

# **Intermediate**

**Vocational Course**

**First Year**

## **FOOD & BEVERAGE PRODUCTION**

**For the Course of Hotel Operations**

## **Author**

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## **INTRODUCTION TO COOKERY & RAW MATERIALS**

### **A. DEFINITION**

Cooking is defined as a “chemical process”, the different methods of mixing of raw materials; the application and withdrawal of heat; decision-making, technical knowledge and manipulative skills. In the more advanced stages, a further element occurs- that of creativity. Cookery is considered to be both an art and technology.

Food preparation is a modern term in professional cooking. It denotes preparation and cooking. It follows a pattern which commences with the purchase and selection of materials, their handling, processing and the ultimate preparation of the dish to the customer, where “food service” take over. In French the word “Cuisine” denotes the the preparation of dishes.

### **EVOLUTION**

The art of cooking is considered very ancient. The first cook was a primitive man, who had put a chunk of meat close to fire, which he had lit to warm himself. He discovered that the meat heated in this way was not only tasty but it was also much easier to masticate. From this moment, in unrecorded past, cooking has evolved to reach the present level of sophistication.

### ***CLASSES OF PROFESSIONAL COOKERY***

There are three classes of professional cookery associated with the craftsman and they are graded according to the quality of the materials used. The classes are:

- 1) ***Cuisine simple*** or plain cookery where the basic necessities are used and the craftsman produces dishes of the highest standard possible with a minimum number of materials.
- 2) ***Cuisine bourgeois or middle class cookery:*** in this cookery provides better materials and in the hands of the craftsman, these materials produce more complicated dishes of a better quality.
- 3) ***Cuisine haute or high cookery:*** where the very best possible materials are used. The craftsman uses these materials to their best advantage and produces dishes of the best quality. This class produces highly complicated dishes.

In Indian cuisine there are two classes: simple and high class.

Simple cookery is confined to the preparation of the everyday dishes. These are prepared quite simple and are very popular

The high class cookery has a wide range variety in it, expensive materials are used to prepare complicated and elaborate dishes

## ***CULINARY HISTORY***

### ***FRENCH CUISINE***

It is recognised by the world as one of the finest cuisines. The French are known for their artistic temperament and so is their cuisine.

***History of French cuisine:*** At the end of the Merovingian period, the convents which had preserved all the traditions of the gourmands increased in the France; it was the beginning of the culinary art. Ovens were installed in the 12<sup>th</sup> century for preparing roasts. From the 14<sup>th</sup> century sauces played very vital role as they much appreciated. Menu was varied which included game, fish and fowl. Vegetables are featured less. Italian cooks and pastry cooks were employed at the end of the 16<sup>th</sup> century.

In the 17<sup>th</sup> & 18<sup>th</sup> century Royal and high ranking people took great interest in food and cooks in gratitude named dishes after them. The cooks during feasts were honoured if the food was good and appreciated. If something went wrong they were flogged in front of the guests.

Since the end of 19<sup>th</sup> century, French culinary art has reached the highest point of perfection, chefs like Escoffier and Prosper Salles published books on cookery, which had far reaching influence and are known throughout the world.

Gastronomy (style or custom of cooking or eating) is an art with defined rules: the same is true of its presentation. Great emphasis is laid on sauces and it is even called 'Sauce cookery'. Every ingredient speaks its own language, wines used for cooking enhance the taste and give an unusual flavour, this being a unique feature of French cuisine. The most important rule is to use only the best ingredients and the proper blend of colour and taste of ingredients. Ingredients play an important role as it has climatic variations in the south France

Garnishes and accompaniments play a key role in French cuisine and dishes are identify by them

Great emphasis is laid on the presentation of the dishes, and garnishes and accompaniments make the dish colourful.

The cooking medium used is butter, olive oil, or salad oil, thus the dishes is not greasy, but gives lightness to the taste.

Spices and herbs give a subtle flavour, taste and originality to the dishes. Some of the spices and herbs are parsley, celery, basil, tarragon, thyme, rosemary, chives, paprika, nutmeg etc.

Vegetables are served with main courses and serve as one of the accompaniments, they act as fillers to a meat dishes. They add colour to the menu and make thyme colourful.

Cheese is extensively used and can be used as a base of dish, garnishes to soups, blended with sauces or grated on top of the dishes and gratinated. almost every region of France has its own cheese and a few popular cheeses are Camembert, Roquefort, brie, Neufchatel, etc.,

## **B. AIMS AND OBJECTIVES OF COOKING**

The aim or the intention of cooking is to see that the food cooked undergoes a physical change, sometimes a chemical change and is acceptable.

The object of cooking is to achieve certain results such as:

1. To facilitate and hasten digestion, so that the cooked food is absorbed by the digestive system and subsequently assimilated by the body.
2. A physical change occurs when a substance changes its form, colour or size, but still remains that same substance, like water that changes to ice.
3. A chemical change occurs when a substance changes its form, colour or size, combining so as to form an entirely new body, e.g. milk changes to curd.
4. Cooking partly sterilize food above 40°C, so that the growth of bacteria falls off rapidly and boiling kills the living cells.
5. Cooking makes food more attractive to have eye appearance and variety.
6. Cooking increases taste and palatability.
7. Cooking helps to make food more digestible.
8. With one ingredient in many dishes can be prepared.
9. Use of right cooking method so that there is minimum loss of colour, texture and nutrition.
10. Use of various ingredients to provide a balance diet.

## **C. EFFECT OF COOKING**

The effect of cooking upon the three chief constituents of food- proteins, carbohydrates and fats – is visible in their increasing digestibility.

### **Proteins**

The protein is coagulated by heat e.g. when the heat is applied to egg white it thickens, becomes opaque and then firm. Avoid high temperatures as the protein hardens, denatures and shrinks and the food becomes indigestible. The connective tissue is converted into gelatine which is soluble in water and rendered digestible. The proteins' biological value is improved by moderate heating.

### **Carbohydrates**

Starch in food is greatly affected by heat. By moist heat, it is converted first into a soluble form and then by extreme heat into a new substance, sweetish in flavour e.g. dextrin in the crust of bread. Moist heat causes the starch grains to swell; it gelatinises at a temperature below boiling point of water, the degree of heat varying with the kind of starchy food.

Cellulose is softened by the application of moist heat.

Sugar when heated in water dissolves, then colours, upon further heating, turns brown and becomes a caramel and emits a lovely flavour, but not crystallise.

Moderate heat does not cause much loss of mineral salts and vitamins, except vitamin.

### **Fats**

If heated to a very high degree for a long time, fats undergo partial decomposition and fatty acids and glycerol are produced. Glycerol further decomposes into acerolin which is an irritating compound to the digestive system.

Fats melt to oils when heated. Water is given off, with a bubbling noise as heating continues. When all the water has been given off, a faint blue haze appears; further heating will result in smoking and burning. The unpleasant smell of burning fat is caused by the presence of fatty acids.

## **D. INTRODUCTION AND CLASSIFICATION OF RAW MATERIALS**

Raw materials are classified in two groups:

**I. Perishables:** The food commodities with less shelf life are called perishables.

Eg. Vegetables, meat products, milk and milk products & fruits.

**I. Non- Perishable:** The food commodities with shelf life are called non-perishables. Eg. Pulses, lentils & cereals.

## **E. CHARACTERISTICS OF RAW MATERIALS**

To achieve the standard finished products one should have a thorough knowledge of characteristics of raw materials and the basic roles of different raw materials used for the food preparation:

- 1) Salt
- 2) Liquids
- 3) Sweetening
- 4) Fats and Oils
- 5) Raising Agents
- 6) Thickenings
- 7) Flavouring and Seasonings

### **Salt**

The chemical name for salt is sodium chloride. It is readily available in a solid (rock salt) or in a solution form (sea salt).

Salt, having a distinctive taste, changes an insipid dish to a wonderful dish. It should be used skilfully, or too much of it could spoil the dish.

Salt is available in 3 forms:

- I. Table salt (fine) containing phosphate.
- II. Coarse or freezing salt for culinary purposes.
- III. Celery salt. It is a blend of celery root and ordinary salt and is purchased ready prepared. It is used for flavouring certain dishes as an alternative to fresh celery or celery seed.

### ***Uses of salt***

- 1) Use of the correct amount of salt improves the flavour of the dishes.
- 2) It strengthens gluten and increases its resistance of fermentation.
- 3) It helps to remove the insects in different vegetables ex: Cauliflower, when put in salted water, makes the insects come out.
- 4) It controls fermentation process in the baked products.
- 5) Helps in colour retention and enhances the taste.

- 6) Salting is one of the oldest popular methods of preserving pickles, fish and bacon
- 7) Salt is essential for good health.

## 1) LIQUIDS

Liquids play a very important role for the purpose of cooking, binding and coating etc. Milk, water, stock and fruit juices are the most commonly used liquids. They help the food to prevent burning, bind dry ingredients and help in maintaining the right consistency.

Stock is a liquid containing soluble nutrients and flavours, which are extracted by prolonged and gentle simmering (except fish stock – 20 mins.). they generally contain a mixture of water, collection of herbs and meat trimmings and bones. They are used as a foundation of soups, sauces, gravies, curries, poaching liquors and many important kitchen preparations.

It is important that the correct amount of liquid should be used, or too much would make the food stodgy, soggy or watery.

## 2) SWEETENERS

Sweeteners are used with other foods to enhance the flavour of the dish produced. It also adds its own sweetness, and is a versatile food product used in a variety of ways. They are available in different forms granulated, fine grained, powdered and in a solution form.

### *Functions*

- It acts as a food additive and also gives the golden brown colour to the baked products.
- The ability of sugar to crystallise, gives a delightful variety in cookery.
- Sugar has long been used as a preservative; it is an effective preservative and can dissolve in water at very high concentration.

### **Degrees and Stages of Cooking the Sugar**

102°C	Small Thread	Suitable for Rasgullas
103°C	Large Thread	Suitable for Jellebis
106°C	Pearl	Suitable for Gomme (white concentrate sugar syrup)
116°C	Soft Ball	Suitable for Marzipan
119°C	Ball	Suitable for Fondant
121 °C	Hard Ball	Suitable for Nougat
143°C	Soft Crack	Suitable for Italian Meringue

156°C	Hard Crack	Suitable for Dipping Fruit
163°C-177°C	Caramel	Suitable for Caramel Custard.

### 1) FATS AND OILS

Fats and oils are nutritionally useful and also contribute certain characteristics like palatability, qualities of flavour and texture. They are popularly used as the medium of cooking.

Fats are solid at room temperature and melts when heated. Oils are liquids at room temperature. Only coconut oil solidifies at low temperature.

Various fats used in cooking are-lard (pig's fat), suet (fat around kidneys), dripping (Tallow Beef fat), butter, margarine, ghee, hydrogenated fat, cocoa butter (for confectionery).

Oils are extracted from coconut, palm, sesame, cotton seed, olive, peanut, mustard, corn and sunflower. Salad oil is a deodorized vegetable oil and is used for salad dressings, etc. as olive oil-the best for the purpose-is very expensive and scarce.

Fats and oils are used for various purposes, the major culinary part played by them are as-

- (1) Spreads,
- (2) Shortenings,
- (3) Salad dressings,
- (4) Frying media and
- (5) Tempering.

**Spreads:** Butter and margarines are used for spreads, and their function is to add to the flavour, nutritional value and increase the satiety value of breads.

**Shortening:** These are fats which shorten the gluten strands, surround them and make them more easily broken (short). When added to flour by the crumbing, folding or rubbing in methods, it gives a bit of tenderness, richness and sheen to the crumb.

**Tempering:** Dals, curries, rice dishes, etc. are tempered. The fat or oil is heated to which cumin seeds, mustard and/or fenugreek seeds, etc. is added and poured over the Dals.

**Salad Dressings:** Fat is used for the various salad dressings-Hot animal fat dressings, which consist of bacon fat, vinegar and seasonings, served hot, are used on green hot salads. Cooked dressing is a cooked mixture of egg, vinegar, lime, fat, starch and seasonings. The typical types of salad dressings which use fat are as follows:

French/American/English dressings are emulsions of oil, vinegar or lemon juice and seasoning.

Mayonnaise is an emulsion of salad oil, vinegar (acid) egg yolk and seasoning.

### **Frying Medium**

Fats and oils are used very commonly as a medium of cooking. When fats or oils are heated, a temperature is reached at which visible fumes appear which is defined as smoke point. Fats with high smoke point are suitable for frying. Different fats do not have the same smoke point. The highest frying needed for any food is about 199°C (390°C). Hydrogenated fats have a high smoke point and are good as a frying medium compared to other fats.

For the selection of a good fat, the following points should be remembered. A frying fat should have a high smoke point, low congealing point, high stability, low moisture content, and should have an acceptable flavour.

Fats and oils have a high percentage of unsaturated fats and have more shortening power, than saturated fats. Animal's fats such as butter, lard and suet make the food short, i.e. break off (short) and readily melt in the mouth. For the selection of shortening, the following factors should be observed according to the type of food product being produced:

- (1) Shortening should cream well or it will affect the cake volume.
- (2) It should have no moisture; then it will be short.
- (3) The shortening should be stable and should not get rancid so that the cooked product has a good keeping quality.
- (4) The right consistency of fat, i.e. solidified for puff and flaky pastry, soft for cakes and biscuits help to get a good texture. To acquire good results in baking, because of fats and other ingredients, certain rules should be followed- "The richer the pastry, the hotter the oven, and the richer the cake, the cooler the oven."

### **Rendering of Fat**

Animal fat is heated and melted and this renders fat from fatty tissues. Tallow, suet and lard are usually rendered and used for cooking. The fat is cut into small pieces and placed in a pan and put in the oven or on slow fire, until the fat melts, and there are crisp brown pieces of tissues left. This should be strained through a fine cloth into a clean bowl. This procedure is known as rendering.

### **Clarification of Fat**

Used fat should be clarified and then used for better results in cooking. Strain the used fat and then mix double the quantity of water in a pan and bring it to the boil. Strain again, cool and place it in a refrigerator.

The fat will solidify and float on top. Lift the cake of fat, turn it upside down and scrape off the foreign particles that have collected. Heat the fat on slow fire, till

fire, till the water evaporates and then strain and store it in a cool place.

### 1) RAISING OR LEAVENING AGENTS

Leavening is increasing the surface area of a dough or batter by creating within, a myriad of gas bubbles puffing up, thus increasing the volume and making it light.

The expansion of these gases during baking increases the volume of the product and gives a desirable porous structure. The aeration of flour products is affected by the following:

- (1) Biological (yeast)
- (2) Chemical (baking powder)
- (3) Mechanical (whisking, beating)
- (4) Lamination (folding, rolling)
- (5) Combination of the above.

**(1) Yeast:** It is a living micro-organism and is a form of plant life (fungi). It requires for its growth, food, moisture, warmth and air. The primary function of yeast is to change sugar into carbon dioxide gas, so that the dough, in which it is generated, is aerated. It also assists in mellowing and ripening the gluten of the dough, and it contains vitamin B complex.

When using yeast, these points should be remembered:

- (a) It remains dormant in cold.
- (b) It rises in warmth.
- (c) It is killed by excess heat (if temperature is over 127° F).
- (d) It is fed by sugar, and in the dough it caramelizes on the outside, forming a brown crust.
- (e) It is fed by flour; the starch gelatinizes with the moisture inside the dough and cooks into a light spongy mixture which is digestible.
- (f) Strong or hard flour is the best to use in bread-making.
- (g) If salt is added in the correct proportions, it gives a good flavour, controls fermentation and improves the colour of the finished goods.

Commercial yeast is of two main types compressed in cake form (also in a liquid form) and dry yeast in granular form.

***Mechanical Aeration:*** This is achieved by incorporating air through whisking, beating and sieving. When sugar and eggs, fat and sugar, fat and flour or any combination of these are beaten or whisked together, or flour is sieved, it works as aeration. Whichever way the air is introduced into the mixing, be it by hand, whisk, spatula or by machine, it is still termed mechanical aeration.

Air is incorporated into the mixing by one of the above means and is held there by the fat, eggs, or both; aeration is brought about by the expansion of the air in the hot oven, together with the water vapour pressure within the air bubbles.

One of the best examples of mechanical aeration is the sponge cake, where foam is produced from the eggs and sugar, the flour is then folded in the sponge and baked. The egg and flour proteins coagulate and the starch cooks thereby making the sponge set.

