent is an egg yolk, as in **mayonnaise** and **hollandaise** sauces. Two others are the casein found in butter and the fine particles of ground dry mustard. Thick liquids such as Dijon mustard and honey can also act as emulsifiers.



Whisking a vinaigrette, thecookful.com

The Cooking Techniques

Steaming



Dim Sum (Chinese steamed buns). thespruceeats.com

When steaming, food is actually cooked at a higher temperature compared to poaching, braising, and stewing. Once water is heated past the 212 F mark, it stops being water and turns into steam. Steaming has an advantage over methods such as boiling or even simmering in that there is no agitation involved, so it is gentler on delicate items like seafood. Because it doesn't require the food to be submerged, it avoids the loss of nutrients through leaching. It also cooks relatively quickly.

Interestingly, steam's maximum temperature is also 212 F, just like water. However, unlike water, steam can be forced to exceed this natural temperature limit by pressurizing it. The higher the pressure, the hotter the steam becomes. Cooking with pressurized steam requires specialized equipment, though, which is typically not available to the [beginner cook](#).

Cooking With Steam

Steaming can be done on a stovetop with two simple pieces of equipment: a pot and a steamer basket. The pot is filled with a small amount of liquid that is brought to a simmer; the item to be

cooked is placed in a basket suspended above the liquid, and the pot is then covered. The hot steam circulates through the pot and cooks the food very quickly. This technique is known as "compartment steaming." (The bamboo steamers used in Asian cuisine are an example of a compartment steamer.)

It is important that the bottom of the steamer basket does not touch the simmering water; this would add too much moisture to the vegetables and would not steam them correctly.

You can also steam food in the microwave, which is actually a natural piece of equipment for steaming since it "excites the liquids in food." You can create your own steaming system by placing the food in a microwave-safe dish, sprinkling it with water or other liquid, and covering with plastic wrap with a few holes poked into it. Cook for just a few minutes and you will be rewarded with perfectly steamed food. You can also buy a steamer basket made just for the microwave if you find yourself using this method often.

Steaming Vegetables

Until oven-roasting and grilling vegetables came into fashion, steaming was the primary way home cooks prepared their veggie side dishes. Too often, however, the vegetables were left as is after cooking, leaving them bland and flavorless. On the other hand, worse, the vegetables were steamed for too long, resulting in a pile of tasteless, dark-colored mush.

Nevertheless, vegetables—including potatoes—benefit from being cooked with steam when done properly. Some vegetables like broccoli and cauliflower can turn soggy when simmered, so steaming is an excellent alternative cooking method. Steaming can also be a good first step to cooking certain vegetables an alternative way; for example, steaming broccoli before adding to a quick-cooking stir-fry will assure they finish with a crisp-tender texture. In addition, steaming potatoes before being sliced and placed on the grill will shorten their grilling time tremendously.

Steaming Fish and Shellfish

Seafood is particularly well suited for steaming. With compartment steaming, the cooking liquid (usually a broth, stock, or wine to add flavor) along with aromatic herbs, are gently simmered, creating flavorful steam. The moist environment inside the steamer compartment helps keep the fish tender and juicy.

Seafood can also be steamed in its own juices. **Mussels** are frequently cooked in a large, covered pot with a very small amount of wine. As the pot heats up, the mussels cook in the steam created from their own juices, which then combines with the wine and other ingredients to create a flavorful sauce.

Cooking EN PAPILOTE

Another technique for cooking with steam is known as cooking EN PAPILOTE ("in paper") or in packets. This method is frequently employed for [cooking fish](#) and involves enclosing the food in a pouch of parchment paper or aluminium foil along with a little liquid (often wine) and perhaps

lemon, herbs, and even thinly sliced vegetables. The packet is then heated—in an oven or on a grill—so that the food inside cooks in its own steam.



Fish en papillote with lemon & herbs
www.loveandoliveoil.com

Health Benefits of Steaming

Besides being a simple cooking method, steaming is also a healthy way to prepare food. Compared to most other cooking methods, steaming preserves up to 50 percent more nutrients in the foods, and does not require any fats when cooking. This makes steaming an ideal cooking technique when you are watching your calorie and fat intake. Just do not forget to season!

Home Steamer



<https://encrypted-tbn0.gstatic.com/images?>

Commercial Steamer



https://cdn2.webdamdb.com/1280_Dfso9MaQqJN3.png?1477896434

Chapter 6:

Cajun Creole Cuisine and Roux

A True and Delectable History of Creole Cooking

[Bethany Ewald Bultman](#), [December 1986](#) Volume 38 Issue No. 1

New Orleans cuisine—with its French roux, African okra, Indian filé, and Spanish peppers—is literally a gastronomic melting pot. Here’s how it all came together.

Bethany Bultman

Across most of America nowadays the term Creole when applied to food variably conjures up images of charred, blackened fish and meat, overbearing, fiery seasonings, and a ubiquitous red sauce not unlike the kind you buy in a can. As a seventh-generation native of south Louisiana, and as a food writer, I join other locals in feeling a twinge of horror at what has befallen my native cuisine since it became the food fad of the eighties. The dishes for which people happily wait in line outside the local Cajun/Creole guru Paul Prudhomme’s K-Paul’s Louisiana Kitchen—and for which they gladly pay high prices in restaurants from New York to San Francisco—would shame the men and women who toiled to create America’s preeminent native cuisine. Remaining virtually unnoticed by the majority of the new wave of Creole food fanciers are the Creole delights we have enjoyed for generations: succulent oyster patties, hogshead cheese, trout meunière, mirliton stuffed with crabmeat, and daube glacé.

It is a popular misconception that the terms Creole and Cajun are interchangeable. While there are similarities, Creole is the sophisticated, worldly urbanite and Cajun is the provincial country cousin. The inhabitants of New Orleans created Creole cuisine, a subtle group of dishes utilizing spices and rich sauces. The Cajuns, having settled later in more remote areas of the Louisiana countryside, had to improvise with ingredients readily available in the bayous.

Creole and Cajun cuisine did not develop in a linear way from French gastronomy to the same extent that American cooking derived from the English and European cooking styles of the seventeenth and eighteenth centuries. Louisiana cuisine, whatever it might be called, is the literal melting pot of America. In a pot of gumbo served today in a traditional New Orleans house, there is a French roux, African okra, Indian filé, Spanish peppers, Cajun sausage, and oysters supplied by a Yugoslav fisherman, all served over Chinese rice with an accompaniment of hot French bread made by one of the city’s finest German bakers.

This harmonious cuisine, born out of the mixture of cultures, evolved because of Louisiana’s geographical isolation, plus its settlers’ hardships, pride, instinct, and the Latin cultural desire to eat well. For two centuries, Creole cuisine kept changing to satisfy the needs and tastes of each new group who came to settle in Louisiana. Nowadays, starting with breakfast, with its calas (rice cakes) served with cane syrup, all the way through to the after-dinner treats of café brûlot and pecan pralines, the inhabitants of south Louisiana happily eat a unique diet.

From the rash of articles and cookbooks extolling the merits of Creole and Cajun food, it appears that the early seventeenth-century French settlers possessed such extraordinary culinary acumen

that all they needed was an introduction to a few Indian herbs, a Spanish spice or two, and voilà, within a few years Louisiana had a legendary cuisine. Although almost any person in Louisiana of French ancestry will probably serve up this theory, it is not exactly the way things happened. Except for the kindness of the Indians, who were adept at living off the land, the French would have starved.

La Nouvelle Orleans was founded in 1718 by the French Canadian Jean-Baptiste Le Moyne, Sieur de Bienville, on a Muskhogean tribal portage at a strategic crescent on the Mississippi River, thirty leagues upriver from the Gulf of Mexico. The actual site was a small, verminous swamp, an area that is marked on maps of the period as being inhabited by “Savage Man Eaters.”

For a time the Compagnie des Indes, which controlled Louisiana, decided to colonize the area from the jails, brothels, and debtors’ prisons of France. The colony was in such chaos that the regent, Philippe of Orleans, finally put a stop to the practice in 1720. Early on, the unfortunate settlers discovered that the staple of their diet, wheat, would not grow in swampy, humid Louisiana. In spite of the fact that they named Lake Pontchartrain after the French minister in charge of providing them with staples; the settlers went for as much as two years without a shipment of flour.

If it had not been for the kindness of the Indians, the French would have starved. These Indians were adept at living off the land. They cultivated corn, from which they made a variety of breads; many kinds of squash, including the chayote (mirliton) and cushaw that are still popular in Louisiana today; and dried beans. They made sweet syrups from persimmons and chokecherries as a flavoring for smoked meats. Their stews were thickened with powdered sassafras, today called filé powder.

Most of the early French settlers were unwilling to live on Indian foods, and it became crucial to the survival of the colony that the Compagnie des Indes find some sturdy farmer immigrants who might be able to grow something for the French settlers to eat. Parts of Germany and Switzerland were inundated with handbills promoting Louisiana as a “paradise.” As a result, several hundred German settlers had been lured to the area by 1721. Quickly realizing that New Orleans, “the Paris of the New World,” was hardly an idyllic place to farm, they preferred to settle twenty miles upriver in an area known as the Côte des Allemands, away from the mildew and malaria of the city. The Germans did their job well, supplying the city with fresh produce. They also soon became fine bakers of French bread and pastries. Even today, most of the top local bakeries bear Swiss and German names.

The lack of women, medical personnel, and teachers in La Nouvelle Orléans prompted Bienville to write home asking that members of the order of Ursuline Sisters, the nuns he had seen at work in Canada, come to assist him in Louisiana. The first Ursulines arrived on August 6, 1727, and they immediately became indispensable members of the colony. They provided a home for the upstanding, middle-class filles de cassette or “casket girls” (so-called because of the government issued chests with clothing and linen that each brought), who were sent over regularly from 1728

to 1751 to become wives for the colonists. The Ursulines took care of orphans, conducted a free school, operated a hospital, and instructed the slaves for baptism.

It was these nuns, the daughters of French aristocratic and middle-class families, who brought with them knowledge of the latest French culinary fashions. One of the Ursulines, Sister Xavier Hébert, was the first woman pharmacist in the New World. A condition of the agreement between the Compagnie des Indes and the Ursulines in 1726 was that the sisters would plant an herb garden in Louisiana and teach its benefits. A bay leaf added to stews and soups prevented souring, and it also kept weevils out of the flour; dill was used to encourage soothing sleep, oregano to reduce swelling, parsley to remove the smell of garlic, shallots for strength, and sage “to put fever to flight.”

If the nuns brought with them the rudiments of French cuisine, blacks can be credited with using what little was available locally to devise something edible. By 1744, the Compagnie des Indes had imported some two thousand slaves from the west coast of Africa and the West Indies. The 1724 Code Noir, French regulations for treatment of blacks, made Louisiana a pleasanter place for them to live than British ruled areas. In addition, the French were lax in enforcing regulations against miscegenation.

African American cooks had a sophisticated tradition of preparing food. Their African ancestors had traded with Arabs since the eighth century and had left a legacy of various cultivated Middle Eastern vegetables. By the sixteenth century, West African farmers were growing corn, peanuts, yams, eggplant, garlic, and onions, which they had assimilated into their native diet of kidney beans, varieties of rice, green leafy vegetables, and okra. Foods were prepared by long, slow cooking and were served with delicate sauces.

It is thought that slaves brought okra, called ‘kingombo’, to the New World. The popular mainstay among Catholic families of Louisiana, gumbo ‘z’herbes’ is taken from a similar African dish made of various greens and herbs. An old saying states that a new friend will be made for each different green used in the soup. During the months when okra was in season, it was the key ingredient for thickening gumbo, replacing the Indian filé powder used the rest of the year.

In New Orleans, as in France, having a good cook was crucial to one’s social status, and, as in France, the proper Creole ‘lady’ did not venture too far from the kitchen while the meal was being prepared. Male and female slave cooks enjoyed such an elevated social position that they were taught to read and write in order to make use of French recipes. “The preparation of food is as much an art form to my people as music,” says Leah Chase, noted chef of Dooky Chase’s restaurant in the central city area, the black counterpart of Antoine’s. “There isn’t one famous Creole dish that didn’t pass through the hands of a black chef or cook before it came to be written down.”

African American cooks are credited with taking the French peasant’s thickener, roux (from the French roux beurre, which means “reddish-brown butter”), as a base for sauces, stews, or soups. Especially in Creole and Cajun dishes, which traditionally are slow-cooked in a single large pot,

the thickener is a key element. Among local cooks today, roux made by a master is considered an even better gift than chocolates.

By 1743, when the Marquis de Vaudreuil-Cavagnal, known as the Grand Marquis, arrived as the governor, New Orleans had developed its own elegant Creole society. By all accounts, the governor and his entourage of officials led a life as close to that of the Court of Versailles as could be mustered. They brought their own chefs from France and kept the prominent locals awestruck with their elaborate feasts.

Perhaps Creole cuisine would have become just a slightly distressed reproduction of eighteenth-century French cuisine had not the Spanish come. In November 1762, Louis XV of France secretly gave Louisiana to his Spanish cousin Charles III in an effort to keep it safely out of the hands of the British after the French defeat in the Seven Years' War. The Spanish introduced to the Louisiana diet the culinary tricks that they had learned from the Mayans, Aztecs, and Incas. Even the term *Créole* comes from the Spanish word *criollo*, originally denoting a person of European or African descent born outside those countries.

It was during the Spanish period in Louisiana that the first Acadians came to settle in the area. They descended from families that had left France in the early 1500s and settled in Nova Scotia. In 1755 the British demanded they pledge allegiance to England or be expelled from Canada. When they refused, they were deported, some being sent to the American colonies and many to France. When those in France who were destitute were offered a home in French-speaking Louisiana by the Spanish, many accepted, and by 1763, they had begun to found settlements deep in the swamps and bayous around New Orleans. They quickly adapted to the rough life and happily lived off the bountiful fresh foods that the wetlands provided. Today the Acadians in Louisiana, now called Cajuns, number perhaps three-quarters of a million and many still speak a French somewhat akin to that of the seventeenth century.

The Spanish were familiar with many of the New World's foods long before they arrived in Louisiana. In the fifteenth century, Columbus had brought yams, tobacco, kidney beans, maize, and red pepper back to Southern Europe and North Africa. Later the Spanish explorers brought back the tomato (known as "wolf peach," "apple of the moors," and "love apple") from Mexico. The Italians and Spanish adored it: the French and English thought it was poisonous. As a matter of fact, the French did not begin to use it until 1850, when the Empress Eugénie introduced it at Napoleon's table.

The Spaniards brought their love for peppers and the tomato back with them to Louisiana, and they began the practice of adding green pepper to sauces and meat dishes, which would arrest the growth of bacteria, reducing the spoilage that was a constant problem in those days before refrigeration. When coupled with the roux, the tomato became the integral ingredient in shrimp Creole sauce; in the rich gravy for grillades; and in the base for court bouillon, a thick seafood stew similar to bouillabaisse. The Spanish paella, a rice and shellfish dish, became the forerunner of Creole jambalaya.

After the Civil War, the impoverished Creoles were said to be “too poor to paint and too proud to whitewash.”

The early Creole proverb ‘*Misé fe macaque mangé piment*’ (“Misery makes the monkey eat red pepper”) perhaps suggests why hot peppers were such an important ingredient in this region of the country. The Cajuns were economically, culturally, and geographically cut off from the more cosmopolitan areas. As Joel Cavaness, an accomplished Cajun cook and a direct descendant of the original Acadians, explains: “We grew up in the bayou eating only what we could grow, catch or shoot and cook in one big pot. We ate what was in season, which could mean that we ate crawfish daily for weeks. The great variety and spice in our diet came from combining various peppers from the garden with some onions, garlic and bell pepper to create bisque, étouffé, court bouillon, sauce piquante, jambalaya, gumbo, or just simple, well-seasoned, boiled crawfish, shrimp, and crabs.”

From the Spanish period onward, no matter how poor, each household could easily grow one or two varieties of hot peppers. The flavors of foods, from old raccoon meat to “mud bugs” (crawfish), were greatly enhanced by the addition of a little salt and a dose of red pepper. Eating pickled and raw pepper is still a popular south Louisiana barroom sport, a proof of manhood. If the Spanish influence was ever in danger of fading, the Mexican War reversed the trend. Hundreds of Louisianians went off to Mexico in the 1840s and returned home with a renewed passion for the pepper. One of these men brought the McIlhenny family of Avery Island some special Mexican pepper seeds. The result was Tabasco sauce, which now sells more than seventy million bottles annually.

Political turmoil throughout the world played an important part in refining the culinary style of the Creoles. Aristocrats fleeing the French Revolution brought a renewed dose of haute cuisine. Those from the West Indies and Santo Domingo brought with them techniques for the preparation of fish with a Spanish flavor. In the late nineteenth century, New Orleans also became a disembarkation point for Sicilians arriving in America, and they brought along their rich red gravies and dishes using garlic and breadcrumbs, such as stuffed artichokes and eggplant, which, in Louisiana, became the stuffed Indian mirliton. Yugoslavs from the Dalmatian coast were working the local oyster beds as early as 1840. Their expertise was so great that, by 1858, the local business directory had to give five pages over to oyster bars, oyster houses, and restaurants specializing in oyster dishes.

Even Asians played a part in the diet of Louisiana. Despite the hackneyed barb comparing Creoles and Chinese—“They both worship their ancestors and eat a lot of rice”—it was Lee Yuen, a rice farmer from Canton, who perfected the method for drying shrimp in Louisiana in 1867. The new process made it possible to have shrimp year round.

Between 1800 and 1860, Creole society flourished, and Creole cuisine, as it is known today, became firmly established. By 1840 New Orleans was the fourth largest city in the United States, the second largest port, and an economic center that attracted executives from all over the world.

It was one of the first cities in the country to have public restaurants, and its hotel dining rooms served continental and Creole cuisine.

Antoine's, America's oldest restaurant under single-family ownership, was founded in 1840 as a French-Creole boarding hotel. The Alciatore/Guste family has preserved the landmark restaurant, which moved to its present location in 1878, almost unchanged. Third- and fourth-generation patrons not only can eat at their grandparents' favorite table, they can eat the same food. The menu is still in French with no explanation of dishes. The food is prepared in the authentic, nineteenth-century style—much heartier, richer, sweeter, and oilier than the culinary style of today.

Creole cooking might have gone full circle and become just another outgrowth of the aristocratic gastronomy of Europe had not the Civil War come along and changed the household economy of the Creoles. Suddenly the French-speaking Creoles had to take a backseat to the influx of Americans and the Reconstruction government. The Creoles became the “red beans-and-rice aristocracy,” people who were said to be “too poor to paint and too proud to whitewash.” However, the Creoles still loved to eat and entertain. When they could not afford fine meats, they would make a tasty gumbo from fresh vegetables and a little leftover chicken or seafood. When coffee became expensive, the refugees of the Napoleonic era in France taught them to roast the root of the Belgian endive (chicory) to stretch their supply. When the price of ice exceeded their means, they would crush glass and sew it into cheesecloth bags that were then floated in pitchers of water to give the tinkle of ice.

This tradition and pride have fostered and preserved Creole cuisine. Strangely, tourism, which rejuvenated the city's economy in the 1950s, 1960s, and early 1970s, came close to destroying the flavors that were innately Creole. Local restaurants were forced to create an Americanized version of the local cuisine that would be more palatable to tourists. Chicory was taken out of the coffee, filé and cooked-down murky morsels of crab and oyster eliminated from the gumbo, and red pepper removed from everything and replaced with freshly ground black pepper. Authenticity in preparation went by the wayside with such shortcuts as red sauces made with canned tomato paste. Visitors were served a brunch of eggs Benedict rather than grillades and grits.

In those years, Creole cuisine remained alive only in the city's homes and its many neighborhood and family restaurants. *Nouvelle cuisine* and *cuisine minceur* came and went without making so much as a ripple on the roux-based sauces of the Creoles.

By the 1980s, food writers were ready for something new, and suddenly Creole and Cajun cuisine was pulled out of the culinary closet—ethnic, inexpensive, relatively easy to prepare, and totally different from the elegant culinary style of the past decade. After more than two hundred years, Creole food has finally achieved its culinary respectability.

ROUX

Roux is a base sauce in international cuisines, originally French, composed of varying ratios of flour and fat (usually butter), useful for making sauces, and for thickening soups or gravies. **The benefits of using a roux include the following: It does not have to cook very long to remove a floury taste, clumps of flour are removed, and it creates unique flavors. It can be cooked to different degrees:**

- **White roux**
- **Blonde roux**
- **Brown roux**
- **Dark Brown roux**

Uses

Depending upon the intended use, and a **darker roux** (one that has been cooked longer) will also be thicker and have more flavor, **but will have less thickening power.**

The fat is most often butter in French cuisine, but may be lard or vegetable oil in other cuisines. The roux is used in three of the five mother sauces of classical French cooking: béchamel sauce, velouté sauce, and espagnole sauce.

In Cajun cuisine, roux is made with bacon fat or oil instead of butter and cooked to a medium or dark brown color, which lends much richness of flavor, but makes it thinner.

Central European cuisine often uses lard (in its rendered form) or more recently vegetable oil instead of butter for the preparation of roux, which is called:

- ‘zápražka’ in Slovak,
- Jíška’ in Czech,
- ‘zasmažka’ in Polish,
- ‘zaprška’ (запршка) in Bosnian, Croatian, Serbian, and Macedonian,
- ‘zaprazhka’ (запръжка) in Bulgarian,
- ‘rántás’ in Hungarian and
- ‘Mehlschwitze’ in German.

- Japanese curry, or *karē*, is made from a roux made by frying yellow curry powder, butter or oil, and flour together.
- Roux (*meyane*) has been used in Ottoman and Turkish cuisine since at least the 15th century.

Methods

1. A basic roux may be composed of equal parts flour and butter by weight.
2. The fat is heated in a pot or pan, melting it if necessary.
3. Then the flour is added.
4. The mixture is heated and stirred until the flour is incorporated.
5. It is then cooked until at least the point where a raw flour taste is no longer apparent and the desired color is achieved.

The final color can range from nearly white to nearly black, depending on the length of time it is heated and its intended use. The end-result is a thickening and flavoring agent.

Roux is most often made with butter as the fat base, but it may be made with any edible fat. For meat gravies, fat rendered from meat is often used. In regional [American cuisine](#), [bacon](#) is sometimes rendered to produce fat to use in the roux. If clarified butter is not available, vegetable oil is often used when producing dark roux, since it does not burn at high temperatures, as whole butter would.

Alternatives

Cooks can substitute for roux by adding a mixture of cold water and wheat flour to a dish that needs thickening, since the heat of boiling water will release the starch from the flour; however, this temperature is not high enough to eliminate the floury taste. A mixture of water and flour used in this way is colloquially known as “cowboy roux”, and in modern cuisine, it is called a white wash. It is used infrequently in restaurant cooking, since it imparts a flavor to the finished dish that a traditional [haute cuisine](#) chef would consider unacceptable. Corn flour (known as cornstarch in the United States) can be used instead of wheat flour. Since less is needed to thicken, it imparts less of the raw flour taste, and it also makes the final sauce shinier.

As an alternative to roux, which is high in fat and very energy-dense, some Creole chefs have experimented with toasting the flour without oil in a hot pan to use as an addition to gumbo. [Cornstarch](#) mixed with water (slurry), [arrowroot](#), and other agents can be used in place of roux as well. These items do not contribute to the flavor of a dish, and are used solely for thickening liquids. More recently, many chefs have turned to a group of naturally occurring chemicals known as [hydrocolloids](#). In addition to being flavorless and possessing the ability to act as a [thickening agent](#). The resulting texture is thought by some to be superior, and only a small amount is required for the desired effect.

Notes, tips and variations

- Depending upon how you plan to use your roux, you may need to add the sauce's other ingredients before the roux is fully cooked.
- One way to use a roux is to add liquid to it, stirring it in as you go. Do not go the other way, adding the roux to the liquid, as you will get lumps. Once enough liquid has been added to the roux (you will know), you can safely add it back into another liquid.
- A good roux will have a slight shine to it, and neither the texture nor the taste of the flour will be apparent.
- When making a dark roux, switching from butter to an oil with a high [smoke point](#) (such as [soybean oil](#) or [Canola oil](#)) will allow for a higher cooking temperature, decreasing cooking time. Keep in mind that different fats will give the roux a somewhat different taste.

Escoffier on Roux

(Auguste Escoffier (1907), *Le Guide Culinaire*)

White Roux (*Roux blanc*)

Same quantities as for brown or pale roux, but the time of cooking is limited to a few minutes, as it is only needed, in this case, to do away with the disagreeable taste of flour that is typical of those sauces whose roux has not been sufficiently cooked.

Pale Roux (*Roux blond*)

The quantities are the same as for brown roux, but cooking must cease as soon as the color of the roux begins to change, and before the appearance of any coloring whatsoever. The observations I made relative to brown roux, concerning the thickening element, apply also to pale roux.

Brown Roux (*Roux brun*)

Quantities for making about one pound:

- 8 oz. by volume clarified butter
- 8 oz. by weight flour

Preparation.—Mix the flour and butter in a very thick saucepan, and put it on the side of the fire or in a moderate oven. Stir the mixture repeatedly so that the heat may be evenly distributed throughout. Brown roux is known to be cooked when it has acquired a fine, light brown color and when it exudes an odor resembling that of the hazelnut, characteristic of baked flour.

It is very important that brown roux should not be cooked too rapidly. When cooking takes place with a very high heat in the beginning, the starch is burned within its shriveled cells. The binding principle is thus destroyed and double or triple the quantity of roux becomes necessary in order to obtain the required consistency. However, this excess of roux in the sauce chokes it up without binding it, and prevents it from clearing. At the same time, the cellulose and the burnt starch lend a bitterness to the sauce of which no subsequent treatment can rid it.

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Chapter 7:

The Menu and Poaching

The Menu

The Menu is a list, in specific order, of the dishes to be served at a given meal. The Menu is central to the food service concept—it defines the product offering, establishes key elements of financial viability namely price and contribution margin, and provides a powerful marketing tool. It dictates staff, equipment, food, and décor choices. It is the most important document in the building!

The word ‘menu’ dates back to 1718, but the custom of making such a list is much older. It is said that in the year 1541 Duke Henry of Brunswick was seen referring to a long slip of paper. On being asked what he was looking at he said it was a form of program of dishes and by referring to it he could see what dish was coming and reserve his appetite accordingly. It is believed that perhaps it was this idea that led to development of menu cards.

During olden times ‘bill of fare’ of ceremonial meals were displayed on the walls to enable the kitchen staff to follow the order in which the meal had to be served. Modern menus did not appear until the nineteenth century when the Parisian restaurant Palais Royale provided customers with small, handy reproduction of the menu displayed on the door. Mid-nineteenth century saw the placement of menus at the end of the table from where the guests could choose the menu item that they wished to have. However, as time progressed, individualized menus came into being.

The menu is the most significant factor in a food service operation. A menu epitomizes a caterer’s F&B intention. People eat away from home for various reasons. However, to many, the food that they eat has the greatest and the most significant impact upon their experience. Therefore, the menu, which proclaims to the guests the choice of food items available, is a major factor in popularizing a restaurant and promoting F&B sales.

Badly composed menu is likely to spoil the best of dinners. Menu plays a competitive role in the commercial industry. Its effect is not only observed in satisfying a client, but also in generating sufficient revenue for the business. Firms should understand the role of menu and entail steps to better it if required.

Functions of the Menu

A menu performs the following functions:

➤ **Information:**

It satisfies a guest’s need for information about what food is available, how it is cooked and presented, and at what price.

➤ **Order:**

It presents the dishes in a logical order, usually listing the menu items under course headings, thereby making comprehension of the menu easy.

➤ **Choice:**

It determines the freedom of choice that a guest may have.

➤ **Image:**

Menu helps present the overall image and style of the restaurant.

➤ **Sales:**

It is a means of promoting sales by appropriately describing the dishes, which appeal to the guest.

In order for the menu to perform all these functions successfully, it must be informative, accurate, understandable, and well designed. A restaurant manager must ensure that the items mentioned on the menu are available at all times and as per description since it is frustrating for a guest to make a decision only to be told that the dish is not available or to receive a dish that is not as stated.

Menus are broadly classified into three styles as follows:

1. **A la carte:** It is a list of all dishes on offer, which is within the resources of a particular kitchen. It means 'from the card'. From it, a guest may select items to compose his/her own menu. The charge of meal will be the total of the prices of individual dishes served to the guest. This is where the skill of the steward will come into picture, where he/she would do the suggestive selling and let the guests mix their choices in such a way that they enjoy the meal.
2. **Semi a la carte:** Some items are priced and ordered separately and some are priced to include other items.
3. **Table d' hote:** It literally means 'from the host's table'. It is a meal usually divided into various courses with little or no choice, and is available at a fixed price.

Menus Also Classify by type:

Static Menu – All patrons are offered the same foods every day.

Cycle Menu – Developed for a set period. At the end of the period, the cycle repeats.

Market Menu – Based on the products available in the market. Also called “Seasonal” menu.

Hybrid Menu – Combines the static, the cycle and the market menus.

The Classical French 12 Course Menu

1. **Hors d'oeuvre:**

This course is usually aimed to simulate appetite and, therefore, is composed of tangy and salty dishes. For example, potato salad, Caesar salad, Russian salad, caviar, smoked salmon, smoked ham, oyster, etc. all in small bite-sized servings and elegantly presented.

2. **Potage:**

It refers to soups of two types—clear (consommé) and thick (cream, velouté, or puree). A clear soup on the menu card is generally listed first.

3. **Poisson (fish):**

In this course normally poached/steamed/baked fish is served with an appropriate sauce and properly cooked vegetables.

4. **Farinaceous:**

Dishes such as risotto, spaghetti, gnocchi, and penne may be served in place of the fish course. Egg dishes, such as en cocotte, sur le plat, may be served in this course, especially during a luncheon menu. They are seldom included during dinner.

5. **Entrée:**

This is the first of the meat course at dinner; and it is usually complete in itself. For example, sweet breads, vol-au-vent, tournedos, etc.

6. **Remove/Relevee:**

It is a large joint of meat. For example, leg of lamb, beef roast loin of pork, etc. Served with potatoes such as Dauphinoise, Puree, Duchesse, Gratinee etc.

7. Sorbet:

Sometimes called the “Intermezzo”. This course is intended to be a pause during a long meal. A sorbet is supposed to settle dishes already served and to stimulate the appetite for the ones to follow. It is water ice flavored with champagne or any liquor or delicate wine. It is usually served in a champagne saucer with a teaspoon. Russian cigarettes may be passed around the table and ten minutes are allowed before the next course.

8. Roti:

This course consists of roast poultry or game, such as chicken, duck, turkey, pheasant, partridge, etc., served with their sauces and gravy. A dressed salad is served along.

9. Legume (vegetable):

The French customarily served vegetables as a separate course, for example, asparagus served with hollandaise sauce.

10. Entremets:

This may consist of a hot sweet dish such as soufflé, rum omelet, etc. Petit fours are served with this course.

11. Savory:

A savory course consists of a titbit on a hot canapé of a toast or fried bread. Cheese platter may also be presented with crackers, watercress, walnuts, and so forth. as accompaniments.

12. Dessert:

This finale consists of a basket of fresh fruits sometimes placed on the table as a part of the decoration, along with nuts and simple fruit tarts. Different types of coffees are served with this course.

The Modern Seven-Course Menu

1. **Amusee’:** An elegant savory, hot or cold, two or three-bite course. It should stimulate the appetite and amuse the mouth, thus the name.
2. **Potage:** A soup; bisque, consommé, purée or chowder.
3. **Poisson:** The fish course, whole or filleted, served with properly cooked vegetables.
4. **Intermezzo:** Sorbet; a citrus or fresh fruit ice, not too sweet. Should be designed to cleanse the palate.

5. **Entrée:** The meat course; comprised of the portion of meat or poultry along with a starch such as potato or rice or pastry, perhaps a slice of Beef Wellington with Sauce Bordelaise.
6. **Dessert:** The sweet course; perhaps a custard, a pastry, a pudding, a mousse,, etc.
7. **Salade/Cheese:** Perhaps leaves of endive or heart of romaine with tiny tomatoes and vinaigrette. Alternatively, this could be a cheese course or a combination of both.

Coffee to conclude or perhaps a ruby or tawny port wine with the cheese.



The Cooking Techniques

Poaching

Poaching is a Moist Heat Cooking Method

Have you ever poached an egg to make Eggs Benedict? Poached pears in wine for dessert? Delicately cooked a fish covered with water, stock or wine (poaching liquids) in a covered pan to preserve the moistness of the meat? These are examples of poaching you are probably familiar with.

