

PROFESSIONAL CHEF

IX



National Vocational & Technical Training Commission (NAVTTC)

Textbook of
Professional Chef
Grade – IX



**National Vocational and Technical Training commission
H-9, Islamabad**

Author: Miss Mariyam Usman

Reviewers:

- Mr. Nasir Khan, DACUM Facilitator
- Mr. Imtiaz Ali Shah, HOD, Fauji Foundation
- Mr. Shakoor Ullah Baig, NUTECH University
- Mr. Tahir Mehmood, Assistant Professor, Federal College of Education H-9, Islamabad
- Ms. Mansoorah Ibrahim, Education Officer, NCC, Islamabad
- Mr. Muhammad Asim, NAVTTC Coordinator

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PREFACE

This book has been written to meet the requirements of Matric Tech to train the students in the trade of Professional cooking. Matric Tech in Professional cooking has been introduced for the first time in the history of Pakistan at SSC level. The book covers 40% theoretical and 60% practical content. We have totally revamped this book to mirror the way that individuals cook in the kitchen today, with the best of food sources and flavors from around the world. The book surveys fixings, hardware involved, and abilities of the expert culinary specialist. It then, at that point, investigates the methods for the full scope of food items: vegetables, potatoes, grains, vegetables, pasta, meats, fish and fish, poultry, eggs, organic products, soups, sauces, quick bread and cakes, yeast bread, etc. This book includes another easy-to-understand plan and design, directing perusers through the essential standards behind every procedure initially, and afterward furnishing more inside and outside data supplemented bit by bit with appropriate photography. Complete with many plans and four-shaded photos all through, this is a fundamental reference for any trying gourmet specialist, culinary students, or cooking expert. Any improvements and suggestions for the betterment of this book will be highly appreciated.

**Executive Director
National Vocational & Technical Training Commission
(NAVTTC)**

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Chapter 1

Introduction to Professional Cooking



Students Learning Outcomes:

After completing this chapter, you will be able to

- understand cooking skills
- learn about industrial food preparation
- differentiate between professional cooking & industrial food preparation
- know about history of cooking
- understand the importance of cooking food
- learn about the role of food in human life
- understand the concept of domestic cooking
- learn about concept of professional cooking
- compare different features of domestic & professional cooking.

1.1 Introduction to cooking and Food preparation

1.1.1Cooking skills

Cooking is an art of food preparation with proper methods and finishing of food through proper techniques. Cooking skills as well as kitchen knowledge is very important for every chef. Chef should be able to cook efficiently and perfectly with balanced flavors and colors.

Cooking skills are the abilities to perform tasks related to the preparation of different dishes. Basic cooking skills include

- Types of cutting
- Knife handling skills
- Production of perfect stock
- Basic recipes of mother sauces
- Expert on the production methods of vegetables and meat
- Safety at work during operations



Basic cutting skills

Interesting Information!

Cooking is an art and science of preparing and presenting different foods.

1.1.2 Industrial food preparation

Food industries covers a number of industrial activities directed at the processing, preparation, conversion, preservation and packaging of food items.

Industry	Materials processed	Storage requirements	Processing techniques	Preserving techniques
Meat processing and preserving	Beef, lamb, pork, poultry	Cold stores	Slaughtering, cutting up, boning, comminuting, cooking	Salting, smoking, refrigeration, deep-freezing, sterilization
Fish processing	All types of fish	Cold stores or salted loose or in barrels	Heading, gutting, filleting, cooking	Deep-freezing, drying, smoking, sterilization
Fruit and vegetable preserving	Fresh fruit and vegetables	Processed immediately; fruits may be stabilized with Sulphur dioxide	Blanching or cooking, grinding, vacuum-concentration of juices	Sterilization, pasteurization, drying, dehydration, lyophilization (freeze drying)
Milling	Grains	Silos may be fumigated in storage	Grinding, sifting, milling, rolling	Drying cooking or baking
Baking	Flour and other dry goods, water,	Silos, super sacks and bags	Kneading, fermentation, laminating	Baking, cutting surface treatments and

	oils		surface treatments of seasoning	packaging
Biscuit making	Flour, cream, butter, sugar, fruit and seasoning	Silos, super sacks and bags	Mixing, kneading, laminating molding	Baking, cutting surface treatments and packaging
Pasta manufacture	Flour, eggs	Silos	Kneading, grinding, cutting, extrusion or moulding	Drying
Sugar processing and refining	Sugar beet, sugar cane	Silos	Crushing, maceration, vacuum concentration, centrifuging, drying	Vacuum cooking
Chocolate making and confectionery	Cocoa bean sugar, fats	Silos, sacks, conditioned chambers	Roasting, grinding, mixing, conching, moulding	—
Brewing	Barley, hops	Silos, tanks, conditioned cellars	Grain milling, malting, brewing, filter pressing,	Pasteurization

			fermentation	
Distilling and manufacture of other beverages	Fruit, grain, carbonated water	Silos, tanks, vats	Distillation, blending, aeration	Pasteurization
Milk and milk products processing	Milk, sugar, other constituents	Immediate processing; subsequently in ripening vats, conditioned vats, cold store	Skimming, churning (butter), coagulation (cheese), ripening	Pasteurization, sterilization or concentration, desiccation
Processing of oils and fats	Groundnuts, olives, dates, other fruit, animal or vegetable fats	Silos, tanks, cold stores	Milling, solvent or steam extraction, filter pressing	Pasteurization where necessary

The food industry today is differentiated, with manufacturing range going from small, customary, family-run, to enormous, capital-escalated industrial processes. Many food ventures rely predominantly upon local agriculture or fishing. Upgrades in food preparing and protection advances have taken pressure off laborers to handle food rapidly to prevent spoilage and different machines are introduced to help divide the labor work.

1.1.3 Difference between professional cooking & industrial food preparation

Professional Cooking	Industrial Food preparation
Professional cooking is the cooking with perfection, following standardized recipes.	Industrial food preparation is the preparation of dishes in manufacturing plants.
Its recipes are specially designed recipes and called standardized recipe	Standardized recipes are always used in industrial kitchen.
Professional cooking is another name of cooking with perfect hygienic practices	In Industrial food preparation, the pressure of workload is high.
It is the combination of HACCP compliances	Time management is important aspect in industrial food preparation.
Professional cooking is mostly related to hotels and restaurants and usually served as fresh foods.	Industrial cooking is done in concerned industry, through machines and usually served as a preserved or canned foods.

1.2 History and Importance of cooking

1.2.1 History of cooking

Cooking is the process of using heat to prepare food for consumption. It is pretty much as old as human advancement itself and eyewitnesses have seen it as both an art and a science.

The exact beginnings of cooking is unknown, in any case, eventually in the far off past, early people vanquished fire and began utilizing it to prepare food. Specialists have discovered what give off an impression of being the remaining parts of pit fires made 1.5 million years prior by early human species.

Paleolithic Era

Old Stone Age - from the beginning of human existence until around 12,000 years ago

Old Stone Age individuals were consistently moving. An individual who moves from one spot to another is known

Important information!

The oldest fast food restaurant chain is “White Castle”, founded in 1921.

as a migrant/ nomad. And because of their nomadic lifestyle, Old Stone Age individuals

had temporary homes and live in small groups. They had two different ways of getting food, by hunting and gathering which means to kill an animal for food and later, is discovering wild berries and different plants to eat. They were also known as hunt-gatherers

Around 1,000,000 years prior people found how to utilize fire to prepare food which empowered them to eat a more range of food. Cooked food was easy to eat and didn't need heavy chewing or difficulty in eating as compared to eating of raw food.

The Paleolithic diet would have been fluctuated. It would have comprised of meat, fish, shellfish, various vegetables, organic product, nuts and different kind of bugs in abundance. Animals of that time were giant sized and were known as 'mega fauna' and are extinct now; they used to eat the animal as soon as it was hunted, because they didn't have any means of storing it but there is minimal direct proof to show the amount of the eating of plant or animal food sources.

Do you know!

Humans started to cook food almost 2.3 million years ago. Chopsticks were the first creation of cooking food.

Agrarian Age

Anthropologists have been astonished by the profundity of information they have about the food and therapeutic properties of various plants.

Cooking was done on the open flames in shallow pits for conservation of warmth and shield from the breeze. There are no resources of their way of living; however, there is proof that a lot of meat and different food was cooked effectively. Agrarian do not carry cooking executes with them while moving from one place to another but as soon as farming became common it permitted individuals to settle down in one place comfortably.

One cooking strategy was to burrow a huge hole, light up the fire, place huge stones on top and heat them to a high temperature, then, at that point place meat on top of the hot stones between layers of green plants and cover the entire thing.

The layer of sodden green plants was spread over the stones, next, by the meat with spices, vegetables, nuts and different plants to add flavor. Another layer of soggy plants

was spread, lastly the opening filled in with earth. The layers of damp plants protected the food from getting dirty and given dampness to steam. The food was cooked for 2-3 days and delicious when ready.

Other strategies for cooking were boiling and roasting.

An alternate strategy for cooking was to fill a pit with water, and afterward drop warmed stones into it to heat up the water. Meat would then be dropped into the water to be bubbled and more stones added to keep the water hot. Simmering meat over spits was additionally normal. Small animals were roasted easily in a skewer but for large animals a full scale wooden spit was required for hanging.

Metal Age

As a metal, bronze conducts heat quite well and is used for more productive cooking. Ton of old bronze artifacts are cooking vessels, looking like a pot. Some probably sat straight forwardly on a fire, while others were covered in pits of coal or put inside enormous dirt or stone broilers. Cooking innovations started to grow during this time, as individuals discovered better approaches to cook things.

Ancient people fostered a wide scope of bronze vessels for cooking and storing food, yet there are a couple of normal structures that can be found all throughout the world. Perhaps the most captivating might be the stand - a profound bowl lying on three legs. A cauldron of this sort could be set straight over a fire, equitably warming the substance poured in it.

Modern age

In the current days, a large number of people around the world are occupied majority of the day; accordingly, have no an ideal opportunity to appreciate cooking or hot beverages. Therefore, the advanced and kitchens efficient cooking machines are

Do you know!

- 17% of dinner's meal goes uneaten in restaurants.
- 1/3 rd of Americans' first job was in a restaurant.

installed in every kitchen. Additionally, most cooking appliances are center in making cooking dishes in less complex ways.

In past we invested the majority of our energy for preparing constantly huge dinners. Aside from the new advances, prepared to-eat food assumes a significant part in food markets. It is extremely helpful for a frequently occupied person. Rather than going through hours in the kitchen, individual requires a few minutes. Likewise, dinners come in more convenient sizes simple to convey all over the place. The utilization of internet and different applications has made it simpler for individuals to get to recipes of cuisines worldwide.

In urban communities, where space is restricted, individuals need to manage little kitchens. Thusly, SMART machines are an absolute necessity. An ever increasing number of organizations are centering in the creation of cooking instruments and machines that can perform more than one task. Smooth and multitasked apparatuses have become successes and are in need by many.

Another significant perspective about cooking is that individuals have gotten more proficient about lifestyle choices better selecting to steam their dinners. More steam cooking machines are available, apparatuses that assist food with holding its unique color, texture and taste. A broad variety of salads of mixed greens and the creation of organic products have become very common now days.

1.2.2 Importance of cooking food

Cooking assumed a fundamental part in human development. Cooking food varieties makes them more edible, so the calories and a portion of the supplements in them are simpler to ingest. Accordingly, cooking permitted early people to tap a more extensive assortment of food sources and obtain more nutrition from them.

1. Safety:

Raw food sources like meat, fish and eggs, may hold onto food contamination microbes, which whenever devoured are probably going to cause illness. The ideal temperature for the duplication of most food contamination microscopic organisms is between 5 - 63°C, while, at temperatures over 70°C most microbes are killed and underneath 5°C most food contamination microorganisms can increase gradually or not at all. Most cooking

techniques whenever performed appropriately will warm food varieties to more than 70°C, so applying such a temperature for a carefully determined time period (along with the proper food preparation and storage) will prevent numerous foods borne illness.

2. Digestibility:

The main reason that we eat food is to extricate the vital nutrients that different food contains to permit our bodies to work properly. This is accomplished by digestion, where food is broken down into simpler particles that can be easily absorbed by the body. For instance, the enzyme amylase (found in the mouth and digestive system) separates the polysaccharide starch into its monomer glucose constituents, which can undoubtedly be digested by the body.

3. Edibility:

The desire to eat is basically determined by the body's requirement for nourishment, with the focus on intake of fundamental supplements being key forever. This basic motivation to eat is tested by the mental necessities of delight and joy. Cooking can cause changes in the color, flavor and texture of food that makes it more tempting to eat. For e.g., roasting potatoes starts a number of changes that makes potato eatable, by changing the flavor and color tone to golden brown, with the fresh, crunchy, crispy shell and a soft internal surface.



Safely cooking of food

1.2.3 Role of food in human life

Food is the basic need of human being which provides energy, and nutrients that provide growth, better development, muscular energy and strength to the body. According to Abraham Maslow's Hierarchy of Needs, food is the physiological need along with the water, shelter, warmth, air, and rest, which explains the importance of food in everyone's life. Human body needs variety of different nutrients for better development processes throughout life. These nutrients are protein, carbohydrate, fat, vitamins and minerals – which comes from the food we consume.



Combination of fruits in Human life

1.3 Difference between domestic and professional cooking

1.3.1 Concept of domestic cooking

Similarly as with all types of cooking, domestic cooking is expected to work on the palatability of the food, making it seriously tantalizing. In contrast to modern food planning and catering or food administration, domestic cooking is completed in home, by individuals who might not have any specialized information on what's going on from an engineering or biochemical perspective. By definition, cooking raises the temperature of the food. This outcomes in various concurrent and interrelated cycles that impact the flavor, surface, appearance, supplement content, and wellbeing of the food.

1.3.2 Concept of professional cooking

Professional cooking is utilized to change the organoleptic characteristics of food sources to meet explicit necessities for specific flavors, colors, aroma or texture and to guarantee that the items are microbiologically protected. It is utilized for the readiness of dinners in centralized kitchens that supply institution, in food services outlets, or it is utilized to create chilled or frozen prepared to-eat food for retail deal. Else, professional cooking utilizing damp heat, dry heat and sous vide processes. It focuses on changes caused to the tactile qualities of food varieties and the impacts on microorganisms, particularly in sous vide handling. There are experts in every field who monitor preparing, toasting, frying, microwave heating and smoking, which are additionally techniques, utilized in modern cooking.

Interesting Information!

Pepperoni is the most popular pizza topping around the world.

1.3.2 Features of domestic and professional cooking

The supposition is that homemade will be fundamentally more excellent in quality. More care is taken in the creation; more variety is added in the ingredients, less expense cutting, no profit focus. Consistent tweaking and flavorings according to the set taste of family recipe. In homemade case, there is one factor that is difficult to beat – freshness of food. A home-prepared food goes from preparation to table right away. Mass-created can't do it. It is normally overcooked and treated to ensure that it is protected to eat. That makes it less scrumptious and less healthful as well. The presumption in the expression quality control is that unique quality is included - a superior term would be consistency control.



Domestic and professional cooking

Domestic Cooking	Professional cooking
Cooking at small scale	At large scale
Taste is always different, though same dish	Taste is always same.
No experience is required	Experts are available for cooking
Follow the recipes made by chefs.	New techniques and recipes are introduced
More kinds of vegetables overall.	More prominent assortment of vegetables in every meal.
Meals often exceeded recommendations for calories and some nutrients	Commercial meals more often fell short on nutrition.

Key points

- Cooking is an art of food preparation with proper methods and finishing of food through proper techniques. Cooking skills as well as kitchen knowledge is very important for every chef. Chef should be able to prepare/cook the food as per standard recipe with balanced flavors and colors.

- Basic cooking skills include knowledge of personal safety, food safety, types of knives, knife handling skills, production of perfect recipe, basic standard recipes and safe production of dish.

- Cooking is the process of using heat to prepare food for consumption. It is pretty much as old as human civilization itself as both an art and a science.

- Professional cooking is the cooking with perfection, following the standardized recipes. Standardized recipe are the specially designed recipes for a particular dish.

- Cooking can be categorized into two main types
 - Domestic cooking
 - Professional cooking

Exercise

select the most appropriate option

1. Cookery is defined as a process
 - a. Physical Process
 - b. Mechanical Process
 - c. Chemical Process
 - d. Both A & C
2. ___ were the first to use fire for cooking.
 - a. French
 - b. Chinese
 - c. Indian
 - d. Japanese
3. Knife Skills are also known as cooking skills.
 - a. false
 - b. true
 - c. These are including in basic life skills.
 - d. Both b & c
4. In domestic cooking the workload and pressure is high as compared to the professional cooking
 - a. True
 - b. False
 - c. it depends on situations
 - d. none of these

Give short answers

1. Define cooking?
2. Describe the term Food Preparation?
3. What do you know about the very first dish of the history of cooking?
4. What is the concept of ice age during the history of cooking?
5. What is the difference between cooking skills and life skills?

6. What is domestic cooking?
7. Enlist any two features of professional cooking?

Answer the following question in detail

1. How the concept of professional cooking is different than the concept of domestic cooking?
2. Differentiate between industrial food preparation and professional cooking?
3. Describe the stone age of cooking?

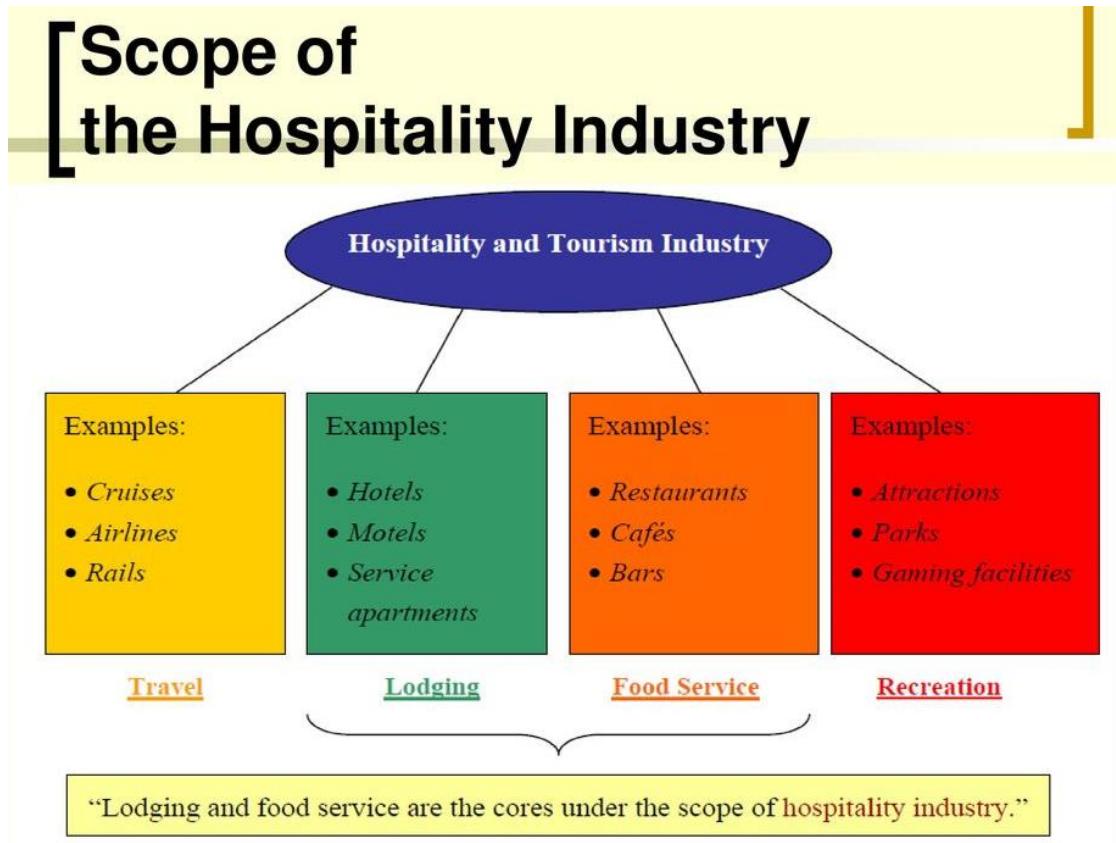
Activity

1. Arrange the class into small groups, each group make an assignment on stone age, agrarian age, metal age and modern age.
2. Arrange the class, give them a task to observe any industrial kitchen and write down the difference between domestic cooking and professional cooking.