**Water Vapour:** Lamination acts as a raising agent. In pastries, -folding and rolling helps to give the lift. In idlies, khaman dhoklas, etc. steam formed by the heat, helps to puff up, as liquid and flour are present in equal quantities. E.g. Popcorns have moisture inside the grains, when heated, they expand in volume.

It is the expansion and blistering of the gluten in the dough layers as a result of steam pressure from the water in the dough that is responsible for the lift.

**Combinations:** Danish pastries is a suitable example wherein a combination of aeration by yeast and by lamination. For this, rich yeast dough is made and butter is incorporated as for puff pastry.

In this, the pastry expands in volume, because of the process of aeration, by lamination, and at the same time is aerated by the action of yeast.

## 1) THICKENING AND BINDING AGENTS

- a) Thickening agents impart the following characters to the food products
- b) They give body, consistency, and palatability.
- c) They improve the nutritive value. E.g. Flavoured liquids are thickened and converted into soups, sauces, gravies, curries, bavarois, mousses, puddings, etc.
- d) Binding agents are used to form a mixture of ingredients into a cohesive mass.
- e) The thickening agents are starch, agar, eggs, gelatin, coconut, tamarind, curd, poppy seeds, onion paste, corriander power, etc. Starch is the reserve carbohydrate of plants and is abundant in common foods like: corn, rice, wheat, potatoes, arrowroot, and tapioca. Rice has about 80% starch, wheat 70% and potatoes about 19% starch.

Starch can be classified into: Cereal starches, root starches and instant starches.

Cereal starch is found in: Rice, wheat and maize.

Root starches can be found in arrowroot, tapioca, elephant yam, etc

Instant starches are chemically produced and can be found in granulated or powdered forms like cornstarch, etc.

## **1) FLAVOURINGS AND SEASONINGS**

Spices and herbs give flavouring and seasoning to the dishes. To get effective results, not only should the food please the eye, but should also flatter or stimulate the palate. The success of cooking largely depends upon the help we obtain from flavouring and seasoning. The spice we use for this purpose should be used sparingly, as well as with skill. All palates may not crave for highly spiced food, yet majority of people demand that the food be moderately flavoured with the right constituents.

## **BASIC PRINCIPLES OF FOOD PRODUCTION**

### **A. PRE-PREPARATION OF INGREDIENTS**

#### **Cutting**

Reducing the shape and the size of vegetables and fruits into small pieces with aid of the knife.

#### **Emulsification**

Involves the mixing of two mediums that will generally not mix with each other except with the aid of a catalyst or by some treatment. E.g. mixing of oil and water is the classical reference example. In terms of food preparation; making of mayonnaise sauce with salad oil and egg yolks can be considered as an emulsification product.

#### **Evaporation or Reduction**

The gradual removal of water or any other liquid over heat will cause the medium to convert into steam (above 100<sup>0</sup> degree Celsius). This process is known as evaporation.

#### **Folding**

This method employs the use of mixing two ingredients in a particular manner which can be highlighted through an example. In the making of sponge cakes the fat is put in to the vessel containing the whipped egg batter and gently incorporated in to it by lifting and dropping into the mixture until all of it becomes a combined mixture

#### **Grinding**

Some cooking procedures require the use of fine ingredients. To achieve this, food products have to be broken down or reduced into fine textures. This reduction into small fragments can be achieved by crushing in a mill or on a grinding stone.

#### **Homogenization**

This is the process of Subdivision of large drops into smaller ones by forcing them through a small opening under great pressure, e.g., fat in cream.

#### **Macedoine**

Cutting vegetables or fruits into sizes of 6 to 8 mm cubes.

#### **Mandolin**

A kitchen equipment to cut vegetables and fruits to various shapes and sizes- Julienne, Batons.

**Mashing**

This is a method of breaking up of soft food with pressure, e.g. potato masher.

**Meringue**

Stiffly beaten egg white with little amount of sugar

**Mincing**

Cutting into very fine pieces, e.g. mutton, onions, etc.

**Paring**

Paring is removing the outer layer of vegetables and fruits in circular motion with help of a knife.

**Peeling**

The process by which the external skin of certain raw ingredients is removed is called peeling. The food items may be spoilt; soiled and/or inedible.

**Pressing**

Extracting liquid portions from solids foods by subjecting them to weights or mechanical pressure is called pressing.

**Pureeing**

The process of passing the cooked vegetables or fruits with the help of a strainer or a blender into flowing consistency is called pureeing.

**Refining**

Separating any material generally impurities from the raw ingredients is known as refining as in refining cane-sugar or flour, etc.

**Rendering**

Separating fat from connective tissues by heat is known as rendering. This is done because the connective tissues bare the inedible portions and their usage in food can lead to digestive problems. Hence they are removed. E.g. as in rendering lard (dripping).

**Grating**

Reducing to small particles by rubbing on a rough surface, as in grating lemon peels, cheese, etc.

**Shredding**

Cutting into long narrow pieces by means of a cleaver or knife, e.g. cabbage is known as shredding.

**Sieving**

Passing through a fine wire mesh to remove impurities. It also helps in enclosing air and mixing ingredients evenly, like sieving of flour for cakes.

**Skimming**

Removal of top layers in certain liquids which may not be required for the food product is known as skimming . As in skimming cream from milk.

**Slicing**

Cutting into thin pieces similar to shredding but not so fine as shredding.

**Slitting**

Making a slit in the middle lengthwise, e.g. lady's fingers, green chillies, etc.

**Washing**

This is necessary to remove superficial dirt. Meat, fish, vegetables and fruits are washed in cold water before any preparation, i.e. peeling or cutting. If cut and soaked for a long period or washed after cutting, there is a great loss of water soluble vitamins and minerals. The more cut surfaces are exposed, the more nutrition is lost.

**B. METHODS OF MIXING**

Food preparation often involves the combining and mixing of different food or food materials. Important effects of the methods of combining food or ingredients are those related to palatability. Texture and flavour are often controlled to an important degree by the skill and method employed in combining component materials.

**Beating**

Mixing materials briskly, lifting and dropping them with an appropriate tool. Sometimes used synonymously with whipping as defined below. This is done to thin mixture of liquids. The aim is to mix well and incorporate air.

**Blending**

Mixing two or more ingredients thoroughly.

**Cutting**

Usually the incorporation of fat in flour and other sifted dry ingredients with a knife, a method which produces relatively coarse division of the fat and does not result in blending as in cutting the fat into a pastry mixture.

**Creaming**

Softening fat by friction with a spoon, usually followed by gradual incorporation of sugar as in cake-making.

**Folding**

Mixing materials with palette knife or wooden spoon, by a careful lifting and dropping motion as in folding whipped egg whites into a cake mixture. Palette knife is to life.

**Kneading**

Manipulating by alternating pressure with folding and stretching as in kneading bread dough. A method of combination to the extent that it combines water and flour proteins to make gluten.

**Marinating**

Coating the surface of food materials, a marinade, which is usually a mixture of oil and acid as in marinating the components of a vegetable salad with French dressing.

**Sealing**

This is done to seal the juices of the food products especially meat, so that the juices are retained within the food as well as to develop colour and flavour. This can be done by sautéing or pre-cooking roast.

**Stirring**

Mixing materials with an appropriate tool, such as a spoon by a circular motion, as in stirring white sauce, while cooking for the purpose of mixing the items in the medium.

**Whipping**

Rapid beating with a wire eggbeater or mechanical beater usually to incorporate air, as in whipping egg white.

**Whisking**

Whisking is done when a mixture needs a lot of air or needs to be aerated. Items need to be mixed together so that they do not separate.

**C. TEXTURE**

It is the term to describe the characteristics of the finished products such as:

- (1) Appearance
- (2) Feel to touch
- (3) Softness
- (4) Mouth feel

## Various Textures

(1) *Firm and Close*: The creation of air bubbles by adding raising agents in the baked products due to which volume is increased, which are many and small. The products are crisp and not spongy, e.g., biscuits and plain short pastry.

(2) *Short and Crumbly*: This is same as firm and close, but more fat is added, e.g. shortbread, nankhatais, biscuits, short crust pastry, etc.

(3) *Light and Even*: There are plenty of holes and of a fair size. the food is firm but not tough or hard. It is neither short nor spongy. e.g. Madeira, queen cakes, etc.

(4) *Spongy*: A elastic and soft appearance with air holes created by inclusion of air. It is soft and elastic to touch as in idlies, khaman dhoklas, Swiss rolls, etc.

(5) *Flaky*: This is created by addition of fat on the dough by rolling and folding different layers. The crispness is due to the method of rubbing fat with the flour. In order to get a good flaky texture, the right amount of ingredients, proper mixing and correct temperature is essential, e.g. puff and flaky pastry, parathas, tikona mathis, etc.

(6) *Smooth*: When a dry ingredient is added to a liquid and the blending results in a smooth texture, e.g. sauces, batters, gravies, phirnee.

The following are the incorrect textures which spoil a dish and should be avoided.

(1) *Coarse and Open Texture*: In this texture one can see uneven and large holes due to the excessive addition of raising agent

2) *Hard Texture*: The air enclosed has been driven off, may be due to the addition of more liquid than required, or has not been mixed properly. Low temperature of the oven also spoils the texture.

(3) *Soggy Texture*: This occurs due to the presence of too much of moisture.

(4) *Lumpy texture*: This caused due to the improper mixing of solids and liquids at the same temperature. This texture may occur in sauces, gnocchi, suji Hal was, etc.

## D. VARIOUS METHODS OF COOKING AND THEIR BASIC RULES

Cooking requires application of heat to raw materials in any one of the following ways:-

### 1. MOIST HEAT METHOD:

The process of transferring heat source to the food through the medium of water held in a container.

### 2 DRY HEAT METHOD:

The process of transferring heat from the source to the food material directly.

### 3. COOKING WITH FAT:

The process of transferring heat from the source to the food through fat or oil.

### 4. COMBINATION METHOD:

Cooking with application of two or more methods of cooking in combination.

#### MOIST HEAT METHOD

1. BOILING
2. SIMMERING
3. POACHING
4. STEAMING
5. PRESSURE COOKING
6. BLANCHING
7. STEWING
8. PAPER BAG COOKING

#### DRY HEAT METHOD

1. OVENROASTING
2. POT ROASTING
3. SPIT ROASTING
4. TANDOORI
5. ROASTING
6. BAKING
7. GRILLING
8. BROILING
9. MICRO WAVE COOKING

#### COOKING WITH FAT

1. TOSSING
2. SHALLOW FAT FRYING
3. DEEP FAT FRYING

#### COMBINATION

1. BRAISING

## MOIST HEAT METHODS:

### 1. BOILING

Cooking a food ingredient in a liquid like water, milk, stock etc at boiling point.

Ex: boiled potatoes, eggs

#### Basic rules

1. The food item should be completely immersed through out the cooking process.
2. Scum that arises during the boiling must be removed or it will discolours & spoil the taste.
3. The liquid in which the food is boiled called as pot liquor, as it contains nourishment & flavour. It should not be thrown away & can be used as a stock.

### 2. Simmering

Cooking a food ingredient in liquid just below boiling point when very tiny bubbles come to the surface of the liquid & breaks. Simmering is best used when the food is too cooked slowly for a long time. The food retains most of the nutrients ex: stock making.

## **2. Simmering**

Cooking a food ingredient in liquid just below boiling point when very tiny bubbles come to the surface of the liquid & breaks. Simmering is best used when the food is too cooked slowly for a long time. The food retains most of the nutrients ex: stock making.

## **3. Poaching**

Cooking in simmering water or stock with an acid like vinegar or lime juice, salt, & any other optional ingredients ex: poaching eggs, fish.

### Basic rules

As soon as the liquid begins to boil lower the temperature to allow the poaching, adding vinegar salt helps in quicker coagulation & prevents disintegration.

## **4. Steaming**

Cooking food by steam without allowing water inside the container to touch the food in a closed pan. Ex: idli, dhoklas etc.

### Basic rules

1. It is good methods for invalids, as the steam food are easily digested.
2. Nourishment & flavour are retaining in the food.
3. The food cannot be easily overcooked.

## **5. Pressure cooking**

Cooking with the help of steam under pressure. If steam is not allowed to escape pressure develops inside the container & the temperature increases. Food cooks faster in a pressure then normal cooking.

### Basic rules

1. The lid of the pressure cooker has to be at perpendicular to the handle for closing & opening the cooker.
2. Don not attempt to open the cooker while steam still present inside. To release the steam faster use a thick duster or gloves & remove the whistle.

## **6. Blanching**

Cooking food in boiling water for very short time. The duration depends on the type of the food to be blanched.

### Basic rules

1. It is a technique used to remove the skin of tomatoes, shallots etc..
2. Put the vegetables into the liquid only after water reaches rolling boil stage.

## **7. Stewing**

Stewing is a gentle method of cooking in a pan with a tight fitting lid using a small quantity of liquid. The food is only half covered with liquid. The food above the liquid level gets cooked the steam & below the liquid level by the simmering liquid. This method is very useful for cooking tougher & cheaper cuts of meat root vegetables & legumes. Longer cooking times & low temperature enables cooking tough meat tender.

### Basic rules

1. The important rule in stewing is that the liquid should never boil.
2. While stewing the liquid should cover the food item.

## **8. Paper bag cooking**

This is a traditional method of cooking where the food articles are enclosed in a heat resistant paper called parchment & cooked in the oven. The main ingredients rest on a bed of herbs, vegetables or sauce or a combination of all these ingredients. Steam created from the food within the bag increases the volume & back puffs up.

### Basic rules

1. The tray used in this method should be greased and should be bigger.
2. The ingredients used as a bed should be fresh.

## **Dry heat methods.**

### **c. Oven roasting**

Oven roasting is suitable for larger joints and rest whole birds. An oven is enclosed cooking chamber where hot air currents are circulated to cook the food. For roasting in an oven the meat is positioned on a mesh within a roasting tray. The roasting tray should slightly tilt to one side to collect the juices and fat. This fat is used for basting. The temperature and time for roasting must be collect the according to the size and type of the meat. One more method of oven roasting is to enclose the meat, fat.

### **d. Tandoor roasting**

This is an Indian method of roasting where marinated meat is skewered to iron rods and roasted in a clay pot oven called tandoor. Heat insulators surround the clay pot in tandoor oven. There is an opening at the bottom for removing spent coal and ash. During roasting the heat is generated by live coal which heats up the clay pot. The clay pot reflects uniform degree of temperature throughout the oven. The top part of the oven is covered with a lid to assist circulation of heat with in. breads are cooked in a tandoor by sticking them to clay pot. The clay pot is shaped in such a way that bread can be cooked uniformly.

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#### Basic rules

1. Meat items for roasting must be tender and of top quality.
2. The juices extracted by the meat product must be used to make accompanying gravy.
3. The thicker the, the lower should be the cooking temperature.

### **e. Grilling**

- Grilling over heat

In this method the prepared food is placed on grills bars or thick sheet of metal (skillet)

Over a heat source. Initially a higher temperature is required to brown and seal the surface of the meat so that the juices remain inside. Then the temperature is lowered so that the inside is gradually and thoroughly cooked. Steaks can be grilled to various degrees of cooking namely rare, medium and well done. When grilling is done on grill bars a pattern is created on the food surface.

- Grilling under heat

Grilling food with the help of the heat radiated from meat bars above the food.

Ex:-finishing pizzas, grilling lobster under a salamander.

- Infrared grilling

Grilling with the help of infra red rays.

#### **f. Baking**

Cooking food by circulating hot air in an enclosed chamber. Vaporizing the moisture within the food can create the hot air current.

Ex:- bread making, cakes biscuits etc..

The combined action of dry heat and steam creates conventional currents. This completes baking.

#### **g. Broiling**

Cooking by radiant heat from a heat source placed above or below the food.

#### **h. Microwave cooking**

This is the quickest method of cooking and this is done with the help of high frequency electromagnetic waves produced in a specially designed oven. Microwave penetrates the food and produces heat by causing friction due to the collision of molecules of food. This heat cooks the food. For cooking in a microwave oven are specially made of china ware or stone ware. Metal container should not be used.

Basic rules

1. Meats for grilling must be small in size, flattened and of top quality.
2. Heat should be intense to enable sealing at once and colouring, a brown crust should formed which seals juice of the food.
3. Grill bars should be cleaned and oiled. Dry cooking should take place.