It is the method accomplished with the least amount of heat, and, therefore is a gradual, gentle cooking process. Poaching is best for very delicate foods, such as eggs, fish, white meat chicken and fruit. It is a very healthy cooking method, because liquid—not fat—carries the heat into the food.

Poaching is ideally done at temperatures between 160°F and 190°F, or well below a simmer. The best way to tell if a poaching liquid is at the correct temperature is with an instant read thermometer. Short of that, look at the liquid in the pan. There should be a slight convective current in the liquid, as the warmer liquid rises to the surface. The liquid should be gently moving, but it should not be bubbling at all.

Poaching is Patience

Poaching takes patience. Poaching allows the proteins in foods to uncoil, or denature, slowly, without squeezing out moisture. If you were to drop a delicate chicken breast into boiling water, the proteins would seize up so quickly that all the moisture would be squeezed out, and you would end up with a small piece of dry rubber!

Poaching Liquids

You can poach in water, milk or a flavorful broth. The broth used in poaching is called a court bouillon. It consists of the poaching liquid itself (often broth or stock) an acid (wine, lemon juice, or vinegar), a bouquet garni (a small bundle of aromatics tied up in cheesecloth, or just tied together with kitchen string (bay leaf, parsley, peppercorns, garlic, thyme, etc) and mirepoix (onion, celery and carrot. Traditional proportions for a white mirepoix is two parts onion to one part each celery and carrot). You can also poach in fats such as clarified butter, duck fat or olive oil. A raw, shelled, lobster tail poached in clarified butter or olive oil is a thing to behold.

For dessert preparations, fruit is often poached in sweet wine and water with some spices (star anise, clove, cinnamon, and so forth). Eggs are generally poached in water with a bit of vinegar. The acid in the poaching liquid helps to speed up the protein coagulation on the outside of the food. This helps hold delicate foods together during the poaching process (think eggs).

To poach a chicken breast: Bring 2 inches of poaching liquid to just below a simmer. You will know when you get there when there are lots of little bubbles all over the bottom of the pan, but no bubbles have started to rise to the top.

Place the chicken breast into the liquid. Keep an eye on the heat. If it starts bubbling, turn it down. If you do not see any convective currents, turn the heat up a little. Do not worry if the chicken breast is not completely submerged. You can use some tongs to turn it over. If totally submerged and you used an ovenproof pan, you may want to insure constant, all around heat by placing pan in a 325-degree oven.

Continue poaching until the internal temperature of the chicken breast has reached 160 degrees, F. Many books talk to you about pushing on the chicken or even cutting into it to see if it's done. The most accurate method, though, is using an accurate instant read thermometer.

Take the piece of chicken out of the poaching liquid. It will be very pale in color. In a moist heat environment and at such low temperatures, there is no browning. You will also lose the deep flavor that some browning imparts. What you lose in flavor though is made up for in moisture.

Poaching is a wonderful way to keep delicate foods moist and plump. Then, there is the added advantage of turning the poaching liquid into a sauce by reducing a part of the poaching liquid, thicken with *beurre manie*, or *monte au beurre* or adding a spot of cream. A small amount of rich sauce can greatly enhance the dish.

As you can see from the above procedure, no special equipment is needed for poaching. A sauté pan or even just a saucepan will suffice. As long as your pan can hold two or three inches of liquid, you are good to go. They do sell a special pan for poaching whole fish and I am sure you can poach just about anything in it that fits.

How to Poach an Egg

Many a cook has been frustrated by the seemingly simple and straightforward task of poaching an egg. Most egg poaching disasters can be averted by keeping the water below a simmer.

1. Bring 3 inches of water and a splash of vinegar to about 170 degrees, F. Look carefully at the bottom of the pan. There should be small bubbles all over it, but they should not be rising to the top and breaking.

2. Crack an egg into a small cup.
3. Stir the water in a circular motion to get the water moving. Lower the egg into the water in the center of the pan. Tip the cup to let the egg slide out gently.
4. If any errant strings of white try to swirl away from the egg, gently push them back with a heat-resistant spatula or a spoon.
5. Let the egg gently poach for about 4-5 minutes, depending on how done you like your eggs. "Jiggle" the egg with your spoon. The white should be fairly firm, but the yolk should still shimmy. Remove the egg with a slotted spoon, and let it drain on some paper towels, or place in ice water for later service. Just bring water to poaching temperature and warm the egg for 40 seconds.
6. Serve on buttered toast, or get fancy and make Eggs Benedict. A lovely way to serve a poached egg at dinner is to make a salad with an acidic dressing. Perch the warm poached egg atop the salad and break the yolk. The rich yolk will blend with and become part of the dressing. Wonderful! (Research "Salade Lyonnaise"...a great salad to serve as dinner. Just add some good crusty bread and a good white wine! Yum!)



Poached egg over roasted asparagus. Foodandwine.com



Eggs Benedict. whatsforeats.com



Curry-Poached Chicken over Basmati. Bonappetit.com

Chapter 8:

Frying

Frying

Frying is a dry-heat cooking technique that has been used for centuries. Sautéing, stir-frying, pan-frying and deep-frying all operate on the same principles -- what differentiates them is how much fat is used in cooking. It can range from a very thin layer (sautéing and stir-frying), to maybe a half inch of oil (for pan-frying), to enough oil to fully submerge an entire piece of food (deep-frying).

The biggest benefit to frying is speed. Fat is much better at transferring heat than either air or water, so frying cooks considerably faster than baking or boiling. In addition, the fat imparts a crispy crust and a richness and depth of flavor that is, too many folks, irresistible. However, there is one major drawback to frying: health concerns that come from eating fatty foods.

Regardless of how healthy the food was before it went into the deep fryer, it is going to come out with five to 40 percent absorbed oil by weight. That is a major drawback for anyone who is watching his or her fat or calorie intake. For healthy people who do not need to worry as much, however, the occasional fried treat is not a problem. To better understand these often-defamed snacks and treats (and sometimes whole turkeys); let's dive into the science of how simple hot oil transforms everyday foods into sinful delights!

Fried foods are typically cooked in oil that has been heated to 350 to 425 degrees F. If you have ever seen food dropped into a hot fryer, then you know that it immediately starts sizzling and bubbling. It looks as if the oil itself is boiling, but those bubbles are actually caused by hot steam shooting out of the food. This sudden expulsion of steam is caused when water, which normally boils at 212 degrees F, hits oil that has been heated as much as *twice* that temperature. In fact, this vaporization occurs so rapidly and violently that, if you were able to watch it at a microscopic level, it would look like thousands of explosions all over the surface of the food! This mass exodus of steam is important for several reasons: (1) the water vapor repels the oil and keeps it from penetrating beyond the surface; (2) the steam cools the oil surrounding the food, which buys time for flavors to develop and heat to make its way to the center of the food without burning around the edges.

When Food Is Done Cooking

As more and more steam escapes from the food, its surface dehydrates, which leaves behind a crispy crust. Once most of the moisture is gone from the outer layer, heat is able to travel more quickly to the center of the food. Steam will continue to escape, but you will see fewer, less urgent bubbles. This is a signal that your food is almost done, and the crust is about to truly dry out and start crisping up. As soon your food reaches the golden-brown color you like, pull it out, drain, season and serve it! If deep frying chicken, utilize an instant-read thermometer to make sure chicken is properly cooked (165F).

Preventing Greasiness and Sogginess

Remember how I mentioned that the steam released from food cools the oil around it? If you are frying at home, you will always get some temperature loss after adding your food, but most recipes account for a normal drop in temperature.

For example, if a recipe tells you to heat your oil to 375 degrees F, it understands that once the food goes in, you will actually be cooking at 350F, and that's okay. If you overcrowd the pan, however, you may end up dropping the temperature far below what the recipe anticipated, and your food may come out unpleasantly greasy. That is why most recipes say things like "don't overcrowd the pan" or "cook in batches." Why does too-cool oil cause greasiness? Because of steam, or in this case, a lack thereof. When the oil is too cool, the explosions of steam you would normally get when adding food to hot oil are less extreme, or worse, nonexistent. Steam exits the food slower than it should and you lose the oil-repelling power of the steam jets. That is why most recipes tell you to preheat your oil before adding any food.

Good hot oil creates a situation akin to trying to cram your way down a flight of stairs in a subway/metro station just moments after a full train lets out at rush hour. You are the oil; the commuters are the steam, and you are not getting through until they stop coming.

Excessive greasiness can also be caused by poor drainage or by sitting for too long before serving. Ironically, batch frying, which is supposed to alleviate greasiness, can be the very reason fried foods have to sit too long before serving. Better than using a flat surface with paper towel to drain fried foods, using a wire rack inside a sheet pan will keep cooling fat away from the food. The solution once again is to keep that steam flowing! That usually means immediately transferring your food to a warm (200 degrees F) oven until you are ready to serve. Keeping your food steaming hot slows the oil's migration into your food while at the same time preventing another unpleasant end: sogginess.

Sogginess is a particularly common problem with fried foods that have been coated with a batter or breading. When food starts to cool, the moisture in the space between the crust and the food turns into water droplets instead of steam. This can make the crust soggy from the inside out and ruin your once crispy crust.

Batters and Breading

Fried foods are often dipped in batters or breadings before being cooked. The purpose of these coatings is to protect food from the violent surface reactions of frying, retain moisture and provide a pleasant flavor and texture.

Batters result in a smooth, crispy and often delicate crust. Items are sometimes dusted in flour before being battered. Batter recipes vary widely, so results differ depending on ingredients. For example, high gluten flours result in a chewy (some might say tough) crust, whereas gluten-free flours (like rice flour) result in a paper-thin ultra-crispy crust (think: Korean fried chicken).

Adding eggs or sugar to a batter will result in a darker crust, which may or may not be desirable. Batter coatings are smoother and have less surface area than most breaded coatings, so they tend to absorb less cooking oil. They also tend to offer the most protection for delicate foods, which is why fish are commonly battered before frying (think: fish and chips). Louisiana style fried fish is usually seasoned then dredged in corn flour or corn meal.

Breadings result in a crispy, crunchy, textured crust. Breaded coatings can range from fine breadcrumbs (think: Chick-fil-A), to large, extra-crispy breadings (think: KFC, Popeye's, Japanese tempura). Fine breadcrumbs tend to absorb less oil than the extra-crispy style, since they provide less surface area for oil to soak into, but they are prone to sogginess. Extra-crispy style breadings are usually achieved by incorporating large, already crispy particles, such as Panko-style breadcrumbs or cereal, such as cornflakes. Common breading procedure:

Flour (sometimes seasoned)	>>>>>>	Egg Wash	>>>>>>	Corn Flour
		Buttermilk		White flour
		Whipped egg whites		Panko
				Cracker Crumbs

Although batters and breadings are delicious, some foods do not require a coating at all. Starchy foods, like potatoes, plantains and yucca root will form their own natural protective skin once they're dunked in the fryer. This makes prep easy and accessible for the home cook.



Pan-Fried Chicken. countryliving.com

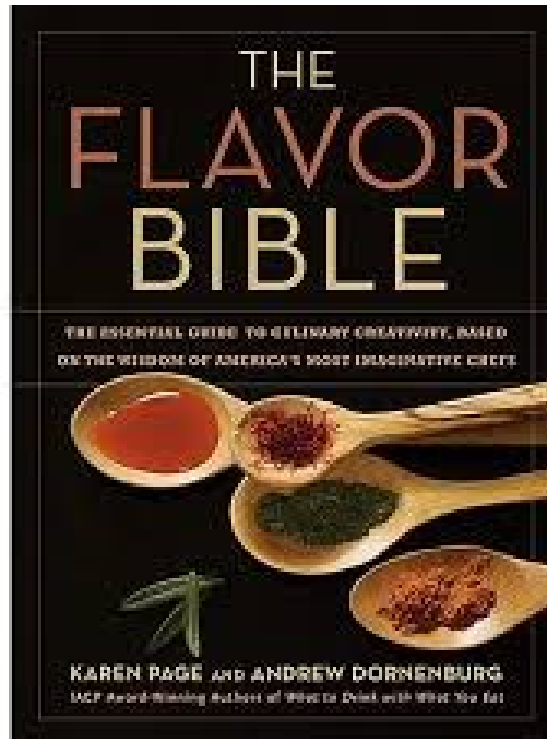


Deep-Fat Fried Chicken. bonappetit.com

Chapter 9:

Flavor and Taste

Flavor and Taste



walmart.com

A must have book for any serious chef is The Flavor Bible by Page and Dornenburg. A listing of different foods, spices and herbs along with the other foods, spices and herbs in which they pair well

FLAVORS

The chef must understand how to flavor foods and be able to recognize flavoring ingredients and know how to use them. This chapter looks at the sense of taste and smell and the flavoring ingredients used in the professional kitchen to enhance foods. Flavorings are the herbs, spices, salt, oils, vinegars, condiments, wines and other alcoholic beverages typically used to create, enhance or alter the natural flavors of a dish-are featured.

From the simplest grunt of pleasure upon biting into a chunk of meat fresh from the fire to the most sophisticated discourse on the fruity top notes of a full-bodied Cabernet Sauvignon, people have long attempted to describe the flavors of food. This is done by describing physical perceptions ("it tastes tart or sugary" or "it feels greasy") or the recognition of the flavor ("I can sense the rosemary" or "there is a hint of strawberries"). In either case, the terms *flavor* and *taste* are often confused. Although often used interchangeably, they are not synonymous.

A **flavor** is a combination of the tastes, aromas and other sensations caused by the presence of a foreign substance in the mouth.

Tastes are the sensations we detect when a substance is exposed to the taste buds on the tongue (sweet, sour, salt, bitter and umami.) Some substances irritate other nerves on the tongue or embedded in the fleshy areas of the mouth. These nerves respond to sensations of pain, heat or cold, or sensations our brain interprets as spiciness, pungency, or astringency.

Mouthfeel refers to the sensation created in the mouth by a combination of a food's taste, smell, texture and temperature.

Aromas are the odors that enter the nose or float up through the back of the mouth to activate smell receptors in the nose. Whenever a particular taste, sensation and/or aroma is detected, a set of neurons in the brain is excited and, with experience, we learn to recognize these patterns as the flavor of bananas, chocolate, grilled lamb or sour milk. Each person has a unique ability to recognize and appreciate thousands of these patterns.

This collection of flavors and your ability to recognize them is sometimes referred to as your **palate**.

TASTES: SWEET, SOUR, SALTY, BITTER AND NOW UMAMI

Over the centuries, various cultures have developed complex philosophies based, in part, on the basic tastes they found in the foods they ate. For example, as early as 1000 B.C.E., the Chinese were describing the five-taste scheme that they still adhere to today. For them, each of the basic tastes - sweet, sour, salty, bitter and pungent/ hot/spicy- is associated with a vital organ of the body, a certain season, a specific element of nature, or an astrological sign. Maintaining the proper

balance of tastes in a dish or during a meal assists in the maintenance of good health and good fortune.

About the same time, in what is now India, the practice of ayurvedic medicine was developing. Indians recognized six tastes (and still do) sweet, sour, salty, spicy/ pungent, bitter and astringent. Based on the tastes of various herbs and spices, practitioners of ayurvedic medicine associate them with specific vital organs or bodily systems. Indian cooks attempt to create dishes with a balance of all six tastes, in part to encourage good health.

A continent away and several hundred years later, the Greek philosopher Aristotle identified seven tastes. He arranged the various tastes on a sort of continuum with the two primary and contrasting tastes, sweet and bitter, at either end. He placed a secondary taste next to each primary taste: succulent to the right of sweet and salty to the left of bitter. Between these secondary tastes he placed - from left to right- pungent, harsh and astringent. Each taste gave way to the next, creating, along with the other senses, the perception of flavors.

As the understanding of the human body evolved, the definition of taste came to be based more on science than on a balancing of elements. Today, taste is defined as the sensations detected when substances come in contact with the taste buds on the tongue.

Sweet - For most people, sweetness is the most pleasurable and often sought-after taste, although, ironically, the fewer sweet-tasting foods we consume, the more enhanced our ability to recognize sweetness becomes. A food's sweetness comes from the naturally occurring sugars it contains (for example, sucrose and fructose) or sweeteners added to it. This sweetness can sometimes be enhanced by adding a small amount of a sour, bitter or salty taste. Adding too much sourness, bitterness or saltiness, however, will lessen our perception of the food's sweetness.

Sour - Considered the opposite of sweet, a sour taste is found in acidic foods and, like sweetness, can vary greatly in intensity. Many foods with a dominant sour taste, such as real currants or sour cream, will also contain a secondary or slight sweetness. Often a sour taste can be improved by adding a little sweetness or negated by adding a large amount of a sweet ingredient.

Salty - With the notable exception of oysters and other shellfish and seaweed, the presence of a salty taste in a food is the result of the cook's decision to add the mineral sodium chloride, known as salt, or to use a previously salted ingredient such as salt-cured fish or soy sauce. Salt helps finish a dish, heightening or enhancing its other flavors. Dishes that lack salt often taste flat. Like the taste of sweetness, the less salt consumed on a regular basis, the more saltiness we can detect in foods.

Bitter - Although the bitterness associated with tasting alkaloids and other organic substances may occasionally be appreciated, such as when tasting chocolate or coffee, a bitter-flavored

ingredient unbalanced by something sour or salty is generally disliked and, as a survival mechanism, is believed to serve as a warning of inedibility or unhealthfulness.

In the past several years, many western researchers have begun to recognize a fifth taste, akin to the savory taste long recognized as the fifth taste in Japanese cuisine. Called 'umami' (from the Japanese word umai, meaning "delicious"), this fifth taste does not have a simple English translation. Rather, for some people it refers to a food's savory characteristic; for others to the richness or fullness of a dish's overall taste, and still others, the meatiness or meaty taste of a dish.

Taste buds sense umami in the presence of several substances, including the naturally occurring amino acid glutamate and its commercially produced counterpart known as monosodium glutamate (MSG).

Cheeses, meats, rich stocks, soy sauce, shellfish, fatty fish, mushrooms, tomatoes and wine are all high in glutamate and produce the taste sensation of umami. Aged or fermented foods also provide umami.

Often food professionals and others refer to tastes in addition to sweet, sour, salty, bitter and umami. Typically, they describe something as pungent, hot, spicy or piquant or something that is astringent, sharp or dry. None of these terms, however, fit the definition of a taste, as none are detected solely by taste buds. Rather, these sensations are detected by nerve endings embedded in the fleshy part of the mouth. These nerves, when "irritated" by the presence of compounds such as piperine (the active ingredient in black peppercorns) or capsaicin (the active ingredient in chiles), register a burning sensation that the brain translates as the hot and spicy "taste" of Szechuan or Mexican cuisines, for example.

FACTORS AFFECTING PERCEPTION OF FLAVORS

Obviously, the most important factors affecting the flavor of a dish are the quantity, quality and concentration of the flavoring ingredients. (With practice, a chef gains a feel for the proper proportions.) Other factors that affect one's perception of flavors include the following:

Temperature - Food at warm temperatures offer the strongest tastes. Heating foods releases volatile flavor compounds, which intensifies one's perceptions of odors. This is why fine cheese is served at room temperature to improve its eating quality and flavor. Foods tend to lose their sour or sweet tastes both the colder and the hotter they become. Saltiness, however, is perceived differently at extreme cold temperatures; the same quantity of salt in a solution is perceived more strongly when very cold than when merely cool or warm. Therefore, it is best to adjust a dish's final flavors at its serving temperature.

That is, season hot food when they are hot and cold foods when they are cold.

Consistency - A food's consistency affects its flavor. Two items with the same amount of taste and smell compounds that differ in texture will differ in their perceived intensity and onset time;

the thicker item will take longer to reach its peak intensity and will have a less intense flavor. For example, two batches of sweetened heavy cream made from the same ingredients in the same proportions can taste different if one is whipped and the other is un-whipped; the whipped cream has more volume and therefore a milder flavor.

Presence of contrasting tastes - Sweet and sour are considered opposites, and often the addition of one to a food dominated by the other will enhance the food's overall flavor. For example, adding a little sugar to vinaigrette reduces the dressing's sourness, or adding a squeeze of lemon to a broiled lobster reduces the shellfish's sweetness. Nevertheless, add too much, and the dominant taste will be negated. Likewise, adding something sweet, sour or salty to a dish with a predominantly bitter flavor will cut the bitterness.

Presence of fats - Many of the chemical compounds that create tastes and aromas are dissolved in the fats naturally occurring in foods or added to foods during cooking. As these compounds are slowly released by evaporation or saliva, they provide a sustained taste sensation. If, however, there is too little fat, the flavor compounds may not be released efficiently, resulting in a dish with little sustained flavor. Too much fat poses another problem; it can coat the tongue and interfere with the ability of taste receptors to perceive flavor compounds.

Color - A food's color affects how the consumer will perceive the food's flavor before it is even tasted. When foods or beverages lack their customary color, they are less readily identified correctly than, when appropriately colored. As color level changes to match normal expectations, our perception of taste and flavor intensity increases. A mismatch created by the perceived flavor (the flavor associated with the color) can have an adverse impact on the consumer's appreciation of the actual flavor. For example, if the predominant flavor of a dessert is lemon, the dessert or some component of the dessert should be yellow; a green color will trigger an expectation of lime and the possible disappointment of the consumer. Similarly, the dark ruby-red flesh of a blood orange looks different from the bright orange flesh of a Valencia orange. This tonal difference can create the expectation of a different, non-orangey flavor, even though the blood orange's flavor is similar to that of other sweet orange varieties. Likewise, a sliced apple that has turned brown may suggest an off-flavor, although there is none.

COMPROMISES TO THE PRECEPTION OF TASTE

The sense of taste can be challenged by factors both within and beyond one's control. Age and general health can diminish one's perception of flavor, as can fatigue and stress. Chefs need to be aware of the age and health of their clientele, adjusting the seasoning of foods served according to their needs. Here are some factors that can affect one's taste perceptions.

Age. "The bad news is that taste and smell sensitivity does decline as we age. The good news is that it declines at a slower rate than our vision and hearing. The sense of smell tends to decline earlier than the sense of taste. There is a great deal of variance across individuals, with some showing declines earlier than others."

Health. "An acute condition, such as a cold, can result in a temporary loss of smell. The presence of mucus can prevent airflow, preventing the odor compounds from reaching the olfactory receptors. In contrast, the sense of taste would remain largely unaffected. Medications can also alter the perception of taste and smell. Some medications suppress the perceptions of saltiness, while others result in chronic perception of bitterness. Still other medications alter salivary flow, making it difficult to swallow dry foods. A further complication is the underlying conditions for taking medication. If an individual is taking high blood pressure medications, not only may the medication have a direct impact on perceived taste, but the same individual is likely to be on a sodium-restricted diet."

Smoking. "Anecdotal reports from those who quit smoking strongly indicate that smoking diminishes odor sensitivity. This is further supported by evidence indicating that people who smoke generally are less sensitive to odors than those who do not. In contrast, evidence indicates that if one waits two hours after smoking, the sense of taste is unaltered. Immediately after smoking, however, taste sensitivity is lowered."

DESCRIBING AROMAS AND FLAVORS IN FOOD

Food scientists and professional tasters make their living describing the smell and taste of foods. Many have attempted to standardize the language used to describe positive and negative aromas and flavors in foods such as beer, cheese, chocolate, coffee and fish. Frequently they employ flavor wheels or other charts to identify types of flavors and tastes found in foods.

DESCRIBING FOOD USING FLAVOR PROFILES

A food's **flavor profile** describes its flavor from the moment the consumer gets the first whiff of its aroma until he or she swallows that last morsel. It is a convenient way to articulate and evaluate a dish's sensory characteristics as well as identify contrasting or complementing items that could be served with it.

A food's flavor profile consists of one or more of the following elements:

Top notes or high notes - the sharp, first flavors or aromas that come from citrus, herbs, spices and many condiments. These top notes provide instant impact and dissipate quickly.

Middle notes – the second wave of flavors and aromas. More subtle and more lingering than top notes, middle notes come from dairy products, poultry, some vegetables, fish and some meats.

Low notes or bass notes - the most dominant, lingering flavors. These flavors consist of the basic tastes (especially sweetness, sourness, saltiness and umami) and come from foods such as anchovies, beans, chocolate, dried mushrooms, fish sauce, tomatoes, most meats (especially beef and game) and garlic. Or they can be created by smoking or caramelizing the food's sugars during grilling, broiling and other dry-heat cooking processes.

After taste or finish - the final flavor that remains in the mouth after swallowing; for example, the lingering bitterness of coffee or chocolate or the pungency of black pepper or a strong mustard.

Roundness - the unity of the dish's various flavors achieved through the judicious use of butter, cream, coconut milk, reduced stocks, salt, sugar and the like; these ingredients cause the other flavorings to linger without necessarily adding their own dominant taste or flavor.

Depth of flavor - whether the dish has a broad range of flavor notes.

these expressions can be applied to any dish to describe its sensory characteristics. For example, a free-range chicken has a flavor profile with a top note of rosemary. Its middle notes are contributed by the chicken, and the low notes from the anchovies and garlic. There is an aftertaste of garlic and vinegar. The sauce adds roundness to the chicken, thus creating a dish with a fine depth of flavor. An experienced chef is able to taste and evaluate a version of this dish, adjusting flavorings, ingredients and cooking technique as needed to maintain the balance of flavors in the original recipe.

Important Terms:

seasoning an item added to enhance the natural flavors of a food without dramatically changing its taste; salt is the most common seasoning

flavoring an item that adds a new taste to a food and alters its natural flavors; flavorings include herbs, spices, vinegars and condiments; the terms seasoning and flavoring are often used interchangeably.

herb any of a large group of aromatic plants whose leaves, stems or flowers are used as a flavoring; used either dried or fresh

aromatic a food added to enhance the natural aromas of another food ; aromatics include most flavorings, such as herbs and spices , as well as some vegetables

spice any of a large group of aromatic plants whose bark, roots, seeds, buds or berries are used as a flavoring; usually used in dried form, either whole or ground

condiment traditionally, any item added to a dish for flavor, including herbs, spices and vinegars; now also refers to cooked or prepared flavorings such as prepared mustards, relishes, bottled sauces and pickles.

FLAVORINGS: HERBS AND SPICES

Herbs and spices are used as flavorings. Herbs refer to the large group of aromatic plants whose leaves, stems or flowers are used to add flavors to other foods. Most herbs are available fresh or dried. Because drying alters their flavors and aromas, fresh herbs are generally preferred and should be used if possible. Spices are strongly flavored or aromatic portions of plants used as flavorings, condiments or aromatics. Spices are the bark, roots, seeds, buds or berries of plants, most of which grow naturally only in tropical climates. Spices are usually used in their dried form, rarely fresh, and can usually be purchased whole or ground. Some plants- dill, for example- can be used as both an herb (its leaves) and a spice (its seeds).

HERBS



Basil

Basil is considered one of the great culinary herbs. It is available in a variety of "flavors" - cinnamon, garlic, lemon, even chocolate- but the most common is sweet basil. Sweet basil has light green, tender leaves and small white flowers. Its flavor is strong, warm and slightly peppery, with a hint of cloves. Basil is used in Mediterranean and some Southeast Asian cuisines and has a special affinity for garlic and tomatoes. When purchasing fresh basil, look for bright green leaves; avoid flower buds and wilted or rust-colored leaves. Dried sweet basil is readily available but has a decidedly weaker flavor.

Opal basil is named for its vivid purple color. It has a tougher, crinkled leaf and a medium-strong flavor. Opal basil may be substituted for sweet basil in cooking, and its appearance makes it a distinctive garnish.



Bay leaves

Bay, also known as sweet laurel, is a small tree from Asia that produces tough, glossy leaves with a sweet balsamic aroma and peppery flavor. Bay symbolized wisdom and glory in ancient Rome; the leaves were used to form crowns or "laurels" Bay leaves worn by emperors and victorious athletes. In cooking, dried bay leaves are often preferred over the more bitter fresh leaves. Essential in French cuisine, bay leaves are part of the traditional bouquet garni and court bouillon. Whole dried leaves are usually added to a dish at the start of cooking, then removed

when sufficient flavor has been extracted the Middle East. Its lacy, fern-like leaves are similar to parsley and can be used as a garnish.



Chervil

Chervil is commonly used in French cuisine and is one of the traditional *finest herbes*. Chervil's flavor is delicate, similar to parsley but with the distinctive aroma of anise. It should not be heated for long periods.



Chives

Chives are perhaps the most delicate and sophisticated members of the onion family. Their hollow, thin grass-green stems grow in clumps and produce round, pale purple flowers, which are used as a garnish. Chives may be purchased dried, quick-frozen or fresh. They have a mild onion flavor and bright green color. Chives complement eggs, poultry, potatoes, fish and shellfish. They should not be cooked for long periods or at high temperatures. Chives make an excellent garnish when snipped with scissors or carefully chopped and sprinkled over finished soups or sauces.

Garlic chives, also known as Chinese chives, actually belong to another plant species. They have flat, solid (not hollow) stems and a mild garlic flavor. They may be used in place of regular chives if their garlic flavor is desired.



Cilantro

Cilantro is the green leafy portion of the plant that yields seeds known as coriander. The flavors of the two portions of this plant are very different and cannot be substituted for each other. Cilantro, also known as Chinese parsley, is sharp and tangy with a strong aroma and an almost citrus flavor. It is widely used in Asian, Mexican and South American cuisines, especially in salads and sauces. It should not be subjected to heat, and cilantro's flavor is completely destroyed by drying. Do not use yellow or discolored leaves or the tough stems. When used in excess, cilantro can impart a soapy taste to foods.



Curry leaves

Curry leaves are the distinctively flavored leaves of a small tree that grows wild in the Himalayan foothills, southern India and Sri Lanka. They look like small shiny bay leaves and have a strong curry-like fragrance and a citrus-curry flavor. Often added to a preparation whole, then removed before serving, they can also be minced or finely chopped for marinades and sauces. Choose fresh bright green leaves, if possible, or frozen leaves; dried leaves have virtually no flavor. Although used in making southern Indian and Thai dishes, curry leaves (also known as neem leaves) must not be confused with curry powder.



Dill

Dill, a member of the parsley family, has tiny, aromatic, yellow flowers and feathery, delicate blue-green leaves. The leaves taste like parsley, but sharper, with a touch of anise. Dill seeds are flat, oval and brown, with a bitter flavor similar to caraway. Both the seeds and the leaves of the dill plant are used in cooking.

Dill is commonly used in Scandinavian and central European cuisines, particularly with fish and potatoes, mushrooms, and other vegetables. Both leaves and seeds are used in pickling and sour dishes. Dill leaves are available fresh or dried but lose their aroma and flavor during cooking, so add them only after the dish is removed from the heat. Dill seeds are available whole or ground and are used in fish dishes, pickles and breads.



Epazote

Epazote, also known as wormseed or stinkweed, grows wild throughout the Americas. It has a strong aroma similar to kerosene and a wild flavor. Fresh epazote is used in salads and as a flavoring in Mexican and Southwestern cuisines. It is often cooked with beans to reduce their gaseousness. Dried epazote is brewed to make a beverage.



Lavender

Lavender is an evergreen with thin leaves and tall stems bearing spikes of tiny purple flowers. Although lavender is known primarily for its aroma, which is widely used in perfumes, soaps and cosmetics, the flowers are also used as a flavoring, particularly in Middle Eastern cuisines though other cuisines use it as well. These flowers have a sweet, lemony flavor and can be crystallized and used as a garnish. Lavender is also used in jams and preserves and to flavor teas and tisanes.



Lemongrass

Lemongrass, also known as citronella grass, is a tropical grass with the strong aroma and flavor of a lemon. It is similar to scallions in appearance but with a woody texture. Only the lower base and white leaf stalks are used. Available fresh or quick-frozen, lemongrass is widely used in Southeast Asian cuisines.



Lime leaves

Lime leaves from a species of thorny lime trees are used much like bay leaves to flavor soups and stews in Thai and other Asian cuisines. These small, dark green leaves have a bright citrus floral aroma. Fragrant lime leaves are available fresh in the United States now that these trees are cultivated domestically.



Lovage

Lovage has tall stalks and large dark green celery-like leaves. The leaves, stalks and seeds (which are commonly known as celery seeds) have a strong celery flavor. Also known as, 'sea parsley', the leaves and stalks are used in salads and stews and the seeds are used for flavoring.