Teacher guide

1. The teacher is required to deliver lecture to the students to differentiate between professional cooking and domestic cooking. He /she will also be able to share personal experience about the effect of consuming various professional and domestic foods.
2. The teacher is required to give knowledge about the history of cooking. He/she is required to make the students aware to the concept that how cooking was started as profession and then convert into modern age of cooking.

Chapter 2: Scope & Carrier Path



Students learning outcomes:

After completing this chapter, you will be able to learn

- know about the hierarchy of kitchen
- understand the job roles and titles of kitchen department
- recognize different branches of food industry
- recognize cooking as a profession
- learn about the availability of dynamic opportunities in hospitality sector
- know about the changing trends of dining out
- identify the emerging trends in catering services

- know about different types of catering services
- understand the critical factors in small and large scale catering
- identify the opportunities of academic and professional development
- recognize career progression paths

2.1 Kitchen brigade

Kitchen brigade is an organizational hierarchy for professional kitchens organized by the legendary French chef “Georges/ Auguste Escoffier”. The kitchen brigade system is a system of structure that kitchen have used for centuries to keep things running smoothly.

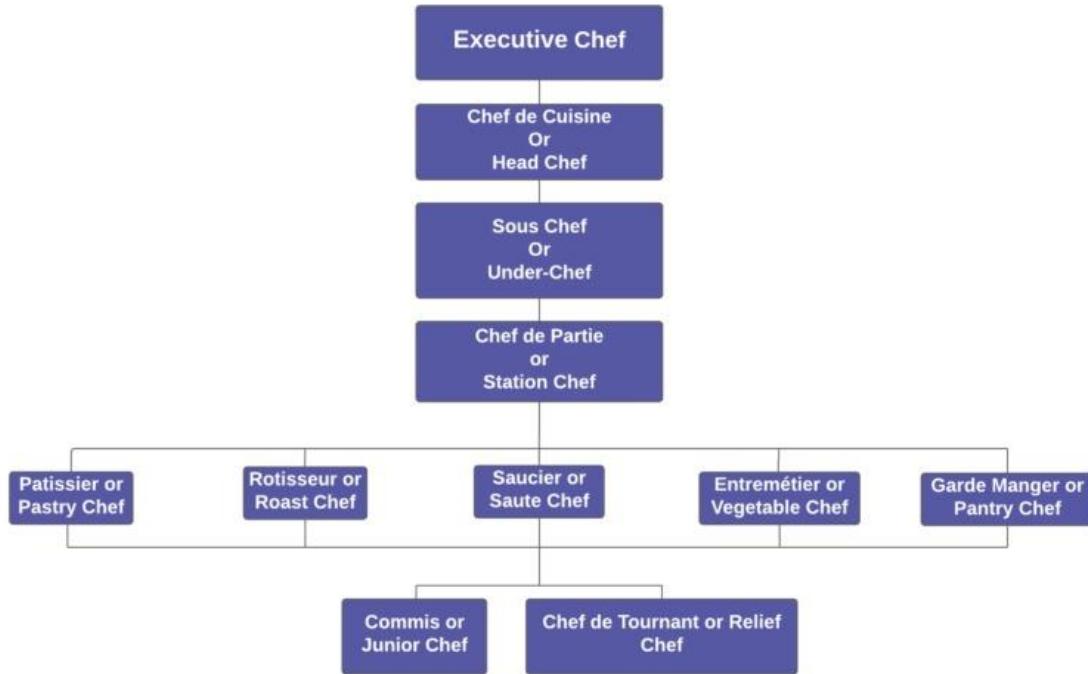
2.1.1 Hierarchy of kitchen

What do you mean by kitchen hierarchy?

The brigade de cuisine is more commonly known as a kitchen hierarchy. There are so many positions in this hierarchy, and each one holds an important role in the overall functions of the kitchen.

The following is the hierarchy of kitchen:

1. Executive chef
2. Sous chef
3. Chef de partie
4. Commis 1,2,3
5. Apprentice



Hierarchy of French Kitchen Brigade System

2.1.2 Job roles and titles of kitchen departments

The different job roles and titles of kitchen departments are

1. Executive chef:

Executive chef is the head chef of kitchen. His primary role is to manage the kitchen, maintain quality of kitchen, introduce new recipes, improve kitchen gadgets but he is not directly responsible for cooking.

2. Sous chef:

Sous chef is the chef which is in command after executive chef. He is also called deputy chef or kitchen in charge and oversees day to day activities of kitchen.

3. Chef de partie:

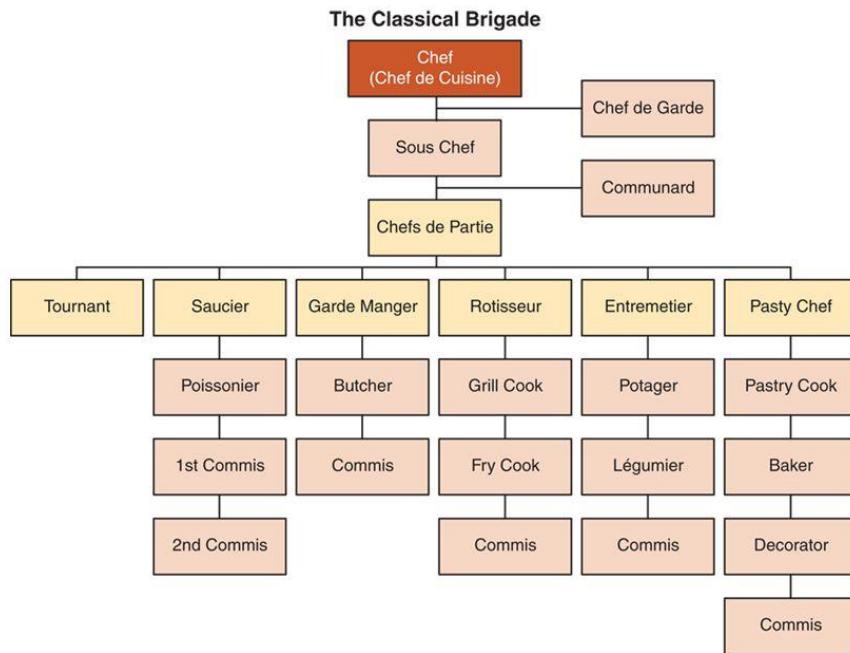
Chef de partie is the chef who is cooking food that is being served to customers. He is playing the critical role in the kitchen and called station in charge.

4. Commis/ Cook 1,2,3:

Commis/ Cook 1, 2, 3 are the junior cooks in the kitchen. They are working with chef de partie to learn about kitchen standards and standard recipes. These are the persons who cook and help in the kitchen. They learn and absorb different techniques and methodologies related to cooking.

5. Apprentice:

Apprentice is the paid trainee in kitchen.



Job roles and titles of kitchen Departments

2.2 Branches of food industry

2.2.1 Different branches of food industry

There are basic 3 branches of food industry:

- Food science and technology
- Food nutrition & dietitian
- Food & Beverage production outlet

Food science and technology:

Food Science and technology is the branch of food industry which is going to be more modern and advance now days. Food science is the chemistry and engineering necessary to deliver hygienic and safe food for the consumers. With the help of food science and technology the more advanced, unique and suitable food products from the production area to the food market place.

The food scientist is the persons who maintain these disciplines to assure a large and high quality of the food which have more nutritional values and their supplies. Food Science is the basic and applied science of food which is very important now days.

"Food technology is the application of the food science to the selection, preservation, processing, packaging, distribution and use of safe food."

The fields which are related to these branches are analytical chemistry, biot8, engineering, nutrition, food safety management and quality control.

Maintenance of food quality and checking of the processing and the manufacturing are the one of the major role of the food technologists. These people are responsible that they make sure that the food items which are produced are not harmful to health.



Food technology

Food nutrition & dietitian:

Food nutrition is the study of the role of food nutrients in the body.

Dietetics is the study which is concerned with the treatment of a variety of food - related diseases and the prevention on food to decay.

What is food nutrition and dietetics all about?

They study nutrients in food, and the relationship between health, disease and diet. They commonly work with food scientists and food manufacturers for the food creation and sharing of information with the public about the manufacturing and processing of the food



Food and nutrition

Food & beverage production:

In a hotel the food and beverages are sold in a special area of the hotel this area is known as the Outlet. The food and beverages are sold to in-house and outside guests.

Some outlets of food and beverage department

Some food and beverage services - outlets are

- Bars
- Cafeterias
- Coffee Shops
- Nightclubs
- Specialty Restaurant
- Grill Room
- Rotisserie

Food and beverage outlets can be manageable through some important tactics and these are

- 1) Motivate staff.
- 2) Make them able to follow rules and regulations.
- 3) Always be disciplined.
- 4) Ensure that there are written house rules and code of conduct.
- 5) Set an example in front of your juniors.



Food and beverage café outlet

2.3 Cooking as a profession

2.3.1 Recognize cooking as a profession

Why is being a chef important?

Chefs are highly regarded as the most important cooks and may also be addressed as head cooks because they manage the kitchen. Chefs also have the responsibilities of planning menus, help and supervise the preparation of dishes as well as developing recipes.

Chefs play a critical role in the kitchen. Their role extends beyond managing other cooks to also planning the menus, ensuring that presentation is on point and even developing new, creative recipes for those unique meals everyone craves. They people are always responsible for the happiness of their customers

Chefs play a substantial role — they collaborate with local farmers, food producers, and other artisans. With their restaurant, they are also able to create jobs. Getting involved with the tourism industry

Activity: Draw a chart elaborating any 5 points on scope of cooking and present that in the class.

2.3.2 Dynamic opportunities of hospitality sector

Hotel and hospitality is dynamic industry which changes vary fast with the passage of time. All the industry stack holders and business people have to be sharper and well prepared to keep them with a pace of the changing environment. Growth in the world economy supported the hospitality and hotel industry to grow fast.

What is dynamic pricing in hotel industry?

Large hotel brands use best available rates which all are based on demand. They charge higher rates during the higher demand periods such as on special events, holidays or when the demand is expected to come in strong as compare to other days.

The opportunities which are available in hospitality industry are

- Banquets and conferences
- Food and beverage management
- Front office/ reception
- Resort management
- Restaurant management
- Spa and wellness management
- Travel and transportation
- Entertainment

- Tourism
- Meeting and events
- Attractions
- Re creations
- Technology
- Cruise ships

These are the multiple departments which are present in every hotel. There are many dynamic opportunities available in these sectors on and off.

Dynamic employment opportunities in Hospitality Sector

Restaurant	Hotel	Café	Catering services
General manager	Event planner	chef managers	Dietitian
Assistant manager	Executive chef	Support manager	Head chef
Executive chef	Cook	Cook	Restaurant manager
Sous chef	Sous chef	Prep cook	Event planners
Pastry chef	Chef de partie	Barista	Kitchen porter
Kitchen manager	General manager	Cashier	Sous chef
Food and beverage manager	House keeper	Receptionist	Bar staff
Line cook	Porter	Dishwashers	Flower decorator
Fast food cook	Bell boy	Stewards	DJ
Short order cook	Waiter	GRO	Waiters
Prep cook	Valet parking attendants	Waiters	Photographers
Sommelier	Door attendants	Order taker	Videographers
Server	Driver	Café manager	Pastry chefs

Runner	Kitchen manager	Valet parking attendants	Buffet managers
Host/ hostess	Quality assurance manager		Menu planners
Bar attendant	Catering manager		Cashiers
Bar back	Restaurant manager		Receptionist
Barista	Security in charge		Housekeeper
Drive through operator	Spa manager		Guest service manager
Cashier	Bar attendant		Assistant guest service manager
Dishwasher	Banquet server		Valet parking attendants

2.3.3 Changing trend of dining out

Some basic changing trends of dining out now days are

- Enhancing experience to build customer loyalty
- More direct orders coming through
- Kitchen Automation
- More restaurants will diversity revenue streams
- Contactless ordering and delivery is here to stay.
- Fine Frozen food
- British sea food
- From Fine dining to Fine Eating
- Quirky dining
- Regenerative agriculture
- Meal Sized sandwiches
- Roof Top dining

- Drive thru dining
- Eco conscious packaging
- Plant - Based foods

Some hotels and restaurants are also offering drive through buffet services in outdoors to attract the customers.



Changing trend during pandemic



Drive through trend



Dining trend of rooftop

2.4 Catering services

2.4.1 Emerging trends in catering services

Catering services is defined as business of providing food services to various events venues at remote sites on demand. It provides the processing, assembly and packaging of food for consumption.

Emerging trends in catering are.

- Food Trucks
- Food waste control
- Food Stations
- Fermented Foods
- The meat-free movement
- Small Plates
- Veggie Plates
- Local menus
- Delivery Options
- Green Kitchen
- Environment Friendly Concerns

- Healthy options
- Gluten free products
- Root to stem eating



Emerging trend of food trucks in catering services



Emerging trend of delivery service

2.4.2 Types of catering services

1. Tiffin Service:

The word tiffin comes from the English word which means "short-meal" or snacks taken between meals. Generally it means a light meal. Most of the tiffin service offer onetime fresh meal that contains any type of vagaries or non-vegetarian foods.

The food of your choice can be ordered online now days and food items will be delivered to your door steps. Tiffin Service is basically homemade food that can be delivering to homes, offices, hostels, markets etc.



Meal for tiffin service



Tiffin service

Corporate Catering

Corporate catering is a type of catering that has been specially designed for corporate events and working professionals.

However corporate catering services are not limited only for corporate offices but they also span off - site meetings, parks, conferences and many other places.



Cooperative catering

3. Social Catering Services

Social Catering services are those services which are categorized for special events such as grand openings, birthday parties, group openings, retirement celebrations, housewarming parties, bridal and baby shower etc.

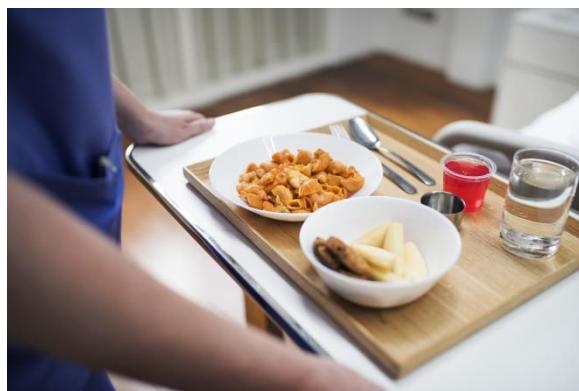


Social catering service

4. Hospital Catering Services

Hospital Catering services are the services which are provided to the patients.

Hospital Catering services are an essential part of the patient care. This service should be cost effective and it should be flexible enough to provide a good, healthy and nutritious food to the patients.



Hospital catering service

2.4.3 Critical factors in small and large scale catering

Some important factors to consider in small and large catering are:

- Budget
- Event Purpose/ Formalities
- Event theme
- Number of Guests
- Personal Resources
- Planning experience
- Menu planning

Factors affecting catering business:

It is very critical to maintain a business, and the reputation of the business.

Some factors which are important for the success of a catering business are as follows.

1. Flexibility: One of the most important factors affecting the success of a small catering business is flexibility of schedules.
2. Safety: Safely prepared food is an important and major factor of any food business.
3. Menu: Menu should be attractive and unique according to budget.
4. Advertisement: Advertisement is the key point of any business which is newly open.

Small scale catering is the type of catering in which small amount of food is served for a small functions. These are based on domestic services like tiffin boxes, lunch boxes for a very limited number (mostly less than 100 persons).the task is carried out mostly by team comprising of one to three members.

Large scale catering is the type of commercial catering in which large amount of food is served for huge gatherings like weddings, conferences, workshops, seminars etc. The task is carried out by a big team of professionals.

Activity: Arrange the students into 4 groups and assign them the task to enlist the critical factors in small and large scale catering.

2.5 Professional development

2.5.1 Opportunities of academic and professional development

The hospitality industry is the industry which provides a pathway to employment even without higher education. Study towards hospitality provides students with knowledge and clear understanding of what they need in their business.

The reasons to learn hospitality and find opportunities of academic and professional catering are:

- **Clear carrier path:**

Hospitality is an industry which is based on skills and knowledge. If you are aiming to work and grow in this industry on a higher positions of management, then the path to these roles are always clear and achieved with hard work as well as skill.

- **Attractive opportunities:**

It is a very wide industry, and provides different opportunities in academic as well as professional catering with skills and dedication.

- **Utilize your creativity:**

If you are a chef, then it's important to work with passion and dedication and show your creativity as it helps in finding of different professional catering services

Working in catering services, provides huge opportunities. You need to show flexibility and more creativity and innovation in your work to attract customer's attention.

2.5.2 Recognize carrier progression paths

The hospitality industry has many carrier progression paths. Each department is offering multiple vacancies and opportunities.

Career progression gives opportunities to employees to discover new interests in company, allowing role gaps to fill internally.