#### **Cooking with fat frying**

Frying is cooking food by fully immersing in or partly in contact with hot oil. Three types of frying are possible:-

1. **Tossing or sautéing:** - food is tossed in a pan with a little quantity of hot oil. Tossing gives a glossy finish to vegetables. Meat etc.. This method prevents finely cut vegetables or meat from over cooking and preserves the nutrients.
2. **Shallow fat frying:** - food is partly immersed in hot fat and cooked until done on one side. The process is repeated on the other side of the food by turning over. Fat absorption is more in shallow fat frying.
3. **Deep fat frying:** - cooking food by submerging in hot oil. Some delicate foods like fish require a protective layer to prevent hot oil from directly coming into contact with the food. Such a protective coating can be made with egg

wash and breadcrumbs or butter. To fry vegetables like potatoes they must be treated for removal of extra moisture and fried two times. In such cases initial is called blanching. The oil chosen for deep fat frying should have a high smoking point.

#### Basic rules

1. Sauté pan and frying pan should have a thick bottom.
2. Item should be seasoned before being shallow fried.
3. Food item must be placed to cook in hot fat in order to seal.
4. A fried item should have a uniform golden colour.
5. The fat used for frying should be strained and stored in a cool place.
6. Frying temperature varies from 160 to 195 degree centigrade.

### **Combination method**

#### **Braising**

Braising is a combination method of roasting and stewing. The food to be braised should be first browned in an oven or pan grilled with a little oil to sear the outer surface. Then, the food is placed in a container and stock is added to half cover the food. The pan is tightly closed and the cooking is completed in an oven, braising is the best.

#### Basic rules

1. Braising pan should be keeping with the size of the food item to be braised; this is to ensure even cooking.
2. Fresh vegetables and herbs with aroma should be used as a bed.
3. An appropriate liquid should half cover the food item.
4. Meat items suitable for braising are those of a tough nature.
5. Braised vegetables are better if served with a good sauce made separately.

### **Egg cookery**

#### **Egg**

The term egg applies not only to those of hen but also the edible eggs of other birds such as turkey, ducks, and quails.

Food value: - they contain most nutrients and are low in calorie, two eggs contain 180 calories, egg protein is complete and easily digestible therefore it is useful for balancing meals. They are also used as main course; they are protective food and

provide energy and material for growth and repair of the body.

Hen eggs are graded into four sizes.

Small, medium, large, extra large.

The size of an egg does not affect the quality but the price. The eggs are tested for quality weight and then graded.

Grade –A :- naturally clean, fresh egg, internally perfect with impact cells and air cells not exceeding 6mm in depth.

Grade –B :- eggs which been down graded because they have been cleaned or preserved or they are internally in perfect or air cell exceeding 6mm but not more than 9mm in depth.

Grade –C: - these eggs are fit for breaking for manufacturing purpose but cannot be sold in their shell to public.

Composition	Whole egg %	White %	Yolk %
water	73	87	47
protein	12	10	15
fat	11	---	33
vitamins & minerals	1	0.5	2

Egg white contains proteins known as egg albumin and amount of white is approximately twice the amount of yolk. The yolk is more complex it contains more protein, than the white it also has fat vitamin A and D, thiamine, riboflavin, calcium, iron, sulphur and phosphorus. Lecithin Emulsifying agent and cholesterol also present, because of proteins, vitamins, minerals, fat eggs are a body building protective and energy producing food.

### **Egg structure and uses**

The egg is composed of two main parts. The egg white and yolk. Various membranes helps to keep the yolk suspended at the centre of the white and helps to prevent contamination or weight loss through evaporation. The egg white consists almost exclusively of water and protein called albumin. Its ability to form relatively stable foam is crucial to development of proper structure of many products. The eggs are a key ingredient in clarifying stocks and broths to produce consommés.

Egg yolk contains protein significant amount of fat and a natural emulsifier called the yolk has ability to foam and ability to form emulsions makes egg yolk crucial to preparation items such as mayonnaise for providing additional richness to food when they are included are included as a liaisons as soups and sauces.

## Preservation

**Cold storage:** - eggs are kept a little above freezing point, the humidity of the air and the amount of CO<sub>2</sub> in the air are controlled. Eggs will keep about 9 months under this condition.

**Frozen eggs:-** these are basically used by bakers and confectionaries and are sold in large tins of various sizes eggs are washed sanitized and then broken into sterilized containers after the yolks and whites have been combined they are strained, pasteurised packed and quick frozen. Yolks and white are also frozen separately.

**Dried eggs:-** eggs are broken well mixed and then spread dried at a temperature of approx 71 degree centigrade mainly used by bakers and confectioneries.

**Grease method :-** paraffin wax or lard egg are dipped into the grease and then allowed to dry the grease fills up the porous shells forms a skin and so exclude air be stored the a way as fresh egg.

**Water glass:** - solution is made up with sodium silicate and boiling water. When cold the new laid eggs are packed in a bowl and covered with the solution a lid is placed on a container to prevent evaporation.

**Dried egg white:** - suitable for meringues, royal icing.

## USES OF EGG IN FOOD PREPARATION

1. **Binding;** - additional of eggs to minced meat and mashed vegetables etc helps to bind the mixture. Due to effect of heat the proteins are bound into cohesive masses order to retain shapes.

Ex: mutton croquettes, kebabs, koftas etc..

2. **Coating:** - eggs help to give a coating to the food item and prevent them from disintegrating acts as a protective coating. Most of the food item such as poulet sauté Maryland, croquettes, cutlets etc are dipped into the egg batter before crumbing and then deep fry it.
3. **Clarifying:** - egg whites are used as a clarifying agent in the preparation of consommés.
4. **Decoration and garnishing:** - boiled eggs, egg slices, egg quarters are use to decorate the dishes.

Ex: boiled eggs in biryanis.

**5. Emulsifying:** - eggs help to form stable emulsions, they help to enhance colour and sheen. They also enrich and enhance the flavour and taste.

Ex: cakes and farinaceous are enriched by adding eggs.

Preparation of mayonnaise sauce.

**6. Leavening:** - egg whites mixed with sugar beaten stiffly (meringue) added to the products such as mousse soufflés sponge cakes increases the volume and it helps to harden.

**7. Thickening:** - it helps to improve the consistency of sauces, soups. Egg liaisons used in soup and sauces help to thicken and improve the consistency.

Ex:- eggs are used in custards to make the custard firm due to effect of heat.

## **KITCHEN OPERATIONS**

### **A. DUTIES AND RESPONSIBILITIES OF KITCHEN BRIGADE**

**EXECUTIVE CHEF:** He carries the full responsibilities, he must be both cook and administrator, and He needs to be capable of ensuring quick service and maintaining discipline. He should have a strict sense of economy and efficiency. His principle function is to plan, organise and supervise the work of kitchen. He is responsible for staffing, selection and dismissal in consultation with personnel department. He prepares a predetermine percentage of profit and works in accordance with the policy of the establishment. He is concerned with the quality of food and its presentation. He is departmental head and is responsible to the management

**SOUS CHEF:** The assistant head chef under studies the head chef in all his duties, it is the sous chef who calls up the order from the kitchen. He is mainly responsibly for the efficient day to day functioning of the kitchen. In large establishments there are number of sous chef, especially when there are separate kitchens.

**CHEF DE PARTIE:** In different sections of the kitchen there is i.e. Each one is assisted according to the production load by one or more commis cooks; first, second, third and also trainees. All C.D.P. may be regarded as supervisors of their sections as well as skilled craftsmen.

**SAUCE COOK:** He will be the sous chef he prepares all poultry, fishes, meat necessary garnishes. He also prepares his own mise-en-place.

**ROAST COOK:** He is responsible for production of all roasts and grills of meat. The prepare sauces, accompaniments, garnishes for the roast and grill items. It is usually the grill cook will cook work under supervision of roast cook.

**FISH COOK:** He prepares all fish main course. He is responsible for cooking, garnishing, sauces and accompaniments. He needs extensive training.

**SOUP COOK:** He prepares all types of soups and responsible for garnishes and accompaniments he plays a very important role as soup gives an impression of the meal to follow.

**LARDER COOK:** He is most spectacular and the busiest, because the work is never ending. Besides feeding the main kitchen with prepared food, for processing, he has to keep the cold buffet supplied. He has various subsections such as hors d'ouvres, salad section and a butchery section.

**VEGETABLE COOK:** He is responsible for the vegetables and potatoes.

**PASTRY COOK :** He has a different status but certainly not less than the sauce cook and larder cook his work is specialised and he prepares hot and cold pudding, cakes, pastries, bread, etc. he is also responsible for special display work and the supply of food items to the main kitchen.

**BANQUET COOK:** In large organisations with large banquet facilities the brigade will have banquet chef with commi I & II. He is responsible for food preparations in large quantities. He coordinates with the banquet staffs regarding no. of pax, time of food pick up, food garnishes and food service.

**RELIEF COOK:** He relieves C.D.P. he takes over a section while chef goes on leave or off days. He is usually very senior and has thorough knowledge of all cuisines and departments, under him assistant relief cook plays vital role assisting the relief cook.

**BREAKFAST COOK:** His duty starts very early, he doesn't rank as C.D.P but nevertheless needs to be of good skill. He has to complete breakfast service. Afterwards he has to complete mise-en-place for the following morning.

**STAFF COOKS:** In small organizations the staff food is prepared by C.D.P. in large establishments a separate kitchen prepares staff meals where all the staff of the hotels dine breakfast, lunch, dinner, and tea. The separate section is called as cafeteria.

**KITCHEN PORTERS:** Kitchen porters plays very important role in the kitchen. They are responsible for entire kitchen cleanliness and hygiene. They are responsible for pot and dish washing.

## **B. ATTITUDE TOWARDS WORK.**

1. Ability to overcome resistance to do normal or menial work.
2. Capacity to take order from seniors.
3. Cheerful attitude towards work & people.
4. Cordial relations with all. i.e. interaction (team).
5. Pride in work.
6. Tact & initiative.
7. Honest.
8. Courtesy.
9. Leadership.
10. Motivation.

## **C. PERSONAL HYGIENE**

Germs and bacteria are to be found in and on the body and they can be transferred onto anything with which the body becomes in contact. Personal hygiene is essential to prevent germs getting onto food.

### **Personal cleanliness**

Self respect is necessary in every food handler because a pride in ones appearance promotes a high standard of cleanliness and physical fitness. Persons suffering from ill health should not handle food.

### **BATHING**

It is essential to take bath or a shower every day. Otherwise germs can be transferred onto clothes and so onto food, particularly in warm weather.

### **HANDS**

Hands must be washed thoroughly and frequently, particularly after using toilet, before commencing work and during the handling of food. They should be washed in hot water, with the aid of a nail brush and bactericidal soap. After washing hands should be dried with a paper towel or by hand hot air dryer. Rings, watches and jewellery should be avoided.

### **FINGERNAILS**

They should be always kept clean and short as dirt can easily lodge under nails .nails should be cleaned with a nail brush and a nail varnish should not be used.

### **HAIR**

Hair should be washed regularly and covered with a chef cap. The hair should never be scratched, combed or touched in the kitchen, as germs could be transferred via hands to the food.

### **NOSE**

The nose is an area where there are vast number of harmful bacteria it is therefore very important that neither food people nor working surfaces are sneezed over. The nose should not be touched when food is being handled. If a handkerchief is used, the hands should be washed afterwards.

### **MOUTH**

There are many germs in the area of mouth, therefore mouth or lips be touched by the hands or utensil which may come into contact with food. Coughing over foods and working area should be avoided as germs are spread long distances if nit trapped in a handkerchief.

**EARS**

The ear-holes should not be touched while in the kitchen as, again, germs can be transferred

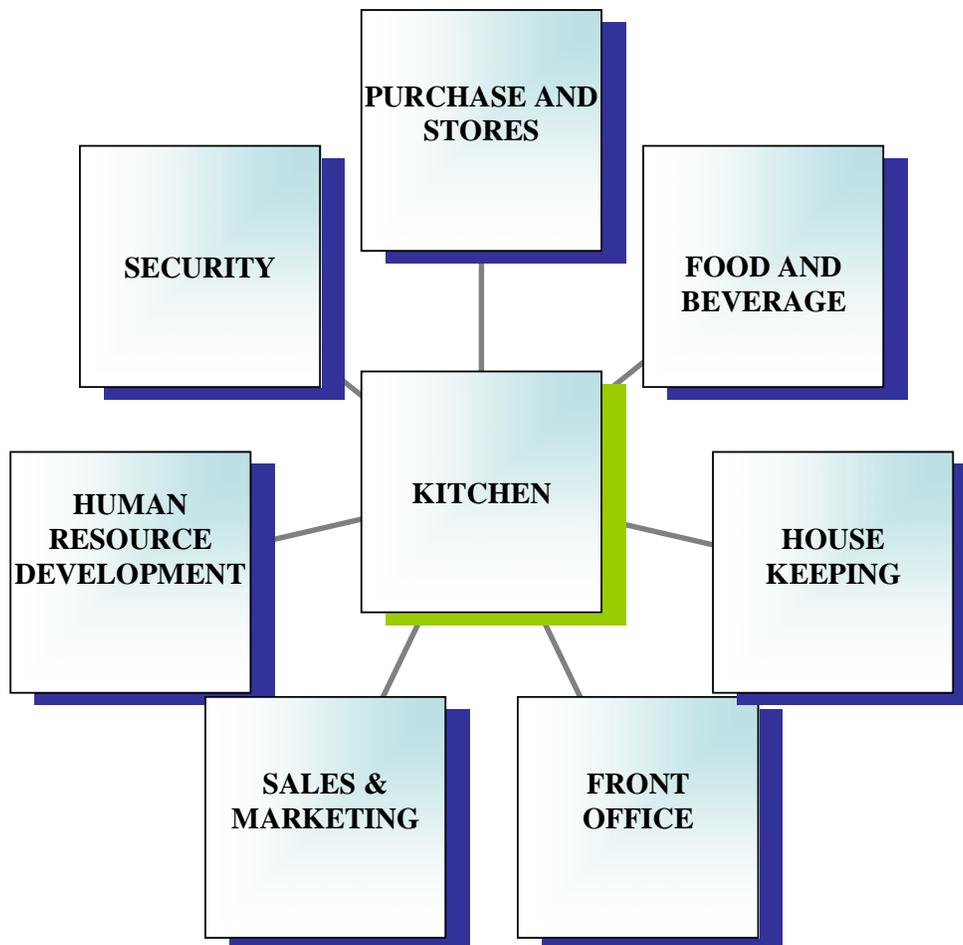
**FEET**

As food handlers are standing for long hours. They should be washed regularly and the toenails kept short and clean. Tired feet can cause general fatigue which leads to carelessness, and this result in a lowering of the standards of hygiene.

**TEETH**

Sound teeth are essential to good health. There should keep clean and visit to the dentist should be regular so that teeth can be in good repair.

## D. CO-ORDINATION OF KITCHEN WITH OTHER DEPARTMENTS



### INTERDEPARTMENTAL CO-ORDINATION

The various departments of a hotel are so closely interlinked that none can do without the other. Therefore it becomes imperative for us to understand what communication exists between these departments so that we may practice the same in our work experiences.

Department has to co-ordinate with the other departments as depicted in the illustration for the following purposes:

**F&B Service:** there should be a very close co-ordination with this department as they are various F& B service outlets for which food has to be sent to all the outlets by taking care of their type of food, quantity of food and different food pickup times. Service outlets have to be informed well in advance regarding the bookings. As per that the kitchen personnel prepares the mise-en-place well in advance for the smooth operations.

**House Keeping:** This department plays a major role in keeping the various kitchen uniforms neat, hygienic and clean at all times. Staffs on both sides have to co-ordinate to maintain high standards of professional upkeep.

**Front Office:** The kitchen department receive information regarding group arrivals & departure dates of the guests which is important and also VIP guest his favorite food items and special instructions for the food preparation. Every day this department sends the house count to the kitchen.

**Sales & Marketing:** The personnel in this department strike deals with various people and organizations for corporate meetings, conventions, celebrative parties, etc. normally these parties are routed to the Banquets department. The same is being instructed the kitchen for the preparations of food and the pick up time with co-ordination with Banquets department.

**HRD:** This is an important department as F&B relies here in recruiting and dismissal of skilled manpower for running their operations smoothly with the co-ordination of executive chef. The salaries and other benefits, training etc of the F&B staff are given by the HRD department.

**Security:** This department takes care of the timings of the kitchen staff. Sometimes they have to take care of the kitchen equipments which are placed in various F&B outlets for food pickup.