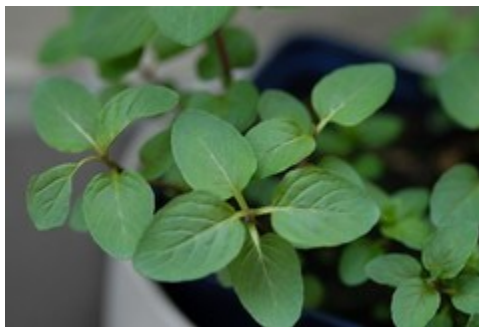
Marjoram

Marjoram, also known as sweet marjoram, is a flowering herb native to the Mediterranean and used since ancient times. Its flavor is similar to thyme but sweeter; it also has a stronger aroma. Marjoram is now used in many European cuisines. Although it is available fresh, marjoram is one of the few herbs whose flavor increases when dried. Wild marjoram is more commonly known as oregano.



Mint

Mint a large family of herb, includes many species and flavors (even chocolate). Spearmint is the most common garden and commercial variety. It has soft, bright green leaves and a tart aroma and flavor. Mint does not blend well with other herbs, so its use is confined to specific dishes, usually fruits or fatty meats such as lamb. Mint has an affinity for chocolate. It can also be brewed into a beverage or used as a garnish.



Peppermint

Peppermint has thin, stiff, pointed leaves and a sharper menthol flavor and aroma. Fresh peppermint is used less often in cooking or as a garnish than spearmint, but peppermint oil is a common flavoring in sweets and candies.



Oregano

Oregano, also known as wild marjoram, is a pungent, peppery herb used in Mediterranean cuisines, particularly Greek and Italian, as well as in Mexican cuisine. It is a classic complement to tomatoes. Oregano's thin, woody stalks bear clumps of tiny, dark green leaves, which are available dried and crushed.



Parsley

Parsley is probably the best-known and most widely used herb in the world. It grows in almost all climates and is available in many varieties, all of which are rich in vitamins and minerals. The most common type in the United States and Northern Europe is curly parsley. It has small curly leaves and a bright green color. Its flavor is tangy and clean. Other cuisines use a variety sometimes known as Italian parsley, which has flat leaves, a darker color and coarser flavor. Curly parsley is a ubiquitous garnish; both types can be used in virtually any food except sweets. Parsley stalks have a stronger flavor than the leaves and are part of the standard bouquet garni. Chopped parsley forms the basis of any fine herb blend.



Rosemary

Rosemary is an evergreen bush that grows wild in warm, dry climates worldwide. It has stiff, needlelike leaves; some varieties bear pale blue flowers. It is highly aromatic, with a slight odor of camphor or pine. Rosemary is best used fresh. When dried, it loses flavor, and its leaves become very hard and unpleasant to chew. Whole rosemary stems may be added to a dish such as a stew and then removed when enough flavor has been imparted. They may also be added to a bouquet garni. Rosemary has a great affinity for roasted and grilled meats, especially lamb.



Sage

Sage was used as a medicine for centuries before it entered the kitchen as a culinary herb. Culinary sage has narrow, fuzzy, gray-green leaves and blue flowers. Its flavor is strong and balsamic, with notes of camphor. Sage is used in poultry dishes, with fatty meats or brewed as a beverage. Sage's strong flavor does not blend well with other herbs. It dries well and is available in whole or chopped leaves or rubbed (coarsely ground).



Savory

Savory has been used since ancient times. Its leaves are small and narrow, and it has a sharp, bitter flavor, vaguely like thyme. It dries well and is used in bean dishes, sausages and fine herb blends. While the variety called *summer savory* is most common and popular, a variety called *winter savory* is also available.



Tarragon

Tarragon is another of the great culinary herbs, is native to Iberia. It is a bushy plant with long, narrow, dark green leaves and tiny gray flowers. Tarragon goes well with fish and tomatoes and is essential in many French dishes such as bearnaise sauce and fine herb blends. Its flavor is strong and diffuses quickly through foods. It is available dried, but drying may cause hay-like flavors to develop.



Thyme

Thyme has been popular since 3500 B.C.E., when Egyptians used it as a medicine and for embalming. Thyme is a small, bushy plant with woody stems, tiny green-gray leaves and purple flowers. Its flavor is strong but refined, with notes of sage. Thyme dries well and complements virtually all types of meat, poultry, fish, shellfish and vegetables. It is often included in a bouquet garni or added to stocks.

SPICES



Different cuisines and areas of the world utilize different spices, and spice combinations. See the chart below:

SPICES BY CUISINE

These spice combinations will have you whipping up dishes from all over the world! Use this chart as a guide to give your meals those traditional ethnic flavors you love.

MEXICAN	CARIBBEAN	FRENCH	NORTH AFRICAN	CAJUN	THAI
CORIANDER CUMIN OREGANO GARLIC POWDER CINNAMON CHILI POWDER	ALLSPICE NUTMEG GARLIC POWDER CLOVES CINNAMON GINGER	NUTMEG THYME GARLIC POWDER ROSEMARY OREGANO HERBES DE PROVENCE	CARDAMOM CINNAMON CUMIN PAPRIKA TURMERIC GINGER RAS EL HANOUT	CAYENNE PEPPER OREGANO PAPRIKA THYME ROSEMARY BAY LEAVES CAJUN SEASONING	BASIL CUMIN GARLIC GINGER TURMERIC CARDAMOM CURRY POWDER
MEDITERRANEAN OREGANO ROSEMARY THYME BAY LEAVES CARDAMOM CINNAMON CLOVES CORIANDER BASIL GINGER		INDIAN BAY LEAVES CARDAMOM CAYENNE PEPPER CINNAMON CORIANDER CUMIN GINGER NUTMEG PAPRIKA TURMERIC GARAM MASALA CURRY POWDER		MIDDLE EASTERN BAY LEAVES CARDAMOM CINNAMON CLOVES CUMIN GINGER CORIANDER OREGANO ZA'ATAR GARLIC POWDER	

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Aleppo pepper

Aleppo pepper (ah-LEHP-oh) is made from bright red chiles grown in Turkey and northern Syria. The sun-dried Aleppo chiles are seeded and crushed, then used as a condiment. It has a sharp, but sweet, fruity flavor, with only mild heat (15,000 Scoville units). Although a member of the capsicum family, Aleppo pepper is used more like ground peppercorns (*piper nigrum*) than a chile. Also known as Halaby pepper, it adds an authentic Mediterranean flavor and fragrance to foods.



Anise

Anise is native to the eastern Mediterranean and is grown commercially in warm climates throughout India, North Africa and southern Europe. The tiny, gray-green egg-shaped seeds have a distinctively strong, sweet flavor, similar to licorice and fennel. When anise seeds turn brown, they are stale and should be discarded. Anise is used in pastries as well as fish, shellfish and vegetable dishes, and is commonly used in alcoholic beverages (for example, Pernod and ouzo). The green leaves of the anise plant are occasionally used fresh as an herb or in salads.



Star anise

Star anise, also known as Chinese anise, is the dried, star-shaped fruit of a Chinese magnolia tree. Although it is botanically unrelated, its flavor is similar to anise seeds but bitterer and pungent. It is an essential flavor in many Chinese dishes and one of the components of five-spice powder.



Annatto

Annatto seeds are the small, brick red triangular seeds of a shrub from South America and the Caribbean. Annatto seeds add a mild, peppery flavor to rice, fish and shellfish dishes and are crushed to make Mexican achiote paste. Because they impart a bright yellow-orange color to foods, annatto seeds are commonly used as a natural food coloring, especially in cheeses and margarine.



Asafetida

Asafetida is a pale brown resin made from the sap of a giant fennel-like plant native to India and Iran. Also known as devil's dung, it has a garlicky flavor and a strong unpleasant fetid aroma (the aroma is not transferred to food being flavored). Available powdered or in lump form, it is used- very sparingly as a flavoring in Indian and Middle Eastern cuisines.



Capers

Capers come from a small bush that grows wild throughout the Mediterranean basin. Its unopened flower buds have been pickled and used as a condiment for thousands of years. Fresh capers are not used, as the sharp, salty, sour flavor develops only after curing in strongly salted white vinegar. The finest capers are the smallest, known as nonpareils, which are produced in France's Provence region. Capers are used in a variety of sauces (tartare, remoulade) and are excellent with fish and game. Capers will keep for long periods if moistened by their original liquid. Do not acid or substitute vinegar, however, as this causes the capers to spoil.



Caraway

Caraway is perhaps the world's oldest spice. Its use has been traced to the Stone Age, and seeds have been found in ancient Egyptian tombs. The caraway plant grows wild in Europe and temperate regions of Asia. It produces a small, crescent-shaped brown seed with the peppery flavor of rye. Seeds may be purchased whole or ground. (The leaves have a mild, bland flavor and are rarely used in cooking.) Caraway is a 'European' flavor, used extensively in German and Austrian dishes, particularly breads, meats and cabbage. It is also used in alcoholic beverages and cheeses.



Cardamom

Cardamom is one of the most expensive spices, second only to saffron in cost. Its seeds are encased in 1/4-inch- (6-millimeter) long light green or brown pods. Cardamom is highly aromatic. Its flavor, lemony with notes of camphor, is quite strong and is used in both sweet and savory

dishes. Cardamom is widely used in Indian and Middle Eastern cuisines, where it is also used to flavor coffee. Scandinavians use cardamom to flavor breads and pastries. Ground cardamom loses its flavor rapidly and is easily adulterated, so it is best to purchase whole seeds and grind your own as needed.

Chiles

Chiles, including paprika, chile peppers, bell peppers and cayenne, are members of the capsicum plant family. Although cultivated for thousands of years in the West Indies and Americas, capsicum peppers were unknown in the Old World prior to Spanish explorations during the 15th century.



Capsicum

Capsicum peppers come in all shapes and sizes, with a wide range of flavors, from sweet to extremely hot. Some capsicums are used as a vegetable, while others are dried, ground and used as a spice.



Cayenne

Cayenne, sometimes simply labeled "red pepper," is ground from a blend of several particularly hot types of dried red chile peppers. Its flavor is extremely hot and pungent; it has a bright orange-red color and fine texture.

**Paprika***Plant**Spice*

Paprika, also known as Hungarian pepper, is a bright red powder ground from specific varieties of red-ripened and dried chiles. Paprika's flavor ranges from sweet to pungent; its aroma is distinctive and strong. It is essential to many Spanish and eastern European dishes. Mild paprika is meant to be used in generous quantities and may be sprinkled on prepared foods as a garnish.

Chile powders are made from a wide variety of dried chile peppers, ranging from sweet and mild to extremely hot and pungent. The finest pure chile powders come from dried chiles that are simply roasted, ground and sieved. Commercial chilli powder, an American invention, is actually a combination of spices- oregano, cumin, garlic and other flavorings- intended for use in Mexican dishes. Each brand is different and should be sampled before using.



Crushed chiles

Crushed chiles, also known as chile flakes, are blended from dried, coarsely crushed chiles. They are quite hot and are used in sauces and meat dishes.



Cinnamon

Cinnamon and its cousin cassia are among the oldest known spices: Cinnamon's use is recorded in China as early as 2500 B.C.E., and the Far East still produces most of these products. Both cinnamon and cassia come from the bark of small evergreen trees, peeled from branches in thin layers and dried in the sun. High-quality cinnamon should be pale brown and thin, rolled up like paper into sticks known as quills. Cassia is coarser and has a stronger, less subtle flavor than cinnamon. Consequently, it is cheaper than true cinnamon. Cinnamon is usually purchased ground because it is difficult to grind.

Cinnamon sticks are used when long cooking times allow for sufficient flavor to be extracted (for example in stews or curries). Cinnamon's flavor is most often associated with pastries and sweets, but it has a great Ground Cinnamon and affinity for lamb and spicy dishes. Labeling laws do Cinnamon Sticks not require that packages distinguish between cassia and cinnamon, so most of what is sold as cinnamon in the United States is actually cassia, blended for consistent flavor and aroma.



Cloves

Cloves are the unopened buds of evergreen trees that flourish in muggy tropical regions. When dried, whole cloves have hard, sharp prongs that can be used to push them into other foods, such as onions or fruit, in order to provide flavor. Cloves are extremely pungent, with a sweet, astringent aroma. A small amount provides a great deal of flavor. Cloves are used in desserts and meat dishes, preserves and liquors. They may be purchased whole or ground .



Coriander

Coriander seeds come from the cilantro plant. They are round and beige, with a distinctive sweet, spicy flavor and strong aroma. Unlike other plants in which the seeds and the leaves carry the same flavor and aroma, coriander and cilantro are very different. Coriander seeds are available whole or ground and are frequently used in Indian cuisine and pickling mixtures.



Cumin

Cumin is the seed of a small delicate plant of the parsley family that grows in North Africa and the Middle East. The small seeds are available whole or ground and look (but do not taste) like caraway seeds. Cumin has a strong earthy flavor and tends to dominate any dish in which it is included. It is used in Indian Middle Eastern and Mexican cuisines, in sausages and a few cheeses.



Fennel

Fennel is a perennial plant with feathery leaves and tiny flowers long cultivated in India and China as a medicine and cure for witchcraft. Its seeds are greenish brown with prominent ridges

and short, hair-like fibers. Their taste and aroma are similar to anise, though not as sweet. Whole seeds are widely used in Italian stews and sausages; central European cuisines use fennel with fish, pork, pickles and vegetables. Ground seeds can also be used in breads, cakes and cookies. The same plant produces a bulbous stalk used as a vegetable.



Fenugreek

Fenugreek is grown in Mediterranean countries since ancient times, is a small, beanlike plant with a tiny flower. The seeds, are available whole or ground, are pebble shaped and transfer their pale orange color to the foods with which they are cooked. Their flavor is bittersweet, like burnt sugar with a bitter aftertaste. Fenugreek is a staple in Indian cuisines, especially curries and chutneys.



File powder

Sassafras plant

File powder is the dried, ground leaf of the sassafras plant. Long used by Choctaw Indians, it is now most commonly used as a thickener and flavoring in Cajun and Creole cuisines. File is also used as a table condiment to add a spicy note to stews, gumbo and the like. The powder forms strings if allowed to boil, so it should be added during the last minutes of cooking.



Galangal root

Galangal is the rhizome of a plant native to India and Southeast Asia. The rhizome has a reddish skin, an orange or whitish flesh and a peppery, ginger-like flavor and piney aroma. Also known as *galanga root*, Thai ginger and Laos ginger, it is peeled and crushed for use in Thai, and Indonesian cuisines. Fresh ginger is an appropriate substitute.



Ginger

Ginger is a well-known spice obtained from the rhizome of a tall, flowering tropical plant. Fresh ginger is known as a "hand" because it looks vaguely like a group of knobby fingers. It has grayish-tan skin and a pale yellow, fibrous interior. Fresh ginger should be plump and firm with smooth skin. It should keep for about a month under refrigeration. Its flavor is fiery but sweet, with notes of lemon and rosemary. Fresh ginger is widely available and is used in Indian and Asian cuisines. It has a special affinity for chicken, beef and curries. Ginger is also available peeled and pickled in vinegar, candied in sugar or preserved in alcohol or syrup. Dried, ground ginger is a fine yellow powder widely used in pastries. Its flavor is spicier and not as sweet as fresh ginger.



Grains of paradise

Grains of paradise are the seeds of a perennial reed-like plant indigenous to the West African coast. Related to cardamom, grains of paradise have a spicy, warm and slightly bitter flavor, similar to peppercorns. In fact, grains of paradise were traditionally used in place of black pepper and are also known as Guinea pepper or Melegueta pepper. Now enjoying a resurgence in popularity and increased availability, they are ground and used primarily in West African and Maghreb dishes, and in the spice blend known as ras el hanout.



Horseradish

Horseradish is the large off-white taproot of a hardy perennial (unrelated to radishes) that flourishes in cool climates. Fresh roots should be firm and plump; they will not have the distinctive horseradish aroma unless cut or bruised. The outer skin and inner core of a fresh horseradish root can have an unpleasant flavor and should be discarded. Typically used in Russian and Central European cuisines, especially as an accompaniment to roasted meats and fish and shellfish dishes, horseradish is usually served grated, creamed into a sauce or as part of a compound butter or mustard preparation. If horseradish is cooked, heat can destroy its flavor and pungency, so any horseradish should be added near the end of cooking.



Juniper

Juniper is an evergreen bush grown throughout the Northern Hemisphere. It produces round purple berries with a sweet flavor similar to pine. Juniper berries are used for flavoring gin and other alcoholic beverages, and are crushed and incorporated in game dishes, particularly venison and wild boar.



Mustard seeds

Mustard seeds, available in black, brown and yellow, come from three different plants in the cabbage family. Mustard seeds are small, hard spheres with a bitter flavor. The seeds have no aroma, but their flavor is sharp and fiery hot. Yellow seeds have the mildest and black seeds the strongest flavor. All are sold whole and can be crushed for cooking. Mustard seeds are a standard component of pickling spices and are processed and blended for prepared mustards, which we discuss later. Ground or city mustard is a bright yellow powder made from a blend of ground seeds, wheat flour and turmeric.



Nutmeg

Nutmeg and mace come from the yellow plum-like fruit of a large tropical evergreen. These fruits are dried and opened to reveal the seed known as nutmeg. A bright red lacy coating or aril surrounds the seed; the aril is the spice mace. Whole nutmegs are oval and look rather like a piece of smooth wood. The flavor and aroma of nutmeg are strong and sweet, and a small quantity provides a great deal of flavor. Nutmeg should be grated directly into a dish as needed; once grated, flavor loss is rapid. Nutmeg is used in many European cuisines, mainly in pastries and sweets, but is also important in meat and savory dishes.



Mace

Mace is an expensive spice, with a flavor similar to nutmeg but more refined. It is almost always purchased ground and retains its flavor longer than other ground spices. Mace is used primarily in pastry items.



Peppercorns

Peppercorns are the berries of a vine plant (*piper nigrum*) native to tropical Asia. Peppercorns should not be confused with the chile (*capsicum*) peppers discussed earlier. Peppercorns vary in size, color, pungency and flavor. Many of these differences are the result of variations in climate and growing conditions. Good-quality pepper is expensive and should be purchased whole and ground fresh in a pepper mill as needed. Whole peppercorns will last indefinitely if kept dry. They should be stored well covered in a cool, dark place.

Black and white peppercorns

Black and white peppercorns are produced from the same plant, but are picked and processed differently. For black peppercorns, the berries are picked when green and simply dried whole in the sun. Black pepper has a warm, pungent flavor and aroma. Tellicherry peppercorns from the southwest coast of India are generally considered the finest black peppercorns in the world and are priced accordingly. For white peppercorns, the berries are allowed to ripen until they turn red. The ripened berries are allowed to ferment, then the outer layer of skin is washed off. Now, white pepper may be produced by mechanically removing the outer skin from black peppercorns. This is not true white pepper, and the resulting product should be labeled "decorticated." White pepper has fewer aromas than black pepper but is useful in white sauces or when the appearance of black speckles is undesirable.

Green peppercorns

Green peppercorns are unripened berries that are either freeze-dried or pickled in brine or vinegar. Pickled green peppercorns are soft, with a fresh, sour flavor similar to capers. They are excellent in spiced butters and sauces or with fish.

Pink peppercorns

Pink peppercorns are actually the berries of a South American tree, not a vine pepper plant. Pink peppercorns are available dried or pickled in vinegar. Although they are attractive, their flavor is bitter and pine-like, with less spiciness than true pepper.



Szechuan pepper

Szechuan pepper is the dried red berries of the prickly ash tree native to China. Also known as anise pepper and Chinese pepper, the berries have an extremely hot, peppery, spicy flavor with citrus overtones and are used in Chinese cuisines and as part of Chinese five-spice powder.



Poppy seeds

Poppy seeds are the ripened seeds of the opium poppy, which flourishes in the Middle East and India. (When ripe, the seeds do not contain any of the medicinal alkaloids found elsewhere in the plant.) The tiny blue-gray seeds are round and hard with a sweet, nutty flavor. Poppy seeds are used in pastries and breads.



Saffron

Crocus plant



saffron spice

Saffron comes from the dried stigmas of the saffron crocus. Each flower bears only three thread like stigmas, and each must be picked by hand. It takes about 250,000 flowers to produce one pound of saffron, making it the most expensive spice in the world. Beware of bargains; there is no such thing as cheap saffron. Luckily, a tiny pinch is enough to color and flavor a large quantity of food. Good saffron should be a brilliant orange color, not yellow, with a strong aroma and a bitter, honey-like taste. Saffron produces a yellow dye that diffuses through any warm liquid. Valencia or Spanish saffron is considered the finest. It is commonly used with fish and

shellfish (a necessity for bouilla-baisse) and rice dishes such as paella and risotto. When using saffron threads, first crush them gently, then soak them in some hot liquid from the recipe. Powdered saffron is less expensive but more easily adulterated. It may be added directly to the other ingredients when cooking.



Sesame seeds

Sesame seeds, also known as benne seeds, are native to India. They are small, flat ovals, with a creamy white color. Their taste is nutty and earthy, with a pronounced aroma when roasted or ground into a paste (known as tahini). Sesame seeds are the source of sesame oil, which has a mild, nutty flavor and does not go rancid easily. Sesame seeds are roasted and used in or as a garnish for breads and meat dishes. They are popular in Indian and Asian cuisines, with a black variety of seeds most popular as a Japanese condiment.



Tamarind

Tamarind also known as an Indian date, is the brown, bean-shaped pod of the tamarind tree, which is native to Africa. Although naturally sweet, tamarind also contains 12% tartaric acid, which makes it extremely tart. It is commonly used in Indian curries and Mediterranean cooking as a souring agent and in the West Indies in fruit drinks. Tamarind is sold as a concentrate or in sticky blocks of crushed pods, pulp and seeds, which should be soaked in warm water for about five minutes, then squeezed through a sieve. Tamarind's high pectin content is useful in chutneys and jams, and it is often included in barbecue sauces and marinades. It is a key ingredient in Worcestershire sauce.



Turmeric

Turmeric, also known as Indian saffron, is produced from the rhizome of a flowering tropical plant related to ginger. It has a mild, woody aroma. It is most often available dried and usually ground although fresh turmeric appears in ethnic markets. Turmeric is renowned for its vibrant yellow color and is used as a food coloring and dye. Turmeric's flavor is distinctive and strong; it should not be substituted for saffron. Turmeric is a traditional ingredient in Indian curries, to which it imparts color as well as flavor.



Wasabi

Wasabi is a pale green root similar, but unrelated, to horseradish. It has a strong aroma and a sharp, cleansing flavor with herbal overtones that is a bit hotter than that of horseradish. Fresh wasabi is rarely found outside Japan, but tins of powder and tubes of paste are readily available. It is commonly served with sushi and sashimi and can be used to add a spicy Asian note to other dishes, such as mashed potatoes or a compound butter.

HERB AND SPICE BLENDS

Many cuisines have created recognizable combinations of flavors that are found in a variety of dishes. Although many of these blends are available already prepared for convenience, most can be mixed by the chef as need. (And commercial blends can contain large amounts of salt.) Chinese five-spice powder is a combination of equal parts finely ground Szechuan pepper, star

anise, cloves, cinnamon and fennel seeds. This blend is widely used in Chinese and some Vietnamese foods and is excellent with pork and in pates.

Curry powder is a European invention that probably took its name from the Tamil word *Kari*, meaning "sauce." Created by 19th-century Britons returning from colonial India, it was meant to be the complete spicing for a "curry" dish. There are as many different formulas for curry powder as there are manufacturers, some mild and sweet (Bombay or Chinese style), others hot and pungent (Madras style). Typical ingredients in curry powder are black pepper, cinnamon, cloves, coriander, cumin, ginger, mace and turmeric.

Fine herbs (Fr. *fines herbes*) are a combination of parsley, tarragon, chervil and chives widely used in French cuisine. The mixture is available dried, or it can be created from fresh ingredients.

Jamaican jerk seasoning is a powdered or wet mixture used on the Caribbean island of the same name made from a combination of spices that typically includes thyme, ground spices such as allspice, cinnamon, cloves, and ginger as well as onions and garlic. Chicken and pork are typically rubbed or marinated in the blend, then grilled.

Herbes de Provence is a blend of dried herbs commonly grown and used in southern France. Commercial blends usually include thyme, rosemary, bay leaf, basil, fennel seeds, savory, and lavender. The herb blend is used with grilled or roasted meat, fish or chicken; in vegetable dishes; on pizza; and even in steamed rice and yeast breads.

Italian seasoning blend is a commercially prepared mixture of dried basil, oregano, sage, marjoram, rosemary, thyme, savory and other herbs associated with Italian cuisine.

Masala is a flavorful, aromatic blend of roasted and ground spices used in Indian cuisines. A **garam masala** is a masala made with hot spices (*garam* means warm or hot). A dry garam masala usually contains peppercorns, cardamom, cinnamon, cloves, coriander, nutmeg, turmeric, bay leaves and fennel seeds and is added toward the end of cooking or sprinkled on the food just before service. Adding coconut milk, oil or sometimes tamarind water to a dry garam masala makes a wet garam masala. A wet garam masala is typically added at the start of cooking.

Pickling spice, as with other blends, varies by manufacturer. Most pickling spice blends are based on black peppercorns and red chiles, with some or all of the following added: allspice, cloves, ginger, mustard seeds, coriander seeds, bay leaves and dill. These blends are useful in making cucumber or vegetable pickles as well as in stews and soups.

Quatre-epices, literally "four spices" in French and also the French word for allspice, is a peppery mixture of black peppercorns with lesser amounts of nutmeg, cloves and dried ginger. Sometimes cinnamon or allspice is included. Quatre-epices is used in charcuterie and long-simmered stews.

Ras el hanout is a common Moroccan spice blend varying greatly from supplier to supplier. It typically contains 20 or more spices, such as turmeric, cinnamon, cloves, grains of paradise, coriander, cumin, cardamom, peppercorns, dried chiles, dried flower petals and, allegedly, an aphrodisiac or two. It is sold whole and ground by the cook as necessary to flavor stews, rice, couscous, and game dishes.

Seasoned salts are commercially blended products containing salt and one or more natural flavoring ingredients such as garlic, spices or celery seeds and, often, monosodium glutamate.

STORING HERBS AND SPICES

Fresh herbs should be kept refrigerated at 34°F-40°F (2°C-4 °C). Large bouquets can be stored upright, their leaves loosely covered with plastic wrap and their stems submerged in water. Smaller bunches should be stored loosely covered with a damp towel. You can dry excess fresh herbs for later use in an electric dehydrator. You can also spread them out on baking sheets in a 100°F (38°C) oven.

Dried herbs and spices should be stored in airtight, opaque containers in a cool, dry place. Avoid light and heat, both of which destroy delicate flavors. If stored properly, dried herbs should last for two to three months.

USING HERBS AND SPICES

Herbs and spices are a simple, inexpensive way to bring individuality and variety to foods. They add neither fat nor sodium and virtually no calories to foods; most contain only 3 to 10 calories per teaspoon.

Although the flavors and aromas of fresh herbs are generally preferred, dried herbs are widely used because they are readily available and convenient. Use less dried herb than you would fresh herb. The loss of moisture strengthens and concentrates the flavor in dried herbs. In general, use only one-half to one-third as much dried herb as fresh in any given recipe. For example, if a recipe calls for 1-tablespoon of fresh basil, substitute only 1-teaspoon of dried basil. More can usually be added later if necessary. The delicate aroma and flavors of fresh herbs is volatile. Most fresh herbs such as chives, parsley, cilantro, basil and tarragon are best when added at the end of cooking.

Spices are often available whole or ground. Once ground, they lose their flavors rapidly, however. Whole spices should keep their flavors for at least six to nine months if stored properly. Stale spices lose their spicy aroma and develop a bitter or musty aftertaste. Discard them.

Most dried spices need to be added early in order for their flavor to develop during the cooking. Whole spices take the longest; ground spices release their flavor more quickly. In some

preparations, Indian curries for example, ground spices are first cooked in oil to release their aromas before being added to a dish. However, some dried spices such as black pepper may become bitter when cooked for an extended period. In uncooked dishes that call for ground spices (for example, salad dressings), the mixture should be allowed to stand for several hours to develop good flavor.

Creating dishes with appealing and complex flavors comes with practice and a solid understanding and appreciation of flavoring ingredients. Although some flavoring combinations are timeless - rosemary with lamb, dill with salmon, nutmeg with spinach, and caraway with rye bread - less common pairings can be equally delicious and far more exciting. Chefs must be willing and able to experiment with new flavors. First, they must become familiar with the distinctive flavors and aromas of an herb, spice, condiment, vinegar or the like.

When experimenting, always bearing in mind the following guidelines:

1. Flavorings should not hide the taste or aroma of the primary ingredient. Balance flavoring combinations so as not to overwhelm the palate.
2. Flavorings should not be used to disguise poor quality or poorly prepared products.
3. Flavorings should be added sparingly when foods are to be cooked over an extended time.
4. When reduced during cooking, flavorings can intensify and overpower the dish.
5. Taste and season foods frequently during cooking.

Even in a well-tested recipe, the quantity of flavorings may need to be adjusted because of a change in brands or the condition of the ingredients. A chef should strive to develop his or her palate to recognize and correct subtle variances as necessary.

SALT

Salt is the most basic and universal seasoning. It preserves foods, heightens their flavors and provides the distinctive taste of saltiness. The presence of salt can be tasted easily but not smelled. Salt suppresses bitter flavor, making the sweet and sour ones more prominent. The flavor of salt will not evaporate or dissipate during cooking so it should be added to foods carefully, according to taste. Remember, more salt can always be added to a dish but too much salt cannot be removed nor can its flavor be masked if too much salt has been added.

Culinary or table salt is sodium chloride (NaCl), one of the minerals essential to human life. Salt contains no calories, proteins, fats or carbohydrates. It is available from several sources, each with its own flavor and degree of saltiness. **Rock salt**, mined from underground deposits, is available in both edible and nonedible forms. It is used in ice cream churns, for thawing frozen sidewalks and, in edible form, in salt mills.

Common **kitchen or table salt** is produced by pumping water through underground salt deposits, then bringing the brine to the surface to evaporate, leaving behind crystals. Chemicals are usually added to prevent table salt from absorbing moisture and thus keep it free flowing. Iodized salt is commonly used in the United States. The iodine has no effect on the salt's flavor or use; it is simply added to provide an easily available source of iodine, an important nutrient, to a large number of people.

Kosher salt has large, irregular crystals and is used in the "koshering " or curing of meats. It is purified rock salt containing no iodine or additives. It is a perfect substitution for common kitchen salt. Some chefs prefer it to table salt because they prefer its flavor and it dissolves more easily than other salts.

Sea salt is obtained, not surprisingly, by evaporating seawater. The evaporation can be done naturally by drying the salt in the sun (unrefined sea salt) or by boiling the salty liquid (refined sea salt). Unlike other table salts, unrefined sea salt contains additional mineral salts such as magnesium, calcium and potassium, which give it a stronger, more complex flavor and a grayish-brown color. The region where it is produced can also affect its flavor and color. For example, salt from the Mediterranean Sea will taste different from salt obtained from the Indian Ocean or the English Channel.

Sel gris is a sea salt harvested off the coast of Normandy, France. It is slightly wet and takes its gray color from minerals in the clay from which it is collected. **Fleur de sel**, which means "flower of salt," is a salt that collects on rocks in the sel gris marshes. It forms delicate crystals and has little color because it has not been exposed to the clay.

Some **specialty salts** are mined from the earth, such as that from the foothills of the Himalayan Mountains. The presence of iron and copper along with other minerals gives Himalayan salt a pink hue and distinct flavor. Black salt, common in traditional Indian recipes, is mined rock salt; minerals and other components in the salt give it a dark color and sulfurous taste. Smoked salt is a type of flavored salt made by smoking the salt over a smoldering fire. It can also be made by adding liquid smoke to a salt solution before it is evaporated.

Sea salt is considerably more expensive than other table salts and is often reserved for finishing a dish or used as a condiment. Because it is nonorganic, salt keeps indefinitely. It will, however, absorb moisture from the atmosphere, which prevents it from flowing properly. Salt is a powerful preservative; its presence stops or greatly slows down the growth of many undesirable organisms. Salt is used to preserve meats, vegetables and fish. It is also used to develop desirable flavors in bacon, ham, cheeses and fish products as well as pickled vegetables.

Notes about Flavor -

Flavor is to food what hue is to color. It is what timbre is to music. (Flavor is adjective; food is noun.) Each ingredient has its own particular character, which is altered by every other ingredient it encounters. A

secret ingredient is one that mysteriously improves the flavor of a dish without calling attention to itself. It is either undetectable or extremely subtle, but its presence is crucial because the dish would not be nearly as good without it.