Few examples of progression in hospitality industry are

- Front Office Supervisor >> Rooms Division Manager >> Assistant Director of Operations >> General Manager
- Night Manager >> Guest Relations Manager >> Director of Sales >> Group Regional Manager
- F&B Outlets Manager (hotel) >> Culinary Director >> Director of F&B
- F&B Coordinator >> F&B Catering & Events Manager >> Entrepreneur
- Hospitality Services Coordinator (Cruise) >> Guest Experience Manager >> Director of HR & Training
- VIP Lounge Assistant >> Guest Services Coordinator >> Director of Operations
- Communications Specialist >> Digital Marketing Manager >> Business Development Director
- Hotel Event Coordinator >> Conference & Banqueting Manager >> Project Manager

- Sports Event Executive >> VIP Services Manager>> Director of Group Sales
- Spa Attendant >> Wellness Area Manager >> Hospitality Services Director
- Apprentice >>Commis 1,2,3 >> Demi Chef >> Chef de Partie (CDP) >> Sous Chef >> Executive Chef

Key points

- Kitchen brigade is an organizational hierarchy for professional kitchens organized by the father of modern cookery, French chef “Georges/Auguste Escoffier”. The kitchen brigade system is a system of structure that kitchen have used for decades to keep things running smoothly.
- Executive chef is the head chef of kitchen. His primary role is to manage the kitchen, maintain quality of kitchen, introduce new recipes, improve kitchen gadgets but he is not directly responsible for cooking.
- Sous chef is the chef which is in command after executive chef. He is also called deputy chef or kitchen in charge and oversees day to day activities of kitchen.
- The role of the food scientist is to successfully apply these disciplines to assure an abundant, high quality and the foods which have more nutritional values and their supplies. Food Science is the basic and applied science of food which is very important now days.
- Hotel and hospitality is dynamic industry which changes vary fast with the passage of time. All the industry stack holders and business people have to be sharper and well prepared to keep them with a pace of the changing environment.

Exercise

select the most appropriate option

1. Who is “Second-in-command” in restaurant kitchens
 - a. Head Chef
 - b. Sous Chef
 - c. Chef de Partie
 - d. Commis Chef
2. Which chef is the head of all the chefs
 - a. Sous chef
 - b. Executive chef
 - c. Commis
 - d. Chef de partie
3. In hospital catering the food should be
 - a. Spicy and Attractive
 - b. Simple, Healthy and nutritious
 - c. Hot and sour
 - d. Fast food
4. Commercial catering is arranged for
 - a. Small scale catering
 - b. Large scale catering
 - c. Domestic catering
 - d. Family catering
5. In progression path, chef de partie promotes to
 - a. Cook
 - b. Apprentice
 - c. Executive chef
 - d. Sous Chef

Give short answers of the following question

1. What is FKBS?
2. Define the term food technology?
3. Enlist the dynamic opportunities in hospitality sector?
4. What is catering service?
5. What do you mean by professional development?

Answer the following question in detail

1. Write down any 8 scopes of food & beverage production?
2. Differentiate between small scale catering and large scale catering?
3. Explain the dynamic opportunities in hospitality industry?
4. Explain the progression path for a chef?

Activity

1. Arrange the class in small groups and ask them to explain the dynamic opportunities in hospitality sector.
2. Arrange a class into small groups. Assign them a task to arrange small scale catering services for a class.
3. Search and make a report on various opportunities in Professional cooking and submit it to teacher.

Teachers guide

1. The teacher is required to guide the students about the finding of job vacancies and scope of food industry, also know them about the factors affecting food industry.
2. The teacher is required to teach and guide about small and large scale catering. He/she also guide them how to plan and arrange small scale catering service by using available resources.

Chapter 3: Introduction to kitchen



Students learning outcomes:

After completing this chapter, you will be able to

- know about kitchen lab and tasks performed
- enlist the sop's of professional kitchen
- recognize different kitchen layouts
- understand various design features of professional kitchen
- identify different tools & equipment used for kitchen
- know the purpose and use of kitchen tools, equipment and utensils
- understand the standard maintenance procedures of tools, utensils and equipment
- learn about modern kitchen gadgets used in commercial kitchen
- understand the sop's for handling kitchen gadgetry

3.1 Designing and Layout

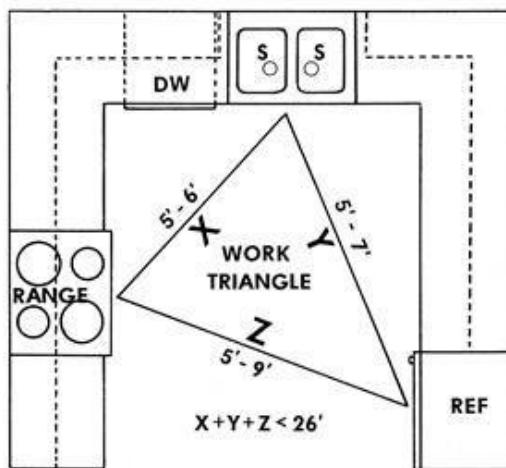
3.1.1 Kitchen lab designing and tasks performed

Getting your kitchen layout right is the main factor in guaranteeing a useful and practical kitchen area. Regardless of whether your kitchen is small or huge, a cunning design will have a significant effect in assisting you with perfect utilization of the available space. Particularly in a kitchen, there is always more to do other than putting furniture and cabinetry: ergonomics has an enormous role in it too. Getting the heights right, guaranteeing sufficient room for movement, arrangement of machines and usability are generally going to play an important role in kitchen.

Ergonomics is the art of designing a fit environment for the people who are going to utilize the space, not changing behavior of people to fit the environment.

The work triangle is one of the most important parts of Kitchen lab which includes food preparation area, the cleaning area and the food storage area, that basically creates a clean triangle.

The triangle length of each leg is between 1.2m to 2.7m. Combined length of these three legs should be between 4m and 7.9m. There must not be any major traffic through triangle.



The kitchen triangle

Different kinds of tasks are performed in the kitchen area, which includes the following:

- Planning a meal
- Washing fruits and vegetables
- Cutting food items
- Shredding lettuce/ chicken/ or other food items
- Measuring
- Stirring dry ingredients
- Assembling
- Tasting
- Whisking
- Separating eggs
- Flavoring
- Melting
- Frosting a cake
- Making purees
- Frying
- Roasting
- Baking

3.1.2SOP's for professional kitchen

The Kitchen Standard Operating Procedures fill in as a functioning aid for clients in respects to food safety, sterilization, sanitation, and equipment use. It is dependent upon the user to keep up with all norms of disinfection and food handling applicable to their particular business. It's simply acceptable marketing sense and is needed for standard certification as well.

The purpose behind these SOP's involves the following:

- To set up all miseen place reliably and in an appropriate way, to work efficiently.
- To keep a protected, clean climate consistently as per all important rules and guidelines.

- To complete all end obligations productively and effectively consistently, to guarantee the wellbeing and security of faculty, the premises, and stock.

Workplace hygiene:

These SOP's guide food service employees in performing following duties:

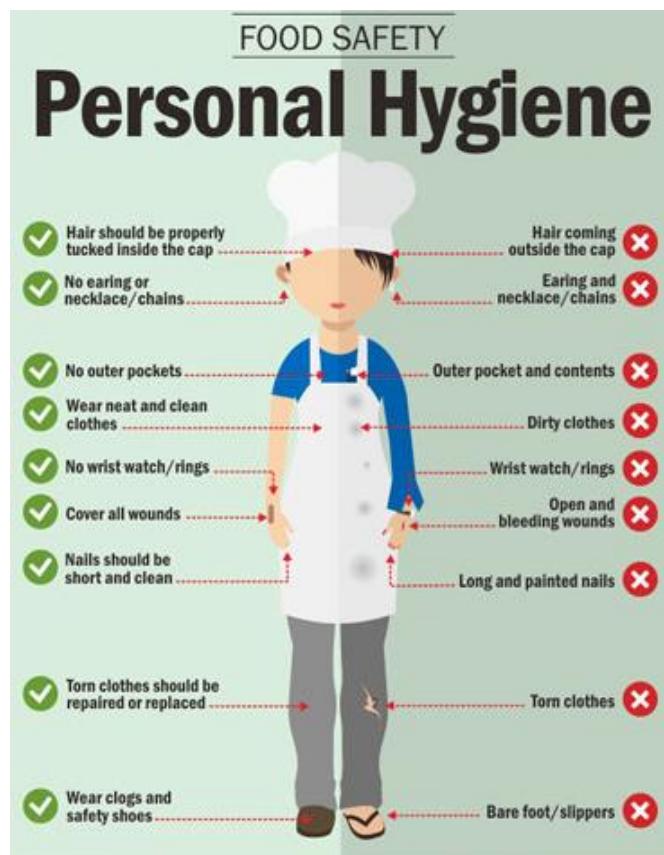
1. Kitchen Preparation/setup
2. Kitchen Hygiene
3. Kitchen Closing



Cleaning and sanitation of stoves

Personnel hygiene:

- User should practice good personal hygiene, i.e. frequent hand washing.
- User should not wear jewelry that may come into contact with food.
- Food handler must not wear any makeup, as it can cause contamination.
- Food handlers must wash hands after visits to the toilet, after handling raw meat, poultry, seafood, and eggs and between different tasks.
- Food handlers must use hairnets and gloves while working.



Good and bad Personal hygiene

Facility:

- Animals are not allowed in the premises.
- Smoking or use of tobacco or illegal drugs is not allowed in the premises.
- All garbage must be bagged and placed in a proper place.
- Any faulty equipment must be removed from the work area.
- Cleaning materials should be stored away from food production areas.

3.1.3 Recognize different kitchen layouts

As different tasks are performed in the kitchen area, it must be designed according to the needs of the worker. Some of the popular kitchen layouts are listed below.

One wall kitchen:

One-wall initially called the "Pullman kitchen," This kind of kitchen format is largely found in studio since it's a definitive space saver. Cupboards and machines are fixed on a

single wall. It can have upper and lower cabinets as well as shelves over the basin area to give it an aesthetic look.



One wall kitchen

The Galley kitchen:

With an exceptionally practical utilization of cupboards, the type of kitchen comprises of two lines of cupboards confronting one another, making an inner passage between them. This kind of format utilizes each millimeter of room without wastage. The straightforward plan likewise implies that there are a few devices that are fundamental, and are for use daily, making this cost effective.



The galley kitchen

The L-shaped Kitchen:

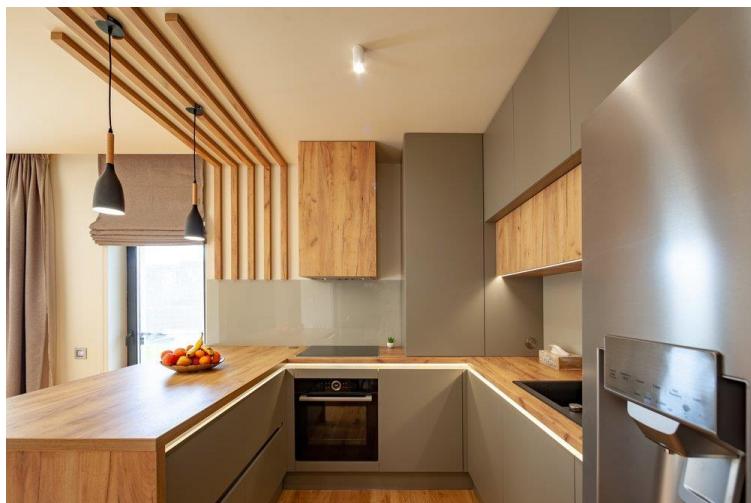
A practical design alternative for little and huge kitchens, the L-shaped kitchen has cupboards along two opposite walls. The open arrangement plan of the L-shaped kitchen offers extraordinary flexibility in the situation of machines and work zones. While you can extend the legs of the L as space permits, it is ideal to keep it to less than 4.5m for convenience.



L shape Kitchen

The U-shaped Kitchen:

An extraordinary design for bigger kitchens, the U-shaped kitchen comprises of cabinetry along three neighboring walls adjacent to each other. This kind of design gives a lot of capacity however can feel encased in case there are upper cupboards on each of the three walls. To avoid this encased feeling, one must build upper cupboards along on just two walls, with open shelves, central tiles or a hob hood on the other. The U shaped kitchen takes into consideration extraordinary work process and work flow with providing more space to different workers.



U shape Kitchen

The Island Kitchen:

An extremely well known decision in open arrangement homes, the island kitchen gives a huge work surface or capacity region in the kitchen. The island can consolidate a cooking surface, prep bowl and bar or wine cooler. It can likewise be utilized essentially as preparation area or for arrangement of family meals for entertainment. While the kitchen must be adequately large to fuse an island, its type is an extraordinary method to create a natural traffic flow.



The Island Kitchen

The Peninsula Kitchen

The peninsula is identified with the island kitchen and joins a kitchen counter that extends away from a divider or cabinetry. This is an incredible arrangement that offers the advantages of a kitchen island where space doesn't take into account a free island to be introduced. The peninsula can be utilized for food planning, eating or different tasks while the cook is occupied with meal preparation.



The Peninsula Kitchen

3.1.4 Design features of professional kitchen

The professional kitchen is design according to the menu of restaurant, utilization of available space. There are basic 6 principles of designing commercial kitchen

- Flexibility and modularity
- Simplicity
- Kitchen flow of materials
- Easy to sanitize
- Easy in aspect to supervision
- Space utilization

There are basic 5 design features for professional kitchen are

1. Island configuration
2. Assembly line configuration
3. Open configuration
4. Ergonomic configuration
5. Zonic configuration

1. Island Configuration kitchen:

Island configuration is a type of commercial kitchen in which central island surrounded by counter space. The central island is equipped with ovens and ranges and devoted to cooking.



Island configuration Kitchen

2. Assembly line configuration kitchen:

Assembly line configuration is a type of commercial kitchen in which align everything in a straight route. This is used in restaurants with small and simple dishes such as sandwiches etc.



Assemble line configuration in Kitchen

3. Open configuration kitchen:

Open configuration kitchen is a type of commercial kitchen in which everything is arranged in one kitchen. It is in Back of house, and not exposed to guests. This is commonly used in pizza restaurants. These designs create great pressure to maintain a neat and organized kitchen.



Open configuration kitchen

4. Ergonomic configuration kitchen:

Ergonomic configuration kitchen is the type of commercial kitchen in which cooking equipment and supplies are placed closely. This kitchen ensures that employees do not need to be reaching, crouching, bending, stretching or walking around to get comfortable environment.



Ergonomic configuration kitchen

5. Zonic configuration kitchen:

Zonic kitchen is types of professional kitchen in which kitchen is divided into different zones. These zones are the based on kind of dishes which are prepared e.g. salad station, pastry station etc.



Zonic configuration kitchen

3.2 Tools & Equipment

3.2.1 Tools & equipment used in kitchen

There are many kitchen tools and equipment's which help in the production of different dishes includes:

	
Pots	Spatula

	
Frying pan	Sauce pan
	
Sharpening steel	Grater
	
Measuring scale	Measuring cups/ spoons

	
Chopping boards	Bowls
	
Measuring jug	Cutlery

 A white and grey electric mixer with two metal beaters attached to the shaft.	 A black blender with a clear plastic pitcher and a dark base.
Electric mixers	Blenders
 A stainless steel toaster with two slices of toast popping up from the slots.	 A white microwave oven with its door open, showing the interior.
Toasters	Microwave oven

	
Refrigerator	Freezer
	
Mincing machine	Choppers

	
Tin openers	Knives
	
Grill	Burners
	

Deep fryers	Wok
	
Sifters	Electric kettles
	
Baking trays	Crockery

	
Steamer	Griddles

Kitchen tools and equipment's

Activity: Arrange the class into small groups. Assign a task to each group to identify various types of kitchen tools.

3.2.2 Use of kitchen tools, equipment and utensils

Commercial Food Production Equipment

Commercial kitchen equipment's are used to produce food for a large number of consumers. The equipment used commercially should consume less electricity, improve the productivity of food production operations, and must be eco-friendly.

Some of the basic food production equipment's are as following:

Burners:

It is used for boiling, cooking and steaming which is often operated by LPG (Liquid Petroleum Gas)

Cooking Ranges:

It is either operated on gas or electricity. It is used for cooking, frying, boiling, grilling and baking etc. It comprises of multiple burners ranging from one to eight, depending on the size and need of the user.

Ovens:

It is used for roasting, baking, browning, and cooking of different food items. There are various models with options of rotating, or steady racks or tunnel.

Griddles:

There are flat plates either made of iron, stainless steel or aluminum which transfer the heat to food for cooking. There are usually used for making breakfast, frying egg, making pancakes etc.

Pans and cooking spoons:

There is a wide range of pots, spoons and pans. Depending on the type of cooking, user selects the utensil accordingly. Different pots are used for cooking and stock, which are usually accompanied by the lids.

Kettle:

Kettle is used for cooking, storing or warming of food, which is two layered pots which provides the steam to food. Kettles which are deep are considered to be the best for soups, gravies, spaghetti sauces, pie fillings, and puddings as the quality of these food items remains the same irrespective of their volume and frequent stirring. Lentils, beans, and pasta can also be cooked in deep kettles.

Vegetable Choppers/Cutters

The cutters and choppers are used for chopping, cutting, shredding and dicing of vegetables in various sizes and shapes. Other than this hand held choppers are also available which are used for cutting fruits and salads.

Mixer:

Overhead vertical mixer is usually used in commercial food production for mixing and blending.

Steamers or cookers:

These electrical operated machines are used for cooking rice, lentils and vegetables.

Fryer:

Food items are prepared in heated oil in a fryer, which have two basic types, i.e.: Gas fryer and Electric Fryer. The frying time and oil temperature depends on the type and size of the food item.

Juicer:

It extracts the pulp and juice from fruits and vegetables which is operated electrically and speeds up the extraction process. There are three different types of juicers used commercially i.e.: Centrifugal, Masticating, and twin-gear.

3.2.3 Standard maintenance procedures of tools, utensils and equipment

Tools, utensils and equipment are used every day and need special consideration in aspect to cleaning. The basic rule is used for maintenance of industrial tools, equipment's and utensils is “**clean, inspect and care**”.

As you already learn in previous topics, for the cleaning purpose of tools, equipment's and utensils 6 stage cleaning method is used.