**Purchase and Stores:** The co-ordination with this department is very essential for purchase of food items with their specifications. With the help of the purchase department the access to the food suppliers should be maintained very smoothly for the supplies of food commodities i.e. perishable and non-perishables and also special ingredients for the special events.

The stores has to co-ordinate with kitchen for the storing and issuing of food commodities round the clock.

## **E. KITCHEN EQUIPMENT**

Kitchen Equipment is expensive so initial selection is important, and the following points to be considered before each item is purchased

Overall dimensions (in relation to available space)

Weight – can the floor support the weight?

Fuel supply – is the existing fuel supply sufficient to take the increase

Drainage – where necessary are there adequate facilities

Water – where necessary, is it to hand?

Use – does the food to be produced justify good use?  
Capacity – can it cook the quantities of food required efficiently?  
Time – can it cook the quantities of food in the time available?  
Ease – is it easy for staff to handle, control and use properly?  
Maintenance – is it easy for staff to clean and maintain  
Attachments – is it necessary to use additional equipment or attachments?  
Extraction – does it require extraction facilities for fumes or steam?  
Noise – does it have an acceptable noise level?  
Constructions – is it well made, safe, hygienic and energy efficient, and are all handles, knobs and switches sturdy and heat resistant?  
Appearance – if equipment is to be on view to customers does it look good and fit in with the overall design?  
Spare parts – are they and replacement parts easily obtainable?  
Kitchen equipment may be divided into three categories:  
Large equipment – ranges, steamers, boiling pan, deep fat-fryers, sinks, tables.  
Mechanical equipment – peelers, mincers, mixers, refrigerators, dish-washers.  
Utensils and small equipment – pots, pans, whisks, bowls, spoons.

## **LARGE EQUIPMENT**

### **Ranges and ovens**

A large variety of ranges is available operated by gas, electricity, solid fuel, oil, microwave or microwave plus convection.

Solid tops should be washed or wiped clean with a pad of sacking. When cool the range tops can be more thoroughly cleaned by washing and using an abrasive. After any kind of cleaning a solid top should always be lightly greased.

On the open type of range all the bars and racks should be removed, immersed in hot water with a detergent, scrubbed clean, dried and put back in place. The gas jets should then be lit to check that none are blocked. All enamel parts of ranges should be cleaned while warm with hot detergent water, rinsed and dried.

The insides of ovens and oven racks should be cleaned while slightly warm, using detergent water and a mild abrasive if necessary. In cases of extreme dirt or grease being baked on to the range or oven a caustic jelly may be used, but thorough rinsing must take place afterwards.

### **CONVECTION OVENS**

These are ovens in which a circulating current of hot air is rapidly forced around the inside of the oven by a motorised fan or blower. As a result, a more even and constant temperature is created which allows food to be cooked successfully in any part of the oven. This means that the heat is used more efficiently, cooking temperatures can be lower, cooking times shortened and overall fuel economy achieved.

## **STEAMERS**

There are basically three types of steaming ovens:

- Atmospheric;
- Pressure;
- Pressure less

There are also combination steaming ovens; pressure/convection steam; pressure less/fully pressurised; steaming/hot air cooking; combination of hot air and steam; combination of hot air and steam with two settings

In addition, dual pressure steamers, switch able between low pressure and high pressure, and two pressure settings plus zero are available. Steaming ovens continue to develop, improve and become more versatile. The modern combination steamers which can be used for steaming, stewing, packing, braising, roasting, backing, vacuum cooking, gratinating, reconstituting, blanching a defrosting, have electronic controls for easier setting and more precise time/temperature control. The advantage of the electronic controls is that they assist in fuel efficiency they are available in several sizes and there are many examples of their efficiency.

## **BOILING PANS**

Many types are available in different metals – aluminium, stainless steel, etc – in various sizes (10, 15, 20, 30 and 40 litre capacity) and they may be heated by gas or electricity. As they are used for boiling or stewing large quantities for food, it is important that they do not allow the food to burn; for this reason the steam-jacket type boiler is the most suitable. Many of these are fitted with a tilting device to facilitate the emptying of the contents.

After use, the boiling pan and lid should be thoroughly washed with mild detergent solutions and then well rinsed. The tilting apparatus should be greased occasionally and checked to see that it tilts easily. If gas fired, the gas jets and pilot should be inspected to ensure correct working. If a pressure gauge and safety valve are fitted these should also be checked.

## **DEEPFAT-FRYERS**

A deep fat-fryer is one of the most extensively used items of equipment in many catering establishments. The careless worker who misuses a deep fat-fryer and spills food or fat can cause accidents and waste money.

Fryers are heated by gas or electricity and incorporate a thermostatic control in order to save fuel and prevent overheating. There is a cool zone below the source of heat into which food **SINKS**

Different materials are used for sinks according to the purpose for which they are intended:

- Heavy galvanised iron for heavy pot wash;
- Stainless steel for general purposes.

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## **TABLES**

Formica or stainless steel topped tables should be washed with hot detergent water then rinsed with hot water containing a sterilising agent – alternatively, some modern chemicals act as both detergent and sterilising agents. Wooden tables should not be used.

Marble slabs should be scrubbed with hot water and rinsed. All excess moisture should be removed with a clean, dry cloth.

No cutting or chopping should be allowed on table tops; cutting boards should be used.

Hot pans should not be put on tables; triangles must be used to protect the table surface

The legs and racks or shelves of tables are cleaned with hot detergent water and then dried. Wooden table legs require scrubbing.

## **MECHANICAL EQUIPMENT**

### **POTATO PEELERS**

Potatoes should be free of earth and stones before loading into the machine.

Before any potatoes are loaded the water spray should be turned on and the abrasive plate set in motion.

The interior should be cleaned out daily and the abrasive plate removed to ensure that small particles are not lodged below.

The peel trap should be emptied as frequently as required.

The waste outlet should be kept free from obstruction.

### **MINCERS**

The hand type should be washed immediately after use, then rinsed and dried.

The electric masher should have the removable sections and the main machine washed and dried after use, extra care being taken over those parts which come into contact with food. The same care should be taken as with electric chippers regarding obstruction and lubrications.

### **REFRIGERATORS**

In large establishments it is necessary to have refrigerated space at different

temperatures. The cold rooms may be divided into separate rooms: one at a chill temperature for storing salads, fruits, Dishwashing machines are costly and it is essential that the manufacturer's instructions with regard to use and maintenance are followed at all times.

## **IRON**

Items of equipment used for frying, such as movable fixtures and frying-pans of all types are usually made of heavy, black wrought iron.

Frying-pans are available in several shapes and many sizes e.g.:

Omelette pans;

Frying-pans;

Oval fish frying-pans;

Pancake pans.

Baking sheets are made in various sizes of black wrought steel. The less they are washed the less likely they are to cause food to stick. New baking sheets should be well heated in a hot oven, thoroughly wiped with a clean cloth and then lightly oiled. Before being used baking trays should be lightly greased with a pure fat or oil. Immediately after use and while still warm they should be cleaned by scraping and dry-wiping. Hot soda or detergent water should be used for washing.

Tartlet and barquette moulds and cake tins should be cared for in the same way as for baking sheets.

## **STAINLESS STEEL**

Specially manufactured stainless steel pots and pans are now being extensively used in place of copper. Copper is considered inappropriate in terms of initial cost, retaining and cleanliness. The vast majority of new establishments buy stainless steel. Some will use copper pans lined with stainless steel.

Stainless steel is also used for many small items of equipment.

## **WOOD AND COMPOUND MATERIALS**

### **CUTTING BOARDS**

These are important items of kitchen equipment which should be kept in use on all table surfaces to protect the table and the edges of cutting knives.

### **WOODEN CHOPPING BOARDS**

To comply with current regulations, wooden boards should not splinter or leak preservatives. They should be of close-grained hard wood either in a thick, solid slab or separate pieces with close-fitting joints.

certain cheeses; one for meats, poultry, game and tinned food which have to be refrigerated; one for deep-frozen foods. Frequently, the cold room storage is designed

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Oval fish frying-pans;

Pancake pans.

Baking sheets are made in various sizes of black wrought steel. The less they are washed the less likely they are to cause food to stick. New baking sheets should be well heated in a hot oven, thoroughly wiped with a clean cloth and then lightly oiled. Before being used baking trays should be lightly greased with a pure fat or oil. Immediately after use and while still warm they should be cleaned by scraping and dry-wiping. Hot soda or detergent water should be used for washing.

Tartlet and barquette moulds and cake tins should be cared for in the same way as for baking sheets.

## **STAINLESS STEEL**

Specially manufactured stainless steel pots and pans are now being extensively used in place of copper. Copper is considered inappropriate in terms of initial cost, retaining and cleanliness. The vast majority of new establishments buy stainless steel. Some will use copper pans lined with stainless steel.

Stainless steel is also used for many small items of equipment.

## **WOOD AND COMPOUND MATERIALS**

### **CUTTING BOARDS**

These are important items of kitchen equipment which should be kept in use on all table surfaces to protect the table and the edges of cutting knives.

### **WOODEN CHOPPING BOARDS**

To comply with current regulations, wooden boards should not splinter or leak preservatives. They should be of close-grained hard wood either in a thick, solid slab or separate pieces with close-fitting joints.

Before using a new board, wash to remove wood dust.  
After use scrub with hot detergent water, rinse with clean water, dry as much as possible and stand on its longest end to prevent warping.  
Do not use for heavy chopping; use a chopping block instead.

## **F. TYPES OF FUELS AND USES**

The fuels used in the running of a catering establishment constitute a large item of expenditure. The general use of electricity for lighting needs care taken in the selection of the type of lighting and its equipment, but the question of choice of a fuel for lighting does not really exist. However, when it comes to the choice of fuel for cooking many factors to be taken into consideration before a decision is made, bearing in mind that other than for lighting or heating premises the consumption of fuel for cooking is the largest in almost any catering enterprise. It is for this reason that the following information is related to the kitchen.

### **ELECTRICITY**

Electricity cannot be heard, tasted or smelled. Installed and used correctly, it is a very safe source of energy, but misused can kill or cause serious injury. It is therefore essential that any electrical installation is undertaken by qualified engineers in accordance with British Standard 7671 and carried out by register contractors of the National Inspection Council for Electrical Installation Contracting (NICIEC).

### **GAS**

Gas is a safe fuel but like all fuels it must be treated with respect. Because it is a visual heat gas is easier to control than electricity and it can usually be adjusted to give the desired degree of heat. It is combusted in conjunction with air to give the correct mixture as denoted by the colour of the flame, and is maintained at constant even pressure by means of a gas governor in the pipeline to each item thus giving consistency of performance.

What do you do if you smell gas?

- open all doors and windows
- Check whether a gas tap has been left on, or if a pilot light has gone out. If so turn off the appliance.
- If in doubt turn off the gas supply at the meter and phone for the emergency service.

*Before deciding on what fuel to be used the following factors should be considered*

- safety
- cost
- efficiency
- storage requirements
- constancy of supply
- cleanliness and need for ventilation
- cost of equipment, installation and maintenance

## COMPARISON OF ELECTRICITY AND GAS

### ADVANTAGES

- ELECTRICITY
- Clean to use, low maintenance.
- Easily controlled, labour saving.
- Good working atmosphere.
- Little heat loss, no storage space required.
- Low ventilation requirements.
- GAS
- Convenient, labour saving, no smoke or dirt.
- Special utensils not required.
- Not fuels storage required.
- Easily controllable with immediate full heat and the flames are visible.
- Cheaper than electricity.

### DISADVANTAGES

- Time taken to heat up in a few instances.
- Particular utensils are required for some hobs, e.g. induction
- More expensive than gas.
- Some heat is lost in the kitchen
- Regular cleaning required for efficient working.
- For gas to produce heat it must burn; this required oxygen which is contained in the air and as a result carbon dioxide and water are produced.
- As a result, adequate ventilation must be provided for combustion and to ensure a satisfactory working environment.

## **G. KITCHEN HAZARDS**

### SAFETY PRECAUTIONS

#### SAFETY FACTORS

- Excessive haste should be prevented
- Distraction should be avoided
- Failure to apply safety rules

Excessive haste may cause people to take chances which inevitably lead to mishaps. Disconnect the power.

Accidents may be caused by not concentrating on the job in hand. It is the responsibility of everyone to observe the safety rules. Ensure operational

#### **Maintain a safe and secure working environment**

Procedures in the event of a fire

- The fire brigade must be called immediately a fire is discovered.
- Do not panic.
- Warn others in the vicinity and sound the fire alarm.
- Do not jeopardise your own safety and that of others.
- Follow the fire instructions of the establishment.
- If the fire is small use the appropriate extinguisher.
- Close the doors and windows turn off gas, electricity and fans.

It is important that passageways are kept clear at all times and that doors open outwards. Fire exits must be clearly marked and fire fighting equipment readily available and in working order. Periodic fire drills should occur and alarm bells tested at least four times a year and staff instructed in the use of extinguishers. The extinguisher will state the kind of fire it is to be used on and that it must be refilled after use.

To extinguish a fire the three principal methods are:

- Starving – removing the fuel
- Smothering – removing the air
- Cooling – removing the heat.

Fire extinguishers are predominantly red with patches of colour to show the nature of the contents.

### Suspicious item or package procedure

In the event of seeing a suspect item on the premises, follow the procedure of the establishment.

- Do not panic
- Calmly warn others in the vicinity.
- Do not touch the item or allow others to do so.
- Immediately inform your employers.
- Move to a safe place.

### Accidents

Accidents may be caused by:

- Excessive haste
- Distraction
- Failure to apply safety rules.

Most accidents could be prevented. However, in the event of an accident, the person responsible for First Aid must be called immediately. If it is a serious accident, phone 999 and ask for the ambulance service.

- State the exact location of the incident.
- Give both the address and telephone number of the location.
- Describe the accident. If heart attack is suspected, say so immediately.
- Indicate age of casualties or casualty.

Any accident occurring to an employee on the premises must be recorded in the accident book, detailing nature of the accident, where and how it happened and names of witnesses, if any.

Accidents occurring to an employee on the premises must be recorded in the accident book, detailing nature of the accident, where and how it happened and names of witnesses, if any.

Accidents which are most frequent in catering establishments are cuts, burns and scalds and falls.

### **CUTS**

Small cuts should be washed and covered with a blue waterproof dressing; more serious cuts should be treated by a First Aid person who would decide on the need for further treatment.

## **BURNS AND SCALDS**

Place the injured part under slowly running cold water for 10 minutes or until the pain eases. If serious, cover the burn or scald with a cloth or dressing and send the person to hospital.

### Maintain a safe environment

The 1974 Health and Safety at Work Act was passed to protect employees and employees and to increase their awareness of the need for safety at work.

The employer's responsibilities are to:

- Provide and maintain premises and equipment that are safe and without risk to health;
- Provide supervision, information and training;
- Issue written statements on general policy and procedures regarding health and safety;
- Consult with employee's safety representative and to establish a safety committee.

Employees are responsible to take reasonable care to avoid injury to themselves or others, to co-operate with employers so as to comply with the law and not to misuse anything provided for health and safety.

## **HAZARDS**

It is desirable to develop a sense of awareness of potential hazards to prevent accidents, for example:

- Power plug 'on' when cleaning electrical equipment.
- Trailing electrical flexes;
- Faulty electrical sockets, overloaded sockets;
- Failure to replace lighting tubes or bulbs;
- Not using correct steps;
- Having wet hands when handling plus etc;
- Gas not alight;
- Main gas not igniting.

## **PREVENTION OF ACCIDENTS**

- Floors in good repair and free from obstacles.
- Spillage to be cleaned up once.
- Warning notices of slippery floors to be displayed
- Guards on machinery to be in place
- Extra care when guards of during cleaning

- One person only at a time of operate machinery
- Never put arm or hand into bowl of electric mixer or cutter until stopped
- Lift heavy items correctly to prevent back injury
- Use a trolley to move heavy items
- Never place knives in the sink.
- Use knives correctly; if they have to be carried, carry with points down, always lay knives down flat, not with the blade pointing up.
- Signs must indicate potentially hazardous machinery and chemicals.
- Protective clothing should be worn, sleeves down, apron on.
- Protective footwear should be in a good state of repair.

#### Secure environment

It is in the interest of everyone using premises that they are safe and secure. This applies to staff, customers and delivery personnel. Lockable lockers needed to be provided for staff. Security systems should be installed to prevent stealing. This is particularly important with expensive food and drink. Control of keys is an important aspect of security.