Primary flavors are those that are obvious, such as the flavors of chicken and tarragon in a chicken tarragon, shrimp and garlic in a shrimp scampi, or beef and red wine in a beef a la Bourguignonne. Secret ingredients belong to the realm of secondary flavors. However obvious it is that you need tarragon to prepare a chicken tarragon, you would not achieve the most interesting result using only tarragon. Tarragon, in this case, needs secondary ingredients—a hint of celery seed and anise— to make it taste more like quintessential tarragon and at the same time more than tarragon. In this way, primary flavors often depend on secret ingredients to make them more interesting and complex. Using only one herb or spice to achieve a certain taste usually results in a lackluster dish—each mouthful tastes the same. Whether they function in a primary or secondary way, flavors combine in only three different ways: They marry, oppose, or juxtapose.

When flavors marry, they combine to form one taste. Some secondary flavors marry with primary ones to create a new flavor greater than the sum of its parts, and often two flavors can do the job better than one. It may sound like an eccentric combination, but vanilla marries with the flavor of lobster, making it taste more like the essence of lobster than lobster does on its own. Additionally when ginger and molasses marry, they create a flavor superior to either alone.

Opposite flavors can highlight or cancel each other; they can cut or balance each other. Sweet/sour, sweet/salty, sweet/hot, salty/sour, and salty/tart are all opposites. Salt and sugar are so opposed, in fact, that when used in equal amounts they cancel each other entirely. Sweet relish helps cancel the salty flavor of hot dogs. Chinese sauces usually contain some sugar to help balance the saltiness of soy sauce.

Knowing how to combine many flavors and aromas to achieve a simple and pure result (and knowing when not to combine flavors) will make you a better, more confident cook. Good cooks over the centuries have known these things intuitively but they have had neither the huge variety of ingredients nor the knowledge of world cuisines that we have today.

From: Chef Michael Roberts, author of Secret Ingredients.

OILS

Oils are a type of fat that remains liquid at room temperature. Cooking oils are refined from various seeds, plants and vegetables. When purchasing oils, consider their use, smoke point, flavor and cost. Fats, including oils and shortenings, are manufactured for specific purposes such as deep-frying, cake baking, salad dressings and sautéing. Most food service operations purchase different ones for each of these needs. Fats break down at different temperatures. When fats break down, their chemical structure is altered - the triglyceride molecules that make up fat are converted into individual fatty acids. These acids add undesirable flavors to the fat and can ruin the flavor of the food being cooked. The temperature at which a given fat begins to break down and smoke is known as its smoke point. Select fats with higher smoke points for high-temperature cooking such as deep-frying and sautéing.

The flavor and cost of each oil must be considerations. For example, both corn oil and walnut oil can be used in a salad dressing. Their selection may depend on balancing cost (corn oil is less expensive) against flavor (walnut oil has a stronger, more distinctive flavor).

Terms:

smoke point the temperature at which a fat begins to break down and smoke.

flash point the temperature at which a fat ignites and small flames appear on the surface of the fat.

shortening (1) a white, flavorless, solid fat formulated for baking or deep-frying; (2) any fat used in baking to tenderize the product by shortening gluten strands.

When fats spoil, they go **rancid**. Rancidity is a chemical change caused by exposure to air, light or heat. It results in objectionable flavors and odors. Different fats turn rancid at different rates, but all fats benefit from refrigerated storage away from moisture, light and air. (Some oils are packaged in colored glass containers because certain tints of green and yellow block the damaging light rays that can cause an oil to go rancid.) Although oils may become thick and cloudy under refrigeration, this is not a cause for concern. The oils will return to their clear, liquid states at room temperature. Stored fats should also be covered to prevent them from absorbing odors.

Vegetable oils are extracted from a variety of plants, including corn, cottonseed, peanuts, grape seeds, sesame seeds and soybeans, by pressure or chemical solvents. The oil is then refined and cleaned to remove unwanted colors, odors or flavors. Vegetable oils are virtually odorless and have a neutral flavor. Because they contain no animal products, they are cholesterol-free. If a commercial product contains only one type of oil, it is labeled "pure" (as in "pure corn oil"). Products labeled "vegetable oil" are blended from several sources. Products labeled "salad oil" are highly refined blends of vegetable oil.

Canola oil is processed from rapeseeds. Its popularity is growing rapidly because it contains no cholesterol and has a high percentage of monounsaturated fat. Canola oil is useful for frying and general cooking because it has no flavor and a high smoke point.

Nut oils are extracted from a variety of nuts and are usually packaged as a "pure" product, never blended. A nut oil should have the strong flavor and aroma of the nut from which it was processed. Popular examples are walnut and hazelnut oils. These oils are used to give flavor to salad dressings, marinades and other dishes. Heat diminishes their flavor, so nut oils are not recommended for frying or baking. Nut oils tend to go rancid quickly and therefore are usually packaged in small containers.

Olive oil is the only oil that is extracted from a fruit rather than a seed, nut or grain. Olive oil is produced primarily in Spain, Italy, France, Greece and North Africa; California produces a

relatively minor amount of olive oil. Like wine, olive oils vary in color and flavor according to the variety of tree, the ripeness of the olives, the type of soil, the climate and the producer's preferences. Colors range from dark green to almost clear, depending on the ripeness of the olives at the time of pressing and the amount of subsequent refining. Color is not a good indication of flavor, however. Flavor is ultimately a matter of personal preference. A stronger-flavored oil may be desired for some foods, while a milder oil is better for others. Good olive oil should be thicker than refined vegetable oils, but not so thick that it has a fatty texture.

The label designations - **extra virgin**, **virgin** and **pure** refer to the acidity of the oil (a low acid content is preferable) and the extent of processing used to extract the oil. The first cold pressing of the olives results in virgin oil. (The designation "virgin" is used only when the oil is 100% unadulterated olive oil, unheated and without any chemical processing.) Virgin oil may still vary in quality depending on the level of free acidity, expressed as oleic acid. Extra virgin oil is virgin oil with not more than 1% free acidity (oleic acid); virgin oil may have up to 3%. Pure olive oil is processed from the pulp left after the first pressing using heat and chemicals. Pure oil is lighter in flavor and less expensive than virgin oil.

Flavored oils, also known as infused oils, are an interesting and increasingly popular condiment. These oils may be used as a dip for breads, a cooking medium or a flavoring accent in marinades, dressings, sauces or other dishes. Flavors include basil and other herbs, garlic, citrus and spice. Flavored oils are generally prepared with olive oil for additional flavor or canola oil, both considered more healthful than other fats.

Top-quality commercially flavored oils are prepared by extracting aromatic oils from the flavoring ingredients and then emulsifying them with a high-grade oil; any impurities are then removed by placing the oil in a centrifuge. Using the aromatic oils of the flavoring ingredients yields a more intense flavor than merely steeping the same ingredients in the oil. Flavored oils should be stored as you would any other high-quality oil.

CONDIMENTS

Strictly speaking, a condiment is any food added to a dish for flavor, including herbs, spices and vinegars. Today, however, condiments more often refer to cooked or prepared flavorings, such as prepared mustards, relishes, bottled sauces and pickles served to accompany foods. We discuss several frequently used condiments here. These staples may be used to alter or enhance the flavor of a dish during cooking, or added to a completed dish at the table.

Chutney (from the Hindi word for catnip) is a pungent relish made from fruits, spices and herbs and is frequently used in Indian cooking.

Fermented black bean sauce is a Chinese condiment and flavoring ingredient made from black soybeans that have been heavily salted, then fermented and either slightly mashed (whole bean sauce) or pureed (paste). Both versions are usually mixed with hoisin, chile sauce or minced

garlic to produce a sauce that has an intense, pungent, salty flavor. Yellow bean sauces are similar, but milder and sweeter.

Fish sauce is the liquid drained from fermenting salted anchovy-like fish. It is a thin, golden to light brown liquid with a very pungent odor and salty flavor. There is no substitute for the savory richness that it adds to food and it is considered an essential flavoring and condiment throughout South east Asia, where it is used in and served with most every sort of dish.

Ketchup (also known as catsup or catchup) originally referred to any salty extract from fish, fruits or vegetables. Prepared tomato ketchup is really a sauce, created in America and used worldwide as a flavoring ingredient or condiment. It is bright red and thick, with a tangy, sweet-sour flavor. Ketchup can be stored either in the refrigerator or at room temperature; it should keep well for up to four months after opening. Ketchup does not turn rancid or develop mold, but it will darken and lose flavor as it ages.

Prepared mustard is a mixture of crushed mustard seeds, vinegar or wine and salt or spices. It can be flavored in many ways- with herbs, onions, peppers and even citrus zest. It can be a smooth paste or coarse and chunky, depending on how finely the seeds are ground and whether the skins are strained out. Prepared mustard gets its tangy flavor from an essential oil that forms only when the seeds are crushed and mixed with water. Prepared mustard can be used as a condiment, particularly with meat and charcuterie items, or as a flavoring ingredient in sauces, stews and marinades.

Dijon mustard takes its name from a town and the surrounding region in France that produces about half of the world's mustard. French mustard labeled as "Dijon" must by law, be produced 'only' in that region. Dijon and Dijon-style mustards are smooth with a rich, complex flavor.

English and Chinese mustards are made from mustard flour and cool water. They are extremely hot and powerful. American or "ballpark" mustard is mild and vinegary with a bright yellow color. Unless it contains a high percentage of oil, mustard never really spoils; its flavor just fades away.

VINEGARS

Vinegar is a thin, sour liquid used for thousands of years as a preservative, cooking ingredient, condiment and cleaning solution. Vinegar is obtained through the fermentation of wine or other alcoholic liquid. Bacteria attack the alcohol in the solution, turning it into acetic acid. No alcohol remains when the transformation is complete. The quality of vinegar depends on the quality of the wine or other liquid on which it is based. Vinegar flavors are as varied as the liquids from which they are made.

Vinegars should be clear and clean looking, never cloudy or muddy. Commercial vinegars are pasteurized, so an unopened bottle should last indefinitely in a cool, dark place. Once opened, vinegars should last about three months if tightly capped. Any sediment that develops can be strained out; if mold develops, discard the vinegar.

Wine vinegars are as old as wine itself. They may be made from white or red wine, sherry or even Champagne, and should bear the color and flavor hallmarks of the wine used. Wine vinegars are preferred in French and Mediterranean cuisines.

Malt vinegar is produced from malted barley. Its slightly sweet, mild flavor is used as a condiment, especially with fried foods.

Distilled vinegar, made from grain alcohol, is completely clear with a stronger vinegary flavor and higher acid content than other vinegars. It is preferred for pickling and preserving.

Cider vinegar is produced from unpasteurized apple juice or cider. It is pale brown in color with a mild acidity and fruity aroma. Cider vinegar is particularly popular in the United States.

Rice vinegar is a clear, slightly sweet product brewed from rice wine. Its flavor is clean and elegant, making it useful in a variety of dishes, especially those of Japanese or Asian origin.

Flavored vinegars are simply traditional vinegars in which herbs, spices, fruits or other foods are steeped to infuse their flavors. They are easily produced from commercial wine or distilled vinegars, using any herb, spice or fruit desired. Inferior flavored vinegars are made by adding the desired flavoring to low-grade vinegar. The use of flavored vinegars is extremely popular but definitely not new. Clove, raspberry and fennel vinegars were sold on the streets of Paris during the 13th century. Making fruit-flavored vinegars was also one of the responsibilities of housewives during the 18th and 19th centuries.

Balsamic vinegar is newly popular in the United States, though it has been produced in Italy for more than 800 years. To produce traditional balsamic vinegar, red or white wine made from specially cultivated grapes (white Trebbiano and red Lambrusco grapes among others), is reduced, then aged in a succession of wooden barrels made from a variety of woods—oak, cherry, locust, ash, mulberry and juniper—for at least 4, but sometimes up to 50, years. The resulting liquid is dark reddish-brown and sweet. Balsamic vinegar has a high acid level, but the sweetness covers the tart flavor, making it very mellow. True balsamic is extremely expensive because of the long aging process and the small quantities available. Most of the commercial products imported from Italy are now made by a quick caramelization and flavoring process. Balsamic is excellent as a condiment or seasoning and has a remarkable affinity for tomatoes and strawberries.

Chapter 10: *Breakfast and Roasting*

Eggs

Nature designed eggs as the food source for developing chicks. Eggs, particularly chicken eggs, are also an excellent food for humans because of their high protein content, low cost and ready availability. They are extremely versatile and are used throughout the kitchen, either served alone or as ingredients in a prepared dish. Eggs are used to provide texture, flavor, structure, moisture and nutrition in everything from soups and sauces to breads and pastries.

Egg dishes are, of course, most often associated with the meals breakfast and brunch. But food service operations must offer a variety of breakfast options to appeal to a wide range of consumers. Breakfast cookery is often one of the first line positions a new cook will be offered. This important duty requires speed, timing and precision and can help an apprentice or beginning cook develop organized, efficient work habits.

This chapter discusses cooking methods used for eggs as well as breakfast meats, griddlecakes, crepes, cereals and the beverages coffee and tea.

EGG COMPOSITION

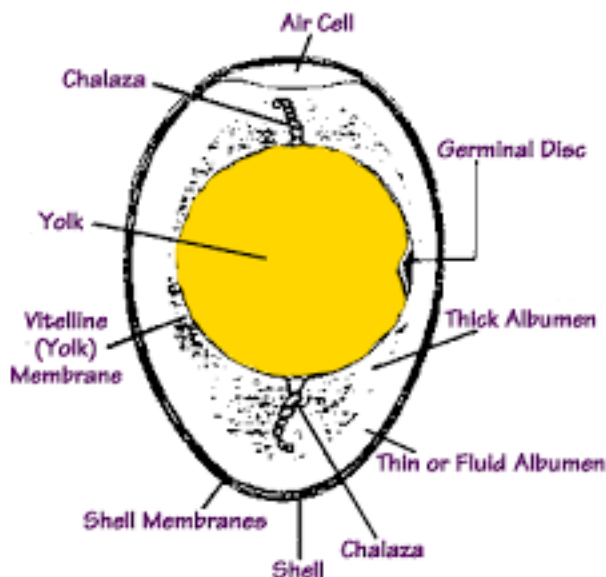
The primary parts of an egg are the shell, yolk and albumen.

The **shell**, composed of calcium carbonate, is the outermost covering of the egg. It prevents microbes from entering and moisture from escaping, and protects the egg during handling and transport. The breed of the hen determines shell color; for chicken s, it can range from bright white to brown. Shell color has no effect on quality, flavor or nutrition:

The **yolk** is the yellow portion of the egg. It constitutes just over one -third of the egg and contains three -fourths of the calories, most of the minerals and vitamins and all the fat. The yolk also contains lecithin, the compound responsible for emulsification in products such as hollandaise sauce and mayonnaise . Egg yolk solidifies (coagulates) at temperatures between 149°F and 158°F (65°C and 70°C). Although the color of a yolk may vary depending on the hen's feed, color does not affect quality or nutritional content.

The **albumen** is the clear portion of the egg and referred to as the **egg white**. It constitutes about two-thirds of the egg and contains more than half of the protein and riboflavin. Egg white coagulates, becoming firm and opaque, at temperatures between 144°F and 149°F (62°C and 65°C).

Eggs are sold in Jumbo, Extra Large, Large, Medium, Small and Peewee sizes, as determined by weight per dozen. See Figure 21.2. Food service operations generally use Large eggs, which weigh 24 ounces per dozen. Other sizes are based on plus or minus 3 ounces per dozen; Medium eggs weigh 21 ounces per dozen while Extra Large eggs weigh 27 ounces per dozen.



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Grading

Eggs are graded by the USDA or a state agency following USDA guidelines. The grade AA, A, or B is given to an egg based on interior and exterior quality, not size. Grade has no effect on nutritional values.

Storage

Improper handling quickly diminishes egg quality. Eggs should be stored at temperatures below 45°F (7°C) and at a relative humidity of 70 to 80 percent. Eggs will age more during one day at room temperature than they will during one week under proper refrigeration. As eggs age, the white becomes thinner and the yolk becomes flatter. Although this will change the appearance of poached or fried eggs, age has little effect on nutrition or behavior during cooking procedures.

Older eggs, however, should be used for hard cooking, as the shells are easier to remove than those on fresh eggs are.

Cartons of fresh, uncooked eggs will keep for at least four to five weeks beyond the pack date if properly refrigerated. Hard-cooked eggs left in their shells and refrigerated should be used within one week. Store eggs away from strongly flavored foods to reduce odor absorption. Rotate egg stock to maintain freshness. Do not use dirty, cracked or broken eggs, as they may contain bacteria or other contaminants. Frozen eggs should be thawed in the refrigerator and used only in dishes that will be thoroughly cooked, such as baked products.

Other Eggs

When most people refer to an "egg," they mean a chicken's egg. However, other eggs are sometimes used in the kitchen:

Bantam egg: The egg from a breed of small chicken; it is about half the size of a regular chicken egg and has the same characteristics.

Duck egg: An egg with an off-white shell and a richer flavor and higher fat content than a chicken's egg; when it is boiled, the white turns bluish and the yolk turns red-orange.

Goose egg: A white-shelled egg that is four to five times as large as a chicken egg; it also has a somewhat richer flavor.

Guinea fowl egg: An egg with an ivory shell flecked with brown; its flavor is more delicate than that of a chicken egg.

Gull egg: An egg whose shell is covered with light to dark brown blotches; it comes in various small sizes and has a slightly fishy flavor.

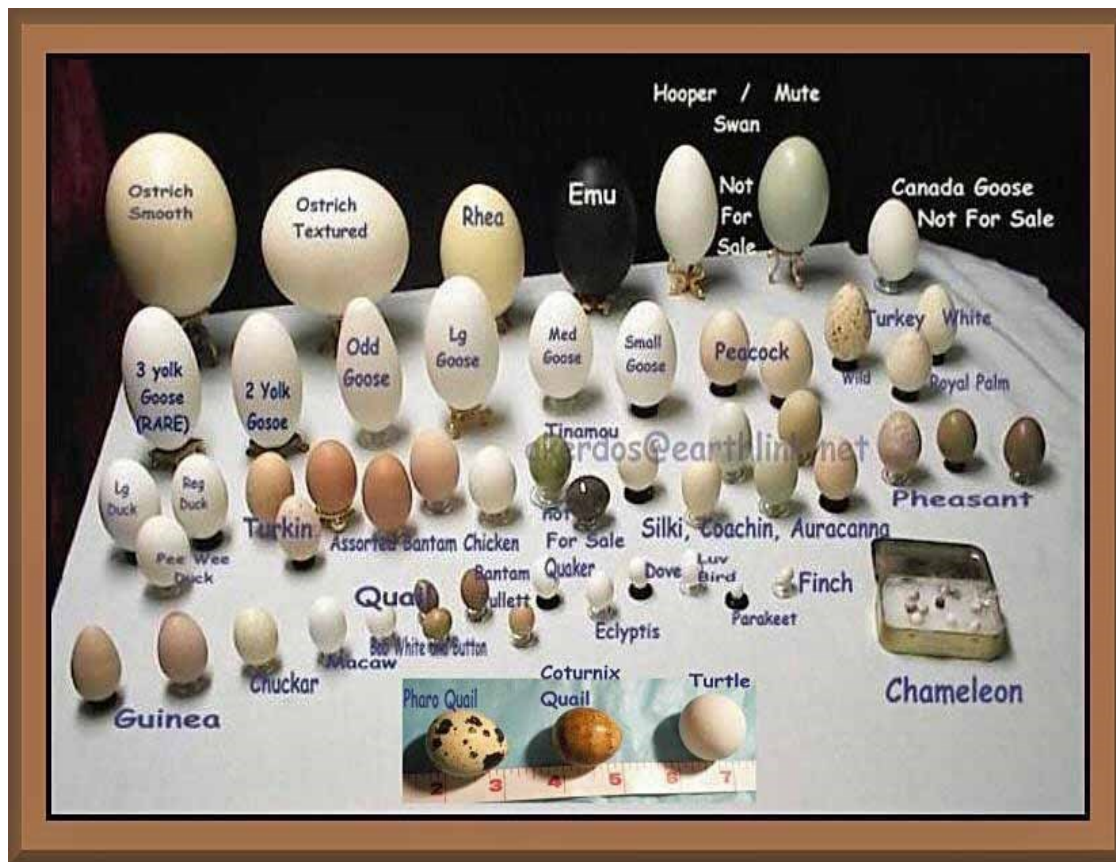
Ostrich egg: An egg that is 20 times as large as a chicken egg and has a thick, ivory-colored shell; its flavor is similar to that of a chicken egg.

Partridge egg: A small egg with a white, buff or olive shell; it has a mild flavor.

Quail egg: A small egg with a speckled brown shell; it has a rich flavor.

Turkey egg: A large egg with a brown shell; it has a delicate flavor.

Turtle egg: A reptile's egg with a soft shell that is buff or speckled; it has a mild, rich flavor.

Egg Varieties. pysankybasics.com

SANITATION

Eggs are a potentially hazardous food. Rich in protein, they are an excellent breeding ground for bacteria. Salmonella is of particular concern with eggs and egg products because the bacteria are commonly found in a chicken's intestinal tract. Although shells are cleaned at packinghouses, some bacteria may remain. Therefore, to prevent contamination, it is best to avoid mixing a shell with the liquid egg.

Inadequately cooking or improperly storing eggs may lead to food-borne illnesses. USDA guidelines indicate that **pasteurization** is achieved when the whole egg stays at a temperature of 140°F (60°C) for Y/2 minutes. Hold egg dishes below 40°F (4°C) or above 140°F (60°C). Never leave an egg dish at room temperature for more than one hour, including preparation and service time. Never reuse a container after it has held raw eggs without thoroughly cleaning and sanitizing it.

Egg Products

Food service operations often want the convenience of buying eggs out of the shell in the exact form needed: whole eggs, yolks only or whites only. These processed items are called egg products and are subject to strict pasteurization standards and USDA inspections. Egg products can be frozen, refrigerated or dried. Precooked, pre-portioned, and blended egg products are also available.

Nutrition

Eggs contain vitamins A, D, E and K, and the B-complex vitamins. They are rich in minerals and contain less cholesterol now than previously. Research indicates that the cholesterol in whole eggs does not affect serum cholesterol as much as was once feared. In fact, the American Heart Association now suggests that it is acceptable to consume up to four egg yolks per week as part of a balanced diet. Egg whites do not contain cholesterol and are often added to egg dishes such as omelets to reduce total fat content.

Dry Heat Cooking

BAKING

Shirred Eggs

Baked eggs, also referred to as shirred eggs, are normally prepared in individual ramekins or baking dishes. The ramekins can be lined or partially filled with ingredients such as bread, ham, creamed spinach or artichokes. The eggs are often topped with grated cheese, fresh herbs or a sauce. When properly cooked, the egg whites should be set while the yolks are soft and creamy.

Preparation

1. Coat each ramekin with melted butter. Add flavoring ingredients as desired.
2. Break one or two eggs into each ramekin. Do not break the yolks. Season with salt and pepper.
3. Bake the eggs until the white is firm, approximately 12- 15 minutes. Approximately 3- 5 minutes before the eggs are done, add cream or top the eggs with grated cheese , diced ham, fresh herbs or other ingredients as desired.



Shirred Eggs. eggs.ca

SAUTEING

Scrambled Eggs

Scrambled eggs are eggs whisked with seasonings and then sautéed. They must be stirred nearly constantly during cooking. The finished eggs should be light and fluffy with a tender, creamy texture. A small amount of milk or cream may be added to the eggs to provide a more delicate finished product. Overcooking or cooking at too high a temperature causes the eggs to become tough and rubbery.

Scrambled eggs are often flavored by sautéing other foods (for example, onions, mushrooms or diced ham) in the pan before adding the eggs or by adding other foods (for example, grated cheeses or herbs) to the eggs just before cooking is complete. Suggested additions include finely diced bell peppers, onions, mushrooms, zucchini or tomatoes; cottage cheese or any variety of shredded firm cheese; crumbled bacon; diced ham, turkey or beef; bits of smoked salmon, cooked shrimp or cooked sausage; and fresh herbs.

Scrambled eggs can also be prepared using only egg whites. Because all of an egg's fat is stored in the yolk, no-yolk scrambled egg dishes are lower in fat, cholesterol and calories. Water or nonfat milk can be used in place of whole milk or cream to further reduce the fat and calorie content of the finished dish. Remember that egg whites coagulate at a lower temperature than yolks, so adjust the cooking time and temperature accordingly.

Preparation

1. Break the eggs into a mixing bowl. Season lightly with salt and pepper. Add 1 scant tablespoon (12 milliliters) milk or cream per egg and whisk everything together.
2. Heat a sauté pan, add clarified butter or oil and heat until the fat begins to sizzle.

3. Sauté any additional ingredients in the hot fat.



Scrambled eggs and Toast. browneyedbaker.com

Frittatas

Frittatas are essentially open -faced omelets of Spanish-Italian heritage. They may be cooked in small pans as individual portions, or in large pans, and then cut into wedges for service. A relatively large amount of hearty ingredients is mixed directly into the eggs. The eggs are first cooked on the stovetop, and then the pan is transferred to an oven or placed under a salamander or broiler to finish cooking.

Preparation

1. Fully cook any meats and blanch or otherwise prepare any vegetables that will be incorporated into the frittata .
2. Heat a sauté pan and add clarified butter.
3. Whisk the eggs, flavorings and any other ingredients together; pour into the pan.
4. Stir gently until the eggs begin to set. Gently lift cooked egg at the edge of the frittata so that raw egg can run underneath. Continue cooking until the eggs are almost set.
5. Place the pan in a hot oven or underneath a salamander or broiler to finish cooking and lightly brown the top.
6. Slide the finished frittata out of the pan onto a serving platter.



Vegetable Frittata. bbcgoodfood.com

PAN-FRYING

Pan-fried eggs are commonly referred to as **sunny side up** or over easy, over medium or over hard. These are visibly different products produced with proper timing and technique. Very fresh eggs are best for pan-frying, as the yolk holds its shape better and the white spreads less.

Sunny-side-up eggs are not turned during cooking; their yellow yolks remain visible. They should be cooked over medium -low heat long enough to firm the whites and partially firm the yolks: approximately 4 minutes if cooked on a 250°F (120°C) cooking surface.

For "**over**" eggs, the egg is partially cooked on one side, then gently flipped, and cooked on the other side until done. The egg white should be firm, and its edges should not be brown. The yolk should never be broken regardless of the degree of doneness. Not only is a broken yolk unattractive, but the spilled yolk will coagulate on contact with the hot pan, making it difficult to serve.

For **over-easy** eggs, the yolk should remain very runny; on a 250°F (120°C) cooking surface, the egg should cook for about 3 minutes on the first side and 2 minutes on the other. Over-medium eggs should be cooked slightly longer, until the yolk is partially set. For over -hard eggs, the yolk should be completely cooked.

Preparation

1. Select a sauté pan just large enough to accommodate the number of eggs being cooked. An 8-inch in diameter pan is appropriate for up to three eggs.
2. Add a small amount of clarified butter and heat until the fat just begins to sizzle.
3. Carefully break the eggs into the pan.
4. Continue cooking over medium-low heat until the eggs reach the appropriate degree of firmness. Sunny-side-up eggs are not flipped during cooking; "over" eggs are flipped once during cooking.
5. When done, gently flip the "over" eggs once again so that the first side is up, then gently slide the cooked eggs out of the pan onto the serving plate.

Basted eggs are a variation of sunny-side-up eggs. Basted eggs are cooked over low heat with the hot butter from the pan spooned over them as they cook. Another version of basted eggs is made by adding 1 to 2 teaspoons (5 to 10 milliliters) water to the sauté pan and then covering the pan. The steam cooks the top of the eggs.



Pan-Fried Eggs. shutterstock.com

Moist Heat Cooking

IN-SHELL COOKING (SIMMERING)

The difference between soft-cooked eggs (also called soft-boiled) and hard-cooked eggs (also called hard-boiled) is time. Both styles refer to eggs cooked in their shell in hot water. Despite the word boiled in their names, eggs cooked in the shell should never be boiled. Boiling toughens eggs and causes discoloration. Instead, the eggs should be simmered. Soft-cooked eggs are usually simmered for 3 to 5 minutes; hard-cooked eggs may be simmered for as long as 12 to 15

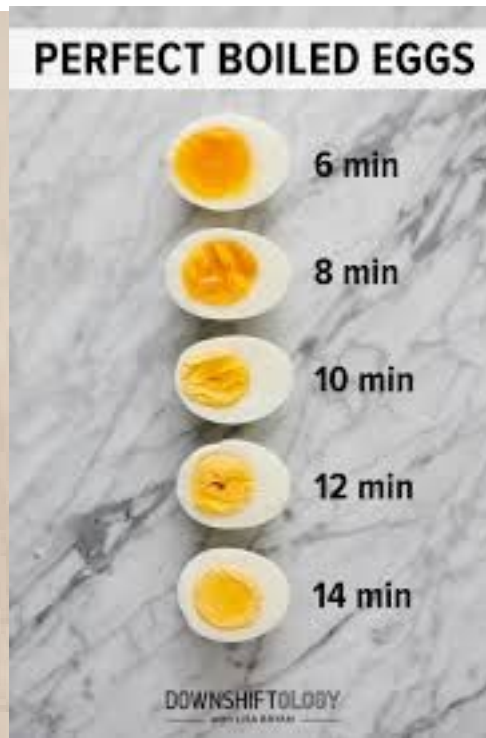
minutes. Sometimes it is difficult to remove the shell from very fresh eggs. Eggs that are a few days old are better for cooking in the shell.

Preparation

1. Fill a saucepan or stockpot with sufficient water to cover the eggs. Bring the water to a simmer.
2. Carefully lower each egg into the simmering water.
3. Simmer uncovered for 3 to 5 minutes (soft cooking), depending on the firmness desired.
4. Lift each egg out of the water with a slotted spoon or spider.
5. Crack the large end of the shell carefully and serve immediately.
6. When the eggs are cool enough to handle, peel them and use as desired or cover and refrigerate for up to 5 days.



Soft boiled egg. cooksillustrated.com



downshiftology.com

POACHING

Eggs that are to be poached should always be very fresh. They should also be kept very cold until used, as cold egg whites stay together better when dropped into hot water. The water for

poaching eggs should be held at approximately 200°F (90°C), a gentle simmer. Poached eggs should be soft and moist; the whites should be firm enough to encase the yolk completely, but the yolk should still be runny.

Some chefs add salt to the poaching water for flavor; others believe that the salt causes the egg whites to separate. To help the egg whites cling together, add 2-tablespoons (30 milliliters) white vinegar per quart (liter) of water.

Preparation

1. Fill a saucepan or stockpot with at least 3 inches (7.5 centimeters) water. Add salt and vinegar if desired. Bring the water to a simmer and hold at a temperature of approximately 200°F (90°C).
2. One at a time, crack the eggs into a small ramekin or cup. If a piece of shell falls into the egg, it should be removed; if the yolk breaks, the egg can be set aside for some other use.
3. Gently slide each egg into the simmering water and cook for 3 to 5 minutes.
4. Lift the poached egg out of the water with a slotted spoon. Trim any ragged edges with a paring knife. Serve immediately.

For quantity service, eggs can be poached in advance and held for up to one day. To do so, cook the eggs as described. As each egg is removed from the hot water, set it in a hotel pan filled with ice water to stop the cooking process. The eggs can then be stored in the ice water until needed. For banquet -style service, all the eggs can be reheated at once by placing the entire pan on the stove top. Alternatively, the eggs can be reheated one or two at a time by placing them in a pan of barely simmering water until they are hot.



Poached Eggs on Toast. myrecipes.com

BREAKFAST & BRUNCH

Breakfast is often an on-the-go, rushed experience; hence the popularity of breakfast sandwiches, jumbo muffins and disposable coffee cups. Brunch, on the other hand, is a leisurely experience, combining breakfast and lunch in to a social occasion. Brunch menus include traditional breakfast foods along with almost anything else. Unlike breakfast, brunch is often accompanied by champagne or other alcoholic beverages and concludes with a pastry or dessert.



New Orleans Jazz Brunch. aboveabc.com / neworleans.co

Breakfast menus typically include the following items:

- Coffee, tea or other hot beverages
- Fruits or fruit juices
- Eggs
- Breads, including sweet breads, Cereals, and grains
- Potatoes
- Pancakes, waffles, and French toast
- Breakfast Meats
 - Bacon, breakfast sausage, smoked ham
- Dairy products, including milk, cheese and yogurt
- Although few people could sit down to a breakfast including all of these components even occasionally, most food service operations find it necessary to offer some items from each category in order to meet their customers' expectations.