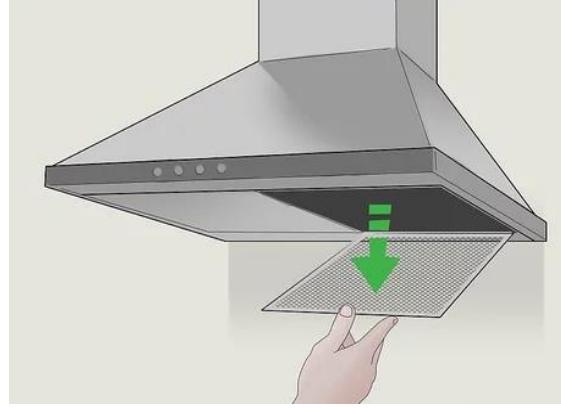
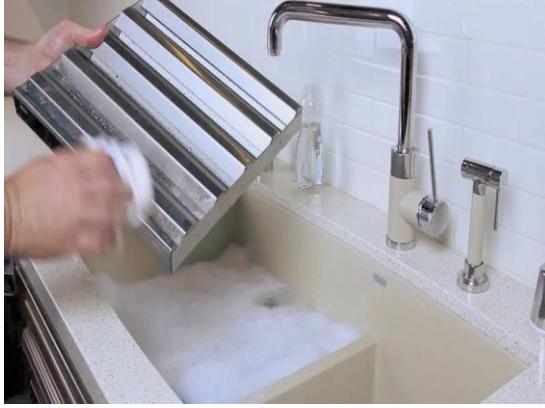
Steps of 6 stage cleaning method:

1. Pre clean
2. Main clean
3. Rinse
4. Disinfect
5. Rinse
6. Dry



6 stage cleaning method for Dishes

Your kitchen equipment is the most important thing in your kitchen. To keep your operations functional, the following 5 points must be used in maintenance

	
Vent hood and dust cleaning	Grease filter cleaning

 A photograph showing a kitchen extraction hood above a stove. A fire is visible on the cooktop. Blue lines indicate the path of an automatic extinguishing system spraying foam onto the flames.	 A photograph of a stainless steel deep-fat fryer with two separate tanks and metal baskets.
Automatic extinguishing system	Deep fat fry inspection
 A photograph of a kitchen floor being cleaned. A person wearing a red apron and black boots uses a long-handled mop to clean a wet concrete floor between stainless steel equipment.	Floor maintenance



Commercial kitchen tools and equipment's

3.3 Modern kitchen gadgetry

3.3.1 Modern kitchen gadgets used in commercial kitchen

Kitchen gadgets are basically the tools and utensils used for the production of many dishes. The list of modern utensils used in commercial kitchen includes

<p>A food processor with a clear plastic bowl containing colorful vegetables like carrots and bell peppers. Various attachments are shown around it, including a smaller blender jar filled with colorful fruits, a small spice grinder, and several metal discs and blades.</p>	<p>An immersion blender with a black handle and a silver blending attachment. Three different blending tips (chopper, whisk, and smoothie) are shown below it.</p>
Food processor	Immersion blender

 A white food blender with a black base and a clear plastic container. It has a control panel with several buttons and a small digital display.	 A large, silver meat slicer with a circular blade. It has a control dial with a red arrow and a power switch.
Food blenders	Meat slicer
 A mandolin slicer with a grey handle and a silver metal frame. It is shown next to various vegetables like lettuce, bell peppers, and tomatoes, along with examples of sliced vegetables like shredded purple cabbage and julienne carrots.	 A manual French fry cutter with a grey handle and a stainless steel blade. It is mounted on a stand with four suction cups.
Mandolin	French fry cutter

 A stainless steel funnel-shaped strainer with a fine mesh screen and a handle.	 A set of red silicone baking moulds including a large rectangular tray, a smaller rectangular tray, a circular cake pan, and a muffin tin.
China cap	Silicon baking moulds
 A stainless steel salad spinner with a base and a rotating basket.	 A hand holding a sous vide immersion circulator in a pot of water containing a piece of salmon.

 A stainless steel deep fryer with two separate fryer baskets. The left basket contains golden-yellow french fries, and the right basket contains pieces of fried chicken. The machine has a control panel with two knobs and a small digital display.	 A large industrial dough sheeter made of stainless steel. It features a vertical metal frame, a horizontal rolling cylinder, and a white fabric sheet being processed through it. A small yellow warning label is visible on the side.
Deep fryer	Dough sheeters
 A digital food thermometer with a long probe. The probe is inserted into a piece of food, and the digital display shows a temperature of 140.5°F.	 A stainless steel dough balling machine. It has a vertical frame, a control panel with a color touchscreen display, and a mechanical arm that moves to shape the dough into balls.
Temperature gadgets	Dough ballers

	
Dough mixing machine	Dough rollers

3.3.2 SOPs for handling kitchen gadgetry

The standard operating procedures for handling kitchen gadgetry includes

- The gadgets should be clean and sanitize properly after use.
- Use gadgets with safety protocols
- Equipment should be clean after every use
- Regularly check thermometer of refrigerator and freezer
- Ensure after each use doors of refrigerator and freezers must closed
- Avoid flammable chemicals around stoves.
- Follow OH & S standards

Key points

- Getting your kitchen layout right is the main factor in guaranteeing a useful and practical kitchen area. Regardless of whether your kitchen is small or huge, a cunning design will have a significant effect in assisting you with perfect utilization of the available space.

- The Kitchen Standard Operating Procedures fill in as a functioning aide for clients in respects to food safety, sterilization, sanitation, and equipment use. It is dependent upon the user to keep up with all norms of disinfection and food handling applicable to their particular business.

- Island configuration is a type of commercial kitchen in which central island surrounded by counter space. The central island is equipped with ovens and ranges and devoted to cooking.

- A practical design alternative for little and huge kitchens, the L-shaped kitchen has cupboards along two opposite walls. The open arrangement plan of the L-shaped kitchen offers extraordinary flexibility in the situation of machines and work zones. While you can extend the legs of the L as space permits, it is ideal to keep it to less than 4.5m for convenience.

- Ergonomic configuration kitchen is the type of commercial kitchen in which cooking equipment and supplies are placed closely.in this kitchen ensures that employees don't need to be reaching, crouching, bending, stretching or walking around to get comfortable environment.

Exercise

select the most appropriate option

1. Kitchen layout should be
 - a. Comfortable (ergonomically)
 - b. Flexible
 - c. Easy to clean
 - d. All of above
2. Faulty equipment of kitchen must be placed
 - a. Outside the kitchen
 - b. Inside the kitchen
 - c. Both of above
 - d. None of these
3. A hand held gadget used for food preparation is called
 - a. Equipment
 - b. Utensils
 - c. Machine
 - d. None of these
4. Kitchen triangle between stove, fridge and sink makes the kitchen
 - a. Seem larger in size
 - b. More efficient
 - c. Comfortable
 - d. None of these

Give short answers of the following question

1. Why kitchens are designed in different layouts?
2. Differentiate between tools and equipment?
3. What do you mean by kitchen?
4. What is island kitchen?
5. Enlist some modern gadgets use in kitchen?

Answer the following questions in detail

1. Explain different types of commercial kitchen?
2. Describe the standard maintenance procedures of utensils and equipment?
3. Describe the SOP's for handling kitchen gadgets?

Activity

- Arrange the class into small groups. Align them a task to separate different tools and utensils according to their purposes.
- Plan a visit to nearest commercial kitchen, prepare questionnaire to be asked during visit, also observe the different utensils used in production of food.

Teacher guide

- The teacher is required to arrange and identify different tools in kitchen, plan an activity on how to recognize various tools and equipment.
- The teacher is required to plan a visit of hotel and give introduction of different kitchen areas, also help them to understand about kitchen triangle and various layouts of kitchens.

Chapter 4: Basic Food Preparation and Cooking Methods



Students learning outcomes:

After completing this chapter, you will be able to

- understand the procedure of receiving raw material and goods for kitchen
- discuss food storage procedures and stock rotation cycle according to sops
- learn the basic concept of wash, peel & re-wash
- apply measuring units and conversions
- practice mise en place tasks
- understand procedure for food preparation
- recognize types of knives and their uses
- understand sharpening and honing of knife
- comprehend safe handling of knife and risks involved
- describe different food cutting styles of fruits, vegetables and meat
- identify the suitable cutting method for different food menus

4.1 Receiving and storing food

4.1.1 Procedure for receiving raw material and goods for kitchen

Receiving, storage and preparation is the major part of food safety laws and receiving raw material and goods is the first step when following the food safety SOP's. In food industry orders are placed based on quantity, quality and specifications. For example if chef orders 5 kg apples, then he must write the specification like "A grade" imported apples.

At the time of receiving goods for kitchen, it must be important to check for any damage, use by date, pest infection and internal temperature. The following points are important when receiving raw goods and materials are

- When receiving **ambient** temperature products check the overall condition e.g. Dents, bloated cans, broken products and packing of product.
- When receiving **chilled** food check condition of products with internal temperature and packing of receiving goods.
- When receiving **frozen** products ensure temperature is below -18C and does not show signs of defrosting and freezer burns.



Receiving of goods

The following are important elements to consider when receiving raw material and goods are:

- Never assume that food is good and receive food without checking.
- The receiving area should be well lit and clean daily according to schedule.
- Schedule your deliveries for the proper inspection of goods
- All appropriate equipment and containers are used when receiving goods e.g. weight scale, gloves, thermometer etc.

4.1.2 Food storage procedure and stock rotation cycle according to SOP's

Food storage is a process in which both cooked and raw materials are stored according to their required temperatures. Storage is divided into 2 types.

- Dry storage
- Wet storage

Dry storage is a type of storage in which dry goods are stored with limited humidity and temperature of 10C to 16C desired. Examples include storage of pulses, legumes, spices, fruit tins and sauces.

You should know that which food is stored where. It's different according to the climate and temperature of region. In winter, potatoes can store outside the chiller but in summers it's quickly spoil outside.



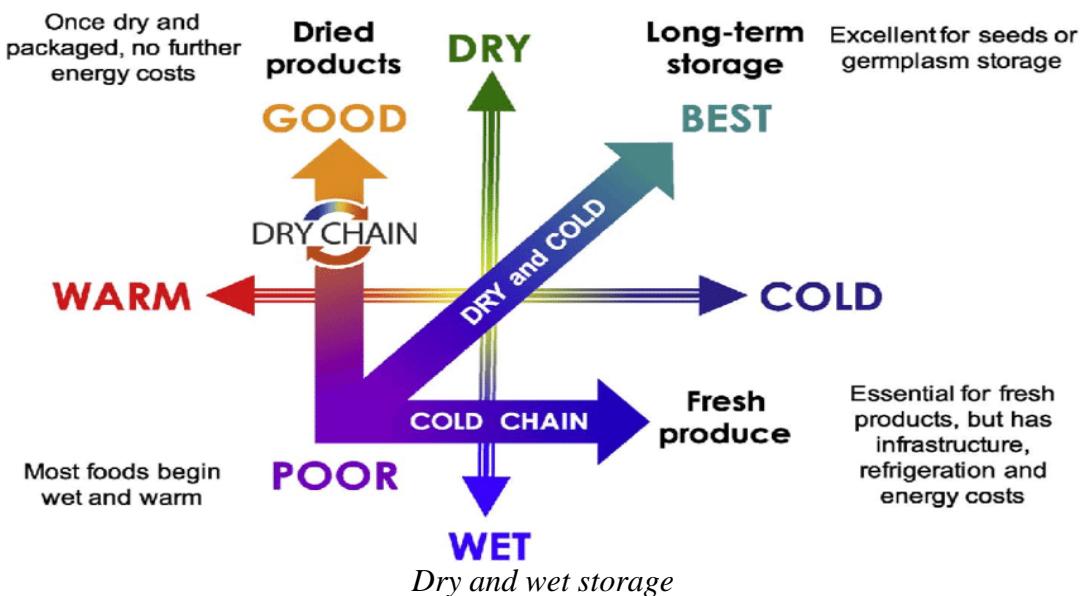
Dry storage

Wet storage is the type of storage in which perishable items are stored in chiller or freezers according to the requirement of product. Examples include ice-cream must be store in freezer at -18C, while milk must store in chiller at 4C.



Wet storage

Chillers and freezers must have external thermometers which display the internal temperature. It must have alarms that alert you to any problem. Data logs are always kept to show the variations in temperatures. All wet storage required this data log sheet so the actual internal temperatures can be recorded easily several times in a day.



Stock rotation cycle according to SOP's

Stock rotation cycle is the process that starts with the purchase of stock items, store it, use in production and ends on consumption or the sale of stock item. It is also known as 'Food Deliveries cycle'.

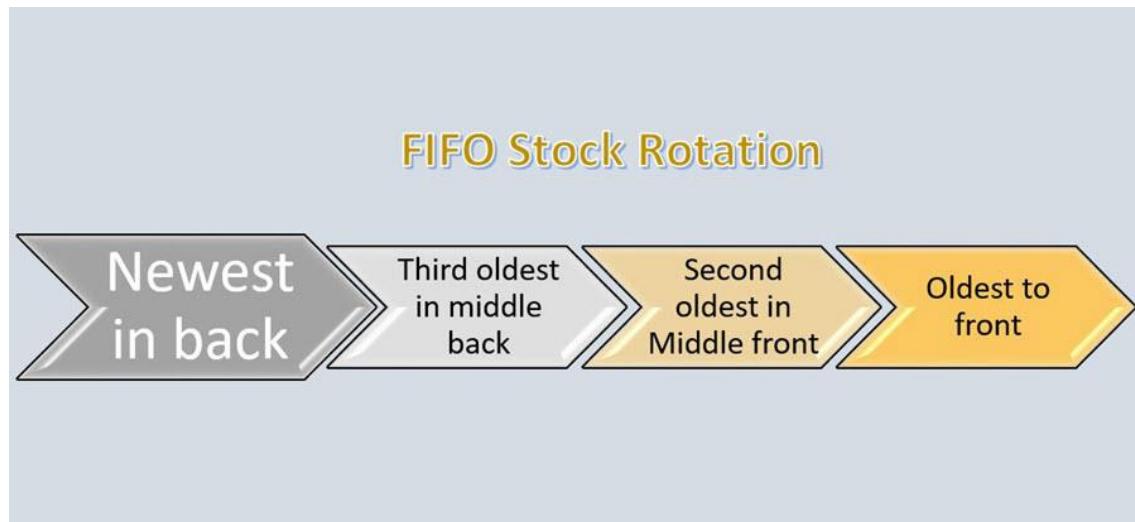
In Stock rotation system, the main rule according to standard operating procedure is FIFO which means first in, First out. **FIFO** is the basic principle in which all stock is stored or managed according to shelf life. It means the first product you received should be used first.

For example: when storing foods in dry storage, you place the new product underneath or behind the old product. In this way, first product is used first. In this procedure labeling of product is must with a date stamp or tag.

Interesting Information!

Best before label on product means the product has some storage life left but may be inferior in taste.

Use by date means the product should be used by that day, otherwise considered expired.



FIFO- First in, First out

4.1.3 Concept of wash, peel and rewash

Wash, peel and rewash (WPRW) is basically the prevention method for contamination. In this method steps include

- Get rid to dust, glass shards, timber pieces and soil
- Peel it properly
- Again wash the product.

This method is mostly used when receiving good and then food stored in different temperatures.

Do you know!

Wash, peel and rewash is the basic rules used for the prevention of physical contamination.



Step 1 – Washing of vegetables



Step 2 – Peeling of vegetables



Step 3 – Rewash of vegetables

4.2 Preparation methods

Preparation methods are the methods which include the methods before cooking or baking.

These methods are listed below

A top-down photograph of various food ingredients and kitchen tools arranged on a rustic wooden surface. It includes a white bowl of green leafy salad, several ripe red tomatoes in a small wooden bowl, a piece of ginger, a rolling pin, a wooden fork and spoon, and smaller bowls containing grains, cheese, and herbs.	A top-down photograph of a digital kitchen scale with a blue digital display showing "2.55". The scale is surrounded by various ingredients and tools: a large glass bowl filled with a crumbly substance, a measuring cup of white flour, a measuring cup of brown sugar, a measuring cup of melted butter, and a red measuring spoon.
Mis en place	Weighing

	
Sifting	Folding
	
Mixing	Beating
	

Marinating	Pouring
	
Greasing	Cutting

4.2.1 Measuring units and conversions

Measuring units:

Measuring unit is the unit through which we can weight different ingredients during cooking. The different units used in cooking are

Units	Type of measurement
Volume	Liter
Grams	Mass (weight)
Litre	Capacity (volume)
Celsius/ Fahrenheit	Temperature

Ingredients can measure in cups as well as on weighing scale. Each ingredient requires its specific unit such as solid food measure in grams and liquid foods are measure in liters.

Conversions
1 pound = 450 gm.
1 liter = 1000 ml

1 fluid ounce = 1 tbsp
1 table spoon = 3 teaspoons
1 cup = 235 ml
$\frac{1}{2}$ cup = 117 ml
1 tbsp = 15 ml
$\frac{1}{2}$ tbsp = 7.5 ml
1 tsp = 5 ml
$\frac{1}{2}$ tsp = 2.5 ml



Measuring cups and spoons

4.2.2 Practice miseen place tasks (planning, organizing, and handling)

Miseen place is a French name which means “putting in a place”. It is a term collecting all the ingredients measured according to the recipe. The basic steps of miseen place are

- Read the recipe carefully
- Prepare your stations and workplace accordingly
- Check out all ingredients are cleaned
- Collect ingredients and measure them



Mis en place of ingredients and utensils

Importance of miseen place:

- It helps in saving of time by collecting every ingredient
- Lack of chance of mistake
- It saves time and space
- It is the reason of prepared and organize kitchen.

Planning, organizing and handling:

Planning of meal is basically the designing of food or meal which you will make in a hotel or restaurant. Meal planning helps to ensure that you have variety of food for your customers. The important tips which are helpful in planning a meal are

- Menu development
- Plan your meal on items which are on sale
- At least one meat meal must present
- Regularly check the expiry dates of food which are stored in refrigerator or freezer
- Special care is required for recipes which needs special ingredients
- Plan to use leftovers

Activity: Arrange the class into smallgroups. Assign them the task to develop a menu of Pakistani food.

5.2.3 Procedure for food preparation

The procedure for food preparation includes the following steps:

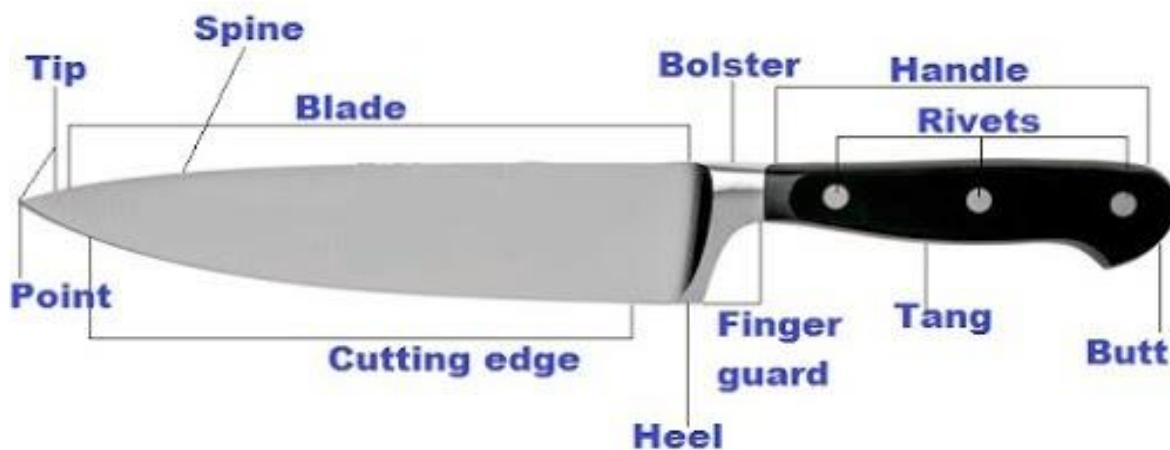
1. Wash hands thoroughly before starting work
2. Clean and sanitize workstations
3. Wash all fruits and vegetables before cooking
4. Separate & store raw and cooked foods
5. Miseen place
6. Choose preparation method according to dish
7. Cook and store food properly.