## **BASIC OF WESTERN CUISINE**

### **A. CONVENIENCE FOODS: TYPES & IMPORTANCE**

#### **Introduction**

Today the term “Convenience Food” is widely used in the catering industry. This is probably due to the rapid progress in food technology over the past decade.

Many convenience foods have been in use in the industry for many years, without being given this title. This was probably due to the fact, that they were used in small proportions during the preparation of meals.

Considerable amounts of convenience food are now used in all levels of catering, packaged and graded specially for the industry, This varies from individual types of food to complete meals.

The term “Convenience Food”, strictly translated, refers to any type of food, where some stage of preparation has been completed beforehand.

#### **Processes**

The following are some of the facts and methods used at present. Undoubtedly further progress in new developments will bring forth many more.

***Accelerated Freeze Drying (A.F.D):*** By using high-vacuum techniques it is possible to produce specific conditions of temperature and pressure which create ideal conditions for the dehydration of food without the’ collapse of cells. Foodstuffs so treated have greatly improved texture retention and rehydration potentialities. There are only a limited number of food in the market, as production costs are relatively high. (See Sublimation of dehydrated peas, cauliflower, spinach, etc.)

***Additives :*** Non-nutritive substances added to food (generally in small quantities) to improve its appearance, flavour, texture and storage properties. Most additives are legally controlled.

***Aseptic Canning:*** A newer development in canning designed for those products which are adversely affected by heat. within sealed containers. Products like fruit juices are sterilized, then placed into sterile cans under microbe-free conditions.

***“Boil-in-the-bag” Ready Food:*** A convenience entree or vegetable commodity. Portioned items are packaged in special plastic bags, sealed, then frozen. To reconstitute, the unopened bag is dropped into boiling water for a predetermined period.

***Dehydration:*** A method of preserving food by reducing the moisture content to such a level that microbes cannot grow and reproduce. The methods used depend on the food, but popular techniques include tunnel, roller and spray-drying. Nutritionally the products lose little value, but the texture, especially in fruit and vegetable, is suspect. Newer methods (dehydro-freezing, freezing

dehydration and quick dehydration) are overcoming this problem. A large variety of food are now available, e.g. pulses and leafy vegetables.

**Dehydro freezing:** A method of preservation where the moisture content of certain food is reduced by 70 per cent, then quick frozen. Because the cells do not collapse, the product has good texture retention. Product must be stored in a frozen state.

**Freeze Dehydration:** (See Accelerated Freeze Drying).

**Freezer Burn:** In any frozen storage room there is a steady removal of moisture from unprotected food which may result in unpleasant irreversible changes to the colour, texture, flavour and nutritive values.

**Freezing:** Food freeze over a wide range of temperatures, although their individual freezing points are unidentifiable. Because of the high water content in many food, they freeze at temperatures between 32°F and 25°F. *Quick-freezing* has been defined as the process whereby food passes through this zone of maximum ice crystal formation (25-32°F) in 30 minutes or less. This ensures that minimum damage is done to the cell structure. Those caterers wishing to freeze their own produce should realise that slow freezing in deep-freeze cabinets might result in the production of large ice crystals, with subsequent breakdown of tissues, especially in fruits and vegetables.

**“Free: flowing” Products:** Many quick-freezing methods (e.g. fluidised bed and flash freezing) produce commodities that have no surface frost, and therefore do not adhere in the pack. Advantageous where thawed appearance is important, e.g. fruit.

**Instant freezing Preservation:** Method of preservation using liquid nitrous oxide at 128°F below zero. By gently flushing food through nitrogen, freezing is almost instantaneous, producing very tiny ice crystals, so important for good texture retention.

**Irradiation:** A novel method of preservation, as it produces a raw sterile article with only a slight rise in temperature. The reaction depends on the absorption of energy by foodstuffs from a material or machine producing radiation. Process may be used for complete sterilization, pasteurization or as a pest and fungi controller, depending on the dose of radiation produced. Nutritionally there is little lost, and the dangers from radiation are negligible. However, this process is still at the experimental stage.

**Preservation:** Stored food tends to deteriorate under the influence of its own enzymes, chemical action and through the growth and reproduction of micro-organisms. The techniques developed for preservation aim to retard these reactions or destroy the cause of deterioration. Methods include: refrigeration, quick freezing, canning, sterilization, pasteurization, irradiation and the addition of various chemicals.

**Spray Drying:** A method of dehydrating food by spraying a slurry of the

commodity into a hot-air chamber, which dries the material immediately forming a powder. Good rehydration properties and nutrient retention in milk, dried soups and instant coffees.

**Sublimation:** Under certain conditions of temperature and pressure it is possible for water to change from ice to vapour without becoming a liquid at any time. This allows food to be dehydrated without the collapse of tissues; given products with excellent texture and rehydration characteristics. (see A.F.D.)

**Smoked Preservation:** This process is applied to a wide variety of raw and prepared foods. When used with fish, usually the fish is salt cured before smoking. Further examples relating to smoked sausages, meats, etc. need to be given.

### **Types of Products**

Apart from the different methods already mentioned which produce the greater part convenience food in dry, quick frozen and canned food, there are products which are very suitable for large-scale catering and produce quite an acceptable article. When used with imagination and sometimes methods from conventional cookery, a much wider variety of dishes can be produced. (Lecturer to quote examples and draw attention to display board on “Convenience Food”, e.g. instant soups, salami, sausages (tinned), canned rasgullas, condensed milk, haricot beans in tomato sauce, tinned cream, mayonnaise, meat balls in gravy, etc.)

## **B. STOCKS, SAUCES AND SOUPS: INTRODUCTION, CLASSIFICATION, PREPARATION AND THEIR USES IN COOKERY.**

### **STOCK**

Stock is a liquid containing some of the soluble nutrients and flavours of food which are extracted by prolonged and gentle simmering (with the exception of fish stock, which requires only 20 minutes); such liquid is the foundation of soups, sauces and gravies. Stocks are the foundation of many important kitchen preparations; therefore the greatest possible care should be taken in their production.

- Scum should be removed; otherwise it will boil into the stock and spoil the colour and flavour.
- Stock should always simmer gently, for if it is allowed to boil quickly, it will evaporate and go cloudy.
- Salt should not be added to stock.
- If stock is to be kept, strain, reboil, cool quickly and place in the refrigerator.
- Unsound meat or bones and decaying vegetables will give stock an unpleasant flavour and cause it to deteriorate quickly.
- Fat should be skimmed; otherwise the stock will taste greasy.

- It should not be allowed to go off the boil, otherwise, in hot weather, there is a danger of its going sour.
- When making chicken stock, if raw bones are not available, then a boiling fowl can be used.

## TYPES OF STOCK

White stock made from beef, mutton or chicken can be used in white soups, sauces or stews.

Brown stocks made from beef, mutton, veal, chicken or game can be used in brown soups, sauces or stews.

## Stock

The general proportion of ingredients and methods for all stocks except fish stock is to use 2 kg of bones for 4 and half litres of stock.

INGREDIENTS	QUANTITY FOR 4 ½ litres
Raw bones	1 kg
Water	5 litres
Onion, carrot, celery, leek	400 gms
Bouquet garni	200 gms
Pepper corns	12 Nos

## METHOD

1. Chop the bones into small pieces, remove any fat or marrow.
2. Place the bones in stock pot, cover with a cold water, bring to the boil.
3. Wash up the bones under cool water clean the pot.
4. Return the bones to the cleaned pot and add the water and reboil.
5. Steam as and when required, white round inside the pot and simmer gently.
6. After 2 hours add washed peeled whole vegetables bouquet garni and pepper corns.
7. Simmer 6 to 8 hours skim, strain and if to be kept, cool quickly and refrigerate.

## BROWN STOCKS

1. Chop the beef bones and brown well on all sides.
2. Drain off any fat and place the bones in stock pot.
3. Add the cold water brings to the boil and skim simmer for 2 hours.
4. Wash peel and roughly cut the vegetables, fry in a little fat until brown strain and add to beef pieces.
5. Add the bouquet garni and pepper corns.
6. Simmer for 6 to 8 hours skim and strain.

Note: for brown stocks if you squashed tomatoes and washed mushrooms trimmings can also be added to improve the flavour.

## FISH STOCK

INGREDIENTS	QUANTITY FOR 4 ½ litres
Margarine or butter	50 g
onions	200 g
White fish bones (sole or turbot fish)	2 kg
Lemon juice	½ tsp
Peppercorns	6
Bay leaf	1
Parsley stalks	50 g
Water	4 ½ lit

## METHOD

1. Melt the margarine or butter in a thick-bottomed pan.
2. Add the sliced onions, the well washed fish bones and remainder of the ingredients except the water.
3. Cover with grease proof paper and lid cook without colouring for 5 minutes.
4. Add the water, bring to the boil skim and simmer for 20 minutes, then strain. Longer cooking time will spoil the flavour.

WHITE VEGETABLE STOCK                      4 portions

INGREDIENTS	QUANTITY
Onion	100 g
Carrots	100 g
Celery	100 g
Leek	100 g
Water	1 ½ lit

## SAUCES

Sauces are liquids or semi-liquid mixtures. A keen sense of smell, delicate sense of taste, a light, strong hand for the blending-all contributes to the perfect sauce.

Long ago, Grimande de la Royere, philosopher and gastronome wrote: "The sauce is to culinary art, what grammar is to language."

A perfect sauce has a colourful appearance, is glowing in its rich smoothness, its texture is that of velvet, and it has a definite taste. It has a natural flavour and

complements the food it accompanies, rather than mask its taste.  
It provides moisture, colour and shine to food.

### **Importance of sauce in food preparation**

1. It helps in digestion.
2. Enhances flavour.
3. Add colours to food
4. It gives the name to the dish
5. It balances a bland food
6. It is served as accompaniment
7. Enhances the nutritive value

### **White sauce or béchamel**

This is a basic white sauce made from milk and a white roux

	4 portions
Margarine or butter	100 g
Flour	100 g
Milk	1 lit
Onion studded with cloves	1 No

### **METHOD**

1. Melt the margarine or butter in a thick-bottomed pan
2. Add the flour and mix in
3. Cook for a few minutes over a gentle heat without colouring
4. Remove from the heat to cool the roux
5. Gradually add the warmed milk and stir till smooth
6. Add the onion studded with a clove
7. Allow to simmer for 30 minutes
8. Remove the onion, pass the sauce through a conical strainer
9. Cover with a film of butter or margarine to prevent a skin forming

### **Veloute**

It is a basic blond sauce. It is prepared from blond (light brown) roux and stock. Veloute gets its name from the type of stock used, e.g. fish stock and blond roux-Fish veloute.

Chicken stock and blond roux-Chicken veloute:

Allemande, a derivative of veloute sauce, strictly speaking, is not a basic sauce, but is very often used in the preparation of other sauces.

### Recipe of Veloute

Ingredients	5 litres	1 litre
Butter	400 gms	90 gms
Flour	400 gms	90 gms
Stock (chicken or veal or fish)	5 litres	1 litre
Mushroom trimmings	125 gms	25 gms

### Method

(1) In a thick bottomed pan, prepare blond roux.

(2) Add cold stock into the roux, stir vigorously to avoid lumps. (3) Add mushroom trimmings.

(4) Simmer gently for one hour, stirring frequently with a wooden spoon.

(5) Pass through a fine strainer and cover with butter, to prevent the formation of skin.

*NB:* Fish veloute should be cooked for 20 minutes only and wine should be added at a later stage.

### Brown or Espagnole Sauce

Brown sauce is made from brown roux and brown stock, or glaze of brown stock. It is one of the most widely used basic or mother sauces. Demi-glaze is a derivative of brown stock and is widely used for the preparation of other brown sauce derivatives.

### Recipe of Brown Sauce or Espagnole

Ingredients	5 litres	1 litre
Fat	300 gms	60 gms
Flour	350 gms	70 gms
Tomato puree	150 gms	30 gms
Brown stock	8 litres	1 1/2 litres
Fat	75 gms	15 gms
Carrots	Roughly 350 gms	70 gms
Onions	chopped 350 gms	70 gms
Mirepoix	250 gms	50 gms
Parsley	10 gms	3 gms
Celery	10 gms	3 gms
bay leaf	10 gms	3 gms
Bacon trimmings	175 gms	35 gms
Fresh pork rind	250gms	5 gms

### Method

(1) Prepare brown roux in a heavy-bottomed pan and cool.

- (2) Add tomato puree, stirring to prevent lumps.
  - (3) Gradually mix in hot stock, stirring vigorously to blend well and cook on a gentle fire.
  - (4) Sauté the mirepoix in fat and add the sautéed vegetables to the sauce.
  - (5) Simmer gently for 4 to 6 hrs.
  - (6) Remove the scum when it comes to the top.
  - (7) Strain and cover with a thin layer of butter.
- NB:* Over browning should be avoided, as this tends to make the sauce taste bitter.

### **Recipe of Demi-glaze (Basic Derivative of Brown Sauce)**

<i>Ingredients</i>	<i>5 litres</i>	<i>1 litre</i>
Brown sauce	5 litres	1 litre
First class brown stock or estouffade	5 litres	1 litre

#### **Method**

- (1) Mix the above ingredients in a pan and place on the stove.
- (2) Reduce it fifty per cent and add a little sherry (optional) and mix.
- (3) Slightly butter the top to avoid the formation of a skin.

### **Hollandaise Sauce**

It is a warm yellow and rich sauce. It contains a high percentage of fat and egg yolks. It is an emulsion of butter, lemon juice and egg yolks. Hollandaise is served over grilled or baked fish, vegetables and egg. It is an accompaniment to cauliflower, asparagus, broccoli, salmon, trout.

### **Recipe of Hollandaise Sauce**

<i>Ingredients</i>	<i>500 gms</i>	<i>200 gms</i>
Butter	500 gms	200 gms
Egg yolks	5	2
Crushed peppercorns	8	5
Vinegar	30 ml	15 ml
Lemon juice	2	1/2

#### **Method**

- (1) Melt butter in a pan and keep aside.
- (2) Place crushed peppercorns and vinegar in a pan and reduce completely.
- (3) Add one tablespoon of water and cool.
- (4) Add egg yolks and whisk.

(5) Place the pan in a double boiler and whisk the egg yolks till a sabayon is formed (thickens). Then gradually add the melted butter until it is blended and forms a smooth sauce. Add lemon juice.

(6) Strain through a fine strainer, correct seasoning.

(7) Store at 30°-37°, if necessary.

*NB:* If Hollandaise turns or curdles or is too thick, beat in a little hot water, a little at a time. If too thin, add a teaspoon of lemon juice to a tablespoon of the sauce in a warm bowl and whisk until it is thick, then add the remaining mixture, a little at a time, whisking all the time. If this method does not rectify the same, then in a clean bowl add egg yolk, a few drops of hot vinegar and whisk while adding the curdled Hollandaise.

### **Tomato Sauce**

It is a red kitchen sauce and has some piquancy. It is served with ravioli or spaghetti, eggs, fish and meat, it adds colour to the dish.

#### **Recipe of Tomato Sauce**

<i>Ingredients</i>	<i>5 litres</i>	<i>1 litre</i>
Flour	400 gms	80 gms
Butter	350 gms	70 gms
Dices of bacon trimmings	200 gms	40 gms
Onions	400 gms	80 gms
Carrots Roughly chopped	400 gms	80 gms
Celery	200 gms	40 gms
Bay leaf	1	1/2
Garlic crushed	5 cloves	1 clove
Tomato puree	450 gms	100 gms
Tomatoes chopped	250 gms	50 gms
Brown stock	4 1/2 litres	450 ml
Sugar	50 gms	10 gms
Salt	15 gms	3 gms

#### **Method**

(1) Melt butter in a pan.

(2) Add roughly chopped vegetables, crushed garlic and saute, till slightly brown.

(3) Mix in flour and fry till it gets a sandy texture and gets a slightly brown colour.

(4) Add tomato puree and chopped tomatoes, and stir.

(5) Add cold stock, stirring to prevent lumps and bring to boil. (6) Add seasoning and cook for 1 1/2 hrs.

(7) Skim frequently.

(8) Strain and cover with butter.

*NB:* If the tomato sauce is being served separately in a sauce boat, it should have a fairly thick consistency. Many of the sauces finished with butter oil is known as *Monter au beurre*.

## **COLD SAUCES**

Mayonnaise is a basic cold sauce. It is used as a salad dressing and as an accompaniment. It has a wide variety of uses, particularly in hors d'oeuvres and salads. It is a rich sauce, as it is thickened with egg yolk and has a high percentage of fat. Sometimes it is thickened with gelatine and is used as a shiny flavourful coating, to decorate cold dishes or buffets.