The American Breakfast. tastessense.com

BEVERAGES

Water, coffee and tea are the staples of most beverage menus. Despite their relatively low price, bottled water or a good cup of coffee or tea can be extremely important to a customer's impression of a food service operation. A cup of coffee is often either the very first or the very last item consumed by a customer. Tea, whether iced or hot, is often consumed throughout the meal. Consequently, it is important to learn to prepare and serve these beverages properly. Many varieties of water are now available and some customers prefer these specialty waters to that from the tap. Not only do these beverages complement a meal, they are important profit centers for restaurant owners. Appreciation of the proper preparation and service of these beverages is an important part of a culinary student's training.

Coffee

City roast: Also called American or brown roast, city roast is the most widely used coffee style in this country. City roast, which is medium brown in color, produces a beverage that may lack brilliance or be a bit flat, yet, it is the roast most Americans assume they prefer because it is the roast most often used in grocery store blends.

Brazilian: Somewhat darker than a city roast, Brazilian roast should begin to show a hint of dark-roast flavor. The beans should show a trace of oil. In this context, the word Brazilian has no relationship to coffee grown in Brazil.

Viennese: Also called medium-dark roast, Viennese roast generally falls somewhere between a standard city roast and French roast.

French roast: French roast, also called New Orleans or dark roast, approaches espresso in flavor without sacrificing smoothness. The beans should be the color of semisweet chocolate, with apparent oiliness on the surface.

Espresso roast: Espresso roast, also called Italian roast, is the darkest of all. The beans are roasted until they are virtually burnt. The beans should be black with a shiny, oily surface.

Tea

BLACK TEAS

Assam - A rich black tea from northeastern India with a reddish color. It is valued by connoisseurs, especially for breakfast.



Assam tea. Flickr

Ceylon - A full-flavored black tea with a golden color and delicate fragrance. Ideal for serving iced, it does not become cloudy when cold. Darjeeling the champagne of teas, grown in the foothills of the Himalayas in northeastern India. It is a full-bodied, black tea with a Muscat flavor.



Ceylon Tea. Wikipedia

Earl Grey - blend of black teas, usually including Darjeeling, flavored with oil of bergamot. A popular choice for afternoon tea.



Twinings Earl Grey. Wikipedia

English Breakfast-An English blend of Indian and Sri Lankan black teas; it is full-bodied and robust, with a rich color.



English breakfast tea. Pricey, CC BY ND 2.0

Keemum- A mellow black Chinese tea with a strong aroma. It is less astringent than other teas and is delicious iced.



Keemum Chinese Tea. Wikipedia

Lapsang Souchong - A large -leafed (souchong) tea from the Lapsang district of China. It has a distinctive tarry, smoky flavor and aroma, appropriate for afternoon tea or dinner.

GREEN TEAS



Green Tea: leaves & powder. Flickr

Gunpowder - A green Chinese tea with a tightly curled leaf and gray-green color. It has a pungent flavor and a light straw color. It is often served after the evening meal.



Twinings gunpowder green tea. [Commons.wikipedia.org](https://commons.wikimedia.org/wiki/File:Twinings_gunpowder_green_tea.jpg)

Sencha (common) - A delicate Japanese green tea that has a light color with a pronounced aroma and a bright, grassy taste.



Sencha Tea. [Wikipedia](https://en.wikipedia.org/wiki/Sencha)

White tea - A delicate green tea made from new buds picked before they open. Allowed to wither so that natural moisture evaporates, these leaves are lightly dried to a pale silvery color. White tea has a subtle flavor.



White Tea. Flickr

OOLONG TEAS



Oolong Tea. Wikipedia

Formosa Oolong - A unique and expensive large -leafed oolong tea with the flavor of ripe peaches. It is appropriate for breakfast or afternoon tea.



Formosa Oolong Tea. Wikipedia

The Cooking Techniques

Roasting

Roasting is a cooking method that uses dry heat. Hot air envelops the food, cooking it evenly on all sides with temperatures of at least 300 °F from an open flame, **oven**, or other heat source. Roasting can enhance **flavor** through **caramelization** and **Maillard browning** on the surface of the food. Roasting uses indirect, diffused heat (as in an oven), and is suitable for slower cooking of meat in a larger, whole piece. **Meats** and most **root and bulb vegetables** can be roasted. Any piece of meat, especially **red meat** that has been cooked in this fashion is called a **roast**. Meats and vegetables prepared in this way are described as "roasted", e.g., roasted **chicken** or roasted **squash**.

Roasting Methods

For roasting, the food may be placed on a rack, in a roasting pan or, to ensure even application of heat, may be rotated on a **spit** or **rotisserie**. If a pan is used, the juice can be retained for use in gravy, Yorkshire pudding, etc. During oven roasting, hot air circulates around the meat, cooking all sides evenly. There are several plans for roasting meat in an oven: low-temperature cooking, high-temperature cooking, and a combination of both. Each method can be suitable, depending on the food and the tastes of the people.

- A low-temperature oven, 200 to 320 °F, is best when cooking with large cuts of meat, turkey and whole chickens. This is not technically roasting temperature, but it is called slow roasting. The benefit of slow roasting an item is less moisture loss and a more tender product. More of the collagen that makes meat tough is dissolved in slow cooking. At true roasting temperatures, 350 °F or more, the water inside the muscle is lost at a high rate.
- Cooking at high temperatures is beneficial if the cut is tender enough—as in **filet mignon** or **striploin**—to be finished cooking before the juices escape. A reason for high temperature roasting is to brown the outside of the food, similar to browning food in a pan before pot roasting or stewing it. Fast cooking gives more variety of flavor, because the outside is brown while the center is much less done. However, as we will see, roasting a whole chicken at 450F has its merits!
- The combination method uses high heat just at either the beginning or the end of the cooking process, with most of the cooking at a low temperature. This method produces the golden-brown texture and crust, but maintains more of the moisture than simply cooking at a high temperature, although the product will not be as moist as low-temperature cooking the whole time. **Searing** and then turning down to low is also beneficial when a dark crust and caramelized flavor is desired for the finished product.

In general, in either case, the meat is removed from the heat before it has finished cooking and left to sit for a few minutes, while the inside cooks further from the residual heat content, known as “carry over cooking” or “residual cooking”.

The objective in any case is to retain as much moisture as possible, while providing the texture and color. As meat cooks, the structure and especially the collagen breaks down, allowing juice to come out of the meat. Meat is juiciest at about medium rare while the juice is coming out. During roasting, meats and vegetables are frequently **basted** on the surface with **butter**, **lard**, or **oil** to reduce the loss of moisture by evaporation.

Roasting can be applied to a wide variety of meat. In general, it works best for cooking whole chickens, turkey, and leaner cuts of lamb, pork, and beef. The aim is to highlight the flavor of the meat itself rather than a sauce or stew, as it is done in braising or other moist-heat methods. Many roasts are tied with string prior to roasting. Tying holds them together during roasting, keeping any stuffing inside, and keeps the roast in a round profile, which promotes even cooking.^[4]

Red meats such as beef, lamb, and venison, and certain game birds are often roasted to be “pink” or “rare”, meaning that the center of the roast is still red. Roasting is a preferred method of cooking for most **poultry**, and certain cuts of **beef**, **pork**, or **lamb**. Although there is a growing fashion in some restaurants to serve “rose pork”, temperature monitoring of the center of the roast is the only sure way to avoid foodborne disease.



Whole Roasted Chicken. culinarygeek.net



Prepped Beef Top Round for Roasting. Wikipedia, CCA – 3.0



**Untrussed and Trussed Chicken for Roasting
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Notes:

- **Professionalism**
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GLOSSARY

a la - French for "in the manner or style of"; used in relation to a food , it designates a style of preparation or presentation.

a la carte - a menu on which each food and beverage is listed and priced separately; (2) foods cooked to order as opposed to foods cooked in advance and held for later service.

a la grecque - a preparation style in which vegetables are marinated in olive oil, lemon juice and herbs, then served cold.

a point - French term for cooking to the ideal degree of doneness; (2) when applied to meat , refers to cooking it medium rare.

absorption - the ability of flour to absorb moisture when mixed into dough , which varies according to protein content, growing, and storage conditions.

acid - a substance that neutralizes a base (alkaline) in a liquid solution; foods such as citrus juice, vinegar and wine that have a sour or sharp flavor (most foods are slightly acidic); acids have a pH of less than 7.

acidulation - the browning of cut fruit caused by the reaction of an enzyme (polyphenol oxidase) with the phenolic compounds present in these fruits; this browning is often mistakenly attributed to exposure to oxygen.

acini di pepe - from the Italian word for "peppercorn"; a tiny pasta shaped like peppercorns primarily used for soups; orzo can be substituted.

additives - substances added to many foods to prevent spoilage or improve appearance, texture, flavor or nutritional value; they may be synthetic materials copied from nature (for example, sugar substitutes) or naturally occurring substances (for example , lecithin). Some food additives may cause allergic reactions in sensitive people.

adobo seasoning - a commercial spice blend; although several brands are available, most include dried chilies, Mexican oregano , cumin, black pepper, garlic powder and onion powder.

aerate - to incorporate air into a mixture through sifting and mixing.

aerobic bacteria - those that thrive on oxygen.

aging - (1) the period during which freshly killed meat is allowed to rest so that the effects of rigor mortis dissipate; (2) the period during which freshly milled flour is allowed to rest so that it will whiten and produce less sticky doughs; the aging of flour can be chemically accelerated.

airline breast - a boneless chicken breast with the first wing bone attached.

albumen - the principal protein found in egg whites.

al dente - Italian for "to the tooth"; used to describe a food , usually pasta, that is cooked only until it gives a slight resistance when one bites into it.

alkali - also known as a base, any substance with a pH higher than 7; baking soda is one of the few alkaline foods.

alkaloid - a number of bitter organic substances with alkaline properties; found most often in plants and sometimes used in drugs.

allemande - an intermediary sauce made by adding lemon juice and a liaison to chicken or veal veloute.

allumette - a matchstick cut of 1/8 inch X 1/8 inch X 2 inches (3 millimeters X 3 millimeters X 5 centimeters) usually used for potatoes; (2) a strip of puff pastry with a sweet or savory filling.

American service - restaurant service in which the waiter takes the orders and brings the food to the table; the food is placed on dishes (plated) in the kitchen, making it a relatively fast method for seated service.

amino acid - the basic molecular component of proteins; each of the approximately two dozen amino acids contains oxygen, hydrogen, carbon and nitrogen atoms.

anadromous - describes a fish that migrates from a saltwater habitat to spawn in fresh water.

anaerobic bacteria - those that are able to live and grow without the presence of oxygen.

andouille - a very spicy smoked pork sausage, popular in Cajun cuisine.

angus beef, Certified - a brand created in 1978 to distinguish the highest-quality beef produced from descendants of the black, hornless Angus cattle of Scotland.

animal husbandry - the business, science and practice of raising domesticated animals.

anterior - at or toward the front of an object or place; opposite of posterior.

appetizers - also known as first courses, usually small portions of hot or cold foods intended to whet the appetite in anticipation of the more substantial courses to follow.

aquafarming - also known as aquaculture, the business, science and practice of raising large quantities of fish and shellfish in tanks, ponds or ocean pens.

aroma - the sensations, as interpreted by the brain, of what we detect when a substance comes in contact with sense receptors in the nose.

aromatic - a food added to enhance the natural aromas of another food; aromatics include most flavorings, such as herbs and spices, as well as some vegetables.

artesian-well water - water obtained from an underground source; the water rises to the surface under pressure.

aspic; aspic jelly - a clear jelly usually made from a clarified stock thickened with gelatin; used to coat foods, especially charcuterie items, and for garnish.

as purchased (A.P.) - the condition or cost of an item as it is purchased or received from the supplier

au gratin - foods with a browned or crusted top; often made by browning a food with a bread-crumb, cheese and/ or sauce topping under a broiler or salamander.

au jus - roasted meats, poultry or game served with their natural, un-thickened juices.

au sec - cooked until nearly dry.

bacteria - single-celled microorganisms, some of which can cause diseases, including food-borne diseases.

bagel - a dense, donut-shaped yeast roll; it is cooked in boiling water, then baked, which gives it a shiny glaze and chewy texture.

bain marie - a hot-water bath used to gently cook food or keep cooked food hot; (2) a container for holding food in a hot-water bath.

baked Alaska - ice cream set on a layer of sponge cake and encased in meringue, then baked until the meringue is warm and golden.

baked blind - describes a pie shell or tart shell that is baked unfilled, using baking weights or beans to support the crust as it bakes.

baking - a dry-heat cooking method in which foods are surrounded by hot, dry air in a closed environment; similar to roasting, the term baking is usually applied to breads, pastries, vegetables and fish.

baking powder - a mixture of sodium bicarbonate and one or more acids, generally cream of tartar and/ or sodium aluminum sulfate, used to leaven baked goods; it releases carbon dioxide gas if moisture is present in a formula. Single-acting baking powder releases carbon dioxide gas in the presence of moisture only; double-acting baking powder releases some carbon dioxide gas upon contact with moisture, and more gas is released when heat is applied.

baking soda - sodium bicarbonate, an alkaline compound that releases carbon dioxide gas when combined with an acid and moisture; used to leaven baked goods.

ballotine - similar to a galantine; usually made by stuffing a deboned poultry leg with forcemeat; it is then poached or braised and normally served hot.

banneton - a traditional woven basket, often lined with canvas, in which yeast bread is placed to rise before baking.

barbecue - to cook foods over dry heat created by the burning of hardwood or hardwood charcoals; (2) a tangy tomato- or vinegar-based sauce used for grilled foods ; (3) foods cooked by this method and/or with this sauce.

barding - tying thin slices of fat, such as bacon or pork fatback, over meats or poultry that have little to no natural fat covering in order to protect and moisten them during roasting.

barista - Italian for "bartender"; now used to describe someone who has been professionally trained in the art of preparing espresso and espresso-based beverages.

base - a substance that neutralizes an acid in a liquid solution; ingredients such as sodium bicarbonate (baking soda) that have an alkaline or bitter flavor; bases have a pH of more than 7.

baste - to moisten foods during cooking (usually grilling, broiling or roasting) with melted fat, pan drippings, a sauce or other liquids to prevent drying and to add flavor.

batonnet - foods cut into matchstick shapes of 1/4 inch X 1/4 inch X 2 inches (6 millimeters X 6 millimeters X 5 centimeters).

batter - (1) a semiliquid mixture containing flour or other starch used to make cakes and breads. The gluten development is minimized and the liquid forms the continuous medium in which other ingredients are disbursed; generally contains more fat, sugar and liquids than a dough; (2) a semiliquid mixture of liquid and starch used to coat foods for deep-frying.

Baume scale - see hydrometer.

bavarian cream - a sweet dessert mixture made by thickening custard sauce with gelatin and then folding in whipped cream; the final product is poured into a mold and chilled until firm.

beard - a clump of dark threads found on a mussel.

bearnaise - a sauce made of butter and egg yolks and flavored with a reduction of vinegar, shallots, tarragon and peppercorns.

beating - a mixing method in which foods are vigorously agitated to incorporate air or develop gluten; a spoon or electric mixer with its paddle attachment is used.

béchamel - a leading sauce made by thickening milk with a white roux and adding seasonings.

beefalo - the product of crossbreeding a bison (American buffalo) and a domestic beef animal.

beer - an alcoholic beverage made from water, hops and malted barley, fermented by yeast.

beignets - squares or strips of eclair paste deep-fried and dusted with powdered sugar.

berry - the kernel of certain grains such as wheat; (2) small, juicy fruits that grow on vines and bushes.

beurre blanc - French for "white butter"; an emulsified butter sauce made from shallots, white wine and butter.

beurre compose - a compound butter term.

beurre fondu - French for "melted butter"; it is often served over steamed vegetables such as asparagus or poached white fish.

beurre manie - a combination of equal amounts by weight of flour and soft, whole butter; it is whisked into a simmering sauce at the end of the cooking process for quick thickening and added sheen and flavor.

beurre noir - French for "black butter"; used to describe whole butter cooked until dark brown (not black); sometimes flavored with vinegar or lemon juice, capers and parsley and served over fish, eggs and vegetables.

beurre noisette - French for "brown butter"; used to describe butter cooked until it is a light brown color; it is flavored and used in much the same manner as beurre noir.

beurre rouge - French for "red butter"; an emulsified butter sauce made from shallots, red wine and butter

biological hazard - a danger to the safety of food caused by disease-causing microorganisms such as bacteria, molds, yeasts, viruses or fungi.

biscuit method - a mixing method used to make biscuits, scones and flaky doughs; it involves cutting cold fat into the flour and other dry ingredients before any liquid is added.

bisque - a soup made from shellfish; classic versions are thickened with rice.

bivalves - mollusks such as clams, oysters and mussels that have two bilateral shells attached at a central hinge.

blanching - very briefly and partially cooking a food in boiling water or hot fat; used to assist preparation (for example, to loosen peels from vegetables), as part of a combination cooking method or to remove undesirable flavors.

blanquette - a white stew made of a white sauce and meat or poultry that is simmered without first browning.

blending - a mixing method in which two or more ingredients are combined just until they are evenly distributed.

bloom - (1) a white, powdery layer that sometimes appears on chocolate if the cocoa butter separates; (2) a measure of gelatin's strength; (3) to soften granulated gelatin in a cold liquid before dissolving and using.

blue cheese - (1) a generic term for any cheese containing visible blue- green molds that contribute a characteristic tart, sharp flavor and aroma; also known as a blue-veined cheese or bleu; (2) a group of Roquefort-style cheeses made in the United States and Canada from cow's or goat's milk rather than ewe's milk and injected with molds that form blue-green veins; also known as blue mold cheese or blue-veined cheese.

boiling - a moist-heat cooking method that uses convection to transfer heat from a hot (approximately 212°F/ 100°C) liquid to the food submerged in it; the turbulent waters and higher temperatures cook foods more quickly than do poaching or simmering.

bombe - two or more flavors of ice cream, or ice cream and sherbet, shaped in a spherical mold; each flavor is a separate layer that forms the shell for the next flavor.

bordelaise - a brown sauce flavored with a reduction of red wine, shallots, pepper and herbs and garnished with marrow.

bottled water - any water, either still or sparkling, that is bottled and sold.

bouchees - small puff pastry shells that can be filled and served as bite-size hors d'oeuvre or petit fours.

bound salad - a salad composed of cooked meats, poultry, fish, shellfish, pasta or potatoes combined with a dressing.

bouquet garni - fresh herbs and vegetables tied into a bundle with twine and used to flavor stocks, sauces, soups and stews.

bouquetiere - a garnish (bouquet) of carefully cut and arranged fresh vegetables.

boxed beef - industry terminology for primal and sub-primal cuts of beef that are vacuum sealed and packed into cardboard boxes for shipping from the packing plant to retailers and food service operations.

braising - a combination cooking method in which foods are first browned in hot fat, then covered and slowly cooked in a small amount of liquid over low heat; braising uses a combination of simmering and steaming to transfer heat from the liquid (conduction) and the air (convection) to the foods.

bran - the tough outer layer of a cereal grain and the part highest in fiber.

brandy - an alcoholic beverage made by distilling wine or the fermented mash of grapes or other fruits.

Brawn - also called an aspic terrine, made from simmered meats packed into a terrine and covered with aspic.

brazier; brasier - a pan designed for braising; usually round with two handles and a tight-fitting lid

breeding - a coating of bread or cracker crumbs, cornmeal or other dry meal applied to foods that will typically be deep-fried or pan-fried; (2) the process of applying this coating.

brigade - a system of staffing a kitchen so that each worker is assigned a set of specific tasks; these tasks are often related by cooking method, equipment or the types of foods being produced.

brine - a mixture of salt, water and seasonings used to preserve foods.

brioche - a rich yeast bread containing large amounts of eggs and butter.

brochettes - skewers, either small hors d'oeuvre or large entree size, threaded with meat, poultry, fish, shellfish and/ or vegetables and grilled, broiled or baked; sometimes served with a clipping sauce.

broiling - a dry-heat cooking method in which foods are cooked by heat radiating from an overhead source

broth - a flavorful liquid obtained from the long simmering of meats and/or vegetables.

brown sauce- see espagnole sauce.

brown stew - a stew in which the meat is first browned in hot fat.

brown stock - a richly colored stock made of chicken, veal, beef or game bones and vegetables , all of which are caramelized before they are simmered in water with seasonings.

brunch - a late-morning to early- afternoon meal that takes the place of both breakfast and lunch; a brunch menu often offers breakfast foods as well as almost anything else.

brunoise - 1) foods cut into cubes of 1/8 inch X 1/8 inch X 1/8 inch (3 millimeters X 3 millimeters X 3 millimeters) ; a 1/16- inch (1.5-millimeter) cube is referred to as a fine brunoise; (2) foods garnished with vegetables cut in this manner

buffet service - restaurant service in which diners generally serve themselves foods arranged on a counter or table or are served by workers assigned to specific areas of the buffet. Usually 'buffet service style' restaurants charge by the meal; restaurants offering buffet service that charge by the dish are known as cafeterias.

bun - any of a variety of small, round yeast rolls; can be sweet or savory.

butcher - to slaughter and/or dress or fabricate animals for consumption.

butler service - restaurant service in which servers pass foods (typically hors d'oeuvre) or drinks arranged on trays.

buttercream - a light, smooth, fluffy frosting of sugar, fat and flavorings; egg yolks or whipped egg whites are sometimes added. There are three principal kinds: simple, Italian and French.

butterfly - to slice boneless meat, poultry or fish nearly in half lengthwise so that it spreads open like a book.

cafeteria - see buffet service.

caffeine - an alkaloid found in coffee beans, tea leaves and cocoa beans that acts as a stimulant.

cake - in American usage, refers to a broad range of pastries , including layer cakes , coffeecakes and gateaux; can refer to almost anything that is baked, tender, sweet and sometimes frosted.

calf - (1) a young cow or bull; (2) the meat of calves slaughtered when they are older than five months.

calorie - the unit of energy measured by the amount of heat required to raise 1000 grams of water one degree Celsius; it is also written as kilocalorie or kcal.

canapé - tiny open-faced sandwich served as an hors d'oeuvres ; usually composed of a small piece of bread or toast topped with a savory spread and garnish.

capon - the class of surgically castrated male chickens; they have well-flavored meat and soft, smooth skin

capsaicin - an alkaloid found in a chili pepper 's placental ribs that provides the pepper's heat.

caramelization - the process of cooking sugars; the browning of sugar enhances the flavor and appearance of foods.

Carbohydrates - a group of compounds composed of oxygen, hydrogen and carbon that supply the body with energy (4 calories per gram); carbohydrates are classified as simple (including certain sugars) and complex (including starches and fiber)

carotenoid - a naturally occurring pigment that predominates in red and yellow vegetables such as carrots and red peppers.

carryover cooking - the cooking that occurs after a food is removed from a heat source; it is accomplished by the residual heat remaining in the food.

cartilage - also known as gristle; a tough, elastic, whitish connective tissue that helps give structure to an animal's body.

carve - to cut cooked meat or poultry into portions casings- membranes used to hold forcemeat for sausages; they can be natural animal intestines or manufactured from collagen extracted from cattle hides.

casserole - (1) a heavy dish, usually ceramic, for baking foods; (2) foods baked in a casserole dish.

caul fat - a fatty membrane from pig or sheep intestines; it resembles fine netting and is used to bard roasts and pates and to encase forcemeat for sausages.

cellulose- a complex carbohydrate found in the cell wall of plants ; it is edible but indigestible by humans

cephalopods--mollusks with a single, thin internal shell called a pen or cuttlebone, well-developed eyes, a number of arms that attach to the head and a saclike fin-bearing mantle ; include squid and octopus

Certified Angus Beef- a brand created in 1978 to distinguish the highest-quality beef produced from descendants of the black, hornless Angus cattle of Scotland. The meat must meet American Angus Association standards for yield, marbling and age, and be graded as high choice or prime.

chafing dish- a metal dish with a heating unit (flame or electric) used to keep foods warm at tableside or during buffet service.

chalazae cords - thick, twisted strands of egg white that anchor the yolk in place.

charcuterie - the production of pates, terrines, galantines, sausages and similar foods.

cheesecloth - a light, fine mesh gauze used to strain liquids and make sachets.

chef de cuisine - also known simply as chef ; the person responsible for all kitchen operations , developing menu items and setting the kitchen's tone and tempo.

chef de partie - also known as station chef; produces the menu items under the direct supervision of the chef or sous-chef.

chefs knife - an all-purpose knife used for chopping, slicing and mincing ; its tapering blade is 8-14 inches (20- 35 centimeters) long.

chemical hazard - a danger to the safety of food caused by chemical substances, especially cleaning agents, pesticides and toxic metals.

chevre - French for "goat"; generally refers to a cheese made from goat's milk.

chiffonade - to finely slice or shred leafy vegetables or herbs.

chili - a member of the capsicum plant family; may be used fresh or dried or dried and ground into a powder.

chili - stew-like dish containing chili- a commercial spice powder containing a blend of seasonings.

china cap - a cone-shaped strainer made of perforated metal.

chine - the backbone or spine of an animal; a sub-primal cut of beef, veal, lamb, pork or game carcass containing a portion of the backbone with some adjoining flesh.

chinois - a conical strainer made of fine mesh, used for straining and pureeing foods.

chlorophyll - a naturally occurring pigment that predominates in green vegetables such as cabbage.

cholesterol - a fatty substance found in foods derived from animal products and in the human body ; it has been linked to heart disease.

chop - (1) a cut of meat, including part of the rib; (2) to cut into pieces when uniformity of size and shape is not important.

chorizo - a coarse, spicy pork sausage flavored with ground chilies and removed from its casing before cooking; used in Mexican and Spanish cuisines.

choux pastry –see Eclair paste.

Chowder - a hearty soup made from fish, shellfish and/or vegetables, usually containing milk and potatoes and often thickened with roux.

churros - a Spanish and Mexican pastry in which sticks of eclair paste flavored with cinnamon are deep-fried and rolled in sugar while still hot.

chutney - a sweet-and-sour condiment made of fruits and/ or vegetables cooked in vinegar with sugar and spices; so me chutneys are reduced to a puree, while others retain recognizable pieces of their ingredients.

cider - mildly fermented apple juice; non-alcoholic apple juice may also be labeled cider.

citrus - fruits characterized by a thick rind, most of which is a bitter white pith with a thin exterior layer of colored skin (zest); their flesh is segmented and juicy and varies from bitter to tart to sweet.

clarification - (1) the process of transforming a broth into a clear consommé by trapping impurities with a clearmeat consisting of the egg white protein albumen, ground meat, an acidic product, mirepoix and other ingredients; (2) the clearmeat used to clarify a broth.

clarified butter - purified butterfat; the butter is melted and the water and milk solids are removed.

classic cuisine - a late 19th - and early 20th-century refinement and simplification of French Grande Cuisine. Classic (or classical) cuisine relies on the thorough exploration of culinary principles and techniques, and emphasizes the refined preparation and presentation of superb ingredients.

clean - to remove visible dirt and soil.

clear soups – un-thickened soups, including broths, consommés and broth-based soups.

clearmeat - see clarification.

club roll - a small oval-shaped roll made of crusty French bread.

coagulation - the irreversible transformation of proteins from a liquid or semi-liquid state to a drier, solid state; usually accomplished through the application of heat.

cocoa butter - the fat found in cocoa beans and used in fine chocolates.

coconut cream - (1) a coconut-flavored liquid made like coconut milk but with less water; it is creamier and thicker than coconut milk; (2) the thick fatty portion that separates and rises to the top of canned or frozen coconut milk; do not substitute cream of coconut for true coconut cream.

coconut milk - a coconut-flavored liquid made by pouring boiling water over shredded coconut; may be sweetened or unsweetened; do not substitute cream of coconut for coconut milk.

coconut water - the thin, slightly opaque liquid contained within a fresh coconut.

cojita - an aged, hard, salty Mexican cow's-milk cheese; similar to feta, although not soaked in brine.

colander - a perforated bowl, with or without a base or legs, used to strain foods.

collagen - a protein found in connective tissue; it is converted into gelatin when cooked with moisture.

combination cooking methods - cooking methods, principally braising and stewing, that employ both dry-heat and moist-heat procedures.

composed salad - a salad prepared by arranging each of the ingredients (the base, body, garnish and dressing) on individual plates in an artistic fashion.

composition - a completed plate's structure of colors, shapes and arrangements.

compound butter - also known as a beurre composé, a mixture of softened whole butter and flavorings used as a sauce or to flavor and color other sauces.

compound sauces - see Small sauces.

concasse - peeled, seeded and diced tomato.

concasser - to pound or chop coarsely; usually used for tomatoes or parsley.

concentrate - also known as a fruit paste or compound; a reduced fruit puree, without a gel structure, used as a flavoring.

conching - stirring melted chocolate with large stone or metal rollers to create a smooth texture in the finished chocolate.

condiment - traditionally, any item added to a dish for flavor, including herbs, spices and vinegars; now also refers to cooked or prepared flavorings such as prepared mustards, relishes, bottled sauces and pickles.

conduction - the transfer of heat from one item to another through direct contact.

confit - meat or poultry (often lightly salt-cured) slowly cooked and preserved in its own fat and served hot.

connective tissue - tissue found throughout an animal's body that binds together and supports other tissues such as muscles.

consommé - a rich stock or broth that has been clarified with clearmeat to remove impurities.

contaminants - biological, chemical or physical substances that can be harmful when consumed in sufficient quantities.

contamination - the presence, generally unintentional, of harmful organisms or substances.

convection - the transfer of heat caused by the natural movement of molecules in a fluid (whether air, water or fat) from a warmer area to a cooler one; mechanical convection is the movement of molecules caused by stirring.

conversion factor (C.F.) - the number used to increase or decrease ingredient quantities and recipe yields

cookery - the art, practice or work of cooking.

cookie press - also known as a cookie gun, a hollow tube fitted with a plunger and an interchangeable decorative tip or plate; soft cookie dough is pressed through the tip to create shapes or patterns.

cookies - small, sweet, flat pastries; usually classified by preparation or makeup techniques as drop, icebox, bar, cutout, pressed and wafer.

cooking - (1) the transfer of energy from a heat source to a food; this energy alters the food's molecular structure, changing its texture, flavor, aroma and appearance; (2) the preparation of food for consumption

cooking medium - the air, fat, water or steam in which a food is cooked.

coring - the process of removing the seeds or pit from a fruit or fruit-vegetable.

cost of goods sold - the total cost of food items sold during a given period; calculated as beginning inventory plus purchases minus ending inventory.

cost per portion - the amount of the total recipe cost divided by the number of portions produced from that recipe; the cost of one serving.

coulis - a creamy mixture of salmon fillet, rice, hard-cooked eggs, mushrooms, shallots and dill enclosed in a pastry envelope usually made of brioche dough.

coulis - a sauce made from a puree of vegetables and/or fruit; may be served hot or cold.

count - the number of individual items in a given measure of weight or volume.

coupe - another name for an ice cream sundae, especially one served with a fruit topping.

court bouillon - water simmered with vegetables, seasonings and an acidic product such as vinegar or wine; used for simmering or poaching fish, shellfish or vegetables.

cows - female cattle after their first calving, principally raised for milk and calf production.

cracking - a milling process in which grains are broken open.

cream filling - a pie filling made of flavored pasty cream thickened with cornstarch.

creaming - a mixing method in which softened fat and sugar are vigorously combined to incorporate air

cream of coconut - a canned commercial product consisting of thick, sweetened coconut-flavored liquid; used for baking and in beverages.