Activity: Arrange the class into small groups. Assign them a task to prepare fruit salad by using standard procedure of food preparation.

4.3 Basic knife skills

4.3.1 Recognize types of knives and their uses

Knife is a tool with a cutting edge attached with handle. It is used for cutting, chopping, dicing, mincing, peeling and garnishing of different fruits, vegetables and meat. These are available in different types and sizes.



Parts of Chef Knife

Types of knives:

1. **Chef knife (large):** It is multi-purpose knife and used for cutting, dicing and chopping of fruits and vegetables.



Chef knife

2. **Paring knife (small):** paring knife is a knife with short, slim and small blade. Its small blade is helpful in cut, chop and slices of vegetables. It also performs the delicate tasks like peeling, trimming and removing seeds from fruits and vegetables.



Paring knife

3. **Bread knife:** bread knife is a knife which have long, sharp zigzag blade. It is used in the cutting of different breads like milk bread, French bread, bagels and bread rolls.



Bread knife

4. **Carving knife:** carving knife is a knife with a small, sharp and slim blade. It is used for cutting of meat, poultry and beef in thin sizes. It is also used for slicing of fruits and vegetables into very thin pieces.



Carving knife

5. **Cleaver:** Cleaver is also called butchers knife, have a large rectangle blade. This is used for cutting meat into smaller pieces before cooking. It can even cut the bone of meat.



Cleaver

6. **Boning knife:** Boning knife is knife which has a slim sharp blade. It is too short almost 6 inches in size. It is best for cutting meat bones and trimming cartilage.



Boning knife

4.3.2 Sharpening and honing of knife

Sharpening is a procedure of removing material from a knife blade's edge. This is a skillful process in which grinding the edge of a knife against a sharpening stone.

Honing is the process of maintaining of already sharped edge. It also keeps the blade sharp by pushing the edge of the knife back to the center.



Sharpening of Chef Knife

4.3.3 Safe handling of knife and risks involved

The following points are important for safe handling of knife:

- Always use knife with sharp blade
- Wear cutting gloves during preparation
- Always cut away from yourself
- Use the right knife according to type of cutting
- Use stable cutting board
- Never try to catch when knife is falling
- Use the knife attentively
- Carry the knife pointed down

Easy
Dos and Don'ts

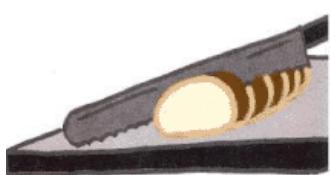
For Teen Workers
- Safe Knife Handling -

Do:



- ✓ Keep knives sharpened and let other staff know when knives are newly sharpened.
- ✓ Use a knife only for its intended purpose.
- ✓ Use the appropriate knife for the job.
- ✓ Carry knives with the cutting edge slightly away from your body.
- ✓ Store knives properly in racks or knife sheaths.

Don't:



- ✗ Touch knife blades.
- ✗ Try and catch a falling knife, let it fall.
- ✗ Hand a knife to someone. Put it down on the counter and let him or her pick it up.
- ✗ Leave a knife soaking in a sink of water.
- ✗ Talk to people while using a knife.

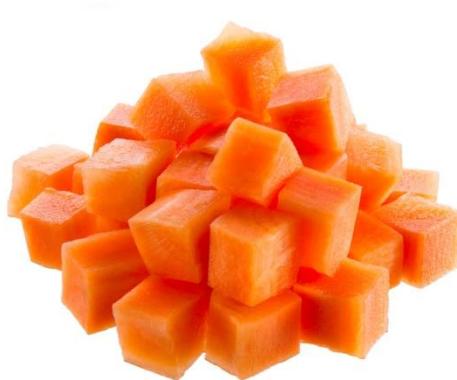
Safe handling techniques of knives and prevent risks

4.4 Types of cuttings

4.4.1 Different cutting styles of food (fruit, vegetable, meat)

Cutting techniques are very important for a professional chef. Take time to learn and practice these skills.

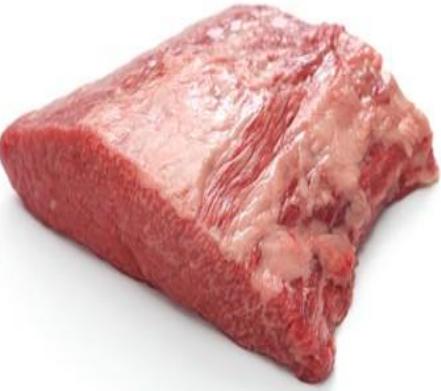
The following types of cutting vegetables are listed below:

 A wooden cutting board featuring diced vegetables: red bell peppers, orange carrots, and red onions.	 A hand using a large chef's knife to shred green chives on a wooden cutting board.
Brunoise (fine dice)	Chiffonade (shredding)
 A pile of colorful julienne-cut vegetables, including carrots, yellow squash, and zucchini.	 A pile of macedoine-cut (large dice) carrots.
Julienne (match stick cuts)	Macedoine (large dice)
 A hand slicing a lemon into thin, circular slices on a wooden cutting board.	 A hand mincing garlic on a wooden cutting board.
Slicing	Mincing

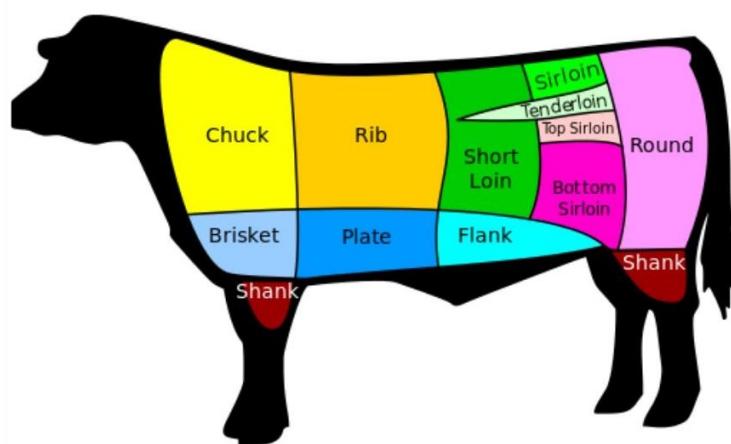
	
Roll cutting	Parallel cutting
	
Crushing	Baton

Cutting of meat:

The following types of cutting vegetables are listed below:

	
Chuck	Rib
	
Short loin	Sirloin
	
Round	Brisket

	
Fore shank	Short plate
	
Flank	

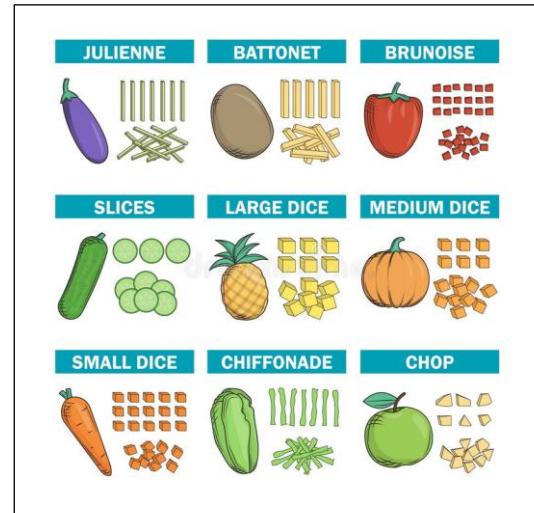


Different cuts of beef

Cutting types of Fruits:

The cutting types of fruits include

- Chopping
- Dicing
- Slicing
- Julienne
- Cube
- Roll cutting
- Parallel cutting



Different cuttings of fruits & vegetables

4.4.2 Cutting method for different food menu.

Various cutting styles are used because of following reasons:

- Good presentation
- Cooking time
- Standardization
- Uniformity

Activity: Arrange the class into 5 groups, each group make Russian salad and present the different cuttings used in the dish.

Activity: Arrange the class into small groups. Assign them a task to present the given types of fruits and vegetables after cutting.

Key points

- Receiving ,storage and preparation is the major part of food safety laws and receiving raw material and goods is the first step when following the food safety SOP's. In food

industry orders are placed based on quantity, quality and specifications.

- Food storage is a process in which both cooked and raw materials are stored according to their required temperatures. Storage is divided into 2 types dry storage and wet storage.
- **Dry storage** is a type of storage in which dry goods are stored with limited humidity and temperature of 10C to 16C. Examples include storage of pulses, legumes, spices, fruit tins and sauces.
- **Wet storage** is the type of storage in which perishable items are stored in chiller or freezers according to the requirement of product. Examples include ice-cream must be stored in freezer at -18C, while milk must be store in chiller at 4C.
- Stock rotation cycle is the process that starts with the purchase of stock items, store it, use in production and ends on consumption or the sale of stock item. It is also known as 'Food Deliveries cycle'
- .
- In Stock rotation system, the main rule according to standard operating procedure is FIFO, LIFO which means First In First Out. **FIFO** is the basic principle in which all stock is stored or managed according to shelf life. It means the first product you receive should be used first.

Exercise

select the most appropriate option

1. FIFO stands for
 - a. First In First Out
 - b. First Out, First In
 - c. First In and Out
 - d. None of these
2. The storage temperature for frozen mutton is
 - a. -18C
 - b. -2C
 - c. 0C
 - d. 24C
3. The physical contamination is prevented by the rules of
 - a. MSDS
 - b. FIFO
 - c. GIGO
 - d. WPRW
4. Which one of the following reason of cut in finger
 - a. Blunt knife
 - b. Sharp knife
 - c. Small knife
 - d. None of theses

Give short answers

1. Enlist storage temperatures for major food groups?
2. Measure different foods and enlist the units involved in measuring?
3. Make a chart and describe the basic cutting styles for vegetables and fruits?
4. Write down the 5 names of cutting?

Answer the following question in detail

1. Describe the procedure of receiving raw material and goods for kitchen?
2. Enlist measuring units for food? Also make conversion chart of these units?
3. Describe the procedure of food preparation?
4. Describe different cutting styles of fruits and vegetables?

Activity

- Arrange the class into small groups, each group arrange different ingredients according to their storage temperatures and FIFO rule.
- Demonstrate stock rotation system by using FIFO & LIFO.
- Arrange the class into 5 groups, each group will arrange mis en place and cut different types of fruits and vegetables.
- Practice the different cuttings of meat in class individually.
- Plan a visit to nearest butcher shop and observe different cutting styles of meat.

Teachers guide

- The teacher is required to demonstrate different styles of cutting of fruits and their uses in production of salads.
- The teacher is required to demonstrate different cutting of meat for the production of steaks.
- The teacher is required to teach the students about how to demand ingredients of a desired food from store, ensure quality of ingredients used for production of food.

Chapter 5: Cooking Methods and temperatures



Students learning outcomes:

After completing this chapter, you will be able to

- learn the concept of heat transfer and its uses for cooking
- know about the basic concepts of cooking food
- comprehend categories of cooking methods dry heat, moist heat and combination method
- understand internal cooking temperature of foods
- understand safe storage of cooked food
- know about effects of cooking on food
- understand the basic concept of dry heat cooking
- know tools & equipment used for dry heat cooking
- follow different types of dry heat cooking
- recognize heat sources in dry heat cooking
- learn which foods are suitable for moist heat cooking

- Know tools and equipment used for moist heat cooking.
- Know about required temperature for moist heat cooking
- Follow different types of dry heat cooking
- Know the difference of dry heat method with moist heat cooking

5.1 Introduction to Cooking methods

Cooking methods are the methods which are used to cook food. The three types of cooking methods are dry heat, moist heat and combination method. Each of this method cooks the food through heat in different ways.

Understanding and mastering the different cooking methods is the essential skill of a professional chef. Knowledge of cooking techniques allows you to produce new dishes with same ingredients and develop new tastes and flavors.

5.1.1 Heat transfer and its use for cooking

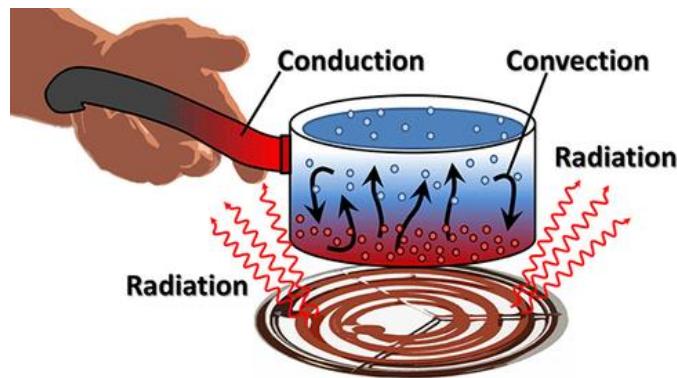
There are 3 ways by which a heat can transfer

- Conduction
- Convection
- Radiation

Conduction and convection are the 2 processes which require matter to transfer heat. Heat will always find a way to transfer from the higher to lower system.

In the cooking process heat transfer is a major aspect when we heat the food the harmful bacteria and other microorganisms will be destroyed, which makes our food safe to eat and easier to digest.

In **conduction** heat transfer will take place between objects by direct contact. In **convection** the heat transfer take place within the fluid. In **radiation** heat transfer take place through electromagnetic waves without involving particles.



Three methods of heat transfer

Convection is a method which transfers the heat using direct contact, food is heated directly in a metal pan, surrounded by air or in a liquid.

Examples:

- Take a pan half full of water boil it on heat. When it starts boiling put a peeled potato into it. The heat will be transferred to the potato and it will become soft and tender.
- Ahmad is frying kebabs in a pan suddenly his hands touches the hot pan due to which his hand burns. This is an example of conduction.
- Heating the biryani in microwave oven is the best example of radiation.

Interesting information!

Naturally heat can transfer from hot surface to cool surface. The movement of heat is commonly referred to as “heat transfer”.

5.1.2 Concepts of cooking food

The basic concept of cooking food is to destroy microorganisms (bacteria and viruses), tissue breakdown of food to help easy to digest and for the enhancement of flavor in dish. There are basic three major concepts of cooking which includes

- Appearance
- Taste
- Flavor

Appearance:

The appearance of food includes its size, shape, color, dullness or gloss. The most important characteristics of any food appearance are its **color**. If a food is garnish with perfect color scheme then food looks more appealing.



Apearance of dish

Taste and flavor:

Flavor refers to the smell or texture of the food. It is dependent on taste and aroma. Taste refers to the connection between the taste buds in a mouth to recognize the basic taste of sweet, sour, bitter and salty.

Activity: Take 4 ingredients which are sweet, sour, bitter and salty and blind fold spice challenge individually.

5.1.3 Categories of cooking food

Categories of cooking food depend on the methods of cooking. There are basic three categories of cooking food which includes

- a. Dry heat cooking
- b. Moist heat cooking
- c. Combination methods

Moist Heat Method	Dry Heat Method	Combination Method
Boiling	Roasting	Braising
Stewing	Grilling	
Steaming	Toasting	
Pressure Cooking	Baking	
Poaching	Sautéeing	
Blanching	Frying	

Basic categories of cooking food

1. Dry heat cooking:

Dry heat cooking is the type of cooking in which food is cooked without any moisture (water or fat). In this method heat is directly transferred to food. Dry heat cooking is based on different methods which includes

1. Broiling
2. Grilling
3. Roasting
4. Baking
5. Sautéing

1. Broiling:

Broiling is a method in which high heat transfer onto the food, usually direct from the radiant which cooks one side at a time.

Browning of food can occur very quickly through this method. Examples include sealing of chicken juices, broiling peaches or grapefruits etc.



Broiling in meat

2. Grilling:

Grilling is the method of cooking which uses radiant heat to cook food quickly. Grilling is similar to broiling, in this flipping is required to cook food on both sides properly. Examples include making of grill burgers, grill of fish and whole chicken etc.



Grilling of fish

3. Roasting:

Roasting is a dry method of cooking in which food is cooked inside oven and cooks until fully tender and brown. This method of cooking is a very slow process and performed at very low temperatures between 70 degree to 75 degree celsius. Examples include roasting of vegetables and whole chicken etc.



Roasting of whole chicken

4. Baking:

Baking is a dry heat method of cooking in which food is cooked on indirect heat in an oven at specific time and temperature. Baking is performed on lower temperatures than roasting. Examples include baking of cakes, cupcakes and pastries etc.



Baking of pizza in an oven

5. Sautéing:

Sautéing is a dry heat cooking method in which food is cooked in shallow pan and uses small amount of fat to coat food only for browning. Sautéing is a French name which means “jump”, it’s a method of quick cooking by continuously flipping and toasting of food. Example includes sautéing of vegetables etc.



Sautéing of vegetables

2. Moist heat method:

Moist heat methods are the type of methods in which food is cooked through any moisture (water or fat). This method can be used for the making of healthy dishes by using water rather than fat. The methods include in moist heat methods are

1. Poaching
2. Simmering
3. Boiling
4. Steaming

1. Poaching:

Poaching is a moist heat method of cooking in which food is submerged in hot liquid at 140 degree to 180 degree Fahrenheit. Examples include poaching of an egg in hot boiling water etc.



Poaching of egg

2. Simmering:

Simmering is a moist heat cooking method in which food is cooked in water at lower temperature than boiling. Examples include simmering of rice, vegetables etc.



Simmering of vegetables in stock

3. Boiling:

Boiling is a moist heat cooking method in which food is submerged in water and heated to 100°C. The boiling water produces large bubbles, in which food is cooked properly. Examples include boiling of eggs, potatoes etc.



Poaching of eggs

4. Steaming:

Steaming is moist heat method of cooking in which food is cooked in steam. In this method, water is boiled continuously to produce steam, in which food cook. Examples include steaming of crème Brûlée, steam buns and steam cakes etc.



Steaming of dumplings

3. Combination methods:

Combination method is a method in which food is cook with dry heat as well as moist heat method. In this method food is cooked in liquid at low heat for a specific period of time. The example of combination cooking is braising.

1. Braising:

Braising is a combination method in which food is cooked in dry heat as well as moist heat. In this method, meat is firstly sealed on high heat to seal the juice of meat and the cooked in a liquid for fully tenderness. Examples include vegetables can braised with meat to add more flavor etc.



Braising of meat

5.2 Importance of temperature in cooking

5.2.1 Internal cooking temperature of foods

Temperature of food is always checking with food probes. For the checking of internal temperature, insert the tip of food probe into center of thicker part of food. If the food is in liquid then stir the liquid then measure temperature with probe.