### **Basic Recipe of Mayonnaise**

<i>Ingredients</i>	5 litres	1 litre
Salad or olive oil	5 litres	1 litre
Egg yolks	35	8
French mustard	1 tspn.	$\frac{1}{4}$ tspn.
Vinegar	100 ml	25 ml
Lemon	5	1
Seasoning	as required	to taste

### **Method**

- (1) Place of yolks of eggs, v whisk well.
- (2) Add oil slowly, a little at a time, whisking continuously, until all the oil is incorporated.
- (3) Finish the sauce by adding the juice of lemon and warm water, seasoning in a clean bowl and this is done to ensure coherence of the sauce and to prevent its turning or curdling. Mayonnaise is suitable for serving with cold fish, meat and hors d'oeuvres.

### **Special Points to be Noted**

- (1) Do not expose mayonnaise to too low a temperature after making it.
- (2) Initially, the oil should not be added rapidly.
- (3) Do not use congealed or too cold an oil.
- (4) The oil should be in proportion to the egg yolks.
- (5) Use hot water when necessary as it acts as a stabiliser.
- (6) Cover the sauce with a lid, and store in a cool place.

### **Rectification of a Turned or Curdled Mayonnaise**

- (1) Take a clean bowl, add boiling water or vinegar and gradually whisk in the

curdled sauce.

(2) Place an egg yolk and gradually whisk in the curdled sauce.

(3) If a small quantity of mayonnaise is to be rectified, then put mustard powder in a clean bowl and add in drop by drop, whisking the curdled mayonnaise.

### **Sauces, a Class of their Own**

These sauces have an individuality of their own in colour and flavour. They blend with the food items they accompany or give a contrasting sharpness. The sauces are bread, apple, mint, cranberry and horse-radish sauces.

### **Butter Sauces**

They are served melted, in a liquid form or as hard butter sauces. Butter is mixed with different ingredients, set and cut in fancy shapes and served with food items. They are placed on the hot food items, just before serving and allowed to melt. It can be served separately, along with the dish in a sauce-boat and crushed ice. The other name for butter sauces is compound butter, e.g. anchovy, colbert, brown butter, etc.

Sauces play a very important part in Western cuisine. Various dishes are named after the sauce that is used. Sometimes very slight variations change the name of sauce and some derivative sauces are used to make other sauces, e.g. demi-glaze, Allemande Normande, Bearnaise, tartare, etc.

There are numerous cold and hot sauces, but only certain sauces are commonly used.

## Derivatives of Basic Sauces

### BROWN OR ESPAGNOLE SAUCE

<i>Name of the sauce</i>	<i>Ingredients</i>	<i>Foods with which cooked or served</i>
Demi-Glaze	50% of brown stock + 50% (Fr. Demi-glaze) of brown sauce reduced to half.	Used for the preparation of the other sauces.
Piquant	Chopped shallots + vinegar, + white wine + demi-glaze and strain, garnish with gherkins, chervil, chopped tarragon and pepper. Chopped onions sauteed + white wine + vinegar + pepper reduced + demi-glaze + mustard to finish.	Grilled pork chops, rice, pastas. Grilled pork, chops, fish.
Bercy	Demi-glaze + meat glaze + minced shallots + white wine + sliced bone marrow.	Grilled meat, fish.
Madeira (Madere Fr.)	Demi-glaze + Madeira wine.	Small items of beef, veal, poultry, game, ham. Eggs.
Chasseur	Minced mushrooms, sauteed chopped shallots +, white wine reduced + demi-glaze + butter + chopped parsley.	Poultry, eggs, grilled or sauteed meat.
Devil (Diable)	Chopped shallots + white wine + vinegar + Peppercorns, salt, reduced + demi-glaze strained + chopped parsley (prominent flavour of pepper).	Vegetables, tongue, boiled veal, beef, grilled fish, meat and poultry.
Charcutiere	Robert sauce, garnished with juliennes of gherkins.	Grilled pork chops.
Bordelaise	Chopped shallots + Mignonette pepper + thyme + bay leaves + red wine.	Steaks, grilled and sauteed cuts of beef, chicken.
Chaufroid	Demi-glaze + aspic jelly + essence of truffles + Madeira.	Poultry, meat, cold dishes.

Glaze de Viande is a meat glaze. The stock is concentrated and used as a glaze for cold dishes and roasts.

## BECHAMEL SAUCE

<i>Name of the sauce</i>	<i>Ingredients</i>	<i>Foods with which cooked or served</i>
Scotch egg sauce (Escossaise)	Thin Bechamel sauce, mixed with hard-bailed yolk, sieved, garnished with white of eggs cut into strips.	Poached fish or boiled fish, eggs, lamb.
Mornay	Bechamel + Parmesan and Gruyere + cream + egg yolks.	Fish, eggs and vegetables.
Cream	Bechamel + fresh cream + butter.	Poached fish, boiled vegetables.
Soubise	Bechamel + sauteed, minced onions + pepper + nutmeg and strained.	Eggs, boiled fish.
Cardinal	Bechamel + fish stock + truffle essence + lobster butter + cayenne pepper.	Fish
Parsley	Bechamei + fresh cream+ butter + chopped and blanched parsley.	Vegetables, calfs' head and boiled fish.
Mustard	Bechamel + fresh cream + butter + mustard (alsoprepared with Hollandaise).	Grilled herrings.
Anchovy	Bechamel + anchovy essence+ anchovy fillets + cream + butter + lemon juice (also prepared with fish veloute).	Poached, fried or boiled fish.
Onion sauce	Bechamel + minced onions cooked in milk + seasoning + nutmeg.	Roast mutton and eggs.

## CHICKEN VELOUTE

<i>Name of the sauce</i>	<i>Ingredients</i>	<i>Foods with which cooked or served</i>
Allemande	Chicken veloute + egg yolks+ mushroom trimmings + cream + juice of lemon.	Poached chicken
Supreme	Chicken veloute + white wine + parsley + shallots + mushroom trimmings and strain. Add fresh cream + yolk of eggs + juice of lemon.	Fish, chicken.
Mushroom	Sauce supreme + sliced button mushrooms.	Bitoks, escalopes of veal, supremes of chicken, poached chicken and sweet breads.
Hongroise	Chicken veloute + paprika + white wine + cream.	Poached chicken escalopes of veal.
Ivory	Sauce supreme + meat glaze.	Poached chicken, boiled chicken. Used for preparing chaufroid sauce.
Aurore	Chicken veloute + tomato sauce + butter.	Poached chicken, boiled chicken, poached eggs.
White chaufroid sauce	Chicken veloute + chicken glaze + cream.	Cold dishes, boiled chicken, boiled leg of mutton.
Chivry	Chicken veloute + tarragon + parsley + chives + strain + green butter.	Boiled or poached poultry.
Curry sauce	Dices of onions + apples sauteed in butter + curry powder + coconut milk + add veloute + strain.	Eggs, fish, chicken.

## **FISH/MEAT VELOUTE**

<i>Name of the sauce</i>	<i>Ingredients</i>	<i>Foods with which cooked or served</i>
Shrimp	Fish veloute + fish fumet + cream+ shelled shrimp tails + shrimp butter.	Fish, shrimps.
Normande	Fish veloute + mushrooms + oyster liquor + fish fumet + finish with egg yolks, cream + shelled shrimp tails + shrimp butter.	Fish, shellfish.
Joinville	Normande sauce + crayfish + cooking liquor of shrimps, juliennes of truffles.	Shellfish, fish.
Vin blanc	Thin fish veloute + yolk of eggs and finished with butter (pour the butter in mixture in a double boiler).	Fish.
Nantua	Fish veloute + fried mirepoix fish in crayfish butter.	Fish, shellfish.
Diplomate	Normande sauce + lobster butter, garnished with dices of lobster and truffles.	Shellfish, fish.
Caper	Mutton veloute + capers.	Boiled leg of mutton.
Bercy	Allemande sauce + chopped shallots + white wine + meat glaze + butter, garnished with dices of marrow and chopped parsley.	Grilled meats.
Ravigote	Veal veloute + white wine + vinegar + shallot butter, garnished with chervil chives and tarragon.	Boiled meat, fish and shellfish.
Poulette	Allemande sauce + mushroom essence + lemon juice + chopped parsley.	Boiled meat, eggs.

## **TOMATO SAUCE**

<i>Name of the sauce</i>	<i>Ingredients</i>	<i>Foods with which cooked or served</i>
Bretonne	Tomato sauce + sauteed chopped onions + white wine reduced, strained + butter + chopped parsley.	Haricots.
Tomated Chaudfroid Provencale	Tomato sauce + aspic jelly. Thin tomato sauce + sauteed sliced mushrooms + chopped parsley + garlic + tomato concasse + sugar.	Cold chicken, eggs. Eggs, fish and shellfish cold sauce is served with cold meats hors d'oeuvres.
Portugaise	Tomato sauce + white wine + tomato concasse + garlic.	Eggs, fish, shellfish.
Italienne	Tomato sauce + demi-glaze + chopped shallots + mushrooms + lean ham + fine herbs.	Small entrees, brains, lamb, cutlets and liver.
Barbecue	Tomato sauce + ketchup + vinegar + sugar.	Barbecued meats. It is an American sauce. There are different recipes.

## **HOLLANDAISE**

<i>Name of the sauce</i>	<i>Ingredients</i>	<i>Foods with which cooked or served</i>
Mousseline	Hollandaise sauce mixed with stiffly whipped cream.	Fish, eggs, vegetables and meat.
Maltaise	Hollandaise sauce + zest + juice of blood oranges.	Served with hot asparagus.
Noisette	Hollandaise + nut brown cooked butter.	Poached salmon and trout.
Bearnaise	Hollandaise sauce + chopped tarragon + chervil.	Grilled fish, meats, i.e. steaks.
Choron	Bearnaise sauce + tomato puree.	Grilled or sauteed meat.
Foyot	Bearnaise sauce + meat glaze.	Grilled and sauteed meat.
Mustard	Hollandaise sauce + mustard.	Meat, steaks.

## MAYONNAISE

<i>Salad dressing</i>	<i>Ingredients</i>	<i>Served with</i>
Chantilly	Mayonnaise + lemon juice instead of vinegar, mixed with whipped cream.	Vegetables, cold dishes.
Gribiche	Mayonnaise + chopped hard boiled eggs + mustard, garnished with chopped gherkins, capers, chervil, tarragon.	Calf's head and cold fish.
Cambridge	Pounded hard-boiled eggs + anchovy fillets + capers + chervil+ tarragon + chives + vinegar + Cayenne pepper, add oil gradually as for mayonnaise, strain + chopped parsley.	Prepared, like mayonnaise, cold meat.
Gloucester	Mayonnaise + sour cream + lemon juice + chopped fennel + Worcestershire sauce.	Cold meat.
Remoulade	Mayonnaise + mustard garnished with capers, parsley, gherkins, chervil, tarragon and finished with anchovy essence.	Fried fish, spiny, lobster, cold meat and poultry.
Andalouse	Mayonnaise + tomato puree garnished with sweet capsicums.	Served with cold meat.
Tartare	Mayonnaise + hard yolk of eggs, garnished with finely chopped onion and chives.	Fried fish and shellfish.
Green sauce	Mayonnaise sauce mixed with puree of blanched herbs, spinach, water parsley, chervil, tarragon. Pass through very fine sieve.	Cold trout, salmon trout and shellfish.
Vincent	Half tartare sauce + half green sauce mixed together.	Cold fish, shellfish.
Thousand Island Dressing	Mayonnaise + hard-boiled eggs + tomato ketchup + chopped gherkins + onions + pimentos, olives + paprika powder.	Cold meat.
Cocktail	Mayonnaise + tomato ketchup + Worcester sauce + tabasco + cream+ lemon juice.	Shellfish.

## **B. SOUPS**

It is probable that soup in its earliest form was a complete meal because it was found hearty, nourishing, economical and wholesome. Soup is a liquid food consisting of meat, seafood, vegetables, cereals or poultry. They play an important role on the menu and are regarded as appetisers as they stimulate the appetite for the heavier food to follow. On the menu, they are served as the first course, if hors d'oeuvres are not being served. If hors d'oeuvre is served then soup is served as the second course.

### **Special Points for the Service and Preparation of the Soups**

1. First-class, clean, strong and flavourful stock should be used, as it would help in producing good quality soup.
2. If there is a heavy entree, the soup should be thin or light.
3. If a heavy soup is served, the portion should be small.
4. The soups should not in any way be filling or consist of food particles that require much chewing.
5. Garnish should be small and dainty, so that they can be picked up easily by a soup-spoon.
6. Soup should be always moderately seasoned.
7. Serve hot soups piping hot and cold soups very cold.
8. A little sugar should be added to tone the acidity of the soup, before mixing cream as it prevents curdling.
9. Consomme should be amber in colour. (Onions halved and browned on hot plate are added to the soup for colour.)
10. Accompaniments of the soups should be of a crisp character, e.g. Melba toast, various crackers, bread-sticks, cheese croutons, bread rolls, etc.

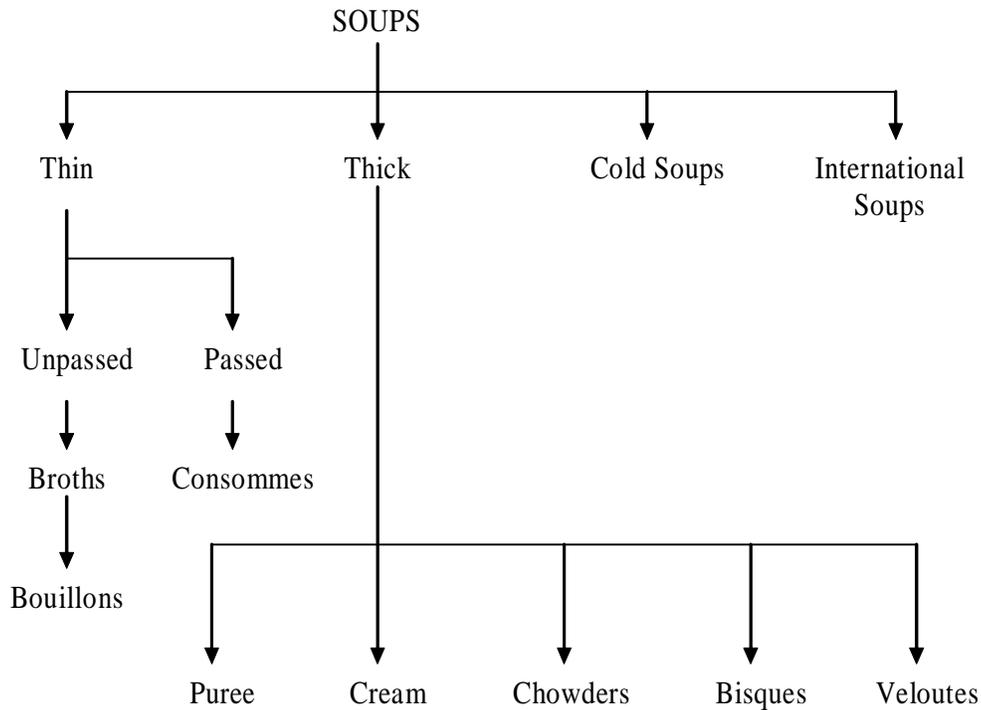
Entree portions of one litre of soup yield five portions.

### **COMMONLY USED GARNISHES FOR SOUPS**

Croutons	Dices or other shapes made from bread, toast, pastry.
Profiteroles	Prepared from chou paste. They are miniature cream puffs which may be filled or used plain.
Cereals	Rice or barley.
Cheese	Cheese balls, or grated Parmesan served with croutons on one side.
Cream	Unsweetened whipped cream or sour cream.
Meats	Usually small dices or juliennes.

Poultry	Same as meat.
Seafood	Diced or flaked. Large enough pieces distinguishable.
Pastas	Noodles, spaghetti, other pasta products such as star letters, cornets, etc.
Vegetables	Cut in various sizes, shapes-juliennes, round slices, dices of sprig, printaniere vegetables.

There is no set standard for the classification of soups, as there are virtually thousands of soup preparations. In order to learn about them easily, soups may be classified in the following manner:



### THIN SOUPS

Most of the thin soups are clear, flavoured nutritious liquids and are prepared without the use of starch. The soup is a thin liquid with garnish or with small, daintily cut food items floating in it. Some of the consommés are slightly thickened with tapioca.