cream puffs - baked rounds of eclair paste cut in half and filled with pastry cream, whipped cream, fruit or other filling

creams - also known as crèmes; include light, fluffy or creamy-textured dessert foods made with whipped cream or whipped egg whites, such as Bavarian creams, chiffons, mousses and crème Chantilly

cream sauce - a sauce made by adding cream to a béchamel sauce

cream soup - a soup made from vegetables cooked in a liquid that is thickened with a starch and pureed; cream is then incorporated to add richness and flavor

crème anglaise - also known as crème à l'anglaise; see vanilla custard sauce

crème Brule - French for "burnt cream"; used to describe a rich dessert custard topped with a crust of caramelized sugar

crème caramel - like crème renversee and flan, a custard baked over a layer of caramelized sugar and inverted for service

crème Chantilly - heavy cream whipped to soft peaks and flavored with sugar and vanilla; used to garnish pastries or desserts or folded into cooled custard or pastry cream for fillings

crème Chiboust - a vanilla pastry cream lightened by folding in Italian meringue; traditionally used in a gâteau St. Honore

crème patissiere - see pastry cream

crepe - a thin, delicate unleavened griddlecake made with a very thin egg batter cooked in a very hot sauté pan; used in sweet and savory preparations

critical control point - a step during the processing of food when a mistake can result in the transmission, growth or survival of pathogenic bacteria

croissant - a crescent-shaped roll made from a rich, rolled-in yeast dough

croquembouche - a pyramid of small puffs, each filled with pastry cream; a French tradition for Christmas and weddings, it is held together with caramelized sugar and decorated with spun sugar or marzipan flowers

croquette - a food that has been pureed or bound with a thick sauce (usually béchamel or veloute), made into small shapes and then breaded and deep-fried

cross-contamination - the transfer of bacteria or other contaminants from one food, work surface or piece of equipment to another

croffte, en - describes a food encased in a bread or pastry crust

crouton - a bread or pastry garnish, usually toasted or sautéed until crisp

crudités - generally refers to raw or blanched vegetables served as an hors d'oeuvre and often accompanied by a clip

crullers - a Dutch pastry in which a loop or strip of twisted éclair paste is deep-fried

crumb - the interior of bread or cake; may be elastic, aerated, fine grained or coarse grained

crustaceans - shellfish characterized by a hard outer skeleton or shell and jointed appendages; include lobsters, crabs and shrimp

cuisine - the ingredients, seasonings, cooking procedures and styles attributable to a particular group of people; the group can be defined by geography, history, ethnicity, politics, culture or religion

cuisson - the liquid used for shallow poaching

cupping - testing coffee or tea for taste and quality, often performed by a professional taster trained to identify key coffee or tea characteristics

curdling - the separation of milk or egg mixtures into solid and liquid components; caused by overcooking, high heat or the presence of acids

curing salt - a mixture of salt and sodium nitrite that inhibits bacterial growth; used as a preservative, often for charcuterie items

custard - any liquid thickened by the coagulation of egg proteins; its consistency depends on the ratio of eggs to liquid and the type of liquid used; custards can be baked in the oven or cooked in a bain-marie or on the stove top

cutlet - a relatively thick, boneless slice of meat

cutting - (1) reducing a food to smaller pieces; (2) a mixing method in which solid fat is incorporated into dry ingredients until only lumps of the desired size remain

cutting loss - the unavoidable and unrecoverable loss of food during fabrication; the loss is usually the result of food particles sticking to the cutting board or the evaporation of liquids

cuttlebone - also known as the pen, the single, thin internal shell of cephalopods

cycle menu - a menu that changes every day for a certain period and then repeats the same daily items in the same order (for example, on a seven-day cycle, the same menu is used every Monday)

dairy products - include cow's milk and foods produced from cow's milk such as butter, yogurt, sour cream

and cheese; sometimes other milks and products made from them are included (e.g., goat's milk cheese)

decant - to separate liquid from solids without disturbing the sediment by pouring off the liquid; vintage wines are often decanted to remove sediment

decline phase - a period during which bacteria die at an accelerated rate, also known as the negative growth phase

decoction - (1) boiling a food until its flavor is removed; (2) a procedure used for brewing coffee

decorator's icing - see royal icing

deep-frying - a dry-heat cooking method that uses convection to transfer heat to a food submerged in hot fat; foods to be deep-fried are usually first coated in batter or breading

deglaze - to swirl or stir a liquid (usually wine or stock) in a pan to dissolve cooked food particles remaining on the bottom; the resulting mixture often becomes the base for a sauce

degrease - to remove fat from the surface of a liquid such as a stock or sauce by skimming, scraping or lifting congealed fat

deionized water - water that has had the cations and anions removed by passing it over a bed of ion-exchange resins

demi-glace - French for "half-glaze"; a mixture of half brown stock and half brown sauce reduced by half

demineralized water - water that has had all the minerals and impurities removed by passing it over a bed of ion-exchange resins

density - the relationship between

the mass and volume of a substance ($D = m/v$). For example, as more

and more sugar is dissolved in a liquid, the heavier or denser the liquid will become. Sugar density is measured on the Baume scale using a hydrometer or saccharometer.

dessert wines - sweet wines made from grapes left on the vine until they are overly ripe, such as Sauternes or wines labeled "Late Harvest"; during fermentation, some of the sugar is not converted to alcohol, but remains in the wine, giving it its characteristic intense sweet taste

detrempe - a paste made with flour and water during the first stage of preparing a pastry dough, especially rolled-in doughs

deveining - the process of removing a shrimp's digestive tract

deviled - describes meat, poultry or other food seasoned with mustard, vinegar and other spicy seasonings

diagonals - oval-shaped slices

dice - to cut into cubes with six equal-sized sides

dip - a thick, creamy sauce, served hot or cold, to accompany crudité, crackers, chips or other foods, especially as an hors d'oeuvre; dips are often based on sour cream, mayonnaise or cream cheese

direct contamination - the contamination of raw foods in their natural setting or habitat

distillation - the separation of alcohol from a liquid (or, during the production of alcoholic beverages, from a fermented mash); it is accomplished by heating the liquid or mash to a gas that contains alcohol vapors; this steam is then condensed into the desired alcoholic liquid (beverage)

distilled water - water that has had all the minerals and impurities removed through distillation; it is generally used for pharmaceutical purposes

diver scallops - scallops that are harvested from the ocean by divers who hand-pick each one; diver scallops tend to be less gritty than those harvested by dragging, and hand-harvesting is more ecologically friendly

docking - pricking small holes in an unbaked dough or crust to allow steam to escape and to prevent the dough from rising when baked

dough - a mixture of flour and other ingredients used in baking; has a low moisture content, and gluten forms the continuous medium into which other ingredients are embedded; it is often stiff enough to cut into shapes

drawn - a market form for fish in which the viscera is removed

dredging - mating a food with flour or finely ground crumbs; usually done prior to sautéing or frying or as the first step of the standard breading procedure

dress - to trim or otherwise prepare an animal carcass for consumption

dressed - a market form for fish in which the viscera, gills, fins and scales are removed

dressing - another name for a bread stuffing used with poultry

drinking water - water that comes from a government-approved source and has undergone some treatment and filtration; it can be bottled or available on tap and is used for drinking and general culinary purposes

drupes - see stone fruits

dry-heat cooking methods - cooking methods, principally broiling, grilling, roasting and baking, sautéing, pan-frying and deep-frying, that use air or fat to transfer heat through conduction and convection; dry-heat cooking methods allow surface sugars to caramelize

drying - a preservation method in which the food's moisture content is dramatically reduced; drying changes the food's texture, flavor and appearance

duchesse potatoes - a puree of cooked potatoes, butter and egg yolks, seasoned with salt, pepper and nutmeg; can be eaten as is or used to prepare several classic potato dishes

duckling - duck slaughtered before it is eight weeks old

dumpling - any of a variety of small starchy products made from doughs or batters that are simmered or steamed; can be plain or filled

durum wheat - a species of very hard wheat with a particularly high amount of protein; it is used to make couscous or milled into semolina, which is used for making pasta

duxelles - a coarse paste made of finely chopped mushrooms sautéed with shallots in butter used in sauces and stuffing

eclair paste - also known as pate a choux; a soft dough that produces hollow baked products with crisp exteriors; used for making eclairs, cream puffs and savory products

eclairs - baked fingers of eclair paste filled with pastry cream; the top is then coated with chocolate glaze or fondant

edible portion (E.P.) - the amount of a food item available for consumption or use after trimming or fabrication; a smaller, more convenient portion of a larger or bulk unit

egg wash - a mixture of beaten eggs (whole eggs, yolks or whites) and a liquid, usually milk or water, used to coat doughs before baking to acid sheen

elastin - a protein found in connective tissues, particularly ligaments and tendons; it often appears as the white or silver covering on meats known as silver skin

emince - small, thin, boneless piece of meat

emulsification - the process by which generally unmixable liquids, such as oil and water, are forced into a uniform distribution

emulsion - a uniform mixture of two unmixable liquids; it is often temporary (for example, oil in water)

endosperm - the largest part of a cereal grain and a source of protein and carbohydrates (starch); the part used primarily in milled products

en papillote - a cooking method in which food is wrapped in paper or foil and then heated so that the food steams in its own moisture

entrée - the main dish of an American meal, usually meat, poultry, fish or shellfish accompanied by a vegetable and starch; in France, the first course, served before the fish and meat courses

Enzymes - proteins that aid specific chemical reactions in plants and animals

escalope - see scallop

escargot - French for "snail"; those used for culinary purposes are land snails (genus *Helix*); the most popular are the large Burgundy snails and the smaller but more flavorful common or garden snail known as petit gris

espagnole - also known as brown sauce, a leading sauce made of brown stock, mirepoix and tomatoes thickened with brown roux; often used to produce demi-glace

essence - a sauce made from a concentrated vegetable juice

essential nutrients - nutrients that must be provided by food because the body cannot or does not produce them in sufficient quantities

essential oils - pure oils extracted from the skins, peels and other parts of plants used to give their aroma and taste to flavoring agents in foods, cosmetics and other products

ethnic cuisine - the cuisine of a group of people having a common cultural heritage, as opposed to the cuisine of a group of people bound together by geography or political factors

ethylene gas - a colorless, odorless hydrocarbon gas naturally emitted from fruits and fruit-vegetables that encourages ripening

evaporation - the process by which heated water molecules move faster and faster until the water turns to a gas (steam) and vaporizes; evaporation is responsible for the drying of foods during cooking

ewe's milk - milk produced by a female sheep; it has approximately 7.9% milkfat, 11.4% milk solids and 80.7% water

extracts--concentrated mixtures of ethyl alcohol and flavoring oils such as vanilla, almond and lemon

extrusion - the process of forcing pasta dough through perforated plates to create various shapes; pasta dough that is not extruded must be rolled and cut

fabricate - to cut a larger portion of raw meat (for example, a primal or sub primal), poultry or fish into smaller portions

fabricated cuts - individual portions cut from a sub-primal

facultative bacteria - those that can adapt and will survive with or without oxygen

fancy - (1) fish that has been previously frozen; (2) a quality grade for fruits, especially canned or frozen

fatback - fresh pork fat from the back of the pig, used primarily for barding

fats - (1) a group of compounds composed of oxygen, hydrogen and carbon atoms that supply the body with energy (9 calories per gram); fats are classified as saturated, monounsaturated or polyunsaturated; (2) the general term for butter, lard, shortening, oil and margarine used as cooking media or ingredients

fermentation - the process by which yeast converts sugar into alcohol and carbon dioxide; it also refers to the time that yeast dough is left to rise - that is, the time it takes for carbon dioxide gas cells to form and become trapped in the gluten network

feuilletées - square, rectangular or diamond-shaped puff pastry boxes; may be filled with a sweet or savory mixture

fiber - also known as dietary fiber; indigestible carbohydrates found in grains, fruits and vegetables; fiber aids digestion

FIFO (first in, first out) - a system of rotating inventory, particularly perishable and semi-perishable goods, in which items are used in the order in which they are received

file' - a seasoning and thickening agent made from dried, ground sassafras leaves

filet, fillet - (1) filet: a boneless tenderloin of meat; (2) fillet: the side of a fish removed intact, boneless or semiboneless, with or without skin; (3) to cut such a piece

fish veloute - a veloute sauce made from fish stock

flambé - food served flaming; produced by igniting brandy, rum or other liquor

flan - a firm savory or sweet egg custard; dessert variety is baked over a layer of caramelized sugar and inverted for service

flash-frozen - describes food that has been frozen very rapidly using metal plates, extremely low temperatures or chemical solutions

flash point - the temperature at which a fat ignites and small flames appear on the surface of the fat

flatfish - fish with asymmetrical, compressed bodies that swim in a horizontal position and have both eyes on the top of the head; include sole, flounder and halibut

flavonoids - plant pigments that dissolve readily in water, found in red, purple and white vegetables such as blueberries, red cabbage, onions and tea

flavor - an identifiable or distinctive quality of a food, drink or other substance perceived with the combined senses of taste, touch and smell

flavored tea - tea to which flavorings such as oils, dried fruit, spices, flowers and herbs have been added

flavoring - an item that adds a new taste to a food and alters its natural flavors; flavorings include herbs, spices, vinegars and condiments; the terms *seasoning* and *flavoring* are often used interchangeably.

fleur-de-lis - a crescent-shaped piece of puff pastry used as a garnish

flour - a powdery substance of varying degrees of fineness made by milling grains such as wheat, corn or rye

fluoridated water - water, either naturally fluoridated or treated with a fluorine-containing compound, intended to promote healthy teeth by preventing tooth decay

foamed milk - milk that is heated and frothed with air and steam generated by an espresso machine; it will be slightly cooler than steamed milk

foie gras - liver of specially fattened geese

fold - a measurement of the strength of vanilla extract

folding - incorporating light, airy ingredients into heavier ingredients by gently moving them from the bottom of the bowl up over the top in a circular motion, usually with a rubber spatula

fond - (1) French for "stock" or "base"; (2) the concentrated juices, drippings and bits of food left in pans after foods are roasted or sautéed; it is used to flavor sauces made directly in the pans in which foods were cooked

fondant - a sweet, thick opaque sugar paste commonly used for glazing pastries such as napoleons or making candies

fond lie - see *jus lie*

fondue - a Swiss specialty made with melted cheese, wine and flavorings; eaten by dipping pieces of bread into the hot mixture with long forks

food cost - the cost of the materials that go directly into the production of menu items

food cost percentage - the ratio of the cost of foods used to the total food sales during a set period, calculated by dividing the cost of food used by the total sales in a restaurant

Food Guide Pyramid - a dietary guide that prioritizes and proportions food choices among six general food groups

Force meat - a preparation made from uncooked ground meats, poultry, fish or shellfish, seasoned, and emulsified with fat; commonly prepared as country-style, basic and mousseline and used for charcuterie items

formula - the standard term used throughout the industry for a bakeshop recipe; formulas rely on weighing to ensure accurate measuring of ingredients

frangipane - a sweet almond and egg filling cooked inside pastry

free-range chickens - chickens allowed to move freely and forage for food; as opposed to chickens raised in coops

free-range veal - the meat of calves that are allowed to roam freely and eat grasses and other natural foods; this meat is pinker and more strongly flavored than that of milk-fed calves

freezer burn - the surface dehydration and discoloration of food that results from moisture loss at below-freezing temperatures

French dressing - classically, a vinaigrette dressing made from oil, vinegar, salt and pepper; in the United States, the term also refers to a commercially prepared dressing that is creamy, tartly sweet and red-orange in color

French service - restaurant service in which one waiter (a captain) takes the order, does the tableside cooking and brings the drinks and food; the secondary or back waiter serves bread and water, clears each course, crumbs the table and serves the coffee

Frenching - a method of trimming racks or individual chops of meat, especially lamb, in which the excess fat is cut away, leaving the eye muscle intact; all meat and connective tissue are removed from the rib bone

fresh-frozen - describes a food that has been frozen while still fresh

fricassee - a white stew in which the meat is cooked in fat without browning before the liquid is added

frittata - an open-faced omelet of Spanish-Italian heritage

frosting - also known as icing, a sweet decorative coating used as a filling between the layers or as a coating over the top and sides of a cake

fruit - the edible organ that develops from the ovary of a flowering plant and contains one or more seeds (pips or pits)

frying - a dry-heat cooking method in which foods are cooked in hot fat; includes sautéing and stir-frying, pan-frying and deep-frying

fumet - a stock made from fish bones or shellfish shells and vegetables simmered in a liquid with flavorings

fungi - a large group of plants ranging from single-celled organisms to giant mushrooms; the most common are molds and yeasts

fusion cuisine - the blending or use of ingredients and/or preparation methods from various ethnic, regional or national cuisines in the same dish; also known as transnational cuisine

galantine - similar to a ballotine; a charcuterie item made from a forcemeat of poultry, game or suckling pig usually wrapped in the skin of the bird or animal and poached in an appropriate stock; often served cold, usually in aspic game-birds and animals hunted for sport or food; many game birds and animals are now ranch-raised and commercially available

game hen - the class of young or immature progeny of Cornish chickens or of a Cornish chicken and White Rock chicken; they are small and very flavorful

ganache - a rich blend of chocolate and heavy cream and, optionally, flavorings, used as a pastry or candy filling or frosting

garde-manger - (1) also known as the pantry chef, the cook in charge of cold food production, including salads and salad dressings, charcuterie items, cold appetizers and buffet items; (2) the work area where these foods are prepared

garnish - (1) food used as an attractive decoration; (2) a subsidiary food used to add flavor or character to the main ingredient in a dish (for example, noodles in chicken noodle soup)

gastrique - caramelized sugar deglazed with vinegar; used to flavor tomato or savory fruit sauces

gastronomy - the art and science of eating well

gateau - (1) in American usage, refers to any cake-type dessert; (2) in French usage, refers to various pastry items made with puff pastry, éclair paste, short dough or sweet dough

gaufrette - a thin lattice or waffle-textured slice of vegetable cut on a mandolin

gaufrette potatoes - thin, fried, lattice-cut slices of potato

gelatin - a tasteless and odorless mixture of proteins (especially collagen) extracted from boiling bones, connective tissue and other animal parts; when dissolved in a hot liquid and then cooled, it forms a jellylike substance used as a thickener and stabilizer

gelatinization - the process by which starch granules are cooked; they absorb moisture when placed in a liquid and heated; as the moisture is absorbed, the product swells, softens and clarifies slightly

gelato - an Italian-style ice cream that is denser than American-style ice cream

genoise – (1) a form of whipped-egg cake that uses whole eggs whipped with sugar; (2) a French sponge cake

germ - the smallest portion of a cereal grain and the only part that contains fat

ghee - a form of clarified butter in which the milk solids remain with the fat and are allowed to brown; originating in India and now used worldwide as an ingredient and cooking medium, it has a long shelf life, a high smoke point and a nutty, caramel-like flavor

giblets - the collective term for edible poultry viscera, including gizzards, hearts, livers and necks.

Gizzard - a bird's second stomach

glacage - browning or glazing a food, usually under a salamander or broiler

glace de poisson - a syrupy glaze made by reducing a fish stock

glace de viande - a dark, syrupy meat glaze made by reducing a brown stock

glace de volaille - a light brown, syrupy glaze made by reducing a chicken stock

glaze – (1) any shiny coating applied to food or created by browning; (2) the dramatic reduction and concentration of a stock; (3) a thin, flavored coating poured or dripped onto a cake or pastry

global cuisine - foods (often commercially produced items) or preparation methods that have become ubiquitous throughout the world; for example, curries and French-fried potatoes

glucose - a thick, sweet syrup made from cornstarch, composed primarily of dextrose; light corn syrup can usually be substituted for it in baked goods or candy making

gluten - an elastic network of proteins created when wheat flour is moistened and manipulated

goat's milk - milk produced by a female goat; it has approximately 4.1% milkfat, 8.9% milk solids and 87% water

gougere eclair- pastry flavored with cheese baked and served as a savory hors d'oeuvre

gourmand -- a connoisseur of fine food and drink, often to excess

gourmet - a connoisseur of fine food and drink

gourmet foods - foods of the highest quality, perfectly prepared and beautifully presented

grading - a series of voluntary programs offered by the U.S. Department of Agriculture to designate a food's overall quality

grains – (1) grasses that bear edible seeds, including corn, rice and wheat; (2) the fruit (that is, the seed or kernel) of such grasses

gram - the basic unit of weight in the metric system; equal to approximately 1/16 of an ounce

grande cuisine - the rich, intricate and elaborate cuisine of the 18th- and 19th-century French aristocracy and upper classes. It is based on the rational identification, development and adoption of strict culinary principles. By emphasizing the how and why of cooking, *grande cuisine* was the first to distinguish itself from regional cuisines, which tend to emphasize the tradition of cooking.

grate - to cut a food into small, thin shreds by rubbing it against a serrated metal plate known as a grater

gravy - a sauce made from meat or liquid and thickening agent; usually made in the pan in which the meat or poultry was cooked

green meats - freshly slaughtered meats that have not had sufficient time to age and develop tenderness and flavor

gremolata - an aromatic garnish of chopped parsley, garlic and lemon zest used for osso buco

grilling - a dry-heat cooking method in which foods are cooked by heat radiating from a source located below the cooking surface; the heat can be generated by electricity or by burning gas, hardwood or hardwood charcoals

grind - to pulverize or reduce food to small particles using a mechanical grinder or food processor

grinding - a milling process in which grains are reduced to a powder; the powder can be of differing degrees of fineness or coarseness

gristle - see cartilage

grosse piece - a centerpiece consisting of a large piece of the principal food offered; for example, a large wheel of cheese with slices of the cheese cascading around it

gum paste - a smooth dough of sugar and gelatin that can be colored and used to make decorations, especially for pastries

HACCP - see Hazard Analysis Critical Control Points

halal - describes food prepared in accordance with Muslim dietary laws

hanging - the practice of allowing eviscerated (drawn or gutted) game to age in a dry, well-ventilated place; hanging helps tenderize the flesh and strengthen its flavor

hard water - water with relatively high calcium and magnesium concentrations

haricot vert - a French variety of green bean characterized by its long, slender pod with an intense flavor and tender texture

Hazard Analysis Critical Control Points (HACCP) - a rigorous system of self-inspection used to manage and maintain sanitary conditions in all types of food service operations; it focuses on the flow of food through the food service facility to identify any point or step in preparation (known as a critical control point) where some action must be taken to prevent or minimize a risk or hazard

Heimlich maneuver - the first-aid procedure for choking victims in which sudden upward pressure is applied to the upper abdomen in order to force any foreign object from the windpipe

herb - any of a large group of aromatic plants whose leaves, stems or flowers are used as a flavoring; used either dried or fresh

high-ratio cake - a form of creamed-fat cake that uses emulsified shortening and a two-stage mixing method

hollandaise - an emulsified sauce made of butter, egg yolks and flavorings (especially lemon juice)

homogenization - the process by which milk fat is prevented from separating out of milk products

hors d'oeuvre - very small portions of hot or cold foods served before the meal to stimulate the appetite

hotel pan - a rectangular, stainless steel pan with a lip allowing it to rest in a storage shelf or steam table; available in several standard sizes

hull - also known as the husk, the outer covering of a fruit, seed or grain

hulling - a milling process in which the hull or husk is removed from grains

hybrid - the result of cross-breeding different species that are genetically unlike; often a unique product

hybrid menu - a menu combining features of a static menu with a cycle menu or a market menu of specials

hydrogenation - the process used to harden oils; hydrogen atoms are added to unsaturated fat molecules, making them partially or completely saturated and thus solid at room temperature

hydrometer - a device used to measure specific gravity; it shows degrees of concentration on the Baume scale

hygroscopic - describes a food that readily absorbs moisture from the air

icing - see frosting

IMPS/NAMP - see NAMP/TMPS

incidental food additives - those inadvertently or unintentionally added to foods during processing, such as pesticide residues on fruits

induction cooking - a cooking method that uses a special coil placed below the stove top's surface in combination with specially designed cookware to generate heat rapidly with an alternating magnetic field

infection - in the food safety context, a disease caused by the ingestion of live pathogenic bacteria that continue their life processes in the consumer's intestinal tract

infrared cooking - a heating method that uses an electric or ceramic element heated to such a high temperature that it gives off waves of radiant heat that cook the food

infuse - to flavor a liquid by steeping it with ingredients such as tea, coffee, herbs or spices

infusion - (1) the extraction of flavors from a food at a temperature below boiling; (2) a group of coffee brewing techniques, including steeping, filtering and dripping; (3) the liquid resulting from this process

instant-read thermometer - a thermometer used to measure the internal temperature of foods; the stem is inserted in the food, producing an instant temperature readout

intentional food additives - those added to foods on purpose, such as the chemicals used to ensure longer shelf life or food colorings

intoxication - in the food safety context, a disease caused by the toxins that bacteria produce during their life processes

inventory - the listing and counting of all foods in the kitchen, storerooms and refrigerators

IQF (individually quick-frozen) - describes the technique of rapidly freezing each individual item of food such as slices of fruit, berries or pieces of fish before packaging; IQF foods are not packaged with syrup or sauce

irradiation - a preservation method used for certain fruits, vegetables, grains, spices, meat and poultry in which ionizing radiation sterilizes the food, slows ripening and prevents sprouting

jam - a fruit gel made from fruit pulp and sugar

jelly - a fruit gel made from fruit juice and sugar

juice - the liquid extracted from any fruit or vegetable

julienne - (1) to cut foods into stick-shaped pieces, approximately 1/8 inch X 1/8 inch X 2 inches (3 millimeters X 3 millimeters X 5 centimeters); a fine julienne has dimensions of 1/16 inch X 1/16 inch X 2 inches (1.5 millimeters X 1.5 millimeters X 5 centimeters); (2) the stick-shaped pieces of cut food

jus lie - also known as fond lie; a sauce made by thickening brown stock with cornstarch or similar starch; often used like a demi-glace, especially to produce small sauces

Kaiser roll - a large round yeast roll with a crisp crust and a curved pattern stamped on the top; used primarily for sandwiches

kneading - working a dough to develop gluten

Kobe beef - an exclusive type of beef traditionally produced in Kobe, Japan. Wagyu cattle are fed a special diet, which includes beer to stimulate the animal's appetite during summer months. The animals are massaged with sake to relieve stress and muscle stiffness in the belief that calm, contented cattle produce better-quality meat. This

special treatment produces meat that is extraordinarily tender and full-flavored, and extraordinarily expensive. Kobe Beef America introduced Wagyu cattle to the United States in 1976. KBA's cattle are raised without hormones and the meat is dry-aged for 21 days prior to sale.

Kosher - prepared in accordance with Jewish dietary laws

Lactose - a disaccharide that occurs naturally in mammalian milk; milk sugar

lag phase - a period, usually following transfer from one place to another, during which bacteria do not experience much growth

lamb - the meat of sheep slaughtered under the age of one year

lard - the rendered fat of hogs

larding - inserting thin slices of fat, such as pork fatback, into low-fat meats in order to add moisture

lardons - sliced, blanched, fried bacon

leading sauces - also known as mother sauces, the foundation for the entire classic repertoire of hot sauces; the five leading sauces (béchamel, veloute, espagnole [also known as brown], tomato and hollandaise) are distinguished by the liquids and thickeners used to make them; they can be seasoned and garnished to create a wide variety of small or compound sauces

leavener - an ingredient or process that produces or incorporates gases in a baked product in order to increase volume, provide structure and give texture

lecithin- a natural emulsifier found in egg yolks

legumes - (1) French for "vegetables"; (2) a large group of vegetables with double-seamed seed pods; depending upon the variety, the seeds, pod and seeds together, or the dried seeds are eaten

liaison - a mixture of egg yolks and heavy cream used to thicken and enrich sauces

liqueur - a strong, sweet, syrupy alcoholic beverage made by mixing or redistilling neutral spirits with fruits, flowers, herbs, spices or other flavorings; also known as a cordial

liquor - an alcoholic beverage made by distilling grains, fruits, vegetables or other foods; includes rum , whiskey and vodka

liter - the basic unit of volume in the metric system, equal to slightly more than a quart

log phase - a period of accelerated growth for bacteria

lozenges - diamond -shaped pieces, usually of firm vegetables

macaroni - any dried pasta made with wheat flour and water; only in the United States does the term refer to elbow-shaped tubes

macerate - to soak foods in a liquid, usually alcoholic, to soften them

macronutrients - the nutrients needed in large quantities: carbohydrates, proteins, fats and water

madeira - a Portuguese fortified wine heated during aging to give it a distinctive flavor and brown color

Magret - a duck breast, traditionally taken from the ducks that produce foie gras; it is usually served boneless but with the skin intact

maître d'hôtel - (1) the leader of the dining room brigade, also known as the dining room manager; oversees the dining room or "front of the house" staff; (2) a compound butter flavored with chopped parsley and lemon juice

makeup - the cutting, shaping and forming of dough products before baking

mandolin - a stainless steel, hand- operated slicing device with adjustable blades

marbling - whitish streaks of inter- and intramuscular fat

marinade - the liquid used to marinate foods; it generally contains herbs, spices and other flavoring ingredients as well as an acidic product such as wine, vinegar or lemon juice

marinate - to soak a food in a seasoned liquid in order to tenderize the food and add flavor to it

market menu - a menu based upon product availability during a specific period ; it is written to use foods when they are in peak season or readily available

marmalade - a citrus jelly that also contains unpeeled slices of citrus fruit

marquise - a frozen mousse-like dessert, usually chocolate

marsala - a flavorful fortified sweet-to-semi dry Sicilian wine

marzipan - a paste of ground almonds, sugar and egg whites used to fill and decorate pastries

matignon - a standard mirepoix plus diced smoked bacon or smoked ham and, depending on the dish, mushrooms and herbs

matzo - thin, crisp unleavened bread made only with flour and water; can be ground into meal that is used for matzo balls and pancakes

mayonnaise - a thick , creamy sauce consisting of oil and vinegar emulsified with egg yolks, usually used as a salad dressing

meal - (1) the coarsely ground seeds of any edible grain such as corn or oats; (2) any dried, ground substance (such as bone meal)

mealy potatoes - also known as starchy potatoes; those with a high starch content and thick skin; they are best for baking

medallion - a small, round, relatively thick slice of meat

melting - the process by which certain foods, especially those high in fat, gradually soften and then liquefy when heated

- menu** - a list of foods and beverages available for purchase
- meringue** - a foam made of beaten egg whites and sugar
- metabolism** - all the chemical reactions and physical processes that occur continuously in living cells and organisms
- meter** - the basic unit of length in the metric system, equal to slightly more than 1 yard
- mezzaluna** - a two-handled knife with one or more thick, crescent-shaped blades used to chop and mince herbs and vegetables
- micronutrients** - the nutrients needed only in small amounts; vitamins and minerals
- microorganisms** - single-celled organisms as well as tiny plants and animals that can be seen only through a microscope
- microwave cooking** - a heating method that uses radiation generated by a special oven to penetrate the food; it agitates water molecules, creating friction and heat; this energy then spreads throughout the food by conduction (and by convection in liquids)
- mignonette** - (1) a medallion; (2) a vinegar sauce with shallots
- milk-fed veal** - also known as formula-fed veal; the meat of calves fed only a nutrient-rich liquid and kept tethered in pens; this meat is whiter and more mildly flavored than that of free-range calves
- milling** - the process by which grain is ground into flour or meal
- mince** - to cut into very small pieces when uniformity of shape is not important
- minerals** - inorganic micronutrients necessary for regulating body functions and proper bone and tooth structures
- mineral water** - drinking water that comes from a protected underground water source and contains at least 250 parts per million of total dissolved solids such as calcium
- mirepoix** - a mixture of coarsely chopped onions, carrots and celery used to flavor stocks, stews and other foods; generally, a mixture of 50 percent onions, 25 percent carrots and 25 percent celery, by weight, is used
- mirin** - sweet, viscous Japanese wine made from glutinous rice, generally used to flavor and sweeten glazes and sauces
- mise en place** - French for "putting in place"; refers to the preparation and assembly of all necessary ingredients and equipment
- miso** - a thick paste made by salting and fermenting soybeans and rice or barley; generally used as a flavoring
- mix** - to combine ingredients in such a way that they are evenly dispersed throughout the mixture
- moist-heat cooking methods** - cooking methods, principally simmering, poaching, boiling and steaming, that use water or steam to transfer heat through convection; moist-heat cooking methods are used to emphasize the natural flavors of foods
- mojo criollo** - a citrus and herb marinade used in Latino cuisines; bottled brands are available in Hispanic markets
- molding** - the process of shaping foods, particularly grains and vegetables bound by sauces, into attractive, hard-edged shapes by using metal rings, circular cutters or other forms
- molds** - (1) algae-like fungi that form long filaments or strands; for the most part, molds affect only food appearance and flavor; (2) containers used for shaping foods
- mollusks** - shellfish characterized by a soft, unsegmented body, no internal skeleton and a hard outer shell
- monounsaturated fats** - see unsaturated fats
- monter au beurre** - to finish a sauce by swirling or whisking in butter (raw or compound) until it is melted; used to give sauces shine, flavor and richness

mortadella - an Italian smoked sausage made with ground beef, pork and pork fat, flavored with coriander and white wine; it is air-dried and has a delicate flavor; also a large American bologna-type pork sausage sn1dded with pork fat and garlic

mortar and pestle - a hard bowl (the mortar) in which foods such as spices are ground or pounded into a pow de r with a club-shaped tool (the pestle)

mother sauces - *see* leading sauces

mousse - a soft, creamy food, either sweet or savory, lightened by adding whipped cream, beaten egg whites or both

mousseline - a cream or sauce lightened by folding in ,whipped cream

mouthfeel - the sensation created in the mouth by a combination of a food 's taste, smell, texture and temperature

muesli - a breakfast cereal made from raw or toasted cereal grains, dried fruits, nuts and dried milk solids and usually eaten with milk or yogurt; sometimes known as granola

muffin method - a mixing method used to make quick-bread batters; it involves combining liquid fat with other liquid ingredients before adding them to the dry ingredients

muscles-- animal tissues consisting of bundles of cells or fibers that can contract and expand; they are the portions of a carcass usually consumed

mushrooms - members of a broad catego1y of plants known as fungi; they are often used and served like vegetables

mutton - the meat of sheep slaughtered after they reach the age of one year

NAMP/IMPS - the Institutional Meat Purchasing Specifications (IMPS) published by the U.S. Department of Agriculture; the IMPS are illustrated and described in The Meat Buyer's Guide published by the National Association of Meat Purveyors (NAMP)

nappe - (1) the consistency of a liquid, usually a sauce , that will coat the back of a spoon; (2) to coat a food with sauce

national cuisine - the characteristic cuisine of a nation

natural water - bottled drinking water not derived from a municipal water supply; it can be mineral, spring, well or artesian-well water

navarin - a brown ragout generally made with turnips , other root vegetables, onions , peas and lamb