Some internal temperatures of different foods are

- Meat and meat mixtures 73 °C
- Fresh beef, veal or lamb 73 °C
- Poultry 83 °C
- Eggs and egg cookery 70C to 74 °C
- Casseroles 70C to 74 °C
- Seafood 60C to 65 °C



Methods to check internal temperature of steaks

5.2.2 Safe storage of cooked food

Storage of ready to eat food is very important because bacteria of raw food can contaminate cooked food. Raw and cook food should be stored separately. There are basic 4 rules for safe storage of food:

1. Put hot food into shallow dishes in a small portion to cool the food as fast as possible
2. Don't put hot food in chiller. Stop until steam of food slow down.
3. Store high risk cooked food at 4C
4. Beware from danger zone (5C to 60C)
5. Follow 2/4 hrs rule



Storage of cooked food

5.2.3 Effects of cooking on food

Cooking of food is very important as it prevents food from contamination and killed viruses, bacteria and toxins. It also helps to avoid food poisoning. Cooking ensures that food is free from microorganisms and safe to eat. There are different sources of cooking which includes

- Burning of wood or charcoal
- Oil or gas
- Electric oven
- Microwave

Cooking improves the flavor, texture, taste, kill harmful bacteria. It makes the fruits and vegetables more digestible as it soften.

5.3 Dry heat cooking

5.3.1 Concept of dry heat cooking

As you already learn in 5.1.3, Dry heat cooking is a type of cooking in which food is cooked without liquid. In this method heat is directly transferred to food. Dry heat cooking is based on different methods which includes

- Broiling
- Grilling
- Roasting
- Baking
- Sautéing

Foods which are cooked with dry heat method includes baking of pizza, buns, bread, cakes and desserts, roasting of chicken or potatoes, sautéing of vegetables etc.



Deep Frying



Shallow Frying



Grilling



Sautéing



Baking



Roasting



Stir Frying



Barbecuing



Pan Frying

Examples of dry heat methods

5.3.2 Tools and equipment used for dry heat cooking

Tools and equipment used for dry heat cooking are

	
Oven	Pans
	
Moulds	Measuring tools
	

Baking trays	Whisks
	
Roasters	Baking trays
	
Cutlery	Ramekins

	
Spatulas	Toasters
	
Tongs	Oven gloves
	
Frying pans	Grill pans

Activity: Divide the class into 5 groups and divide each dry heat method to them. Every group should make one recipe using any one dry heat method of cooking.

5.3.3 Heat source of dry heat cooking

Dry heat cooking is a process of cooking where food is exposed to a source of high heat. This heat brings food to a much higher temperature than moist heat method.

Heat is transferred in dry heat cooking through air, fat, metal or radiation in the following ways

- By rays which come from burning coals and flames. This type of rays also called radiations.
- By metal which cooked food from the burner
- By oil is that heat in which pan transferred heat from the burner to the oil.

Interesting Information!

Perfect crosshatch grill marks create when meat is placed diagonally with the perfect temperature of heat.

5.4 Moist heat cooking

5.4.1 Foods suitable for moist heat cooking

Foods made with moist heat cooking includes

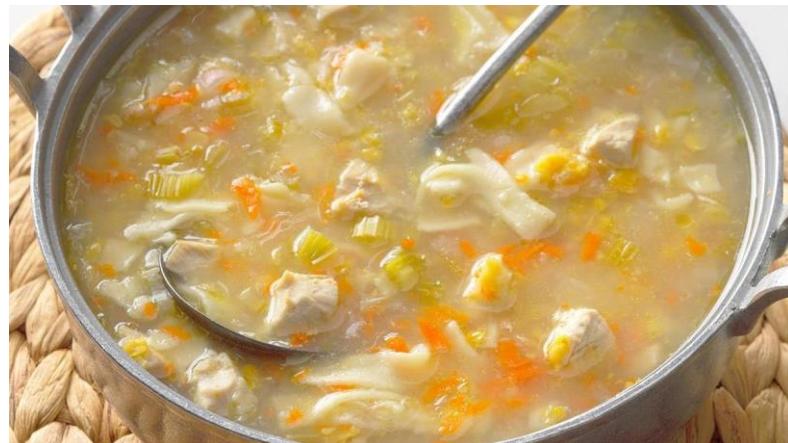
- Poaching of eggs, salmon, pears, lentils and vegetables



- Blanching of tomatoes, asparagus and potatoes



- Boiling of milk, water, stocks and soups



- Simmering of chicken, fish, broth and stocks

-
-
-



- Steaming of chicken, meat, vegetables and fruits



5.4.2 Tools & equipment used for moist heat cooking

Tools and equipment used for moist heat cooking are

	
Measuring cups	Measuring spoons

	
Stove	Ladle
	
Frying pans	Sauce pans
	

Slicers	Wok
	
Pressure cooker	Tongs
	
Cooking pots	Colanders

	
Steamers	Strainer

5.4.3 Temperature required for moist heat cooking

There are basic many methods of dry heat cooking. Each method of cooking requires different temperature. The temperature of each method is listed below

1. Poaching – 71-80 °C
2. Simmering – 85- 90 °C
3. Boiling – 100 °C
4. Steaming – 102 to 110 °C
5. Blanching – 100 °C

Activity: Arrange the class into 5 groups and divide each dry heat method to them. Every group should make one recipe using any one dry heat method of cooking.

5.4.4 Difference of dry heat method with moist heat cooking methods

Dry heat cooking method	Moist heat cooking method
Dry method of cooking is the method in which food is cooked without any liquid.	Moist heat method is the method in which food is cooked in liquid(water or fat)
Dry heat cooking temperature is higher than moist heat	Moist heat cooking temperature are lower than dry heat cooking
It has limited methods of cooking.	It is more effective than dry heat.

Key points

- Cooking methods are the methods which are used to cook food. The three types of cooking methods are dry heat, moist heat and combination method. Each of these methods cooks the food through heat in different ways.
- Conduction and convection are the 2 processes which required matter to transfer heat. As long as the difference between these 2 systems heat will always find a way to transfer from the higher to lower system.
- The appearance of food includes its size, shape, color, dullness or gloss. The most important characteristics of any food appearance are its **color**. If a food is garnish with perfect color scheme then food looks more appealing.
- Dry heat cooking is the type of cooking in which food is cooked without any moisture (water or fat). In this method heat is directly transfer to foods.
- Moist heat methods are the type of methods in which food is cooked through moisture (water or fat). This method can be used for the making of healthy dishes by using water.
- Combination method is a method in which food is cook with dry heat as well as moist heat method. In this method food is cooked in liquid at low heat for a specific period of time.
- Temperature of food is always checked with food probes. Checking of internal temperature, insert the tip of food probe into center of thicker part of food. If the food is in liquid then stir the liquid then measure temperature with probe.

Exercise

select the most appropriate option

1. Chicken is boiled at
 - a. 100°C
 - b. 110°C
 - c. 1000°C
 - d. 200°C
2. Blanching is the cooking method of
 - a. Dry heat
 - b. Moist heat
 - c. Combination method
 - d. None of these
3. The storage temperature for cooked meat is
 - a. 60°C
 - b. -2 °C
 - c. 75°C
 - d. -5°C
4. Simmering is conducted at
 - a. 100C
 - b. 105C
 - c. 55C
 - d. 75C

Give short answers

1. Differentiate between combination cooking and dry heat cooking?
2. What is roasting?
3. What is blanching and simmering?
4. What is the role of pressure in cooker cooking?
5. Enlist tools and equipment used in moist heat cooking?

Answer the following question in detail

1. Explain the basic concept of cooking food?
2. Describe the various categories of cooking methods?
3. State the importance of temperature ranges of cooking food?
4. Define dry heat cooking? Explain various dry heat cooking methods?

Activity

- Arrange the class into small groups; each group will prepare presentation on chart elaborating different cooking methods.
- Arrange the class into small groups. Assign a task to each group to make a dish by using any of the moist heat method.
- Prepare, cook and finish seafood by using any of the dry heat method.

Teacher's guide

- The teacher is required to demonstrate different cooking methods. He/she has to help them to prepare different food by using every method of cooking.
- The teacher is required to make the students familiar about the temperatures ranges required for the production of vegetable, chicken dishes and stocks.

Chapter 6: Cold Kitchen



Students learning outcomes:

After completing this chapter, you will be able to

- define cold kitchen
- identify the equipment in cold kitchen
- learn how to store food as per cold kitchen policies
- know different types of salads and identify their origins
- learn preparation methods involve in salad making
- identify salads dressings
- understand standard process to prepare different types of salads
- know categories of sandwiches
- understand standard process to prepare hot and cold sandwiches
- learn how to finish & present salads and sandwiches
- understand the storage and display of cold kitchen items in cold bars

6.1 Introduction to cold kitchen

6.1.1 Define cold kitchen

The Cold Kitchen is a part of kitchen where cold foods are prepared for the guests to serve.

The cold kitchen is kitchen where cooking processes take place that do not require heat. The normal temperature of cold kitchen is 16°C to 25°C. Types of foods which are produced in the cold kitchen are:-

- Cold Salads
- Cold Meats
- Cold Desserts
- Cold Soups
- Cold Canapes
- Cold Fruit Platters etc.



6.1.2 Equipment used in cold kitchen

The equipment's which are used in the cold kitchen are according to the dishes and food items which are produced in the cold kitchen.

List of some equipment's which are used in the cold kitchen are.



Cold Bain Marie	Cold display counter
	
Salad counters	Bread cutters
	
Cutting boards	Knives

	
Chillers	Bowls
	
Crockery	Cutlery



Cold kitchen in hotel

6.1.3 Store food as per cold kitchen policies

In the cold kitchen the temperature is always 4°C or below. And the food storage temperature is - 18°C or below.

The overall kitchen temperature should be 4°C or below so the food items which are used in the production of different dishes should be remain fresh and healthy and their colors and textures remain the same.

Any disturbance in the food store of kitchen can damage the food items which are stored in the chillers are storage rooms of the cold kitchen such as cold salads, cold meats, cold desserts, cold soups etc.

Do you know!

What is the danger zone of food temperature?

Bacteria can grow rapidly in the range of temperatures between 5°C and 60°C. This temperature zone in known as the Danger Zone. Food should not be left out of the refrigerator for more than 2 hours otherwise it will affect the quality of food.

Chilling and storing foods at proper temperature is one of the best ways to slow the growth bacteria and other microorganisms, so the food items remain fresh for a longer time.

Which food should be stored at the coldest part?

The upper shelves of the fridge have the most consistent temperatures and the lower shelves are the coldest. Place food in middle shelf such as hummus, olives, and deli meat that don't need to be cooked or reheat

Some food items such as avocados, bananas, onions, potatoes, ginger and garlic all are the food items which should not be stored in colder temperature.

Some other foods like honey, bread and fresh herbs should not be placed in the cold storage. If these things are stored on the cold temperatures the texture and color of these food items will be affected badly.



Storage of vegetables in cold kitchen

6.2 Preparation of salads

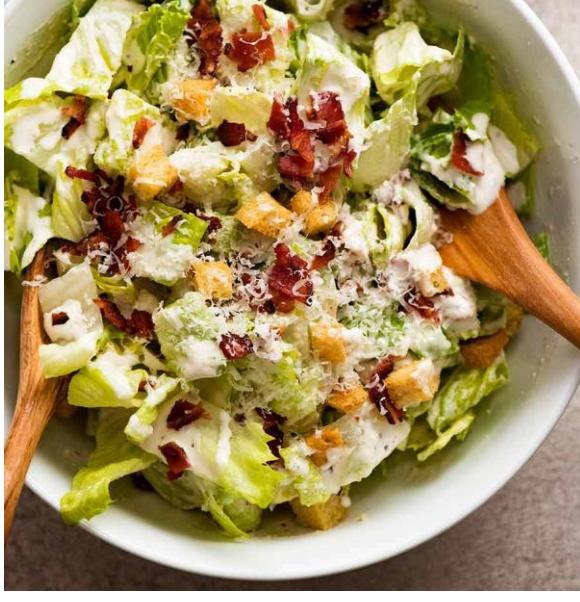
6.2.1 Types of salad and their origins

Different types of salads with their origins are described below:

	
<p>Salad name: Acar</p> <p>Origin: Indonesia, Brunei, Malaysia and Singapore.</p>	<p>Salad name: Arab Salad</p> <p>Origin : Arab Cuisine</p>
	
<p>Salad name: Beet Salad</p> <p>Origin: Canada</p>	<p>Salad name: Potato Salad</p> <p>Origin: German</p>

	
<p>Salad name: Olivier Salad Origin: Russia</p>	<p>Salad name: Pasta Salad Origin: Italian</p>
	
<p>Salad name: Macaroni Pasta Salad Origin: Asia</p>	<p>Salad name: Mushroom Salad Origin: Finland</p>

	
<p>Salad name: Greek Salad Origin: Greece</p>	<p>Salad name: Kachumbar Origin: India</p>
	
<p>Salad name: Egg Salad Origin: Worldwide</p>	<p>Salad name: Fruit Salad Origin: Unspecific</p>

 A vibrant Chinese Chicken Salad served on a green plate. It consists of shredded lettuce, sliced grilled chicken, halved cherry tomatoes, and shaved Parmesan cheese.	 A large bowl of coleslaw made with shredded white cabbage, finely diced carrots, and a light dressing.
Salad name: Chinese Chicken Salad Origin: American Chinese Cuisine	Salad name: Coleslaw Origin: Worldwide
 A classic Caesar salad in a white bowl, featuring romaine lettuce, croutons, and bacon bits, all dressed in a creamy Caesar dressing.	 A bowl of classic chicken salad, a creamy mixture of shredded lettuce, diced chicken, red onions, and bell peppers.
Salad name: Caesar salad Origin: Mexico	Salad name: Classic Chicken Salad Origin: Worldwide

6.2.2 Preparation methods involved in salad making

Following are the steps of Salads preparation are

- Choose the freshest ingredient
- Store the greens of your salad properly
- Make the salad dressing
- Mixing of ingredients
- Toss each vegetables in separate bowls
- Add seasoning
- Add fresh herbs in salads
- Add oil to make it more nutritious and shiny

Cooking Methods which are involved in the preparation of Sandwiches are

- | | |
|-------------|------------|
| ▪ Baking | ▪ Grilling |
| ▪ Boiling | ▪ Poaching |
| ▪ Blanching | ▪ Roasting |
| ▪ Frying | ▪ Steaming |



Types of salads

6.2.3 Salad dressings

What is a dressing?

The dressing is a mixture of liquids used in the salad preparation to enhance flavor and appropriate sheen.

A dressing is generally an emulsion of oil-in-water and consists of the different combinations of oil, water, vinegar, salt, citric acid, spices and an emulsifier.

For the consumption of different nutrients, salad dressing plays an important role. The fats which are used in the salad dressing help to absorb key nutrients such as lycopene and alpha-and beta-carotene. Salads and salad dressings are a good source of vitamins, minerals and fibers.

Classifications of Salad Dressing

There are two types of Salad dressings:

1) Creamy Dressings

It uses mayonnaise, yogurt, sour cream, butter milk or milk is used as a base in creamy dressings.



Creamy dressing

2) Vinaigrette Dressings

It uses oil, vinegars, and fruit juices, condiments like salt, sugar, pepper, herbs and different spices as a base.



Vinaigrette Dressings

Some major types of Salad dressings are

 A white bowl filled with a creamy white ranch dressing. The top is garnished with finely chopped dill and black pepper. The bowl is surrounded by fresh green herbs and a piece of orange cheese.	 A white bowl filled with a dark brown balsamic vinaigrette dressing. A silver spoon is resting in the bowl, showing the thick consistency of the sauce. The bowl is surrounded by fresh green herbs.
Ranch dressing	Balsamic vinaigrette dressing

 A white bowl containing a thick, yellowish-orange honey mustard dressing. A spoon is being used to drizzle the dressing back into the bowl.	 A glass jar filled with a light-colored, creamy coconut cream dressing. A wooden spoon is resting in the jar. In the background, there are small bowls of herbs and a striped cloth.
Honey mustard dressing	Coconut cream dressing
 A small glass bowl containing a vibrant orange Italian dressing.	 A glass jar filled with a pale yellow zesty lemon dressing. It is surrounded by lemons, a lemon squeezer, and green onions.
Italian dressing	Zesty lemon dressing
 A close-up of a spoonful of apple cider vinegar dressing over a jar, showing its texture and small dark specks.	 A small jar of bright yellow ginger turmeric dressing next to a bowl of salad. There are whole lemons and ginger root in the background.
Apple cider vinegar dressing	Ginger turmeric dressing

	
Avocado cilantro lime dressing	Honey mustard dressing
	
Greek yogurt ranch dressing	Sesame ginger dressing

6.2.4 Standard process to prepare different types of salads

The standard process to prepare a salad is as follows

- Choose a base. It is the primary ingredient of the salad.
- Add suitable protein to your salad
- Choose Fruits or vegetables as per your choice.
- Add spices and flavors
- Add dressing

1. Ranch Dressing

Name of dish	Ranch dressing	Preparation time:	20 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Mayonnaise	250 gm.		
Butter milk	250 ml.		
Dried chives	3 gm.		
Dried parsley	3 gm.		
Garlic powder	3 gm.		
Salt	As per taste		
Black pepper	As per taste		

Method

- Take a bowl and put all the ingredients into it.
- Whisk till they are combined well
- Cover and refrigerate for 40 minutes.
- Use it.

*Ranch dressing*

2. Balsamic Vinaigrette Dressing

Name of dish	Balsamic vinaigrette dressing	Preparation time:	20 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Extra virgin olive oil	180 ml.		
Balsamic vinegar	63 ml.		
Salt	As per taste		
Black pepper	As per taste		

Method

- Take a jar and add all the ingredients into it and shake vigorously.
- If it tastes too sharp add more oil into it. But if its taste is too dense, add more balsamic vinegar into it.
- You can add mustard, garlic, herbs, honey or brown sugar into it.



Balsamic Vinaigrette Dressing

3. Honey Mustard Dressing

Name of dish	Honey mustard dressing	Preparation time:	20 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Dijon mustard	75 gm.		

Honey	60 ml.		
Cider vinegar	60 ml.		
Salt	As per taste		
Vegetable oil	85 ml.		

Method

- Take a large bowl mix all the ingredients into it except oil
- Add the oil gradually while whisking to make the dressing creamy.



Honey mustard dressing

Important Note!

It is a dressing use in different ways such as with green salads, steamed veggies, chicken, fish and meats.

Coconut Cream Dressing

Name of dish	Coconut cream dressing	Preparation time:	20 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Cream of coconut	1 can		
Cider vinegar	63 ml.		
Italian salad dressing mix	20 gm.		

Method

- Take a bowl and mix all the ingredients into it. Keep mixing till the ingredients are well combined.



Coconut cream dressing

6.3 Preparation of sandwiches

6.3.1 Categories of sandwiches

What do you know about sandwiches..?