Consomme-Comes from the word 'consummate', which means to bring to completion or perfect. It is a strongly-flavoured, clarified soup. Its flavour is heightened by the adding of meat, vegetables, poultry and seasonings. The foundation liquid used is rich, of cold beef, mutton or chicken stock, to which raw lean minced meat, finely diced or chapped carrots, turnips, onions, celery seasonings and egg whites are added and mixed well. This mixture is placed on heat and allowed to come to boil and then simmered. The protein in the eggs and meat coagulates and binds in most of the clouding materials.

This coagulated mass, rises slowly to the top and forms a raft. When the consommé is clear and cooked, the soup is strained, through several thicknesses of cloth. Consommés are varied and the soup gets its name from the additional ingredients that are added to the consommé. Sometimes it is named after historical figures, people or events in the form of accompanying garnish.

Consumers should be sparkling, clear and well flavoured and they are varied. They can be served hot or cold.

#### Recipe of Consomme (1 litre)

Minced meat	225 gms
Onions	70 gms
Carrots	50 gms
Turnips	30 gms
Stock	1½ litres
Egg whites	2
Celery	40 gms
Thyme	½ tspn.
Bay leaf	½
Peppercorns	3

#### Method

Mix minced meat and chopped onions, carrots, turnips, celery and mix well with egg whites. Add cold stock, thyme, bay leaf and peppercorns. Place on fire, go on stirring so that the ingredients do not stick to the bottom of the pan and articles are suspended. When the mixture starts boiling, lower the temperature and let it simmer until the coagulated mass (raft) comes to the top. Simmer for one and a half hours. When consommé is clear and tasty, strain through a double muslin cloth. Add seasoning.

NB: Beef stock is good for consommé as it is full of flavour and has body.

#### Consommés

<i>Alexandra</i>	Chicken consommé thickened with tapioca garnished with juliennes of chicken, quenelles and shredded lettuce.
<i>Andalouse</i>	Consommé blended with tomato puree garnished with dices of Royale and dices of tomato, juliennes of ham, boiled rice + vermicelli and threaded eggs.

## **THICK SOUPS**

They are passed thick soups and in this category are purees, cream, veloutes, bisques and chowders.

### **Purees**

Starchy vegetables such as leguminous plants, potatoes or cereals when pureed in soups, usually act as self-thickeners and need no further thickening ingredients. Many vegetables like carrots, pumpkins, turnips, peas, celery, leafy greens need an additional thickening agent as their own purees do not cohere and so the above thickening agents are added. The cooked soup is strained through a sieve and the consistency of the soup is thick. Water or stock in which the pureed product was cooked is usually used as the liquid in the soup. The soup is served with fried golden brown croutons (fried small dices of bread). Common puree soups are-Puree parmentiere, pea soup, lentils puree, tomato soup.

### **Puree Soups**

<i>Compiègne</i>	Puree of white rajma (haricot beans) garnished with sorrel and chemil shreds and butter added at the last minute.
<i>Conde</i>	Puree of red kidney beans with red wine and butter added before serving.
<i>Conti</i>	Puree of lentils (malka masoor) garnished with bacon chervil and butter added at the last minute.
<i>Grecque</i>	Puree of green peas and garnished with shreds of carrots, leeks, cabbage and butter added before serving.
<i>Lambaile</i>	Half of fresh peas puree and half of tapioca puree, and butter added just before serving.

## **CREAM SOUPS**

They are composed of a puree of vegetables, fish, poultry, or meat, thickened with bechamel sauce or given a cream finish. Milk is used to dilute and achieve correct consistency. Various cream soups are: cream of Germaine (peas), cream of tomato, cream of argenteuil (asparagus), cream of mushrooms soup, cream of chicken soup, cream of lentil soup.

<i>Ambassadeur</i>	Prepare puree of fresh peas and garnish with rice, shredded sorrel, chervil, lettuce, add butter and cream just before serving.
<i>Bretonne</i>	Puree of white rajma (haricot beans) with onions and spring onions. Add tomato puree, add butter and cream before serving.
<i>Chantilly</i>	Puree of lentils, add cream, garnish with quenelles of chicken.
<i>Crecy</i>	Puree of carrots and rice and add butter and cream just before serving.
<i>Washington</i>	Puree of maize, add cream and just before serving, add whisky and port and garnish with maize grains.

## VELOUTES

Veloute sauces have already been discussed. Veloutes as soups are similar to other veloutes, but differ from purees, as they require a thickening element and a roux. Veloute is made by preparing roux and adding stock and the pureed vegetable or meat and hot milk is blended in, to produce a smooth soup. Generally proportions for a veloute soup are half basic veloute,  $\frac{1}{4}$  puree (main ingredients characterising the soup),  $\frac{1}{4}$  stock or white consommé used to dilute the mixture of puree and veloute to the correct consistency. Finishing of veloutes is done by a liaison, i.e. cream and egg yolks, as it enhances the taste and texture. Examples of veloutes are: chicken veloute, celery veloute, almond veloute, etc.

<i>Veloute</i>	Chicken veloute with barley flour, garnish <i>Marie Louisa</i> with dices of spring vegetables, cooked macaroni and cream and egg liaison.
<i>Veloute Celeris</i>	Veloute supreme and celery puree and add cream.
<i>Veloute Princesse</i>	Equal quantities of chicken veloute and asparagus puree, garnish with dices of chicken and asparagus heads and pluches of chervil and cream.
<i>Veloute Montoruelt</i>	Chicken veloute, garnished printaniere of vegetables, shreds of sorrel and chervil.
<i>Veloute Indienne</i>	Veloute supreme with coconut milk, flavoured with curry powder, garnished with rice.

**Bisques**-These are shellfish puree soups, thickened with rice or cream. It is a slightly thick rice cream type of soup with small particles of cooked shellfish floating in it, to add flavour and colour. A small amount of wine is added to enhance the flavour. Examples of bisques are: Crayfish bisque, Lobster bisque.

**Chowders**-Originated from America. They are thick heavy soups, owing their consistency to potatoes. Chowders consist of potatoes, onions, pieces of bacon, various seasonings, and seafood. They can be milk or tomato based. Crackers are generally added just before serving. Examples are: Clam chowder, seafood chowder, oyster chowder, etc.

## COLD SOUPS

Chilled soups include those that are jellied by the natural gelatin in the meat stock or by addition of gelatin powder or those that are thickened with a starch or puree. Cold consommé Madrilène is popular. Vichyssoise is a rich cream of potato soup, which is served cold, and garnished with chopped chives. Borscht can be served cold or hot. Scandinavians love cold fruit soup which contains a blend of assorted fruit and juices, usually garnished with mint leaves.

Andalouse gazpacho is a refreshing tomato and cucumber soup with a

garnish of thin strips of pimentos, cumin seeds for flavour accompanied with croutons. Cold soups have become popular and a summer menu is incomplete without it.

### INTERNATIONAL SOUPS

There are many varieties, cold or hot, thin or thick soups. They have been placed in a special category, as they have different origins. There are soups that originated in a certain locality and are associated with that particular place. In some cases, these soups have a great tradition, as the New England clam chowder, helped the early colonists survive many winters. Crecy soup originated when nothing was available at the site of the Battle of Crecy. The carrots that were grown in the land were taken and cooked. Most of the national soups are unpassed soups.

### SOME OF THE INTERNATIONAL SOUPS

Name of the Soup	Origin
Minestrone	Italy
Green turtle soup	England
French onion soup	France
Petite marmite	France
Scotch broth and Cock-a-leekie	Scotland
Mulhgatawny	India
Bortsch Polonais	Poland
Olla-podrida and Gazpacho	Spain
Manhattan Clam Chowder	America
Hotch Pot Flamanda	Belgium
Camaro	Brazil
Laberkroedel	Germany
Paprika	Hungary
Bouillabaise	French (salad-water and shellfish stew)

### CONVENIENCE SOUPS

These are marketed in dried, liquid or frozen form. They are available in many varieties. The soups are sold in cans or bottles, some in ready to use forms, others in concentrated forms. These liquid soups can be classed as deluxe, e.g. turtle, kangaroo's tail, oxtail, etc. They are a consistent product.

## C. CULINARY TERMS

Abats	Meat items such as offals, heads, hearts, liver, kidneys, etc.
Aiguillettes	Thin strips of the fish, breast of poultry, cut length-wise.
Aging	To improve the tenderness of meat which is held at a cold temperature.
a la	According to the style or a standard in vogue, such as a la francaise or according to the French way.
a la Bourgeoise	Family style-plain.
a la Broche	Cooked and roasted on a skewer. Meat or seafood served on a skewer.
a la carte	Foods prepared to order; each dish priced separately.
anglaise	To cook a l'anglaise means to cook plainly in water. It also means the preparation of a dish dipped in egg and breadcrumbs, and fried.
appareil	Mixture of different elements for the preparation of a dish.
Appetiser	It is the first course, and it stimulates the appetite. Fruit juices, sherry, cocktails or tidbits could be served.
Aromates	Vegetables like carrots, turnips, onions, leeks, herbs and spices that impart aroma to the dish they are put in.
Aspic	Clear meat or poultry jelly. It is a gelatine in a thin syrupy stage used to decorate dishes in the larder.
Arroser	To baste as in roasting.
Assorti	An assortment.
Au bleu	In French, it means underdone, i.e. the meat is not cooked properly, Another meaning is preparing and cooking of a live trout in cooking liquor.
Au four	Baked in the oven.
Au gratin	Food covered with a sauce sprinkled with cheese breadcrumbs, doted with butter and baked or gratinated in a salamander.
Au Jus	Served with natural juices or gravy.
Au natural	Served in a simple unadorned style.
Baba	A yeast raised cake. A famous variety is flavoured and soaked in rum before serving. Fruit, whipped cream is added. Baba au rum is cooked in rum.
Bain-marie	A hot water bath in which utensils containing various culinary preparations are immersed to warm or for the purpose of poaching and reheating.

Baking	Usually the food is put in the oven and cooked by dry heat.
Barbecue	A party in which usually meat (sometimes a whole carcass of animal fixed in a rod) is basted and roasted in front of the people. It is usually held in the open. Meat roasted in open fire is known as barbecued meat.
Barding	Pieces of port fat placed over the lean meat, fish or the breast of a bird to prevent drying.
Barquette	A boat shaped pastry tartlet with a filling.
Baste	To moisten food product with drippings or fat while cooking. The other term for it is spooning of fat.
Baron	A double sirloin and rump of beef: also the saddle and two legs of lamb.
Bat	To flatten slices of raw meat with a cutlet bat, dipping it in water to prevent meat from sticking to the bat.
Batter	Mixture of flour and liquid of a consistency that can be stirred. Batter could be plain or with eggs. For the beignets and fritters, food items are dipped in the batter and fried.
Beating	Regular lifting motion to bring mixture to smooth texture.
Bechamel	A basic sauce, white in colour, prepared with flour, butter and milk.
Beurre Fondue	Melted butter.
Beurre noisette	Butter heated to a nut brown colour.
Beurre noir	Butter heated to a very dark brown colour.
Beurre manie	Equal quantities of flour and butter put in sauces, etc. for thickening.
Beignets	Fritters, savoury or sweet, e.g. banana beignet. Bind To cohere, unite or hold together. To the croquette mixture, egg is added to bind.
Bisque	A thick sauce or soup from shellfish or game. Blanc* White.
Blanching	To submerge in boiling water for a short time. It is done in many ways, tomatoes are dipped in boiling water to blanch, i.e. to remove the skin. Cauliflower is dipped in boiling water to white the colour. French fried potatoes are put in hot fat to let a skin form and to partially cook them.
Blanquette	A white stew of veal which has been stiffened in butter and then cooked in white sauce.
Blend	Thorough mixing of two or more ingredients.
Bombe	A frozen dessert. A combination of two or more frozen mixtures (ice-cream, sherbets or mousse) packed in a round or melon shaped mould and frozen.
Bouillon	Soup made of stock which is not as strong as consomme

	but stronger than broth.
Bouchee	Very small meat patty or pastry shell filled with meat, poultry or lobster.
Bouillabaise	The French Provencale “stew” made of numerous types of fish; combined with savoury spices and oil, served with toasted French garlic bread.
Bortsch	An unpassed soup with an accent on beetroot and is duck flavoured. Native of Poland or Russia. The accompaniments are sour cream, duck bouchee and beetroot juice.
Bouquet garni	A bouquet of fresh herbs such as parsley, bay leaf, thyme tied together in a cheese cloth bag, to flavour soups, stews and removed before dish is served.
Brioche	A feathery light yeast cake. A favourite breakfast bun in France.
Broil	The ancient term for grilling.
Brunnoise	Cut into fine dices.
Buffet	Display of ready to eat foods. Often self-service from a table of assorted foods.
Cafe	Coffee.
Candyng	Cooking fruit in heavy syrup until transparent. Then drained and dried.
Canape	Small pieces of fried or toasted bread topped with a wide variety of colourful appetisers. Eaten with fingers. Small fancy open faced item.
Carte du jour	Menu for the day.
Canneloni	Italian farinaceous dish. It is a pasta preparation stuffed with savoury minced meat and rolled into cigar shapes.
Capon	A young male bird which has been castrated to improve flavour and to fatten. Noted for its tenderness.
Caramelize	To heat sugar until it turns dark brown. Used for coating moulds and flavouring dishes.
Cassoulet	A hot hors d’oeuvre shaped like a small drum:
Casserole	An earthenware or pyrex fireproof dish with a lid.
Caviar	Salted roe or eggs of fish, usually sturgeon, served as a sandwich spread or in plates as appetisers.
Cepes	Species of mushrooms.
Champignons	Mushrooms.
Chantilly cream	Whipped cream.
Chapelure	Crumbs made from dried bread.

Chateaubriand	A steak cut from the head of the beef fillet usually broiled. The steak has been named after the Vicount of Chateaubriand.
Clarification	To make clear, e.g. fat, stock or jelly.
Claudfroid	Veloute or demi-glaze with aspic or gelatine used for masking cold dishes.
Chiffonade	Shreds of lettuce or sorrel.
Chinoise	A conical shaped wire mesh strainer.
Cisel	To cut a vegetable after the manner of a chaffcutting machine.
Coagulation	Proteins solidifying after the application of heat, e.g. fried egg.
Coat	Cover with sauce.
Cloche sous	Under bell, usually glass.
Cioute	Studded, e.g. clove, bay leaf in an onion.
Cocotte	Porcelain or earthenware fireproof dish.
Coddling	Cooking below boiling point, e.g. coddled eggs.
Compote	A dish of stewed fruit retaining their natural shape.
Cook out	Process of cooking the flour in the roux, sauce or soup.
Concassee	Coarsely chopped, e.g. blanched tomatoes or parsley, etc.
Condiments	Seasonings.
Correcting	Adjusting the seasoning, consistency and colour of a dish.
Consomme	Clear soup made from minced meat, aromatic vegetables, herbs and stock, etc. It is clarified with egg white.
Cordon	To have a thin line of sauce.
Coulis	An essence made from shellfish, also used as a sauce.
Court bouillon	A lightly flavoured cooking liquor in which fish is cooked.
Contre fillet	Sirloin of beef, deboned.
Cote	A rib or chop.
Cordon	A thread or thin line of sauce.
Crackling	The rind of roast pork. Crepe Pancake.
Crouste	Rounds made out of bread or brioche dough used as hors d'oeuvres or as a garnish.
Croquettes	Thick white sauce or mashed potato base, plus minced meat, fish or vegetables shaped as pipes dipped in beaten eggs, breadcrumbed and deep fired.
Croutons	Small dices of fancy shapes or fried or toasted bread used as a garnish for soups or as underliner for all kinds of canapes.
Cuisine	Art of cooking, preparation in the kitchen. Cult Cooked.
Dariole	A deep round sloping sided mould like a flowerpot.
Darne	A section of fish cut across the bone of a large whole

round fish.	
Deglaze	To swill a pan in which food has been cooked with wine/stock to use the sediment and essences. Demi Half.
Demiglaze	Brown sauce made by reducing equal quantities of brown stock and brown sauce (espagnole). Diable Devilled.
Drain	Place food cooked in a strainer or colander.
Duram wheat	Hard wheat with high gluten content used for making pasta and semolina.
Dredging	Coating with dry ingredients, e.g. sugar or flour.
Depouiller	To skim.
Docking	Making holes in pastry goods to allow steam to pass.
Duxelle	Minced vegetable stuffing or forcemeat consisting of mushrooms, parsley and shallots.
Drippings	The fat and juice which drops from roasting meats Animal fat is also called dripping.
Dust	Sprinkling fine sugar or flour.
Egg wash	Brush food item with egg yolk.
Emince	Cut fine or shredded fine.
Emulsion	A mixture-oil and yolk incorporated, does not separate on standing, e.g. mayonnaise, hollandaise.
Encasserole	Food served in the same dish in which it was cooked.
Entree	A main dish of meat or poultry for an informal meal.
Entremet	Refers to the sweet course, cold or hot.
Epigramme	Boned breast of lamb.
Escalopes	To cut thin slices sideways.
Estouffade	Brown stock.
Espagnole	Basic brown sauce.
Etamine	Tammy or double thickness of cheese cloth for straining soups and sauces.
Fleuron	Small crescent shape, puff pastry, used as garnish for poached fish, meat, etc.
Farce	Stuffing, and farci means stuffed.
Farinaceous	It is a word derived from the Latin word "Farina" meaning flour, a wide-range of dishes mostly made from flour, e.g. spaghetti, macaroni, etc.
Fillets	Boneless flesh under the loin of beef, veal or pork.
Flake	To break into natural segments (fish).
Florentine	With spinach.
Flute	A long crisp roll of bread, thin slices cut on a slant and used for garnishing soups.