Neapolitan - a three-layered loaf or cake of ice cream; each layer is a different flavor and a different color, a typical combination being chocolate, vanilla and strawberry

nectar- the diluted, sweetened juice of peaches, apricots, guavas , black currants or other fruits, the juice of ·which would be too thick or too tart to drink straight

neutral spirits or grain spirits - pure alcohol (ethanol or ethyl alcohol); they are odorless , tasteless and a ve1y potent 190 proof (95% alcohol)

New American cuisine - late- 20th-century movement that began in California but has spread across the United States; it stresses the use of fresh, locally grown, seasonal produce and high -quality ingredients simply pre pa red in a fashion that preserves and emphasizes natural flavors

noisette - a small, usually round, portion of meat cut from the rib

noodles - flat strips of pasta-type dough made with eggs; may be fresh or dried

nouvelle cuisine - French for "new cooking"; a mid-20th-century movement away from many classic cuisine principles and toward a lighter cuisine based on natural flavors, shortened cooking times and innovative combinations

nut – (1) the edible single-seed kernel of a fruit surrounded by a hard shell; (2) generally , any seed or fruit with an edible kernel in a hard shell

nutrients - the chemical substances found in food that nourish the body by promoting growth, facilitating body functions and providing energy; there are six categories of nutrients: proteins, carbo hydrates, fats, water, minerals and vitamins

nutrition - the science that studies nutrients

oblique cuts - small pieces with two angle-cut sides

offal - also called variety meats; edible entrails (for example, the heart, kidneys, liver, sweetbreads and tongue) and extremities (for example, oxtail and pig's feet) of an animal

oignon brule- French for "burnt onion"; made by charring onion halves; used to flavor and color stocks and sauces

oignon pique - French for "pricked onion"; a bay leaf tacked with a clove to a peeled onion; used to flavor sauces and soups

oil - a type of fat that remains liquid at room temperature

organic farming - a method of farming that does not rely on synthetic pesticides, fungicides, herbicides or fertilizers

Orzo - a rice-shaped pasta

oven spring - the rapid rise of yeast goods in a hot oven, resulting from the production and expansion of trapped gases

overhead costs - expenses related to operating a business, including but not limited to costs for advertising, equipment leasing, insurance, property rent, supplies and utilities

over run - the amount of air churned into an ice cream during freezing

paillard - a scallop of meat pounded until thin, usually grilled

palate - (1) the complex of smell, taste and touch receptors that contribute to a person's ability to recognize and appreciate flavors; (2) the range of an individual's recognition and appreciation of flavors

panada; panade - (1) something other than fat added to a forcemeat to enhance smoothness, aid emulsification or both; it is often béchamel, rice or crust less white bread soaked in milk; (2) a mixture for binding stuffing and dumplings, notably quenelles, often choux pastry, bread crumbs, frangipane, pureed potatoes or rice

pan-broiling - a dry-heat cooking method that uses conduction to transfer heat to a food resting directly on a cooking surface; no fat is used and the food remains uncovered

pan-dressed - a market form for fish in which the viscera, gills and scales are removed and the fins and tail are trimmed

panettone - sweet Italian yeast bread filled with raisins, candied fruits, anise seeds and nuts; traditionally baked in a rounded cylindrical mold and served as a breakfast bread or dessert during the Christmas holidays

pan-frying - a dry-heat cooking method in which food is placed in a moderate amount of hot fat

pan gravy - a sauce made by deglazing pan drippings from roast meat or poultry and combining them with a roux or other starch and stock

papain - an enzyme found in papayas that breaks down proteins; used as the primary ingredient in many commercial meat tenderizers

papillote, en - a cooking method in which food is wrapped in paper or foil and then heated so that the food steams in its own moisture

parboiling - partially cooking a food in boiling or simmering liquid; similar to blanching but the cooking time is longer

parchment paper - heat-resistant paper used throughout the kitchen for tasks such as lining baking pans, wrapping foods to be cooked en papillote and covering foods during shallow poaching

par cooking - partially cooking a food by any cooking method

parfait - ice cream served in a long, slender glass with alternating layers of topping or sauce; also the name of the mousse-like preparation that forms the basis for some still-frozen desserts

paring knife - a short knife used for detail work, especially cutting fruits and vegetables; it has a rigid blade approximately 2-4 inches (5-10 centimeters) long

Paris-Brest - rings of baked eclair paste cut in half horizontally and filled with light pastry cream and/or whipped cream; the top is dusted with powdered sugar or drizzled with chocolate glaze

Parsienne - spheres of fruits or vegetables cut with a small melon ball cutter

par stock (par level) - the amount of stock necessary to cover operating needs between deliveries

pasta - (1) an unleavened paste or dough made from wheat flour (often semolina), water and eggs; the dough can be colored and flavored with a wide variety of herbs, spices or other ingredients and cut or extruded into a wide variety of shapes and sizes; it can be fresh or dried and is boiled for service; (2) general term for any macaroni product or egg noodle

pasteurization - the process of heating something to a certain temperature for a specific period in order to destroy pathogenic bacteria

pastillage - a paste made of sugar, cornstarch and gelatin; it may be cut or molded into decorative shapes

pastry cream - also known as crème patissiere, a stirred custard made with egg yolks, sugar and milk and thickened with starch; used for pastry and pie fillings

pate - traditionally, a fine savory meat filling wrapped in pastry, baked and served hot or cold; as opposed to a terrine, which was a coarsely ground and highly seasoned meat mixture baked in an earthenware mold and served cold; today, the words pate and terrine are generally used interchangeably

pate a choux - see eclair paste

pate a glacer - a specially formulated chocolate coating compo und with vegetable oils designed to retain its shine without tempering; it is used as a coating or frosting chocolate

pate au pate - a specially formulated pastry dough used for wrapping pate when making pate en croute

pate brisee - a dough that produces a very flaky baked product containing little or no sugar; flaky dough is used for prebaked pie shells or crusts; mealy dough is a less flaky product used for custard, cream or fruit pie crusts

pate en croute - a pate baked in pastry dough such as pf1te au pate

pate feuilletée - also known as puff pastry; a rolled- in dough used for pastries, cookies and savory products; it produces a rich and buttery but not sweet baked product with hundreds of light, flaky layers

pate sucrée - a dough containing sugar that produces a very rich, crisp baked product; also known as sweet dough, it is used for tart shells

pathogen - any organism that causes disease; usually refers to bacteria; undetectable by smell, sight or taste

patissier - a pastry chef; the person responsible for all baked items, including breads, pastries and desserts

paupiette - a thin slice of meat or fish that is rolled around a filling offinely ground meat or vegetables, then fried, baked or braised in wine or stock

paysanne - foods cut into flat square, round or triangular items with dimensions of 1/2 inch X ½ inch X ⅓ inch (1.2 centimeters X 1.2 centimeters X 3 millimeters)

pearling - a milling process in which all or part of the hull, bran and germ are removed from grains

pectin - a gelatin-like carbohydrate obtained from certain fruits; used to thicken jams and jellies

pepperoni - a hard, thin, air-dried Italian sausage seasoned with red and black pepper

persillade - (1) a food served with or containing parsley; (2) a mixture of bread crumbs, parsley and garlic used to coat meats, especially lamb

pH - a measurement of the acid or alkali content of a solution, expressed on a scale of 0 to 14.0. A pH of 7.0 is considered neutral or balanced. The lower the pH value, the more acidic the substance. The higher the pH value, the more alkaline the substance.

physical hazard - a danger to the safety of food caused by particles such as glass chips, metal shavings, bits of wood or other foreign matter

pickle - (1) to preserve food in a brine or vinegar solution; (2) food that has been preserved in a seasoned brine or vinegar, especially cucumbers. Pickled cucumbers are available whole, sliced, in wedges, or chopped as a relish, and may be sweet, sour, dill- flavored or hot and spicy.

pigment - any substance that gives color to an item

pilaf - a cooking method for grains in which the grains are lightly sautéed in hot fat and then a hot liquid is added; the mixture is simmered without stirring until the liquid is absorbed

poaching - a moist-heat cooking method that uses convection to transfer heat from a hot (approximately 160°F-180°F [71°C-82°C]) liquid to the food submerged in it

polyunsaturated fats - see unsaturated fats

pomes - members of the Rosaceae family; tree fruits with a thin skin and firm flesh surrounding a central core containing many small seeds (called pips or carpels); include apples, pears and quince

ponzu – a Japanese dipping sauce traditionally made with lemon juice or rice wine vinegar, soy sauce, mirin or sake, seaweed and dried bonito flakes

pork - the meat of hogs, usually slaughtered under the age of one year

posole - also known as hominy or samp; dried corn that has been soaked in hydrated lime or lye; posole (Sp. pozole) also refers to a stew-like soup made with pork and hominy served in Mexico and Central America

Posterior - at or toward the rear of an object or place; opposite of anterior

potentially hazardous foods - foods on which bacteria can thrive

poultry - the collective term for domesticated birds bred for eating; they include chickens, ducks, geese, guineas, pigeons and turkeys

preserve- a fruit gel that contains large pieces or whole fruits

primal cuts--the primary divisions of muscle, bone and connective tissue produced by the initial butchering of the carcass

prix fixe - French for "fixed price"; refers to a menu offering a complete meal for a set price; also known as table d'hôtel

professional cooking - a system of cooking based on a knowledge of and appreciation for ingredients and procedures

profiteroles - small baked rounds of éclair paste filled with ice cream and topped with chocolate sauce

proofing - the rise given shaped yeast products just prior to baking

proteins - a group of compounds composed of oxygen, hydrogen, carbon and nitrogen atoms necessary for manufacturing, maintaining and repairing body tissues and as an alternative source of energy (4 calories per gram); protein chains are constructed of various combinations of amino acids

pudding - a thick, spoonable dessert custard, usually made with eggs, milk, sugar and flavorings and thickened with flour or another starch

puff pastry - see pate feuilletée

pulled sugar - a dough-like mixture of sucrose, glucose and tartaric acid that can be colored and shaped by hand into decorative items

pulses - dried seeds from a variety of legumes

pumpnickel - (1) coarsely ground 1ye flour; (2) bread made with this flour

puree - (1) to process food to achieve a smooth pulp; (2) food that is processed by mashing, straining or fine chopping to achieve a smooth pulp

puree soup - a soup usually made from starchy vegetables or legumes; after the main ingredient is simmered in a liquid, the mixture, or a portion of it) is pureed

purified water - bottled water produced by distillation, reverse osmosis, deionization or suitable processes that meet governmental standards

putrefactives - bacteria that spoil food without rendering it unfit for human consumption

quality grades - a guide to the eating qualities of meat-its tenderness, juiciness and flavor- based on an animal's age and the meat's color, texture and degree of marbling

quenelle - a small, dumpling-shaped portion of a mousseline forcemeat poached in an appropriately flavored stock; it is shaped by using two spoons

quiche - a savory tart or pie consisting of a custard baked in a pastry shell with a variety of flavorings and garnishes

quick bread - a bread, including loaves and muffins, leavened by chemical leaveners or steam rather than yeast

radiation cooking - a heating process that does not require physical contact between the heat source and the food being cooked; instead energy is transferred by waves of heat or light striking the food. Two kinds of radiant heat used in the kitchen are infrared and microwave.

raft - a crust formed during the process of clarifying consommé; it is composed of the clearmeat and impurities from the stock, which rise to the top of the simmering stock and release additional flavors

ragout - (1) traditionally, a well-seasoned, rich stew containing meat, vegetables and wine; (2) any stewed mixture

ramekin - a small, ovenproof dish, usually ceramic

rancidity - the decomposition of fats by exposure to oxygen, resulting in off flavors and destruction of nutritive components

ratites - family of flightless birds with small wings and flat breastbones; they include the ostrich, emu and rhea

recipe - a set of written instructions for producing a specific food or beverage; also known as a formula

recovery time - the length of time it takes a cooking medium such as fat or water to return to the desired cooking temperature after food is submerged in it

red fish - a name applied to various species of fish around the world. In the United States, it generally refers to a member of the drum family found in the southern Atlantic and the Gulf of Mexico. It has a reddish-bronze skin and firm, ivory flesh with a mild flavor and a typical market weight of 2 to 8 pounds (0.9 to 3.6 kilograms); it is also known as channel bass, red drum and reel bass.

red rice - an un-milled short- or long-grain rice from the Himalayas; it has a russet-colored bran and an earthy, nutty flavor

reduction - cooking a liquid such as a sauce until its quantity decreases through evaporation. To reduce by one-half means that one-half of the original amount remains. To reduce by three-fourths means that only one-fourth of the original amount remains. To reduce au sec means that the liquid is cooked until nearly dry.

refreshing - submerging a food in cold water to quickly cool it and prevent further cooking, also known as shocking; usually used for vegetables

regional cuisine - a set of recipes based on local ingredients, traditions and practices; within a larger geographical, political, cultural or social unit, regional cuisines are often variations of one another that blend together to create a national cuisine

relish - a cooked or pickled sauce usually made with vegetables or fruits and often used as a condiment; can be smooth or chunky, sweet or savory and hot or mild

remouillage - French for "rewetting"; a stock produced by reusing the bones left from making another stock. After draining the original stock from the stockpot, add fresh mirepoix, a new sachet and enough water to cover the bones and mirepoix, and a second stock can be made. A remouillage is treated like the original stock; allow it to simmer for four to five hours before straining. A remouillage will not be as clear or as flavorful as the original stock, however. It is often used to make glazes or in place of water when making stocks.

Render - (1) to melt and clarify fat; (2) to cook meat in order to remove the fat

respiration rate - the speed with which the cells of a fruit use oxygen and produce carbon dioxide during ripening

restaurateur - a person who owns or operates an establishment serving food, such as a restaurant

ribbon - a term used to describe the consistency of a batter or mixture, especially a mixture of beaten egg and sugar; when the beater or whisk is lifted, the mixture will fall back slowly onto its surface in a ribbon-like pattern

ricer - a sieve-like utensil with small holes through which soft food is forced; it produces particles about the size of a grain of rice

rillettes - meat or poultry slowly cooked, mashed and preserved in its own fat; served cold and usually spread on toast

ripe - fully grown and developed; a ripe fruit's flavor, texture and appearance are at their peak, and the fruit is ready to use as food

risers - boxes (including the plastic crates used to store glassware) covered with linens, paper or other decorative items and used on a buffet table as a base for platters, trays or displays

risotto - (1) a cooking method for grains in which the grains are lightly sautéed in butter and then a liquid is gradually added; the mixture is simmered with near-constant stirring until the still-firm grains merge with the cooking liquid; (2) a Northern Italian rice dish prepared this way

roasting - a dry-heat cooking method that heats food by surrounding it with hot, dry air in a closed environment or on a spit over an open fire; similar to baking, the term roasting is usually applied to meats, poultry, game and vegetables

roe - fish eggs

roll cuts – see oblique cuts

rolled fondant - a cooked mixture of sugar, glucose and water formulated to drape over cakes

rolled-in dough - a dough in which a fat is incorporated in many layers by using a rolling and folding procedure; it is used for flaky baked goods such as croissants, puff pastry and Danish pastry

rondeau - a shallow, wide, straight-sided pot with two loop handles

rondelles - disk-shaped slices

rotate stock – to use products in the order in which they were received; all perishable and semi-perishable goods, whether fresh, frozen, canned or dry, should be used according to the first in, first out (FIFO) principle

roisserie - cooking equipment that slowly rotates meat or other foods in front of a heating element

roulade - (1) a slice of meat, poultry or fish rolled around a stuffing; (2) a filled and rolled sponge cake

round fish - fish with round, oval or compressed bodies that swim in a vertical position and have eyes on both sides of their heads; include salmon, swordfish and cod

rounding - the process of shaping dough into smooth, round balls; used to stretch the outside layer of gluten into a smooth coating

roux - a cooked mixture of equal parts flour and fat, by weight, used as a thickener for sauces and other dishes; cooking the flour in fat coats the starch granules with the fat and prevents them from lumping together or forming lumps when introduced into a liquid

royal icing - also known as decorator's icing, an uncooked mixture of confectioner's sugar and egg whites that becomes hard and brittle when dried; used for making intricate cake decorations

rub - a mixture of fresh or dried herbs and spices ground together; it can be used dried, or it can be mixed with a little oil, lemon juice, prepared mustard or ground fresh garlic or ginger to make a wet rub

Russian service - restaurant service in which the entree, vegetables, and starches are served from a platter on to the diner's plate by a waiter

sabayon - also known as zabaglione; a foamy, stirred custard sauce made by whisking eggs, sugar and wine over low heat

sachet d'epices; sachet - French for "bag of spices"; aromatic ingredients tied in a cheesecloth bag and used to flavor stocks and other foods; a standard sachet contains parsley stems, cracked peppercorns, dried thyme, bay leaf, cloves and, optionally, garlic

salad - a single food or a mix of different foods accompanied or bound by a dressing

salad dressing - a sauce for a salad; most are based on a vinaigrette, mayonnaise or other emulsified product

salad greens - a variety of leafy vegetables that are usually eaten raw

salamander - a small broiler used primarily for browning or glazing the tops of foods

Salsa - Spanish for "sauce"; (1) generally, a cold chunky mixture of fresh herbs, spices, fruits and/or vegetables used as a sauce for meat, poultry, fish or shellfish; (2) in Italian usage, a general term for pasta sauces

salt-curing - the process of surrounding a food with salt or a mixture of salt, sugar, nitrite-based curing salt, herbs and spices; salt-curing dehydrates the food, inhibits bacterial growth and adds flavor

sanding sugar - granulated sugar with a large, coarse crystal structure that prevents it from dissolving easily; used for decorating cookies and pastries

sanitation - the creation and maintenance of conditions that will prevent food contamination or food-borne illness

sanitize - to reduce pathogenic organisms to safe levels

sansho - dried berries of the prickly ash tree, ground into a powder that is also known as Szechuan pepper, fagara and Chinese pepper; generally used in Japanese cooking to season fatty foods

sashimi - raw fish eaten without rice; usually served as the first course of a Japanese meal

saturated fats - fats found mainly in animal products and tropical oils; usually solid at room temperature; the body has more difficulty breaking down saturated fats than either monounsaturated or polyunsaturated fats

sauce - generally, a thickened liquid used to flavor and enhance other foods

sausage - a seasoned forcemeat usually stuffed into a casing; a sausage can be fresh, smoked and cooked, dried or hard

sautéing - a dry-heat cooking method that uses conduction to transfer heat from a hot pan to food with the aid of a small amount of hot fat; cooking is usually done quickly over high temperatures

sauteuse - the basic sauté pan with sloping sides and a single long handle

sautoir - a sauté pan with straight sides and a single long handle

savory - a food that is not sweet

scald - to heat a liquid, usually milk, to just below the boiling point

scallop - a thin, boneless slice of meat

score - to cut shallow gashes across the surface of a food before cooking

Scoville Heat Units - a subjective rating for measuring a chile's heat; the sweet bell pepper usually rates 0 units, the tabasco pepper rates from 30,000 to 50,000 units and the habanero pepper rates from 100,000 to 300,000 units

Seafood - an inconsistently used term encompassing some or all of the following: saltwater fish, freshwater fish, saltwater shellfish, freshwater shellfish and other edible marine life

sear - to brown food quickly over high heat; usually done as a preparatory step for combination cooking methods

season - traditionally, to enhance flavor by adding salt; (2) more commonly, to enhance flavor by adding salt and/or pepper as well as herbs and spices; (3) to mature and bring a food (usually beef or game) to a proper condition by aging or special preparation; (4) to prepare a pot, pan or other cooking surface to prevent sticking

seasoning - an item added to enhance the natural flavors of a food without dramatically changing its taste; salt is the most common seasoning

seitan - a form of wheat gluten; it has a firm, chewy texture and a bland flavor; traditionally simmered in a broth of soy sauce or tamari with ginger, garlic and kombu (seaweed)

seltzer water - a flavorless natural mineral water with carbonation, originally from the German town of Niederselters

semi a la carte-describes a menu on which some foods (usually appetizers and desserts) and beverages are priced and ordered separately, while the entree is accompanied by and priced to include other dishes such as a salad, starch or vegetable

semifreddi - also known as still-frozen desserts; items made with frozen mousse, custard or cream into which large amounts of whipped cream or meringue are folded in order to incorporate air; layers of sponge cake and/or fruits may be added for flavor and texture; include frozen snuffles, marquise, mousses and Neapolitans

semolina - see durum wheat

sfoglia - a thin, flat sheet of pasta dough that can be cut into ribbons, circles, squares or other shapes

shallow poaching - a moist-heat cooking method that combines poaching and steaming; the food (usually fish) is placed on a vegetable bed and partially covered with a liquid (cuisson) and simmered

shellfish - aquatic invertebrates with shells or carapaces

sherbet - a frozen mixture of fruit juice or fruit puree that contains milk and/or eggs for creaminess

shocking - also called refreshing; the technique of quickly chilling blanched or par-cooked foods in ice water; prevents further cooking and sets colors

shortening - (1) a white, flavorless, solid fat formulated for baking or deep-frying; (2) any fat used in baking to tenderize the product by shortening gluten strands

shred - to cut into thin but irregular strips

shrinkage - the loss of weight in a food due to evaporation of liquid or melting of fat during cooking

shuck - (1) a shell, pod or husk; (2) to remove the edible portion of a food (for example, clam meat, peas or an ear of corn) from its shell, pod, or husk

side masking - the technique of coating only the sides of a cake with a garnish such as chopped nuts

sifting- shaking one or more dry substances through a sieve or sifter to remove lumps, incorporate air and mix

silver skin - the tough connective tissue that surrounds certain muscles; see Elastin

simmering - (1) a moist-heat cooking method that uses convection to transfer heat from a hot (approximately 185°F-205°F [85°C-96°C]) liquid to the food submerged in it; (2) maintaining the temperature of a liquid just below the boiling point

skim - to remove fat and impurities from the surface of a liquid during cooking

slice - to cut an item into relatively broad, thin pieces

slurry - a mixture of raw starch and cold liquid used for thickening

small sauces - also known as compound sauces; made by adding one or more ingredients to a leading sauce; they are grouped together into families based on their leading sauce; some small sauces have a variety of uses, while others are traditional accompaniments for specific foods

smoke point- the temperature at which a fat begins to break down and smoke

smoking - any of several methods for preserving and flavoring foods by exposing them to smoke; includes cold smoking (in which the foods are not fully cooked) and hot smoking (in which the foods are cooked)

smorbrod - Norwegian cold open-faced sandwiches; similarly, the Swedish term smorgasbord refers to a buffet table of bread and butter, salads, open-faced sandwiches, pickled or marinated fish, sliced meats and cheeses

soda water - a flavorless water with induced carbonation, consumed plain or used as a mixer for alcoholic drinks or soda fountain confections; also known as club soda and seltzer

soft water - water with a relatively high sodium concentration

solid pack - canned fruits or vegetables with little or no water added

soppressata - a hard, aged Italian salami, sometimes coated with cracked peppercorns or herbs

sorbet - a frozen mixture of fruit juice or fruit puree; similar to sherbet but without milk products

soufflé - either a sweet or savory fluffy dish made with a custard base lightened with whipped egg whites and then baked; the whipped egg whites cause the dish to puff when baked

sous-chef - a cook who supervises food production and who reports to the executive chef; he or she is second in command of a kitchen

specifications; specs - standard requirements to be followed in procuring items from suppliers

spice - any of a large group of aromatic plants whose bark, roots, seeds, buds or berries are used as a flavoring; usually used in dried form, either whole or ground

spring form pan - a circular baking pan with a separate bottom and a side wall held together with a clamp that is released to free the baked product

spring lamb - the meat of sheep slaughtered before they have fed on grass or grains

spring water - water obtained from an underground source that flows naturally to the earth's surface

spun sugar - a decoration made by flicking dark caramelized sugar rapidly over a dowel to create long, fine, hair-like threads

squab - the class of young pigeon used in food service operations

staling - also known as starch retrogradation; a change in the distribution and location of water molecules within baked products; stale products are firmer, drier and more crumbly than fresh baked goods

standard breading procedure - the procedure for coating foods with crumbs or meal by passing the food through flour, then an egg wash and then the crumbs; it gives foods a relatively thick, crisp coating when deep-fried or pan-fried

standardized recipe - a recipe producing a known quality and quantity of food for a specific operation

staples - (1) certain foods regularly used throughout the kitchen; (2) certain foods, usually starches, that help form the basis for a regional or national cuisine and are principal components in the diet

starch - (1) complex carbohydrates from plants that are edible and either digestible or indigestible (fiber); (2) a rice, grain, pasta or potato accompaniment to a meal

starch retrogradation - the process whereby starch molecules in a batter or dough lose moisture after baking; the result is baked goods that are dry or stale

starchy potatoes - see mealy potatoes

static menu - a menu offering patrons the same foods every day

station chef - the cook in charge of a particular department in a kitchen

steak - (1) a cross-section slice of a round fish with a small section of the bone attached; (2) a cut of meat, either with or without the bone

steamed milk - milk that is heated with steam generated by an espresso machine; it should be approximately 150°F to 170°F (66°C to 77°C)

steamer - a set of stacked pots with perforations in the bottom of each pot; they fit over a larger pot filled with boiling or simmering water and are used to steam foods; (2) a perforated insert made of metal or bamboo placed in a pot and used to steam foods; (3) a type of soft-shell clam from the East Coast; (4) a piece of gas or electric equipment in which foods are steamed in a sealed chamber

steaming - a moist-heat cooking method in which heat is transferred from steam to the food being cooked by direct contact; the food to be steamed is placed in a basket or rack above a boiling liquid in a covered pan

steel - a tool, usually made of steel, used to hone or straighten knife blades

steep - to soak food in a hot liquid in order to either extract its flavor or soften its texture

steers - male cattle castrated prior to maturity and principally raised for beef

sterilize - to destroy all living microorganisms

stewing - a combination cooking method similar to braising but generally involving smaller pieces of meat that are first blanched or browned, then cooked in a small amount of liquid that is served as a sauce

stir-frying - a dry-heat cooking method similar to sautéing in which foods are cooked over very high heat using little fat while stirring constantly and briskly; often done in a wok

stirring - a mixing method in which ingredients are gently mixed by hand until blended, usually with a spoon, whisk or rubber spatula

stock (French fond) - a clear, un-thickened liquid flavored by soluble substances extracted from meat, poultry or fish and their bones as well as from a mirepoix, other vegetables and seasonings

stone fruits - members of the genus *Prunus*, also known as drupes; tree or shrub fruits with a thin skin, soft flesh and one woody stone or pit; include apricots, cherries, nectarines, peaches and plums

straight dough method - a mixing method for yeast breads in which all ingredients are simply combined and mixed

strain - to pour foods through a sieve, mesh strainer or cheesecloth to separate or remove the liquid component

streusel - a crumbly mixture of fat flour, sugar and sometimes nuts and spices, used to top baked goods

subcutaneous fat - also known as exterior fat; the fat layer between the hide and muscles

submersion poaching - a poaching method in which the food is completely covered with the poaching liquid

sub-primal cuts - the basic cuts produced from each primal

sucrose - the chemical name for common refined sugar; it is a disaccharide, composed of one molecule each of glucose and fructose

sugar - a carbohydrate that provides the body with energy and gives a sweet taste to foods

sugar syrups - either simple syrups (thin mixtures of sugar and water) or cooked syrups (melted sugar cooked until it reaches a specific temperature)

sundae - a great and gooey concoction of ice cream, sauces (hot fudge, marshmallow and caramel, for example), toppings (nuts, candies and fresh fruit to name a few) and whipped cream

supreme - an intermediary sauce made by adding cream to chicken veloute

sushi - cooked or raw fish or shellfish rolled in or served on seasoned rice

sweat - to cook a food in a pan (usually covered), without browning, over low heat until the item softens and releases moisture; sweating allows the food to release its flavor more quickly when cooked with other foods

sweetbreads - the thymus glands of a calf or lamb

syrup - sugar that is dissolved in liquid, usually water, and often flavored with spices or citrus zest

syrup pack - canned fruits with a light, medium or heavy syrup added

table d'hôte - see *Prix fixe*

tahini - a thick, oily paste made from crushed sesame seeds

tamale - a Mexican baked dish consisting of seasoned meats, poultry and or vegetables wrapped in a corn husk spread with masa

tang - the portion of a knife's blade that extends inside the handle

tart - a sweet or savory filling in a baked crust made in a shallow, straight-sided pan without a top crust

tartlet - a small, single-serving tart

taste - the sensations, as interpreted by the brain, of what we detect when food, drink or other substances come in contact with our taste buds

tempeh - fermented whole soybeans mixed with a grain such as rice or millet; it has a chewy consistency and a yeasty, nutty flavor

temper - to heat gently and gradually; refers to the process of slowly adding a hot liquid to eggs or other foods to raise their temperature without causing them to curdle

temperature danger zone - the broad range of temperatures between 41°F and 135°F (5°C and 57°C) at which bacteria multiply rapidly

tempering - a process for melting chocolate during which the temperature of the cocoa butter is carefully stabilized; this keeps the chocolate smooth and glossy

terrine - (1) traditionally, a loaf of coarse forcemeat cooked in a covered earthenware mold and without a crust; today, the word is used interchangeably with pate; (2) the mold used to cook such items, usually a rectangle or oval shape and made of ceramic

thickening-agents - ingredients used to thicken sauces; include starches (flour, cornstarch and arrowroot), gelatin and liaisons

timbale - (1) a small pail-shaped mold used to shape foods; (2) a preparation made in such a mold

tisanes - beverages made from herbal infusions that do not contain any tea

tofu- also known as bean curd; it is created from soymilk using a method similar to the way animal milk is separated into curds and whey in the production of cheese

togarishi - a Japanese spice and sesame seed blend available at Asian markets

tomato sauce - a leading sauce made from tomatoes, vegetables, seasonings and white stock; it may or may not be thickened with roux

toque (toke) - the tall white hat worn by chefs

torchon - French for a cloth or towel, such as a dishcloth. The term is sometimes used to refer to dishes in which the item has been shaped into a cylinder by being wrapped in a cloth or towel.

torte - in Central and Eastern European usage, refers to a rich cake in which all or part of the flour is replaced with finely chopped nuts or bread crumbs

tossed salad - a salad prepared by placing the greens, garnishes and salad dressing in a large bowl and tossing to combine

total recipe cost - the total cost of ingredients for a particular recipe ; it does not reflect overhead, labor, fixed expenses or profit

tourner - to cur into football-shaped pieces with seven equal sides and blunt ends

toxins - by-products of living bacteria that can cause illness if consumed in sufficient quantities

tranche - an angled slice cut from fish fillets

trans fats - a type of fat created when vegetable oils are solidified through hydrogenation

tripe - the edible lining of a cow's stomach

truffles - (1) flavorful tubers that grow near the roots of oak or beech trees; (2) rich chocolate candies made with ganache

truss-- to tie poultry with butcher's twine into a compact shape for cooking

tube pan - a deep round baking pan with a hollow tube in the center

tuber - the fleshy root, stem or rhizome of a plant from which a new plant will grow; some, such as potatoes, are eaten as vegetables

tunneling - large tubular holes in muffins and cakes, a defect caused by improper mixing

unit cost - the price paid to acquire one of the specified units

univalves - single-shelled mollusks with a single muscular foot, such as abalone

unsaturated fats - fats that are normally liquid (oils) at room temperature; they may be monounsaturated (from plants such as olives and avocados) or polyunsaturated (from grains and seeds such as corn, soybeans and safflower as well as from fish)

vacuum packaging - a food preservation method in which fresh or cooked food is placed in an airtight container (usually plastic). Virtually all air is removed from the container through a vacuum process, and the container is then sealed.