Sandwich is a type of food consisting of some sauces, vegetables, sliced cheese or meat, which is placed on or between the slices of the bread

There are basic 2 categories of Sandwiches

- Grilled / Hot Sandwiches
- Cold Sandwiches

There are five main types of Sandwiches are there:

	
Hard roll Sandwich	Soft bun Sandwich
	
Hero Sandwich	Sliced bread Sandwich

Grilled / Hot Sandwiches:

Hot Sandwiches consist of hot fillings, usually meat, but sometimes grilled vegetables, grilled fishes or other hot items are used in the preparation of hot sandwiches between two slices of bread.

Do you know!

The world's largest sandwich currently weighs 5,440 pounds.



Grill Hot Sandwich

In hot sandwiches sometimes the items which are used are not hot such as a piece of raw onion, a slice of tomato, mushrooms etc.

Types of Hot Sandwiches:

Five types of hot sandwiches are

	
Grilled pepper jack and Roast Beef sandwich	Grilled Merguez Sandwich with Caramelized Red Onion
	
Cuban sandwich	Cuban roast sandwich



Barbecue Sloppy Joe's

Cold Sandwiches

Cold slices are having two slices of bread with a cold filling in it. Cold Sandwiches are called simple because only two slices of bread are used in it. Simple cold sandwiches range from a single slice of cheese or meat between two slices of buttered.

Types of cold sandwiches

 A bistro beef baguette sandwich on a white plate. It consists of a long baguette filled with roast beef, cheese, lettuce, and tomato. It is garnished with pickles and onions.	 A robust roast beef sandwich on a blue napkin. It features a bun, cheese, roast beef, and vegetables like red and green bell peppers.
Bistro beef baguette sandwich	Robust roast beef sandwich

	
Buffalo chicken wrap sandwich	California turkey and vegetable sandwich
 Herbed tuna sandwich	

6.3.2 Standard process to prepare hot & cold sandwiches

The following standard processes to prepare hot & cold sandwiches are:

- Processed the bread
- Apply sauce to bread
- Add greens and vegetables
- Add meat/ egg/ poultry or their products
- Place cheese slices

- Assemble sandwiches
- Grill or toast (if required after assembling)
- Perform cutting of sandwiches with sharp knife

Activity: Make group of 3 and do search on the standard process to prepare hot and cold sandwiches and present it during the class

Recipes:

Name of dish	Club sandwich	Preparation time:	30 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Chicken (boiled and shred)	250 gm.		
White pepper	As per taste		
Salt	As per taste		
Black pepper	As per taste		
Butter	25 gm.		
Egg	2		
Oil	For greasing		
Bread slices	1 large		
Mayonnaise	30 gm.		
Cucumber slices	200 gm.		
Lettuce	200 gm.		
Tomato slices	200 gm.		

Method:

- In bowl, add chicken, black pepper crushed, white pepper powder, salt and butter, mix well and set aside.
- In small bowl, add eggs, salt and yellow food color, whisk well.
- In frying pan, brush oil and pour egg mixture, cook omelet from both sides and set aside.
- Cut corners of bread slices, heat grill pan and grill bread slice, spread mayonnaise, add chicken and cucumber.
- Grill another bread slice and place over it, again spread mayonnaise, place lettuce leaf, egg omelet, cheese slice, tomato, spread mayonnaise on another bread slice and top with bread slice.
- Grease grill pan with butter, place sandwich, apply butter and grill from both sides.
- Club sandwich is ready; serve with french fries, coleslaw and ketchup.



Club sandwich

Name of dish	Russian salad	Preparation time:	30 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Chicken	300 gm.		
Vegetable oil	20 gm.		
Carrots	2 large		
Capsicum	1 medium cubes		
Peas	125 gm.		
Pineapple	100 gm.		
Salt	As per taste		
Black pepper	As per taste		
Mayonnaise	100 gm.		
Cream	65 ml.		

Method:

- Wash and boil the chicken
- Wash vegetables and boil them until tender
- Assemble vegetables and chicken
- Add pineapple in it
- Mix mayonnaise and cream

- Add salt and black pepper in it
- Add this mixture into fruits and vegetables
- Mix well and serve.



Russian salad

6.4 Serving

6.4.1 Finish & present salad and sandwiches

Finishing and presentation plays an important role for any food item. If the food will look more appetizing then people will think it is good and delicious just because of hot it looks.

When you are presenting salad, Sandwiches or appetizers these characteristics plays a major role.

- Presentation
- Appearance
- Contemporary and classical variations
- Fresh Look
- Color
- Nutritional value
- Service style
- Taste
- Texture

5 components of a satisfying Appetizer are

- Greens
- Sweetness
- Creaminess
- Crunchiness
- Dressing.



Presentation of salad



Presentation of sandwiches

6.4.2 Storage and display of cold kitchen items in cold bars

Cold kitchen food items	Display and Storage
Cold sandwiches	3°C
Apple cabbage salad	3°C
Cold soup	2°C
Canopies	3°C
Russian salad	3°C
Chick pea salad	4°C

Activity: Arrange a visit of your nearest restaurant with your teacher; observe the working of cold kitchen.

Key points

- The cold kitchen is a section of kitchen where food is processed without heat. The normal temperature of cold kitchen is 16°C to 25°C.
- In the cold kitchen, food storage temperature is 1°C to 4°C. The overall kitchen temperature should 16°C so the food items which are used in the production of different dishes should be remain fresh and healthy and their colors and textures remain the same.
- Some food items such as avocados, bananas, onions, potatoes and garlic all are the food items should not be stored at colder temperature.
- A dressing is generally an emulsion of oil-in-water and consists of the different combinations of oil, water, vinegar, salt, citric acid, spices and an emulsifier.

Exercise

select the most appropriate option

1. Club sandwich is a type of ----- sandwich
 - a. Hot
 - b. Cold
 - c. Hot and cold
 - d. None of these
2. Danger Zone for the Salads and Sandwiches are
 - a. 5°C and 60°C
 - b. -5°C and -60°C
 - c. 5°C to 65°C
 - d. -5°C to - 65°C
3. Ceaser salad dressing is an example of what type of dressing?
 - a. Emulsion
 - b. Romane
 - c. Combination
 - d. Suspension
4. Appetizers like salads should be
 - a. In small size
 - b. In large portion
 - c. Both A & B
 - d. None of these

Give short answers of the following question

1. What is the serving temperature of Salads?
2. Describe Club sandwich with respect to its origin?
3. Enlist the steps to store food in cold bars in the cold kitchen?
4. What is meant by sandwich?

Answer the following question in detail

1. What is cold kitchen? Describe any 5 equipment used in cold kitchen?
2. Define Russian salad and its preparation methods?
3. What is a sandwich? Explain types of sandwiches?
4. Explain the temperatures ranges for storing of hot & cold salads and sandwiches?

Activity

- Perform storing of cold items in cold kitchen according to their specifications.
- Arrange the class into small groups. Assign task to each group to prepare, cook and finish any cold salad.
- Arrange the class into small groups. Assign the task to each group to prepare, cook and finish any one hot and cold sandwich in the class.

Teacher's guide

- The teacher is required to demonstrate the students about the production of different types of salads. He/she will also guide them about the holding and storage temperatures of each salad.
- The teacher is required to demonstrate the students to prepare, cook and finish any 3 types of sandwiches.

Chapter 7: Soups, Stocks and Sauces



Students learning outcomes:

After completing this chapter, you will be able to

- learn about different types of stocks
- know main ingredients of stocks
- understand how stock is prepared
- differentiate between stock and broth
- understand the use of stock in cooking
- know main ingredients of soup
- understand about different types of soups
- learn how soups are prepared
- understand the purpose of starches and thickening agents
- learn about types and purpose of sauces
- recognize main ingredients of sauces
- learn about 5 mother sauces and their derivatives

7.1 Stock

Stock is defined as a liquid which has been simmering for long time in order to extract flavor from animal bones, vegetables, often with the addition of aromatic herbs and spices. It is a savory cooking liquid, which is the base of many soups, stews and sauces.



Preparation of stock

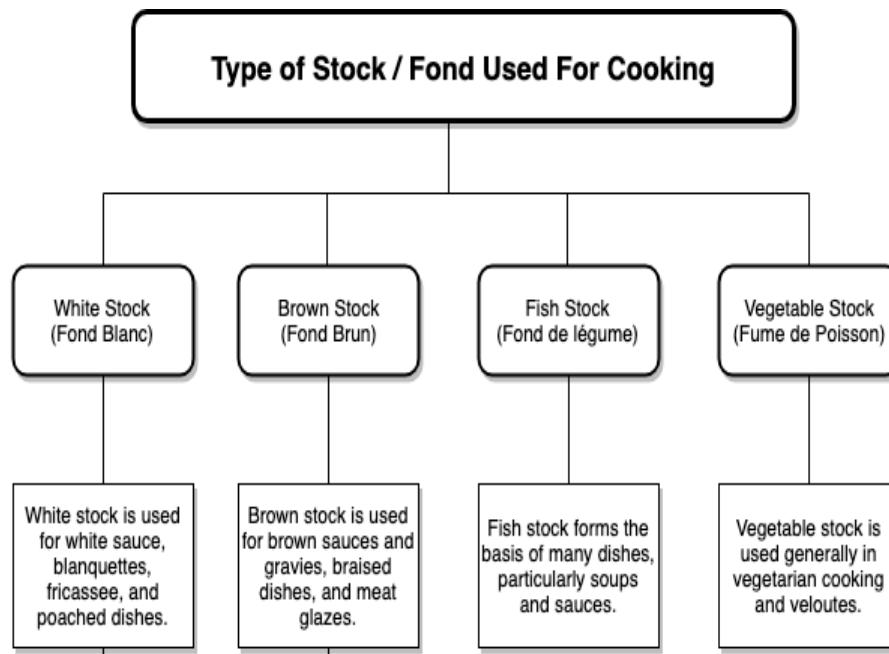
7.1.1 Types of stocks

In stock preparation, meat or vegetables are simmered in water for a long time to extract their flavor, aroma and color. It helps in the production of soups and sauces. The stocks are classified in 4 types are described below according to their color:

1. White (chicken / fish) stock
2. Brown stock
3. Neutral stock /vegetable stock

Do you know!

Tomatoes are not used in production of white stock, because they changed the color of stock.



Types of Stocks

1. White Stock (Fond Blanc):

White stock is a type of stock which is made from bones of white meat (chicken and fish) and vegetables. In this type of stocks bones of white meat are blanched to get rid of impurities. Light color vegetables are used in this stock such as leek, onion, celery and turnips. No tomato based product is used in white stock, as it affect the color of white stock.



White stock / Fond Blanc

There are two types of white stock:

- a) Chicken stock
- b) Fish stock

Chicken stock is a type of stock which is made from bones of chicken and some vegetables.



Chicken stock

Fish stock is a type of stock which is made from bones of fish, heads and other trimmings. It is a base for many dishes like chowder, paella and bouillabaisse etc. It is simmered for very less time as fish cooks faster as compared to chicken and beef.



Fish stock/ Fume de Poisson

2. Brown stock(Fond Brun):

Brown stock is a type of stock which is made with roasted or caramelized vegetables and bones. Tomato sauce is used in its production as it gives deep brown color to stock. The most preferable bone of meat for brown stock is beef bones stock.



Brown stock/ Fond Brun

3. Neutral stock / vegetable stock (Fond de legume):

Neutral soup is a type of soup in which vegetables and herbs sauté in butter, than cooked in liquid. In this stock the extra parts of vegetables used in stock as skin of carrots and ends of celery etc.



Neutral stock/ fond de legume

Interesting Information!

The term “Fond” is used for the liquids, which is the foundation for various dishes.

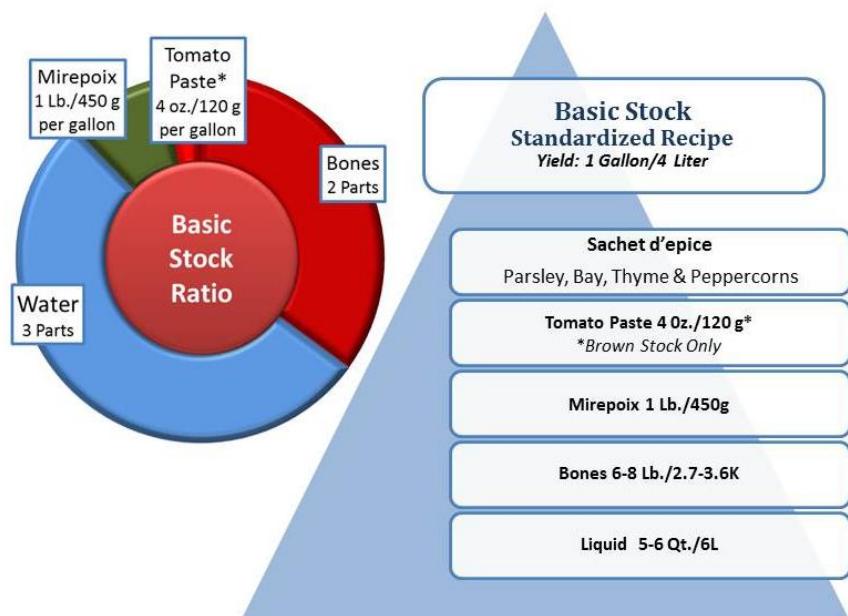
7.1.2 Ingredients of stocks

In stocks, main ingredient is the nourishing element. Bouquet garni is the combination of fresh herbs and vegetables that are tied in a bundle. This is removed before the stock is used in any food. The ingredients of stock may vary according to the dish and types of stock. The main ingredients are

- Bones of mutton, beef , poultry or fish
- Whole Vegetable
- Vinegar
- Spices
- Herbs
- Water

Do you know!

The major flavoring ingredient in stocks consists of bones and trimmed meat on them.



Basic ratio in preparation of stock

7.1.3 Preparation of Stock

As with most culinary efforts, it is important to choose the good quality ingredients and choosing the right utensils for making the better stock. The method for the preparation of stock is

- Place meat bones in a large pot.
- Blanch or brown the bones if desired
- Add water in it.
- Then add vegetables and spices
- Lastly add herbs in it
- Simmer them until cook
- Stain the stock, boil it and reduce the water to intensify the flavor

Do you know?

The main ingredient of neutral stock is vegetables.

The basic rules of stock making are listed below

- I. Never add salt to stock
- II. Skim stock in beginning
- III. Never boil it
- IV. For the better stock, use better ingredients
- V. Stain the stock
- VI. Reduce the stock in boiling

Cooking Times for Stocks



Cooking time for stocks

Name of dish	Chicken stock	Preparation time:	4 hours
Number of +portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Chicken	300 gm.		
Onion	100 gm.		
Carrots	65 ml.		

Celery	3		
Black pepper	As per taste		
Salt	As per taste		
Water	8-10 cups		
Bay leaves	2		

Method:

- Cut the carrots, onion and celery into quarters
- Add chicken, vegetables, spices, bay leaves in a pot
- Add water in it
- Bring it to boil and cover the pot
- Once boiling, reduce the heat to low
- Simmer in for 3-4 hours
- Strain the stock and serve



Chicken stock

7.1.4 Differentiate between stock and broth

A stock is a liquid in which many flavors of bones, vegetables and herbs are blend together to prepare soups, stews, sauces and braises. The quality of stock plays a major part in the quality of soups and sauces. Stocks are the main part in French cuisine, that's why known as "fonds de cuisine" which means foundation of cooking.

Stocks are produced by the simmering of the following ingredients as you already learn in topic 7.1.2.

1. Bones (mutton, beef or fishes)
2. Vegetables
3. Mirepoix
4. Spices and herbs
5. Water

Do you know!

Mirepoix used as a combination of carrots, onion and celery as 1:2:1 in a stock.

Broth is also called bouillon, is a savory item in which meat, vegetables and herbs are simmering in water. It can be eaten alone but it can also use in cooking of sauces, soups and gravies. Broth contains less calories, fat and carbohydrates then stocks.

Stock	Broth
Stock is defined as a liquid which has been simmering for long time in order to extract flavor from animal bones, vegetables, often with the addition of aromatic herbs and spices.	Broth is defined as a liquid which has been simmering for long time in order to extract flavor from animal meat, vegetables and herbs.
Stock is cooked with bones.	Broth is cooked with meat.
It contains more calories.	It contains less calories
It contains large amount of protein, vitamins and minerals.	It contains large amount of amino acids.

Another name of stock is fond de cuisine.	Another name of broth is bouillon.
It is thicker and takes long time to cook	It is lighter and more flavorful



Difference between broth and stock according to color and texture

7.1.5 Use of stock in cooking

Stocks are used in cooking in various ways. It helps in the preparation of soups and sauces. It is the base of soups, stews and sauces. Recipes often indicate the use of stocks in production of different sauces or soups.

Do you know what Stock is?

Basically stock is the liquid water extract that become from the simmering of animals bones, meat, vegetables and water. Some aromatic herbs and spices are part of the stocks too.

Stock is used in soups, sauces, stews and many other dishes as the base. Stocks are rich flavored liquid and it enhances the taste, aroma and color of different dishes. The main ingredients which are used in the process of stock preparation are.

- A major flavoring ingredient
- Liquid (water)
- Aromatic herbs

These all are make a very good and aromatic taste. Stock is the base of many western as well as Eastern dishes. It is commonly used to make soups and sauces.

White stock is used for preparation of white sauces and clear soups, while the brown stocks are used in the preparation of brown sauces, red meat stews and braised dishes.

Do you know!

The liquid which is used in the preparation of Stock is water but sometimes it is wine. It depends on the nature of the dish for which the stock is prepared.

7.2 Soups

Soup is defined as a mixture made by combination of meat and/or vegetable with stock, milk or water. It is mostly served hot. Soups are classified into 2 main categories, clear soup and thick soup.



Vegetable soup

7.2.1 Main ingredients of Soups

The main ingredients of soup includes

	
Stock (chicken, meat, seafood)	Carrots
	
Spices and herbs	Chicken

	
Onion	Parsley
	
Celery	Pasta
	
Bay leaves	Garlic

Sauces	Salt



Ingredients of soup

7.2.2 Different types of soups

Types of soups:

The quality of soups depends on the stock making skills and the ingredients used in production as you already learn in previous topic 7.1.4. There are basic 2 types of stocks

1. Clear Soups
2. Thick Soups

Clear soup is a type of soup which is made by simmering of vegetables or a meat in water. These types of soups are good for persons who are on clear fluid diet. These are made without any salt, spices or any other flavoring ingredients. Examples includes chicken noodle soup, onion soup etc.



Clear soup

Thick soup is a type of soup which is opaque in texture and thickened with flour, corn flour, cream and other ingredients. It has 5 main types.