Foie gras	Flatted goose liver.
Fool	A cold sweet dish made with sieved fruit and whipped to a light mixture served with cream.
Force meat	Mixture of minced or chopped meat and seasonings, used for stuffing.
Frappe	Partially frozen drinks or desserts.
Fricadelles	Meat balls or round cakes made with either raw or cooked meat.
Fricandeau	Is a slice of veal taken from the topside of veal and cut with the grain 1 1/2" thickness.
Fricassee	Small pieces of chicken, veal or rabbit cooked in white sauce, with the addition of mushrooms, onions, etc. The other name for it is white stew.
Fritters	Small pieces of vegetables, fruit, cheese, etc. dipped in batter and deep fried.
Friture	A pan that contains deep fat.
Frizzling	Cooking in small amount of fat until crisp.
Fumet	A kind of essence extracted from the bones and the skin of fish.
Galantine	Deboned chicken or fish or meat is minced and stuffed. The forcemeat is seasoned mixed with eggs and cream (optional). Placed in a mould with jelly and served cold. Served at cold buffets or as cold meats for meals.
Garnish	To embellish, to decorate, "Farniture" in French means to garnish.
Gelatin	A soluble protein got from cow's hoofs. Sold in powder form or in sheets. Used for jellies and for preparing aspics.
Gherkins	Small cucumbers (a few days old) usually pickled.
Giblets	Liver, heart and trimmings from poultry.
Glaze	A semi-transparent or glossy coating. Also to colour, gives elasticity to a dough.
Gluten	Vegetable protein found in cereal especially flour.
Gnocchi	Italian-Light dumplings usually made from farina (cream of wheat).
Goulash	A Hungarian beef stew with onions, tomatoes and paprika.
Gourmet	Connoisseur of food and drinks known as in epicure.
Grenadine	Slices of veal, a little thicker than escalopes.
Gratinate	To colour under a salamander or in the oven.
Griddle	To cook on a solid surface or plate.
Hash	It is usually a rechauffe dish. A dish of meat diced or minced and seasoned.
Hors d'oeuvres	Small relishes or appetisers. Served as first course of a meal.
Indiehne	An oriental dish. Indian style dish.
Infusion	Liquid obtained from steeping a food, e.g. coffee and tea.

Incise	To make small cuts across the back of fish prior to cooking.
Isinglass	Fish gelatine-(used for clarification).
Jariniere	Vegetables cut into batons.
Juliennes	Refers to vegetables and meat cut into fine strips (match size) for soups and salads.
Junket	It is a light, easily digestible dish, good for invalids and children. It is a set milk product because of the addition of rennet. It can be flavoured.
Kedgerree	It is an Anglo-Indian dish of fish, rice, eggs, and curried dish.
Kosher	Meat sold within 48 hrs. after holding, in accordance with prescribed Hebrew religious laws or style of Jewish cooking with restrictions.~ dietary
Kromeskys	Similar to croquettes but it is dipped in a yeast batter and deep fried.
Langouste	Crayfish.
Langoustine	Spiny lobster.
Liasion	Cream and eggs, blood, flour are used as thickening agents for soups and sauces.
Larding	Strips of pork fat inserted into meat with the aid of a larding needle. This keeps the meat moist.
Macedoine	Mixture of fruit and vegetables cut in even pieces; fruit salad.
Maitre d'hotel butter	Sauce of softened butter, parsley, lemon juice chilled and served with fish, steak, etc.
Marashchino	Italian cherry cordial. Also a type of cherries.
Marinade	A spiced mixture of vinegar, oil, spices or wine.
Marmite	Stock-pot, or earthenware pot in which soup is served.
Macerate	To soak (in flavoured syrup, wine or liquor) often applied to fruits.
Mandolin	A hand held machine used for slicing vegetables, potatoes.
Masking	To cover completely (usually with a sauce).
Matelotes	Fish stew with wine, onions and seasonings.
Matignon	Minced aromatic vegetables, ham (optional) thyme, bay leaf, used in dishes to impart a good flavour.
Mediallion	Round flat shaped piece of fish or meat.

Menu	List of fare.
Mignonette	pepper Coarsely ground pepper.
Mirepoix	Carrots, onions, celery, pork (salted optional) cut into fine dices, with thyme, bay leaf. Improves the flavour of the dish
Mise-en-place	Basic preparation in the kitchen before serving.
Mono sodium	A flavouring added to meat products to increase glutamate flavour. Known as Chinese salt.
Mortifier	To hand meat so as to tenderize it.
Mousse	Applied to a very light dessert generally prepared with whipped cream, egg whites, gelatin and sugar, etc. chilled and frozen. Also referred to meat dishes with egg, cream, gelatin and seasoning, served for cold buffets.
Napper	To coat or mask with sauce.
Navarin	Mutton stew with carrots and turnips.
Noodles	Narrow strips of dried dough, used in soups, as garnishes, and also used for Chinese dishes.
Panada	Thick white sauce.
Paner	The egg and breadcrumb food items before frying.
Papillote en	Cutlet cooked in paper.
Parboil	To partially cook.
Parmesan	Italian cooking cheese. Hard sharp cheese, used as garnishes for soups and used for sauce, etc.
Paupiette	Stuffed rolled thin slices of meat, etc. braised.
Paysanne	Cut into uniform shapes, whether it is round, or triangles, etc.
Pimentos	Red sweet Spanish pepper pod.
Piquant	Highly seasoned, tangy.
Plat du jour	Special dish of the day.
Poisson	Fish in French.
Potage	Soup usually thickened.
Pot au feu	Meat broth with vegetables.
Printaniere	Spring vegetables.
Puree	Pulp or paste of vegetables or fruit, also a thick soup.
Quenelles	Very light dumplings, which are made out of fish, chicken, or meat, poached and used as a garnish.
Ragout	Thick savoury stew.
Ramekins	Food baked in shallow baking china dishes. Individual small baking dishes.
Raspings	Fine breadcrumbs.
Rechauffe	A re-heated dish.
Reduce	To concentrate a liquid by boiling, usually without a lid.

Reish	A highly seasoned food item used as an accompaniment.
Royal	Used as a garnish for soups, cubes of a savoury custard. Also the name of a kind of icing.
Salamander	Dessert, egg yolks, vanilla, sugar, sherry or wine cooked till light and creamy.
Saboyon	A griller with heat from above open front so that the dishes could be placed on shelf for gratinating.
Salami	Sausage of pork, beef, highly seasoned.
Searing	Browning surface by intense heat, usually meat. To form a protective coating of coagulated proteins to retain the juices of the meat.
Score	To cut slits in the fat piece of pork before roasting.
Skewer	A metal or wooden pin to hold meat or poultry pieces while cooking, e.g. seekh kabab, shami kababs.
Souse	Herrings, etc. pickled in vinegar and spices.
Souffle	Light puffed baked custard.
Spit	Pointed metal rod to hold meat or poultry for roasting.
Supreme	A fillet of a deboned fish or breast of a chicken. It is the tender portion of the bird.
Table d'hote	Fixed price meal. A meal of definite number of courses.
Terrine	Forcemeat stuffing moulded cooked and served cold.
Timbale	A cup shaped mould usually made from meat, fish or vegetables added to a custard mixture and finely decorated.
Tripe	The white fatty inner lining of the stomach, chiefly ox which has large amount of connective tissue which gelatinizes on boiling and so it is easily digestible.
Troncon	A slice of flat fish with the bone.
Vol au vent	Puff pastry case.
Wok	A concave pan used for stir frying.
Whipping	Rapid beating to increase the volume of mixing air.
Zest	The rind of orange or lemon grated and used for flavouring.
Zuppa	Italian soup.

## **KITCHEN CONTROLS**

### **A. GARBAGE DISPOSAL**

It is important to store garbage correctly before it is disposed off. It should not be left overnight near the kitchen area. The kitchen area is warmer than the other areas and decay is faster near the kitchen. The ideal storage area is in a yard behind the premises. Garbage should be filled in bins and these bins should be kept in the coolest place. Care should be taken to ensure easy cleaning and absence of pests. The garbage storage area should be large enough for the amount of garbage that will accumulate.

In large establishments and places where it is not disposed off frequently, it is stored in the basement at low temperatures.

#### **Methods of Disposal**

After refuse is collected, it is important to dispose it off in such a way that it does not create any nuisance.

The variety and quantity of waste products to be disposed off has increased tremendously with improvement in the standard of living and the population explosion.

Waste arising from catering establishments is mainly composed of biodegradable or organic matter (biomass). This waste needs prompt disposal because it is highly perishable and decomposes rapidly, giving rise to foul odours and encouraging the growth of micro-organisms and pests.

Before selecting a method for proper disposal of wastes, it is necessary to understand the value of the waste matter which is to be disposed off and the nuisance it is likely to cause if improperly disposed.

Land filling, burial, composting, incineration, mechanically disposing, biogas plants, vermiculture and recycling.

#### **Land filling**

Dumping Refuse is dumped in low lying land or in land depressions like pits and hollows for reclaiming low lying land. This is the easiest method of disposing dry refuse. Bacterial action reduces the volume of the refuse and gradually converts it to humus. This method however, has the following disadvantages:

1. Loose refuse may be dispersed by wind
2. Garbage is exposed to flies and rodents
3. It is unsightly in appearance and produces an unpleasant smell
4. Surface water as well as ground water may get polluted

**Controlled dumping:** If dumping is done during the dry season and under proper supervision, it is called controlled dumping. It is used to fill land depressions, disused quarries and empty pits. The land selected should be outside town limits, at least 45 m (150 feet) away from the nearest habitation. The work of filling up should start at one end of the depression. Refuse is dumped, adequately compacted and covered with earth at the end of the day or after a maximum period of 72 hours. The refuse is deposited in uniform layers up to 1.8 m (6 feet) in height. Each layer is sealed with a mud cover of at least 23 cm (9 inches) in thickness. Dumping is done till the level reaches 60 cm (2 feet) above ground level to allow for subsequent settlement. This made soil should be used for cultivation for 10 years and only then used as residential land.

**Burial:** This method is suitable where the volume of garbage produced is small. A trench is prepared to collect the garbage. At the end of the day the refuse is covered with 20 to 30 cm of earth. Alternate layers of refuse and earth are formed. When the trench is filled up till it is only 40cm deep, it is filled with earth and sealed. A new trench is then dug. Chemical, bacteriological and physical changes occur in the buried refuse. It takes approximately four to six months for complete decomposition of organic matter into an innocuous mass. Temporary food service establishments set up in open areas should dispose off garbage by this method.

**Composting:** This is a method of combined disposal of refuse and sludge. Sludge is the solid precipitate in the sewage tank which settles at the bottom. Animal and plant wastes are rich in nitrogen and phosphorous which can be returned to the soil by composting. Wastes of biological origin contain high amounts of water and are digested anaerobically by micro-organisms in the absence of air. The waste is decomposed and stabilised by bacteria and fungi to form humus like material called compost. Compost is rich in nutrients and fertilises the soil. During this breakdown carbon dioxide, water and heat are produced. The heat produced is over 60 degrees centigrade for several days. This destroys larvae and eggs of flies and other pathogenic organisms.

**Incineration:** It is a hygienic method involving burning of refuse and converting it into harmless waste. It is burned in a specially constructed incinerator. The incinerator should be maintained in perfect working condition.

The incinerator should have a tall chimney and sufficient draught of air for efficient combustion, without creating a smoke nuisance.

## **B. STANDARDISATION**

### Introduction

One of the most important function of menu planning is charging correct amount of money for items listed on the menu. Failure to do so results in a selling price that is high or too low. Both of these situations are bad for the restaurant. In order to determine the correct selling price it is imperative that the exact cost be known because selling prices are figured, to a large extent on food cost. Ingredients cost vary area to area in many cases can change from day to day.

### Standardised recipes

To place into effect a solid control system in many restaurant, standardised recipes are a necessity. The control the quantity and quality of ingredients used to prepare a particular dish, as well as controls the portions that are to be served. They are also a necessity tool in figuring the cost. Simply having standardised recipes in an operation is not enough. It is imperative that every one follow them. Any deviation from the standardised recipe results not only in poor quality, but inaccurate cost being figured for that item and, consequently, an incorrect selling price.

There are two methods used to write standardised recipes. They are the AP method which means "As Purchased" and EP method which stands for "Edible Portion". There is large difference between the two methods which affect both the quality of the recipes and the cost.

In the AP method all ingredient quantities are listed on the standardised recipes in the form in which they are purchased. Eg. 10 kgs. of onions sliced, the cook would weigh the 10 kgs. of onions with their skins on (as purchased). Then peel the onion, slice them and add them to the recipe. In costing the recipe, the invoice cost of 10 kgs. of onions would be used.

In the EP method all ingredient quantities are listed using the edible portion only of that particular ingredient. Eg. 10 kgs. of chopped onions in this case the onions would be peeled, chopped then weighed and added to the recipe. To obtain the cost in this instance the original weights of the product have been used. Thus if we started with 11 kgs of onions, to obtain 10 kgs EP of chopped, we would use the 11 kgs figure to determine our cost.

## C. PORTION CONTROL

Portion control means controlling the size or quantity of food to be served to each customer. The amount of food allowed depends on the three following considerations:

- The type of customer or establishment: there will obviously be a difference in the size of portions served, such as to those working in heavy industry or to female clerical workers. In a restaurant offering a three-course table d'hôte menu for Rs.X including salmon, the size of the portion would naturally be smaller than in a luxury restaurant charging Rs.X for the salmon on an a la carte menu.
- The quality of the food: better quality food usually yields a greater number of portions than poor quality food: low quality stewing beef often needs so much trimming that it is difficult to get six portions to the kilo, and the time and labour involved also loses money. On the other hand, good quality stewing beef will often give eight portions to the kilogramme with much less time and labour required for preparation and more customer satisfaction.
- The buying price of the food: this should correspond to the quality of the food if the person responsible for buying has bought wisely. A good buyer will ensure that the price paid for any item of food is equivalent to the quality – in other words a good price should mean good quality, which should mean a good yield, and so help to establish a sound portion control. If on the other hand, an inefficient buyer has paid a high price for indifferent quality food then it will be difficult to get a fair number of portions, the selling price necessary to make the required profit will be too high and customer satisfaction can be affected.

Portion control should be closely linked with the buying of the food; without a good knowledge of the food bought it is difficult to state fairly how many portions should be obtained from it. To evolve a sound system of portion control each establishment ( or type of establishment ) needs individual consideration. A golden rule should be 'a fair portion for a fair price'.

Convenient portioned items are available, such as individual sachets of sugar, jams, sauce, salt, pepper; individual cartons of milk, cream and individual butter and margarine portions.

## **Portion control equipment**

There are certain items of equipment which can assist in maintaining control of the size of the portions:

- Scoops, for ice-cream or mashed potatoes
- Ladles, for soups and sauces
- Butter pat machines, regulating pats from 7 g upwards
- Fruit juice glasses, 75-150 g
- Soup plates or bowls, 14, 16, 17, 18 cm
- Milk dispensers and tea-measuring machines
- Individual pie dishes, pudding basins, mould and coupes