vanilla custard sauce - also known as *crème anglaise*; a stirred custard made with egg yolks, sugar and milk or half-and-half and flavored with vanilla; served with or used in dessert preparations

- vanillin** - (1) whitish crystals of vanilla flavor that often develop on vanilla beans during storage; (2) synthetic vanilla flavoring
- variety** - the result of breeding plants of the same species that have different qualities or characteristics; the new plant often combines features from both parents
- variety meats** - *see* offal
- veal** - the meat of calves under the age of nine months
- vegan** - a vegetarian who does not eat dairy products, eggs, honey or any other animal product; vegans usually also avoid wearing and using animal products such as fur, leather or wool
- vegetable** - any herbaceous plant (one with little or no woody tissue) that can be partially or wholly eaten; vegetables can be classified as cabbages, fruit-vegetables, gourds and squashes, greens, mushrooms and truffles, onions, pods and seeds, roots and tubers and stalks
- vegetarian** - a person who does not eat any meat, poultry, game, fish, shellfish or animal by-products such as gelatin or animal fats; may also exclude dairy products or eggs from the diet
- veloute** - a leading sauce made by thickening a white stock (fish, veal, or chicken) with roux
- venison** - flesh from any member of the deer family, including antelope, elk, moose, reindeer, red-tailed deer, white-tailed deer, mule deer and axis deer
- vent** - (1) to allow the circulation or escape of a liquid or gas; (2) to cool a pot of hot liquid by setting the pot on blocks in a cold water bath and allowing cold water to circulate around it
- vinaigrette** - a temporary emulsion of oil and vinegar seasoned with salt and pepper
- vinegar** - a thin, sour liquid used as a preservative, cooking ingredient and cleaning solution
- viniculture** - the art and science of making wine from grapes
- vintner** - a winemaker
- viruses** - the smallest known form of life; they invade the living cells of a host and take over those cells' genetic material, causing the cells to produce more viruses; some viruses can enter a host through the ingestion of food contaminated with those viruses
- viscera** - internal organs
- vitamins** - compounds present in foods in very small quantities; they do not provide energy but are essential for regulating body functions
- viticulture** - the art and science of growing grapes used to make wines; factors considered include soil, topography (particularly, sunlight and drainage) and microclimate (temperature and rainfall)
- vol-au-vents** - deep, individual portion-sized puff pastry shells, often shaped as a heart, fish or fluted circle; they are filled with a savory mixture and served as an appetizer or main course
- volume** - the space occupied by a substance; volume measurements are commonly expressed as liters, teaspoons, tablespoons, cups, pints and gallons
- wash** - a glaze applied to dough before baking; a commonly used wash is made with whole egg and water
- water bath** - *see* bain marie
- water buffalo's milk** - milk produced by a female water buffalo; it has approximately 7.5% milkfat, 10.3% milk solids and 82.2% water
- water pack** - canned fruits with water or fruit juice added
- waxy potatoes** - those with a low starch content and thin skin; they are best for boiling
- weight** - the mass or heaviness of a substance; weight measurements are commonly expressed as grams, ounces and pounds
- whetstone** - a dense, grained stone used to sharpen or hone a knife blade
- whipping** - a mixing method in which foods are vigorously beaten in order to incorporate air; a whisk or an electric mixer with its whip attachment is used
- white stew** - *see* fricassee and blanquette
- white stock** - a light-colored stock made from chicken, veal, beef or fish bones simmered in water with vegetables and seasonings

whitewash – a thin mixture or slurry of flour and cold water used like cornstarch for thickening

whole butter- butter that is not clarified , whipped or reduced-fat

wine - an alcoholic beverage made from the fermented juice of grapes; may be sparkling (effervescent) or still (non-effervescent) or fortified with additional alcohol

work section - see work station

work station - a work area in the kitchen dedicated to a particular task, such as broiling or salad making; workstations using the same or similar equipment for related tasks are grouped together into work sections

yeasts - microscopic fungi whose metabolic processes are responsible for fermentation; they are used for leavening bread and in cheese, beer and wine making

yield - the total amount of a product made from a specific recipe; also , the amount of a food item remaining after cleaning or processing

yield grades - a grading program for meat that measures the amount of usable meat on a carcass

zabaglione - see sabayon

zest - the colored outer portion of the rind of citrus fruit; contains the oil that provides flavor and aroma

zushi - the seasoned rice used for sushi

Appendix

KITCHEN WEIGHT AND MEASURES

1 pinch	= 1/8 teaspoon
<u>3</u> teaspoons	= <u>1</u> tablespoon (teaspoon – tsp / Tablespoon = tbsp.)
<u>2</u> tablespoons	= <u>1</u> ounce
<u>1</u> cup	= <u>8</u> ounces / 16 tbsp.
$\frac{3}{4}$ cup	= 6 ounces / 12 tbsp.
$\frac{1}{2}$ cup	= 4 ounces / 8 tbsp.
$\frac{1}{4}$ cup	= 2 ounces / 4 tbsp.
16 ounces	= 1 pound
2 cups	= 1 pint / 16 oz.
4 cups	= 1 quart / 32 oz.
16 cups	= 1 gallon / 128 oz.
2 quarts	= $\frac{1}{2}$ gallon / 64 oz.
4 quarts	= 1 gallon

METRIC CONVERSIONS

1 gram	= 0.03527 oz.
1 kilogram	= 2.2 pounds
<u>28.35</u> grams	= <u>1</u> ounce / 2 tbsp.
<u>453.6</u> g.	= 1 pound
<u>5</u> milliliters	= 1 teaspoon
<u>15</u> milliliters	= 1 tablespoon
<u>240</u> milliliters	= <u>1</u> cup
0.4732 liters	= 1 pint
0.951 liters	= 1 quart
1 liter	= 1.06 quarts

FOOD QUANTITY NEEDED

- (1) Number to be served X portions size = number of ounces needed
 Number of ounces needed / 16 (ounces per pound) = pounds needed

EXAMPLE: 25 hamburgers, 8 oz. each. SO.... 8 oz. X 25 = 200 ounces needed. So....200oz. / 16oz (1 lb.) = 12.5 pounds of hamburger needed.

RECIPE CONVERSION

Must know: (1) number of servings – recipe yield, and (2) # of servings needed.

- **More servings than the recipe** - recipe yield divided into number of servings needed is the amount needed.
- **Less servings needed than the recipe yields** - divide number of servings needed divided by recipe yield is the percentage to reduce the recipe by.

EXAMPLES:

(1) Recipe yields 6 servings – you need 24 servings SO... $24 / 6 = 4$ times the recipe amounts.

(2) Recipe yields 24 servings and you need 6 servings So.... $6 \text{ servings} / 24 \text{ servings} = 25\%$ of recipe ingredients. Or – $6/6 = 1$ $24/6 = 4$ = ratio 1 to 4 or 25%

Measurement and conversion charts

Formulas for Exact measurement

	WHEN YOU KNOW:	MULTIPLY BY:	TO FIND:
Mass (weight)	Ounces	28.35	grams
	Pounds	0.45	kilograms
	Grams	0.035	ounces
	Kilograms	2.2	pounds
Volume (capacity)	teaspoons	5.0	milliliters
	tablespoons	15.0	milliliters
	fluid ounces	29.57	milliliters
	cups	0.24	liters
	pints	0.47	liters
	quarts	0.95	liters
	gallons	3.785	liters
	milliliters	0.034	fluid ounces
Temperature	Fahrenheit	5/9 (after subtracting 32)	Celsius
	Celsius	9/5 (then add 32)	Fahrenheit

Rounded Measurement for Quick Reference

1 oz.		= 30 g
4 oz.		= 120 g
8 oz.		= 240 g
16 oz.	= 1 lb.	= 480 g
32 oz.	= 2 lb.	= 960 g
36 oz.	= 2¼ lb.	= 1000 g (1 kg)
1/4 tsp.	= 1/24 fl. oz.	= 1 ml
½ tsp.	= 1/12 fl. oz.	= 2 ml
1 tsp.	= 1/6 fl. oz.	= 5 ml
1 Tbsp.	= 1/2 fl. oz.	= 15 ml
1 C.	= 8 fl. oz.	= 240 ml
2 c. (1 pt.)	= 16 fl. oz.	= 480 ml
4 c. (1 qt.)	= 32 fl. oz.	= 960 ml
4 qt. (1 gal.)	= 128 fl. oz.	= 3.75 l
32°F		= 0°C
122°F		= 50°C
212°F		= 100°C

Conversion Guidelines

1 gallon	4 quarts
	8 pints
	16 cups (8 fluid ounces)
	128 fluid ounces
1 fifth bottle	approximately 1 ½ pints or exactly 26.5 fluid ounces

1 measuring cup	8 fluid ounces (a coffee cup generally holds 6 fluid ounces)
1 large egg white	1 ounce (average)
1 lemon	1 to 1 ¼ fluid ounces of juice
1 orange	3 to 3½ fluid ounces of juice

Scoop Sizes

Scoop Number	Level Measure
6	2/3 cup
8	1/2 cup
10	2/5 cup
12	1/3 cup
16	1/4 cup
20	3 1/5 tablespoons
24	2 2/3 tablespoons
30	2 1/5 tablespoons
40	1 3/5 tablespoons

The number of the scoop determines the number of servings in each quart of a mixture: for example, with a No. 16 scoop, one quart of mixture will yield 16 servings.

Ladle Sizes

Size	Portion of a Cup	Number per Quart	Number per Liter
1 fl. oz.	1/8	32	34
2 fl. oz.	1/4	16	17
2 2/3 fl. oz.	1/3	12	13
4 fl. oz.	1/2	8	8.6
6 fl. oz.	3/4	5 1/3	5.7

Canned Goods

SIZE	NO. OF CANS PER CASE	AVERAGE WEIGHT	AVERAGE NO. CUPS PER CAN
No. ¼	1 & 2 doz.	4 oz.	1/2
No. ½	8	8 oz.	1
No. 300	1 & 2 doz.	14 oz.	1 3/4
No. 1 tall (also known as 303)	2 & 4 doz.	16 oz.	2
No. 2	2 doz.	20 oz.	2 1/2
No. 2½	2 doz.	28 oz.	3 1/2
No. 3	2 doz.	33 oz.	4
No. 3 cylinder	1 doz.	46 oz.	5 2/3
No. 5	1 doz.	3 lb. 8 oz.	5 1/2
No. 10	6	6 lb. 10 oz.	13

Basic Cooking Methods

With-in the cooking process, there are three distinct methods in reference to applying heat to food. These are: moist heat cooking, dry heat cooking, and combination cooking

Understanding the working procedure of each of these methods, will help you to become a better, more confident and successful chef.

Moist Heat Cooking

The method of applying heat via hot liquids, associated with:

1. Poaching,
2. Simmering,
3. Boiling,
4. Blanching
5. Braising
6. Steaming

These cooking methods are most useful when a cook fully understands the relationship of time and temperature. Establishing familiarity with these aspects of the cooking process will immediately improve and enhance one's ability in the kitchen. The moist heat cooking methods follow with regard to temperature ranges.

1. Poaching - 160-180 degrees Fahrenheit

Poaching: to submerge food in a hot liquid at a temperature range of 160-180 degrees Fahrenheit, I like to use the term "gentle poach". This requires submerging food into a hot liquid of no higher than 180 degrees Fahrenheit, and can be approached by two different methods. Two approaches are applicable: place a food product in a cold liquid, slowly raising the temperature up to 170/degrees, or bring the liquid to a boil then submerge the raw food product into the hot liquid then, immediately remove it from the heat source. Either method works well to cook the product while ultimately maintaining or protecting the quality and integrity of the food. It is important to remember that all proteins coagulate when applied to heat.

2. Simmering & Stewing - 180-205 degrees Fahrenheit

Simmering: to submerge a food in a hot liquid within a temperature range of 180-205 degrees, representing a slow to rapid performance result. Simmering is a long and slow cooking method utilized for cooking less tender cuts of meat as in a stew. Subsequently, less tender cuts of meat are most often less expensive. When simmering at the proper temperature one has total control over the cooking process with less evaporation or controlled loss of liquid. Evaporation can be controlled by utilizing a cover on the pot or pan. Ultimately, this method allows for both maximum flavor extraction, and maximum tenderization of a protein.

Stewing: to sear off in hot fat, then simmer fully submerged in a flavored liquid (stock or broth). Stewing is considered a 'low and slow' cooking method, is best prepared in a cassoulet or crock-pot, and is recognized as a combination form of cookery.

3. **Boiling:** to submerge a food in a hot liquid at a temperature range of 205-212 degrees. A true boil is not effectively reached until 212/degrees, but for convenience and better control, consider 205 – 210 a gentle boil and 210 – 212 a rapid boil.
4. **Blanching:** to cook food quickly submerged in a hot liquid such as boiling water (212 degrees F.) or hot fat. Usually this method is followed by “shocking” a process of halting cooking by submerging the food in an ice water bath. We blanch foods for the following purposes:
 - Speeds up the final cooking process
 - Promotes more even and consistent cooking throughout
 - Enhances color pigmentation
 - Promotes vitamin and nutrient retention
 - Helps to prevent spoilage/extends the shelf life of a product
 - Blanched vegetables can be easier for some people to digest v/s eating raw food
 - Improves flavor - cooked food can taste better than raw food

Of course, if you were blanching in hot oil as in “French fries”, one would not shock the food afterwards. The process of blanching potatoes in hot oil, removes excess liquid from the potato, prevents oxidization and yields a much crispier fried potato as a result.

5. **Braising:** meats and vegetables are seared and browned in hot fat, then simmered in a covered pot or roasting pan with a small amount of liquid. This is referred to as a

combination form of cookery. Usually, this method of cookery is reserved for less tender and less expensive cuts of meats. Eye of the round, the cut of beef commonly recommended for braising pot roast is a good example of this application or cooking method. When braising a pot roast the liquid or stock should come half way up the side of the roast. Half way through the cooking process the roast would be turned over. Braising can be done on top of the stove or in the controlled temperature environment of an oven. The latter is the preferred method. However, be sure to bring the liquid to a simmer before placing it in the oven. Long, slow cooking produces the best results with less evaporation and shrinkage. A nominal braising temperature is 300 degrees Fahrenheit for three hours. This of course depends on the cut, weight and size of the meat being braised. The oven braising temperature range is 275 to 325 degrees Fahrenheit.

6. **Steaming:** one of the hottest cooking mediums available ranging from 212 degrees Fahrenheit and higher. That is why pressure-cooking generally reduces overall cooking times by 2/3rds. This method is also arguably recognized and recommended for maximum vitamin and nutrient retention. Essential dietary vitamin and nutrient values are not washed away during the cooking process. As a word of caution, be very careful when cooking with steam, it is very hot and will burn if the steam is exposed to the skin or flesh of an individual. Never remove the cover of a steamer and look directly into the pot. Be sure to allow the steam to escape prior to inspecting your cooked foods.

Dry Heat Cooking

1. Roasting v/s Baking
 2. Pan Roasting
 3. Stove Top Smoking
 4. Spit roasting
 5. Grilling / Barbecuing
 6. Broiling
 7. Griddling
1. **Roasting v/s Baking (300 to 400 degrees Fahrenheit):** I always ask this question on day one of my classes while discussing cooking methods. What is the difference between roasting and baking? Often, this question is followed by a long pause and then a few

suggestions are offered. However, the answer is quite simple; there is no difference. Both cooking methods are performed in the temperature-controlled environment of an oven. One can low temperature roast or bake and one can high temperature roast or bake. They are both considered dry heat methods of cookery. The only difference is the semantics involved in describing a particular type of food or dish. For example, oven roasted breast of chicken verses baked chicken. Usually, the term roasting refers to meats, poultry, fish, and vegetables and baking refers more to the baking of bread or sweet and savory pastries.

2. **Pan Roasting (350 to 450 degrees Fahrenheit):** a common cooking method frequently found on menus across America today. This method requires only a minimal amount of fat. After a food item is seared off (browned) in a hot pan on top of the stove, it is moved to a low or high temperature oven (dependent on the size of the cut) to complete the cooking process.
3. **Stove Top Smoking (200 to 220 degrees Fahrenheit):** is yet another dry heat cooking method. This method was traditionally carried out on a backyard BBQ or grill. Today smoking can be done on a grill or the stovetop or in an oven. However, all indoor smoking requires a good ventilation system or exhaust fan. For indoor smoking, soak wood chips in water for thirty minutes prior to using them. Drain them well, pat them dry with paper towel and then scatter them in the bottom of a roasting pan. Insert a wire rack over the wood chips, and then place your meat, fish, poultry or vegetables on the rack. Place a tightly fitting lid on the pan and secure it with aluminum foil. Begin by heating the pan on top of the stove until the wood chips start smoking. Adjust the flame or temperature to produce an even and consistent burn. At this point, the smoking procedure can be finished on top of the stove or in an oven. Due to the fact that this cooking method is so dry, it is recommended that all protein food products be marinated or brined prior to the smoking process. See Brining....
4. **Spit roasting (minimum 300 degrees Fahrenheit):** this age-old method occurs by which a food item is skewered, and then placed on a rotisserie device over or next to an indirect flame. The advantages of using this method are uniform cooking throughout and even browning and self- basting. There is nothing more satisfying than a spit roasted chicken, marinated leg of lamb or barbecued pork loin cooked in your own back yard on a rotisserie, above a charcoal grill or a slow burning open pit wood fire...Wow! Brining is also recommended for this method of cookery.

5. **Grilling Verses Barbecuing (350 to 400 degrees Fahrenheit):** being from the North East this is a frequently asked question: When cooking steaks outdoors on a gas grill am I grilling or barbecuing? Why is it when inviting guests we often say; we are having a backyard barbecue this afternoon would you like to join us? Although similar, there are some very distinct differences between the two cooking methods. Traditional barbecuing is done over rendered molten coals or cindered wood ash, over long periods and best described as a long, 'low and slow', methodical cooking process. Thus, fattier less expensive cuts of meat are recommended for this method of cooking.

Grilling is generally cooking over high heat with charcoal, wood or gas. Items are marked or seared on the outside surface, then most often moved and finished in an oven, as not to over-char the outside surface. Alternately, move your charred foods to a rack raised above the heat source rather than directly over it. Barbecued foods are slow cooked in a low temperature oven or over slow burning coals or wood over a long period, then moved to a grill or broiler for final finishing. Barbecue sauce can be applied by brushing during the final stages of cooking - or served with on the side as an accompaniment.

6. **Broiling (500 to 550 degrees Fahrenheit):** can be described as a rapid high heat cooking method achieved by a direct radiant heat source from above. Typically gas or electric broiling can be a very low fat way of cooking due to the fact that very little fat or liquid is required during the cooking process. Marinated foods work well using this direct heat method. Once an item is fully cooked on one side, it is turned over to finish the process on the other side. Broiling is a clean and efficient way to accomplish Maillard enzymatic browning, the toasting of breadcrumbs or melting cheese as in "Gratinee".
7. **Griddling (250 to 375 degrees Fahrenheit):** is accomplished on a flat top temperature controlled surface, referred to as a pancake griddle. The heat source is from the bottom and usually a small amount of fat or vegetable spray is required to prevent sticking. The latest trend is to use a grooved or raised griddle surface that leaves the appearance of open flame grill marks on the foods that are being prepared an in a "Panini" griddle.

Dry Heat Using Fat

1. Sautéing
2. Pan Frying
3. Deep Fat Frying
4. Pan Searing

5. Radiation or Microwaving

The only distinguishable differences between these cooking methods are the varying amounts of fat required for each. If a recipe is calling for clarified butter, it is ok to use whole butter but oil must be added to raise the smoking point of the butter. I recommend using half butter and half oil. The food product can be placed in the pan when the butter is melted and after it stops foaming.

1. **Sautéing (350 to 400 degrees Fahrenheit):** to sauté literally means “to jump” referring to the action of the food being tossed around or flipped directly in the pan. The sloped shaped sides of the pan help to facilitate this action. This method is achieved by cooking foods on very high heat in small amounts of fat. I recommend about (1-1 ½) ounces of fat in a standard 8” - 10” sauté pan. For the best results, get the pan hot, pour in the oil, followed by the food product. The most important factor when sautéing, is not to overcrowd the pan. NEVER let your proteins touch. Direct contact between proteins results in overcrowding. Overcrowding the pan causes moisture to build up, creating steam, which counteracts browning. Since browning is often the objective when sautéing, then anti-browning becomes counter-productive. Sometimes, meats are dredged in seasoned flour prior to being sautéed to help achieve uniform browning and to thicken a soup, stew, or sauce. This is perfectly acceptable; however never pre-dredge proteins ahead of time, as moisture in the product will make the flour wet and gummy.
2. **Pan Frying or Shallow Fat Frying (325 to 400 degrees Fahrenheit):** is accomplished in a shallow straight-sided pan with a moderate amount of fat over moderately high temperature (360) degrees. Pan-frying is recommended when preparing foods such as fish cakes, chicken parts and/or fritters. The proper amount of fat should come half way up the side of the food being fried. If too much fat is used the food product will become buoyant, preventing direct contact with the pan. Contact with the pan produces a brown exterior for which pan-frying is known. The food product is fried on one side, and then it is flipped over to finish cooking it on the other side. If the product being pan-fried is thick, dense, or on the bone, it can be finished in an oven for final cooking throughout.
3. **Deep Fat Frying (350 to 375 degrees Fahrenheit):** this cooking method requires that foods be totally submerged in hot fat. Temperature of the fat plays a significant role in the success of deep frying foods. The average temperature range of the oil for fried foods should be between 360 - 375 degrees. It is important to regulate the temperature range of the fat throughout the cooking process or consistency of the cooked product will vary greatly. Never overcrowd the frying basket or pan because doing so will drastically

reduce the temperature of the frying oil. Recommended frying oils should have a high smoking point. Vegetable and peanut oils work well for this reason. After frying, oils should be strained, filtered and cooled before being refrigerated.

4. **Pan Searing (400 to 450 degrees Fahrenheit):** this method utilizes the least amount fat. Using, a pre-heated hot pan, spray the surface of the pan or the food with a light coating of vegetable oil. Another option may be to utilize a previously marinated product prior to exposing it to the surface of the pan. For example, pan searing may be the method chosen to cook a marinated tuna steak. The tuna steak is removed from the marinade, quickly seared on one side and then flipped over to finish the cooking process on the other side on top of the stove. If a really thick product is used, then it can be moved to a low temperature oven to finish the cooking process to ones desired degree of doneness.
5. **Radiation or Microwaving:** is certainly one of the greatest inventions of the 20th century. This technology has added a significant convenience to today's modern kitchen. Small waves of radiant energy motivate the water molecules in the food to move rapidly and flow through the food at an accelerated rate creating friction, which in turn heats and cooks the food product. Thus, dried or dehydrated foods that do not contain water cannot be cooked in a microwave without being rehydrated.

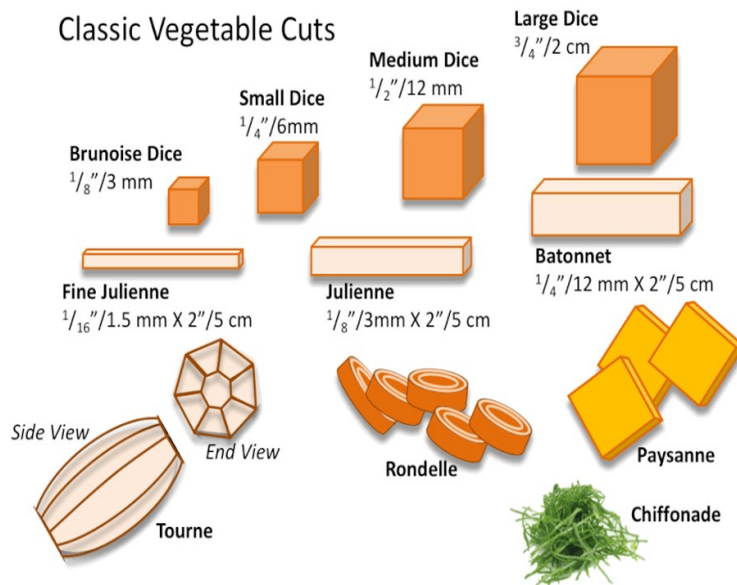
As with any piece of equipment or appliance, learning how to use the microwave properly is of most importance. One of the biggest benefits of the microwave oven is its ability to speed thaw and defrost frozen foods quickly and safely. Due to the speed of the defrosting process, foods are not exposed to the "Danger Zone" for extended periods before being cooked and served. Some foods respond extremely well to the microwave cooking process, such as steamed vegetables, corn on the cob, (in the husk) and potatoes. Rotating foods during the cooking process helps to cook foods more uniformly and microwaving in multiple short blasts rather than longer uninterrupted cook times is recommended. When reheating foods, they should be covered trapping the steam and moisture for maximum efficiency.

In terms of power and heat, 700 Watts in a microwave is like cooking at 350 degrees; 800 Watts equates to 450 degrees; 900 Watts equates to 525 degrees (Self clean) 1000 Watts equates to 575 degrees; and 1100 Watts would equal 625 degrees. Note: When using a microwave to thaw food I generally recommend cooking that food item shortly after thawing it to avoid the food being exposed to the danger zone for a prolong time. Remember that microwaving cooks food from the inside out. The inside temperature of the thawed food may be warmer than the outside temperature.

Knife Cuts



Classic Vegetable Cuts



PROFESSIONAL ASSOCIATIONS

American Culinary Association (ACF), www.acfchefs.org
 American Dietetic Association (ADA), www.eatright.org
 American Hotel and Lodging Association (AHLA), www.ahla.org
 American Institute of Baking (AIB), www.aibonline.org
 American Institute of Wine and Food (AIWF), www.aiwf.org
 American Personal Chef Association (APCA), www.personalchef.com
 American Society for Healthcare Food Service Administrators (ASHFSA), www.ashfsa.org
 Black Culinarian Alliance (BCA), www.blackculinarians.com
 Bread Bakers Guild of America, www.bbga.org
 Club Managers Association of America (CMAA), www.cmaa.org
 Confrerie de la Chaine des Rotisseurs, www.chaineus.org
 Dietary Managers Association (DMA), www.dmaonline.org
 Foodservice Consultants Society International (FCSI), www.fcsi.org
 Foodservice Educators Network International (FENI), www.feni.org
 Food Truck Operation, Foodtruckoperators.com
 Institute of Food Technologists (IFT), www.ift.org
 International Association of Culinary Professionals (IACP), www.iacp.com
 International Caterers Association, www.icacater.org
 International Council of Cruise Lines, www.iccl.org
 International Council on Hotel and Restaurant Institutional Education (ICHRIE), www.chrie.org
 International Food Service Executives Association (IFSEA), www.ifsea.com
 International Foodservice Manufacturers Association (IFMA), www.ifmaworld.com
 International Inflight Food Service Association (IFSA), www.ifsanet.com
 Les Dames d'Escoffier International, www.ldei.org
 National Association of College and University Foodservice (NACUFS), www.nacufs.org
 National Association of Foodservice Equipment Manufacturers (NAFEM), www.nafem.org
 National Association for the Specialty Food Trade (NASFT), www.fancyfoodshows.com
 National Food Processors Association, www.nfpa-food.org
 National Ice Carving Association (NICA), www.nica.org
 National Restaurant Association, www.restaurant.org
 National Society for Healthcare Foodservice Management (HFM), www.hfm.org
 Research Chefs Association (RCA), www.culinology.com
 Retailer's Bakery Association (RBA), www.rbanet.com
 School Nutrition Association (SNA), www.schoolnutrition.org
 Societe Culinaire Philanthropique, www.societeculinaire.com
 Society for Foodservice Management (SFM), www.sfm-online.org
 United States Personal Chef Association (USPCA), www.uspca.com
 Women's Foodservice Forum (WFF), www.womensfoodserviceforum.com
 Women Chefs and Restaurateurs, www.womenfhfs.org

INDUSTRY RESOURCES



Agri Beef www.agrib Beef.com/education/
American Lamb Board www.americanlamb.com/chefs-corner/curriculumlamb/
Butterball Foodservice www.butterballfoodservice.com
Maple Leaf Farms www.mapleleaffarms.com
National Cattlemen's Beef Association
National Pork Board www.porkfoodservice.org
National Turkey Federation www.eatturkey.org
North American Meat Institute www.meatinstitute.org

Seafood

Alaska Seafood Marketing Institute www.alaskaseafood.org
Bureau of Seafood and Aquaculture www.freshfromflorida.com/Recipes/Seafood
National Aquaculture Association thenaa.net

Produce

American Egg Board www.aeb.org
Apricot Producers of California www.califapricot.com
Avocados from Mexico foodservice.avocadosfrommexico.com
California Cling Peach Board www.calclingpeach.com
California Cling Peach Board www.calclingpeach.com
California Avocado Commission www.californiaavocado.com
California Dried Plum Board www.californiadriedplums.org
California Endive www.endive.com
California Fig Advisory Board www.californiafigs.com
California Kiwifruit Commission www.kiwifruit.org
California Pear Advisory Board www.calpear.com
California Raisin Marketing Board * Dietary Tool Kit www.calraisins.org
California Strawberry Commission www.calstrawberry.com
California Table Grape Commission www.tablegrape.com
Cherry Marketing Institute www.choosecherries.com
Concord Grape Association www.concordgrape.org
Cranberry Institute www.cranberryinstitute.org
Cranberry Marketing Committee*Tool Kit www.uscranberries.com
Dole Packaged Foods *Cost Savings Calculator www.dolefoodservice.com
Florida Dept. of Citrus www.floridajuce.com
Hass Avocado Board *Tool Kit www.avocadocentral.com

Idaho Potato Commission *Cost & Sizing Guides www.idahopotato.com
 Leafy Greens Council www.leafy-greens.org
 Leaf Greens Marketing Association www.lgma.ca.gov/
 Louisiana Sweet Potato Commission www.sweetpotato.org
 Mushroom Council www.mushroomcouncil.org
 National Honey Board *Teacher Guide www.honey.com
 National Mango Board *Lesson Plans www.mango.org
 National Onion Association*Lesson Plans www.onions-usa.org
 National Processed Raspberry Council www.redrazz.org
 National Watermelon Promotional Board www.watermelon.org
 NC Sweet Potato Commission www.ncsweetpotatoes.com
 New York Apple Association www.nyapplecountry.com
 North American Blueberry Council www.blueberry.org
 Northwest Cherry Growers www.nwcherries.com
 Olives from Spain olivesfromspain.us/
 Oregon Raspberries and Blackberries www.oregon-berries.com
 Pacific Northwest Canned Pear Service www.eatcannedpears.com/
 Pear Bureau Northwest www.usapears.com
 Pomegranate Council www.pomegranates.org
 Potatoes USA www.PotatoGoodness.com
 Produce for Better Health Foundation www.5aday.com
 The Soyfoods Council www.thesoyfoodscouncil.com
 U.S. Apple Association www.usapple.org
 USA Rice Federation www.menurice.com
 Washington Red Raspberry Commission www.red-raspberry.org
 Washington State Apple Commission www.bestapples.com
 Washington State Potato Commission www.potatoes.com
 Wheat Foods Council *Tool kits and classroom materials www.wheatfoods.org
 Wild Blueberry Assn. of North America www.wildblueberries.com

Oil, Spices and Seasonings

North American Olive Oil Association *Classroom materials www.aboutoliveoil.org

Nuts and Legumes

Almond Board of California*Tool Kit www.almonds.com/food-professionals
 American Pistachio Growers www.americanpistachios.org/
 California Walnut Board www.walnuts.org
 National Peanut Board www.nationalpeanutboard.org

Dairy Products

Emmi Roth USA *Pairing information us.emmi.com/en

Real CA Milk www.realcaliforniamilk.com/foodservice/

Wisconsin Milk Marketing Board Pairing guides www.wisdairy.com

Specialty Foods

New York Wine & Grape Foundation www.nywine.com

Popcorn Board www.popcorn.org

Baking Ingredients

Guittard Chocolate Company www.guittard.com

Bay State Milling Co. www.baystatemilling.com

Manufacturing/Distributors

Barilla America www.barilla.com/en-us

Bay State Milling Co.

www.baystatemilling.com

Dole Packaged Foods *Cost Savings Calculator www.dolefoodservice.com

Knouse Foods www.knousefoodservice.com

SYSCO www.sysco.com

Unilever Food Solutions www.unileverfoodsolutions.us

Verterra Dinnerware www.verterra.com