1. Cream soups
2. Purees
3. Bisques
4. Chowders
5. Potage



Thick soup

7.2.3 Preparation of Soups

The procedure for preparation of soup includes these points

- Heat the large pot on medium heat
- Sauté the vegetables in oil
- Cook your meat if needed (stewing, sautéing)
- Add your basic vegetables, meat and spices
- Balance the taste according to taste buds
- Allow to simmer for an hour
- Cook well and serve hot.

Name of dish	Chicken corn soup	Preparation time:	4 hours
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Chicken	300 gm.		
Onion	100 gm.		
Carrots	65 ml.		
Celery	3		
Black pepper	As per taste		
Salt	As per taste		
Water	8-10 cups		
Bay leaves	2		
Corns	100 gm.		
Eggs	4 no.		
Corn starch	25 gm.		
Chilli sauce	10 ml.		
Soya sauce	10 ml.		
Vinegar	10 ml.		

Method:

- Cut the carrots, onion and celery into quarters
- Add chicken, vegetables, spices, bay leaves in a pot
- Add water to it
- Bring it to boil and cover the pot
- Check temperature with food probe
- Reduce the heat to low when it comes to boiling
- Perform simmering for 2-3 hours
- Stain the stock
- Shred chicken
- Put chicken chunks and cornsin the stock mixtureand bring it to boil
- Mix corn flour in water and add it to stock mixture
- Add beateneeggs in it
- Add seasoning and sauces in it
- Serve it hot



Chicken corn soup

7.2.4 Thickening agents (starch)

There are different types of starch used as thickening agents. The purpose behind addition of starch is as follows:

- It helps in the thickening of soup and sauces.
- Improve the suspension of other ingredients.
- Increase the stability of products.
- It helps in the formation of gel or jellies.
- It works as stabilizing agent in dishes.

7.3 Sauces

A sauce is a liquid which is served with food, mostly with snacks, to enhance the flavor, color and texture of food. Sauces are made from 3 basic ingredients.

1. Liquids (water , fat)
2. Aromatics or seasoning
3. Thickeners (corn flour, Gelatin or agar agar)



Different types of sauces

7.3.1 Types & purposes of sauces

There are basic 5 types of sauces which includes

1. Béchamel Sauce
2. Volute
3. Espanola
4. Hollandaise
5. Tomato

These sauces are developed in the 19th century by the French chef August Escoffier.

These sauces are the starting point for variety of delicious sauces used in different dishes for enhancing the taste of different types of dishes including veggies, fish, meat, casseroles and pastas etc.

Purposes of sauces:

- Add texture
- Add contrast in dish
- Add tanginess'
- Enhance flavor of food
- Add moisture
- Add appearance

7.3.2 Main ingredients of sauces

As you know, the main element of any sauce is its stability, dripping and pouring consistency. The sauce is accomplished in 3 steps roux, emulsifier and reduction. Four out of five mother sauces are made with roux. Roux is basically the fancy name of equal amount of butter and flour.

Ingredients for béchamel sauce

- Butter
- Flour
- Milk
- Cheese

- Seasoning

Ingredients for veloute sauce

- Butter
- Flour
- Stock

Ingredients for Espagnola sauce

- Butter
- Flour
- Tomatoes
- Chicken stock
- Seasoning
- Onion

Ingredients for hollandaise sauce

- Butter
- Egg yolk
- Lemon juice
- Mustard
- Salt
- Cayenne powder

Ingredients for tomato sauce

- Tomato
- Spices
- Herbs

7.3.3 Five Mother sauces and their derivatives

1. Béchamel Sauce

The derivatives of Béchamel sauce are morney sauce, parsley sauce, crème sauce and egg source.

Name of dish	Béchamel sauce	Preparation time:	30 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 15 mins
Butter	60gm.		
Flour	85 gm.		
Milk	1000gm.		
Parmesan cheese	75 gm.		
Salt	As per taste		
Nutmeg	As per taste		

Method:

- Melt the butter on medium to high heat until foaming.
- Add flour into it keep stirring for 2 - 3 minutes until bubbling.
- Turn off the heat
- Add milk gradually and whisk it continuously until it turns smooth.
- Then turn on the heat and cook and stir it with a spoon for 10 to 15 minutes until it starts boiling.
- Cook it until it turns into a thick saucy texture

- Add Parmesan cheese, salt and nutmeg into it



Consistency of béchamel sauce

2. Veloute Sauce

The derivatives of Veloute sauce are mushroom sauce, supreme, aurora, cardinal and caper sauce.

Name of dish	Veloute sauce	Preparation time:	30 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Unsalted butter	25 gm.		
Flour	25 gm.		
Chicken stock	320 ml.		
Salt	As per taste		
Black pepper	As per taste		

Method

- Melt the butter on a sauce pan on low flame.
- Add flour into it and cook for 3 - 5 minutes keep stirring with a whisk
- Now add chicken stock gradually
- Stirring with a whisk until it turns into a smooth mixture and bring it to simmer.
- Keep it on simmering for 10 - 15 minutes until it turns into a thick saucy texture then add salt and black pepper into it



Pouring consistency of veloute sauce

3. Espagnole Sauce

The derivatives of Espagnole sauce are demi glaze, Madeira sauce, bigararde, diable, pepper sauce.

Name of dish	Espagnole sauce	Preparation time:	40 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Carrot chopped	50 gm.		
Onion chopped	50 gm.		
Garlic chopped	12 gm.		
Unsalted butter	63 gm.		
Flour	63 gm.		
Beef stock	1 Liter		
Tomato purree	60 gm.		
Celery (chopped)	1 stick		
Black pepper	As per taste		
Bay leaves	1		

Method:

- Melt the butter
- Add carrot and onion into it
- Stir it until golden brown
- Add flour into it and cook it on medium heat Stir it constantly to prevent lumps

- Add tomato puree into it
- Add garlic, celery, peppercorns and bay leaf into it and bring it to boil, stirring it continuously.
- Cook it until it reduced to about 3 cups and it turns into a saucy texture
- Strain it.



Consistency of Espagnole Sauce

4. Hollandaise Sauce

The derivatives of Hollandaise sauce are maltaise, mousselin, béarnaise and choron.

Name of dish	Hollandaise sauce	Preparation time:	40 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Butter	125 gm.		
Lemon juice	12 gm.		
Egg yolks	3		

Dijon	12 gm.		
Salt	As per taste		
Cayenne powder	1 pinch		

Method:

- Melt the butter
- Take a blender add egg yolks, lemon juice, Dijon, salt, cayenne powder into it and blend it.
- Now add melted butter into it and blend it to 5 -7 minutes
- Pour it into a bowl and use it



Pouring consistency of Hollandaise Sauce

5. Tomato sauce

The derivatives of tomato sauce are portugaise sauce, provencel sauce and marinara sauce.

Name of dish	Tomato sauce	Preparation time:	30 mins
Number of portions:	4	Size of unit:	1
Commodities:			
Items	Quantity	Specifications	Cooking time: 10 mins
Extra virgin olive oil	25 ml.		
Onion chopped	125 gm.		
Carrot chopped	20 gm.		
Stalk celery chopped	1		
Chopped parsley	15 gm.		
Garlic clove	1		
Dried basil	5 gm.		
Tomato	1 kg		
Tomato paste	5 gm.		
Salt	As per taste		
Black pepper	As per taste		

Method:

- Heat the olive oil.
- Add onion, carrot, celery and parsley into it and stir it
- Cook it on low flame for 10-15 minutes stir it until the vegetables are softened

- Add garlic into it and cook for 10 seconds
- Add the tomatoes into it and cook for 5 minutes
- Add tomato paste and basil into it
- Add salt and black pepper into it
- Bring it to low simmer, reduce the flame on low, and cook it until a saucy texture
- Blend it to give a smooth consistency.



Tomato puree

Activity:

1. Prepare 4 basic types of stocks
2. Prepare soup by using stock
3. Prepare mother sauces

Key points

- Stock is defined as a liquid which has been simmering for long time in order to extract flavor from animal bones, vegetables, often with the addition of aromatic herbs and spices. It is a savory cooking liquid, which is the base of many soups, stews and sauces.
- White stock is a type of stock which is made from bones and vegetables. In this type of stock bones of meat are blanched to get rid of impurities. Light color vegetables are used in this stock such as leek, onion, celery and turnips.
- Brown stock is a type of stock which is made with roasted or caramelized vegetables and bones. Tomato sauce is used in its production as it gives deep brown color to stock. The most preferable bone of meat for brown stock is beef bones stock.
- Neutral soup is a type of soup in which vegetables and herbs sauté in butter, than cooked in liquid. In this stock the extra parts of vegetables used in stock as skin of carrots and ends of celery etc.
- Fish stock is a type of stock which is made from bones of fish, heads and other trimmings. It is a base for many dishes like chowder, paella and bouillabaisse etc. It is simmer for very less time as fish cooked faster as compared to chicken and beef.
- Broth is also called bouillon, is a savory item in which meat, vegetables and herbs are simmering in water. It can be eaten alone but it can also use in cooking of sauces, soups and gravies.
- A sauce is a liquid which is served with food, mostly with snacks, to enhance the flavor, color and texture of food.
- Soup is defined as a mixture made by combination of meat and/or vegetable with stock, milk or water. It is mostly served hot. Soups are classified into 2 main categories, clear soup and thick soup.

Exercise

Mark the correct option

1. Which one is white stock dish
 - a. Hot corn soup
 - b. Hot & sour soup
 - c. White chicken stock
 - d. None of above
2. A liquid which has been simmering for long time in order to extract flavor from meat, vegetables and herbs, is called
 - a. Stock
 - b. Broth
 - c. Stew
 - d. Sauce
3. The basic roux ingredients include
 - a. Butter & milk
 - b. Egg & butter
 - c. Butter & flour
 - d. Egg & milk
4. How many mother sauce are there
 - a. 5
 - b. 4
 - c. 3
 - d. 6

Give short answers of the following question

1. What is meripox and how is it prepared?
2. How does making brown stock differ from white stock?
3. How do you check the quality of stew?
4. List quality characteristics for a white stock?
5. Enlist the names of 5 mother sauces?
6. State the categories of soup?

Answer the following question in detail

1. What do you know about stock? Explain the types of stock?
2. Differentiate between stock and broth?
3. Describe different types of soups?
4. Enlist 5 mother sauces and describe their key ingredients?

Activity

- Arrange the class into 5 groups; each group will prepare one mother sauce in kitchen.
- Arrange the class into 3 groups; each group will prepare any one soup by using stock.

Teacher's guide

- The teacher is required to demonstrate the students about the preparation of stock by using mirepoix.
- The teacher is required to explain and demonstrate the preparation of 5 mother sauces and how to make different derivatives by using these sauces.
- The teacher is required to explain the students about the preparation and serving of clear and thick soups.

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GLOSSARY

- Ail** - French for garlic.
- Adipose** - This is the fatty tissue in meat.
- Acidic** - it refers to the pH level of foods and liquids, as well as the taste experience.
- Anglaise** it is an egg custard which may be used as a sauce in sweet dishes.
- Aromats** - A variety of herbs and spices added to dishes to enhance their taste and flavor.
- Bisque** - A smooth, creamy soup made up from shellfish, fish stock and may be vegetables.
- Boiling** cook food in the liquid other than fat (water) at 100°C.
- Braising** - food is cooked in oven for partially suspended in liquid.
- Bonning Knife** - A knife used for trimming and boning.
- Brown Sugar** - Unrefined raw sugar. Used in making desserts.
- Canapés** - A bite sized appetizer which is made up with bread base
- Cook's knife** - The main knife used by the chef for cutting and chopping
- Cuisine** - French for kitchen.
- Culinaire** - Culinary arts the love of food.
- Cuds** - A mixture of citrus juice, eggs and sugar.
- Demi glace** - A basic brown sauce.
- De-seed** Removing the seeds from food such as tomatoes, chilies, lemon etc.
- Dicing** - basic term used for cube cutting.
- Dusting** garnishing technique using icing sugar and cocoa powder.
- Drippings** rendered beef fat.
- Emulsify** - to combine two ingredients that would normally separate such as fat and water.
- Emulsion** - a mixture of water and fat.
- Entrée** - a starter which served at the beginning of the meal.
- Essence** - an artificial flavoring agent, e.g. vanilla essence.
- Evaporate** to reduce a liquid through rapid boiling.
- Fettuccine** - a type of noodle that is cut into 1 cm wide strips.
- FIFO** - First In First Out, the products which are older used them first.
- Freezing point** - the point on which a liquid starts to go solid.
- French knife** - a knife used for larger cuts, slicing, dicing and chopping.
- Food poisoning** - sickness that occurs after eating contaminated food.
- Glace** French word used for "frozen".
- Glycogen** complex carbohydrates used to store sugar in the animal's muscle.
- Golden Syrup** a byproduct of sugar refining.
- Gravlax** fish cured in salt and sugar e.g. salmon and tuna.
- Grilling**- cooking method in which food is cooked by exposing it to radiated heat.
- High- ratio fats** - fats contain emulsifiers to absorb extra moisture from the food.
- Hoisin** - sweet, spicy sauce made from ground soy beans, garlic and spices.
- Hollandaise** a warm butter sauce, served with vegetables, meat and fish dishes.

Hummus a sauce from the Middle East, made with chickpeas.

Honing the process of sharpening the knives.

Incinerate - to burn.

Incubation period - time between the intakes of bacteria to the first sign of illness.

Inherent - flavor contained within and come out when poaching.

Insecticides chemicals used for the harvesting.

Instruction sheets sheet which provide guidelines.

Jelly sweet food gel made by adding gelatine to edible liquids

Jam process the cooking of fruit and sugar to 105°C

Japonaise type of maringue

Jus roasting juices

Juslie roasting juices with the addition of brown stock, thickened with arrowroot

Julienne a basic vegetable cut

Kipper- to kipper means to cure

Knead - a process with working with dough by mixing it with hands

Knish - a pastry of Jewish origin

Kosher food - fit or proper food

Kosher salt - a pure refined rock salt

Legumes plants with seed, pods such as peas and beans

Liqueur - alcoholic beverage, sweetened with other flavors and extracts.

Listeria - bacteria occurs in soil and raw food.

Lemon Curd - creamy mixture of lemon juice with other ingredients.

Lime Citrus fruit with high acidic nature.

Medallion - a slice of meat or seafood without any bone or shell.

Melting point - a temperature at which an item begins to soften.

Mortar and Pestle - used for grinding spices and other foods manually.

Mise-en-place a French term meaning everything in its place before you starts cooking.

Mousse Refers to light dishes usually lightened with whipped cream.

Niacin - Vitamin B3.

Neutralise - to balance out or harmonies.

Nori - type of seaweed used for wrapping food items, particularly sushi.

Nutmug a spice available whole as a nut or ground.

Nutrients the essential dietary requirements of the body.

Oolong - considered one of the best teas, it is partially fermented.

Organic vegetables - vegetables grown according to the regulations using natural fertilizers

Overcooked - any item cooked for too long and texture and flavor will be negatively affected.

Overpowering- if a flavor is too strong and masking the others.

Ox tongue delicacy that requires extended cooking.

Pectin - a setting agent used for jams.

Perishable - Food that will deteriorate with extended storage.

Pesto - a blend of basil, pine nuts, parmesan and olive oil.

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- Pilaf** - rice cooked by absorption using a ratio of 1 part rice and 1.5 parts stock.
- Pimento** - spice also referred to as allspice.
- Quenelles** - a French term for oval-shaped food items.
- Quickest puff paste** - production method of puff paste.
- Quince** - fruit in the apple family
- Recipe** - set of instructions for the preparation of any food item.
- Roux** - a thickening agent used for soups and stocks. It is a cooked mixture of fat and flour, ration 1:1.
- Roasting** - cooking method in which cooking food by exposing it to direct heat. Fat is used in this cooking method.
- Rye flour** - flour which is low in gluten.
- Relish** - a spicy or savory accompaniment served with food.
- Sambal** - a blend of spices such as sambhaloelek (chilli paste).
- Sanitise** - to remove any bacteria from a surface.
- Saute** - to toss in hot water.
- SOP** - Standard Operating Procedures.
- Steaming** Cooking food by the steam of boiling liquid.
- Starter** dish served at the beginning of a meal.
- Toffee**- mixture of Caramel and cream.
- Tofu**- a low fat curd made from soy bean.
- Topside** - primal cut on the inside of the leg near the hip joint.
- Toque Blanche** - French term for a chef's hat.
- Tomato fondue** - slow cooked tomatoes with the addition of other ingredients and form a thick sauce.
- Udon** thick noodle used in Japanese cooking.
- Ucs**- Uniform communicating system.
- Ugli** - an irregular shaped citrus fruit.
- Uffva-** United Fresh Fruit and Vegetables Association.
- Umido**- stew
- Uncooked** - not cooked properly.
- Velouté**- a basic white sauce.
- Vension**-game animal with strong - flavored dark red meat.
- Vienna style** - named after the Austrian city Vienna, famous for its crumbed schnitzel.
- Vinegar**- the production of vinegar utilizes acid fermentation of fresh wine.
- Vitamin** - chemical substance essential for a range of bodily processes.
- Witlof** a white oblong-shaped vegetable.
- Wok** - a round - bottomed frying pan.
- Wonton**- a small Chinese dumpling.
- Workflow** - Logical approach to tasks and you can perform them.
- WPRW** - Wash, Peel, Rewash, washing procedure of fruits and vegetables.
- Yakitori** - Japanese term meaning "grilled".
- Yankee pot roast** - a piece of chuck or round cut that is brown in color.
- Yautia** - sweet potato.
- Yeast starter** - use before yeast.
- Yema**- yolk
- Yerba** – Herb
- Yogurt cheese** - yogurt that has had the whey drained from it.
- Zwieback** German word known as "Twice baked".
- Zabaglione** it is an Italian word meaning "egg punch".

About the Author

The Author is a senior food Preparation and Culinary Arts –Patisserie Principle Trainer and Owner of Business **ANAYA’s PATISSERIE** with an extensive background as a Nutritionist, Food Safety expert in Catering in well-renowned Conglomerate Companies such as Hashoo Foundation, Kitchen Cuisine, Pearl Continental, HashooHunar and TDCP- ITHM. She is currently working as senior food Preparation and culinary arts-patisserie principle trainer at Tourism Development Corporation Punjab College Institute of Tourism & Hotel Management Lahore. She also owns her own Business and is Member of Curriculum Development Community in **NAVTTC**. She holds a degree of Food and nutritionist and also International Diploma in Food safety in catering principles from United Kingdom. Her passions include travel and mentoring young people to develop their own professional paths.

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تو نشانِ عزِم عالی شان ارض پاکستان
مرکزِ یقین شاد باد!

پاک سر زمین کا نظام وقتِ اخوبت عوام
قوم، ملک، سلطنت پاتنده تابنده باد!
شاد باد منزلِ مُراد!

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National Vocational & Technical Training Commission (NAVTTC)

Plot No.38, Sector H-9/4, Kirthar Road, Islamabad.

Tel: +92-51-9207518

Website: www.navttc.gov.pk